Case Name: BP Service Station #84849

PI #: 016006

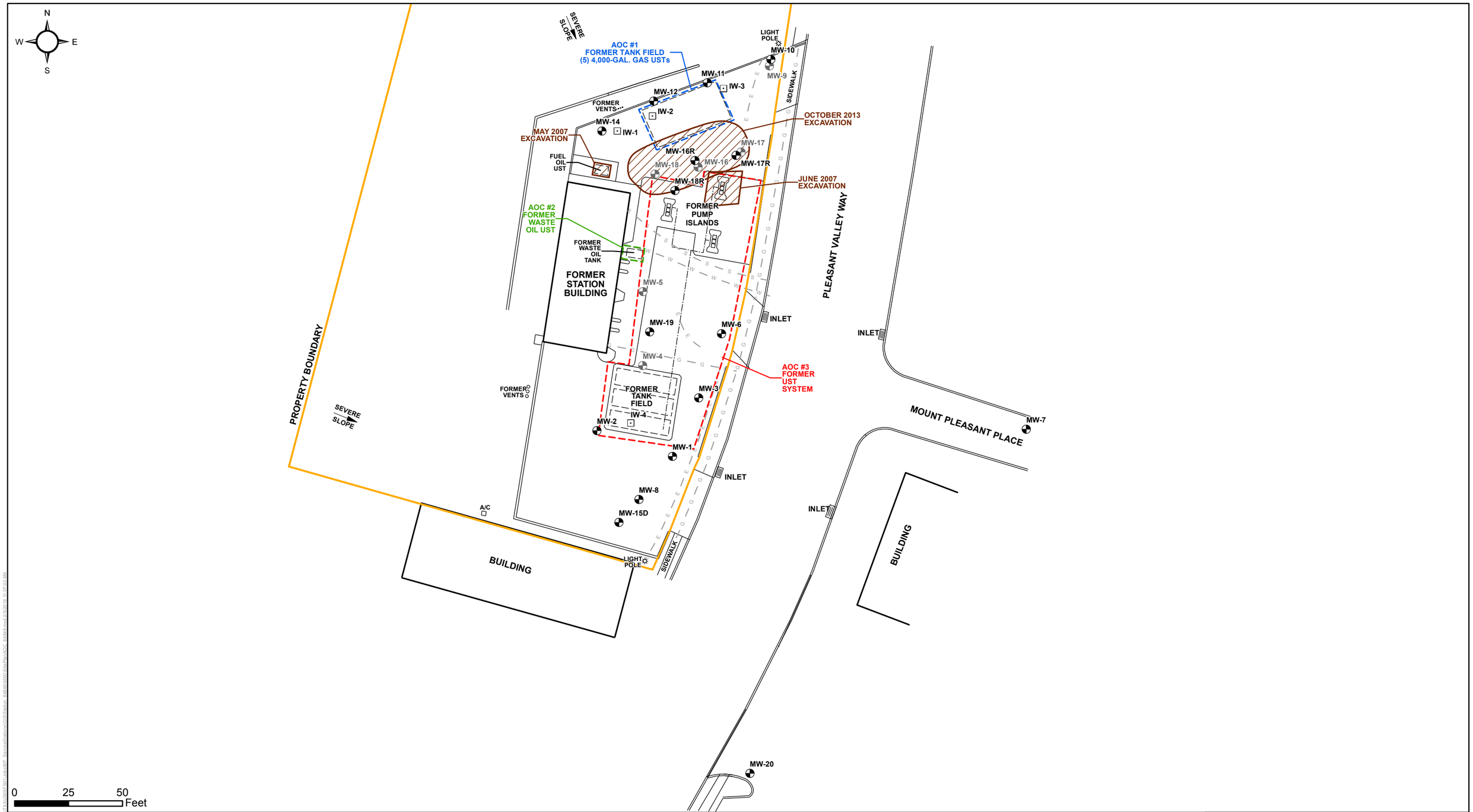
IMPORTANT: *1) Do not delete or copy and paste across multiple columns because it can disrupt hidden equations.*

2) If pasting from a Word document, use the Paste option: ***Match Destination Formatting***

3) If the text turns ***red*** *you have exceeded the character limit for that column*

Case Inventory Document Version 1.4 02/23/17

AOC ID	AOC Type	AOC Description	Confirmed Contamination	AOC Status	Status Date	Incident #	DEP AOC Number	Contaminated Media	Contaminants of Concern	Additional Contaminants of Concern	Additional Contaminants of Concern	Applicable Remediation Standard	Exposure Route	Additional Exposure Route	RA Type	Additional RA Type	Additional RA Type	Was an Order of Magnitude Evaluation Conducted?	Activity
AOC 1	Storage tank and appurtenance - State or Federal Regulated underground storage tank	This AOC consists of five former 4,000-gallon gasoline USTs and associated piping (removed 1987)	Yes	RAR	9/4/2019	93-03-15-1156-05		Mixed Media	VO			Soil Cleanup Criteria (MUST have RAW approved for AOC prior to 12/2/2008)	Ground Water		Excavation	In situ chemical oxidation (ISCO)	Monitored Natural Attenuation	No	Five 4,000 gasoline USTs were reportedly removed from the site in 1987. The USTs were previously located on the northern end of the site. The location of the former USTs were noted as AOC#1 in the 1999 NJDEP RAW approval letter. No documentation of the condition of the tanks upon removal or record of post excavation soil sampling is available. Soil and groundwater sampling conducted in response to the 95-03-15-1156-05 case number has fully characterized and assessed this AOC. The nature and extent of the soil and groundwater concentrations in this area have been defined and have been incorporated into the selected remedial action for the site.
AOC 2	Storage tank and appurtenance - State or Federal Regulated underground storage tank	This AOC consists of one former 550-gallon waste oil UST and associated piping (removed March 1994)	Yes	RAR	9/4/2019	93-03-15-1156-05		Mixed Media	VO + PAHs			Soil Cleanup Criteria (MUST have RAW approved for AOC prior to 12/2/2008)	Ground Water		Excavation	Monitored Natural Attenuation		No	On March 16, 1994, a used oil steel 550-gallon UST was removed. Four (4) soil samples were collected following the UST removal activities by Lutz Environmental Co. Sample results showed total xylenes, TPH, and chromium were detected in sample WO-1. The location of the former waste oil tank was designated as AOC #2 in the 1999 NJDEP RAW approval letter. Historical groundwater and soil investigation activities have been completed in conjunction with case number 95-03-15-1156-05. The nature and extent of soil and groundwater impact in this AOC has been defined and has been incorporated into the selected remedial action for the site. However, this AOC will still be referenced as a separate Area of Concern based on the nature of the initial release (waste oil). In March 2019, a confirmatory soil sample was collected at location WO-1 and analyzed for EPH. Results showed EPH was non-detect in confirmatory sample CB-1, confirming there is no continued presence of petroleum hydrocarbons.
AOC 3	Storage tank and appurtenance - State or Federal Regulated underground storage tank	This AOC contists of three former 10,000-gallon gasoline UST and three pump islands and associated piping (removed April 2001)	Yes	RAR	9/4/2019	93-03-15-1156-05		Mixed Media	VO			Soil Cleanup Criteria (MUST have RAW approved for AOC prior to 12/2/2008)	Ground Water		Excavation	In situ chemical oxidation (ISCO)	Monitored Natural Attenuation	No	August 1995: Handex was retained by Amoco to completed a hydrogeologic investigation at the site in response to the closure of the former 550-gallon waste oil UST cited as AOC #2. A total of six monitoring wells were installed in 1995 and subsequent groundwater sampling indicated the presence of volatile organic compounds above the applicable GWQS. EFR was initiated at the site as an interim remedial measure in March 1997 and was subsequently proposed as a remedial action in the June 30, 1999 RAW. The RAW was approved by the NJDEP on December 2, 1999 and modified in 2003 based on reduced concentrations in groundwater at the site. EFR has not been conducted at the site since 2003 due to high water table elevations. The NJDEP's RAW approval letter also established the Soil Cleanup Criteria as the soil standards for the site. June 2001 UST Closure Report: Between April 18 and April 19, 2001, three (3) 10,000-gallon and single-walled steel gasoline USTs, gasoline dispenser piping and three (3) dispenser islands were excavated and removed from the site. Approximately 58 tons of soil was also disposed of. Soil sample PES-23D, collected from below the former dispenser island, exceeded the IGWSCC for MTBE and benzene. On June 7, 2007, soil was excavated in the former pump island area, focusing around soil sample PES-23D. Approximately 93.44 tons of impacted soil was removed and disposed of. Subsequently, five (5) soil samples were collected and were in compliance with the IGWSCC for all constituents. Historically, LNAPL has been observed in monitoring wells MW-9, MW-11, MW-12, MW-16, MW-17, and MW-18. Since 2003, no LNAPL had been detected in any well until November 8, 2010, when approximately 0.35 ft of weathered gasoline was observed in monitoring well MW-18. Based on the LNAPL observed on November 8, 2010, a LNAPL reporting form was submitted to the NJDEP on December 2, 2010. EFR events were completed and an absorbent wick was installed in MW-18 to address the LPH. No LNAPL has been detected since November 8, 2010. The results of the remedial activities were included in the December 20, 2011 IRM. The January 11, 2013 Permit By Rule was approved by the NJDEP on March 11, 2013. Additional soil excavation activities took place in October 2013 in the area of MW-16, MW-17 and MW-18. Approximately 321.3 tons of soil was removed and soil samples collected from the excavation sidewalls were below the NJDEP SCC. Four (4) injection points were installed and along with monitoring well MW-18R was utilized to inject Ixper70C® in the northern and southern tank field areas. A Permit-by-Rule Monitoring Report was submitted in February 2015.



- Monitoring Well
- Abandoned Monitoring Well
- Injection Well
- AOC #1 Former Tank Field
- AOC #2 Former Waste Oil UST
- AOC #3 Former UST System
- Soil Excavation
- Utility - Electric
- Utility - Gas
- Utility - Sewer
- Utility - Water
- Property Boundary

Figure 3
Site Plan/Areas of Concern Map

Service Station #84849
955 Pleasant Valley Way
West Orange, New Jersey
PI #: 016006

PARSONS
200 Cottontail Lane
Somerset, NJ 08873

Drawn By:	Revision Date:	
PDS	2/5/2019	SitePlanAOC_84849.mxd

New Jersey Department of Environmental Protection
Site Remediation and Waste Management Program

AUTHORIZATION TO SUBMIT A REMEDIAL PHASE REPORT THROUGH NJDEP ONLINE

[Except Response Action Outcome (RAO)]

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: BP Service Station #84849

Street Address: 955 Pleasant Valley Way

Municipality: West Orange (Township, Borough or City)

County: Essex Zip Code: 07052

Program Interest (PI) Number(s): 016006

SECTION B. STATEMENT OF AUTHORIZATION TO SUBMIT THE REMEDIAL PHASE REPORT

I authorize the Licensed Site Remediation Professional, retained for this site pursuant to the Brownfield and Contaminated Site Remediation Act at N.J.S.A. 58:10B-1.3b, and named below to submit, as applicable, the remedial phase report listed below, updated Receptor Evaluation Form, and CEA/Well Restriction Fact Sheet Form, for the Program Interest Number noted above. I understand that I am assuming full responsibility that the information provided in the remedial phase report is true, accurate, and complete.

Name and Date of Remedial Phase Report:

Remedial Action Report, April 2019

Authorized Licensed Site Remediation Professional (LSRP)

First Name: Richard Last Name: Simun

LSRP License #: 590510

SECTION C. CERTIFICATION BY THE PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION

Full Name of Person Responsible for Conducting the Remediation: BP Products North America, Inc.

Representative First Name: John Representative Last Name: Frankenthal

Mailing Address: 1 West Pennsylvania Ave, Suite 925

Municipality: Towson State: MD Zip Code: 21204

Telephone Number: (312) 809-4117 Ext.: Fax:

Email Address: John.Frankenthal@bp.com

This certification shall be signed by the person responsible for conducting the remediation who is submitting this Authorization and Report in accordance with the Administrative Requirements for the Remediation of Contaminated Sites at N.J.A.C. 7:26C-1.5(a).

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

Signature: Date: 7/18/19

Name/Title: John Frankenthal, Project Manager

Completed form should be uploaded to NJDEP Online.

New Jersey Department of Environmental Protection
Site Remediation and Waste Management Program

COVER/CERTIFICATION FORM

(Submit with Remedial Phase Report, Receptor Evaluation, and CEA Forms)

Date Stamp
(For Department use only)

SECTION A. SITE INFORMATION

Site Name: BP Service Station #84849

AKAs: Former Amoco Service Station #84849

Street Address: 944 Pleasant Valley Way

Municipality: West Orange (*Township, Borough or City*)

County: Essex Zip Code: 07052

Program Interest (PI) Number(s): 016006

Case Tracking Number(s) for this submission: 95-03-15-1156-05

Date Remediation Initiated Pursuant to N.J.A.C. 7:26C-2: 03/15/1995

State Plane Coordinates for a central location at the site: Easting: 556057 Northing: 714247

List current Municipal Block and Lot Numbers of the Site:

Block # 172.02	Lot #(s) 8.01	Block #	Lot #(s)
Block #	Lot #(s)	Block #	Lot #(s)
Block #	Lot #(s)	Block #	Lot #(s)
Block #	Lot #(s)	Block #	Lot #(s)

SECTION B. SUBMISSION STATUS

1. Indicate how the Electronic Data Deliverable (EDD) for this submission is being provided to the NJDEP:
   - ☒ Via Email at srpedd@dep.state.nj.us (attach NJDEP confirmation email); or
   - ☐ CD (attach to this submission)
   - ☐ Not Applicable – No EDD
2. Complete the following Submission and Permit Status Table:

Remedial Phase Documents	N/A	Included in this Submission	Previously Submitted	Date of Submission	Date of Revised Submission	Date of Previous NJDEP Approval	Date of Document Withdrawal
Preliminary Assessment Report	☒	☐	☐				
Site Investigation Report	☒	☐	☐				
Remedial Investigation Report	☐	☐	☒	05/05/2014			
Remedial Action Work Plan	☐	☐	☒	07/06/1999			
Remedial Action Report	☐	☒	☐				
Response Action Outcome	☒	☐	☐				
Other Submissions							
Alternative Soil Remediation Standard and/or Screening level Application Form	☒	☐	☐				
Case Inventory Document		☒					
Classification Exception Area / Well Restriction Area (CEA/WRA)	☐	☒	☐				
Discharge to Ground Water Permit by Rule Authorization Request	☒	☐	☐				

IEC Engineered System Response Action Report	☒	☐	☐				
Immediate Environmental Concern Report	☒	☐	☐				
LNAPL Interim Remedial Measure Report	☒	☐	☐				
Public Notification	☐	☐	☒	04/20/2012			
Receptor Evaluation	☐	☒	☐				
Technical Impracticability Determination	☒	☐	☐				
Vapor Concern Mitigation Report	☒	☐	☐				
Permit Application – list:	☒						
		☐	☐				
		☐	☐				
		☐	☐				
		☐	☐				
Radionuclide Remedial Action Report	☒	☐	☐				
Radionuclide Remedial Action Workplan	☒	☐	☐				
Radionuclide Remedial Investigation Report	☒	☐	☐				
Radionuclide Remedial Investigation Workplan	☒	☐	☐				

SECTION C. SITE USE

Current Site Use: (*check all that apply*)

- ☐ Industrial
- ☐ Residential
- ☐ Commercial
- ☐ School or child care
- ☐ Agricultural
- ☐ Park or recreational use
- ☒ Vacant
- ☐ Government
- ☐ Other: _____

Intended Future Site Use, if known: (*check all that apply*)

- ☐ Industrial
- ☐ Residential
- ☒ Commercial
- ☐ School or child care
- ☐ Park or recreational use
- ☒ Vacant
- ☐ Government
- ☐ Future site use unknown
- ☐ Other: _____

SECTION D. CASE TYPE: (*check all that apply*)

- ☐ Administrative Consent Order (ACO)
- ☐ Brownfield Development Area (BDA)
- ☐ Child Care Facility
- ☐ Chrome Site (Chromate chemical production waste)
- ☐ Coal Gas
- ☐ Due Diligence with RAO
- ☐ Hazardous Discharge Remediation Fund (HDSRF) Grant/Loan
- ☐ ISRA
- ☐ Landfill (SRP subject only)
- ☒ Regulated Underground Storage Tank (UST)
- ☐ Remediation Agreement (RA)/Remediation Certification
- ☐ School Development Authority (SDA)
- ☐ School facility
- ☐ Spill Act Defense – Government Entity
- ☐ Spill Act Discharge
- ☐ UST Grant/Loan
- ☐ Other: _____

Federal Case (*check all that apply*)

☐ RCRA GPRA 2020 ☐ CERCLA/NPL ☐ USDOD ☐ USDOE

1. Is the party conducting remediation a government entity? ..... ☐ Yes ☒ No

If "Yes," check one: ☐ Federal ☐ State ☐ Municipal ☐ County

SECTION E. PUBLIC FUNDS

Did the remediation utilize public funds? ..... ☐ Yes ☒ No

If "Yes," check applicable:

- ☐ UST Grant
- ☐ HDSRF Grant
- ☐ Spill Fund
- ☐ UST Loan
- ☐ HDSRF Loan
- ☐ Schools Development Authority
- ☐ Brownfield Reimbursement Program
- ☐ Landfill Reimbursement Program
- ☐ Environmental Infrastructure Trust

SECTION F. LICENSED SITE REMEDIATION PROFESSIONAL INFORMATION AND STATEMENT

LSRP ID Number: 590510

First Name: Richard Last Name: Simun

Phone Numbers: (732) 537-3570 Ext.: _____ Fax: (732) 537-3502

Mailing Address: 200 Cottontail Lane

Municipality: Somerset State: New Jersey Zip Code: 08873

Email Address: Richard.Simun@Parsons.com

This statement shall be signed by the LSRP who is submitting this notification in accordance with N.J.S.A. 58:10C-14, and N.J.S.A. 58:10B-1.3b(1) and (2).

(1) I certify, as a Licensed Site Remediation Professional authorized pursuant to N.J.S.A. 58:10C-1 et seq. to conduct business in New Jersey, that for the remediation described in this submission, and all attachments included in this submission, I personally: Managed, supervised, or performed the remediation conducted at this site that is described in this submission, and all attachments included in this submission; and/or periodically reviewed and evaluated the work performed by other persons that forms the basis for the information in this submission; and/or completed the work of another site remediation professional, licensed or not, after having: (1) reviewed all available documentation on which I relied; (2) conducted a site visit and observed the then-current conditions and verified the status of as much of the work as was reasonably observable; and (3)concluded, in the exercise of my independent professional judgment, that there was sufficient information upon which to complete any additional phase of remediation and prepare workplans and reports related thereto.

(2) I certify:

- *That I have read this submission and all attachments to this submission;*
- *That in performing the professional services as the licensed site remediation professional for the entire site or each area of concern, I adhered to the professional conduct standards and requirements governing licensed site remediation professionals provided in N.J.S.A. 58:10C-16;*
- *That the remediation conducted at the entire site or each area of concern, that is described in this submission and all attachments to this submission, was conducted pursuant to and in compliance with the remediation requirements in N.J.S.A. 58:10C-14.c;*
- *That the remediation described in this submission, and all attachments to this submission, was conducted pursuant to and in compliance with the regulations of the Site Remediation Professional Licensing Board at N.J.A.C. 7:26I; and*
- *That the information contained in this submission and all attachments to this submission is true, accurate, and complete.*

(3) I certify, when this submission includes a response action outcome, that the entire site or each area of concern has been remediated in compliance with all applicable statutes, rules, and regulations and is protective of public health and safety and the environment.

(4) I certify that no other person is authorized or able to use any password, encryption method, or electronic signature that the Board or the Department have provided to me.

(5) I certify that I understand and acknowledge that:

- *If I knowingly make a false statement, representation, or certification in any document or information I submit to the Department I may be subject to civil and administrative enforcement pursuant to N.J.S.A. 58:10C-17.a.1(a)through (f) by the Board, including but not limited to license suspension, revocation, or denial of renewal; and*
- *If I purposely, knowingly, or recklessly make a false statement, representation, or certification in any application, form, record, document or other information submitted to the Department or required to be maintained pursuant to the Site Remediation Reform Act, I shall be guilty, upon conviction, of a crime of the third degree and shall, notwithstanding the provisions of subsection b. of N.J.S.2C:43-3, be subject to a fine of not less than $5,000 nor more than $75,000 per day of violation, or by imprisonment, or both.*

(6) I certify that I have read this certification prior to signing, certifying, and making this submission.

LSRP Signature: _____ Date: 7/22/2019

LSRP Name: Richard Simun

Company Name: Parsons

SECTION G. PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION INFORMATION AND CERTIFICATION

Full Legal Name of the Person Responsible for Conducting the Remediation: BP Products North America Inc.

Representative First Name: John Representative Last Name: Frankenthal

Title: BP Project Manager

Phone Number: (312) 809-4117 Ext.: FAX:

Mailing Address: 1 West Pennsylvania Avenue, Suite 925

Municipality: Towson State: Maryland Zip code: 21204

Email Address: John.Frankenthal@BP.com

This certification shall be signed by the person responsible for conducting the remediation who is submitting this notification in accordance with Administrative Requirements for the Remediation of Contaminated Sites rule at N.J.A.C. 7:26C-1.5(a).

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

Signature: Date: 7/18/19

Name/Title: John Frankenthal / Project Manager

For CEA Submissions:

☐ Check this box if the person above is also the property owner of the site or their representative. If this person is not the site property owner, please ensure the site property owner's name and address is in the first line of the table in Section E.2 of the Classification Exception Area / Well Restriction Area (CEA/WRA) Fact Sheet Form.

Completed forms should be sent to:

Bureau of Case Assignment & Initial Notice
Site Remediation Program
NJ Department of Environmental Protection
401-05H
PO Box 420
Trenton, NJ 08625-0420

REMEDIAL ACTION REPORT

Former Amoco/BP Service Station #84849

NJDEP Case Tracking Number: 95-03-15-1156-05

Program Interest Number: 016006

955 Pleasant Valley Way
West Orange, New Jersey 07052

Prepared for:

BP Products North America, Inc.
1 West Pennsylvania Avenue, Suite 925
Towson, Maryland 21204

Prepared by:

PARSONS

200 Cottontail Lane
Somerset, New Jersey 08873

September 2019

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G		Classification Exception Area
H		Remedial Action Permit for Groundwater

LIST OF ACRONYMS AND ABBREVIATIONS

AOC	Area of Concern
ARRCS	Administrative Requirements for the Remediation of Contaminated Sites
bgs	Below ground surface
BP	BP Products North America Inc.
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CEA	Classification Exemption Area
COC	Contaminant of concern
DTW	Depth to water
EDD	Electronic Data Deliverable
EFR	Enhanced Fluid Recovery
EPH	Extracted Petroleum Hydrocarbon
ft	Foot or Feet
GWSL	Groundwater Screening Levels
GWQS	Ground Water Quality Standard
Handex	Handex of New Jersey, Inc.
IGWSCC	Impact to Groundwater Soil Clean-up Criteria
IRM	Interim Remedial Measures
LNAPL	Light Non-Aqueous Phase Liquid
MNA	Monitored Natural Attenuation
MTBE	Methyl Tert-Butyl Ether
NJDEP	New Jersey Department of Environmental Protection
NJPDES	New Jersey Pollutant Discharge Elimination System
NRDCSCC	Non-Residential Direct Contact Soil Clean-up Criteria
Parsons	Parsons Environment & Infrastructure Group Inc.
PCB	Polychlorinated Bipheyl
QA/QC	Quality Assurance/Quality Control
RA	Remedial Action
RAR	Remedial Action Report
RAP	Remedial Action Permit
RAWP	Remedial Action Work Plan
RDCSCC	Residential Direct Contact Soil Clean-up Criteria
RE	Receptor Evaluation
RI	Remedial Investigation
RIR	Remedial Investigation Report
RIW	Remedial Investigation Workplan
SIR	Site Investigation Report
SCC	Soil Clean-up Criteria
TBA	Tertiary Butyl Alcohol
TIC	Tentatively Identified Compound
TPH	Total Petroleum Hydrocarbon
TRSR	Technical Requirements for Site Remediation
US EPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UST	Underground Storage Tank
VI	Vapor Intrusion
VOC	Volatile Organic Compound

1.0 INTRODUCTION

Parsons Environment & Infrastructure Group Inc. (Parsons) has prepared this Remedial Action Report (RAR) on behalf of BP Products North America, Inc. (BP) to document the remedial action activities for the former Amoco/BP Service Station #84849 Site (Site) located at 955 Pleasant Valley Way, West Orange, Essex County, New Jersey. The Site location is depicted on a United States Geological Survey (USGS) Topographical Quadrangle Map in **Figure 1**.

This RAR was prepared in accordance with the New Jersey Department of Environmental Protection (NJDEP) Technical Requirements for Site Remediation (N.J.A.C. 7:26E) (TRSR) and the Administrative Requirements for the Remediation of Contaminated Sites (ARRCS) (N.J.A.C. 7:26C, ARRCS) rules, both dated August 2018.

1.1 Report Objectives

The objective of this RAR is to document the Remedial Actions (RAs) completed at the Site and provide details of any additional intended RAs for soil and groundwater.

1.2 Report Organization

- Section 1 presents the objectives and organization of this RAR.
- Section 2 presents background information for the Site, which includes details about the Site, such as: Site history, physical setting, hydrogeology, and receptor evaluations (RE).
- Section 3 presents an overview of the Remedial Investigation (RI) activities for the Site and a summary of the findings from the RI activities for soil, groundwater, light non-aqueous phase liquid (LNAPL), and vapor intrusion (VI).
- Section 4 presents details of the RA for the Site.
- Section 5 provides a summary of the analytical data usability.
- Section 6 presents a description of the institutional controls to be implemented at the Site.
- Section 7 provides an overview of the Site remediation costs.
- Section 8 provides references cited in this RAR.

2.0 SITE HISTORY AND BACKGROUND

2.1 Site Description

The Site is currently a ±0.45-acre lot located at 955 Pleasant Valley Way, West Orange, Essex County, New Jersey, and occupies Block 172.02, Lot 8.01. The Site is owned by 955 Pleasant Valley Way Associates and currently exists as vacant land.

The Site historically consisted of five 4,000-gallon gasoline underground storage tanks (USTs) and associated piping (removed in 1987), one 550-gallon used oil UST and associated piping (removed March 1994), and three 10,000-gallon gasoline USTs, three pump islands, and associated piping (removed in June 2001).

A total of three areas of concern (AOCs) have been identified at the Site.

- AOC-1: Former UST system consisting of five 4,000-gallon gasoline USTs and associated piping (removed in 1987)
- AOC-2: Former 550-gallon used oil UST and associated piping (removed March 1994)
- AOC-3: Former UST system consisting of three 10,000-gallon gasoline USTs, three pump islands, and associated piping (removed June 2001)

2.2 Physical Setting

The Site is located at the intersection of Pleasant Valley Way and Mount Pleasant Place. The area surrounding the Site is a mixed residential and commercial area. The Site is bordered to the north and west by residences; to the south by a retail store; and to the east by Pleasant Valley Way followed by residences. An aerial photograph depicting the Site and surrounding area is provided as **Figure 2**, and a Site Plan is shown in **Figure 3.**

2.3 Geology and Hydrogeology

The Site is located within the Feltville Formation of the Piedmont Physiographic Province of New Jersey. The Piedmont Physiographic Province is defined to its northwest by a prominent escarpment formed by a series of major faults. To the northwest side of the escarpment lies the Highlands Physiographic Province, while the Piedmont exists to the southeast of the escarpment. The Piedmont extends to the southeast until sediments of the Coastal Plain Physiographic overlap the rock of the Piedmont.

The topography of the Piedmont is generally a broad lowland with periodic northeast to the southwest trending ridges. The underlying geology consists of interbedded sandstone, shale, conglomerate, basalt, and diabase. The Piedmont formation was created after a crustal block dropped down during the early stages of the Atlantic Ocean opening in the late Triassic age. Eroded sediments that were deposited from adjacent upland became compacted and cemented along the rivers and lakes of the rift basin. The rock formations have a distinctive reddish-brown color.

The Piedmont formation is an important bedrock aquifer in the area. The most productive wells completed in this formation are typically hydraulically connected to coarse grained, highly permeable overlying unconsolidated deposits. The nearest body of water is a branch of the Rahway River located approximately 475 feet (ft) east and topographically downgradient of the site.

The groundwater at this Site is classified as a Class IIA aquifer. Based on quarterly synoptic groundwater level measurements, groundwater flow is generally to the southeast. The depth to water (DTW) on-site ranges between 5.58 ft and 15.64 ft below ground surface (bgs)

during the last five rounds of groundwater sampling with an average hydraulic gradient of 0.065 ft/ft.

2.5 Site History

Based on a review of historical aerial photographs and property ownership records, the Site remained undeveloped until the 1970s when it was operated as an Amoco retail gasoline service station.

Below is a summary of RI and RA activities conducted at the Site:

1987: Five 4,000-gallon USTs and associated piping was excavated from the northern portion of the Site and monitoring wells MW-1 through MW-4 were subsequently installed.

Mar. 1994: Lutz Environmental Company (Lutz) performed an environmental site investigation at the Site. One 550-gallon used oil UST was excavated and removed from the Site.

July 1994: Lutz submitted a Site Investigation Report (SIR) to the NJDEP.

Oct. 1995: Monitoring wells MW-5 and MW-6 were installed on the Site. The results indicated that volatile organic compounds (VOCs) were detected in groundwater above the NJDEP applicable Groundwater Quality Standards (GWQS). NJDEP Case Number 95-03-15-1156-05 was assigned to the Site.

Jan. 1996: Handex of New Jersey, Inc. (Handex) submitted a Remedial Investigation Report (RIR) to the NJDEP.

Aug. 1996: Delineation monitoring well MW-7 was installed.

Sept. 1996: Delineation monitoring wells MW-8 and MW-9 were installed. Additionally, soil borings, S-1 through S-13, were advanced to assess the soil quality at the Site and soil sample MW-8 was collected during the installation of monitoring well MW-8.

Jan 1997: Remedial Investigation Workplan (RIW) was submitted to the NJDEP.

May 1999: Soil borings, SB-1 through SB-6, were advanced to further assess the soil quality at the Site.

June 1999: Handex submitted a Remedial Action Workplan (RAWP) to the NJDEP.

July 1999: Monitoring wells MW-15, MW-16, MW-17, and MW-18 were installed on the Site.

Dec. 1999: The NJDEP approved a RAWP for enhanced fluid recovery (EFR) for groundwater. Classification Exemption Area (CEA) was established for the Site.

April 2001: Three 10,000-gallon single-walled steel gasoline USTs, three pump islands, and associated piping were excavated and removed from the Site.

Dec. 2006: Five soil borings were advanced on the northern portion of the Site to further assess the extent of soil impacts.

May 2007: One 550-gallon fuel oil UST and two hydraulic lifts were excavated and removed from the Site.

June 2007: Soil was excavated and removed from the former pump island area. Approximately 93.44 tons of soil were excavated.

Nov. 2010: Initial RE submitted to the NJDEP.

Dec. 2010: EFR events were completed.

May 2011: Eleven soil borings were advanced to further characterize soil conditions on the northern portion of the Site.

Dec. 2011: A LNAPL Interim Remedial Measures (IRM) Report was submitted to the NJDEP.

Jan. 2013: A New Jersey Pollutant Discharge Elimination System (NJPDES) Permit-by-Rule was submitted for the removal of vapor-phase hydrocarbons by injections to groundwater at the Site.

Mar. 2013: A NJPDES Permit-by-Rule was approved by the NJDEP.

Oct. 2013: Approximately 321.30 tons of soil were excavated from the source area and removed from the Site.

March 2014 Four injection points were installed within the northern and southern tank fields.

May 2014: An RIR was submitted to NJDEP summarizing remedial investigation activities associated with the Site's AOCs.

Sept. 2014: Ixper70C® injections were complete.

Feb. 2015: Permit-by-Rule Monitoring Report submitted.

March 2019 Soil boring (CB-1) was installed as a confirmatory boring for total petroleum hydrocarbons (TPH) from sample WO-1 (6.0-6.5 ft)

2.6 Receptor Evaluation

An initial RE for the site was submitted to NJDEP on November 19, 2010 and an updated RE was submitted with the RIR in May 2014. An additional updated RE is also submitted as part of this RAR as **Appendix A**.

An updated well search was performed as part of the RE on January 11, 2019 using the NJDEP Data Miner XY Well Search tool. The updated well search found 100 new wells within a half mile of the Site, which were permitted, drilled, or sealed since the previous well search was completed on November 19, 2010. The overall XY Well Search yielded 402 well records within a half mile of the Site since 1950. Within that field of 402 wells, 21 of the records

showed potentially potable wells which includes well uses such as domestic and irrigation, installed within a half mile from the Site. The potentially potable wells identified were installed prior to the previous well search conducted in November 2010. No potentially potable wells have been installed within a ½ mile of the Site since 1984. Due to the presence of potable wells within ½ mile of the Site, a door to door canvas was performed 250 ft upgradient and 500 ft side and downgradient of the Site. No potable wells were identified as part of the door to door search. The updated XY Well Search from January 2019 is provided as **Appendix A: Table A-1**. Details for the potentially potable wells within ½ mile of the Site are provided in **Appendix A: Table A-2**. The well canvas information is provided as **Appendix A: Table A-3**.

Pursuant to N.J.A.C. 7:26E-1.10 through 1.16, no additional receptors have been identified regarding land use, groundwater, vapor intrusion, or ecological since the submittal of the RE in May 2014. A review of the NJDEP map of Environmentally Sensitive Areas within 200 ft of the Site can be referenced as **Appendix A: Exhibit A-1.**

3.0 REMEDIAL INVESTIGATION SUMMARY

An RIR was submitted for this Site in May 2014 and provided details of RI activities and results. Based on the RI results, delineation of contaminants of concern (COCs) is complete for soil and groundwater at the Site.

3.1 Applicable Remediation Standards

A NJDEP RAWP approval letter dated December 2, 1999, established the NJDEP Soil Cleanup Criteria (SCC) as the cleanup standards for the Site. The SCC were used as a basis for comparison and discussion of soil analytical data within this report. The three standards that comprise the NJDEP SCC are the Impact to Ground Water Screening Levels (IGWSCC), which is applicable to soil analytical data collected within the vadose zone, and the Residential Direct Contact Soil Cleanup Criteria (RDCSCC) and Non-Residential Direct Contact Soil Cleanup Criteria (NRDCSCC), which are applicable to soil analytical data collected within both the vadose and saturated zone.

Based on average historical depth to water collected from monitoring wells associated with the Site, which range from approximately 5.58 ft bgs to 15.64 ft bgs. The IGWSCC will therefore be applied to soil analytical data from 0 to 5.58 ft bgs.

The remediation standards applicable to site groundwater are the NJDEP GWQS, which were last amended in August 2018. Groundwater sampling results were also compared to the March 2013 NJDEP Groundwater Screening Levels (GWSL) to determine if conditions are present that trigger additional investigation of the VI pathway.

3.2 Soil Investigation Summary

In 1987, Amoco excavated and removed five 4,000-gallon gasoline USTs from the northern portion of the Site. In 1994, an environmental Site Investigation was performed, and one 550-gallon used oil UST was excavated and removed from the Site. Post excavation soil samples confirmed that a release occurred within the area of used oil UST. The June 1999

RAWP documents that the post excavation samples were collected and analyzed for TPH, VOCs, base neutrals, metals and polychlorinated biphenyls (PCBs). One soil sample, WO-1 (6.0-6.5 ft) located at the base of the former used oil UST excavation, contained a detection of TPH at 35,200 ppm which is above the 10,000 mg/kg NJDEP SCC. The remaining soil results were below the NJDEP SCC.

In September 1996, soil borings, S-1 through S-13, were advanced to assess the soil quality at the Site. Additionally, soil sample MW-8 (12.0-12.5 ft) was collected during the installation of monitoring well MW-8. The soil samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) and lead. Soil samples results were not detected above the NJDEP SCC.

In May 1999, soil borings, SB-1 through SB-6, were advanced to further assess the soil quality at the Site. Additionally, soil sample MW-14 (14.5-15.0 ft) was collected during the installation of monitoring well MW-14. The soil samples were collected within the saturated zone and therefore the NJDEP IGWSCC is not applicable. Soil samples results were not detected above the NJDEP SCC.

In April 2001, three 10,000-gallon single-walled steel gasoline USTs, three pump islands, and associated piping were excavated and removed from the central and southern portion of the Site. Approximately 58 tons of soil were excavated from the Site. Twenty-five post excavation samples were collected and analyzed for BTEX and methyl tert-butyl ether (MTBE). Benzene and MTBE were detected in soil sample PES-23D (4.0-4.5 ft) above the NJDEP IGWSCC. Post excavation samples PES-17 (12.0-12.5 ft) contained MTBE above the NJDEP IGWSCC; however, this sample was collected within the saturated zone and the NJDEP IGWSCC is not applicable. The remaining soil samples were below the NJDEP SCC.

In December 2006, five soil borings (SB-7 through SB-11) were advanced on the northern portion of the Site to further assess the extent of soil impact. The soil samples were collected within the saturated zone and therefore the NJDEP IGWSCC is not applicable. The remaining soil samples were below the NJDEP SCC.

In May 2007, one 550-gallon fuel oil UST and two hydraulic lifts were excavated and removed from the Site. Post excavation soil samples were collected from the former UST and hydraulic lift areas. Post excavation soil samples FO-1 and FO-2 were analyzed for TPH. Post excavation soil samples HY-1 and HY-2 were analyzed for BTEX, TPH, MTBE, and Tertiary Butyl Alcohol (TBA). None of these compounds were detected above the NJDEP SCC.

In June 2007, approximately 93.44 tons of soil were excavated from the former pump island area. Soil sample PES-23D (4.0-4.5 ft) was excavated and no longer represents a detection of MTBE and benzene above the NJDEP IGWSCC. Additionally, five post excavation soil samples were collected and were analyzed for BTEX, VOC tentatively identified compounds (TICs), and TBA. No samples were detected above the NJDEP SCC.

In May and June of 2011, 11 soil borings (ET-1 through ET-11) were advanced to further characterize soil conditions on the northern portion of the Site. Soil samples were collected from each location and various depths. The soil samples were collected within the saturated

zone and therefore the NJDEP IGWSCC does not apply. No samples were detected above the NJDEP SCC.

In October 2013, approximately 321.30 tons of soil were excavated from around monitoring wells MW-16, MW-17, and MW-18 and removed from the Site. Five soil samples (SW-1 through SW-5) were collected from the sidewalls of the excavation area and were analyzed for BTEX, MTBE, TBA, and VO TICS. The soil samples were collected within the saturated zone and therefore the NJDEP IGWSCC does not apply. Concentrations of these compounds were below the NJDEP SCC in soil samples SW-1 through SW-5.

One soil boring (CB-1) was installed in March 2019 as a confirmatory boring for TPH from sample WO-1 (6.0-6.5 ft) collected in 1994 as part of former used oil tank removal. The sample was collected from 6.0-6.5 ft bgs and analyzed for extractable petroleum hydrocarbons (EPH), as TPH is an antiquated analysis and no longer performed. The confirmatory soil sample result was non-detect for EPH.

Based on historical soil investigations, soil impacts have been delineated horizontally and vertically. Historic analytical results for soil at the Site are provided in **Table 2**. Historic investigation soil boring locations can be referenced on **Figure 4**. Soil analytical lab reports for sampling events conducted after the May 2014 RIR submission are included as **Appendix B.**

3.3 Groundwater Investigation Summary

In 1987, four monitoring wells (MW-1 through MW-4) were installed to identify potential groundwater impacts associated with the Site. Monitoring wells MW-1 through MW-4 were installed near the former tank field and were advanced to a depth of 20 ft bgs.

Monitoring wells MW-5 and MW-6 were installed in October 1995 in the central portion of the Site and monitoring well MW-7 was installed off-site, downgradient of the Site, in August 1996. Monitoring wells MW-8 and MW-9 were installed further downgradient. Each of these monitoring wells was installed to a depth of 20 ft bgs.

In January 1997, monitoring wells MW-10 through MW-12 were installed on the northern property boundary. In May 1999, monitoring wells MW-13 and MW-14 were installed on the Site to horizontally delineate groundwater impact. Monitoring wells MW-10 through MW-12 were installed to 20 ft bgs and MW-13 and MW-14 were advanced to 25 ft bgs.

Monitoring wells MW-15D and MW-16 were installed in December 1999. Monitoring well MW-15D was installed to vertically delineate groundwater impact and was advanced to a depth of 62 ft bgs. Monitoring well MW-16 was installed to 20 ft bgs. In January 2002, monitoring wells MW-17 through MW-19 were installed to characterize and evaluate groundwater impact on the northern portion of the Site. In August 2004, monitoring well MW-20 was installed to horizontally delineate groundwater impact. Each of the four monitoring wells were advanced to a depth of 20 ft bgs.

Monitoring wells MW-16, MW-17, and MW-18 were destroyed during the 2013 soil excavation and monitoring wells MW-16R, MW-17R, and MW-18R were installed in their place. Monitoring wells MW-16R, MW-17R, and MW-18R were advanced to a depth of 20 ft

bgs. Injection wells IW-1 through IW-4 were installed on the Site in March 2014 to a depth of 20 ft bgs to be utilized to inject calcium peroxide in the northern and southern tank field areas.

Currently, there are a total of 14 on-site and off-site monitoring wells associated with the Site. Monitoring well construction details are presented in **Table 2** and **Appendix C**. Monitoring well locations are illustrated in **Figure 5**. Monitoring wells continued to be sampled on a semiannual basis and analyzed for BTEX, TBA, and VOC TICs until the first half of 2019. Historically, BTEX, TBA, MTBE, and VOC TICs have been observed in select monitoring wells at the Site at concentrations exceeding their respective NJDEP GWQS.

Groundwater analytical results from monitoring wells MW-1 through MW-3, MW-7, MW-8, MW-10, MW-11, MW-12, MW-15D, and MW-20 demonstrate delineation of the dissolved-phase plume has been achieved. Based on the analytical results collected during the most recent sampling event (January 2019), benzene, TBA, and VOC TICs are present in Site groundwater at concentrations that exceed the GWQS.

Groundwater sampling analytical results are summarized in **Table 3**. Groundwater analytical lab reports for sampling events conducted after the May 2014 RIR submission are included as **Appendix D**, and the Electronic Data Deliverable (EDD) approval emails are included as **Appendix E.**

3.4 LNAPL Summary

An EFR event was initiated as an interim measure in March 1997 and was proposed as a remedial action for impacted groundwater and dissolved- and absorbed-phase petroleum hydrocarbons within the vadose zone in the RAWP. The RAWP was approved by the NJDEP on December 2, 1999 and modified in 2003 based on reduced concentrations in groundwater at the Site. EFR was not conducted at the Site from 2003 to 2010 due to high water table elevations.

Detectable LNAPL had not been identified in any well from 2003 to November 8, 2010, when approximately 0.35 ft of weather gasoline as observed in monitoring well MW-18. EnviroTrac prepared a LNAPL IRM Report dated December 20, 2011. The LNAPL IRM report documented EFR activities which were conducted on November 9, 2010 and November 12, 2010 utilizing monitoring well MW-18 as an extraction point. Approximately 1,020 gallons of LNAPL and hydrocarbon impacted groundwater were recovered between the two events. In addition to the completion of the EFR events in 2010, an absorbent wick was installed within monitoring well MW-18 as a passive remedial measure to recover product. No LNAPL had been detected since November 18, 2010, therefore the absorbent wick was removed. Monitoring well MW-18 was properly abandoned prior to the excavation activities in 2013.

In October 2015 and October 2016, LNAPL was measured in monitoring well MW-17R with a thickness of 0.4 ft and 0.09 ft, respectively. The observation of LNAPL at MW-17R coincides with a greater depth to water table compared to historical observations, which suggests that the occurrence of LNAPL is a function of hydrogeologic conditions rather than a new release. This is supported by the fact that the concentration of COCs in groundwater in MW-17R are

negligible and have not increased. The presence of LNAPL on groundwater has not been observed since October 2016.

3.5 Vapor Intrusion Evaluation

Benzene had been detected above the VI GWSL in monitoring well MW-18R since its installation in 2014. Benzene was below the VI GWSL during the most recent groundwater sampling event which occurred in January 2019. The nearest structures to monitoring well MW-18R are residences, located approximately 135 ft east. Since the residences are located outside of the 30 ft VI trigger distance, a VI investigation is not warranted at this time. The Site will continue to be monitored for any changes in land use; however, no changes are planned or expected at this time.

4.0 REMEDIAL ACTION

This section presents a summary of the Site's AOCs and its associated RA.

4.1 Summary and Status of AOCs

4.1.1 AOC-1: Former UST system consisting of five 4,000-gallon gasoline USTs and associated piping

As stated in the NJDEP December 2, 1999 RAW approval letter, five 4,000-gallon USTs and associated piping were excavated from the northern portion of the Site. No additional details pertaining to the condition of the USTs upon removal or post excavation soil sample data was available. Between 1999 and 2011 multiple soil sampling events were conducted to assess the soil quality at the Site. Soil borings were advanced, and samples were collected from immediately above the water table and were analyzed for BTEX, MTBE, TBA, and lead. Soil analytical results were below the NJDEP SCC.

4.1.2 AOC 2: Former 550-gallon used oil UST and associated piping

One former 550-gallon used oil UST was excavated and removed from the Site. Four post excavation soil samples were collected and analyzed for TPH, VOCs, base neutrals, metals and PCBs. TPH was detected above the NJDEP SCC in soil sample WO-1 and the remaining samples were below the NJDEP SCC. In March 2019, a confirmatory soil boring (CB-1) was installed to assess the presence of petroleum hydrocarbons at this location. EPH was non-detect at confirmatory sample CB-1 (6.0-6.5 ft).

4.1.3 AOC 3: Former UST system consisting of three 10,000-gallon gasoline USTs, three pump islands, and associated piping

In April 2001, three 10,000-gallon single-walled steel gasoline USTs, three pump islands, and associated piping were excavated and removed from the Site. Approximately 58 tons of soil was excavated and removed. Twenty-five post excavation soil samples (PES-1 through PES-25) were collected from the Site. Soil sample PES-17 contained a detection of MTBE above the NJDEP IGWSCC. Soil sample PES-23D contained detections of MTBE and benzene above the NJDEP IGWSCC. The post excavation sample PES-17 (12.0-12.5 ft) was collected within

the saturated zone and therefore the NJDEP IGWSCC is not applicable. The remaining soil samples were below the NJDEP SCC.

In May 2007, one 550-gallon fuel oil UST and two hydraulic lifts were excavated and removed from the Site. Post excavation soil samples FO-1 and F-2 were collected from the former UST and post-excavation samples HY-1 and HY-2 were collected from the former hydraulic lift area. Post excavation soil samples FO-1 and FO-2 were analyzed for TPH and there were no exceedances of the NJDEP SCC. Post excavation samples HY-1 and HY-2 were analyzed for BTEX, TPH, MTBE, and TBA and there were no exceedances of the NJDEP SCC.

In June 2007, approximately 93.44 tons of soil was excavated from the former pump island area. Soil sample PES-23D (4.0-4.5 ft) was excavated and no longer represents a detection of MTBE and benzene above the NJDEP IGWSCC. Additionally, five post excavation soil samples (PE-1 through PE-5) were collected and were analyzed for BTEX, VOC TICs, and TBA. No samples were detected above the NJDEP SCC.

Based on LNAPL observed in monitoring well MW-18, two EFR events were conducted on November 9, 2010 and November 12, 2010, utilizing monitoring well MW-18 as an extraction point. Approximately 1,020 gallons of LNAPL and hydrocarbon impacted groundwater were recovered.

In October 2013, approximately 321.30 tons of soil was excavated from around monitoring wells MW-16, MW-17, and MW-18 and removed from the Site. The excavation extended to approximately 16 ft bgs. Five soil samples were collected from the sidewalls of the excavation area. The soil samples were collected within the saturated zone and therefore do not represent accurate detections of contaminants above the NJDEP IGWSCC. The soil samples were detected below the NJDEP SCC. Waste documentation can be referenced in the 2014 RIR prepared by Envirotrac.

In March 2013, a NJPDES Permit-by-Rule was issued for the injections of calcium peroxide to groundwater at the Site. In March 2014, injection points IW-1, IW-2, and IW-3 were installed in the northern tank field area and injection well IW-4 was installed in the southern tank field area. Ixper70C®, calcium peroxide, injections were completed on September 24, 2014 and October 3, 2014 in injection points IW-1 through IW-4 and monitoring well MW-18R. A Permit-by-Rule Monitoring Report was submitted in February 2015.

4.3 Groundwater Trend Analysis

A Mann-Kendall trend analysis was performed for benzene concentrations at monitoring wells MW-6, MW-14, MW-16R, MW-17R, and MW-18R. The Mann-Kendall portrays decreasing trends in monitoring wells MW-6, MW-14, MW-16R, and MW-18R and a stable trend of benzene in monitoring well MW-17R. The Mann-Kendall analyses can be referenced in **Appendix F**.

5.0 DATA USABILITY

In accordance with N.J.A.C 7:26E-1.6(b) 9, a discussion of the usability of the laboratory analytical data referenced in this report was generated following the requirements of N.J.A.C. 7:26E-2.0, Quality Assurance for Sampling and Laboratory Analysis.

Groundwater and soil samples were placed in laboratory supplied bottleware which was then placed in a cooler maintained at 4° Celsius to ensure proper preservation. Proper chain of custody documentation was maintained until delivery to the laboratory.

Analysis of samples for this project was performed in accordance with United States Environmental Protection Agency (US EPA) or US EPA-approved methods. Each analytical data package generated by the laboratory was reviewed for consistency with previous data and the hydrogeological characteristics of the Site. Quality Assurance/Quality Control (QA/QC) data is available within each individual laboratory analytical package. Further information regarding the project's data quality objectives and data validation processes can be found in the Site-specific Quality Assurance Project Plan (Parsons 2017).

6.0 INSTITUTIONAL CONTROLS

6.1 Classification Exception Area

A CEA was approved by the NJDEP on December 2, 1999, and a revised CEA proposal is being submitted with this RAR to model for the reduced number of COCs present in groundwater associated with the Site, and the reduced plume size since the 1999 CEA submittal. Using existing and historical groundwater concentrations, potentiometric maps, and a regression analysis as required by the NJDEP, the duration of the CEA is estimated as 16 years from the date of submission, with achievement of GWQS by 2035. The CEA is projected to cover an area with a maximum length of 215 ft, and a maximum width of 100 ft. The revised CEA proposal can be referenced in **Appendix G**.

6.2 Remedial Action Permit for Groundwater

A Remedial Action Permit (RAP) Application for monitored natural attenuation (MNA) of groundwater, as required by N.J.A.C. 7:26E-5.7, is being submitted concurrent with this RAR and can be referenced in **Appendix H**. The RAP application includes a groundwater monitoring plan for biennial monitoring of benzene and VOC TICs in AOC monitoring wells MW-14, MW-16R, MW-17R, MW-18R; plume sampling points MW-3 and MW-6; and sentinel well MW-20.

7.0 REMEDIATION COSTS

As required by N.J.A.C. 7:26E-5.7, this section is provided to present a summary of the RA costs. Since December 1994, the implementation of the remediation at the Site is approximately $738,020 for investigation and remediation costs. Additional remediation costs will be incurred for continued operation, maintenance, and monitoring of the Site.

8.0 REFERENCES

EnviroTrac. *Remedial Investigation Report BP Service Station No. 84849*. May 2014.

Handex of New Jersey Inc. *Remedial Action Workplan*. June 1997.

New Jersey Department of Environmental Protection. *Administrative Requirements for the Remediation of Contaminated Sites*. January 2018.

New Jersey Department of Environmental Protection. *Monitored Natural Attenuation Technical Guidance*. March 2012.

New Jersey Department of Environmental Protection. *Final Guidance on Designation of Classification Exception Areas*. November 1998.

New Jersey Department of Environmental Protection. *Technical Requirements for Site Remediation*. June 2008, Revised July 2018.

New Jersey Department of Environmental Protection. *Technical Guidance for the Attainment of Remediation Standards and Site-Specific Criteria*. September 2012.

New Jersey Department of Environmental Protection. *Vapor Intrusion Technical Guidance*. January 2018.

Tables

Table 1
Soil Analytical Summary
Former BP Service Station #84849
945 Pleasant Valley Way
West Orange, Essex County, New Jersey

Sample ID	Sample Date	Depth in feet bgs	Constituents of Concern (mg/kg)										
			Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Naphthalene	Lead	TPH	TICs	TBA	EPH
Impact to Groundwater Soil Cleanup Criteria			**1**	**500**	**100**	**67**	**3.1**	**100**	**400**	**10000**	**100/500**	**-**	**5100**
Residential Direct Contact Soil Cleanup Criteria			**3**	**1000**	**1000**	**410**	**-**	**230**	**400**	**-**	**-**	**-**	**5100**
Non-Residential Direct Contact Soil Cleanup Criteria			**13**	**1000**	**1000**	**1000**	**-**	**4200**	**600**	**-**	**-**	**-**	**54000**
WO-1	1994	6-6.5	NA	NA	NA	20	NA	NA	NA	**35200**	NA	NA	NA
S-1	9/25/1996	12-12.5	ND	ND	ND	ND	NA	NA	2.83	NA	NA	NA	NA
S-2	9/25/1996	12-12.5	ND	ND	ND	ND	NA	NA	2.57	NA	NA	NA	NA
S-3	9/25/1996	12-12.5	ND	ND	ND	ND	NA	NA	10.9	NA	NA	NA	NA
S-4	9/25/1996	12-12.5	ND	ND	ND	ND	NA	NA	2.68	NA	NA	NA	NA
S-5	9/25/1996	12-12.5	ND	ND	ND	ND	NA	NA	4.96	NA	NA	NA	NA
S-6	9/25/1996	12-12.5	ND	0.01	0.002	0.029	NA	NA	3.04	NA	NA	NA	NA
S-7	9/25/1996	12-12.5	ND	ND	ND	0.001	NA	NA	2.79	NA	NA	NA	NA
S-8	9/25/1996	12-12.5	ND	0.002	ND	0.004	NA	NA	1.99	NA	NA	NA	NA
S-9	9/25/1996	12-12.5	ND	ND	ND	ND	NA	NA	2.78	NA	NA	NA	NA
S-10	9/25/1996	12-12.5	ND	0.001	ND	0.002	NA	NA	4.87	NA	NA	NA	NA
S-11	9/25/1996	4-4.5	ND	NA	NA	0.002	NA	NA	2.96	NA	NA	NA	NA
S-12	9/25/1996	4-4.5	ND	NA	NA	0.001	NA	NA	2.66	NA	NA	NA	NA
S-13	9/25/1996	4-4.5	ND	NA	NA	ND	NA	NA	3.59	NA	NA	NA	NA
SB-1	5/20/1999	9-9.5	0.119	1.21	0.626	3.84	NA	NA	ND	NA	NA	NA	NA
SB-2	5/20/1999	9-9.5	ND	0.222	1.72	8.52	NA	NA	ND	NA	NA	NA	NA
SB-3	5/20/1999	9-9.5	ND	ND	ND	ND	NA	NA	ND	NA	NA	NA	NA
SB-4	5/20/1999	9-9.5	ND	ND	13.1	69.8	NA	NA	ND	NA	NA	NA	NA
SB-5	5/20/1999	9-9.5	ND	13.8	16.5	126	NA	NA	ND	NA	NA	NA	NA
SB-6	5/20/1999	9-9.5	ND	5.12	4.16	27.3	NA	NA	ND	NA	NA	NA	NA
MW-8	9/25/1996	12-12.5	ND	ND	ND	ND	NA	NA	5.01	NA	NA	NA	NA
MW-14	5/20/1999	14.5-15	1.08	0.078	0.501	1.35	NA	NA	ND	NA	NA	NA	NA
PES-1	4/18/2001	10.5-11	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
PES-2	4/18/2001	10.5-11	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
PES-3	4/18/2001	10.5-11	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
PES-4	4/18/2001	10.5-11	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
PES-5	4/18/2001	10.5-11	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
PES-6	4/18/2001	10.5-11	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
PES-7	4/18/2001	10.5-11	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
PES-8	4/18/2001	10.5-11	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
PES-9	4/18/2001	10.5-11	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
PES-10	4/18/2001	10.5-11	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
PES-11	4/18/2001	10.5-11	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
PES-12	4/18/2001	10.5-11	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
PES-13	4/18/2001	10.5-11	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
PES-14	4/18/2001	10.5-11	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
PES-15	4/18/2001	12-12.5	ND	0.185	ND	ND	1.84	NA	NA	NA	NA	NA	NA
PES-16	4/18/2001	12-12.5	ND	ND	0.356	1.03	1.12	NA	NA	NA	NA	NA	NA
PES-17	4/18/2001	12-12.5	ND	0.702	ND	0.467	14	NA	NA	NA	NA	NA	NA
PES-18	4/19/2001	3-3.5	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
PES-19	4/19/2001	3-3.5	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
PES-20	4/19/2001	3-3.5	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
PES-21	4/19/2001	3-3.5	ND	0.223	ND	ND	0.726	NA	NA	NA	NA	NA	NA
PES-22	4/19/2001	3-3.5	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
PES-23D	4/19/2001	4.5-5	**1.3**	26.8	7.62	39.1	**48**	NA	NA	NA	NA	NA	NA
PES-24	4/19/2001	3-3.5	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
PES-25	4/19/2001	3-3.5	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
SB-7	12/13/2006	12	0.146	0.173	1.42	7.12	ND (0.042)	2.4	NA	NA	NA	NA	NA
SB-8A	12/13/2006	9.5	ND (0.032)	ND (0.036)	ND (0.030)	ND (0.033)	ND (0.037)	ND (0.030)	NA	NA	NA	NA	NA
SB-8B	12/13/2006	12	0.415	4.69	3.3	19.5	ND (0.038)	2.1	NA	NA	NA	NA	NA
SB-8C	12/13/2006	14	0.267	0.219	1.11	2.33	ND (0.040)	0.726	NA	NA	NA	NA	NA
SB-9A	12/13/2006	9	ND (0.027)	ND (0.030)	ND (0.025)	ND (0.028)	ND (0.031)	NA	NA	NA	NA	NA	NA
SB-9B	12/13/2006	14	ND (0.031)	0.863	0.860	5.66	ND (0.036)	NA	NA	NA	NA	NA	NA
SB-9C	12/13/2006	15	ND (0.034)	ND (0.039)	ND (0.032)	ND (0.035)	ND (0.040)	NA	NA	NA	NA	NA	NA
SB-10A	12/13/2006	9	ND (0.027)	0.241	9.52	82.9	ND (0.032)	NA	NA	NA	NA	NA	NA
SB-10B	12/13/2006	12	1.41	7.68	2.57	16.1	ND (0.033)	NA	NA	NA	NA	NA	NA
SB-10C	12/13/2006	14	2.85	10.4	0.964	4.61	ND (0.033)	NA	NA	NA	NA	NA	NA
SB-11A	12/13/2006	9	NA	NA	NA	ND (0.027)	NA	NA	NA	NA	NA	NA	NA
SB-11B	12/13/2006	11.5	NA	NA	NA	ND (0.028)	NA	NA	NA	NA	NA	NA	NA
FO-1	5/17/2007	6	NA	NA	NA	NA	NA	NA	NA	424	NA	NA	NA
FO-2	5/17/2007	6	NA	NA	NA	NA	NA	NA	NA	69.8	NA	NA	NA
HY-1	5/23/2007	9	ND (0.029)	ND (0.032)	ND (0.027)	ND (0.029)	ND (0.033)	NA	NA	NA	NA	ND (0.440)	NA
HY-2	5/23/2007	9	ND (0.029)	ND (0.033)	ND (0.027)	ND (0.030)	ND (0.034)	NA	NA	NA	NA	ND (0.450)	NA
PE-1	6/4/2007	7	ND (0.025)	ND (0.028)	ND (0.023)	0.281 J	ND (0.029)	NA	NA	NA	ND	ND (0.390)	NA
PE-2	6/4/2007	6.5	ND (0.033)	ND (0.037)	ND (0.031)	ND (0.034)	ND (0.038)	NA	NA	NA	ND	ND (0.510)	NA
PE-3	6/4/2007	6.5	(ND (0.033)	ND (0.038)	ND (0.031)	ND (0.034)	ND (0.039)	NA	NA	NA	ND	ND (0.520)	NA
PE-4	6/4/2007	6.5	ND (0.033)	ND (0.033)	ND (0.027)	ND (0.030)	ND (0.034)	NA	NA	NA	ND	ND (0.450)	NA
PE-5	6/4/2007	6.5	ND (0.027)	ND (0.030)	ND (0.025)	ND (0.028)	ND (0.031)	NA	NA	NA	ND	ND (0.420)	NA
ET-1	5/3/2011	9.0-9.5	ND (0.026)	ND (0.052)	0.6	2.1	ND (0.026)	NA	14.4	NA	NA	ND (1.0)	NA
ET-1A	5/3/2011	13.0-13.5	0.0015 J	0.0073	0.008	0.04	ND (0.050)	NA	7.06	NA	NA	ND (0.02)	NA
ET-1B	5/3/2011	16.5-17.0	0.01	0.24	0.18	1.2	ND (0.00059)	NA	8.76	NA	NA	ND (0.023)	NA
ET-2	5/3/2011	9.0-9.5	ND (0.025)	ND (0.050)	ND (0.050)	ND (0.050)	ND (0.025)	NA	14.1	NA	NA	ND (0.99)	NA
ET-2A	5/3/2011	13.0-13.5	ND (0.07)	4.2	17	110	ND (0.07)	NA	6.9	NA	NA	ND (2.8)	NA
ET-2B	5/3/2011	15.0-15.5	ND (0.036)	0.350 J	0.45	3.6	ND (0.036)	NA	11.3	NA	NA	ND (1.4)	NA
ET-2C	5/3/2011	18.5-19.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ET-3	5/3/2011	9.0-9.5	ND (0.071)	ND (0.140)	3.8	30	ND (0.071)	NA	10	NA	NA	ND (2.9)	NA
ET-3A	5/3/2011	12.0-12.5	0.130 J	38	12	82	ND (0.074)	NA	24.4	NA	NA	ND (3.0)	NA
ET-3B	5/3/2011	15.5-16.0	ND (0.059)	0.370 J	6	34	ND (0.059)	NA	8.03	NA	NA	ND (2.3)	NA
ET-3C	5/3/2011	19.0-19.5	0.048 J	1	0.67	3.9	ND (0.043)	NA	11.1	NA	NA	ND (1.7)	NA
ET-4	5/3/2011	8.0-8.5	0.067 J	0.210 J	0.36	1.1	ND (0.028)	NA	10	NA	NA	ND (1.1)	NA
ET-4A	5/3/2011	11.0-11.5	0.180 J	ND (0.069)	1.3	1.6	ND (0.034)	NA	9.72	NA	NA	ND (1.4)	NA
ET-4B	5/3/2011	12.0-12.5	0.73	0.260 J	0.99	1.9	ND (0.042)	NA	7.3	NA	NA	ND (1.7)	NA
ET-5	5/3/2011	9.0-9.5	0.0019 J	0.0014 J	ND (0.0014)	ND (0.0014)	ND (0.00068)	NA	9.78	NA	NA	ND (0.027)	NA
ET-5A	5/3/2011	13.0-13.5	0.094 J	1.2	2.2	13	ND (0.033)	NA	11.4	NA	NA	ND (1.3)	NA
ET-5B	5/3/2011	15.0-15.5	0.76	0.310 J	0.71	1.9	ND (0.032)	NA	9.3	NA	NA	ND (1.3)	NA
ET-5C	5/3/2011	15.5-16.0	2	0.081 J	1	0.99	ND (0.033)	NA	8.48	NA	NA	ND (1.3)	NA
ET-6	5/3/2011	9.5-10.0	ND (0.030)	ND (0.059)	0.33	0.62	ND (0.030)	NA	9.7	NA	NA	ND (1.2)	NA
ET-6A	5/3/2011	11.5-12.0	ND (0.036)	0.079 J	1.1	5.4	ND (0.036)	NA	15.7	NA	NA	ND (1.4)	NA
ET-6B	5/3/2011	13.5-14	0.120 J	0.66	1.1	5.1	ND (0.039)	NA	16.9	NA	NA	ND (1.6)	NA
ET-7	5/3/2011	6.5-7.0	ND (0.00058)	ND (0.0012)	ND (0.0012)	ND (0.0012)	ND (0.00058)	NA	2.98	NA	NA	ND (0.023)	NA
ET-7A	5/3/2011	9.0-9.5	ND (0.00059)	0.0022 J	ND (0.0012)	0.0016 J	ND (0.00059)	NA	2.9	NA	NA	ND (0.024)	NA
ET-8	5/4/2011	9.0-9.5	0.00065 J	ND (0.0011)	ND (0.0011)	ND (0.0011)	ND (0.00057)	NA	9.43	NA	NA	ND (0.023)	NA
ET-8A	5/4/2011	11.0-11.5	0.066 J	0.120 J	0.74	3.9	ND (0.034)	NA	6.38	NA	NA	ND (1.4)	NA
ET-8B	5/4/2011	14-14.5	3	0.4	2	5.4	ND (0.032)	NA	6.53	NA	NA	ND (1.3)	NA
ET-9	5/4/2011	7.0-7.5	ND (0.31)	ND (0.62)	ND (0.62)	1.4 J	ND (0.31)	NA	6.07	NA	NA	ND (12)	NA
ET-9A	5/4/2011	9.0-9.5	ND (0.057)	ND (0.11)	4.8	26	ND (0.057)	NA	8.27	NA	NA	ND (2.3)	NA
ET-10A	6/2/2011	8.0 - 9.0	0.019	0.015	0.13	0.2	ND (0.00068)	NA	NA	NA	NA	ND (0.027)	NA
ET-10B	6/2/2011	11.0-12.0	ND (0.032)	0.23 J	0.69	5.7	ND (0.032)	NA	NA	NA	NA	ND (1.3)	NA
ET-10C	6/2/2011	14.0-15.0	0.035	0.0047 J	0.14	0.096	ND (0.00064)	NA	NA	NA	NA	ND (0.025)	NA
ET-11	6/2/2011	7.0-8.0	0.012	0.0031 J	0.0012 J	0.0021 J	0.0013 J	NA	NA	NA	NA	ND (0.022)	NA
CB-1	3/22/2019	6.0-6.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND (89.2)
POST EXCAVATION SIDE WALL SAMPLES													
SW-1	10/18/2013	8.5-9	ND	0.59 J	0.88 J	4.6	ND	NA	NA	NA	7.2 J	ND	NA
SW-2	10/18/2013	9.5-10	ND	0.24 J	13.7	50.1	ND	NA	NA	NA	830 J	ND	NA
SW-3	10/18/2013	9.5-10	0.21 J	3.3	10.8	17.6	ND	NA	NA	NA	270 J	ND	NA
SW-4	10/18/2013	9.5-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
SW-5	10/18/2013	9.5-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA

NOTES:
Bold - Concentration exceeds the IGWSCC
ND (0.033) - Not detected above the method detection limit
NA - Not Analyzed
MTBE - Methyl tertiary butyl ether
TBA - Tertiary butyl alcohol
TPH - Total Petroleum Hydrocarbin
TIC - Tentatively Identifed Compound
EPH - Extracted Petroleum Hydrocabons
J - Indicates an estimated value

TABLE 2
MONITORING WELL CONTRUCTION DATA
FORMER AMOCO/BP SERVICE STATION #84849
PI # 016006
945 PLEASANT VALLEY WAY
WEST ORANGE, ESSEX COUNTY, NEW JERSEY

Well ID	Permit Number	Date Installed	Easting (X)	Northing (Y)	Top of Casing Elevation (Feet AMSL)	Top of Screen Elevation (Feet AMSL)	Bottom of Screen Elevation (Feet AMSL)	Well Diameter (Inches)	Casing Interval (Feet BGS)	Screen Interval (Feet BGS)	Screen Length (Feet)	Total Depth (Feet BGS)
MW-1	26-11686	9/11/1987	556064.8	714174.0	371.34	366.34	351.34	4	0-5	5-20	15	20
MW-2	26-11687	9/11/1987	556029.7	714183.9	372.9	367.90	352.90	4	0-5	5-20	15	20
MW-3	26-11688	9/11/1987	556077.2	714201.7	371.34	366.34	351.34	4	0-5	5-20	15	20
MW-6	26-42252	10/31/1995	556091.0	714223.6	371.56	369.56	351.56	2	0-2	2-20	18	20
MW-8	26-45530	9/25/1996	556039.3	714142.2	371.91	366.91	351.91	2	0-5	5-20	15	20
MW-10	26-46201	1/21/1997	556109.5	714361.5	374.60	373.60	358.60	4	0-1	1-16	15	16
MW-11	26-46200	1/21/1997	556085.0	714344.7	374.21	372.21	357.21	4	0-2	2-17	15	17
MW-12	26-46199	1/21/1997	556057.4	714343.7	374.37	372.37	357.37	4	0-2	2-17	15	17
MW-14	26-52516	5/20/1999	556032.2	714327.4	374.20	369.20	349.20	4	0-5	5-25	20	25
MW-15D	26-56098	12/15/1999	556030.8	714134.7	371.69	324.69	309.69	2	0-47	47-62	15	62
MW-20	26-62921	8/20/2004	556077.5	713994.5	369.98	364.98	354.98	4	0-5	5-15	10	15
IW-1	E201403239	3/24/2014	556037.1	714329.9	373.41	368.41	353.41	2	0-5	5-20	15	20
IW-2	E201403240	3/24/2014	556055.7	714336.6	373.24	368.24	353.24	2	0-5	5-20	15	20
IW-3	E201403241	3/24/2014	556086.0	714344.4	373.29	368.29	353.29	2	0-5	5-20	15	20
IW-4	E201403242	3/24/2014	556048.0	714188.9	371.49	366.49	351.49	2	0-5	5-20	15	20
MW-16R	E201403245	3/24/2014	556069.1	714305.0	372.85	367.85	347.85	2	0-5	5-25	20	25
MW-17R	E201403246	3/24/2014	556090.0	714306.6	372.06	367.06	347.06	2	0-5	5-25	20	25
MW-18R	E201403247	3/24/2014	556059.6	714292.3	372.48	367.48	347.48	2	0-5	5-25	20	25

TABLE 3
GROUNDWATER ANALYTICAL DATA
FORMER BP SERVICE STATION #84849
PI #016006
945 PLEASANT VALLEY WAY
WEST ORANGE, ESSEX COUNTY, NEW JERSEY

Well ID	Date	Groundwater Monitoring Data (ft)				Groundwater Analytical Data (in micrograms per liter [µg/l])						
		Top of Casing	Depth to Ground Water	LPH Thickness	Ground Water Elevation	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	TICs
		NJDEP Ground Water Quality Criteria				1	600	700	1,000	70	100	100/500
		Vapor Intrusion Screening Levels				20	330,000	700	8,600	580	--	--
MW--1	11/30/1995	371.43	10.15	--	361.28	--	--	--	--	--	--	--
	11/20/1996	371.43	11.34	--	360.09	--	--	--	--	--	--	--
	10/6/1997	371.43	14.79	--	356.64	**353**	ND	ND	ND	**39,600**	**11,300**	--
	1/29/1998	371.43	12.71	--	358.72	ND	ND	ND	ND	**16,200**	**18,000**	--
	10/6/1998	371.43	14.84	--	356.59	**164**	5.01	25.3	3.7	**3,830**	**6,430**	--
	2/2/1999	371.43	13.64	--	357.79	**76**	4.14	37.7	30	**711**	**9,960**	--
	8/3/1999	371.43	15.07	--	356.36	**42.5**	1.2	43.5	ND	**231**	**4,100**	--
	12/1/1999	371.43	13.66	--	357.77	ND	ND	4.3	ND	**91.1**	ND	--
	3/9/2000	371.43	12.99	--	358.44	ND	ND	ND	ND	**79.4**	ND	--
	6/5/2000	371.43	13.31	--	358.12	0.78	ND	0.71	ND	24.1	**327**	--
	10/26/2000	371.43	13.98	--	357.45	**8.8**	ND	0.87	0.34	41.0	**192**	--
	1/18/2001	371.43	13.38	--	358.05	**3.5**	ND	ND	ND	**142**	**293**	--
	4/30/2001	371.43	12.65	--	358.78	**7.6**	7.7	ND	ND	**887**	**725**	--
	10/19/2001	371.43	14.10	--	357.33	**211**	ND	15.6	ND	**275**	**1,400**	--
	4/12/2002	371.43	13.86	--	357.57	**7.7**	ND	ND	ND	**1,940**	**11,300**	--
	10/4/2002	371.43	14.12	--	357.31	0.7	ND	ND	ND	36.6	**1,510**	**514**
	4/9/2003	371.43	13.46	--	357.97	ND (0.19)	ND (0.24)	ND (0.65)	ND (0.55)	1.9	ND (5.9)	274.1
	11/6/2003	371.43	13.02	--	358.41	ND (0.19)	1.5	ND (0.65)	0.84	4.0	ND (5.9)	--
	4/13/2004	371.43	12.68	--	358.75	ND (0.19)	ND (0.24)	ND (0.65)	ND (0.55)	ND (0.77)	ND (5.9)	0
	10/13/2004	371.43	13.27	--	358.16	ND (0.33)	ND (0.11)	ND (0.22)	ND (0.26)	1.5	ND (10)	--
	4/13/2005	371.43	13.65	--	357.78	ND (0.33)	ND (0.11)	ND (0.22)	ND (0.26)	ND (0.41)	ND (10)	7.6
	10/14/2005	371.43	11.61	--	359.82	ND (0.11)	ND (0.14)	ND (0.38)	ND (0.18)	ND (0.17)	ND (8.8)	--
	4/7/2006	371.43	13.71	--	357.72	ND (0.18)	ND (0.31)	ND (0.23)	ND (0.25)	ND (0.35)	ND (9.6)	0
	10/24/2006	371.43	13.17	--	358.26	ND (0.18)	ND (0.31)	0.53	1.8	1.7	ND (9.6)	--
	4/30/2007	371.43	11.95	--	359.48	ND (0.18)	ND (0.31)	ND (0.23)	ND (0.25)	ND (0.35)	ND (9.6)	0
	10/18/2007	371.43	14.62	--	356.81	ND (0.18)	1.2	0.71 J	3.4	1.3	ND (9.6)	--
	4/28/2008	371.43	2.10	--	369.33	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	--
	10/13/2008	371.43	14.11	--	357.32	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	1.3 J	ND (30)	--
	5/11/2009	371.43	13.20	--	358.23	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	--
	11/11/2009	371.43	13.90	--	357.53	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	1.0 J	ND (30)	154 J
	4/20/2010	371.43	13.04	--	358.39	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	--
	9/3/2010	371.43	14.95	--	356.48	--	--	--	--	--	--	--
	4/26/2011	371.43	12.49	--	358.94	--	--	--	--	--	--	--
	10/27/2011	371.43	8.16	--	363.27	--	--	--	--	--	--	--
	4/20/2012	371.43	14.42	--	357.01	--	--	--	--	--	--	--
	10/2/2012	371.43	14.03	--	357.40	--	--	--	--	--	--	--
	4/9/2013	371.43	13.30	--	358.13	ND (0.50)	ND (0.70)	ND (0.80)	0.87 J	ND (0.50)	ND (10)	15 J
	10/16/2013	371.43	14.75	--	356.68	ND (0.50)	ND (0.70)	ND (0.80)	ND (0.80)	ND (0.50)	ND (10)	0
	3/10/2014	371.43	12.94	--	358.49	ND (0.28)	ND (0.44)	ND (0.21)	ND (0.19)	ND (0.29)	ND (1.9)	0
	7/4/2014	371.43	12.53	--	358.90	--	--	--	--	--	--	--
	9/23/2014	371.43	14.73	--	356.70	ND (0.21)	ND (0.22)	ND (0.40)	ND (0.20)	0.65	ND (4.7)	0
	10/31/2014	371.43	14.36	--	357.07	ND (0.21)	ND (0.22)	ND (0.40)	ND (0.20)	0.95	11.7	14.8 J
	11/24/2014	371.43	13.91	--	357.52	ND (0.21)	ND (0.22)	ND (0.40)	ND (0.20)	0.27	ND (4.7)	0
	4/16/2015	371.43	13.58	--	357.85	ND (0.24)	ND (0.16)	ND (0.27)	ND (0.17)	ND (0.24)	ND (2.8)	0
	10/20/2015	371.43	15.15	--	356.28	ND (0.24)	ND (0.16)	ND (0.27)	ND (0.17)	ND (0.24)	ND (2.8)	0
	4/12/2016	371.43	13.53	--	357.90	--	--	--	--	--	--	--
	10/25/2016	371.43	15.40	--	356.03	--	--	--	--	--	--	--
	4/17/2017	371.43	12.90	--	358.53	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (5.0)	0 U
	10/4/2017	371.43	14.90	--	356.53	--	--	--	--	--	--	--
	4/3/2018	371.43	12.56	--	358.87	--	--	--	--	--	--	--
	10/1/2018	371.43	12.41	--	359.02	--	--	--	--	--	--	--
	1/15/2019	371.43	12.21	--	359.22	--	--	--	--	--	--	--

TABLE 3
GROUNDWATER ANALYTICAL DATA
FORMER BP SERVICE STATION #84849
PI #016006
945 PLEASANT VALLEY WAY
WEST ORANGE, ESSEX COUNTY, NEW JERSEY

Well ID	Date	Groundwater Monitoring Data (ft)				Groundwater Analytical Data (in micrograms per liter [µg/l])						
		Top of Casing	Depth to Ground Water	LPH Thickness	Ground Water Elevation	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	TICs
		NJDEP Ground Water Quality Criteria				1	600	700	1,000	70	100	100/500
		Vapor Intrusion Screening Levels				20	330,000	700	8,600	580	--	--
MW--2	11/30/1995	372.90	13.32	--	359.58	--	--	--	--	--	--	--
	11/20/1996	372.90	13.44	--	359.46	--	--	--	--	--	--	--
	10/6/1997	372.90	13.42	--	359.48	**46.8**	ND	45.1	ND	16.5	ND	--
	1/29/1998	372.90	8.71	--	364.19	**28**	ND	14.3	ND	**1,030**	**169**	--
	10/6/1998	372.90	13.75	--	359.15	**10.9**	ND	13	ND	27	ND	--
	2/2/1999	372.90	10.74	--	362.16	**1.35**	ND	ND	ND	13.3	ND	--
	8/3/1999	372.90	13.32	--	359.58	**7.6**	ND	8.3	ND	27.9	ND	--
	12/1/1999	372.90	11.43	--	361.47	**8.6**	ND	4	ND	**78.8**	ND	--
	3/9/2000	372.90	10.24	--	362.66	**29.7**	1	9.2	2.5	33	ND	--
	6/5/2000	372.90	10.40	--	362.50	**3.5**	ND	2.7	ND	8.7	ND	--
	10/26/2000	372.90	12.45	--	360.45	**3.4**	ND	4.7	ND	**192**	ND	--
	1/18/2001	372.90	11.43	--	361.47	**5.2**	ND	5.2	ND	43.6	ND	--
	4/30/2001	372.90	9.50	--	363.40	**9.8**	1.8	3.1	ND	59.2	ND	--
	10/19/2001	372.90	12.29	--	360.61	--	--	--	--	--	--	--
	4/12/2002	372.90	12.00	--	360.90	**4.2**	ND	4.2	ND	6.5	ND	--
	10/4/2002	372.90	12.96	--	359.94	0.24	ND	ND	ND	10.7	ND	0
	4/9/2003	372.90	7.04	--	365.86	ND (0.19)	ND (0.24)	ND (0.65)	ND (0.55)	ND (0.77)	ND (5.9)	0
	11/6/2003	372.90	9.82	--	363.08	**1.3**	5.0	ND (0.65)	3.5	ND (0.77)	ND (5.9)	--
	4/13/2004	372.90	8.58	--	364.32	ND (0.19)	ND (0.24)	ND (0.65)	ND (0.55)	ND (0.77)	ND (5.9)	0
	10/13/2004	372.90	10.98	--	361.92	ND (0.33)	ND (0.11)	ND (0.22)	ND (0.26)	ND (0.41)	ND (10)	--
	4/13/2005	372.90	11.74	--	361.16	ND (0.33)	ND (0.11)	ND (0.22)	ND (0.26)	ND (0.41)	ND (10)	0
	10/14/2005	372.90	8.58	--	364.32	ND (0.11)	ND (0.14)	ND (0.38)	ND (0.18)	ND (0.17)	ND (8.8)	--
	4/7/2006	372.90	11.24	--	361.66	**2.1**	ND (0.31)	ND (0.23)	ND (0.25)	4	ND (9.6)	0
	10/24/2006	372.90	10.13	--	362.77	ND (0.18)	ND (0.31)	0.03	0.74	ND (0.35)	ND (9.6)	--
	4/30/2007	372.90	4.61	--	368.29	ND (0.18)	ND (0.31)	ND (0.23)	ND (0.25)	ND (0.35)	ND (9.6)	0
	10/18/2007	372.90	13.00	--	359.90	**15.7**	0.33 J	ND (0.23)	1.1	6.3	ND (9.6)	--
	4/28/2008	372.90	7.63	--	365.27	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	--
	10/13/2008	372.90	12.70	--	360.20	**16**	ND (0.80)	ND (0.80)	ND (0.90)	7	ND (30)	--
	5/11/2009	372.90	7.52	--	365.38	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	--
	11/11/2009	372.90	11.84	--	361.06	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	1.4 J	ND (30)	0
	4/20/2010	372.90	11.07	--	361.83	--	--	--	--	--	--	--
	9/3/2010	372.90	13.48	--	359.42	--	--	--	--	--	--	--
	11/8/2010	372.90	12.93	--	359.97	**5.1**	ND (0.80)	ND (0.80)	ND (0.90)	4.0 J	ND (30)	8 J
	4/26/2011	372.90	6.20	--	366.70	--	--	--	--	--	--	--
	10/27/2011	372.90	10.29	--	362.61	--	--	--	--	--	--	--
	4/20/2012	372.90	12.28	--	360.62	**15**	ND (0.70)	ND (0.80)	ND (0.80)	2.3 J	ND (10)	--
	10/2/2012	372.90	12.99	--	359.91	**54**	0.98 J	ND (0.80)	1.1 J	3.1 J	ND (10)	--
	4/9/2013	372.90	9.48	--	363.42	ND (0.50)	ND (0.70)	ND (0.80)	ND (0.80)	ND (0.50)	ND (10)	0
	10/16/2013	372.90	13.29	--	359.61	**33**	ND (0.70)	ND (0.80)	ND (0.80)	1.4 J	ND (10)	30 J
	3/10/2014	372.90	8.91	--	363.99	ND (0.28)	ND (0.44)	ND (0.21)	ND (0.19)	ND (0.29)	ND (1.9)	0
	7/4/2014	372.90	13.11	--	359.79	--	--	--	--	--	--	--
	9/23/2014	372.90	14.67	--	358.23	**3.9**	0.25	ND (0.40)	0.69	0.57	ND (4.7)	59.4 J
	10/31/2014	372.90	13.35	--	359.55	**1.1**	ND (0.22)	ND (0.40)	0.30	0.61	ND (4.7)	51 J
	11/24/2014	372.90	13.20	--	359.70	0.46	ND (0.22)	ND (0.40)	ND (0.20)	0.88	ND (4.7)	0
	4/16/2015	372.90	10.93	--	361.97	ND (0.24)	ND (0.16)	ND (0.27)	ND (0.17)	ND (0.24)	ND (2.8)	0
	10/20/2015	372.90	14.60	--	358.30	0.48 J	ND (0.16)	ND (0.27)	ND (0.17)	0.74	ND (2.8)	8.6 J
	4/12/2016	372.90	11.60	--	361.30	--	--	--	--	--	--	--
	10/25/2016	372.90	14.80	--	358.10	--	--	--	--	--	--	--
	4/17/2017	372.90	9.40	--	363.50	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (5.0)	0
	10/4/2017	372.90	14.03	--	358.87	--	--	--	--	--	--	--
	4/3/2018	372.90	9.80	--	363.10	--	--	--	--	--	--	--
	10/1/2018	372.90	9.66	--	363.24	--	--	--	--	--	--	--
	1/15/2019	372.90	9.25	--	363.65	--	--	--	--	--	--	--

TABLE 3
GROUNDWATER ANALYTICAL DATA
FORMER BP SERVICE STATION #84849
PI #016006
945 PLEASANT VALLEY WAY
WEST ORANGE, ESSEX COUNTY, NEW JERSEY

Well ID	Date	Groundwater Monitoring Data (ft)				Groundwater Analytical Data (in micrograms per liter [µg/l])						
		Top of Casing	Depth to Ground Water	LPH Thickness	Ground Water Elevation	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	TICs
		NJDEP Ground Water Quality Criteria				1	600	700	1,000	70	100	100/500
		Vapor Intrusion Screening Levels				20	330,000	700	8,600	580	--	--
MW--3	11/30/1995	371.34	13.34	--	358.00	**310**	ND	ND	ND	**20,000**	--	--
	11/20/1996	371.34	13.43	--	357.91	--	--	--	--	--	--	--
	10/6/1997	371.34	14.74	--	356.60	**1,470**	ND	542	**1,533**	**4,080**	**3,610**	--
	1/29/1998	371.34	12.74	--	358.60	ND	ND	ND	ND	**14,300**	**11,800**	--
	10/6/1998	371.34	14.79	--	356.55	**1,320**	54.6	604	456	**1,330**	**1,070**	--
	2/2/1999	371.34	13.64	--	357.70	**392**	11.1	122	57.4	**650**	**3,530**	--
	8/3/1999	371.34	15.01	--	356.33	**1,240**	186	579	536	**1,060**	**2,900**	--
	12/1/1999	371.34	13.64	--	357.70	**60.5**	1.6	21.6	33.6	**192**	ND	--
	3/9/2000	371.34	12.94	--	358.40	**670**	16.1	127	254	**465**	ND	--
	6/5/2000	371.34	13.29	--	358.05	**210**	12.4	47.4	49.4	**168**	ND	--
	10/26/2000	371.34	13.94	--	357.40	**682**	20.7	236	225	**409**	ND	--
	1/18/2001	371.34	13.35	--	357.99	**626**	10.4	135	104	**303**	**362**	--
	4/30/2001	371.34	12.60	--	358.74	**69.6**	130	20.9	60.4	**19,400**	**607**	--
	10/19/2001	371.34	14.02	--	357.32	**323**	ND	123	122	**5,200**	**3,320**	--
	4/12/2002	371.34	13.79	--	357.55	**166**	ND	59.4	ND	**12,500**	**9,400**	--
	10/4/2002	371.34	14.07	--	357.27	**465**	8.9	192	136	**3,820**	**6,680**	230
	4/9/2003	371.34	13.16	--	358.18	ND (0.19)	ND (0.24)	ND (0.65)	ND (0.55)	ND (0.77)	ND (5.9)	0
	11/6/2003	371.34	12.46	--	358.88	**138**	0.79	46.4	1.9	41.6	**144**	--
	4/13/2004	371.34	12.57	--	358.77	ND (0.19)	ND (0.24)	ND (0.65)	ND (0.55)	ND (0.77)	ND (5.9)	0
	10/13/2004	371.34	13.21	--	358.13	ND (0.33)	ND (0.11)	ND (0.22)	ND (0.26)	1.3	ND (10)	--
	4/13/2005	371.34	13.37	--	357.97	ND (0.33)	ND (0.11)	ND (0.22)	ND (0.26)	ND (0.41)	ND (10)	0
	10/14/2005	371.34	11.72	--	359.62	ND (0.11)	ND (0.14)	ND (0.38)	ND (0.18)	ND (0.17)	ND (8.8)	--
	4/7/2006	371.34	13.73	--	357.61	ND (0.18)	ND (0.31)	ND (0.23)	ND (0.25)	0.56	ND (9.6)	0
	10/24/2006	371.34	13.27	--	358.07	**20.3**	1.5	9.8	10.8	2.1	ND (9.6)	--
	4/30/2007	371.34	11.97	--	359.37	ND (0.18)	ND (0.31)	ND (0.23)	ND (0.25)	ND (0.35)	ND (9.6)	0
	10/18/2007	371.34	14.59	--	356.75	**44.5**	11.9	3.7	16.2	5.2	14.2 J	--
	4/28/2008	371.34	10.15	--	361.19	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	--
	10/13/2008	371.34	14.72	--	356.62	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	3.4 J	ND (30)	--
	5/11/2009	371.34	13.02	--	358.32	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	--
	11/11/2009	371.34	14.02	--	357.32	**59**	2.0 J	2.0 J	8.5	3.2 J	39 J	464 J
	4/20/2010	371.34	13.47	--	357.87	--	--	--	--	--	--	--
	9/3/2010	371.34	14.94	--	356.40	--	--	--	--	--	--	--
	11/8/2010	371.34	14.49	--	356.85	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	131 J
	4/26/2011	371.34	12.54	--	358.80	ND (0.50)	ND (0.70)	ND (0.50)	ND (0.80)	0.69J	ND (10)	--
	10/27/2011	371.34	13.30	--	358.04	ND (0.50)	ND (0.70)	ND (0.80)	ND (0.80)	1.3 J	ND (10)	--
	4/20/2012	371.34	14.44	--	356.90	--	--	--	--	--	--	--
	10/2/2012	371.34	14.49	--	356.85	--	--	--	--	--	--	--
	4/9/2013	371.34	13.41	--	357.93	ND (0.50)	ND (0.70)	ND (0.80)	ND (0.80)	ND (0.50)	ND (10)	0
	10/16/2013	371.34	14.74	--	356.60	ND (0.50)	ND (0.70)	ND (0.80)	ND (0.80)	0.84 J	ND (10)	0
	3/10/2014	371.34	13.39	--	357.95	ND (0.28)	ND (0.44)	ND (0.21)	ND (0.19)	0.56	ND (1.9)	0
	7/4/2014	371.34	13.17	--	358.17	--	--	--	--	--	--	--
	9/23/2014	371.34	14.69	--	356.65	**18.3**	0.43	ND (0.40)	3.6	2.2	ND (4.7)	42.2 J
	10/31/2014	371.34	14.30	--	357.04	**38.5**	0.86	ND (0.40)	5.4	3.3	22.6	145.4 J
	11/24/2014	371.34	13.90	--	357.44	**3.1**	ND (0.22)	ND (0.40)	ND (0.20)	2	ND (4.7)	0
	4/16/2015	371.34	13.60	--	357.74	ND (0.24)	ND (0.16)	ND (0.27)	ND (0.17)	0.36	ND (2.8)	0
	10/20/2015	371.34	15.11	--	356.23	23.1	0.63 J	ND (0.27)	1	ND (0.24)	8.3 J	69 J
	4/12/2016	371.34	13.63	--	357.71	--	--	--	--	--	--	--
	10/25/2016	371.34	14.90	--	356.44	**47.1**	1.3	0.22 J	3.0	2.2	10.9	202 J
	4/17/2017	371.34	13.07	--	358.27	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (5.0)	0 U
	10/5/2017	371.34	15.02	--	356.32	**25.4**	--	--	--	--	--	--
	4/3/2018	371.34	13.07	--	358.27	ND (1.0)	--	--	--	--	--	--
	10/1/2018	371.34	12.95	--	358.39	ND (1.0)	--	--	--	--	--	--
	1/15/2019	371.34	12.75	--	358.59	--	--	--	--	--	--	--

TABLE 3
GROUNDWATER ANALYTICAL DATA
FORMER BP SERVICE STATION #84849
PI #016006
945 PLEASANT VALLEY WAY
WEST ORANGE, ESSEX COUNTY, NEW JERSEY

Well ID	Date	Groundwater Monitoring Data (ft)				Groundwater Analytical Data (in micrograms per liter [µg/l])						
		Top of Casing	Depth to Ground Water	LPH Thickness	Ground Water Elevation	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	TICs
		NJDEP Ground Water Quality Criteria				1	600	700	1,000	70	100	100/500
		Vapor Intrusion Screening Levels				20	330,000	700	8,600	580	--	--
MW--4 (Abandoned)	11/30/1995	100.03	10.73	--	89.30	--	--	--	--	--	--	--
	11/20/1996	100.03	11.19	--	88.84	--	--	--	--	--	--	--
	10/6/1997	100.03	13.11	--	86.92	ND	ND	ND	ND	21.1	ND	--
	1/29/1998	100.03	9.48	--	90.55	ND	ND	ND	ND	**2,160**	**5,740**	--
	10/6/1998	100.03	13.41	--	86.62	ND	ND	ND	ND	20.8	ND	--
	2/2/1999	100.03	11.55	--	88.48	ND	ND	ND	ND	64.3	ND	--
	8/3/1999	100.03	13.34	--	86.69	ND	ND	ND	ND	21.7	ND	--
	12/1/1999	100.03	11.46	--	88.57	ND	ND	ND	ND	**81.7**	ND	--
	3/9/2000	100.03	10.41	--	89.62	ND	ND	ND	ND	30.6	ND	--
	6/5/2000	100.03	10.54	--	89.49	0.76	ND	ND	ND	20	ND	--
	10/26/2000	100.03	12.13	--	87.90	ND	ND	ND	ND	26.3	ND	--
	1/18/2001	100.03	11.37	--	88.66	ND	ND	ND	ND	19.8	ND	--
	Monitoring Well Destroyed in 2001.					--	--	--	--	--	--	--
MW--5 (Abandoned)	11/30/1995	100.16	10.31	--	89.85	**1,300**	330	200	270	**2,000**	--	--
	9/10/1996	100.16	12.72	--	87.44	**3,300**	82	370	350	**100**	ND	--
	11/20/1996	100.16	11.41	--	88.75	ND	ND	ND	ND	ND	ND	--
	10/6/1997	100.16	13.29	--	86.87	**4,410**	71.2	255	180	**1,240**	**655**	--
	1/29/1998	100.16	9.85	--	90.31	**4,200**	120	268	145	**1,070**	**672**	--
	10/6/1998	100.16	13.38	--	86.78	**3,780**	55.3	153	60.2	**971**	**257**	--
	2/2/1999	100.16	11.77	--	88.39	**486**	45.9	158	54.8	**552**	**260**	--
	8/3/1999	100.16	13.56	--	86.60	**4,130**	85	370	97.6	**1,080**	ND	--
	12/1/1999	100.16	11.68	--	88.48	**3,030**	195	287	209	**1,150**	ND	--
	3/9/2000	100.16	10.70	--	89.46	**4,870**	98.6	414	165	**781**	ND	--
	6/5/2000	100.16	10.83	--	89.33	**3,720**	101	232	131	**782**	ND	--
	10/26/2000	100.16	12.41	--	87.75	**2,790**	59.3	352	92.4	**795**	ND	--
	1/18/2001	100.16	11.57	--	88.59	**3,340**	62.9	362	78.1	**697**	ND	0
	Monitoring Well Destroyed in 2001.					--	--	--	--	--	--	--

TABLE 3
GROUNDWATER ANALYTICAL DATA
FORMER BP SERVICE STATION #84849
PI #016006
945 PLEASANT VALLEY WAY
WEST ORANGE, ESSEX COUNTY, NEW JERSEY

Well ID	Date	Groundwater Monitoring Data (ft)				Groundwater Analytical Data (in micrograms per liter [µg/l])						
		Top of Casing	Depth to Ground Water	LPH Thickness	Ground Water Elevation	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	TICs
		NJDEP Ground Water Quality Criteria				1	600	700	1,000	70	100	100/500
		Vapor Intrusion Screening Levels				20	330,000	700	8,600	580	--	--
MW--6	11/30/1995	371.56	13.34	--	358.22	**680**	**4,700**	**1,700**	**7,300**	**1,300**	--	--
	9/10/1996	371.56	14.58	--	356.98	**1,700**	**7,000**	**1,800**	**6,200**	**500**	ND	--
	11/20/1996	371.56	13.34	--	358.22	**11**	**3,500**	**1,000**	**3,400**	**1,500**	**1,000**	--
	10/6/1997	371.56	14.81	--	356.75	**820**	**2,760**	**872**	**3,196**	**514**	ND	--
	1/29/1998	371.56	12.33	--	359.23	**964**	**6,270**	**1,540**	**6,060**	**394**	**810**	--
	10/6/1998	371.56	14.88	--	356.68	**677**	426	689	**2,070**	**147**	ND	--
	2/2/1999	371.56	13.60	--	357.96	**413**	431	ND	830	**72.2**	**268**	--
	8/3/1999	371.56	15.12	--	356.44	**1,120**	504	**979**	**2,380**	**413**	**1,240**	--
	12/1/1999	371.56	13.33	--	358.23	**405**	**1,430**	**884**	**4,090**	**166**	ND	--
	3/9/2000	371.56	12.35	--	359.21	**570**	**1,830**	660	**3,800**	**127**	ND	--
	6/5/2000	371.56	12.35	--	359.21	**317**	599	557	**1,310**	**121**	**13,800**	--
	10/26/2000	371.56	13.75	--	357.81	**201**	202	453	870	**77.5**	ND	--
	1/18/2001	371.56	13.19	--	358.37	**288**	238	630	**1,410**	52	ND	--
	4/30/2001	371.56	11.25	--	360.31	**71.7**	422	486	**1,580**	19	ND	--
	10/19/2001	371.56	13.82	--	357.74	**177**	394	517	**1,420**	ND	ND	--
	4/12/2002	371.56	13.55	--	358.01	**228**	540	**736**	**2,260**	15.2	ND	--
	10/4/2002	371.56	13.94	--	357.62	**170**	314	615	**1,370**	19	ND	**5,050**
	4/9/2003	371.56	13.36	--	358.20	**10.4**	19.0	9.4	31.4	ND (0.77)	ND (5.9)	488
	4/13/2004	371.56	10.54	--	361.02	**42.9**	69.3	550	722	5.3	ND (29)	**3,450**
	10/13/2004	371.56	11.67	--	359.89	**9.8**	10.5	359	178	ND (0.83)	23.7	--
	4/13/2005	371.56	12.16	--	359.40	**7.2**	28.9	82.6	233	ND (0.41)	ND (10)	**1,395**
	10/14/2005	371.56	12.29	--	359.27	**23**	41.9	45.3	308	ND (0.17)	ND (8.8)	--
	4/7/2006	371.56	12.32	--	359.24	**2.5**	0.45	43.8	0.36	ND (0.35)	ND (9.6)	454
	10/24/2006	371.56	11.74	--	359.82	**20.1**	42.3	333	354	ND (0.35)	ND (9.6)	--
	4/30/2007	371.56	6.31	--	365.25	**1.5**	2.5	10.7	15.8	ND (0.35)	ND (9.6)	**594**
	10/18/2007	371.56	14.30	--	357.26	**7.8**	20.2	13.5	102	ND (0.35)	ND (9.6)	--
	4/28/2008	371.56	13.28	--	358.28	0.91 J	ND (0.80)	24	17	ND (1.0)	ND (30)	--
	10/13/2008	371.56	14.22	--	357.34	**7.4**	21	110	220	ND (1.0)	ND (30)	--
	5/11/2009	371.56	10.53	--	361.03	**2.1 J**	4.1 J	43	59	ND (1.0)	ND (30)	--
	11/11/2009	371.56	12.01	--	359.55	**1.2 J**	2.1 J	9.0	10	ND (1.0)	ND (30)	**1,332 J**
	4/20/2010	371.56	8.43	--	363.13	ND (0.90)	ND (0.80)	3.4 J	2.6 J	ND (1.0)	ND (30)	--
	9/3/2010	371.56	14.69	--	356.87	--	--	--	--	--	--	--
	11/8/2010	371.56	14.52	--	357.04	**50**	2.0 J	ND (0.80)	6.9	1.8 J	ND (30)	352 J
	4/26/2011	371.56	7.69	--	363.87	**1.3 J**	ND (0.70)	5.7	6.2	ND (0.50)	ND (10)	--
	10/27/2011	371.56	11.49	--	360.07	ND (0.50)	1.2 J	0.87 J	1.9 J	ND (0.50)	ND (10)	--
	4/20/2012	371.56	13.49	--	358.07	ND (0.50)	ND (0.70)	ND (0.80)	ND (0.80)	ND (0.50)	ND (10)	--
	10/2/2012	371.56	13.30	--	358.26	**5.7**	9.8	15	34	ND (0.50)	ND (10)	--
	4/9/2013	371.56	11.25	--	360.31	0.85 J	1.8 J	32	45	ND (0.50)	ND (10)	320 J
	10/16/2013	371.56	14.42	--	357.14	**1.9 J**	1.5 J	1.6 J	8	ND (0.50)	ND (10)	400 J
	7/4/2014	371.56	13.08	--	358.48	--	--	--	--	--	--	--
	9/23/2014	371.56	15.51	--	356.05	**4.3**	5.4	0.84	10.5	0.47	ND (4.7)	**664 J**
	10/31/2014	371.56	14.35	--	357.21	**8**	15.5	6.8	22.1	ND (0.26)	ND (4.7)	**621 J**
	11/24/2014	371.56	14.08	--	357.48	**10**	23.2	9.6	23.9	ND (0.26)	ND (4.7)	**553 J**

TABLE 3
GROUNDWATER ANALYTICAL DATA
FORMER BP SERVICE STATION #84849
PI #016006
945 PLEASANT VALLEY WAY
WEST ORANGE, ESSEX COUNTY, NEW JERSEY

Well ID	Date	Groundwater Monitoring Data (ft)				Groundwater Analytical Data (in micrograms per liter [µg/l])						
		Top of Casing	Depth to Ground Water	LPH Thickness	Ground Water Elevation	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	TICs
		NJDEP Ground Water Quality Criteria				1	600	700	1,000	70	100	100/500
		Vapor Intrusion Screening Levels				20	330,000	700	8,600	580	--	--
MW--7	11/20/1996	367.91	10.27	--	357.64	**3,400**	85	350	200	**1,000**	**670**	--
	10/6/1997	367.91	11.51	--	356.40	ND	ND	ND	ND	ND	ND	--
	1/29/1998	367.91	9.61	--	358.30	ND	ND	ND	ND	ND	ND	--
	10/6/1998	367.91	11.54	--	356.37	ND	ND	ND	ND	ND	ND	--
	2/2/1999	367.91	10.95	--	356.96	ND	ND	ND	0.71	ND	ND	--
	8/3/1999	367.91	11.72	--	356.19	ND	ND	ND	ND	ND	ND	--
	12/1/1999	367.91	10.41	--	357.50	ND	ND	ND	ND	ND	ND	--
	3/9/2000	367.91	9.72	--	358.19	ND	3.9	1.8	22.4	ND	ND	--
	6/5/2000	367.91	10.08	--	357.83	ND	ND	ND	ND	ND	ND	--
	10/26/2000	367.91	10.70	--	357.21	ND	ND	ND	ND	ND	ND	--
	1/18/2001	367.91	10.07	--	357.84	ND	ND	ND	ND	ND	ND	--
	4/30/2001	367.91	9.41	--	358.50	ND	ND	ND	ND	ND	ND	--
	10/19/2001	367.91	10.74	--	357.17	ND	ND	ND	ND	ND	ND	--
	4/12/2002	367.91	10.47	--	357.44	ND	ND	ND	1.8	ND	ND	--
	10/4/2002	367.91	10.74	--	357.17	ND	ND	ND	ND	ND	ND	0
	4/9/2003	367.91	10.36	--	357.55	ND (0.19)	ND (0.24)	ND (0.65)	ND (0.55)	ND (0.77)	ND (5.9)	0
	11/6/2003	367.91	9.69	--	358.22	ND (0.19)	ND (0.24)	ND (0.65)	ND (0.55)	ND (0.77)	ND (5.9)	--
	4/13/2004	367.91	9.34	--	358.57	ND (0.19)	ND (0.24)	ND (0.65)	ND (0.55)	ND (0.77)	ND (5.9)	0
	10/13/2004	367.91	10.03	--	357.88	ND (0.33)	ND (0.11)	ND (0.22)	ND (0.26)	ND (0.41)	ND (10)	--
	4/13/2005	367.91	10.11	--	357.80	ND (0.33)	ND (0.11)	ND (0.22)	ND (0.26)	ND (0.41)	ND (10)	0
	10/14/2005	367.91	8.61	--	359.30	ND (0.11)	ND (0.14)	ND (0.38)	ND (0.18)	ND (0.17)	ND (8.8)	--
	4/7/2006	367.91	10.38	--	357.53	ND (0.18)	ND (0.31)	ND (0.23)	ND (0.25)	ND (0.35)	ND (9.6)	0
	10/24/2006	367.91	9.94	--	357.97	ND (0.18)	ND (0.31)	ND (0.23)	ND (0.25)	ND (0.35)	ND (9.6)	--
	4/30/2007	367.91	9.01	--	358.90	ND (0.18)	ND (0.31)	ND (0.23)	ND (0.25)	ND (0.35)	ND (9.6)	0
	10/18/2007	367.91	11.23	--	356.68	ND (0.18)	ND (0.31)	ND (0.23)	ND (0.25)	ND (0.35)	ND (9.6)	--
	4/28/2008	367.91	10.10	--	357.81	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	--
	10/13/2008	367.91	7.36	--	360.55	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	--
	5/11/2009	367.91	9.96	--	357.95	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	--
	11/11/2009	367.91	10.73	--	357.18	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	0
	4/20/2010	367.91	10.02	--	357.89	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	--
	9/3/2010	367.91	11.50	--	356.41	--	--	--	--	--	--	--
	4/26/2011	367.91	5.58	--	362.33	--	--	--	--	--	--	--
	10/27/2011	367.91	9.98	--	357.93	ND (0.50)	ND (0.70)	ND (0.80)	ND (0.80)	ND (0.50)	ND (10)	--
	4/20/2012	367.91	9.78	--	358.13	--	--	--	--	--	--	--
	10/2/2012	367.91	11.88	--	356.03	--	--	--	--	--	--	--
	4/9/2013	367.91	10.10	--	357.81	--	--	--	--	--	--	--
	10/16/2013	367.91	12.09	--	355.82	--	--	--	--	--	--	--
	3/10/2014	367.91	10.05	--	357.86	--	--	--	--	--	--	--
	7/4/2014	367.91	11.56	--	356.35	--	--	--	--	--	--	--
	9/23/2014	367.91	11.25	--	356.66	--	--	--	--	--	--	--
	10/31/2014	367.91	10.89	--	357.02	--	--	--	--	--	--	--
	11/24/2014	367.91	10.64	--	357.27	--	--	--	--	--	--	--
	4/16/2015	367.91	10.23	--	357.68	--	--	--	--	--	--	--
	10/20/2015	367.91	11.20	--	356.71	--	--	--	--	--	--	--
	4/12/2016	367.91	10.23	--	357.68	--	--	--	--	--	--	--
	10/25/2016	367.91	11.45	--	356.46	--	--	--	--	--	--	--

TABLE 3
GROUNDWATER ANALYTICAL DATA
FORMER BP SERVICE STATION #84849
PI #016006
945 PLEASANT VALLEY WAY
WEST ORANGE, ESSEX COUNTY, NEW JERSEY

Well ID	Date	Groundwater Monitoring Data (ft)				Groundwater Analytical Data (in micrograms per liter [µg/l])						
		Top of Casing	Depth to Ground Water	LPH Thickness	Ground Water Elevation	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	TICs
		NJDEP Ground Water Quality Criteria				1	600	700	1,000	70	100	100/500
		Vapor Intrusion Screening Levels				20	330,000	700	8,600	580	--	--
MW--8	11/20/1996	371.91	13.23	--	358.68	ND	ND	ND	ND	**17,000**	**15,000**	--
	10/6/1997	371.91	15.21	--	356.70	**18.8**	ND	ND	ND	**20,500**	**6,270**	--
	1/29/1998	371.91	12.05	--	359.86	ND	ND	ND	ND	**250**	**131**	--
	10/6/1998	371.91	15.26	--	356.65	ND	ND	ND	ND	**1,700**	**253**	--
	2/2/1999	371.91	13.79	--	358.12	ND	ND	ND	ND	40	ND	--
	8/3/1999	371.91	15.44	--	356.47	ND	ND	ND	ND	45.9	**212**	--
	12/1/1999	371.91	13.62	--	358.29	ND	ND	ND	ND	21.3	**310**	--
	3/9/2000	371.91	12.92	--	358.99	ND	ND	ND	ND	6.5	ND	--
	6/5/2000	371.91	12.65	--	359.26	ND	ND	ND	ND	5.7	ND	--
	10/26/2000	371.91	14.03	--	357.88	ND	ND	ND	ND	13.1	**280**	--
	1/18/2001	371.91	13.38	--	358.53	ND	ND	ND	ND	3.5	**215**	--
	4/30/2001	371.91	12.06	--	359.85	--	--	--	--	--	--	--
	10/19/2001	371.91	14.33	--	357.58	--	--	--	--	--	--	--
	4/12/2002	371.91	14.02	--	357.89	ND	ND	ND	ND	**114**	**610**	--
	10/4/2002	371.91	14.24	--	357.67	ND	ND	ND	ND	2.4	ND	0
	4/9/2003	371.91	13.18	--	358.73	ND (0.19)	ND (0.24)	ND (0.65)	ND (0.55)	4.2	ND (5.9)	0
	11/6/2003	371.91	11.98	--	359.93	ND (0.19)	ND (0.24)	ND (0.65)	ND (0.55)	ND (0.77)	ND (5.9)	--
	4/13/2004	371.91	11.74	--	360.17	ND (0.19)	ND (0.24)	ND (0.65)	ND (0.55)	ND (0.77)	ND (5.9)	0
	10/13/2004	371.91	12.34	--	359.57	0.46	2.5	0.56	3.5	ND (0.41)	ND (10)	--
	4/13/2005	371.91	13.11	--	358.80	ND (0.33)	ND (0.11)	ND (0.22)	ND (0.26)	ND (0.41)	ND (10)	0
	10/14/2005	371.91	11.56	--	360.35	ND (0.11)	ND (0.14)	ND (0.38)	ND (0.18)	ND (0.17)	ND (8.8)	--
	4/7/2006	371.91	13.92	--	357.99	ND (0.18)	ND (0.31)	ND (0.23)	ND (0.25)	0.64	ND (9.6)	0
	10/24/2006	371.91	13.33	--	358.58	ND (0.18)	ND (0.31)	0.69	3	ND (0.35)	ND (9.6)	--
	4/30/2007	371.91	11.06	--	360.85	ND (0.18)	ND (0.31)	ND (0.23)	ND (0.25)	ND (0.35)	ND (9.6)	0
	10/18/2007	371.91	15.15	--	356.76	ND (0.18)	0.99 J	0.57 J	2.3	ND (0.35)	ND (9.6)	--
	4/28/2008	371.91	10.96	--	360.95	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	--
	10/13/2008	371.91	14.93	--	356.98	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	--
	5/11/2009	371.91	13.32	--	358.59	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	--
	11/11/2009	371.91	14.39	--	357.52	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	0
	4/20/2010	371.91	13.70	--	358.21	--	--	--	--	--	--	--
	9/3/2010	371.91	15.56	--	356.35	--	--	--	--	--	--	--
	4/26/2011	371.91	12.62	--	359.29	--	--	--	--	--	--	--
	10/27/2011	371.91	9.49	--	362.42	--	--	--	--	--	--	--
	4/20/2012	371.91	14.98	--	356.93	--	--	--	--	--	--	--
	10/2/2012	371.91	15.08	--	356.83	--	--	--	--	--	--	--
	4/9/2013	371.91	13.55	--	358.36	--	--	--	--	--	--	--
	10/16/2013	371.91	16.43	--	355.48	--	--	--	--	--	--	--
	7/4/2014	371.91	14.08	--	357.83	--	--	--	--	--	--	--
	9/23/2014	371.91	15.35	--	356.56	--	--	--	--	--	--	--
	10/31/2014	371.91	14.95	--	356.96	--	--	--	--	--	--	--
	11/24/2014	371.91	14.58	--	357.33	--	--	--	--	--	--	--
	4/16/2015	371.91	14.21	--	357.70	--	--	--	--	--	--	--
	10/20/2015	371.91	15.76	--	356.15	--	--	--	--	--	--	--
	4/12/2016	371.91	14.26	--	357.65	--	--	--	--	--	--	--
	10/25/2016	371.91	15.97	--	355.94	--	--	--	--	--	--	--
	4/17/2017	371.91	13.60	--	358.31	--	--	--	--	--	--	--
	10/4/2017	371.91	15.70	--	356.21	--	--	--	--	--	--	--
	4/3/2018	371.91	13.60	--	358.31	--	--	--	--	--	--	--
	10/1/2018	371.91	13.70	--	385.61	--	--	--	--	--	--	--
	1/15/2019	371.91	13.43	--	358.48	--	--	--	--	--	--	--

TABLE 3
GROUNDWATER ANALYTICAL DATA
FORMER BP SERVICE STATION #84849
PI #016006
945 PLEASANT VALLEY WAY
WEST ORANGE, ESSEX COUNTY, NEW JERSEY

Well ID	Date	Groundwater Monitoring Data (ft)				Groundwater Analytical Data (in micrograms per liter [µg/l])						
		Top of Casing	Depth to Ground Water	LPH Thickness	Ground Water Elevation	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	TICs
		NJDEP Ground Water Quality Criteria				1	600	700	1,000	70	100	100/500
		Vapor Intrusion Screening Levels				20	330,000	700	8,600	580	--	--
MW--9 (Abandoned)	11/20/1996	102.14	10.77	0.24	91.37	--	--	--	--	--	--	--
	8/25/1997	102.14	12.26	0.13	91.00	--	--	--	--	--	--	--
	10/6/1997	102.14	12.91	0.51	89.43	--	--	--	--	--	--	--
	10/6/1998	102.14	11.98	0.02	89.99	**771**	**6,720**	**1,160**	**9,250**	ND	ND	--
	2/2/1999	102.14	9.14	0.09	92.89	--	--	--	--	--	--	--
	8/3/1999	102.14	12.61	0.25	89.54	--	--	--	--	--	--	--
	3/9/2000	102.14	9.44	Film	92.52	**1,330**	**10,400**	**733**	**13,300**	ND	ND	--
	6/5/2000	102.14	9.78	0.25	92.37	--	--	--	--	--	--	--
	10/26/2000	102.14	11.58	0.21	90.54	**952**	**8,800**	**1,480**	**13,500**	ND	ND	--
	1/18/2001	102.14	10.26	Film	91.70	**323**	**4,580**	**814**	**10,300**	ND	ND	--
	Monitoring Well Destroyed in 2001.					--	--	--	--	--	--	--
MW--10	10/6/1997	374.60	12.27	--	362.33	ND	8.3	9.6	59.1	ND	ND	--
	1/29/1998	374.60	7.46	--	367.14	**535**	**2,870**	381	24.25	9.8	57.3	--
	10/6/1998	374.60	12.07	--	362.53	**100**	5.64	3.9	31.3	16.4	ND	--
	2/2/1999	374.60	8.70	--	365.90	**11.8**	116	20	228	2	ND	--
	8/3/1999	374.60	11.98	--	362.62	ND	ND	ND	116	ND	ND	--
	12/1/1999	374.60	10.17	--	364.43	**3.6**	11.2	3.9	120	ND	ND	--
	3/9/2000	374.60	8.52	--	366.08	**3.1**	8.7	4.3	148	ND	ND	--
	6/5/2000	374.60	8.92	--	365.68	**47.3**	378	23.5	465	ND	ND	--
	10/26/2000	374.60	11.21	--	363.39	**37.8**	214	13.1	209	ND	ND	--
	1/18/2001	374.60	9.13	--	365.47	**4.2**	11.4	ND	19.2	ND	ND	--
	4/30/2001	374.60	7.51	--	367.09	**9.7**	81.5	4.7	77.4	ND	ND	--
	10/19/2001	374.60	11.68	--	362.92	ND	ND	ND	ND	ND	ND	--
	4/12/2002	374.60	10.58	--	364.02	ND	3.2	1.3	11.7	ND	ND	--
	10/4/2002	374.60	11.79	--	362.81	ND	ND	0.24	2	ND	ND	**545**
	4/9/2003	374.60	7.41	--	367.19	ND (0.19)	ND (0.24)	ND (0.65)	ND (0.55)	ND (0.77)	ND (5.9)	0
	11/6/2003	374.60	8.49	--	366.11	**2.2**	6.8	0.94	5.5	ND (0.77)	ND (5.9)	--
	4/13/2004	374.60	7.93	--	366.67	ND (0.19)	ND (0.24)	ND (0.65)	ND (0.55)	ND (0.77)	ND (5.9)	0
	10/13/2004	374.60	9.54	--	365.06	ND (0.33)	1.4	0.73	5.5	ND (0.41)	ND (10)	--
	4/13/2005	374.60	10.49	--	364.11	ND (0.33)	0.15	0.27	0.53	ND (0.41)	ND (10)	0
	10/14/2005	374.60	10.98	--	363.62	0.65	2	0.47	2.8	ND (0.17)	ND (8.8)	--
	4/7/2006	374.60	9.82	--	364.78	ND (0.18)	1.1	0.3	2.6	ND (0.35)	ND (9.6)	0
	10/24/2006	374.60	8.83	--	365.77	ND (0.18)	ND (0.31)	ND (0.23)	ND (0.25)	ND (0.35)	ND (9.6)	--
	4/30/2007	374.60	4.58	--	370.02	ND (0.18)	ND (0.31)	ND (0.23)	ND (0.25)	ND (0.35)	ND (9.6)	0
	10/18/2007	374.60	11.10	--	363.50	ND (0.18)	ND (0.31)	ND (0.23)	1.1	ND (0.35)	ND (9.6)	--
	4/28/2008	374.60	5.26	--	369.34	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	--
	10/13/2008	374.60	8.32	--	366.28	**1.6 J**	1.7 J	3.0 J	13	ND (1.0)	ND (30)	--
	5/11/2009	374.60	7.26	--	367.34	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	--
	11/11/2009	374.60	10.43	--	364.17	**23**	77	11	200	1.1 J	ND (30)	**1,504 J**
	4/20/2010	374.60	7.28	--	367.32	--	--	--	--	--	--	--
	9/3/2010	374.60	12.02	--	362.58	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	--
	11/8/2010	374.60	11.26	--	363.34	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	0
	4/26/2011	374.60	6.19	--	368.41	--	--	--	--	--	--	--
	10/27/2011	374.60	9.31	--	365.29	ND (0.50)	ND (0.70)	ND (0.80)	ND (0.80)	ND (0.50)	ND (10)	--
	4/20/2012	374.60	10.60	--	364.00	--	--	--	--	--	--	--
	10/2/2012	374.60	11.55	--	363.05	--	--	--	--	--	--	--
	4/9/2013	374.60	8.11	--	366.49	--	--	--	--	--	--	--
	10/16/2013	374.60	11.78	--	362.82	ND (0.50)	ND (0.70)	ND (0.80)	ND (0.80)	ND (0.50)	ND (10)	0
	3/10/2014	374.60	7.88	--	366.72	--	--	--	--	--	--	--
	7/4/2014	374.60	11.04	--	363.56	--	--	--	--	--	--	--
	10/31/2014	374.60	12.15	--	362.45	--	--	--	--	--	--	--
	11/24/2014	374.60	11.88	--	362.72	--	--	--	--	--	--	--
	4/16/2015	374.60	8.85	--	365.75	--	--	--	--	--	--	--
	10/20/2015	374.60	11.25	--	363.35	--	--	--	--	--	--	--
	4/12/2016	374.60	10.05	--	364.55	--	--	--	--	--	--	--
	10/25/2016	374.60	11.40	--	363.20	--	--	--	--	--	--	--
	10/4/2017	374.60	6.11	--	368.49	--	--	--	--	--	--	--
	4/3/2018	374.60	8.75	--	365.85	--	--	--	--	--	--	--
	10/1/2018	374.60	8.33	--	366.27	--	--	--	--	--	--	0
	1/15/2019	374.60	7.86	--	366.74	--	--	--	--	--	--	--

TABLE 3
GROUNDWATER ANALYTICAL DATA
FORMER BP SERVICE STATION #84849
PI #016006
945 PLEASANT VALLEY WAY
WEST ORANGE, ESSEX COUNTY, NEW JERSEY

Well ID	Date	Groundwater Monitoring Data (ft)				Groundwater Analytical Data (in micrograms per liter [µg/l])						
		Top of Casing	Depth to Ground Water	LPH Thickness	Ground Water Elevation	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	TICs
		NJDEP Ground Water Quality Criteria				1	600	700	1,000	70	100	100/500
		Vapor Intrusion Screening Levels				20	330,000	700	8,600	580	--	--
MW--11	8/25/1997	374.21	13.00	2.37	361.21	--	--	--	--	--	--	--
	10/6/1997	374.21	12.33	0.54	361.88	--	--	--	--	--	--	--
	1/29/1998	374.21	6.59	0.4	367.62	--	--	--	--	--	--	--
	10/6/1998	374.21	12.96	1.46	361.25	--	--	--	--	--	--	--
	2/2/1999	374.21	8.34	--	365.87	**179**	**2,020**	615	**4,030**	52.8	ND	--
	8/3/1999	374.21	12.15	0.34	362.06	--	--	--	--	--	--	--
	12/1/1999	374.21	10.18	--	364.03	**526**	**9,800**	**1,850**	**23,400**	ND	ND	--
	3/9/2000	374.21	8.59	Film	365.62	**588**	**10,200**	**1,590**	**27,800**	ND	ND	--
	6/5/2000	374.21	9.09	0.25	365.12	--	--	--	--	--	--	--
	10/26/2000	374.21	10.79	Film	363.42	**763**	**9,370**	**1,650**	**12,200**	ND	ND	--
	1/18/2001	374.21	9.59	Film	364.62	**394**	**7,020**	**1,990**	**14,000**	ND	ND	--
	4/30/2001	374.21	6.75	--	367.46	**44.1**	**2,980**	**838**	**10,100**	ND	ND	--
	10/19/2001	374.21	11.34	0.07	362.87	--	--	--	--	--	--	--
	4/12/2002	374.21	10.91	0.13	363.30	--	--	--	--	--	--	--
	10/4/2002	374.21	11.58	0.05	362.63	**492**	**7,500**	**1,490**	**12,200**	23.8	ND	**19,810**
	4/9/2003	374.21	6.12	--	368.09	ND (0.19)	260	**1,170**	**8,030**	ND (0.77)	ND (5.9)	**41,800**
	11/6/2003	374.21	8.43	--	365.78	**60.1**	**1,730**	574	**4,660**	ND (0.77)	ND (5.9)	--
	4/13/2004	374.21	6.48	--	367.73	ND (0.19)	ND (0.24)	1.2	4.2	ND (0.77)	ND (5.9)	23
	10/13/2004	374.21	9.02	--	365.19	**44.9**	**989**	191	**2090**	ND (0.41)	ND (10)	--
	4/13/2005	374.21	10.06	--	364.15	ND (0.33)	ND (0.11)	ND (0.22)	ND (0.26)	ND (0.41)	ND (10)	0
	10/14/2005	374.21	9.94	--	364.27	--	--	--	--	--	--	--
	4/7/2006	374.21	9.04	--	365.17	**7.9**	246	146	**1,260**	ND (0.35)	ND (9.6)	**3,270**
	10/24/2006	374.21	8.38	--	365.83	**10.2**	188	124	839	ND (0.35)	ND (9.6)	--
	4/30/2007	374.21	4.04	--	370.17	ND (0.18)	ND (0.31)	ND (0.23)	ND (0.25)	ND (0.35)	ND (9.6)	0
	10/18/2007	374.21	10.64	--	363.57	**28.2**	355	179	872	ND (0.35)	ND (9.6)	--
	4/28/2008	374.21	5.80	--	368.41	ND (0.90)	1.8 J	1.8 J	12	ND (1.0)	ND (30)	--
	10/13/2008	374.21	10.30	--	363.91	**60**	**700**	410	**2,400**	ND (2.5)	ND (75)	--
	5/11/2009	374.21	5.60	--	368.61	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	--
	11/11/2009	374.21	9.31	--	364.90	**39**	240	220	840	2.0 J	ND (30)	**2,920 J**
	4/20/2010	374.21	5.98	--	368.23	ND (0.90)	5.2	11	56	ND (1.0)	ND (30)	--
	9/3/2010	374.21	11.11	--	363.10	**11**	55	91	400	ND (2.0)	ND (60)	--
	11/8/2010	374.21	10.20	--	364.01	**12**	ND (1.0)	160	660	ND (1.0)	37 J	**4,030 J**
	4/26/2011	374.21	5.14	--	369.07	ND (0.50)	ND (0.70)	ND (0.80)	0.85J	ND (0.50)	ND (10)	--
	10/27/2011	374.21	7.62	--	366.59	ND (0.50)	ND (0.70)	ND (0.80)	4.3 J	ND (0.50)	ND (10)	--
	4/20/2012	374.21	9.53	--	364.68	--	--	--	--	--	--	--
	10/2/2012	374.21	10.40	--	363.81	--	--	--	--	--	--	--
	4/9/2013	374.21	6.55	--	367.66	ND (0.50)	ND (0.70)	ND (0.80)	ND (0.80)	ND (0.50)	ND (10)	0
	10/16/2013	374.21	10.57	--	363.64	**4.4 J**	20	84	310	ND (0.50)	**120**	**1,500 J**
	3/10/2014	374.21	6.15	--	368.06	ND (0.28)	ND (0.44)	ND (0.21)	ND (0.19)	ND (0.29)	ND (1.9)	0
	7/4/2014	374.21	9.56	--	364.65	--	--	--	--	--	--	--
	9/23/2014	374.21	12.36	--	361.85	**4.2**	18.8	44.4	274	ND (0.26)	**196**	**740 J**
	10/31/2014	374.21	11.45	--	362.76	**2.8**	8.8	40.7	311	0.56	59.2	494 J
	11/24/2014	374.21	10.24	--	363.97	0.52	1.6	4	41.7	ND (0.26)	25.6	79 J
	4/16/2015	374.21	8.38	--	365.83	1.3	9.0	41.0	279	ND (0.24)	ND (2.8)	**890 J**
	10/20/2015	374.21	13.35	--	360.86	0.53	1.3	1.2	24.6	ND (0.24)	**153**	71.7 J
	4/12/2016	374.21	9.13	--	365.08	**3.6**	13.3	92	104	0.44 J	7.5 J	**510 J**
	10/25/2016	374.21	13.60	--	360.61	0.43 J	2.5	1.6	45.6	ND (0.34)	**115**	**413 J**
	4/17/2017	374.21	7.01	--	367.20	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (5.0)	0 U
	10/4/2017	374.21	13.32	--	360.89	--	--	--	--	--	--	--
	4/3/2018	374.21	6.09	--	368.12	--	--	--	--	--	ND (50.0)	**107** / 279 J
	10/1/2018	374.21	6.12	--	368.09	--	--	--	--	--	ND (50.0)	ND
	1/15/2019	374.21	5.73	--	368.48	--	--	--	--	--	---	40.6 J

TABLE 3
GROUNDWATER ANALYTICAL DATA
FORMER BP SERVICE STATION #84849
PI #016006
945 PLEASANT VALLEY WAY
WEST ORANGE, ESSEX COUNTY, NEW JERSEY

Well ID	Date	Groundwater Monitoring Data (ft)				Groundwater Analytical Data (in micrograms per liter [µg/l])						
		Top of Casing	Depth to Ground Water	LPH Thickness	Ground Water Elevation	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	TICs
		NJDEP Ground Water Quality Criteria				1	600	700	1,000	70	100	100/500
		Vapor Intrusion Screening Levels				20	330,000	700	8,600	580	--	--
MW--12	8/25/1997	374.37	11.46	0.14	362.91	--	--	--	--	--	--	--
	10/6/1997	374.37	12.09	0.06	362.28	--	--	--	--	--	--	--
	1/29/1998	374.37	6.19	0.05	368.18	--	--	--	--	--	--	--
	10/6/1998	374.37	12.05	0.08	362.32	--	--	--	--	--	--	--
	2/2/1999	374.37	8.01	--	366.36	**44.8**	271	338	724	1.28	ND	--
	8/3/1999	374.37	12.05	0.04	362.32	--	--	--	--	--	--	--
	12/1/1999	374.37	10.22	--	364.15	**316**	**5,680**	422	**8,340**	ND	ND	--
	3/9/2000	374.37	8.40	--	365.97	**199**	**3,230**	136	**7,140**	ND	ND	--
	6/5/2000	374.37	8.82	--	365.55	**43.8**	489	150	**1,620**	**160**	ND	--
	10/26/2000	374.37	10.93	--	363.44	**580**	**6,790**	**1,100**	**7,450**	**98.1**	ND	--
	1/18/2001	374.37	9.53	--	364.84	**186**	**2,910**	331	**3,190**	55.7	ND	--
	10/19/2001	374.37	11.40	--	362.97	**399**	**4,960**	312	**2,440**	ND	ND	--
	4/12/2002	374.37	10.83	--	363.54	**572**	**8,560**	610	**4,540**	41.3	**746**	--
	10/4/2002	374.37	11.71	--	362.66	**582**	**9,740**	**989**	**7,840**	23.8	ND	**15,640**
	4/9/2003	374.37	6.31	--	368.06	ND (0.19)	ND (0.24)	ND (0.65)	ND (0.55)	ND (0.77)	ND (5.9)	0
	11/6/2003	374.37	7.95	--	366.42	**37.4**	479	171	**1,000**	1.5	ND (5.9)	--
	4/13/2004	374.37	6.54	--	367.83	ND (0.19)	ND (0.24)	0.66	0.75	ND (0.77)	ND (5.9)	0
	10/13/2004	374.37	8.37	--	366.00	**2.7**	9.1	6.8	74.3	ND (0.41)	ND (10)	--
	4/13/2005	374.37	9.15	--	365.22	ND (0.33)	ND (0.11)	ND (0.22)	ND (0.26)	ND (0.41)	ND (10)	0
	10/14/2005	374.37	9.88	--	364.49	ND (0.11)	0.84	ND (0.38)	1	ND (0.17)	ND (8.8)	--
	4/7/2006	374.37	8.49	--	365.88	**4.8**	15	59.9	172	0.37	ND (9.6)	**1,257**
	10/24/2006	374.37	7.84	--	366.53	**7.4**	14.8	83.4	334	0.44	ND (9.6)	--
	4/30/2007	374.37	4.23	--	370.14	ND (0.18)	ND (0.31)	ND (0.23)	ND (0.25)	ND (0.35)	ND (9.6)	0
	10/18/2007	374.37	10.53	--	363.84	**68.6**	546	325	**1,340**	2.9	ND (19)	--
	4/28/2008	374.37	5.29	--	369.08	ND (0.90)	ND (0.80)	4.9 J	5.4	ND (1.0)	ND (30)	--
	10/13/2008	374.37	12.20	--	362.17	**18**	110	130	570	ND (1.0)	ND (30)	--
	5/11/2009	374.37	5.51	--	368.86	ND (0.90)	ND (0.80)	8.8	26.0	ND (1.0)	ND (30)	--
	11/11/2009	374.37	8.90	--	365.47	**11**	16	86	160	ND (1.0)	ND (30)	**3,130 J**
	4/20/2010	374.37	5.81	--	368.56	**2.4 J**	19	61	250	ND (1.0)	ND (30)	--
	9/3/2010	374.37	11.17	--	363.20	**34**	89	80	250	1.5 J	ND (30)	--
	11/8/2010	374.37	10.26	--	364.11	**2.8 J**	7.6	4.8 J	200	ND (1.0)	ND (30)	**1,472 J**
	4/26/2011	374.37	5.14	--	369.23	0.89J	2.1J	21	33	ND (0.50)	ND (10)	--
	10/27/2011	374.37	7.88	--	366.49	**4.0 J**	6.9	34	42	ND (0.50)	ND (10)	--
	4/20/2012	374.37	9.26	--	365.11	**11**	20	48	100	ND (1.0)	ND (20)	--
	10/2/2012	374.37	10.58	--	363.79	**38**	42	260	1000	1.1 J	ND (20)	--
	4/9/2013	374.37	6.33	--	368.04	ND (0.50)	ND (0.70)	ND (0.80)	ND (0.80)	ND (0.50)	ND (10)	0
	10/16/2013	374.37	10.68	--	363.69	**9**	4.9 J	11	21	ND (0.50)	ND (10)	**800 J**
	3/10/2014	374.37	5.92	--	368.45	ND (0.28)	ND (0.44)	ND (0.21)	ND (0.19)	ND (0.29)	ND (1.9)	0
	7/4/2014	374.37	9.57	--	364.80	--	--	--	--	--	--	--
	9/23/2014	374.37	14.71	--	359.66	**82.3**	72.3	99.5	351	3	17.8	237 J
	10/31/2014	374.37	11.61	--	362.76	**61.8**	53.1	125	840	0.99	22.3	376 J
	11/24/2014	374.37	10.48	--	363.89	**77.1**	61.8	151	727	1.3	14.7	598 J
	4/16/2015	374.37	7.23	--	367.14	**1.5**	0.84	8.1	27.5	ND (0.24)	ND (2.8)	348 J
	10/20/2015	374.37	13.09	--	361.28	**26.1**	17.6	24.7	257	0.53 J	10.7	**1,886 J**
	4/12/2016	374.37	7.83	--	366.54	**1.3**	0.25 J	0.66 J	62.6	ND (0.24)	ND (2.8)	142 J
	10/25/2016	374.37	12.80	--	361.57	**29.9**	26.9	96.2	665	0.60 J	10.4	**2563 J**
	4/17/2017	374.37	5.81	--	368.56	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (5.0)	0 U
	10/4/2017	374.37	12.06	--	362.31	**15.2**	--	--	--	--	--	--
	4/3/2018	374.37	5.95	--	368.42	ND (1.0)	--	--	--	--	--	0 U
	10/1/2018	374.37	5.75	--	368.62	ND (1.0)	--	--	--	--	--	24.4 J
	1/15/2019	374.37	5.80	--	368.57	--	--	--	--	--	--	--

TABLE 3
GROUNDWATER ANALYTICAL DATA
FORMER BP SERVICE STATION #84849
PI #016006
945 PLEASANT VALLEY WAY
WEST ORANGE, ESSEX COUNTY, NEW JERSEY

Well ID	Date	Groundwater Monitoring Data (ft)				Groundwater Analytical Data (in micrograms per liter [µg/l])						
		Top of Casing	Depth to Ground Water	LPH Thickness	Ground Water Elevation	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	TICs
		NJDEP Ground Water Quality Criteria				1	600	700	1,000	70	100	100/500
		Vapor Intrusion Screening Levels				20	330,000	700	8,600	580	--	--
MW--13 (Abandoned)	10/6/1997	--	--	--	--	--	--	--	--	--	--	--
	1/29/1998	--	12.45	--	--	**2.6**	15.2	ND	6.6	**382**	81	--
	10/6/1998	--	14.53	--	--	ND	ND	ND	ND	**91.1**	ND	--
	2/2/1999	--	13.33	--	--	ND	ND	ND	0.51	**71.3**	ND	--
	8/3/1999	--	14.74	--	--	ND	ND	ND	ND	**73.3**	ND	--
	12/1/1999	--	13.34	--	--	ND	ND	ND	ND	**89.5**	ND	--
	Monitoring Well Destroyed in 2001.					--	--	--	--	--	--	--
MW--14	6/15/1999	374.20	--	--	--	**405**	244	319	876	**74**	**213**	--
	8/3/1999	374.20	13.28	--	360.92	**287**	124	181	406	43	ND	--
	12/1/1999	374.20	11.49	--	362.71	**374**	160	256	**1,560**	57	ND	--
	3/9/2000	374.20	10.25	--	363.95	**341**	38.5	147	512	50.3	ND	--
	6/5/2000	374.20	10.36	--	363.84	**231**	40.6	150	245	40.1	ND	--
	10/26/2000	374.20	12.11	--	362.09	**280**	46.3	229	413	**79.2**	ND	--
	1/18/2001	374.20	11.33	--	362.87	**339**	118	216	548	61.5	ND	--
	4/30/2001	374.20	9.31	--	364.89	**400**	90.1	251	465	60.6	ND	--
	10/19/2001	374.20	12.66	--	361.54	**305**	38	211	400	ND	ND	--
	4/12/2002	374.20	12.40	--	361.80	**466**	134	330	**1,020**	62.6	ND	--
	10/4/2002	374.20	12.98	--	361.22	**532**	64.1	363	687	58.6	ND	**3,860**
	4/9/2003	374.20	9.06	--	365.14	0.66	ND (0.24)	ND (0.65)	ND (0.55)	2.3	ND (5.9)	0
	11/6/2003	374.20	10.21	--	363.99	**240**	20.3	222	217	28.2	49.4	--
	4/13/2004	374.20	9.24	--	364.96	ND (0.19)	ND (0.24)	1.8	2.3	1.8	ND (5.9)	7
	10/13/2004	374.20	10.82	--	363.38	**24.6**	5.3	35.1	16.7	2.5	ND (10)	--
	4/13/2005	374.20	11.52	--	362.68	ND (0.33)	ND (0.11)	ND (0.22)	ND (0.26)	0.56	ND (10)	0
	10/14/2005	374.20	11.93	--	362.27	**34**	3.7	10.5	88.1	ND (0.17)	ND (8.8)	--
	4/7/2006	374.20	10.96	--	363.24	**35.8**	3.2	16	10.9	4.6	ND (9.6)	**484**
	10/24/2006	374.20	10.63	--	363.57	**287**	27	249	286	22.2	70.8	--
	4/30/2007	374.20	6.37	--	367.83	**235**	69.9	213	562	9.6	32.4 J	**3390**
	10/18/2007	374.20	12.48	--	361.72	**240**	30.3	185	274	13.8	ND (9.6)	--
	4/28/2008	374.20	6.59	--	367.61	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	--
	10/13/2008	374.20	12.50	--	361.70	**160**	49	250	650	9.0	ND (30)	--
	5/11/2009	374.20	8.71	--	365.49	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	--
	11/11/2009	374.20	11.55	--	362.65	**190**	30	180	680	10	ND (60)	**4,500 J**
	4/20/2010	374.20	8.63	--	365.57	**97**	26	100	340	4.0 J	ND (30)	--
	9/3/2010	374.20	11.21	--	362.99	**170**	41	280	**1,200**	10 J	ND (150)	--
	11/8/2010	374.20	12.80	--	361.40	**95**	46	380	**1,500**	6.7 J	ND (60)	**10,940 J**
	4/26/2011	374.20	7.22	--	366.98	**240**	18	48	**140**	6.5	29J	--
	10/27/2011	374.20	10.32	--	363.88	**5.4**	ND (0.70)	4.6 J	5.5	0.52 J	ND (10)	--
	4/20/2012	374.20	11.80	--	362.40	**96**	5.8	37	110.0	4.1 J	ND (10)	--
	10/2/2012	374.20	12.73	--	361.47	**260**	12	100	290	8.2 J	42 J	--
	4/9/2013	374.20	10.24	--	363.96	ND (0.50)	ND (0.70)	ND (0.80)	ND (0.80)	ND (0.50)	ND (10)	0
	10/16/2013	374.20	12.87	--	361.33	**13**	2.6 J	23	61	2.0 J	ND (10)	**720 J**
	3/10/2014	374.20	9.86	--	364.34	**3.8**	ND (0.44)	2	4.4	1.1	ND (1.9)	17.4
	7/4/2014	374.20	12.57	--	361.63	--	--	--	--	--	--	--
	9/23/2014	374.20	14.90	--	359.30	**36.7**	3.9	26	52.4	1.4	ND (4.7)	**641 J**
	10/31/2014	374.20	12.68	--	361.52	**35.4**	5.7	28.4	164	4.4	15.4	307 J
	11/24/2014	374.20	12.52	--	361.68	**32.6**	7.2	26.2	229	4.2	10.7	313 J
	4/16/2015	374.20	10.73	--	363.47	**53.5**	10.3	74.5	296	3.3	ND (2.8)	**1,508 J**
	10/20/2015	374.20	14.42	--	359.78	**12.4**	0.84 J	6.3	15.4	ND (0.24)	11.6	310 J
	4/12/2016	374.20	11.24	--	362.96	**42.1**	7	37.7	226	2.5	ND (2.8)	**564 J**
	10/25/2016	374.20	14.20	--	360.00	**64.9**	6.1	91.2	227	3.2	ND (3.0)	**3,090 J**
	4/19/2017	374.20	9.47	--	364.73	**1.6**	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (5.0)	10 J
	10/4/2017	374.20	13.80	--	360.40	**15.2**	--	--	--	--	--	--
	4/3/2018	374.20	10.10	--	364.10	**13.6**	--	--	--	--	--	--
	10/1/2018	374.20	10.33	--	363.87	**3.4**	--	--	--	--	--	--
	1/15/2019	374.20	9.23	--	364.97	ND (1.0)	---	---	---	---	---	ND

TABLE 3
GROUNDWATER ANALYTICAL DATA
FORMER BP SERVICE STATION #84849
PI #016006
945 PLEASANT VALLEY WAY
WEST ORANGE, ESSEX COUNTY, NEW JERSEY

Well ID	Date	Groundwater Monitoring Data (ft)				Groundwater Analytical Data (in micrograms per liter [µg/l])						
		Top of Casing	Depth to Ground Water	LPH Thickness	Ground Water Elevation	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	TICs
		NJDEP Ground Water Quality Criteria				1	600	700	1,000	70	100	100/500
		Vapor Intrusion Screening Levels				20	330,000	700	8,600	580	--	--
MW--15D	3/9/2000	371.69	13.50	--	358.19	ND	ND	ND	ND	1	ND	--
	6/5/2000	371.69	13.77	--	357.92	ND	ND	ND	ND	2.9	ND	--
	10/26/2000	371.69	14.22	--	357.47	ND	ND	ND	ND	ND	ND	--
	1/18/2001	371.69	13.29	--	358.40	ND	ND	ND	ND	ND	ND	--
	4/30/2001	371.69	13.09	--	358.60	ND	ND	ND	ND	14.2	ND	--
	10/19/2001	371.69	14.53	--	357.16	ND	ND	ND	ND	14.2	ND	--
	4/12/2002	371.69	14.08	--	357.61	ND	ND	ND	ND	ND	ND	--
	10/4/2002	371.69	14.68	--	357.01	ND	ND	ND	ND	ND	ND	ND
	4/9/2003	371.69	13.20	--	358.49	ND (0.19)	ND (0.24)	ND (0.65)	ND (0.55)	ND (0.77)	ND (5.9)	0
	11/6/2003	371.69	13.42	--	358.27	ND (0.19)	ND (0.24)	ND (0.65)	ND (0.55)	ND (0.77)	ND (5.9)	--
	4/13/2004	371.69	9.07	--	362.62	ND (0.19)	ND (0.24)	ND (0.65)	ND (0.55)	ND (0.77)	ND (5.9)	0
	10/13/2004	371.69	13.88	--	357.81	1.0	3	0.67	3.6	ND (0.41)	ND (10)	--
	4/13/2005	371.69	14.03	--	357.66	ND (0.33)	ND (0.11)	ND (0.22)	ND (0.26)	ND (0.41)	ND (10)	0
	10/14/2005	371.69	9.13	--	362.56	ND (0.11)	ND (0.14)	ND (0.38)	ND (0.18)	ND (0.17)	ND (8.8)	--
	4/7/2006	371.69	14.13	--	357.56	ND (0.18)	ND (0.31)	ND (0.23)	ND (0.25)	ND (0.35)	ND (9.6)	0
	10/24/2006	371.69	13.81	--	357.88	ND (0.18)	ND (0.31)	0.49	2.1	ND (0.35)	ND (9.6)	--
	4/30/2007	371.69	12.73	--	358.96	ND (0.18)	ND (0.31)	ND (0.23)	ND (0.25)	ND (0.35)	ND (9.6)	0
	10/18/2007	371.69	15.07	--	356.62	ND (0.18)	0.41 J	ND (0.23)	1.2	ND (0.35)	ND (9.6)	--
	4/28/2008	371.69	13.10	--	358.59	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	--
	10/13/2008	371.69	14.10	--	357.59	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	--
	5/11/2009	371.69	13.75	--	357.94	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	--
	11/11/2009	371.69	14.51	--	357.18	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	0
	4/20/2010	371.69	13.33	--	358.36	--	--	--	--	--	--	--
	9/3/2010	371.69	15.51	--	356.18	--	--	--	--	--	--	--
	4/16/2011	371.69	13.27	--	358.42	--	--	--	--	--	--	--
	10/27/2011	371.69	12.08	--	359.61	--	--	--	--	--	--	--
	4/20/2012	371.69	14.92	--	356.77	--	--	--	--	--	--	--
	10/2/2012	371.69	13.36	--	358.33	--	--	--	--	--	--	--
	4/9/2013	371.69	13.96	--	357.73	--	--	--	--	--	--	--
	10/16/2013	371.69	18.02	--	353.67	--	--	--	--	--	--	--
	7/4/2014	371.69	17.50	--	354.19	--	--	--	--	--	--	--
	9/23/2014	371.69	15.22	--	356.47	--	--	--	--	--	--	--
	10/31/2014	371.69	14.80	--	356.89	--	--	--	--	--	--	--
	11/24/2014	371.69	12.17	--	359.52	--	--	--	--	--	--	--
	4/16/2015	371.69	14.11	--	357.58	--	--	--	--	--	--	--
	10/20/2015	371.69	15.71	--	355.98	--	--	--	--	--	--	--
	4/12/2016	371.69	14.05	--	357.64	--	--	--	--	--	--	--
	10/25/2016	371.69	16.03	--	355.66	--	--	--	--	--	--	--
	4/17/2017	371.69	13.52	--	358.17	--	--	--	--	--	--	--
	10/4/2017	371.69	15.64	--	356.05	--	--	--	--	--	--	--
	4/3/2018	371.69	13.60	--	358.09	--	--	--	--	--	--	--
	10/1/2018	371.69	13.48	--	358.21	--	--	--	--	--	--	--
	1/15/2019	371.69	13.45	--	358.24	--	--	--	--	--	--	--

TABLE 3
GROUNDWATER ANALYTICAL DATA
FORMER BP SERVICE STATION #84849
PI #016006
945 PLEASANT VALLEY WAY
WEST ORANGE, ESSEX COUNTY, NEW JERSEY

Well ID	Date	Groundwater Monitoring Data (ft)				Groundwater Analytical Data (in micrograms per liter [µg/l])						
		Top of Casing	Depth to Ground Water	LPH Thickness	Ground Water Elevation	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	TICs
		NJDEP Ground Water Quality Criteria				1	600	700	1,000	70	100	100/500
		Vapor Intrusion Screening Levels				20	330,000	700	8,600	580	--	--
MW--16 (Abandoned)	3/9/2000	373.41	9.95	0.06	363.46	--	--	--	--	--	--	--
	6/5/2000	373.41	10.12	0.1	363.29	--	--	--	--	--	--	--
	10/26/2000	373.41	11.83	--	361.58	--	--	--	--	--	--	--
	1/18/2001	373.41	10.97	Film	362.44	**9,560**	**11,300**	**2,240**	**9,790**	**1,020**	ND	--
	4/30/2001	373.41	9.04	--	364.37	**7,310**	**9,570**	**1,800**	**7,560**	**687**	ND	--
	10/19/2001	373.41	12.24	--	361.17	**5,500**	**6,750**	**1,490**	**6,800**	**937**	ND	--
	4/12/2002	373.41	11.83	Film	361.58	**6,410**	**6,840**	**1,440**	**5,820**	**952**	**799**	--
	10/4/2002	373.41	12.38	Film	361.03	**6,400**	**11,800**	**2,340**	**11,100**	**1,040**	ND	**17,970**
	4/9/2003	373.41	7.62	--	365.79	**1.8**	26.7	180	**1,240**	11.6	ND (5.9)	**15,250**
	11/6/2003	373.41	10.17	--	363.24	**2,640**	**12,600**	**1,520**	**9,530**	**374**	ND (5.9)	--
	4/13/2004	373.41	8.81	--	364.60	**1,140**	**12,100**	**1,800**	**11,200**	**89.4**	ND (590)	**17,800**
	10/13/2004	373.41	10.81	--	362.60	**847**	**12,000**	**1,730**	**12,400**	ND (41)	ND (1000)	--
	4/13/2005	373.41	11.09	--	362.32	**3.1**	2.3	13.7	108	ND (0.41)	ND (10)	3,220
	10/14/2005	373.41	11.42	--	361.99	**11.3**	9.7	51.2	278	ND (0.17)	ND (8.8)	--
	4/7/2006	373.41	10.55	--	362.86	**507**	**9,630**	**1,600**	**9,340**	20.9	ND (480)	**10,910**
	10/24/2006	373.41	9.76	--	363.65	**248**	**3,780**	**1,590**	**11,100**	11.9	ND (48)	--
	4/30/2007	373.41	4.31	--	369.10	0.61 J	ND (0.31)	1	12	ND (0.35)	ND (9.6)	0
	10/18/2007	373.41	12.00	--	361.41	**776**	159	**975**	**4,470**	58.7	ND (48)	--
	4/28/2008	373.41	6.10	--	367.31	**74**	**1,400**	**990**	**7,100**	5.7 J	ND (150)	--
	10/13/2008	373.41	11.13	--	362.28	**150**	**3,000**	**2,900**	**17,000**	ND (300)	ND (90)	--
	5/11/2009	373.41	6.74	--	366.67	**1.2 J**	ND (0.80)	1.1 J	6.2	ND (1.0)	ND (30)	--
	11/11/2009	373.41	10.64	--	362.77	**360**	560	**1,100**	**4,900**	12 J	ND (150)	**11,410 J**
	4/20/2010	373.41	7.89	--	365.52	**9.2**	26	120	430	ND (1.0)	ND (30)	--
	9/3/2010	373.41	12.63	--	360.78	**990**	220	690	**4,200**	23	ND (75)	--
	11/8/2010	373.41	11.93	--	361.48	**440**	380	**1,700**	**9,500**	9.6 J	ND (60)	**16,830 J**
	4/26/2011	373.41	5.13	--	368.28	ND (0.50)	ND (0.70)	ND (0.80)	ND (0.80)	ND (0.50)	ND (10)	--
	10/27/2011	373.41	9.61	--	363.80	**33**	450	**740**	**4300**	2.4 J	ND (25)	--
	4/20/2012	373.41	11.05	--	362.36	**69**	**1,400**	**1,700**	**8,400**	4.3 J	ND (50)	--
	10/2/2012	373.41	11.60	--	361.81	**440**	270	**1,300**	**5,800**	9.6	68 J	--
	4/9/2013	373.41	9.43	--	363.98	**9.6**	130	400	**2,200**	0.88 J	ND (10)	**4,900 J**
	10/16/2013	373.41	12.11	--	361.30	**45**	260	**1,900**	**7,700**	1.4 J	ND (20)	**10,000 J**
MW--16R	5/15/2014	372.85	9.42	--	363.43	ND (0.28)	ND (0.44)	0.29	1.2	2.1	13.9	5.6 J
	7/4/2014	372.85	10.86	--	361.99	--	--	--	--	--	--	--
	9/23/2014	372.85	14.07	--	358.78	**153**	70	5.10	134	6.9	27.7	313 J
	10/31/2014	372.85	12.47	--	360.38	ND (0.21)	ND (0.22)	ND (0.40)	0.87	0.52	ND (4.7)	0
	11/24/2014	372.85	12.35	--	360.50	ND (0.21)	ND (0.22)	ND (0.40)	ND (0.20)	0.96	ND (4.7)	0
	4/16/2015	372.85	10.81	--	362.04	**183**	35.9	18.7	52.8	4.3	20.7	344 J
	10/20/2015	372.85	13.35	--	359.50	**311**	**783**	566.0	**4,840**	5.8	52.9	**10,010 J**
	4/12/2016	372.85	11.20	--	361.65	**22.1**	9	12.9	140	2.1	10.9	324 J
	10/25/2016	372.85	14.00	--	358.85	**76.3**	20.4	56.0	185	4.1	39.4	**2,077 J**
	4/17/2017	372.85	9.05	--	363.80	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (5.0)	0 U
	10/4/2017	372.85	13.65	--	359.20	**50.0**	--	--	--	--	--	**101 / 627 J**
	4/3/2018	372.85	9.75	--	363.10	ND (1.0)	--	--	--	--	--	0 U
	10/1/2018	372.85	9.96	--	362.89	**3.9**	--	--	--	--	--	344.60 J
	1/15/2019	372.85	8.85	--	364.00	ND (1.0)	--	--	--	--	--	--

TABLE 3
GROUNDWATER ANALYTICAL DATA
FORMER BP SERVICE STATION #84849
PI #016006
945 PLEASANT VALLEY WAY
WEST ORANGE, ESSEX COUNTY, NEW JERSEY

Well ID	Date	Groundwater Monitoring Data (ft)				Groundwater Analytical Data (in micrograms per liter [µg/l])						
		Top of Casing	Depth to Ground Water	LPH Thickness	Ground Water Elevation	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	TICs
		NJDEP Ground Water Quality Criteria				1	600	700	1,000	70	100	100/500
		Vapor Intrusion Screening Levels				20	330,000	700	8,600	580	--	--
MW--17 (Abandoned)	4/12/2002	373.36	12.80	0.01	360.56	**8,920**	**6,150**	**1,050**	**6,320**	**2,480**	**5,410**	**5,410**
	10/4/2002	373.36	12.29	--	361.07	**6,490**	**6,230**	**1,360**	**7,040**	**1,180**	**3,550**	**13,210**
	4/9/2003	373.36	5.75	--	367.61	ND (0.19)	ND (0.24)	ND (0.65)	ND (0.55)	ND (0.77)	ND (5.9)	0
	11/6/2003	373.36	8.77	--	364.59	**18.7**	**729**	496	**6,040**		ND (5.9)	--
	4/13/2004	373.36	6.85	--	366.51	0.46	3.8	ND (0.65)	148	ND (0.77)	ND (5.9)	**536**
	10/13/2004	373.36	9.68	--	363.68	**13.9**	118	148	**1,490**	0.94	ND (10)	--
	4/13/2005	373.36	9.62	--	363.74	ND (0.33)	ND (0.11)	ND (0.22)	ND (0.26)	ND (0.41)	ND (10)	0
	10/14/2005	373.36	10.68	--	362.68	ND (0.11)	1.4	ND (0.38)	1.4	ND (0.17)	ND (8.8)	--
	4/7/2006	373.36	10.12	--	363.24	**12**	7.5	14.8	309	1.9	ND (9.6)	**913**
	10/24/2006	373.36	8.59	--	364.77	**1.8**	12	23.2	192	ND (0.35)	ND (9.6)	--
	4/30/2007	373.36	4.21	--	369.15	**1.8**	1.4	3.4	130	ND (0.35)	ND (9.6)	0
	10/18/2007	373.36	10.95	--	362.41	**129**	274	148	684	11.3	ND (9.6)	--
	4/28/2008	373.36	6.20	--	367.16	ND (0.90)	0.98 J	9.4	310	ND (1.0)	ND (30)	--
	10/13/2008	373.36	8.93	--	364.43	**1.4 J**	9.5	21	340	ND (1.0)	ND (30)	--
	5/11/2009	373.36	4.61	--	368.75	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	--
	11/11/2009	373.36	8.44	--	364.92	ND (0.90)	1.3 J	1.4 J	29	ND (1.0)	ND (30)	**554 J**
	4/20/2010	373.36	6.79	--	366.57	**8.4**	ND (0.80)	0.95 J	1.9 J	ND (1.0)	ND (30)	--
	9/3/2010	373.36	--	--	--	**28**	7.2	7.8	37	ND (1.0)	ND (30)	--
	11/8/2010	373.36	10.50	--	362.86	ND (0.90)	ND (0.80)	ND (0.80)	1.4 J	ND (1.0)	ND (30)	5 J
	4/26/2011	373.36	4.37	--	368.99	**1.3J**	ND (0.70)	ND (0.80)	ND (0.80)	ND (0.50)	ND (10)	--
	10/27/2011	373.36	7.93	--	365.43	ND (0.50)	ND (0.70)	ND (0.80)	ND (0.80)	ND (0.50)	ND (10)	--
	4/20/2012	373.36	10.26	--	363.10	**7.5**	ND (0.70)	ND (0.80)	0.93 J	ND (0.50)	ND (10)	--
	10/2/2012	373.36	8.97	--	364.39	**220**	6.9	5.4	8.6	3.9 J	86	--
	4/9/2013	373.36	7.83	--	365.53	ND (0.50)	ND (0.70)	ND (0.80)	3.8 J	ND (0.50)	ND (10)	150 J
	10/16/2013	373.36	11.33	--	362.03	**7.4**	2.4 J	8.2	15	0.96 J	ND (10)	180 J
MW--17R	5/15/2014	372.06	8.62	--	363.44	ND (0.28)	ND (0.44)	ND (0.21)	ND (0.19)	ND (0.29)	ND (1.9)	0
	9/23/2014	372.06	13.40	--	358.66	**557**	**2,740**	**1,860**	**8,440**	6.7	41.7	**2,710 J**
	10/31/2014	372.06	11.66	--	360.40	**421**	**1,020**	**1,070**	**5,480**	ND (5.3)	ND (93)	**6,190 J**
	11/24/2014	372.06	11.72	--	360.34	**222**	**1,080**	**1,010**	**6,280**	4.1	ND (47)	**3,506 J**
	4/16/2015	372.06	10.20	--	361.86	**245**	54.1	158	452	4.4	46.7	**1,189 J**
	10/20/2015	372.06	17.00	0.4	355.06	--	--	--	--	--	--	--
	4/12/2016	372.06	10.83	--	361.23	**348**	**288**	**772**	**4,590**	6.6 J	65.7 J	**4,850 J**
	10/25/2016	372.06	13.50	0.09	358.56	--	--	--	--	--	--	--
	4/17/2017	372.06	8.29	--	363.77	**2.7**	0.64 J	34	76	ND (0.50)	ND (5.0)	**390 / 1,300 J**
	10/4/2017	372.06	13.06	--	359.00	**488**	279	**1,920**	**9,160**	--	--	**191 / 920 J**
	4/3/2018	372.06	9.00	--	363.06	**8.3**	3.2	56.9	961	--	--	**1,290 / 7,587 J**
	10/1/2018	372.06	9.21	--	362.85	ND (1.0)	ND (1.0)	5.8	21.7	--	--	270 J
	1/15/2019	372.06	8.11	--	363.95	**3.6**	--	--	--	--	--	**183 J / 913 J**
MW--18 (Abandoned)	4/12/2002	373.40	12.26	0.59	361.14	--	--	--	--	--	--	--
	10/4/2002	373.40	12.36	0.03	361.04	--	--	--	--	--	--	--
	4/9/2003	373.40	6.92	--	366.48	**4,320**	**5,670**	**1,810**	**7,410**	**192**	ND (5.9)	**22,000**
	11/6/2003	373.40	9.78	--	363.62	**3,120**	**4,800**	**1,420**	**5,760**	**195**	ND (5.9)	--
	4/13/2004	373.40	8.89	--	364.51	**2,300**	**6,140**	**1,160**	**5,460**	**178**	ND (290)	**15,630**
	10/13/2004	373.40	10.34	--	363.06	**1,750**	**4,650**	**959**	**5,150**	**126**	ND (250)	--
	4/13/2005	373.40	11.07	--	362.33	ND (0.33)	0.34	0.51	2.8	ND (0.41)	ND (10)	56.4
	10/14/2005	373.40	11.52	--	361.88	**98.1**	254	58.7	364	ND (0.34)	ND (18)	--
	4/7/2006	373.40	10.69	--	362.71	**3,180**	**10800**	**1,840**	**10,200**	**157**	ND (960)	**22,800**
	10/24/2006	373.40	10.02	--	363.38	**2,280**	**3,270**	**1,640**	**7,540**	**154**	**345**	--
	4/30/2007	373.40	5.16	--	368.24	ND (0.18)	ND (0.31)	ND (0.23)	ND (0.25)	ND (0.35)	ND (9.6)	0
	10/18/2007	373.40	12.10	--	361.30	**2,890**	**8,850**	**1,370**	**7,180**	**161**	**488**	--
	4/28/2008	373.40	7.06	--	366.34	**240**	430	290	**1,300**	20	48 J	--
	10/13/2008	373.40	12.51	--	360.89	**690**	**1,200**	**1,000**	**5,500**	22 J	ND (150)	--
	5/11/2009	373.40	7.94	--	365.46	**75**	61	120	550	2.5 J	ND (30)	--
	11/11/2009	373.40	11.04	--	362.36	**1,700**	**1,900**	**1,100**	**5,800**	61 J	ND (600)	**13,740 J**
	4/20/2010	373.40	8.49	--	364.91	**830**	**1,400**	370	**2,000**	46	**130**	--
	9/3/2010	373.40	--	--	--	**4,100**	**3,800**	**1,300**	**6,300**	**97**	ND (300)	--
	11/8/2010	373.40	12.46	0.35	360.94	--	--	--	--	--	--	--
	4/26/2011	373.40	6.26	--	367.14	ND (0.50)	6	12	120	ND (0.50)	ND (10)	--
	10/27/2011	373.40	10.19	--	363.21	**290**	200	140	800	6.2	19 J	--
	4/20/2012	373.40	11.58	--	361.82	**530**	480	440	**2,200**	17	23 J	--
	10/2/2012	373.40	12.06	--	361.34	**320**	290	310	**1,500**	6.3	23 J	--
	4/9/2013	373.40	9.81	--	363.59	**110**	110	210	**1,000**	2.6 J	ND (10)	**3,900 J**
	10/16/2013	373.40	12.41	--	360.99	**670**	320	510	**2,000**	18	59 J	**3,800 J**

TABLE 3
GROUNDWATER ANALYTICAL DATA
FORMER BP SERVICE STATION #84849
PI #016006
945 PLEASANT VALLEY WAY
WEST ORANGE, ESSEX COUNTY, NEW JERSEY

Well ID	Date	Groundwater Monitoring Data (ft)				Groundwater Analytical Data (in micrograms per liter [µg/l])						
		Top of Casing	Depth to Ground Water	LPH Thickness	Ground Water Elevation	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	TICs
		NJDEP Ground Water Quality Criteria				1	600	700	1,000	70	100	100/500
		Vapor Intrusion Screening Levels				20	330,000	700	8,600	580	--	--
MW--18R	5/15/2014	372.48	9.07	--	363.41	**114**	398	542	**2,470**	3	ND (9.4)	**2,100 J**
	7/4/2014	372.48	10.59	--	361.89	**63**	210	320	**1,600**	ND (2.5)	ND (25)	**5,800 J**
	9/23/2014	372.48	13.77	--	358.71	**124**	71	472	**1,170**	5.9	11.4	**607 J**
	10/31/2014	372.48	12.18	--	360.30	**86.9**	140	302	**1,530**	6.4	ND (23)	**2,081 J**
	4/16/2015	372.48	10.60	--	361.88	**108**	133	176	**1,140**	9.3	21.6	**4,139 J**
	10/20/2015	372.48	14.00	--	358.48	**38.2**	23	45.7	535	ND (1.2)	22.8	**1,890 J**
	4/12/2016	372.48	11.00	--	361.48	**13.3**	15.6	14.9	200	3	10.1	**451 J**
	10/25/2016	372.48	13.80	--	358.68	**18.8**	6.5	3.2	84	3.9	15.7	**773 J**
	4/17/2017	372.48	8.90	--	363.58	**9.3**	8.2	1.9	ND (0.50)	1.5	ND (5.0)	**170 / 900 J**
	10/4/2017	372.48	13.55	--	358.93	**59.0**	--	--	--	--	--	**218 / 675 J**
	4/3/2018	372.48	9.75	--	362.73	**16.8**	--	--	--	--	--	60 / 191 J
	10/1/2018	372.48	9.50	--	362.98	**82.3**	--	--	--	--	--	**157 J / 385.9 J**
	1/15/2019	372.48	8.60		363.88	**19.7**	--	--	--	--	--	**499 J / 2893 J**
MW--19	4/12/2002	373.06	12.62	--	360.44	**858**	13.2	39.7	13.6	**364**	ND	ND
	10/4/2002	373.06	13.16	--	359.90	**1,160**	19.5	78	18.6	**220**	**382**	**950**
	4/9/2003	373.06	9.25	--	363.81	ND (0.19)	ND (0.24)	ND (0.65)	ND (0.55)	ND (0.77)	ND (5.9)	0
	11/6/2003	373.06	10.85	--	362.21	**2.3**	5.2	0.70	4	2.6	ND (5.9)	--
	4/13/2004	373.06	8.11	--	364.95	0.43	1	8.40	10.4	ND (0.77)	ND (5.9)	37.5
	10/13/2004	373.06	11.43	--	361.63	ND (0.33)	ND (0.11)	0.57	ND (0.26)	ND (0.41)	ND (10)	--
	4/13/2005	373.06	12.01	--	361.05	ND (0.33)	ND (0.11)	ND (0.22)	ND (0.26)	ND (0.41)	ND (10)	0
	10/14/2005	373.06	12.24	--	360.82	ND (0.11)	ND (0.14)	ND (0.38)	ND (0.18)	ND (0.17)	ND (8.8)	--
	4/7/2006	373.06	11.73	--	361.33	**4.7**	ND (0.31)	ND (0.23)	ND (0.25)	11.1	ND (9.6)	0
	10/24/2006	373.06	11.35	--	361.71	ND (0.18)	1	1.3	4.3	0.45	ND (9.6)	--
	4/30/2007	373.06	6.54	--	366.52	ND (0.18)	ND (0.31)	ND (0.23)	ND (0.25)	ND (0.35)	ND (9.6)	0
	10/18/2007	373.06	13.10	--	359.96	0.97 J	1.7	0.92 J	4.6	7.6	ND (9.6)	--
	4/28/2008	373.06	11.23	--	361.83	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	1.5 J	ND (30)	--
	10/13/2008	373.06	12.50	--	360.56	**1.2 J**	ND (0.80)	ND (0.80)	ND (0.90)	2.5 J	ND (30)	--
	5/11/2009	373.06	9.63	--	363.43	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	--
	11/11/2009	373.06	12.15	--	360.91	**29**	ND (0.80)	ND (0.80)	ND (0.90)	4.7 J	35 J	60 J
	4/20/2010	373.06	11.72	--	361.34	--	--	--	--	--	--	--
	9/3/2010	373.06	13.70	--	359.36	--	--	--	--	--	--	--
	11/8/2010	373.06	13.15	--	359.91	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	1.4 J	ND (30)	0
	4/26/2011	373.06	8.02	--	365.04	ND (0.50)	ND (0.70)	ND (0.80)	ND (0.80)	ND (0.50)	ND (10)	--
	10/27/2011	373.06	11.12	--	361.94	ND (0.50)	ND (0.70)	ND (0.80)	ND (0.80)	0.61 J	ND (10)	--
	4/20/2012	373.06	12.59	--	360.47	--	--	--	--	--	--	--
	10/2/2012	373.06	13.15	--	359.91	--	--	--	--	--	--	--
	4/9/2013	373.06	11.11	--	361.95	**1.5 J**	ND (0.70)	ND (0.80)	ND (0.80)	ND (0.50)	ND (10)	0
	10/16/2013	373.06	13.43	--	359.63	ND (0.50)	ND (0.70)	ND (0.80)	ND (0.80)	ND (0.50)	ND (10)	0
	3/10/2014	373.06	10.50	--	362.56	ND (0.28)	ND (0.44)	ND (0.21)	ND (0.19)	ND (0.29)	ND (1.9)	0
	7/4/2014	373.06	12.77	--	360.29	--	--	--	--	--	--	--
	9/23/2014	373.06	13.83	--	359.23	**64.7**	1.1	ND (0.40)	1.6	3.5	ND (4.7)	22 J
	10/31/2014	373.06	13.41	--	359.65	**13.6**	ND (0.22)	ND (0.40)	0.22	2.5	5.5	0
	11/24/2014	373.06	13.15	--	359.91	ND (0.21)	ND (0.22)	ND (0.40)	ND (0.20)	ND (0.26)	ND (4.7)	0
	4/16/2015	373.06	11.58	--	361.48	**6.6**	ND (0.16)	ND (0.27)	ND (0.17)	2.5	ND (2.8)	0
	10/20/2015	373.06	14.63	--	358.43	ND (0.24)	ND (0.16)	ND (0.27)	ND (0.17)	0.31 J	ND (2.8)	0
	4/12/2016	373.06	12.02	--	361.04	**18.7**	0.22 J	ND (0.27)	ND (0.17)	3.8	9.4 J	--
	10/25/2016	373.06	14.60	--	358.46	ND (0.14)	ND (0.23)	ND (0.20)	ND (0.21)	4.0	ND (3.0)	0

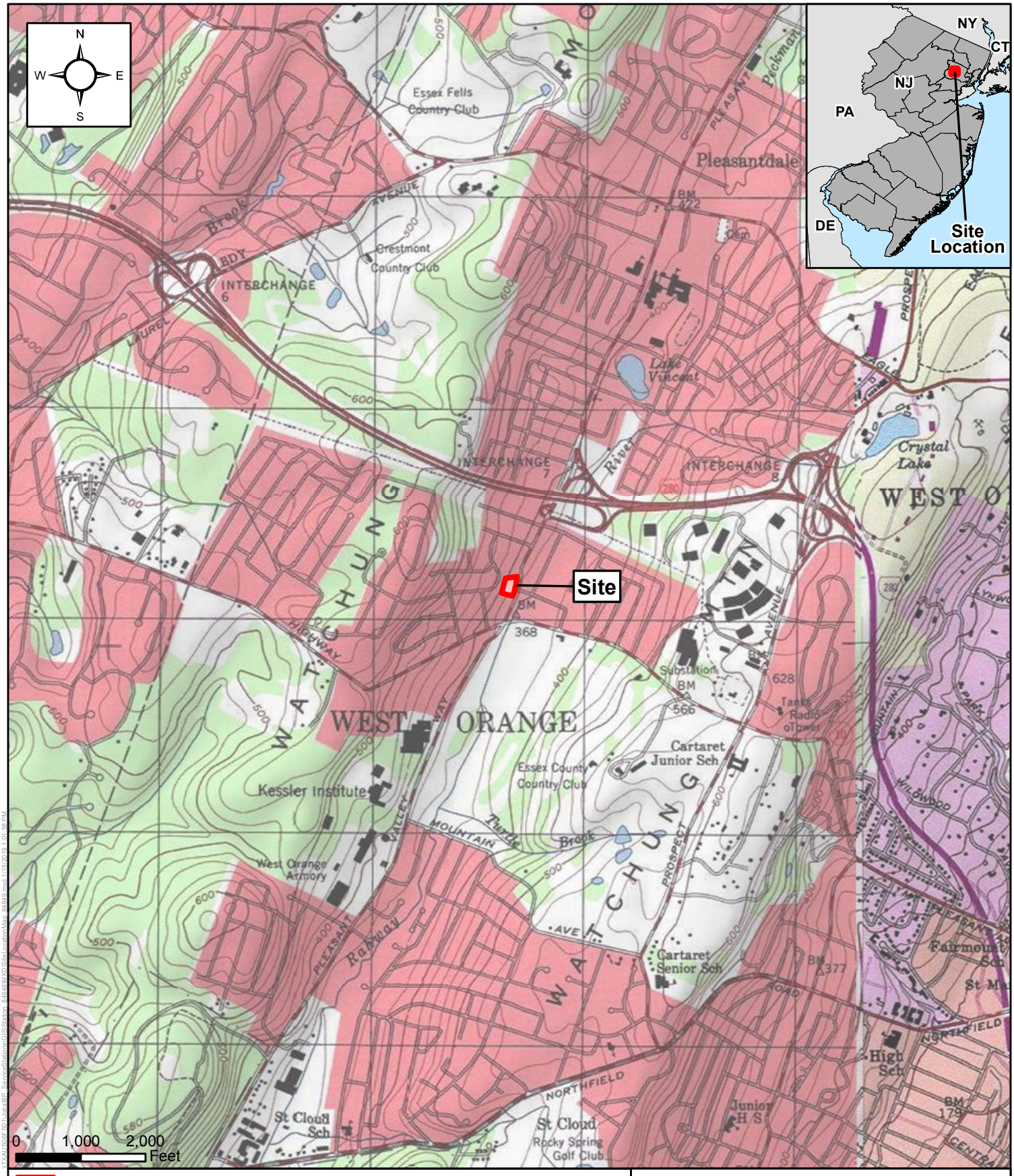
TABLE 3
GROUNDWATER ANALYTICAL DATA
FORMER BP SERVICE STATION #84849
PI #016006
945 PLEASANT VALLEY WAY
WEST ORANGE, ESSEX COUNTY, NEW JERSEY

Well ID	Date	Groundwater Monitoring Data (ft)				Groundwater Analytical Data (in micrograms per liter [µg/l])						
		Top of Casing	Depth to Ground Water	LPH Thickness	Ground Water Elevation	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TBA	TICs
		NJDEP Ground Water Quality Criteria				1	600	700	1,000	70	100	100/500
		Vapor Intrusion Screening Levels				20	330,000	700	8,600	580	--	--
MW--20	10/13/2004	369.98	12.92	--	357.06	ND (0.33)	ND (0.11)	ND (0.22)	ND (0.26)	ND (0.41)	ND (10)	0
	4/13/2005	369.98	12.73	--	357.25	ND (0.33)	ND (0.11)	ND (0.22)	ND (0.26)	ND (0.41)	ND (10)	0
	10/14/2005	369.98	10.39	--	359.59	ND (0.11)	ND (0.14)	ND (0.38)	ND (0.18)	ND (0.17)	ND (8.8)	--
	4/7/2006	369.98	12.67	--	357.31	ND (0.18)	ND (0.31)	ND (0.23)	ND (0.25)	ND (0.35)	ND (9.6)	0
	10/24/2006	369.98	12.27	--	357.71	ND (0.18)	ND (0.31)	ND (0.23)	0.93	ND (0.35)	ND (9.6)	--
	4/30/2007	369.98	8.26	--	361.72	ND (0.18)	ND (0.31)	ND (0.23)	ND (0.25)	ND (0.35)	ND (9.6)	0
	10/18/2007	369.98	13.60	--	356.38	ND (0.18)	ND (0.31)	ND (0.23)	ND (0.25)	ND (0.35)	ND (9.6)	--
	4/28/2008	369.98	11.27	--	358.71	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	--
	10/13/2008	369.98	14.21	--	355.77	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	--
	5/11/2009	369.98	11.21	--	358.77	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	--
	11/11/2009	369.98	13.02	--	356.96	ND (0.90)	ND (0.80)	ND (0.80)	ND (0.90)	ND (1.0)	ND (30)	0
	4/20/2010	369.98	12.24	--	357.74	--	--	--	--	--	--	--
	9/3/2010	369.98	13.91	--	356.07	--	--	--	--	--	--	--
	4/26/2011	369.98	11.37	--	358.61	--	--	--	--	--	--	--
	10/27/2011	369.98	9.20	--	360.78	--	--	--	--	--	--	--
	4/20/2012	369.98	9.78	--	360.20	--	--	--	--	--	--	--
	10/2/2012	369.98	13.77	--	356.21	--	--	--	--	--	--	--
	4/9/2013	369.98	12.48	--	357.50	--	--	--	--	--	--	--
	10/16/2013	369.98	13.70	--	356.28	--	--	--	--	--	--	--
	3/10/2014	369.98	12.20	--	357.78	--	--	--	--	--	--	--
	7/4/2014	369.98	10.38	--	359.60	--	--	--	--	--	--	--
	9/23/2014	369.98	13.66	--	356.32	--	--	--	--	--	--	--
	10/31/2014	369.98	13.22	--	356.76	--	--	--	--	--	--	--
	11/24/2014	369.98	12.95	--	357.03	--	--	--	--	--	--	--
	4/16/2015	369.98	12.66	--	357.32	--	--	--	--	--	--	--
	10/20/2015	369.98	13.90	--	356.08	--	--	--	--	--	--	--
	4/12/2016	369.98	12.68	--	357.30	--	--	--	--	--	--	--
	10/25/2016	369.98	14.05	--	355.93	--	--	--	--	--	--	--
	4/17/2017	369.98	12.20	--	357.78	--	--	--	--	--	--	--
	10/4/2017	369.98	14.10	--	355.88	--	--	--	--	--	--	--
	4/3/2018	369.98	12.13	--	357.85	--	--	--	--	--	--	--
	10/1/2018	369.98	12.00	--	357.98	--	--	--	--	--	--	--
	1/15/2019	369.98	12.00	--	357.98	ND (1.0)	--	--	--	--	ND (50.0)	-

Legend:

-- = Data Not Available or Not Collected (also Not Analyzed or Not Sampled)
µg/L = Micrograms per Liter
J = Estimated Value
LPH = Liquid Phase Hydrocarbons
MTBE = Methyl Tertiary Butyl Ether
ND (##) = Non-Detect (Laboratory Method Detection Limit)
TBA = *Tertiary*-Butyl Alcohol
TIC = Tentatively Identified Compound

Figures



Site Location

Figure 1
Site Location Map

Service Station #84849
955 Pleasant Valley Way
West Orange, New Jersey
PI #: 016006

PARSONS

200 Cottontail Lane
Somerset, NJ 08873

Drawn By:	Revision Date:	
PDS	1/15/2019	SiteLocationMap_84849.mxd

Site Boundary

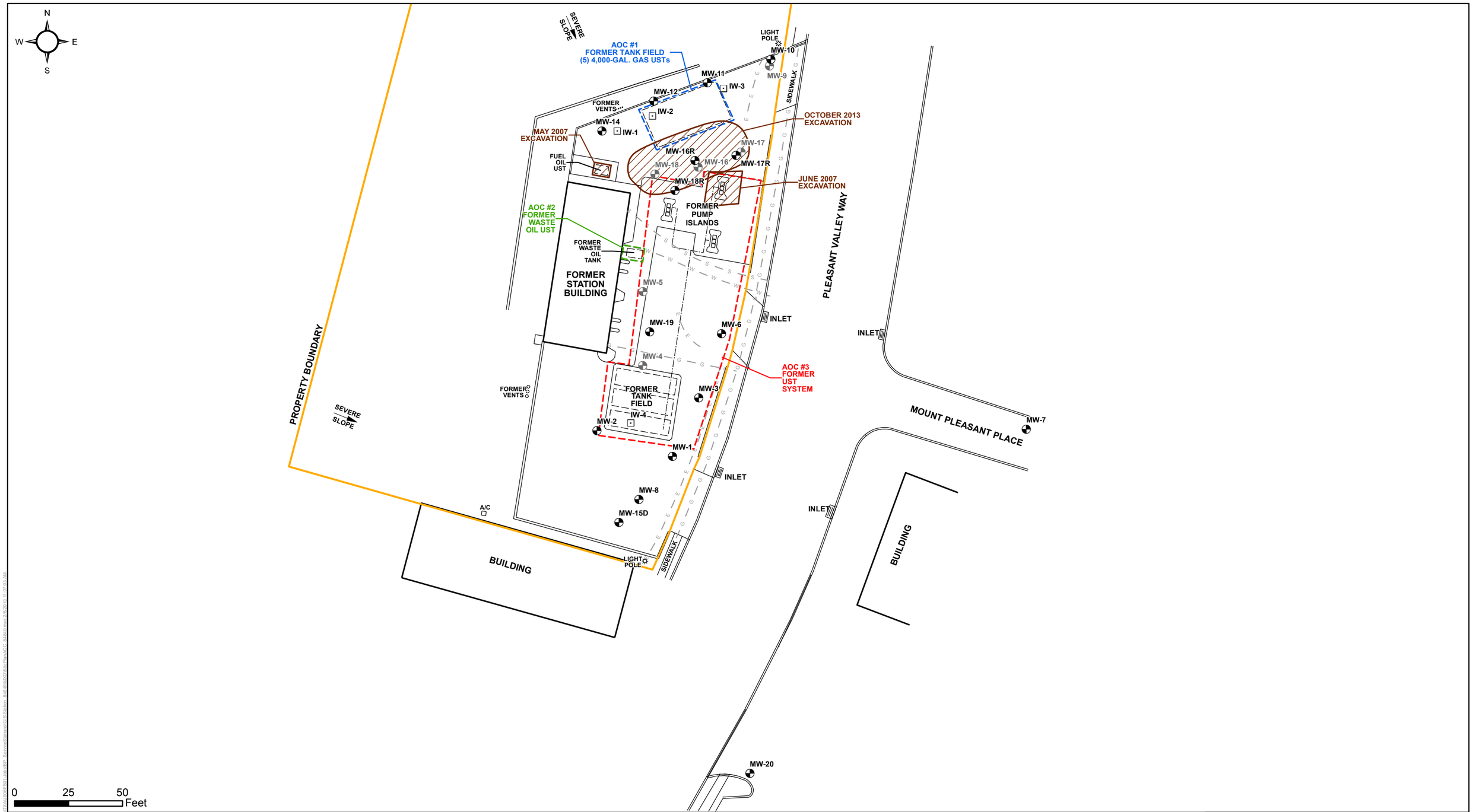
Figure 2
Aerial View Map

Service Station #84849
955 Pleasant Valley Way
West Orange, New Jersey
PI #: 016006

PARSONS

200 Cottontail Lane
Somerset, NJ 08873

Drawn By:	Revision Date:	
PDS	1/15/2019	AerialMap_84849.mxd



- Monitoring Well
- Abandoned Monitoring Well
- Injection Well
- AOC #1 Former Tank Field
- AOC #2 Former Waste Oil UST
- AOC #3 Former UST System
- Soil Excavation
- Utility - Electric
- Utility - Gas
- Utility - Sewer
- Utility - Water
- Property Boundary

Figure 3
Site Plan/Areas of Concern Map

Service Station #84849
955 Pleasant Valley Way
West Orange, New Jersey
PI #: 016006

PARSONS
200 Cottontail Lane
Somerset, NJ 08873

Drawn By:	Revision Date:	
PDS	2/5/2019	SitePlanAOC_84849.mxd

- Soil Borings
- Monitoring Well
- Abandoned Monitoring Well
- Injection Well
- Soil Excavation
- Utility - Electric
- Utility - Gas
- Utility - Sewer
- Utility - Water
- Property Boundary

Figure 4
Historic Soil Sampling Locations

Service Station #84849
955 Pleasant Valley Way
West Orange, New Jersey
PI #: 016006

PARSONS
200 Cottontail Lane
Somerset, NJ 08873

Drawn By:	Revision Date:	
PDS	3/14/2019	HistoricSoilSampling_84849.mxd

Appendix A

Updated Receptor Evaluation

New Jersey Department of Environmental Protection
Site Remediation and Waste Management Program

RECEPTOR EVALUATION (RE) FORM

Date Stamp
(For Department use only)

SECTION A. SITE

Site Name: Former Amoco/BP Service Station #84849

Program Interest (PI) Number(s): 016006

Communication Center Number(s) and/or ISRA number(s) for this submission: (as *many as will fit in the space provided)*

95-03-15-1156-05

This form must be attached to the Cover/Certification Form if not submitted through a Remedial Phase Online Service

Indicate the type of submission:

☐ Initial RE Submission

☒ Updated RE Submission

Indicate the reason for submission of an updated RE form

☐ Submission of an Immediate Environmental Concern (IEC) source control report;
☐ Submission of a Remedial Investigation Report;
☒ Submission of a Remedial Action Report;

Check if included in updated RE

☐ The known concentration or extent of contamination in any medium has increased;
☐ A new AOC has been identified;
☐ A new receptor is identified;
☐ A new exposure pathway has been identified.

SECTION B. ON SITE AND SURROUNDING PROPERTY USE

1. Identify any sensitive populations/uses that are currently on-site or surrounding property usage within 200 feet of the site property boundary (*check all that apply*):

	On-site	Off-site
None of the following	☒	☐
Residences or residential property	☐	☒
Public or Private Schools Grades K-12	☐	☐
Child care centers	☐	☐
Public parks, playgrounds or other recreation areas	☐	☐
Other sensitive population use(s) Explain _____	☐	☐

If any of the above applies, attach a list of addresses, facility names, type of use, and a map depicting each location relative to the site.

2. Current site uses (*check all that apply*):

☐ Industrial ☐ Residential ☐ Commercial
☐ School or child care ☐ Government ☐ Park or recreational use
☒ Vacant ☐ Agricultural ☐ Other: _____

3. Planned future on-site uses and off-site uses within 200 feet of the site boundary (*check all that apply*):

On-Site	Off-Site		On-Site	Off-Site		On-Site	Off-Site	
☐	☐	Industrial	☐	☒	Residential	☐	☒	Commercial
☐	☐	School or child care	☐	☐	Government	☐	☐	Park or recreational use
☐	☐	Vacant	☐	☐	Agricultural	☐	☐	Other: _____

Provide a map depicting the location of the proposed changes in land use.

SECTION C. DESCRIPTION OF CONTAMINATION

1. Identify if any of the following exist at the site:

Yes	No	
☐	☒	Free product [N.J.A.C. 7:26E-1.8] identified is ☐ LNAPL* or ☐ DNAPL**.
		Date identified: _____
☐	☒	Residual product [N.J.A.C. 7:26E-1.8]
☐	☒	Other primary source materials not identified above (e.g., buried drums, containers, unsecured friable asbestos). See form instructions for additional information.
		Explain: _____

* LNAPL – measured thickness of .01 feet or more

**DNAPL – See *Ground Water Technical Guidance* and *USEPA Assessment and Delineation of DNAPL Source Zones at Hazardous Waste Sites* (attached as Appendix A of the NJDEP GW Guidance) available at: http://www.nj.gov/dep/srp/guidance/#pa_si_ri_gw. Also, see US EPA DNAPL Overview available at: http://cluin.org/contaminantfocus/default.focus/sec/Dense_Nonaqueous_Phase_Liquids_(DNAPLS)/cat/Overview

2. Soil Migration Pathway

Has soil contamination been delineated to the applicable Direct Contact Soil Remediation Standard pursuant to N.J.A.C. 7:26E-4.2? ..... ☒ Yes ☐ No

Are all soils either below the applicable Direct Contact Criteria or under an institutional control (i.e. deed notice)? ..... ☒ Yes ☐ No

3. If this evaluation is submitted with a technical document that includes contaminant summary information, proceed to Section D. Otherwise, attach a brief summary of all currently available data and information to be included in the site investigation or remedial investigation report.

SECTION D. GROUND WATER USE

1. Have all potentially contaminated areas of concern been evaluated to determine if there is a potential that ground water is contaminated pursuant to N.J.A.C. 7:26E-3.5? ..... ☒ Yes ☐ No

   If "**No**," proceed to Section E.

2. Is a ground water investigation required? ..... ☒ Yes ☐ No

   If "**No**," proceed to Section E.

3. Has a groundwater investigation been conducted? ..... ☒ Yes ☐ No

   If "**Yes**":
   Has the laboratory data package been received? ..... ☒ Yes ☐ No

   If the laboratory data package has not been received, provide the expected due date for data: _____ and proceed to Section E.

   If "**No**":
   Proceed to Section E.

4. Is ground water contaminated above the Ground Water Remediation Standards [N.J.A.C.7:9C]? ..... ☒ Yes ☐ No

   If "**Yes**": Provide the date that the laboratory data package was available and confirmed contamination was identified above the Ground Water Remediation Standards. Date: 11/30/1995

   If "**No**": Proceed to Section E.

5. Has ground water contamination been delineated to the applicable Remediation Standard pursuant to N.J.A.C 7:26E-4.3? ..... ☒ Yes ☐ No

6. What is the ground water classification for this site as per N.J.A.C. 7:9C? (*check all that apply*)

☐ Class I-A	☒ Class II-A
☐ Class I-PL Pinelands Protection Area	☐ Class III-A
☐ Class I-PL Pinelands Preservation Area	☐ Class III-B

7. Has a well search been completed?..... ☒ Yes ☐ No

Date of most recent or updated well search: 01/11/2019

8. Is a completed Well Search Spreadsheet or historical well search table attached and has an electronic copy of the spreadsheet been submitted to srpgis_wrs@dep.nj.gov. ..... ☒ Yes ☐ No

Note: Redacted wells must be excluded from all non-confidential documents including maps, tables, etc. (see RE Instructions).

If "**No**," explain:_____

9. Are any potable or irrigation wells located within ½ mile of the currently known extent of contamination? ..... ☒ Yes ☐ No

If "**Yes**,":

- A door to door survey is required in accordance with [N.J.A.C.7:26E-1.14(a)ii]. Attach results of the door to door survey.
- Identify if any of the following conditions exist based on the well search and door to door survey [N.J.A.C.7:26E-1.14(a)]:

Yes	No	
☐	☒	Potable wells located within 500 feet from the downgradient edge of the currently known extent of contamination.
☐	☒	Potable wells located 250 feet upgradient or 500 feet side gradient of the currently known extent of contamination.
☐	☒	Ground water contamination from the discharge is located within a Tier 1 wellhead protection area (WHPA).

10. Has sampling been conducted of ☐ potable well(s) and /or ☐ non-potable use well(s)? ..... ☐ Yes ☒ No

If "No," provide justification then proceed to Question 12.

No new potable wells were identified through XY search or door to door canvas.

11. Has contamination been identified in potable well(s), **not attributed to background conditions**, above the Class II Ground Water Remediation Standards or State Safe Drinking Water levels, N.J.A.C 7:1E, whichever is applicable? ..... ☐ Yes ☒ No

If "**Yes**":

- Provide the date laboratory data package was received: _____
- Follow the **IEC** Guidance Document at http://www.nj.gov/dep/srp/guidance/IEC/index.html for required actions and answer the following:
- Has an engineered system response action been completed on all impacted receptors?..... ☐ Yes ☐ No
  Provide a brief narrative description:

Date completed: _____ NJDEP Case Manager: _____

12. Has contamination been identified in non-potable well(s), **not attributed to background conditions**, above the Class II Ground Water Remediation Standards?..... ☐ Yes ☒ No

If "**Yes**," provide the date laboratory data package was received: _____

13. Has the ground water use evaluation been completed pursuant to N.J.A.C. 7:26E-1.14? ..... ☒ Yes ☐ No

SECTION E. VAPOR INTRUSION (VI)

1. Indicate if any of the following conditions exist that trigger a Vapor Intrusion investigation. For each condition checked "Yes", provide the date the condition was first identified (e.g. date laboratory data package was available). (*see NJDEP Vapor Intrusion Technical Guidance*)

Yes	No		Date Condition First Identified
☐	☒	Ground water contamination in excess of the NJDEP Vapor Intrusion Ground Water Screening Levels (VIGWSL) and within 30 feet of a building for Petroleum Hydrocarbon Compounds (PHC) or 100 feet for non-PHC compounds ..	_____
☐	☒	Free product within 30 feet of a building for PHC or 100 feet for non-PHC compounds	_____
☐	☒	Soil gas contamination detected at concentrations that exceed the Soil Gas Screening Levels (SGSL)	_____
☐	☒	Indoor air contamination that exceeds the Indoor Air Screening Levels	_____
☐	☒	Wet basement or sump containing free product or ground water containing detectable concentration of volatile organic contaminants	_____
☐	☒	Methane generating conditions causing oxygen deficient or explosion concern	_____
☐	☒	Other human or safety concern from the VI pathway (i.e. elemental mercury, unsaturated soil contamination), *explain below:*	_____

If you checked "No" to <u>all</u> boxes in Question 1., proceed to Section F, "Ecological Receptors", otherwise complete the rest of this section.

2. Has ground water contamination been delineated to the applicable Vapor Intrusion Ground Water Screening Levels pursuant to N.J.A.C 7:26E-4.3? ..... ☐ Yes ☐ No

3. Was a site-specific screening level, modeling or other alternative approach employed for the VI pathway? ..... ☐ Yes ☐ No

4. Identify and locate, on a scaled map, any buildings/sensitive populations that exist within the following distances from ground water contaminant concentrations above the Vapor Intrusion Ground Water Screening Levels or other specific triggers noted in Question 1 above.:

Yes	No	
☐	☐	30 feet of petroleum free product or dissolved petroleum hydrocarbon contamination in ground water
☐	☐	100 feet of any non-petroleum free product (e.g. chlorinated hydrocarbons) or any non-petroleum dissolved volatile organic ground water contamination
☐	☐	Other specific triggers
☐	☐	No buildings exist within the specified distances or other specific triggers

5. Is the vapor intrusion pathway a concern at or adjacent to the site? (if "No," attach justification) ..... ☐ Yes ☐ No

6. Has soil gas sampling of the building(s) been conducted? ..... ☐ Yes ☐ No

   If "**Yes**," has the laboratory data package been received? ..... ☐ Yes ☐ No

      If the data package was received, did constituents exceed the Soil Gas Screening Levels? ..... ☐ Yes ☐ No

   If "**No**," attach technical justification consistent with the NJDEP Vapor Intrusion Technical Guidance.

7. Has indoor air sampling been conducted at the identified building(s)? ..... ☐ Yes ☐ No

   If "**Yes**," has the laboratory data package been received? ..... ☐ Yes ☐ No

      If the data package has been received, did constituents exceed the Indoor Air Screening Levels? .. ☐ Yes ☐ No

   If "**No**," or awaiting indoor air laboratory data package, proceed to Question 12.

8 Has indoor air contamination been identified but not suspected to be from a discharge? (if "**Yes**," attach justification) ..... ☐ Yes ☐ No

9. Were indoor air results above the NJDEP's Rapid Action Levels? ..... ☐ Yes ☐ No

If "**Yes**":

- Provide the date laboratory data package was received: _____
- Follow the **IEC** Guidance Document at http://www.nj.gov/dep/srp/guidance/index.html#iec for required actions and answer the following:
- Was the IEC engineering system response for control implemented for all impacted structures? ..... ☐ Yes ☐ No

  Date implemented: _____ NJDEP Case Manager: _____

10. Were the results of indoor air sampling above the NJDEP's Indoor Air Screening Levels but at, or below, the Rapid Action Levels ..... ☐ Yes ☐ No

If "**Yes**," answer the following:

- Provide the date laboratory data package was received: _____
- Has the Vapor Concern (VC) Response Action Form notifying the NJDEP of the exceedances been submitted? ..... ☐ Yes ☐ No

  Date: _____
- Has a plan to mitigate and monitor the exposure been submitted? ..... ☐ Yes ☐ No

  Date: _____
- Has the Mitigation Response Action Report been submitted? ..... ☐ Yes ☐ No

  Date: _____

11. Do one or more buildings have an Indeterminate VI Pathway status? ..... ☐ Yes ☐ No

If "**Yes**," attach a list of the building(s) with address(s) and block/lot(s)

12. Has the vapor intrusion investigation been completed? ..... ☐ Yes ☐ No

If "**No**", is the vapor intrusion investigation stepping out as part of the site investigation or remedial investigation. (If "No," attach justification) ..... ☐ Yes ☐ No

SECTION F. ECOLOGICAL RECEPTORS

1. Has an Ecological Evaluation (EE) been conducted? [N.J.A.C. 7:26E-1.16] ..... ☒ Yes ☐ No

   Date conducted: 11/19/2014

2. Are any site-related contaminants above any Ecological Screening Criteria? ..... ☐ Yes ☒ No
3. Are there any Environmentally Sensitive Natural Resources (ESNRs) on or adjacent to the site, or potentially impacted by site related contamination? [N.J.A.C. 7:26E-1.16] ..... ☐ Yes ☒ No
4. Do any potential or complete migration pathways exist between Contaminant of Potential Ecological Concern (COPECs) and ESNRs, or did historic migration pathways exist? ..... ☐ Yes ☒ No

If You answered "No" to Questions 2, 3, or 4, above <u>Stop Here</u> (form is complete).

5. If site-related free or residual product is/was present, does/did a potential or complete migration pathway exist to an ESNR? ..... ☐ Yes ☐ No
6. Do the results of an EE trigger a remedial investigation of ecological receptors? [N.J.A.C. 7:26E-4.8] ..... ☐ Yes ☐ No

   If "**Yes**", has a remedial investigation of ecological receptors been conducted? ..... ☐ Yes ☐ No

   Date conducted: _____

7. Do available data indicate an impact (COPECs above Ecological Screening Criteria in ESNRs) to Ecological Receptor(s), Surface water, or Sediment? ☐ Yes ☐ No

If "**Yes**,"

a) Check all ESNRs or media that apply:

☐ Surface water ☐ Sediment ☐ Soil ☐ Wetlands

b) If this information is not submitted with an ecological evaluation that includes contaminant summary information, attach a brief summary of all currently available data and a description of all actions to be taken to mitigate exposure.

8. Have COPECs been fully delineated to the Ecological Screening Criteria [N.J.A.C. 7:26E-4.8(a)] in:

a) Migration pathways ☐ Yes ☐ No

b) ESNR ☐ Yes ☐ No

9. Has an Ecological Risk Assessment been conducted? ☐ Yes ☐ No

10. Provide the following information for any on-site and/or off-site surface water body, which is potentially impacted by the site related discharges:

Surface Water Body Name	Stream Classification	Antidegradation Designation	Trout Production	Trout Maintenance
			☐	☐
			☐	☐
			☐	☐
			☐	☐
			☐	☐
			☐	☐

11. Has a Program Interest (PI) or Permit number been issued for any regulated areas by the Division of Land Use Regulation? (e.g. wetlands, transition areas, flood hazard areas, coastal areas, tidelands, etc.). ☐ Yes ☐ No

If "**Yes**,":

Identify the type(s) of regulated areas: _____

Provide the Land Use Regulation Program (LURP) PI or Permit number(s) for the site:

_____

12 Are there any **pending** applications for LURP jurisdiction letters or approvals under review by the NJDEP for the remediation? ☐ Yes ☐ No

13. Are there any **valid** LURP jurisdiction letters or approvals issued for the remediation? ☐ Yes ☐ No

Completed forms should be sent to the municipal clerk, designate health department, and:

Bureau of Case Assignment & Initial Notice
Site Remediation Program
NJ Department of Environmental Protection
401-05H
PO Box 420
Trenton, NJ 08625-0420

Receptor Evaluation - Attachment 1
Vapor Intrusion Summary
(May 2019)

Former Amoco/BP Service Station #84849
945 Pleasant Valley Way
West Orange, Essex County, New Jersey 07052
SRP PI #: 016006
NJDEP Case #: 95-03-15-1156-05

The Former Amoco/BP Service Station #84849 Site (Site) is an approximately ±0.45-acre lot located at 945 Pleasant Valley Way, West Orange, Essex County, New Jersey, and occupies Block 172.02, Lot 8.01. The Site is owned by 955 Pleasant Valley Way Associates. The Site currently contains vacant land.

Benzene had been detected above the Vapor Intrusion (VI) GWSL in historically in monitoring well MW-18R. Benzene was below the VI GWSL during the most recent groundwater sampling event which occurred in January 2019. The Site will continue to be monitored for any changes in land use; however, no changes are planned or expected at this time.

Site
200-ft Radius
Stream and Rivers
Residential Properties within 200' Buffer

Figure A-1
Sensitive Receptors Map

Service Station #84849
945 Pleasant Valley Way
West Orange, New Jersey
PI #: 016006

PARSONS
200 Cottontail Lane
Somerset, NJ 08873

Drawn By:	Revision Date:	
PDS	3/6/2019	SensitiveReceptors_84849.mxd

TABLE A-1 UPDATED WELL SEARCH
FORMER AMOCO/BP SERVICE STATION #84849
PI # 016006
945 PLEASANT VALLEY WAY, WEST ORANGE, ESSEX COUNTY, NEW JERSEY

Well Permitting XY Well Search - 199 wells found within Half Mile of Easting = 556057 Northing = 714247																
Permit Number	Well Use	Well Name	Potentially Potable	Document	Date (permitted /drilled /sealed)	Physical Address	County	Municipality	Block	Lot	Location Method	Easting (X)	Northing (Y)	Distance (Feet)	Depth (ft)	Capacity (gal/min)
E201806146	Monitoring	MW-1	No	Permit	6/25/2018	291-309 Mt.Pleasant Ave	Essex	West Orange Twp	83	11	Digital Image	559685	712179	4,176	20	0
E201806146	Monitoring	MW-1	No	Record	7/6/2018	291-309 Mt.Pleasant Ave	Essex	West Orange Twp	83	11	GPS	559685	712179	4,176	17	
E201707078	Monitoring	B-8	No	Permit	6/20/2017	PROSPECT AVE	Essex	West Orange Twp	155.21	40	Digital Image	559235	713949	3,191.94	25	4
E201707077	Monitoring	B-6	No	Record	6/23/2017	PROSPECT AVE	Essex	West Orange Twp	155.21	40	GPS	559679	713558	3,686.95	25	
E201707077	Monitoring	B-6	No	Permit	6/20/2017	PROSPECT AVE	Essex	West Orange Twp	155.21	40	Digital Image	559679	713558	3,686.95	25	4
E201707076	Monitoring	B-3	No	Record	6/22/2017	PROSPECT AVE	Essex	West Orange Twp	155.21	40	GPS	560012	714385	3,957.41	25	
E201707076	Monitoring	B-3	No	Permit	6/20/2017	PROSPECT AVE	Essex	West Orange Twp	155.21	40	Digital Image	560012	714385	3,957.41	25	4
E201707068	Monitoring	B-1	No	Permit	6/20/2017	ROONEY CIRCLE	Essex	West Orange Twp	155	40.03	Digital Image	559398	714876	3,399.69	25	0
E201705354	Monitoring	MW-1	No	Record	5/10/2017	1 Roosevelt Avenue	Essex	West Orange Twp	175.20	6	GPS	556489	717577	3,357.9	20	
E201705354	Monitoring	MW-1	No	Decommissioning	8/10/2017	1 Roosevelt Avenue	Essex	West Orange Twp	175.20	6	GPS	556489	717577	3,357.9	20	
E201705354	Monitoring	MW-1	No	Permit	5/9/2017	1 Roosevelt Avenue	Essex	West Orange Twp	175.20	6	Digital Image	556492	717583	3,364.24	20	0
E201504407	Monitoring	MW3	No	Record	5/5/2015	Prospect Avenue	Essex	West Orange Twp	155.21	40	Survey frm Benchmark	559872	713334	3,922.73	27	
E201504407	Monitoring	MW3	No	Permit	5/1/2015	Prospect Avenue	Essex	West Orange Twp	155.21	40	Digital Image	559874	713331	3,925.37	25	0
E201504406	Monitoring	MW2	No	Record	5/4/2015	Prospect Avenue	Essex	West Orange Twp	155.21	40	Survey frm Benchmark	559898	713440	3,924.86	23	
E201504406	Monitoring	MW2	No	Permit	5/1/2015	Prospect Avenue	Essex	West Orange Twp	155.21	40	Digital Image	559888	713439	3,915.28	25	0
E201504405	Monitoring	MW1	No	Record	5/5/2015	Prospect Avenue	Essex	West Orange Twp	155.21	40	Survey frm Benchmark	559785	713398	3,823.45	21	
E201504405	Monitoring	MW1	No	Permit	5/1/2015	Prospect Avenue	Essex	West Orange Twp	155.21	40	Digital Image	559787	713403	3,824.3	25	0
E201503524	Monitoring	MW-1	No	Decommissioning	9/16/2015	Mt Pleasant Place	Essex	West Orange Twp	155.07	36	GPS	556770	714188	715.44	8.5	
E201503524	Monitoring	MW-1	No	Permit	4/13/2015	Mt Pleasant Place	Essex	West Orange Twp	155.07	36	Digital Image	556771	714187	716.52	20	0
E201503524	Monitoring	MW-1	No	Record	4/21/2015	Mt Pleasant Place	Essex	West Orange Twp	155.07	36	GPS	556770	714188	715.44	8.5	
E201410474	Air Sparge	SP3	No	Record	9/22/2014	473 Mt Pleasant ave	Essex	West Orange Twp	157	2	GPS	556032	713908	339.92	20.5	
E201410474	Air Sparge	SP3	No	Permit	8/8/2014	473 Mt Pleasant ave	Essex	West Orange Twp	157	2	Digital Image	556035	713914	333.73	25	0
E201410473	Air Sparge	SP2	No	Record	9/22/2014	473 Mt Pleasant ave	Essex	West Orange Twp	157	2	GPS	556035	713914	333.73	20.5	
E201410473	Air Sparge	SP2	No	Permit	8/8/2014	473 Mt Pleasant ave	Essex	West Orange Twp	157	2	Digital Image	556032	713908	339.92	25	0
E201407396	Monitoring	MW-11	No	Record	6/17/2014	325 Mt. Pleasant Avenue	Essex	West Orange Twp	155	26.01	GPS	559837	712707	4,081.67	34	
E201407396	Monitoring	MW-11	No	Decommissioning	7/27/2018	325 Mt. Pleasant Avenue	Essex	West Orange Twp	155	26.01	GPS	559836	712710	4,079.61	34	
E201407396	Monitoring	MW-11	No	Permit	6/11/2014	325 Mt. Pleasant Avenue	Essex	West Orange Twp	155	26.01	Digital Image	559837	712707	4,081.67	15	0
E201407395	Monitoring	MW-10	No	Record	6/17/2014	325 Mt. Pleasant Avenue	Essex	West Orange Twp	155	26.01	GPS	559847	712770	4,067.63	14	
E201407395	Monitoring	MW-10	No	Permit	6/10/2014	325 Mt. Pleasant Avenue	Essex	West Orange Twp	155	26.01	Digital Image	559847	712770	4,067.63	15	0
E201404652	Cathodic Protection/Individual	CP-1	No	Permit	4/16/2014	325 Mt Pleasant Ave	Essex	West Orange Twp	155	26.01	Digital Image	559082	712977	3,280.78	60	0
E201404652	Cathodic Protection/Individual	CP-1	No	Record	4/24/2014	325 Mt Pleasant Ave	Essex	West Orange Twp	155	26.01	GPS	559080	712976	3,279.32	62	
E201403247	Monitoring	MW-18R	No	Record	3/26/2014	955 Pleasant Valley Way	Essex	West Orange Twp	172.02	8.01	GPS	556075	714274	32.45	25	
E201403247	Monitoring	MW-18R	No	Permit	3/20/2014	955 Pleasant Valley Way	Essex	West Orange Twp	172.02	8.01	Digital Image	556076	714274	33.02	25	0
E201403246	Monitoring	MW-17R	No	Record	3/27/2014	955 Pleasant Valley Way	Essex	West Orange Twp	172.02	8.01	GPS	556105	714305	75.29	25	

TABLE A-1 UPDATED WELL SEARCH
FORMER AMOCO/BP SERVICE STATION #84849
PI # 016006
945 PLEASANT VALLEY WAY, WEST ORANGE, ESSEX COUNTY, NEW JERSEY

Permit Number	Well Use	Well Name	Potentially Potable	Document	Date (permitted /drilled /sealed)	Physical Address	County	Municipality	Block	Lot	Location Method	Easting (X)	Northing (Y)	Distance (Feet)	Depth (ft)	Capacity (gal/min)
E201403246	Monitoring	MW-17R	No	Permit	3/20/2014	955 Pleasant Valley Way	Essex	West Orange Twp	172.02	8.01	Digital Image	556104	714315	82.66	25	0
E201403245	Monitoring	MW-16R	No	Record	3/26/2014	955 Pleasant Valley Way	Essex	West Orange Twp	172.02	8.01	GPS	556075	714303	58.82	25	
E201403245	Monitoring	MW-16R	No	Permit	3/20/2014	955 Pleasant Valley Way	Essex	West Orange Twp	172.02	8.01	Digital Image	556085	714305	64.4	25	0
E201403243	Injection	IW-5	No	Permit	3/20/2014	955 Pleasant Valley Way	Essex	West Orange Twp	172.02	8.01	Digital Image	556063	714205	42.43	20	0
E201403242	Injection	IW-4	No	Record	3/26/2014	955 Pleasant Valley Way	Essex	West Orange Twp	172.02	8.01	GPS	556044	714179	69.23	20	
E201403242	Injection	IW-4	No	Permit	3/20/2014	955 Pleasant Valley Way	Essex	West Orange Twp	172.02	8.01	Digital Image	556044	714176	72.18	20	0
E201403241	Injection	IW-3	No	Record	3/26/2014	955 Pleasant Valley Way	Essex	West Orange Twp	172.02	8.01	GPS	556102	714342	105.12	20	
E201403241	Injection	IW-3	No	Permit	3/20/2014	955 Pleasant Valley Way	Essex	West Orange Twp	172.02	8.01	Digital Image	556097	714342	103.08	20	0
E201403240	Injection	IW-2	No	Record	3/26/2014	955 Pleasant Valley Way	Essex	West Orange Twp	172.02	8.01	GPS	556063	714333	86.21	20	
E201403240	Injection	IW-2	No	Permit	3/20/2014	955 Pleasant Valley Way	Essex	West Orange Twp	172.02	8.01	Digital Image	556067	714336	89.56	20	0
E201403239	Injection	IW-1	No	Record	3/26/2014	955 Pleasant Valley Way	Essex	West Orange Twp	172.02	8.01	GPS	556049	714319	72.44	20	
E201403239	Injection	IW-1	No	Record	3/26/2014	955 Pleasant Valley Way	Essex	West Orange Twp	172.02	8.01	GPS	556049	714319	72.44	20	
E201403239	Injection	IW-1	No	Permit	3/20/2014	955 Pleasant Valley Way	Essex	West Orange Twp	172.02	8.01	Digital Image	556049	714319	72.44	20	0
E201313767	Monitoring	MW-4R	No	Record	10/15/2013	486 Prospect Avenue	Essex	West Orange Twp	84.01	49	GPS	559946	712759	4,163.95	7.6	
E201313767	Monitoring	MW-4R	No	Decommissioning	7/27/2018	486 Prospect Avenue	Essex	West Orange Twp	84.01	49	GPS	559957	712755	4,175.65	7.6	
E201313767	Monitoring	MW-4R	No	Permit	9/24/2013	486 Prospect Avenue	Essex	West Orange Twp	84.01	49	Digital Image	559960	712760	4,176.67	10	0
E201313766	Monitoring	MW-4D	No	Record	10/15/2013	486 Prospect Avenue	Essex	West Orange Twp	84.01	49	GPS	559952	712770	4,165.64	30	
E201313766	Monitoring	MW-4D	No	Decommissioning	7/27/2018	486 Prospect Avenue	Essex	West Orange Twp	84.01	49	GPS	559952	712770	4,165.64	30	
E201313766	Monitoring	MW-4D	No	Permit	9/24/2013	486 Prospect Avenue	Essex	West Orange Twp	84.01	49	Digital Image	559951	712764	4,166.84	30	0
E201311377	Monitoring	MW-9	No	Record	9/5/2013	Mt Pleasant Ave	Essex	West Orange Twp	157.01	11	GPS	555622	713131	1,197.78	18	
E201311377	Monitoring	MW-9	No	Permit	8/8/2013	Mt Pleasant Ave	Essex	West Orange Twp	157.01	11	Digital Image	555622	713131	1,197.78	20	0
E201311376	Monitoring	MW-8	No	Record	9/5/2013	Mt Pleasant Ave	Essex	West Orange Twp	157.01	11	GPS	555787	713182	1,098.69	15	
E201311376	Monitoring	MW-8	No	Permit	8/8/2013	Mt Pleasant Ave	Essex	West Orange Twp	157.01	11	Digital Image	555787	713182	1,098.69	20	0
E201308746	Monitoring	MW-5	No	Record	7/1/2013	471-475 Prospect Avenue	Essex	West Orange Twp	155	26.02	GPS	559877	712980	4,024.64	20	
E201308746	Monitoring	MW-5	No	Permit	6/25/2013	471-475 Prospect Avenue	Essex	West Orange Twp	155	26.02	Digital Image	559872	712981	4,019.57	20	0
E201308135	Monitoring	MW-3	No	Permit	6/14/2013	55 Fitzrandolph Road	Essex	West Orange Twp	153.12	21	Digital Image	559348	717688	4,761.42	20	0
E201308135	Monitoring	MW-3	No	Decommissioning	12/12/2013	55 Fitzrandolph Road	Essex	West Orange Twp	153.12	21	GPS	559330	717756	4,798.5	9	
E201308135	Monitoring	MW-3	No	Record	7/23/2013	55 Fitzrandolph Road	Essex	West Orange Twp	153.12	21	GPS	559330	717756	4,798.5	9	
E201308134	Monitoring	MW-2	No	Permit	6/17/2013	55 Fitzrandolph Road	Essex	West Orange Twp	153.12	21	Digital Image	559358	717681	4,763.29	20	0
E201308134	Monitoring	MW-2	No	Decommissioning	12/12/2013	55 Fitzrandolph Road	Essex	West Orange Twp	153.12	21	GPS	559354	717687	4,764.85	17	
E201308134	Monitoring	MW-2	No	Record	6/21/2013	55 Fitzrandolph Road	Essex	West Orange Twp	153.12	21	GPS	559354	717687	4,764.85	17	
E201300467	Monitoring	MW-9D	No	Record	1/21/2013	490 Prospect Ave.	Essex	West Orange Twp	84.01	47	GPS	559939	712643	4,200.33	29	0
E201300467	Monitoring	MW-9D	No	Decommissioning	7/27/2018	490 Prospect Ave.	Essex	West Orange Twp	84.01	47	GPS	559920	712646	4,181.62	29	
E201300466	Monitoring	MW-9S	No	Record	1/21/2013	490 Prospect Ave.	Essex	West Orange Twp	84.01	47	GPS	559939	712642	4,200.71	9	0

TABLE A-1 UPDATED WELL SEARCH
FORMER AMOCO/BP SERVICE STATION #84849
PI # 016006
945 PLEASANT VALLEY WAY, WEST ORANGE, ESSEX COUNTY, NEW JERSEY

Permit Number	Well Use	Well Name	Potentially Potable	Document	Date (permitted /drilled /sealed)	Physical Address	County	Municipality	Block	Lot	Location Method	Easting (X)	Northing (Y)	Distance (Feet)	Depth (ft)	Capacity (gal/min)
E201300466	Monitoring	MW-9S	No	Decommissioning	7/27/2018	490 Prospect Ave.	Essex	West Orange Twp	84.01	47	GPS	559920	712646	4,181.62	9	
E201213597	Boring/Individual	B-6A	No	Record	9/11/2012	Pleasant Valley Way	Essex	West Orange Twp	157.01	11	GPS	555797	713271	1,010.04		
E201213597	Boring/Individual	B-6A	No	Decommissioning	9/11/2012	Pleasant Valley Way	Essex	West Orange Twp	157.01	11	GPS	555797	713271	1,010.04		
E201213597	Boring/Individual	B-6A	No	Permit	9/4/2012	Pleasant Valley Way	Essex	West Orange Twp	157.01	11	Digital Image	555797	713271	1,010.04	70	0
E201213596	Boring/Individual	B-5A	No	Record	9/10/2012	Pleasant Valley Way	Essex	West Orange Twp	157.01	11	GPS	555744	713288	1,008.79		
E201213596	Boring/Individual	B-5A	No	Decommissioning	9/10/2012	Pleasant Valley Way	Essex	West Orange Twp	157.01	11	GPS	555744	713288	1,008.79		
E201213596	Boring/Individual	B-5A	No	Permit	9/4/2012	Pleasant Valley Way	Essex	West Orange Twp	157.01	11	Digital Image	555744	713288	1,008.79	70	0
E201213595	Monitoring	MW-7	No	Record	9/10/2012	Pleasant Valley Way	Essex	West Orange Twp	157.01	11	GPS	555775	713218	1,066.94	18	
E201213595	Monitoring	MW-7	No	Permit	9/4/2012	Pleasant Valley Way	Essex	West Orange Twp	157.01	11	Digital Image	555769	713221	1,065.65	20	0
E201208744	Monitoring	MW-8D	No	Record	7/11/2012	486 Prospect Ave	Essex	West Orange Twp	84.01	49	GPS	559992	712617	4,259.24	32	0
E201208744	Monitoring	MW-8D	No	Decommissioning	7/27/2018	486 Prospect Ave	Essex	West Orange Twp	84.01	49	GPS	560003	712656	4,254.67	32	
E201208744	Monitoring	MW-8D	No	Permit	6/13/2012	486 Prospect Ave	Essex	West Orange Twp	84.01	49	Digital Image	560005	712663	4,253.91	40	0
E201208743	Monitoring	MW-8S	No	Record	7/11/2012	486 Prospect Ave	Essex	West Orange Twp	84.01	49	GPS	560001	712655	4,253.19	10	0
E201208743	Monitoring	MW-8S	No	Decommissioning	7/27/2018	486 Prospect Ave	Essex	West Orange Twp	84.01	49	GPS	560001	712655	4,253.19	10	
E201208743	Monitoring	MW-8S	No	Permit	6/13/2012	486 Prospect Ave	Essex	West Orange Twp	84.01	49	Digital Image	560002	712656	4,253.74	20	0
E201117444	Monitoring	MW-1	No	Record	10/27/2011	49 Fitzrandolph Rd	Essex	West Orange Twp	153.11	47	GPS	559550	717820	4,996.74	18	
E201117444	Monitoring	MW-1	No	Decommissioning	8/8/2012	49 Fitzrandolph Rd	Essex	West Orange Twp	153.11	47	GPS	559550	717820	4,996.74	18	
E201117444	Monitoring	MW-1	No	Permit	10/21/2011	49 Fitzrandolph Rd	Essex	West Orange Twp	153.11	47	Digital Image	559550	717825	5,000.31	20	0
E201117246	Monitoring	MW-10	No	Record	11/2/2011	972 Pleasant Valley Way	Essex	West Orange Twp	157	2	GPS	556042	713918	329.34	20	
E201117246	Monitoring	MW-10	No	Permit	10/19/2011	972 Pleasant Valley Way	Essex	West Orange Twp	157	2	Digital Image	556158	713962	302.37	20	0
E201116603	Monitoring	MW-1	No	Permit	10/24/2011	61 Fitzrandolph Rd	Essex	West Orange Twp	153.12	21	Digital Image	559382	717703	4,795.79	20	0
E201116603	Monitoring	MW-1	No	Record	10/17/2011	61 Fitzrandolph Rd	Essex	West Orange Twp	153.12	21	GPS	559372	717707	4,791.75	15	
E201116603	Monitoring	MW-1	No	Decommissioning	12/12/2013	61 Fitzrandolph Rd	Essex	West Orange Twp	153.12	21	GPS	559372	717707	4,791.75	15	
E201114805	Monitoring	MW-1	No	Record	9/2/2011	39 Westminster Terrace	Essex	West Orange Twp	155.06	14	GPS	557159	713666	1,245.78	30	
E201114805	Monitoring	MW-1	No	Decommissioning	10/31/2011	39 Westminster Terrace	Essex	West Orange Twp	155.06	14	GPS	557159	713666	1,245.78	30	
E201114805	Monitoring	MW-1	No	Permit	9/2/2011	39 Westminster Terrace	Essex	West Orange Twp	155.06	14	Digital Image	557183	713677	1,262.05	25	0
E201108678	Monitoring	MW-7	No	Record	6/15/2011	486 Prospect Ave	Essex	West Orange Twp	84.01	49	GPS	560017	712672	4,261.72	8	
E201108678	Monitoring	MW-7	No	Permit	6/3/2011	486 Prospect Ave	Essex	West Orange Twp	84.01	49	Digital Image	560009	712672	4,254.28	10	0
E201102193	Monitoring	MW-4	No	Record	3/18/2011	486 Prospect avenue	Essex	West Orange Twp	84	49	GPS	559953	712745	4,175.5	8	
E201102193	Monitoring	MW4	No	Decommissioning	5/9/2013	486 Prospect avenue	Essex	West Orange Twp	84	49	GPS	559967	712779	4,176.5	8	
E201102193	Monitoring	MW4	No	Permit	2/18/2011	486 Prospect avenue	Essex	West Orange Twp	84	49	Digital Image	559952	712746	4,174.21	15	0
E201014263	Monitoring	MW-1	No	Decommissioning	5/31/2011	53 Roosevelt Avenue	Essex	West Orange Twp	175	268	GPS	556102	716352	2,105.48	37	
E201014263	Monitoring	MW-1	No	Record	1/4/2011	53 Roosevelt Avenue	Essex	West Orange Twp	175	268	GPS	556102	716352	2,105.48	37	

TABLE A-2 POTENTIALLY POTABLE WELLS
FORMER AMOCO/BP SERVICE STATION #84849
PI # 016006
945 PLEASANT VALLEY WAY, WEST ORANGE, ESSEX COUNTY, NEW JERSEY

Well Permitting XY Well Search - 12 wells found within Half Mile of Easting = 556057 Northing = 714247

Permit Number	Well Use	Potentially Potable	Document	Date (permitted /drilled /sealed)	Physical Address	County	Municipality	Block	Lot	Location Method	Easting (X)	Northing (Y)	Distance (Feet)	Depth (ft)	Capacity (gal/min)
2500001677	Domestic	Yes	Record	5/26/1952	475 WASHINGTON STREET	Essex	Livingston Twp			Prop Loc - Dig Image	555301	714430	777.87	200	0
2600000990	Public Non-Community	Yes	Permit	7/28/1954		Essex	West Orange Twp			Prop Loc - Hard Copy	558921	712416		200	50
2600000990	Public Non-Community	Yes	Record	9/8/1954	MT PLEAANT AVENUE	Essex	West Orange Twp			Prop Loc - Dig Image	555311	710382	3,936.11	115	0
2600000846	Domestic	Yes	Permit	2/8/1954		Essex	West Orange Twp			Prop Loc - Hard Copy	554834	716453		100	5
2600000846	Domestic	Yes	Record	2/19/1954	28 COOLIDGE AVENUE	Essex	West Orange Twp			Prop Loc - Hard Copy	554834	716453		128	5
2600000552	Domestic	Yes	Permit	7/28/1952		Essex	West Orange Twp			Prop Loc - Hard Copy	553764	713718		200	10
2600000552	Domestic	Yes	Record	10/20/1952	775 NORTHFIELD AVENUE	Essex	West Orange Twp			Prop Loc - Hard Copy	553764	713718		120	0
2600000158	Domestic	Yes	Permit	2/23/1950		Essex	West Orange Twp			Prop Loc - Hard Copy	552765	713715		150	10
2600000158	Domestic	Yes	Record	1/28/1950	775 NORTHFIELD ROAD	Essex	West Orange Twp			Prop Loc - Dig Image	554279	713078	2,127.95	150	0
2600001787	Domestic	Yes	Permit	2/6/1958		Essex	West Orange Twp			Prop Loc - Hard Copy	558925	710999		300	25
2600001787	Domestic	Yes	Record	7/18/1958	RIDGE ROAD	Essex	West Orange Twp			Prop Loc - Hard Copy	558925	710999		643	0
2600004436	Domestic	Yes	Permit	11/11/1971		Essex	West Orange Twp			Prop Loc - Hard Copy	554848	710988		150	10
2600004436	Domestic	Yes	Record	11/23/1971	OLD INDIAN ROAD	Essex	West Orange Twp			Prop Loc - Hard Copy	554848	710988		175	0
2600004355	Domestic	Yes	Permit	9/16/1970		Essex	West Orange Twp			Prop Loc - Hard Copy	554831	717768		200	6
2600004355	Domestic	Yes	Record	10/13/1970	MELLON AVE.	Essex	West Orange Twp			Prop Loc - Hard Copy	554831	717768		200	8
2600004585	Irrigation	Yes	Permit	6/10/1974		Essex	West Orange Twp			Prop Loc - Hard Copy	555838	715039		200	60
2600004954	Domestic	Yes	Permit	2/3/1981		Essex	West Orange Twp	0015	4J	Prop Loc - Hard Copy	557921	712413		150	10
2600004954	Domestic	Yes	Record	5/22/1981	MARCY WAY	Essex	West Orange Twp	0015	4J	Prop Loc - Dig Image	558370	717137	3,701.22	200	0
2600006977	Domestic	Yes	Permit	8/25/1984		Essex	West Orange Twp	151	17B	Prop Loc - Hard Copy	559462	711608		400	50
2600003045	Irrigation	Yes	Permit	3/12/1965	OFF PLEASANT VALLEY ROAD	Essex	West Orange Twp			Prop Loc - Hard Copy	556834	716458		200	420
2600003045	Irrigation	Yes	Record	3/31/1965	OFF PLEASANT VALLEY ROAD	Essex	West Orange Twp			Prop Loc - Dig Image	556330	713083	1,195.27	72	0
2600003045	Irrigation	Yes	Record	3/31/1965	OFF PLEASANT VALLEY ROAD	Essex	West Orange Twp			Prop Loc - Hard Copy	556834	716458		72	0

TABLE A-3 WELL CANVAS
FORMER AMOCO/BP SERVICE STATION #84849
PI # 016006
945 PLEASANT VALLEY WAY, WEST ORANGE, ESSEX COUNTY, NEW JERSEY

Block	Lot	Physical Address	Correspondence Type			Potable Well Observed?		Potable Well Idenfitied in XY Well Search?		Comments
			In Person	Phone-call	Letter	Yes	No	Yes	No	
155.14	1	35 Mt Pleasant Place			X		X		X	
155.14	3	37 Mt Pleasant Place			X		X		X	
155.14	5	938 Pleasant Valley Way			X		X		X	
155.14	6	932 Pleasant Valley Way			X		X		X	
155.14	7	928 Pleasant Valley Way			X		X		X	
155.14	8	924 Pleasant Valley Way			X		X		X	
155.14	9	920 Pleasant Valley Way			X		X		X	
155.14	11	916 Pleasant Valley Way			X		X		X	
155.14	12	912 Pleasant Valley Way			X		X		X	
155.14	14	908 Pleasant Valley Way			X		X		X	
155.14	35	25 Brook Place			X		X		X	
155.14	33	23 Brook Place			X		X		X	
155.14	30	21 Brook Place			X		X		X	
155.14	29	19 Brook Place			X		X		X	
155.14	27	17 Brook Place			X		X		X	
155.12	39	26 Brook Place			X		X		X	
155.12	40	24 Brook Place			X		X		X	
155.12	3	22 Brook Place			X		X		X	
155.12	4	20 Brook Place			X		X		X	
155.12	5	18 Brook Place	X				X		X	
155.12	6	16 Brook Place			X		X		X	
157	1	960 Pleasant Valley Way							X	Dentist Office
157	5	459 Mt Pleasant Ave							X	Julio's Restaurant
157	9	985 Pleasant Valley Way							X	Strip Mall
157	2	972 Pleasant Valley Way					X		X	Exxon
157	8.03	24 Mt Pleasant Place			X				X	
157	8.02	22 Mt Pleasant Place			X				X	
172.02	1	963 Pleasnt Valley Way					X		X	United Rent-All
172.02	6	993 Pleasant Valley Way					X		X	Starlite Restaurant
172.02	8	1 Lorelei Road			X				X	
172.02	9	3 Lorelei Road			X				X	
172.02	10	5 Lorelei Road			X				X	
172.02	11	7 Lorelei Road			X				X	
172.02	12	9 Lorelei Road			X				X	
172.02	13	11 Lorelei Road			X				X	
172.02	14	15 Lorelei Road			X				X	
172.02	15	129 Roosevelt Ave			X		X		X	
172.02	16	127 Roosevelt Ave			X		X		X	
172.02	17	125 Roosevelt Ave			X		X		X	
172.02	18	123 Roosevelt Ave			X		X		X	
172.02	19	121 Roosevelt Ave			X		X		X	
172.03	21	491 Mt Pleasant Ave			X		X		X	
172.03	19	8 Lorelei Road			X		X		X	
172.03	18	10 Lorelei Road			X		X		X	
172.03	17	12 Lorelei Road			X		X		X	
172.03	22	14 Lorelei Road			X		X		X	

TABLE A-3 WELL CANVAS
FORMER AMOCO/BP SERVICE STATION #84849
PI # 016006
945 PLEASANT VALLEY WAY, WEST ORANGE, ESSEX COUNTY, NEW JERSEY

Block	Lot	Physical Address	Correspondence Type			Potable Well Observed?		Potable Well Idenfitied in XY Well Search?		Comments
			In Person	Phone-call	Letter	Yes	No	Yes	No	
172.03	23	16 Lorelei Road			X		X		X	
172.03	24	18 Lorelei Road			X		X		X	
172.03	25	20 Lorelei Road			X		X		X	
172.15	13	25 Lorelei Road			X		X		X	
172.15	14	23 Lorelei Road			X		X		X	
172.15	15	21 Lorelei Road			X		X		X	
172.15	16	19 Lorelei Road			X		X		X	
172.15	17	124 Roosevelt Ave			X		X		X	
172.15	18	122 Roosevelt Ave			X		X		X	
172.15	1	1 Shelly Terrace			X		X		X	
172.15	2	3 Shelly Terrace			X		X		X	
172.15	3	5 Shelly Terrace			X		X		X	
172.15	4	7 Shelly Terrace			X		X		X	
172.15	5	9 Shelly Terrace			X		X		X	
172.15	6	11 Shelly Terrace			X		X		X	
172.15	7	15 Shelly Terrace			X		X		X	
172.05	25	117 Garfield Ave			X		X		X	
172.05	24	119 Garfield Ave			X		X		X	
172.05	23	121 Garfield Ave			X		X		X	
172.05	22	4 Shelly Terrace			X		X		X	
172.05	21	2 Shelly Terrace			X		X		X	
172.05	20	112 Roosevelt Ave			X		X		X	
172.05	19	110 Roosevelt Ave			X		X		X	
172.05	2	108 Roosevelt Ave			X		X		X	
172.04	26	119 Roosevelt Ave			X		X		X	
172.04	25	117 Roosevelt Ave			X		X		X	
172.04	24	115 Roosevelt Ave			X		X		X	
172.04	23	111 Roosevelt Ave			X		X		X	
172.04	22	109 Roosevelt Ave			X		X		X	
172.04	21	107 Roosevelt Ave			X		X		X	
172.04	20	105 Roosevelt Ave			X		X		X	
172.04	18	19 Elmwood Ave			X		X		X	
172.04	16	17 Elmwood Ave			X		X		X	
172.04	14	15 Elmwood Ave			X		X		X	
172.04	12	13 Elmwood Ave			X		X		X	
172.04	10	11 Elmwood Ave			X		X		X	
172.04	8	9 Elmwood Ave			X		X		X	
172.04	6	7 Elmwood Ave			X		X		X	
172.04	4	5 Elmwood Ave			X		X		X	
172.04	2	897 Pleasant Valley Way			X		X		X	
172.04	2.01	899 Pleasant Valley Way			X		X		X	
172.04	5.05	907 Pleasant Valley Way			X		X		X	
172.04	5.04	913 Pleasant Valley Way			X		X		X	
172.04	5.03	919 Pleasant Valley Way			X		X		X	
172.04	5.01	931 Pleasant Valley Way			X		X		X	

Appendix B

Soil Analytical Lab Reports

Analytical Data Package

Prepared by:

Pace Analytical Services

Pace Project No.: 7083318

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Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

April 09, 2019

Allyson Kriney
Parsons
200 Cottontail Lane
Somerset, NJ 08873

RE: Project: 84849 - 3/22
Pace Project No.: 7083318

Dear Allyson Kriney:
Enclosed are the analytical results for sample(s) received by the laboratory on March 23, 2019. The results relate only to the samples included in this report. Results contained within this report conform to the most current version of the TNI standards, BP LaMP Technical Requirements Revision 12.1, and any applicable Quality Assurance Project Plan (QAPP), or Work Plan unless otherwise narrated in the body of this report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Danielle Williams
danielle.williams@pacelabs.com
(631)694-3040
Project Manager

Enclosures

cc: ENFOS BP, ENFOS BP
Attn Scanning Dept, BP
Nick Loizos, BP-Parsons (Somerset NJ)
Dennis Miller, Parsons
Andrea Nyegaard, Parsons
Christopher Watson, Parsons
Danielle Williams, Pace Analytical Melville

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Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

CERTIFICATIONS

Project: 84849 - 3/22
Pace Project No.: 7083318

Long Island Certification IDs

575 Broad Hollow Rd, Melville, NY 11747
New York Certification #: 10478 Primary Accrediting Body
New Jersey Certification #: NY158
Pennsylvania Certification #: 68-00350
Connecticut Certification #: PH-0435
Maryland Certification #: 208
Rhode Island Certification #: LAO00340
Massachusetts Certification #: M-NY026
New Hampshire Certification #: 2987

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575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

SAMPLE SUMMARY

Project: 84849 - 3/22
Pace Project No.: 7083318

Lab ID	Sample ID	Matrix	Date Collected	Date Received
7083318001	**CB-1-V6.0-6.5-03222019**	Solid	03/22/19 11:05	03/23/19 11:00
7083318002	**BD-03222019**	Solid	03/22/19 12:00	03/23/19 11:00
7083318003	**FB-03222019**	Water	03/22/19 11:30	03/23/19 11:00

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575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

SAMPLE ANALYTE COUNT

Project: 84849 - 3/22
Pace Project No.: 7083318

Lab ID	Sample ID	Method	Analysts	Analytes Reported
7083318001	**CB-1-V6.0-6.5-03222019**	NJ DEP EPH	JKB	3
		ASTM D2216-92M	AK1	1
7083318002	**BD-03222019**	NJ DEP EPH	JKB	3
		ASTM D2216-92M	AK1	1
7083318003	**FB-03222019**	NJ DEP EPH	JKB	3

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Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

SUMMARY OF DETECTION

Project: 84849 - 3/22
Pace Project No.: 7083318

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
7083318001	**CB-1-V6.0-6.5-03222019**					
ASTM D2216-92M	Percent Moisture	11.1	%	0.10	04/05/19 09:48	
7083318002	**BD-03222019**					
ASTM D2216-92M	Percent Moisture	14.6	%	0.10	04/05/19 09:49	

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(631)694-3040

PROJECT NARRATIVE

Project: 84849 - 3/22
Pace Project No.: 7083318

Method: **NJ DEP EPH**
Description: NJEPH S
Client: BP-Parsons (Somerset NJ)
Date: April 09, 2019

General Information:
2 samples were analyzed for NJ DEP EPH. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3545A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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(631)694-3040

PROJECT NARRATIVE

Project: 84849 - 3/22
Pace Project No.: 7083318

Method: **NJ DEP EPH**
Description: NJEPH W
Client: BP-Parsons (Somerset NJ)
Date: April 09, 2019

General Information:
1 sample was analyzed for NJ DEP EPH. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3510C with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: 84849 - 3/22
Pace Project No.: 7083318

Sample: CB-1-V6.0-6.5-03222019 **Lab ID: 7083318001** Collected: 03/22/19 11:05 Received: 03/23/19 11:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NJEPH S	Analytical Method: NJ DEP EPH Preparation Method: EPA 3545A								
Total EPH	**<89.2**	mg/kg	89.2	2.5	1	04/02/19 13:07	04/05/19 21:25		
Surrogates									
1-Chloro-octadecane (S)	87	%	40-140		1	04/02/19 13:07	04/05/19 21:25	3386-33-2	
o-Terphenyl (S)	84	%	40-140		1	04/02/19 13:07	04/05/19 21:25	84-15-1	
Percent Moisture	Analytical Method: ASTM D2216-92M								
Percent Moisture	**11.1**	%	0.10	0.10	1		04/05/19 09:48		

REPORT OF LABORATORY ANALYSIS

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Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: 84849 - 3/22
Pace Project No.: 7083318

Sample: BD-03222019 **Lab ID: 7083318002** Collected: 03/22/19 12:00 Received: 03/23/19 11:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NJEPH S	Analytical Method: NJ DEP EPH Preparation Method: EPA 3545A								
Total EPH	**<92.6**	mg/kg	92.6	2.6	1	04/02/19 13:07	04/05/19 21:59		
Surrogates									
1-Chloro-octadecane (S)	75	%	40-140		1	04/02/19 13:07	04/05/19 21:59	3386-33-2	
o-Terphenyl (S)	69	%	40-140		1	04/02/19 13:07	04/05/19 21:59	84-15-1	
Percent Moisture	Analytical Method: ASTM D2216-92M								
Percent Moisture	**14.6**	%	0.10	0.10	1		04/05/19 09:49		

REPORT OF LABORATORY ANALYSIS

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Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: 84849 - 3/22
Pace Project No.: 7083318

Sample: FB-03222019 **Lab ID: 7083318003** Collected: 03/22/19 11:30 Received: 03/23/19 11:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NJEPH W	Analytical Method: NJ DEP EPH Preparation Method: EPA 3510C								
Total EPH	**<100**	ug/L	100	45.6	1	04/05/19 20:48	04/08/19 19:15		
Surrogates									
1-Chloro-octadecane (S)	88	%	40-140		1	04/05/19 20:48	04/08/19 19:15	3386-33-2	
o-Terphenyl (S)	95	%	40-140		1	04/05/19 20:48	04/08/19 19:15	84-15-1	

REPORT OF LABORATORY ANALYSIS

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Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: 84849 - 3/22
Pace Project No.: 7083318

QC Batch: 107584 | Analysis Method: NJ DEP EPH
QC Batch Method: EPA 3545A | Analysis Description: NJEPH Solid GCSV
Associated Lab Samples: 7083318001, 7083318002

METHOD BLANK: 498079 | Matrix: Solid
Associated Lab Samples: 7083318001, 7083318002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total EPH	mg/kg	<80.0	80.0	2.2	04/05/19 19:43	
1-Chloro-octadecane (S)	%	75	40-140		04/05/19 19:43	
o-Terphenyl (S)	%	68	40-140		04/05/19 19:43	

LABORATORY CONTROL SAMPLE & LCSD: 498080 498081

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Total EPH	mg/kg	360	273	256	76	71	40-140	6	25	
1-Chloro-octadecane (S)	%				93	81	40-140		25	
o-Terphenyl (S)	%				93	82	40-140		25	

MATRIX SPIKE SAMPLE: 498082

Parameter	Units	7083528003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total EPH	mg/kg	10.4J	476	382	78	40-140	
1-Chloro-octadecane (S)	%				90	40-140	
o-Terphenyl (S)	%				91	40-140	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 84849 - 3/22
Pace Project No.: 7083318

QC Batch: 108366 | Analysis Method: NJ DEP EPH
QC Batch Method: EPA 3510C | Analysis Description: NJEPH Water GCSV
Associated Lab Samples: 7083318003

METHOD BLANK: 502342 | Matrix: Water
Associated Lab Samples: 7083318003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total EPH	ug/L	<100	100	45.6	04/08/19 17:32	
1-Chloro-octadecane (S)	%	99	40-140		04/08/19 17:32	
o-Terphenyl (S)	%	100	40-140		04/08/19 17:32	

LABORATORY CONTROL SAMPLE & LCSD: 502343 502344

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Total EPH	ug/L	3600	2750	2700	76	75	40-140	2	25	
1-Chloro-octadecane (S)	%				77	90	40-140		25	
o-Terphenyl (S)	%				80	93	40-140		25	

MATRIX SPIKE SAMPLE: 502345

Parameter	Units	7083318003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total EPH	ug/L	<100	3600	2950	82	40-140	
1-Chloro-octadecane (S)	%				93	40-140	
o-Terphenyl (S)	%				98	40-140	

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QUALITY CONTROL DATA

Project: 84849 - 3/22
Pace Project No.: 7083318

QC Batch: 108209
QC Batch Method: ASTM D2216-92M
Associated Lab Samples: 7083318001, 7083318002

Analysis Method: ASTM D2216-92M
Analysis Description: Dry Weight/Percent Moisture

SAMPLE DUPLICATE: 501602

Parameter	Units	30287307001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	21.9	21.2	3	20	

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(631)694-3040

QUALIFIERS

Project: 84849 - 3/22
Pace Project No.: 7083318

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

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Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 84849 - 3/22
Pace Project No.: 7083318

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
7083318001	**CB-1-V6.0-6.5-03222019**	EPA 3545A	107584	NJ DEP EPH	108295
7083318002	**BD-03222019**	EPA 3545A	107584	NJ DEP EPH	108295
7083318003	**FB-03222019**	EPA 3510C	108366	NJ DEP EPH	108383
7083318001	**CB-1-V6.0-6.5-03222019**	ASTM D2216-92M	108209		
7083318002	**BD-03222019**	ASTM D2216-92M	108209		

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WO#:7083318

7083318

ory Management Program LaMP Chain of Custody Record

Node Path: BP > USA > NJ > ESSEX > 84849 > PMPv4 > 1994 F

Facility No: 84849

Req Due Date (mm/dd/yy): STD Rush TAT: Yes ___ No X

Lab Work Order Number:

Lab Name:	PACE Analytical Services LLC	Facility Address:	84849 – West Orange	Consultant/Contractor:	Parsons
Lab Address:	575 Broad Hollow Road, Melville NY 11747	City, State, ZIP Code:		Consultant/Contractor Project No:	450472-84849
Lab PM:	Danielle Williams	Lead Regulatory Agency:	NJDEP	Address:	200 Cottontail Lane Somerset, NJ
Lab Phone:	516-370-6041	California Global ID No.:	N/A	Consultant/Contractor PM:	Allyson Kriney
Lab Shipping Accnt:	522658367	Enfos Proposal No:	009WH-0005	Phone: 732-537-3549	Email: Allyson.Kriney@parsons.c
Lab Bottle Order No:		Accounting Mode:	Provision X OOC-BU ___ OOC-RM ___	Email EDD To:	dennis.miller@parso and to lab.enfosdoc@bp.com
Other Info:	Profile	Stage: 40	Activity: 146	Invoice To:	BP X Contractor ___

BP Project Manager (PM):

BP PM Phone:

BP PM Email:

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Matrix: Is this location a well?	No. Containers / Preservative: Total Number of Containe	Unpreserved	H2SO4	HNO3	HCl	Methanol	Requested Analyses: TCL									Report Type & QC Level
	~~CB-1-V6.0-6.5-03222019~~	~~3/22/19~~																					
	CB-1-V6.0-6.5-03222019	3/22/19	1105	X					X					X									001
	BD-03222019	3/22/19	1200	X					X					X									002
	FB-03222019	3/22/19	1130		X									X									003

Report Type & QC Level: Standard; Full Data Package x

NJ reduced deliverable

Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

Sampler's Name:	Nick Lekos	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:	Parsons	/ Parsons	3/22/19	1345		3/23/19	1100
Shipment Method:	FedEx Ship Date: 3/22/19						
Shipment Tracking No:							

Special Instructions:

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: 3.3 °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

BP Remediation Management COC - Effective Date: starting August 16, 2011.

BP LaMP COC Rev. 8, 24 June 2012

Pace Analytical
Long Island Laboratory

Sample Condition Upon Receipt

WO#:7083318
PM: DW1 Due Date: 04/08/19
CLIENT: BP_PAR(SONJ)

Client Name: BP **Proj**

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #: 4899 5747 0706

Custody Seal on Cooler/Box Present: ☒ Yes ☐ No **Seals intact:** ☒ Yes ☐ No **Temperature Blank Present:** ☒ Yes ☐ No

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ Ziploc ☐ None ☐ Other **Type of Ice:** ☒ Wet ☐ Blue ☐ None

Thermometer Used: TH091 **Correction Factor:** 0.0 ☐ Samples on ice, cooling process has begun

Cooler Temperature (°C): 3.3 **Cooler Temperature Corrected (°C):** 3.3 **Date/Time 5035A kits placed in freezer** _____

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☒ N/A, water sample) **Date and Initials of person examining contents:** JK 3/23/19

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ YES ☐ NO

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present:	☑Yes	☐No		1.
Chain of Custody Filled Out:	☑Yes	☐No		2.
Chain of Custody Relinquished:	☑Yes	☐No		3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No		5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No		6.
Rush Turn Around Time Requested:	☐Yes	☑No		7.
Sufficient Volume: (Triple volume provided for MS/MSD	☑Yes	☐No		8.
Correct Containers Used:	☑Yes	☐No		9.
-Pace Containers Used:	☑Yes	☐No		
Containers Intact:	☑Yes	☐No		10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC:	☑Yes	☐No		12.
-Includes date/time/ID/Analysis Matrix: SL WT OIL				
All containers needing preservation have been checked	☐Yes	☐No	☑N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
pH paper Lot #				
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl, NaOH>9 Sulfide, NAOH>12 Cyanide) Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis	☐Yes	☐No	☑N/A	Sample # / Initial when completed: / Lot # of added preservative: / Date/Time preservative added:
Samples checked for dechlorination:	☐Yes	☐No	☑N/A	14.
KI starch test strips Lot #				
Residual chlorine strips Lot #				Positive for Res. Chlorine? Y N
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	15.
Trip Blank Present:	☐Yes	☐No	☑N/A	16.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if applicable): _____				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

*** PM (Project Manager) review is documented electronically in LIMS.**

F-LI-C-002-rev.02

Pace Long Island

575 Broad Hollow Road
Melville, NY 11747

tel 631.694.3040
fax 631.420.8436

Analytical Data Report Package
For the
New Jersey Department of Environmental Protection
Trenton, New Jersey 08625

Case Name	Field Sample #	Laboratory Sample #	Date of Collection
BP_PAR (SONJ) 7083318	CB-1-V6. 0-6.5-03222019	7083318001	03/22/2019
BP_PAR (SONJ) 7083318	BD-03222019	7083318002	03/22/2019
BP_PAR (SONJ) 7083318	FB-03222019	7083318003	03/22/2019

Laboratory Address: 575 Broad Hollow Road, Melville NY 11747
Certification #: NY158
Date: April 10, 2019
Assistant General Manager Signature: _____
Printed Name: Michael Miller
Quality Assurance Manager Signature: _____ for Diana Losito
Printed Name: Diana Losito

PACE ANALYTICAL SERVICES, INC.

New Jersey Department of Environmental Protection
Division of Water Resources
Ground Water Quality Management Element
CN-029, Trenton, New Jersey 08625

Relinquisher of sample: (please print)

Name _____ Signature _____

Company _____

Title _____

Date _____ Time _____

Laboratory sample recipient: (please print)

Name Jackie Kori Signature _____

Laboratory Name Pace Analytical Services, Inc.

Laboratory Address 575 Broadhollow Rd, Melville NY 11747

NJDEP Laboratory Certification No: NY 158 Title Custodian

Date 3/23/19 Time 11:00

Did sample arrive cold? Yes X No _____

Were the samples properly preserved? Yes X No _____

If no, which analyses will be affected? _____

Did sample for analyses of volatile organics contain headspace? Yes _____ No _____ N/A X

Was the septum in place with the TFE side down? Yes _____ No _____ N/A X

Pace Long Island

575 Broad Hollow Road
Melville, NY 11747

tel 631.694.3040
fax 631.420.8436

SDG: BP_PAR (SONJ) 7083318

	Sample Prep	Analyst	Signature	Date of Analysis
1.	Semi-volatiles			
2.	Pesticides			
3.	Metals-ICP			
4.	Metals-Hg			
5.	Other-Semivolatiles			
6.	Other –EPH	Henry Barrera	for HMB	04/02/19 04/05/19

	Sample Analysis			
1.	Volatiles			
2.	Volatiles			
3.	Semi-Volatiles			
4.	PCBs			
5.	Herbicides			
6.	Metals-TSS			
7.	Metals-ICP			
8.	Other –BOD			
9.	Other – COD			
10.	Other –IGN			
11.	Other –Free Liquid			
12.	Other –Cyanide			
13.	Other – EPH	James Bidas		04/05/19 04/06/19
14.	Other- NH3			
15.	Other – P. Moist	Arianna King	for AKI	4/06/19
16.	Other – CR6			

Pace Long Island

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tel 631.694.3040
fax 631.420.8436

SDG: BP_PAR (SONJ) 7083318

Did any of the sample extraction and/or analysis exceed holding times?

Yes___ **No** X.

If yes, which analyses will be affected:

If re-extraction and/or reanalysis are necessary indicate the reason and attach another Laboratory Chain of Custody/Chronicle with the appropriate signatures and dates:

Quality Assurance Manager Signature Michele R. Crespi for Diana Losito

Printed Name: Diana Losito

Date: April 10, 2019

575 Broad Hollow Road
Melville, NY 11747
tel. 631.694.3040
fax. 631.420.8436

Methodology Summary

EPH: The above sample(s) was/were analyzed for extractable petroleum hydrocarbon according to the protocol for Extractable Petroleum Hydrocarbon Compounds (EPH) NJDEP EPH 10/08, Revision 3 and reported with requested deliverables. The above water samples was/were extracted in accordance with EPA 3510C and the above soil sample was/were extracted in accordance with EPA 3545A.

Other (Wet Chemistry): The above soil samples were received by Pace Analytical Services, LLC. for select wet chemistry analysis. The samples were prepared and analyzed using the following method(s):

Percent Moisture	ASTM D2216-92M

NOTE: Include only fractions actually analyzed.

GCV FID - FORM II VOA-1
SOLID VOLATILE SURROGATE RECOVERY

Lab Name: Pace Analytical - New York SDG No.: 7083318 Contract: 84849 - 3/22

Instrument ID: 70GCS7

LAB SAMPLE ID	SAMPLE NAME	COCT	OTER
498079	498079BLANK	75	68
498080	498080LCS	93	93
498081	498081LCSD	81	82
7083318001	CB-1-V6.0-6.5-03222019	87	84
7083318002	BD-03222019	75	69

	QC LIMITS
(COCT) = 1-Chloro-octadecane (S)	(40-140)
(OTER) = o-Terphenyl (S)	(40-140)

* Values outside of QC Limits

GCV FID - FORM II VOA-2
WATER VOLATILE SURROGATE RECOVERY

Lab Name: Pace Analytical - New York SDG No.: 7083318 Contract: 84849 - 3/22

Instrument ID: 70GCS7

LAB SAMPLE ID	SAMPLE NAME	COCT	OTER
502342	502342BLANK	99	100
502343	502343LCS	77	80
502344	502344LCSD	90	93
502345	502345MS	93	98
7083318003	FB-03222019	88	95

	QC LIMITS
(COCT) = 1-Chloro-octadecane (S)	(40-140)
(OTER) = o-Terphenyl (S)	(40-140)

* Values outside of QC Limits

GCV FID - FORM III VOA-1

SOLID LABORATORY CONTROL SAMPLE RECOVERY

Lab Name: Pace Analytical - New York
Lab Sample ID: 498080LCS
Date Extracted: 04/02/2019
Date Analyzed (1): 04/05/2019
Instrument: 70GCS7
LCS Lot No: 53518,64836
Lab File ID: 040519.B\GC70001654.D
SDG No.: 7083318

COMPOUND	AMOUNT ADDED (mg/kg)	LCS CONCENTRATION (mg/kg)	LCS %REC	QC LIMITS REC.
Total EPH	360	273	76	40-140

Spike Recovery: 0 out of 1 outside limits.

GCV FID - FORM III VOA-2

SOLID LABORATORY CONTROL SAMPLE RECOVERY

Instrument ID (2): 70GCS7 Lab Sample ID (2): 498081LCSD

Date Analyzed 04/05/2019 Lab File ID (2): 040519.B\GC70001655.D

COMPOUND	AMOUNT ADDED (mg/kg)	LCSD CONCENTRATION (mg/kg)	LCSD %REC	%RPD	QC LIMITS	
					RPD	REC.
Total EPH	360	256	71	6	0-25	40-140

RPD: 0 out of 1 outside limits.

Spike Recovery: 0 out of 1 outside limits.

GCV FID - FORM III VOA-1

WATER LABORATORY CONTROL SAMPLE RECOVERY

Lab Name: Pace Analytical - New York
Lab Sample ID: 502343LCS
Date Extracted: 04/05/2019
Date Analyzed (1): 04/08/2019
Instrument: 70GCS7
LCS Lot No: 46707,53513
Lab File ID: 040819.B\GC70001672.D
SDG No.: 7083318

COMPOUND	AMOUNT ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS %REC	QC LIMITS REC.
Total EPH	3600	2750	76	40-140

Spike Recovery: 0 out of 1 outside limits.

GCV FID - FORM III VOA-2
WATER LABORATORY CONTROL SAMPLE RECOVERY

Instrument ID (2): 70GCS7 Lab Sample ID (2): 502344LCSD

Date Analyzed 04/08/2019 Lab File ID (2): 040819.B\GC70001673.D

COMPOUND	AMOUNT ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD %REC	%RPD	QC LIMITS	
					RPD	REC.
Total EPH	3600	2700	75	2	0-25	40-140

RPD: 0 out of 1 outside limits.
Spike Recovery: 0 out of 1 outside limits.

GCV FID - FORM III VOA-1

SOLID VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Pace Analytical - New York

Matrix Spike - Sample No: 498082MS

Date Extracted: 04/02/2019

Date Analyzed (1): 04/06/2019

Instrument: 70GCS7

Lab File ID: 040519.B\GC70001664.D

Parent Sample ID: 7083528003

SDG No.: 7083318

COMPOUND	SPIKE ADDED (mg/kg)	SAMPLE CONCENTRATION (mg/kg)	MS CONCENTRATION (mg/kg)	MS %REC	QC LIMITS REC.
Total EPH	476	10.4J	382	78	40-140

Spike Recovery: 0 out of 1 outside limits.

GCV FID - FORM III VOA-1

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Pace Analytical - New York

Matrix Spike - Sample No: 502345MS

Date Extracted: 04/05/2019

Date Analyzed (1): 04/08/2019

Instrument: 70GCS7

Lab File ID: 040819.B\GC70001675.D

Parent Sample ID: FB-03222019

SDG No.: 7083318

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS %REC	QC LIMITS REC.
Total EPH	3600	<100	2950	82	40-140

Spike Recovery: 0 out of 1 outside limits.

SAMPLE NO.

498079BLANK

GCV FID - FORM IV VOA-1
VOLATILE METHOD BLANK SUMMARY

Lab Name: Pace Analytical - New York SDG No.: 7083318 Contract: 84849 - 3/22

Instrument ID: 70GCS7 Matrix: Solid Lab Sample ID: 498079

Lab File ID: 040519.B\GC70001653.D Date Analyzed: 04/05/2019 Time: 19:43

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	ANALYZED
498080LCS	498080	040519.B\GC70001654.D	04/05/2019 20:17
498081LCSD	498081	040519.B\GC70001655.D	04/05/2019 20:51
CB-1-V6.0-6.5-03222019	7083318001	040519.B\GC70001656.D	04/05/2019 21:25
BD-03222019	7083318002	040519.B\GC70001657.D	04/05/2019 21:59

SAMPLE NO.

502342BLANK

GCV FID - FORM IV VOA-1
VOLATILE METHOD BLANK SUMMARY

Lab Name: Pace Analytical - New York SDG No.: 7083318 Contract: 84849 - 3/22

Instrument ID: 70GCS7 Matrix: Water Lab Sample ID: 502342

Lab File ID: 040819.B\GC70001671.D Date Analyzed: 04/08/2019 Time: 17:32

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	ANALYZED
502343LCS	502343	040819.B\GC70001672.D	04/08/2019 18:07
502344LCSD	502344	040819.B\GC70001673.D	04/08/2019 18:41
FB-03222019	7083318003	040819.B\GC70001674.D	04/08/2019 19:15
502345MS	502345	040819.B\GC70001675.D	04/08/2019 19:49

SAMPLE NO.

GCV FID - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

CB-1-V6.0-6.5-03222019

Lab Name: Pace Analytical - New York Contract: 84849 - 3/22

Date Received: 03/23/2019 11:00 Matrix: Solid SDG No.: 7083318

Date Extracted: 04/02/2019 13:07 Lab Sample ID: 7083318001

Date Analyzed: 04/05/2019 21:25 Lab File ID: 040519.B\GC70001656.D

Initial wt/vol: 10.09 g Final wt/vol: 1 mL Dilution: 1 Instrument: 70GCS7 Percent Moisture: 11.1%

CAS NO.	COMPOUND	CONCENTRATION UNITS: mg/kg	Q
	Total EPH	<89.2	U

Pace Analytical Services, Inc.

NJ EPH

Data file : \\v70wintarget\chem\70gcs7.i\040519.B\GC70001656.D
Lab Smp Id: 7083318001 Client Smp ID: CB-1-V6.0-6.5-03222
Inj Date : 05-APR-2019 21:25
Operator : JKB Inst ID: 70gcs7.i
Smp Info : 7083318001,
Misc Info : 6509,
Comment   : NJ EPH
Method   : \\v70wintarget\chem\70gcs7.i\040519.B\NJEPHNonFrac-072218.m
Meth Date : 08-Apr-2019 13:45 70gcs7.i Quant Type: ESTD
Cal Date : 21-JUL-2018 14:50 Cal File: GC70000008.D
Als bottle: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TEPH.sub
Target Version: RC10A

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVar

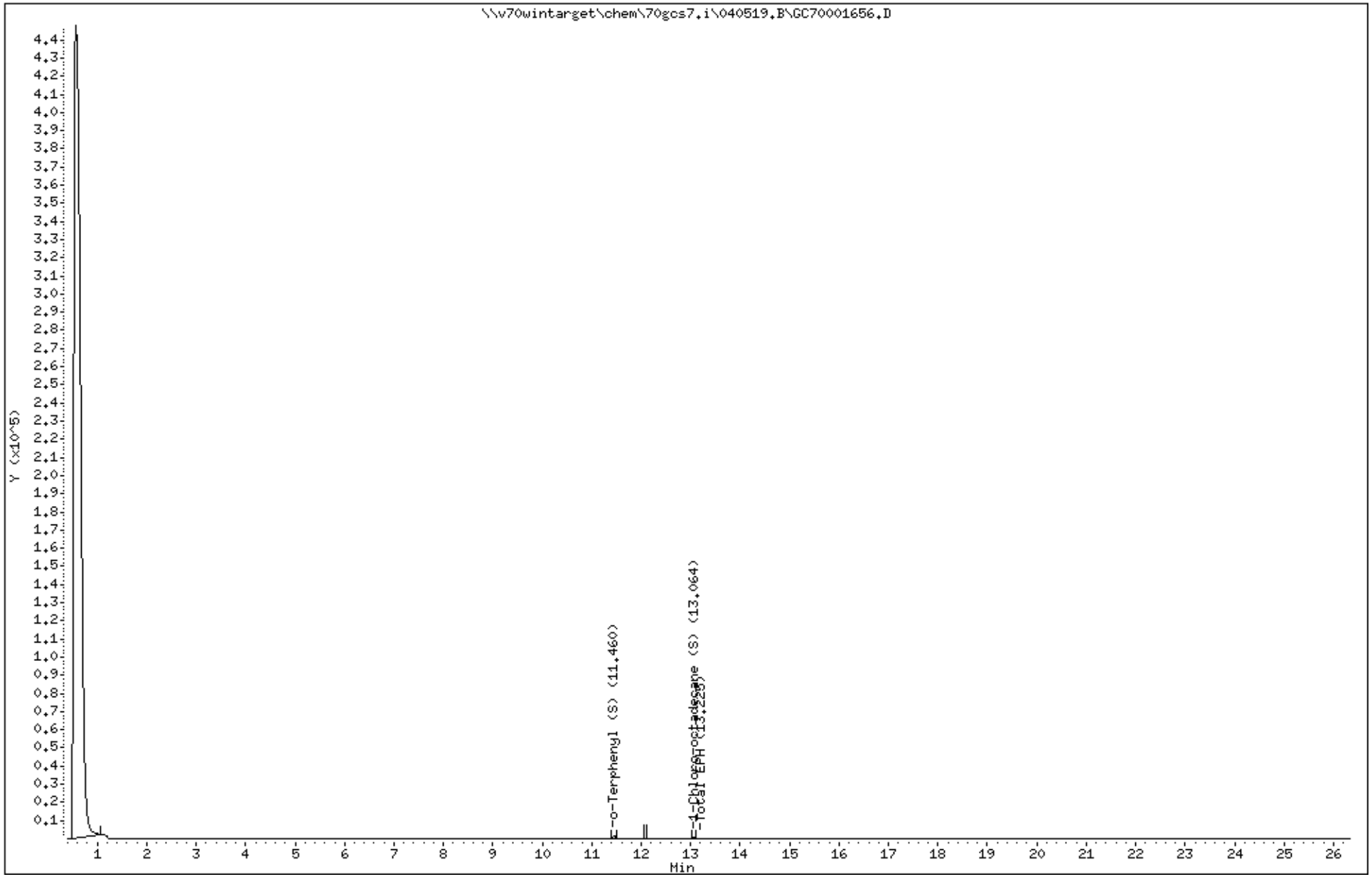
Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	Correction factor
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	10.090	Weight of Sample extracted (g)
M	11.113	% Moisture
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS		
					ON-COLUMN	FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(mg/Kg)	REVIEW CODE
$ 26 o-Terphenyl (S)	11.459	11.468	-0.009	2160	83.8184	9.34	
$ 28 1-Chloro-octadecane (S)	13.063	13.106	-0.043	1850	86.6037	9.66(R)	
S 33 Total EPH	1.350-25.100			134	5.84316	0.652	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: \\v70wintarget\chem\70gcs7.i\040519.B\GC70001656.D
Date : 05-APR-2019 21:25
Client ID: CB-1-V6.0-6.5-03222
Instrument: 70gcs7.i
Sample Info: 7083318001,
Volume Injected (uL): 1.0
Operator: JKB
Column phase: RTX-CLP2
Column diameter: 0.32



Data File: \\v70wintarget\chem\70gcs7.i\040519.B/GC70001656.D (ManInt: TEPH.sub Orig: all.sub)
Injection Date: 05-APR-2019 21:25 Operator: JKB
Instrument: 70gcs7.i
Lab Sample ID: 7083318001

NO SIGNAL MANUAL INTEGRATIONS DONE FOR THIS DATA FILE

Manually Integrated Compounds

Compound	Area (before)	Area (after)
Total EPH	134	134
o-Terphenyl (S)	2160	2160
1-Chloro-octadecane (S)	1850	1850

SAMPLE NO.

BD-03222019

GCV FID - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Pace Analytical - New York Contract: 84849 - 3/22

Date Received: 03/23/2019 11:00 Matrix: Solid SDG No.: 7083318

Date Extracted: 04/02/2019 13:07 Lab Sample ID: 7083318002

Date Analyzed: 04/05/2019 21:59 Lab File ID: 040519.B\GC70001657.D

Initial wt/vol: 10.11 g Final wt/vol: 1 mL Dilution: 1 Instrument: 70GCS7 Percent Moisture: 14.6%

CAS NO.	COMPOUND	CONCENTRATION UNITS: mg/kg	Q
	Total EPH	<92.6	U

Pace Analytical Services, Inc.

NJ EPH

Data file : \\v70wintarget\chem\70gcs7.i\040519.B\GC70001657.D
Lab Smp Id: 7083318002 Client Smp ID: BD-03222019
Inj Date : 05-APR-2019 21:59
Operator : JKB Inst ID: 70gcs7.i
Smp Info : 7083318002,
Misc Info : 6509,
Comment : NJ EPH
Method : \\v70wintarget\chem\70gcs7.i\040519.B\NJEPHNonFrac-072218.m
Meth Date : 08-Apr-2019 13:45 70gcs7.i Quant Type: ESTD
Cal Date : 21-JUL-2018 14:50 Cal File: GC70000008.D
Als bottle: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TEPH.sub
Target Version: RC10A

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVar

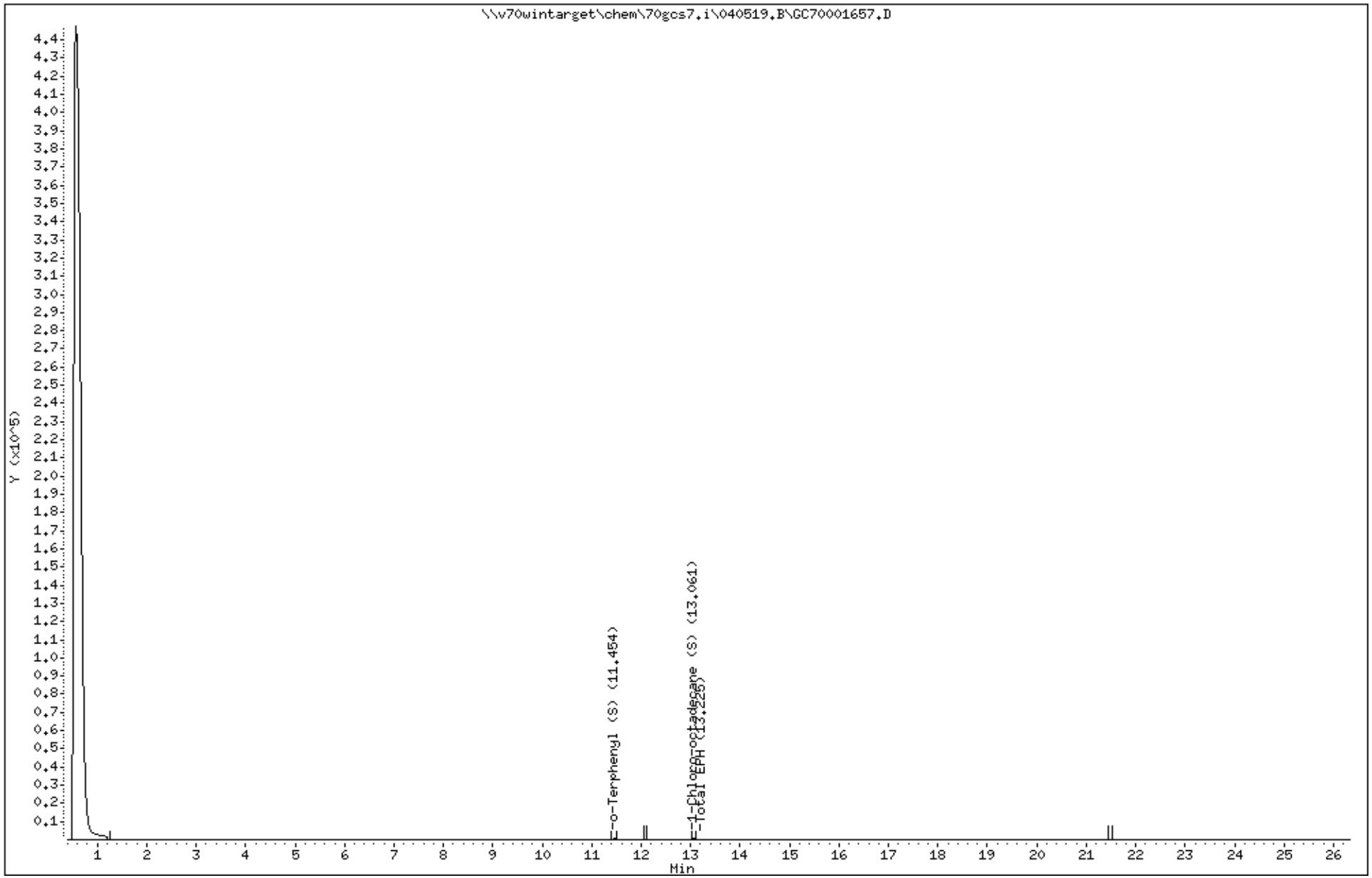
Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	Correction factor
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	10.110	Weight of Sample extracted (g)
M	14.560	% Moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS		
						ON-COLUMN	FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE		(ug/mL)	(mg/Kg)	REVIEW CODE
$ 26 o-Terphenyl (S)	11.453	11.468	-0.015	1779		69.0338	7.99	
$ 28 1-Chloro-octadecane (S)	13.060	13.106	-0.046	1611		75.4155	8.73(R)	
S 33 Total EPH	1.350-25.100			279		12.1660	1.41	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: \\v70wintarget\chem\70gcs7.i\040519.B\GC70001657.D
Date : 05-APR-2019 21:59
Client ID: BD-03222019
Instrument: 70gcs7.i
Sample Info: 7083318002,
Volume Injected (uL): 1.0
Operator: JKB
Column phase: RTX-CLP2
Column diameter: 0.32



Data File: \\v70wintarget\chem\70gcs7.i\040519.B/GC70001657.D (ManInt: TEPH.sub Orig: all.sub)
Injection Date: 05-APR-2019 21:59 Operator: JKB
Instrument: 70gcs7.i
Lab Sample ID: 7083318002

NO SIGNAL MANUAL INTEGRATIONS DONE FOR THIS DATA FILE

Manually Integrated Compounds

Compound	Area (before)	Area (after)
Total EPH	279	279
o-Terphenyl (S)	1779	1779
1-Chloro-octadecane (S)	1611	1611

SAMPLE NO.

FB-03222019

GCV FID - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Pace Analytical - New York Contract: 84849 - 3/22

Date Received: 03/23/2019 11:00 Matrix: Water SDG No.: 7083318

Date Extracted: 04/05/2019 20:48 Lab Sample ID: 7083318003

Date Analyzed: 04/08/2019 19:15 Lab File ID: 040819.B\GC70001674.D

Initial wt/vol: 1000 mL Final wt/vol: 1 mL Dilution: 1 Instrument: 70GCS7 Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
	Total EPH	<100	U

Pace Analytical Services, Inc.

NJ EPH

Data file : \\v70wintarget\chem\70gcs7.i\040819.B\GC70001674.D
Lab Smp Id: 7083318003 Client Smp ID: FB-03222019
Inj Date : 08-APR-2019 19:15
Operator : JKB Inst ID: 70gcs7.i
Smp Info : 7083318003,
Misc Info : 6519,
Comment : NJ EPH
Method : \\v70wintarget\chem\70gcs7.i\040819.B\NJEPHNonFrac-072218.m
Meth Date : 09-Apr-2019 11:19 jbidas Quant Type: ESTD
Cal Date : 21-JUL-2018 14:50 Cal File: GC70000008.D
Als bottle: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TEPH.sub
Target Version: RC10A
Processing Host: L-23028

Concentration Formula: Amt * DF * Uf * (Vt/Vo) * CpndVariable

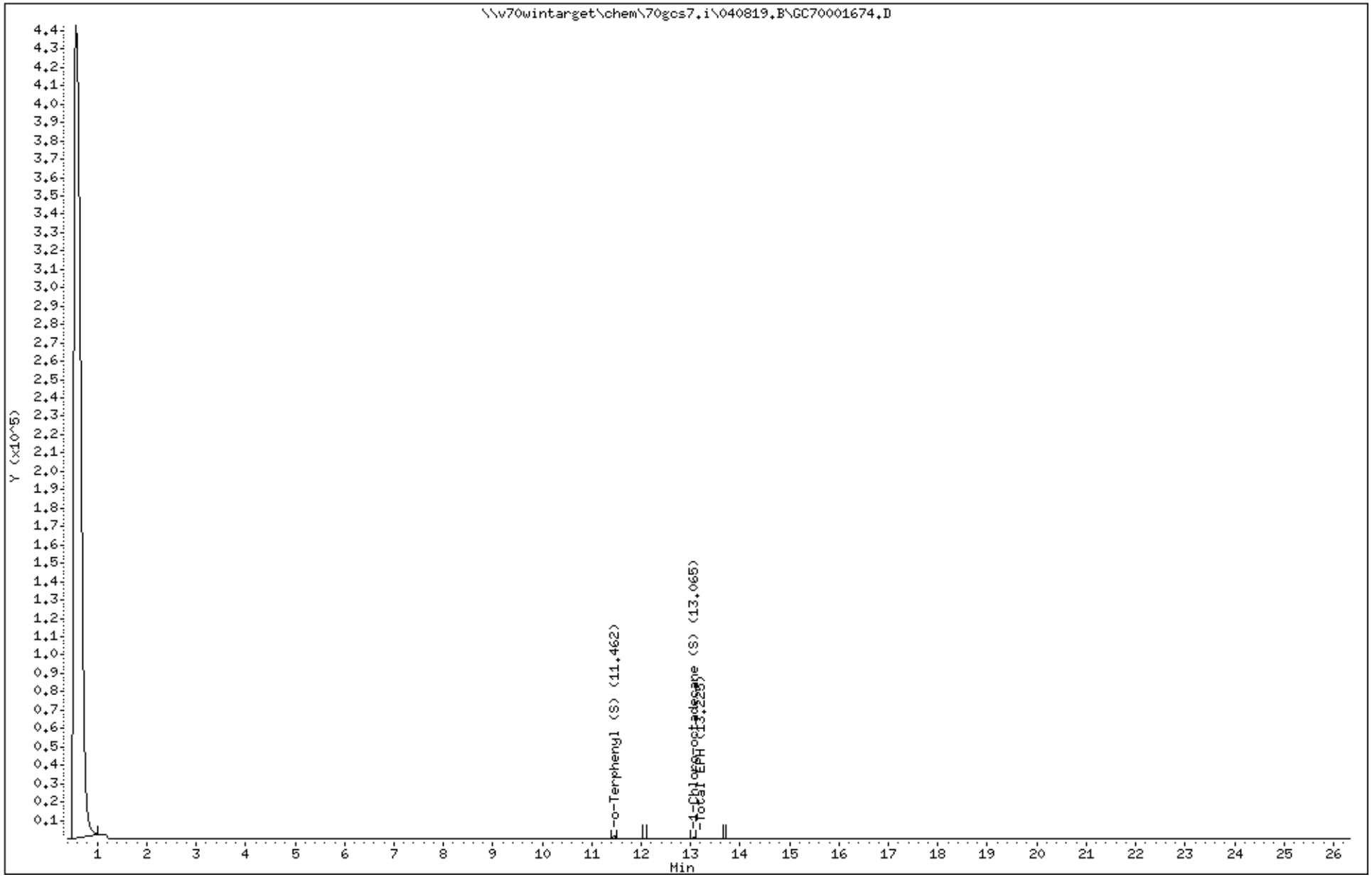
Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 26 o-Terphenyl (S)	11.461	11.468	-0.007	2440	94.6837	94.7	
$ 28 1-Chloro-octadecane (S)	13.065	13.106	-0.041	1876	87.8209	87.8(R)	
S 33 Total EPH	1.350-25.100			112	4.88384	4.88	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: \\v70wintarget\chem\70gcs7.i\040819.B\GC70001674.D
Date : 08-APR-2019 19:15
Client ID: FB-03222019
Instrument: 70gcs7.i
Sample Info: 7083318003,
Purge Volume: 1000.0
Operator: JKB
Column phase: RTX-CLP2
Column diameter: 0.32



Data File: \\v70wintarget\chem\70gcs7.i\040819.B/GC70001674.D (ManInt: TEPH.sub Orig: TEPH.sub)
Injection Date: 08-APR-2019 19:15 Operator: JKB
Instrument: 70gcs7.i
Lab Sample ID: 7083318003

NO SIGNAL MANUAL INTEGRATIONS DONE FOR THIS DATA FILE

Manually Integrated Compounds

Compound	Area (before)	Area (after)
Total EPH	112	112
o-Terphenyl (S)	2440	2440
1-Chloro-octadecane (S)	1876	1876

GCV FID - FORM VI VOA-1

GCV FID INITIAL CALIBRATION DATA

Lab Name: Pace Analytical - New York Instrument ID: 70GCS7 GC Column: Col 1 SDG No.: 7083318

Calibration Date(s): 07/21/2018 07/21/2018 Calibration Time(s): 10:50 14:16

LAB FILE ID

CAL1 = 072218.B\GC70000007.D CAL2 = 072218.B\GC70000006.D CAL3 = 072218.B\GC70000005.D

CAL4 = 072218.B\GC70000004.D CAL5 = 072218.B\GC70000003.D CAL6 = 072218.B\GC70000001.D

CAL6 = 072218.B\GC70000002.D

COMPOUND	CURVE TYPE	CAL1	CAL2	CAL3	CAL4	CAL5	CAL6
Total EPH	Averaged	21.91111	22.41667	23.57556	23.05056	24.08578	22.55700
1-Chloro-octadecane (S)	Averaged	21.17000	20.81000	20.88000	20.13000	22.18000	23.00000
o-Terphenyl (S)	Averaged	26.18000	25.63000	25.70000	25.29000	27.14000	24.68000

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

GCV FID - FORM VI VOA-2

GCV FID INITIAL CALIBRATION DATA

Lab Name: Pace Analytical - New York Instrument ID: 70GCS7 GC Column: Col 1 SDG No.: 7083318

Calibration Date(s): 07/21/2018 07/21/2018 Calibration Time(s): 10:50 14:16

LAB FILE ID

CAL1 = 072218.B\GC70000007.D CAL2 = 072218.B\GC70000006.D CAL3 = 072218.B\GC70000005.D

CAL4 = 072218.B\GC70000004.D CAL5 = 072218.B\GC70000003.D CAL6 = 072218.B\GC70000001.D

CAL6 = 072218.B\GC70000002.D

COMPOUND	CURVE TYPE	%RSD	R2	A1	A2	A3
Total EPH	Averaged	3.49272			22.93278	
1-Chloro-octadecane (S)	Averaged	4.88466			21.36167	
o-Terphenyl (S)	Averaged	3.24107			25.77000	

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

Pace Analytical Services, Inc.

NJ EPH

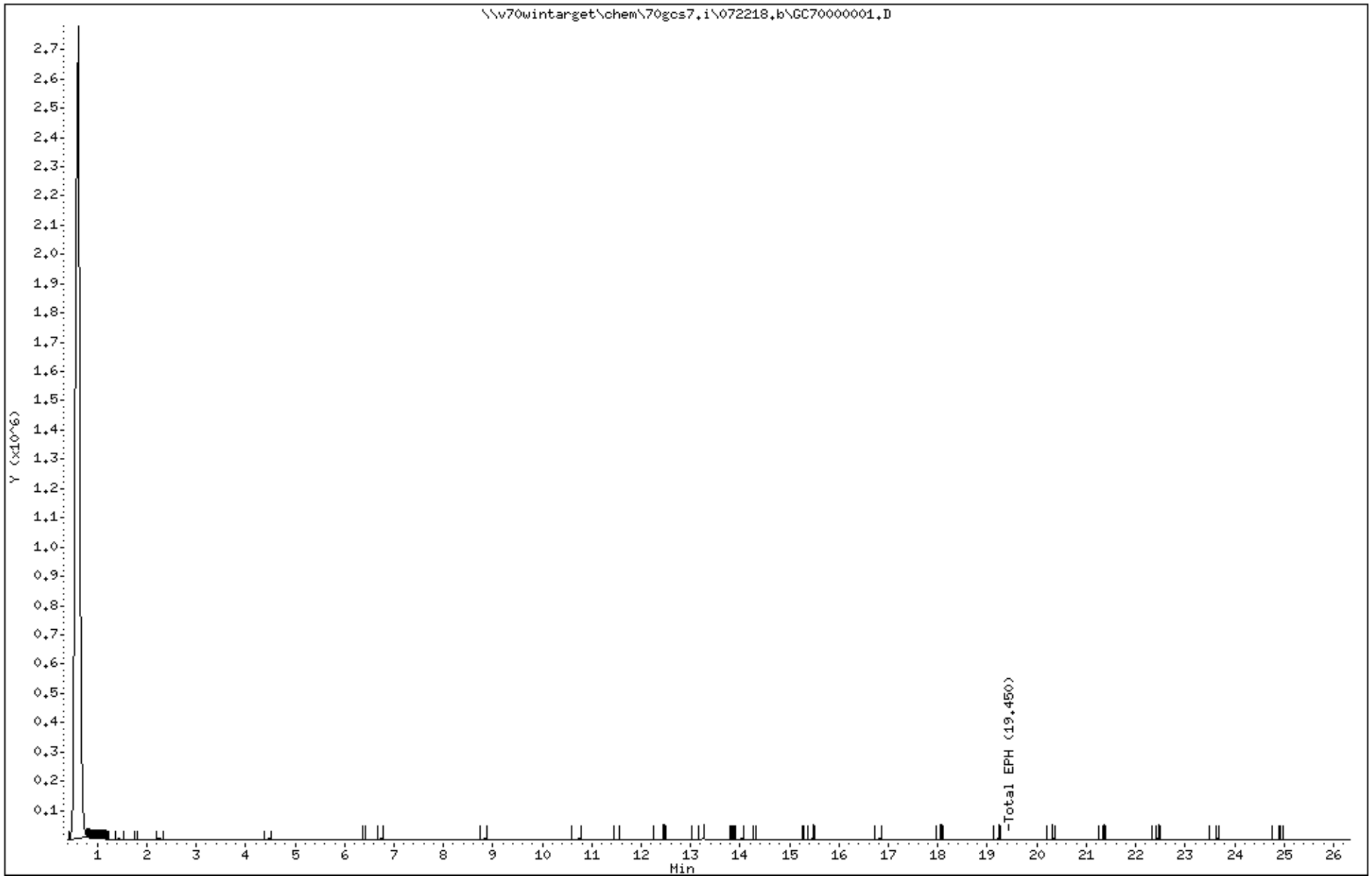
Data file : \\v70wintarget\chem\70gcs7.i\072218.b\GC70000001.D
Lab Smp Id: CAL6 Client Smp ID: CAL6
Inj Date : 21-JUL-2018 10:50
Operator : JKB Inst ID: 70gcs7.i
Smp Info : cal6, 48747:1
Misc Info : 4765,
Comment : NJ EPH
Method : \\v70wintarget\chem\70gcs7.i\072218.b\NJEPHNonFrac-072218.m
Meth Date : 29-Jul-2018 14:17 70gcs7.i Quant Type: ESTD
Cal Date : 21-JUL-2018 10:50 Cal File: GC70000001.D
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TEPH.sub
Target Version: RC10A

Concentration Formula: Amt * DF * Uf * (Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

					AMOUNTS		
					CAL-AMT	ON-COL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	REVIEW CODE
$ 26 o-Terphenyl (S)	Compound Not Detected.						
$ 28 1-Chloro-octadecane (S)	Compound Not Detected.						
S 33 Total EPH	1.350-25.100			162083	9000.00	9000	

Data File: \\v70wintarget\chem\70gcs7.i\072218.b\GC70000001.D
Date : 21-JUL-2018 10:50
Client ID: CAL6
Instrument: 70gcs7.i
Sample Info: CAL6, 48747:1
Purge Volume: 1000.0
Operator: JKB
Column phase: RTX-CLP2
Column diameter: 0.32



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Injection Date: 21-JUL-2018 10:50 Operator: JKB
Instrument: 70gcs7.i
Lab Sample ID: CAL6

NO SIGNAL MANUAL INTEGRATIONS DONE FOR THIS DATA FILE

Manually Integrated Compounds

Compound	Area (before)	Area (after)
Total EPH	162083	162083
o-Terphenyl (S)	0	0
1-Chloro-octadecane (S)	0	0

Pace Analytical Services, Inc.

NJ EPH

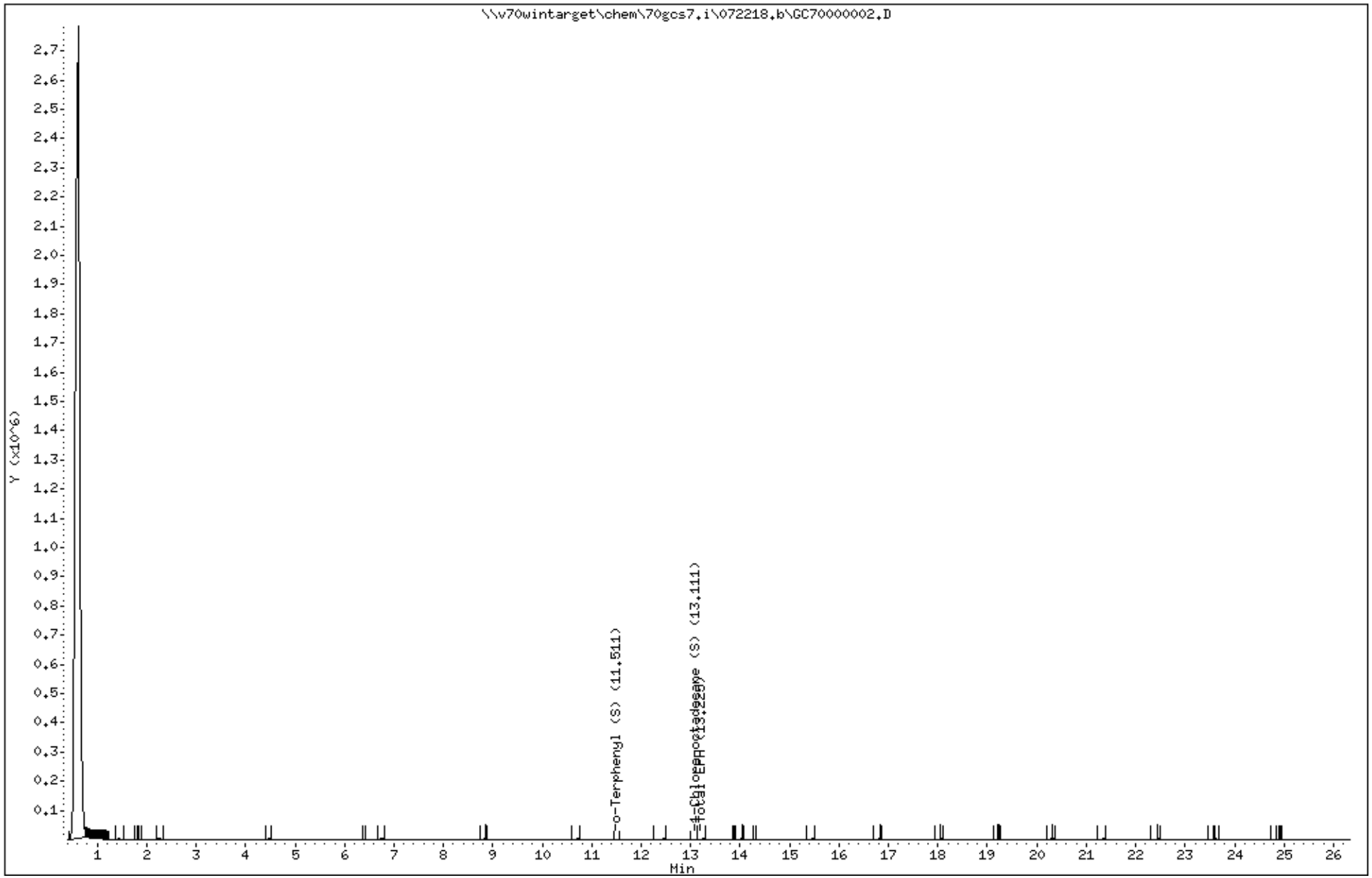
Data file : \\v70wintarget\chem\70gcs7.i\072218.b\GC70000002.D
Lab Smp Id: CAL6 Client Smp ID: CAL6
Inj Date : 21-JUL-2018 11:24
Operator : JKB Inst ID: 70gcs7.i
Smp Info : cal6, 48747:1
Misc Info : 4765,
Comment : NJ EPH
Method : \\v70wintarget\chem\70gcs7.i\072218.b\NJEPHNonFrac-072218.m
Meth Date : 29-Jul-2018 14:17 70gcs7.i Quant Type: ESTD
Cal Date : 21-JUL-2018 11:24 Cal File: GC70000002.D
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TEPH.sub
Target Version: RC10A

Concentration Formula: Amt * DF * Uf * (Vt/Vo) * CpndVariable

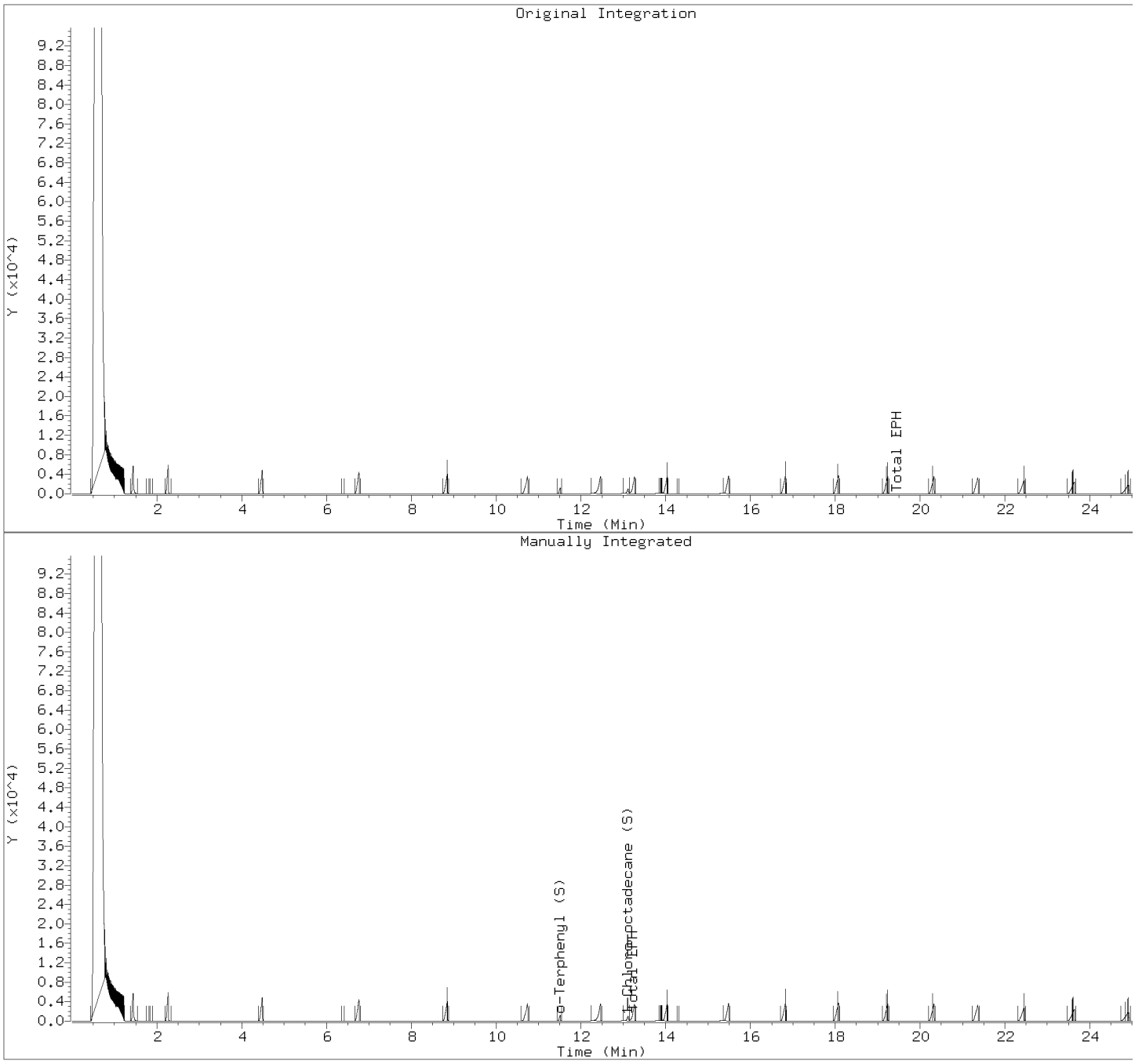
Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

					AMOUNTS		
					CAL-AMT	ON-COL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	REVIEW CODE
$ 26 o-Terphenyl (S)	11.510	11.507	0.003	2468	100.000	95.8	
$ 28 1-Chloro-octadecane (S)	13.110	13.106	0.004	2300	100.000	108	
S 33 Total EPH	1.350-25.100			203013	9000.00	9160	

Data File: \\v70wintarget\chem\70gcs7.i\072218.b\GC70000002.D
Date : 21-JUL-2018 11:24
Client ID: CAL6
Instrument: 70gcs7.i
Sample Info: CAL6, 48747:1
Purge Volume: 1000.0
Operator: JKB
Column phase: RTX-CLP2
Column diameter: 0.32



Data File: \\v70wintarget\chem\70gcs7.i\072218.b/GC70000002.D (ManInt: TEPH.sub Orig: TEPH.sub)
Injection Date: 21-JUL-2018 11:24 Operator: JKB
Instrument: 70gcs7.i
Lab Sample ID: CAL6



Manually Integrated Compounds

Compound	Area (before)	Area (after)
Total EPH	173656	203013
o-Terphenyl (S)	0	2468
1-Chloro-octadecane (S)	0	2300

Pace Analytical Services, Inc.

NJ EPH

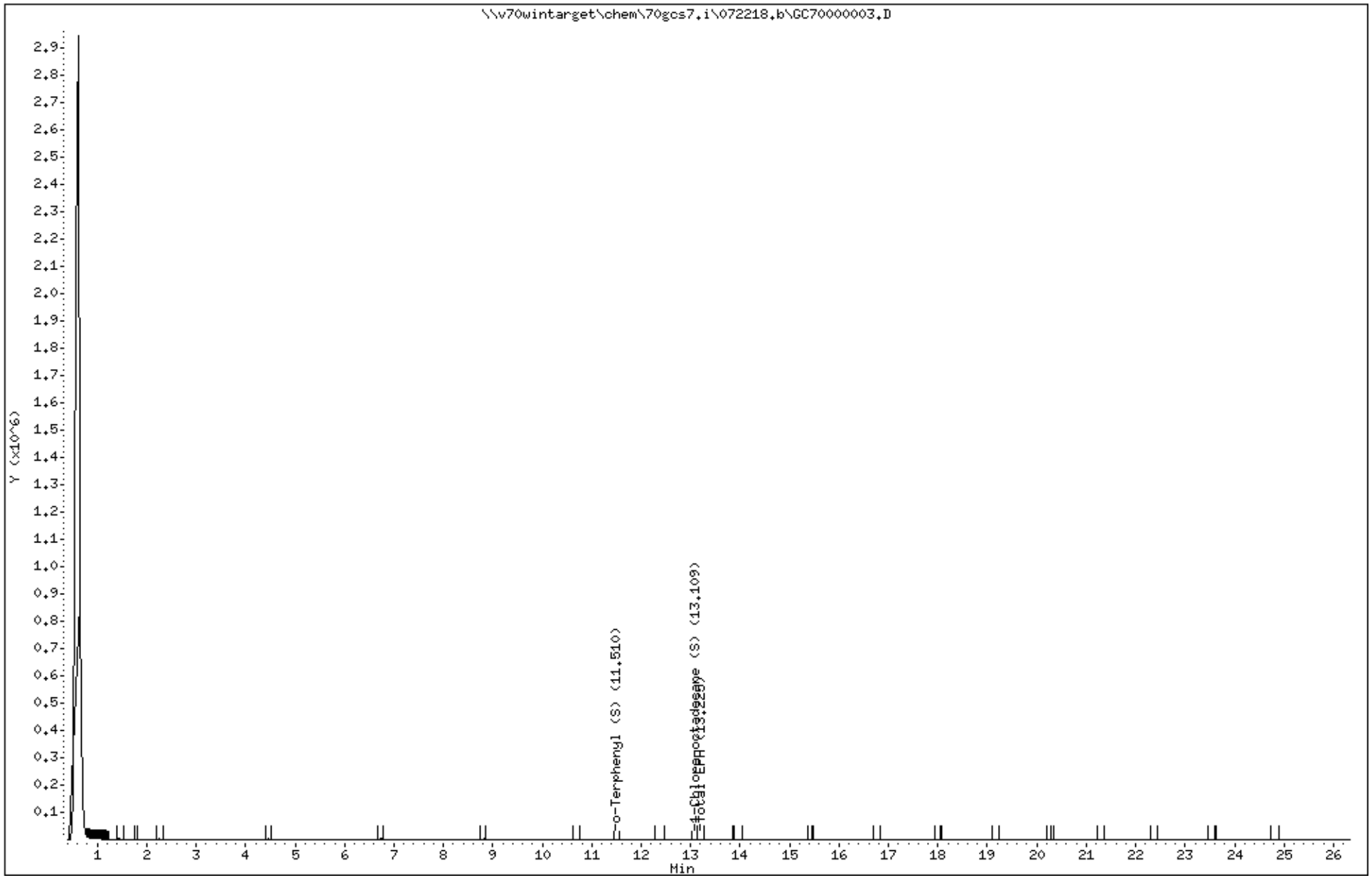
Data file : \\v70wintarget\chem\70gcs7.i\072218.b\GC70000003.D
Lab Smp Id: CAL5 Client Smp ID: CAL5
Inj Date : 21-JUL-2018 11:59
Operator : JKB Inst ID: 70gcs7.i
Smp Info : cal5, 48746:1
Misc Info : 4765,
Comment : NJ EPH
Method : \\v70wintarget\chem\70gcs7.i\072218.b\NJEPHNonFrac-072218.m
Meth Date : 29-Jul-2018 14:17 70gcs7.i Quant Type: ESTD
Cal Date : 21-JUL-2018 11:59 Cal File: GC70000003.D
Als bottle: 2 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TEPH.sub
Target Version: RC10A

Concentration Formula: Amt * DF * Uf * (Vt/Vo) * CpndVariable

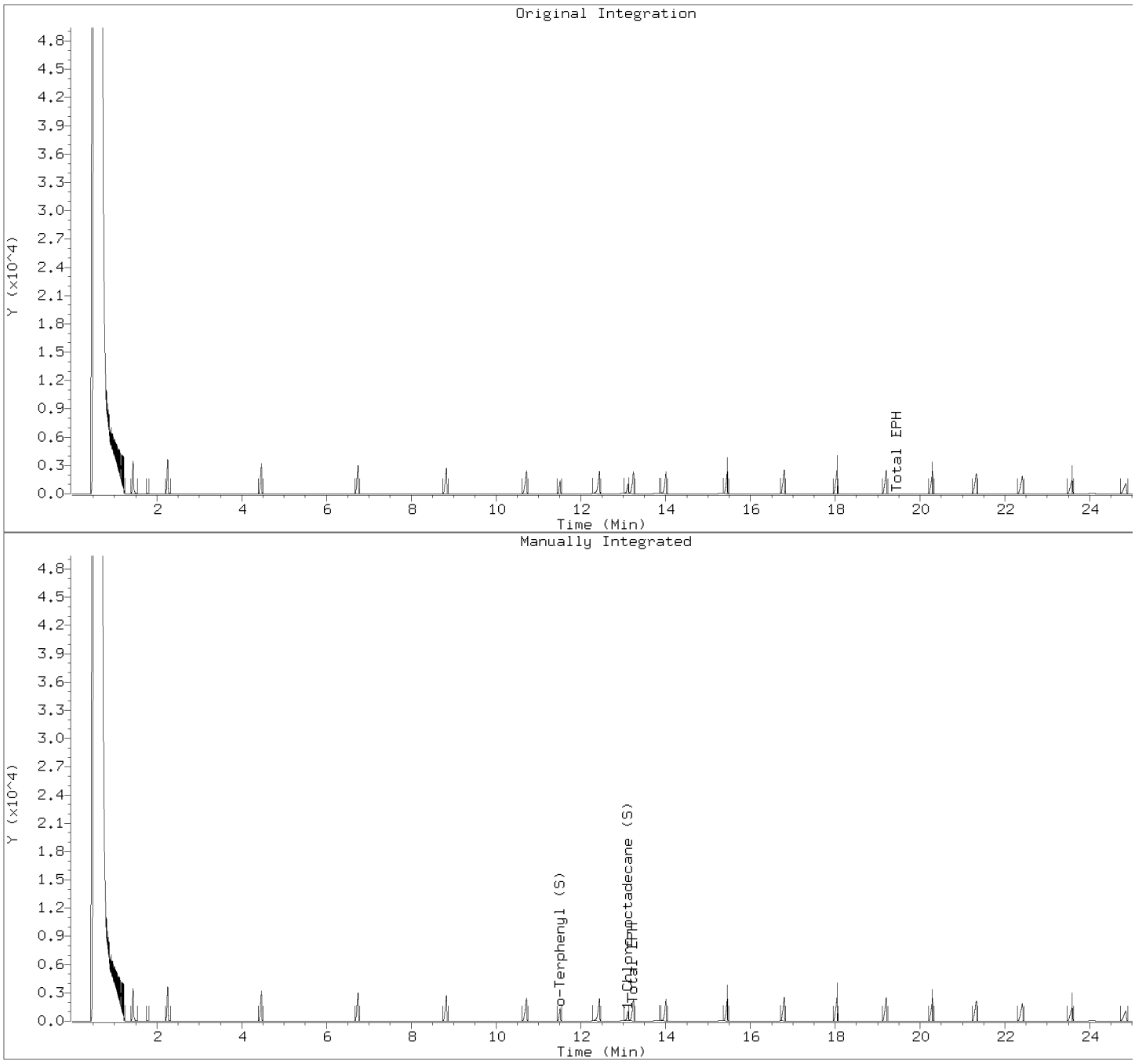
Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

					AMOUNTS		
Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$ 26 o-Terphenyl (S)	11.509	11.507	0.002	2714	100.000	105	
$ 28 1-Chloro-octadecane (S)	13.108	13.106	0.002	2218	100.000	104	
S 33 Total EPH	1.350-25.100			108386	4500.00	4890	

Data File: \\v70wintarget\chem\70gcs7.i\072218.b\GC70000003.D
Date : 21-JUL-2018 11:59
Client ID: CAL5
Instrument: 70gcs7.i
Sample Info: CAL5, 48746:1
Purge Volume: 1000.0
Operator: JKB
Column phase: RTX-CLP2
Column diameter: 0.32



Data File: \\v70wintarget\chem\70gcs7.i\072218.b/GC70000003.D (ManInt: TEPH.sub Orig: TEPH.sub)
Injection Date: 21-JUL-2018 11:59 Operator: JKB
Instrument: 70gcs7.i
Lab Sample ID: CAL5



Manually Integrated Compounds

Compound	Area (before)	Area (after)
Total EPH	94690	108386
o-Terphenyl (S)	0	2714
1-Chloro-octadecane (S)	0	2218

Pace Analytical Services, Inc.

NJ EPH

Data file : \\v70wintarget\chem\70gcs7.i\072218.b\GC70000004.D
Lab Smp Id: CAL4 Client Smp ID: CAL4
Inj Date : 21-JUL-2018 12:33
Operator : JKB Inst ID: 70gcs7.i
Smp Info : cal4, 48745:1
Misc Info : 4765,
Comment : NJ EPH
Method : \\v70wintarget\chem\70gcs7.i\072218.b\NJEPHNonFrac-072218.m
Meth Date : 29-Jul-2018 14:17 70gcs7.i Quant Type: ESTD
Cal Date : 21-JUL-2018 12:33 Cal File: GC70000004.D
Als bottle: 3 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TEPH.sub
Target Version: RC10A

Concentration Formula: Amt * DF * Uf * (Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

					AMOUNTS		
					CAL-AMT	ON-COL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	REVIEW CODE
$ 26 o-Terphenyl (S)	11.508	11.507	0.001	2529	100.000	98.1	
$ 28 1-Chloro-octadecane (S)	13.107	13.106	0.001	2013	100.000	94.2	
S 33 Total EPH	1.350-25.100			41491	1800.00	1870(M)	BA

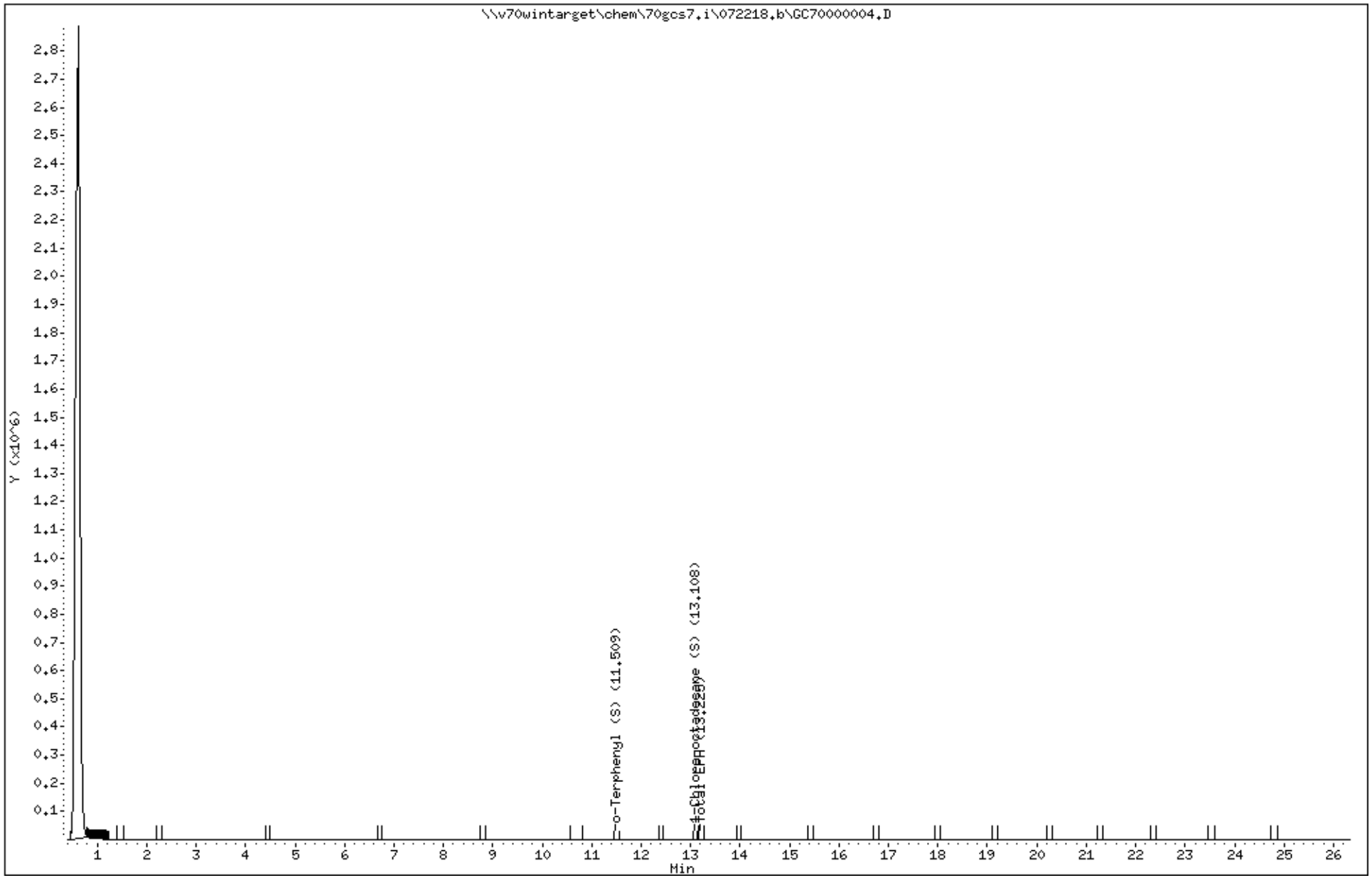
QC Flag Legend

M - Compound response manually integrated.

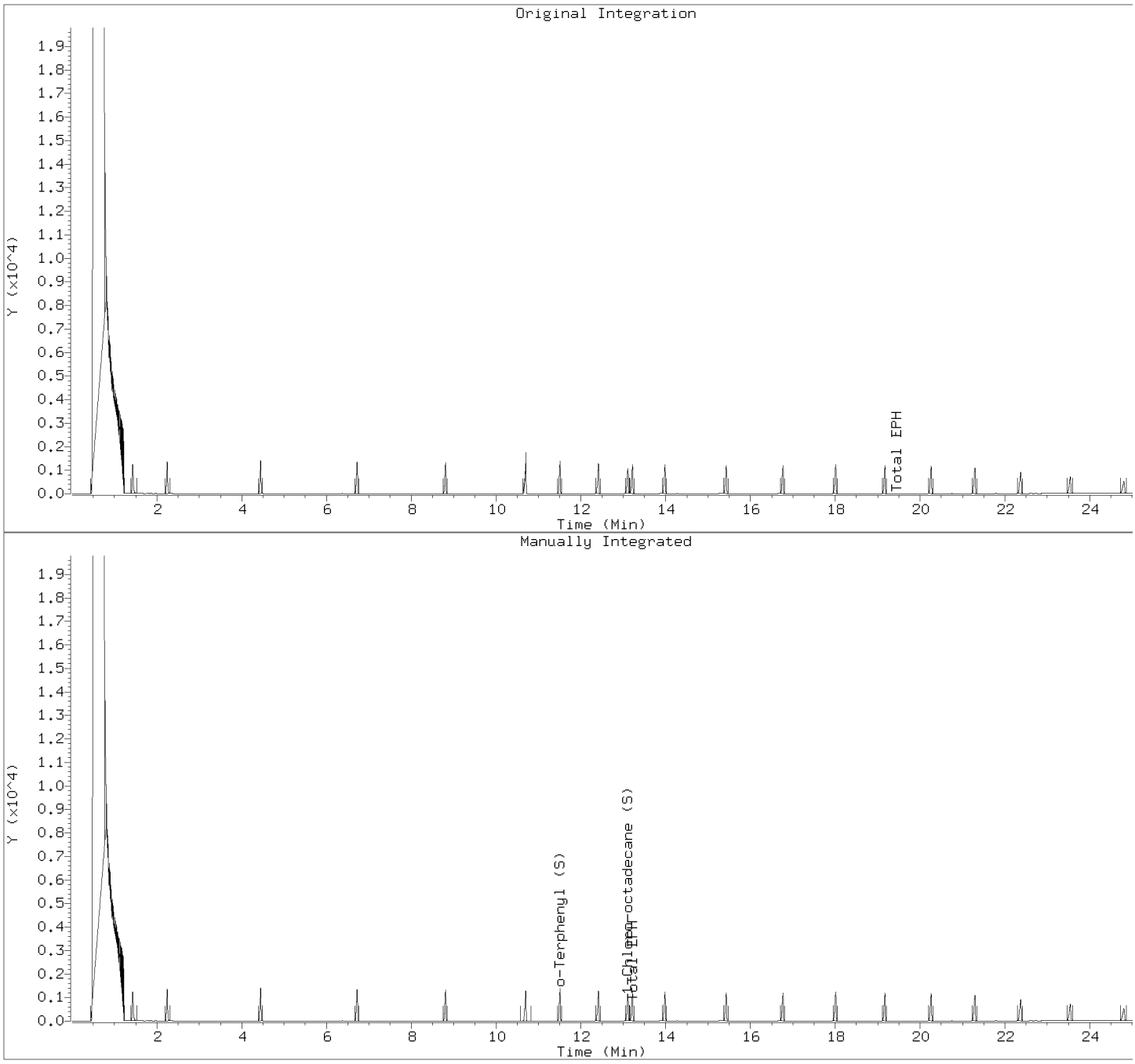
Review Codes Legend

:
BA: Indicates that the baseline had to be adjusted correctly by the analyst.

Data File: \\v70wintarget\chem\70gcs7.i\072218.b\GC70000004.D
Date : 21-JUL-2018 12:33
Client ID: CAL4
Instrument: 70gcs7.i
Sample Info: CAL4, 48745:1
Purge Volume: 1000.0
Operator: JKB
Column phase: RTX-CLP2
Column diameter: 0.32



Data File: \\v70wintarget\chem\70gcs7.i\072218.b/GC70000004.D (ManInt: TEPH.sub Orig: TEPH.sub)
Injection Date: 21-JUL-2018 12:33 Operator: JKB
Instrument: 70gcs7.i
Lab Sample ID: CAL4



Manually Integrated Compounds

Compound	Area (before)	Area (after)
Total EPH	36865	41491
o-Terphenyl (S)	0	2529
1-Chloro-octadecane (S)	0	2013

Pace Analytical Services, Inc.

NJ EPH

Data file : \\v70wintarget\chem\70gcs7.i\072218.b\GC70000005.D
Lab Smp Id: CAL3 Client Smp ID: CAL3
Inj Date : 21-JUL-2018 13:07
Operator : JKB Inst ID: 70gcs7.i
Smp Info : cal3, 48744:1
Misc Info : 4765,
Comment : NJ EPH
Method : \\v70wintarget\chem\70gcs7.i\072218.b\NJEPHNonFrac-072218.m
Meth Date : 29-Jul-2018 14:17 70gcs7.i Quant Type: ESTD
Cal Date : 21-JUL-2018 13:07 Cal File: GC70000005.D
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TEPH.sub
Target Version: RC10A

Concentration Formula: Amt * DF * Uf * (Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

					AMOUNTS		
					CAL-AMT	ON-COL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	REVIEW CODE
$ 26 o-Terphenyl (S)	11.506	11.507	-0.001	2570	100.000	99.7	
$ 28 1-Chloro-octadecane (S)	13.105	13.106	-0.001	2088	100.000	97.7	
S 33 Total EPH	1.350-25.100			21218	900.000	948(M)	BA

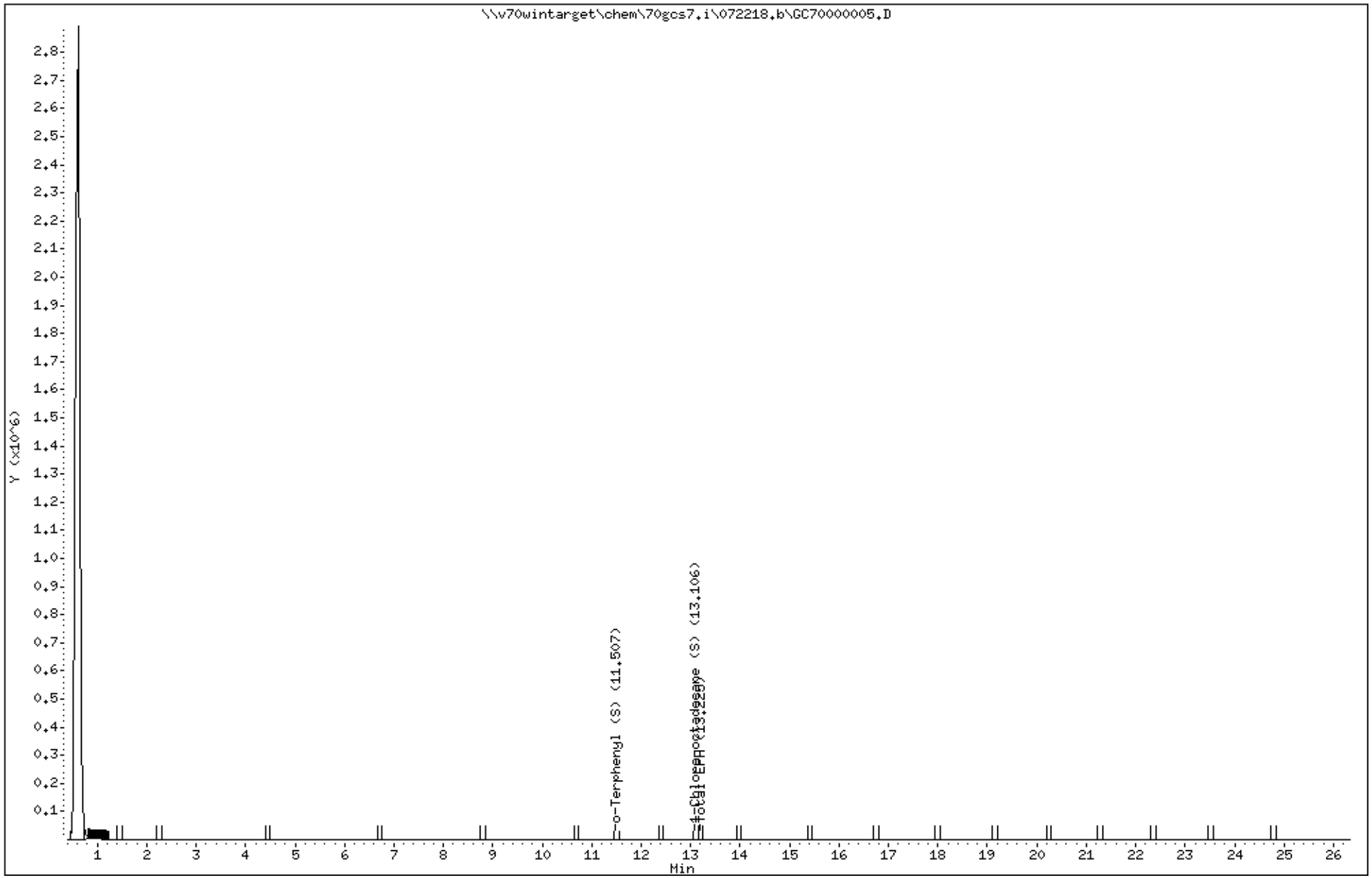
QC Flag Legend

M - Compound response manually integrated.

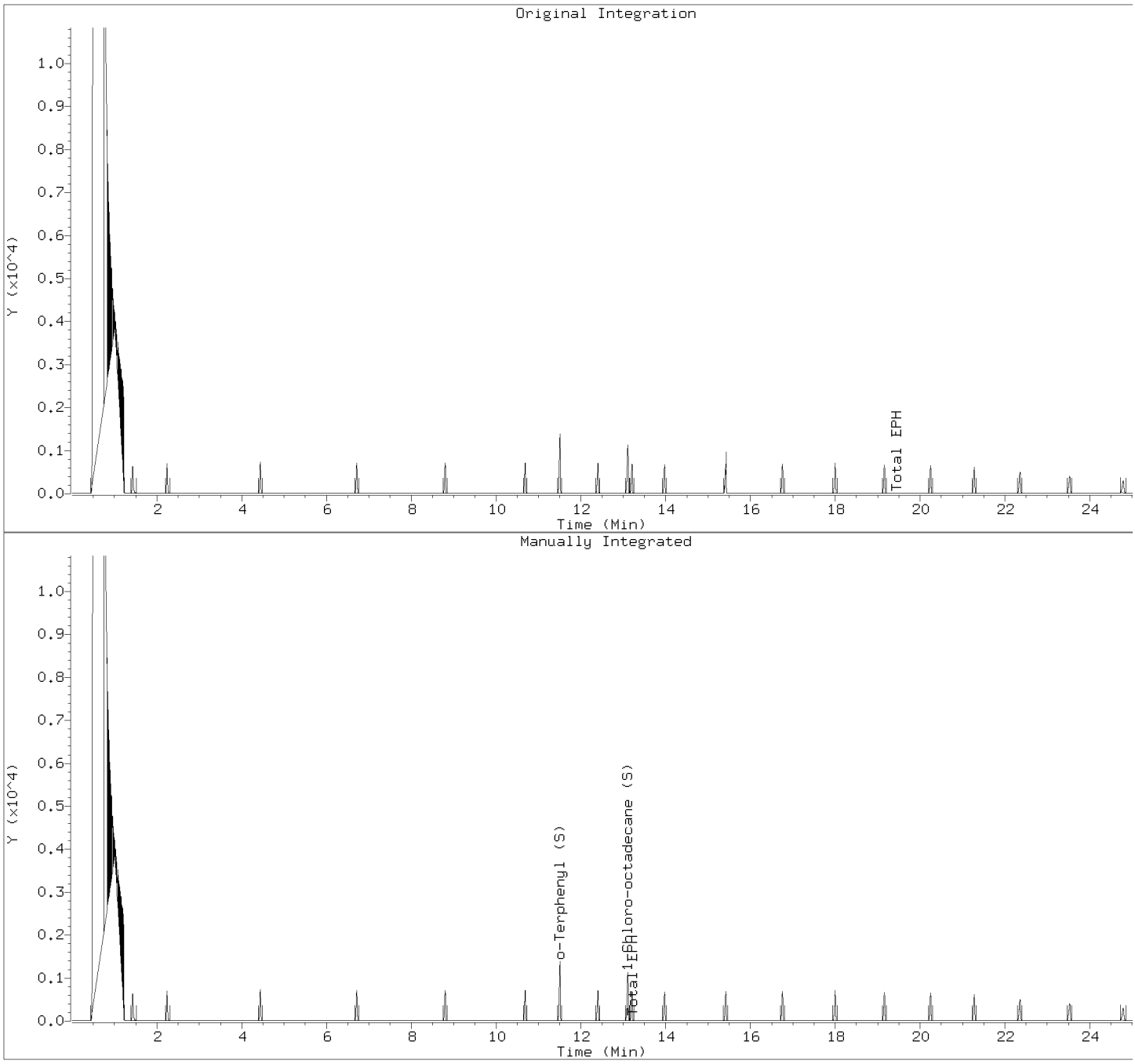
Review Codes Legend

:
BA: Indicates that the baseline had to be adjusted correctly by the analyst.

Data File: \\v70wintarget\chem\70gcs7.i\072218.b\GC70000005.D
Date : 21-JUL-2018 13:07
Client ID: CAL3
Instrument: 70gcs7.i
Sample Info: CAL3, 48744:1
Purge Volume: 1000.0
Operator: JKB
Column phase: RTX-CLP2
Column diameter: 0.32



Data File: \\v70wintarget\chem\70gcs7.i\072218.b/GC70000005.D (ManInt: TEPH.sub Orig: TEPH.sub)
Injection Date: 21-JUL-2018 13:07 Operator: JKB
Instrument: 70gcs7.i
Lab Sample ID: CAL3



Manually Integrated Compounds

Compound	Area (before)	Area (after)
Total EPH	21236	21218
o-Terphenyl (S)	0	2570
1-Chloro-octadecane (S)	0	2088

Pace Analytical Services, Inc.

NJ EPH

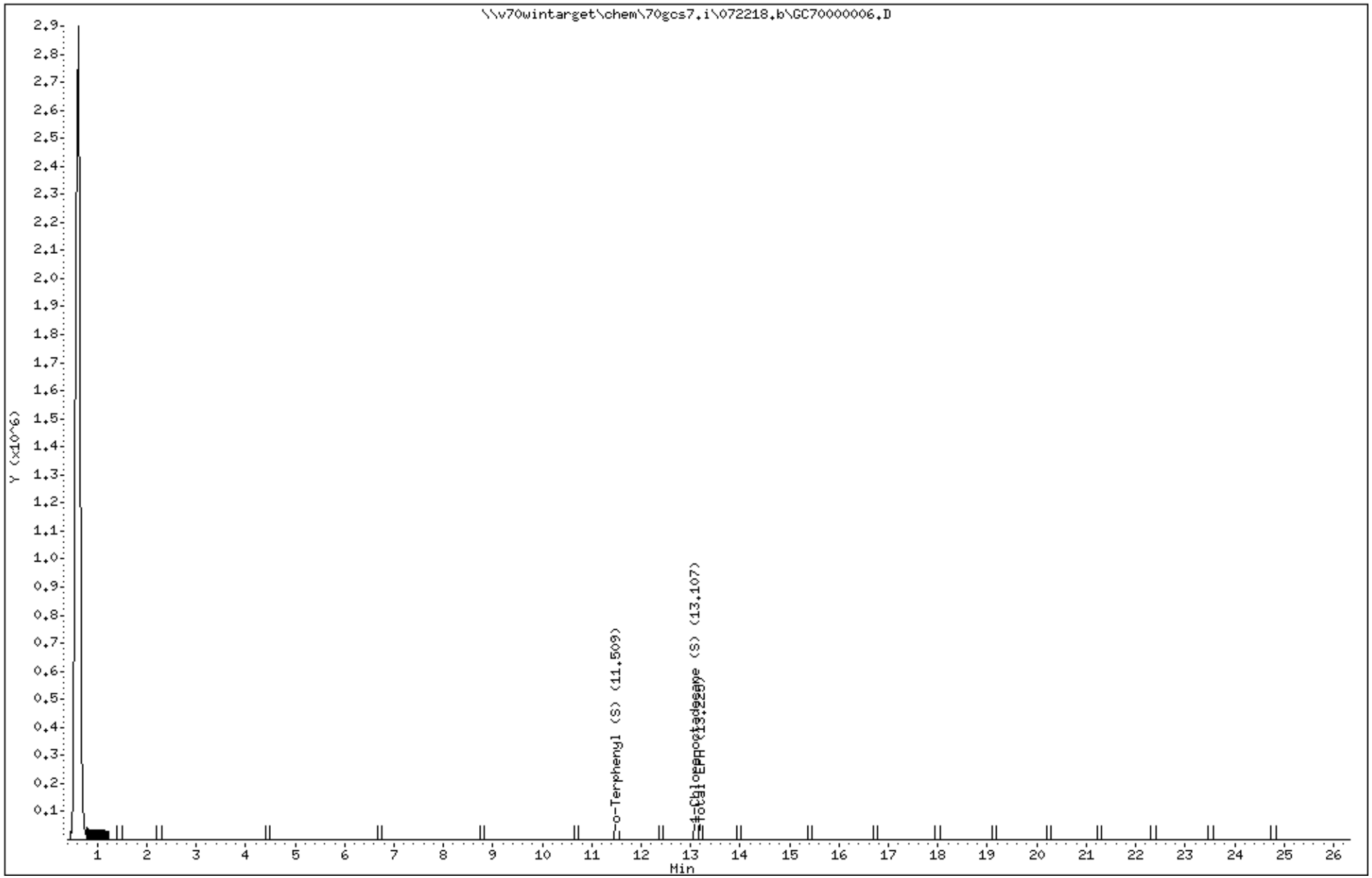
Data file : \\v70wintarget\chem\70gcs7.i\072218.b\GC70000006.D
Lab Smp Id: CAL2 Client Smp ID: CAL2
Inj Date : 21-JUL-2018 13:41
Operator : JKB Inst ID: 70gcs7.i
Smp Info : cal2, 48743:1
Misc Info : 4765,
Comment : NJ EPH
Method : \\v70wintarget\chem\70gcs7.i\072218.b\NJEPHNonFrac-072218.m
Meth Date : 29-Jul-2018 14:17 70gcs7.i Quant Type: ESTD
Cal Date : 21-JUL-2018 13:41 Cal File: GC70000006.D
Als bottle: 5 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TEPH.sub
Target Version: RC10A

Concentration Formula: Amt * DF * Uf * (Vt/Vo) * CpndVariable

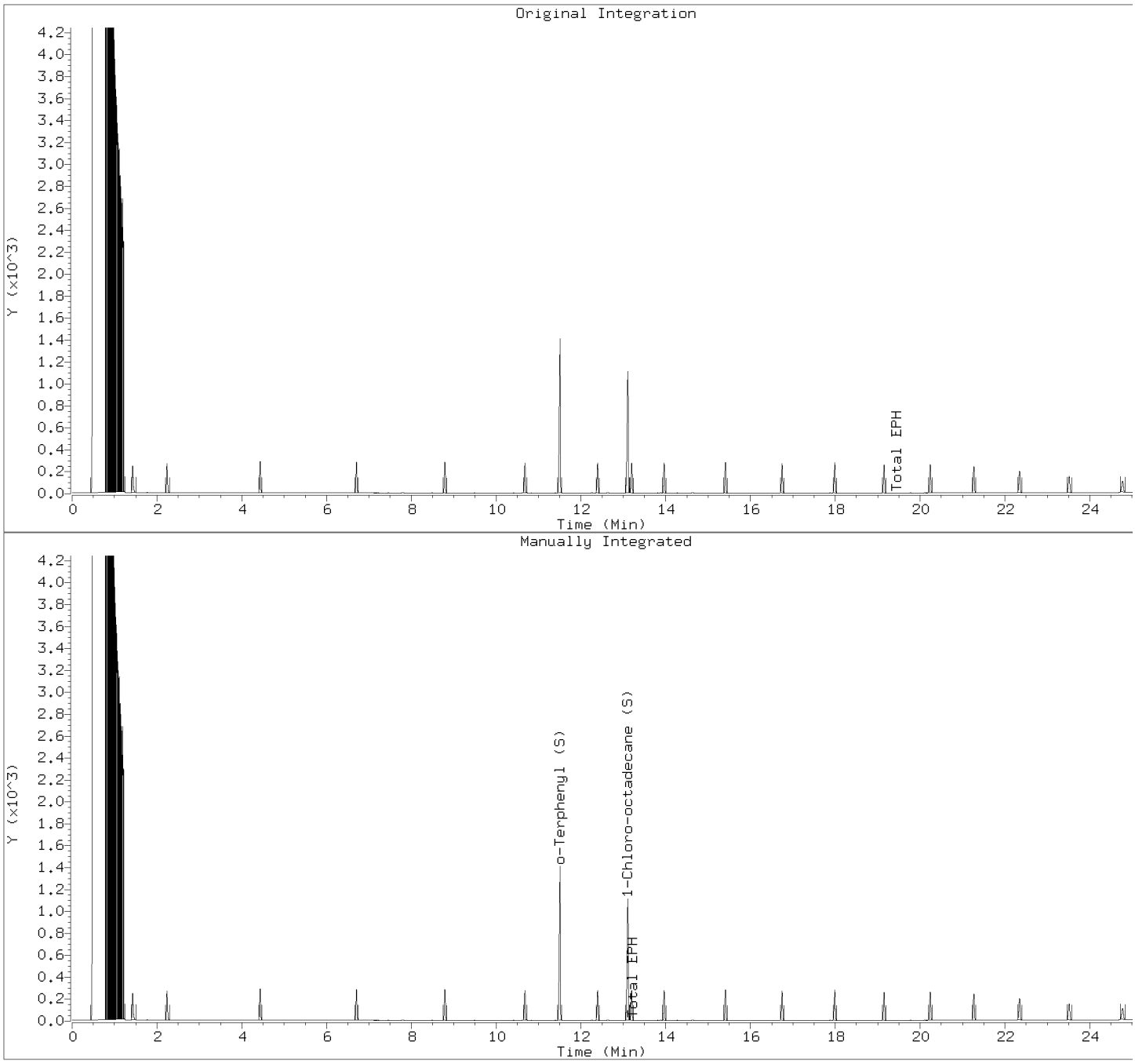
Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

					AMOUNTS		
					CAL-AMT	ON-COL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	REVIEW CODE
$ 26 o-Terphenyl (S)	11.508	11.507	0.001	2563	100.000	99.4	
$ 28 1-Chloro-octadecane (S)	13.106	13.106	0.000	2081	100.000	97.4	
S 33 Total EPH	1.350-25.100			8070	360.000	357	

Data File: \\v70wintarget\chem\70gcs7.i\072218.b\GC70000006.D
Date : 21-JUL-2018 13:41
Client ID: CAL2
Instrument: 70gcs7.i
Sample Info: CAL2, 48743:1
Purge Volume: 1000.0
Operator: JKB
Column phase: RTX-CLP2
Column diameter: 0.32



Data File: \\v70wintarget\chem\70gcs7.i\072218.b/GC70000006.D (ManInt: TEPH.sub Orig: TEPH.sub)
Injection Date: 21-JUL-2018 13:41 Operator: JKB
Instrument: 70gcs7.i
Lab Sample ID: CAL2



Manually Integrated Compounds

Compound	Area (before)	Area (after)
Total EPH	11385	8070
o-Terphenyl (S)	0	2563
1-Chloro-octadecane (S)	0	2081

Pace Analytical Services, Inc.

NJ EPH

Data file : \\v70wintarget\chem\70gcs7.i\072218.b\GC70000007.D
Lab Smp Id: CAL1 Client Smp ID: CAL1
Inj Date : 21-JUL-2018 14:16
Operator : JKB Inst ID: 70gcs7.i
Smp Info : cal1, 48742:1
Misc Info : 4765,
Comment : NJ EPH
Method : \\v70wintarget\chem\70gcs7.i\072218.b\NJEPHNonFrac-072218.m
Meth Date : 29-Jul-2018 14:17 70gcs7.i Quant Type: ESTD
Cal Date : 21-JUL-2018 14:16 Cal File: GC70000007.D
Als bottle: 6 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TEPH.sub
Target Version: RC10A

Concentration Formula: Amt * DF * Uf * (Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

					AMOUNTS		
					CAL-AMT	ON-COL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	REVIEW CODE
$ 26 o-Terphenyl (S)	11.508	11.507	0.001	2618	100.000	102	
$ 28 1-Chloro-octadecane (S)	13.105	13.106	-0.001	2117	100.000	99.1	
S 33 Total EPH	1.350-25.100			1972	90.0000	87.3(M)	BA

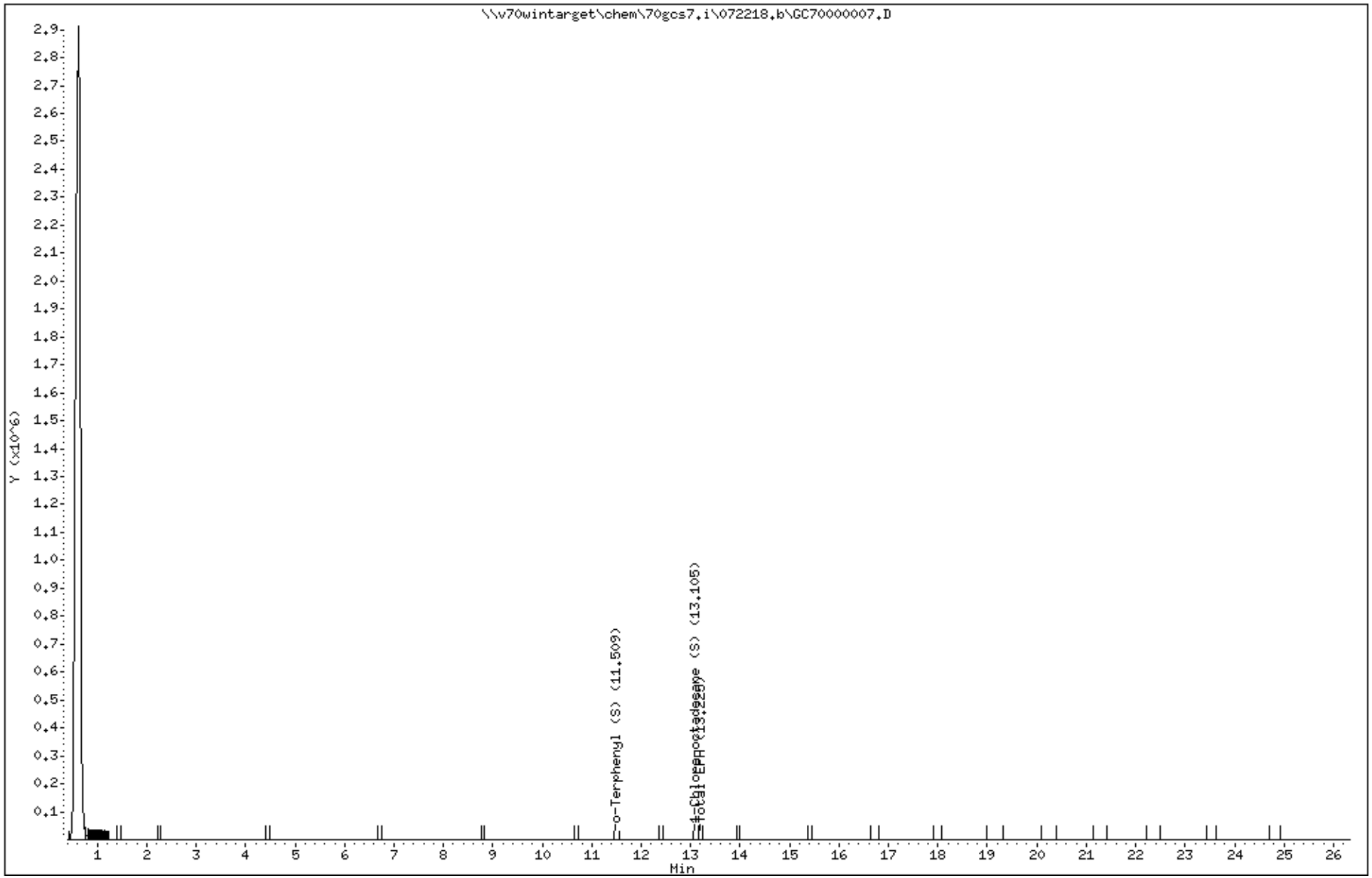
QC Flag Legend

M - Compound response manually integrated.

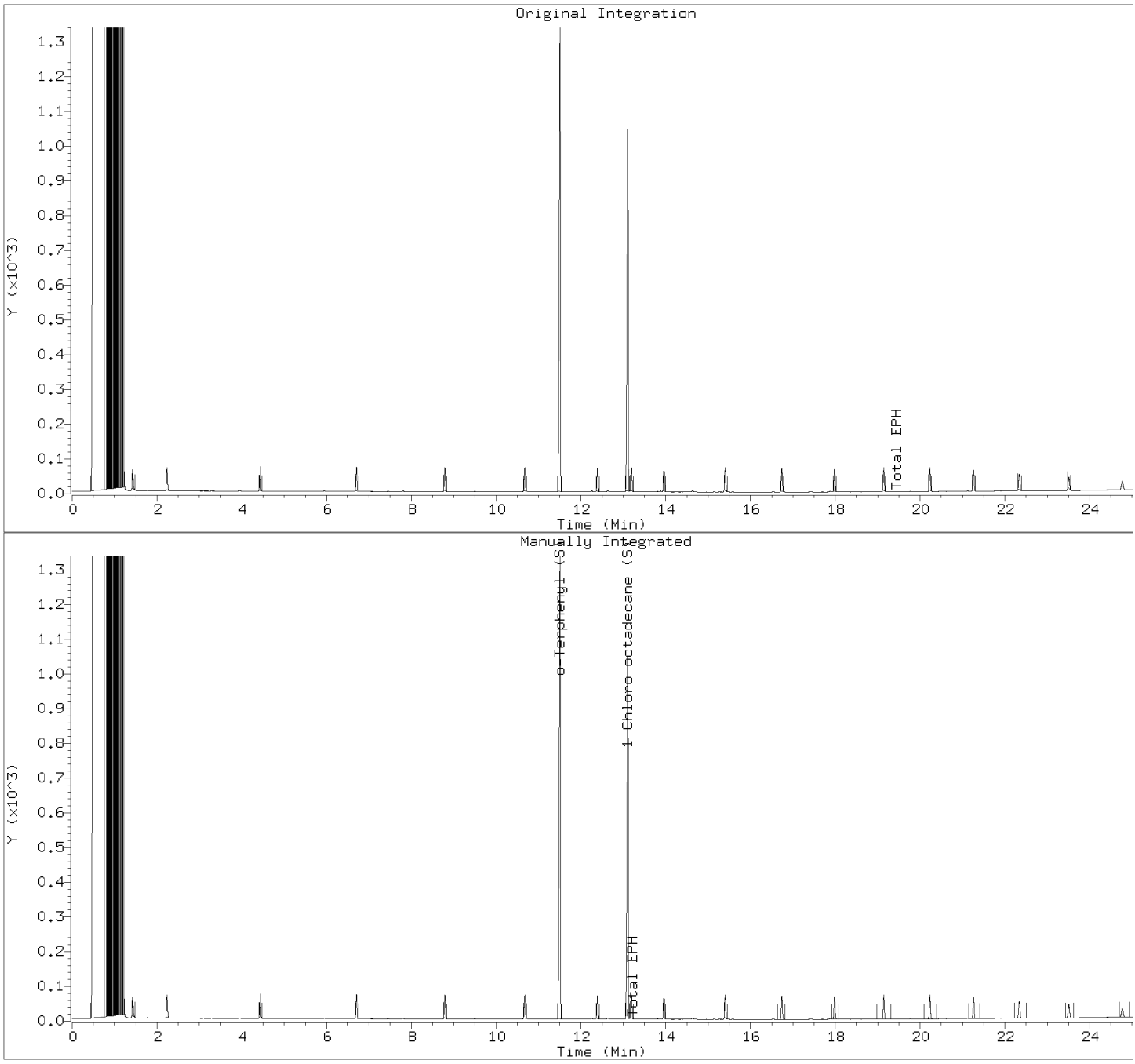
Review Codes Legend

:
BA: Indicates that the baseline had to be adjusted correctly by the analyst.

Data File: \\v70wintarget\chem\70gcs7.i\072218.b\GC70000007.D
Date : 21-JUL-2018 14:16
Client ID: CAL1
Instrument: 70gcs7.i
Sample Info: CAL1, 48742:1
Purge Volume: 1000.0
Operator: JKB
Column phase: RTX-CLP2
Column diameter: 0.32



Data File: \\v70wintarget\chem\70gcs7.i\072218.b/GC70000007.D (ManInt: TEPH.sub Orig: TEPH.sub)
Injection Date: 21-JUL-2018 14:16 Operator: JKB
Instrument: 70gcs7.i
Lab Sample ID: CAL1



Manually Integrated Compounds

Compound	Area (before)	Area (after)
Total EPH	6217	1972
o-Terphenyl (S)	0	2618
1-Chloro-octadecane (S)	0	2117

SAMPLE NO.

11145028ICV

GCV FID - FORM VII VOA-1
GCV FID INITIAL CALIBRATION DATA

Lab Name: Pace Analytical - New York Calibration Date: 07/21/2018 Time: 14:50

Instrument ID: 70GCS7 GC Column: Col 1 Init. Calib. Date(s): 07/21/2018 07/21/2018

Lab File ID: 072218.B\GC70000008.D Init. Calib. Time(s): 10:50 14:50

SDG No.: 7083318

COMPOUND	CURVE	$\overline{RRF}$ or Amount	RRF or Amount	MIN RRF	%D	MAX %D
Total EPH	Averaged	22.93278	19.69370	0.0100	-14.1242	25.0000
1-Chloro-octadecane (S)	Averaged	21.36167	19.48000	0.0100	-8.8086	25.0000
o-Terphenyl (S)	Averaged	25.77000	24.64000	0.0100	-4.3849	25.0000

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

SAMPLE NO.

11484944CCV

GCV FID - FORM VII VOA-1
GCV FID CONTINUING CALIBRATION DATA

Lab Name: Pace Analytical - New York Calibration Date: 04/05/2019 Time: 19:09

Instrument ID: 70GCS7 GC Column: Col 1 Init. Calib. Date(s): 07/21/2018 07/21/2018

Lab File ID: 040519.B\GC70001652.D Init. Calib. Time(s): 10:50 14:50

SDG No.: 7083318

COMPOUND	CURVE	$\overline{RRF}$ or Amount	RRF or Amount	MIN RRF	%D	MAX %D
Total EPH	Averaged	22.93278	23.00756	0.0100	0.3261	25.0000
1-Chloro-octadecane (S)	Averaged	21.36167	20.65000	0.0100	-3.3315	25.0000
o-Terphenyl (S)	Averaged	25.77000	25.41000	0.0100	-1.3970	25.0000

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

SAMPLE NO.

GCV FID - FORM VII VOA-1
GCV FID CONTINUING CALIBRATION DATA

11484945CCV

Lab Name: Pace Analytical - New York Calibration Date: 04/06/2019 Time: 03:41

Instrument ID: 70GCS7 GC Column: Col 1 Init. Calib. Date(s): 07/21/2018 07/21/2018

Lab File ID: 040519.B\GC70001667.D Init. Calib. Time(s): 10:50 14:50

SDG No.: 7083318

COMPOUND	CURVE	$\overline{\text{RRF}}$ or Amount	RRF or Amount	MIN RRF	%D	MAX %D
Total EPH	Averaged	22.93278	22.36667	0.0100	-2.4686	25.0000
1-Chloro-octadecane (S)	Averaged	21.36167	21.65000	0.0100	1.3498	25.0000
o-Terphenyl (S)	Averaged	25.77000	26.72000	0.0100	3.6865	25.0000

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

SAMPLE NO.

11495002CCV

GCV FID - FORM VII VOA-1
GCV FID CONTINUING CALIBRATION DATA

Lab Name: Pace Analytical - New York Calibration Date: 04/08/2019 Time: 16:58

Instrument ID: 70GCS7 GC Column: Col 1 Init. Calib. Date(s): 07/21/2018 07/21/2018

Lab File ID: 040819.B\GC70001670.D Init. Calib. Time(s): 10:50 14:50

SDG No.: 7083318

COMPOUND	CURVE	$\overline{RRF}$ or Amount	RRF or Amount	MIN RRF	%D	MAX %D
Total EPH	Averaged	22.93278	20.36133	0.0100	-11.2130	25.0000
1-Chloro-octadecane (S)	Averaged	21.36167	18.60000	0.0100	-12.9281	25.0000
o-Terphenyl (S)	Averaged	25.77000	22.89000	0.0100	-11.1758	25.0000

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

SAMPLE NO.

11494998CCV

GCV FID - FORM VII VOA-1
GCV FID CONTINUING CALIBRATION DATA

Lab Name: Pace Analytical - New York Calibration Date: 04/08/2019 Time: 20:58

Instrument ID: 70GCS7 GC Column: Col 1 Init. Calib. Date(s): 07/21/2018 07/21/2018

Lab File ID: 040819.B\GC70001677.D Init. Calib. Time(s): 10:50 14:50

SDG No.: 7083318

COMPOUND	CURVE	$\overline{\text{RRF}}$ or Amount	RRF or Amount	MIN RRF	%D	MAX %D
Total EPH	Averaged	22.93278	22.34867	0.0100	-2.5471	25.0000
1-Chloro-octadecane (S)	Averaged	21.36167	19.57000	0.0100	-8.3873	25.0000
o-Terphenyl (S)	Averaged	25.77000	25.13000	0.0100	-2.4835	25.0000

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

Pace Analytical Services, Inc.

NJ EPH

Data file : \\v70wintarget\chem\70gcs7.i\072218.b\GC70000008.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 21-JUL-2018 14:50
Operator : JKB Inst ID: 70gcs7.i
Smp Info : icv, 49248:1
Misc Info : 4765,
Comment : NJ EPH
Method : \\v70wintarget\chem\70gcs7.i\072218.b\NJEPHNonFrac-072218.m
Meth Date : 29-Jul-2018 14:17 70gcs7.i Quant Type: ESTD
Cal Date : 21-JUL-2018 14:50 Cal File: GC70000008.D
Als bottle: 7 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TEPH.sub
Target Version: RC10A

Concentration Formula: Amt * DF * Uf * (Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

					AMOUNTS		
					CAL-AMT	ON-COL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	REVIEW CODE
$ 26 o-Terphenyl (S)	11.506	11.507	-0.001	2464	100.000	95.6(M)	
$ 28 1-Chloro-octadecane (S)	13.106	13.106	0.000	1948	100.000	91.2	
S 33 Total EPH	1.350-25.100			53173	2700.00	2320(M)	BA

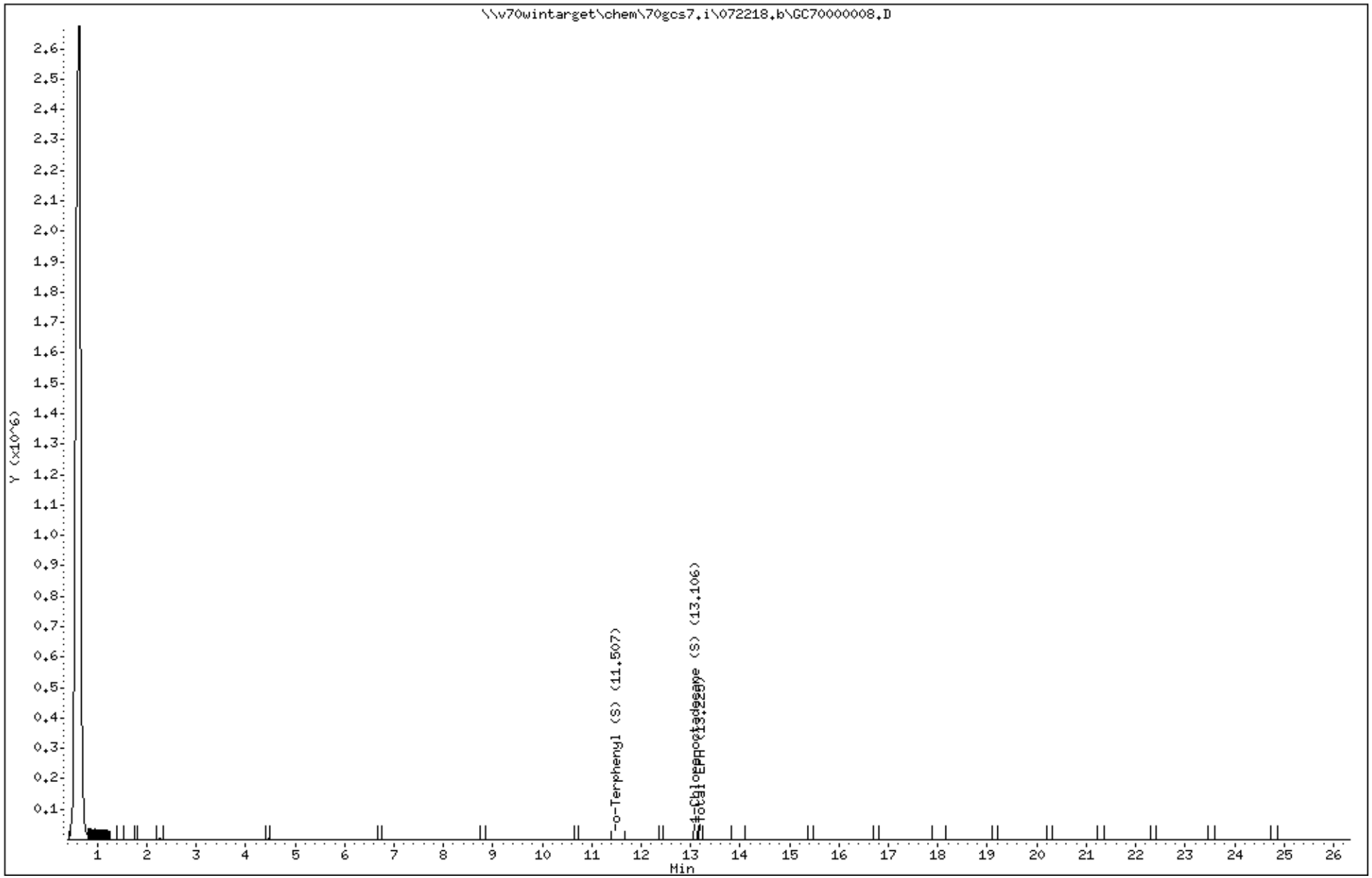
QC Flag Legend

M - Compound response manually integrated.

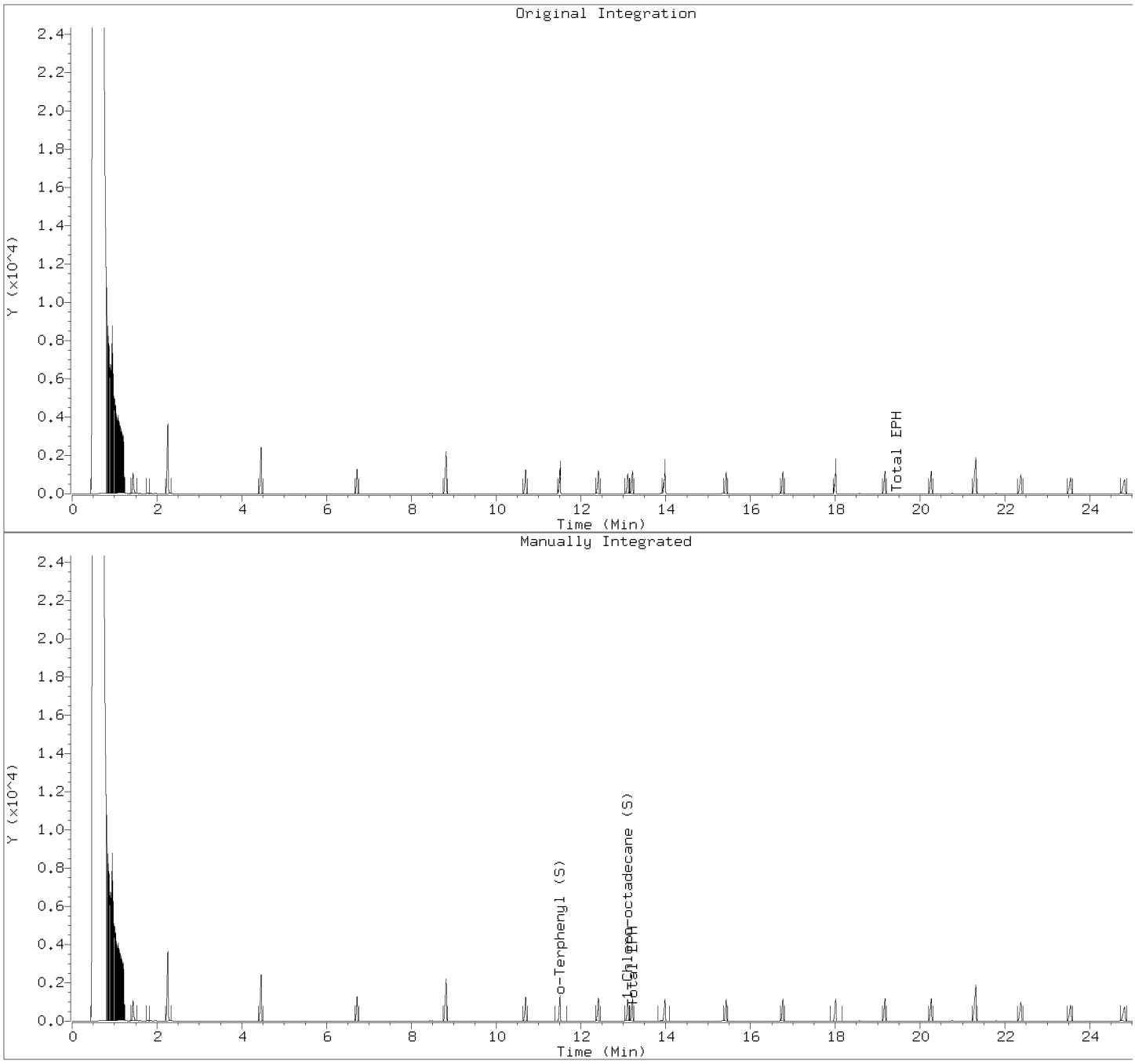
Review Codes Legend

:
BA: Indicates that the baseline had to be adjusted correctly by the analyst.

Data File: \\v70wintarget\chem\70gcs7.i\072218.b\GC70000008.D
Date : 21-JUL-2018 14:50
Client ID: ICV
Instrument: 70gcs7.i
Sample Info: ICV, 49248:1
Purge Volume: 1000.0
Operator: JKB
Column phase: RTX-CLP2
Column diameter: 0.32



Data File: \\v70wintarget\chem\70gcs7.i\072218.b/GC70000008.D (ManInt: TEPH.sub Orig: TEPH.sub)
Injection Date: 21-JUL-2018 14:50 Operator: JKB
Instrument: 70gcs7.i
Lab Sample ID: ICV



Manually Integrated Compounds

Compound	Area (before)	Area (after)
Total EPH	38328	53173
o-Terphenyl (S)	0	2464
1-Chloro-octadecane (S)	0	1948

Pace Analytical Services, Inc.

NJ EPH

Data file : \\v70wintarget\chem\70gcs7.i\040519.B\GC70001652.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 05-APR-2019 19:09
Operator : JKB Inst ID: 70gcs7.i
Smp Info : ccv, 64076:1
Misc Info : 4765,
Comment : NJ EPH
Method : \\v70wintarget\chem\70gcs7.i\040519.B\NJEPHNonFrac-072218.m
Meth Date : 08-Apr-2019 13:45 70gcs7.i Quant Type: ESTD
Cal Date : 21-JUL-2018 14:50 Cal File: GC70000008.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TEPH.sub
Target Version: RC10A

Concentration Formula: Amt * DF * Uf * (Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

					AMOUNTS		
					CAL-AMT	ON-COL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	REVIEW CODE
$ 26 o-Terphenyl (S)	11.470	11.468	0.002	2541	100.000	98.6	
$ 28 1-Chloro-octadecane (S)	13.073	13.106	-0.033	2065	100.000	96.7	
S 33 Total EPH	1.350-25.100			103534	4500.00	4510(M)	

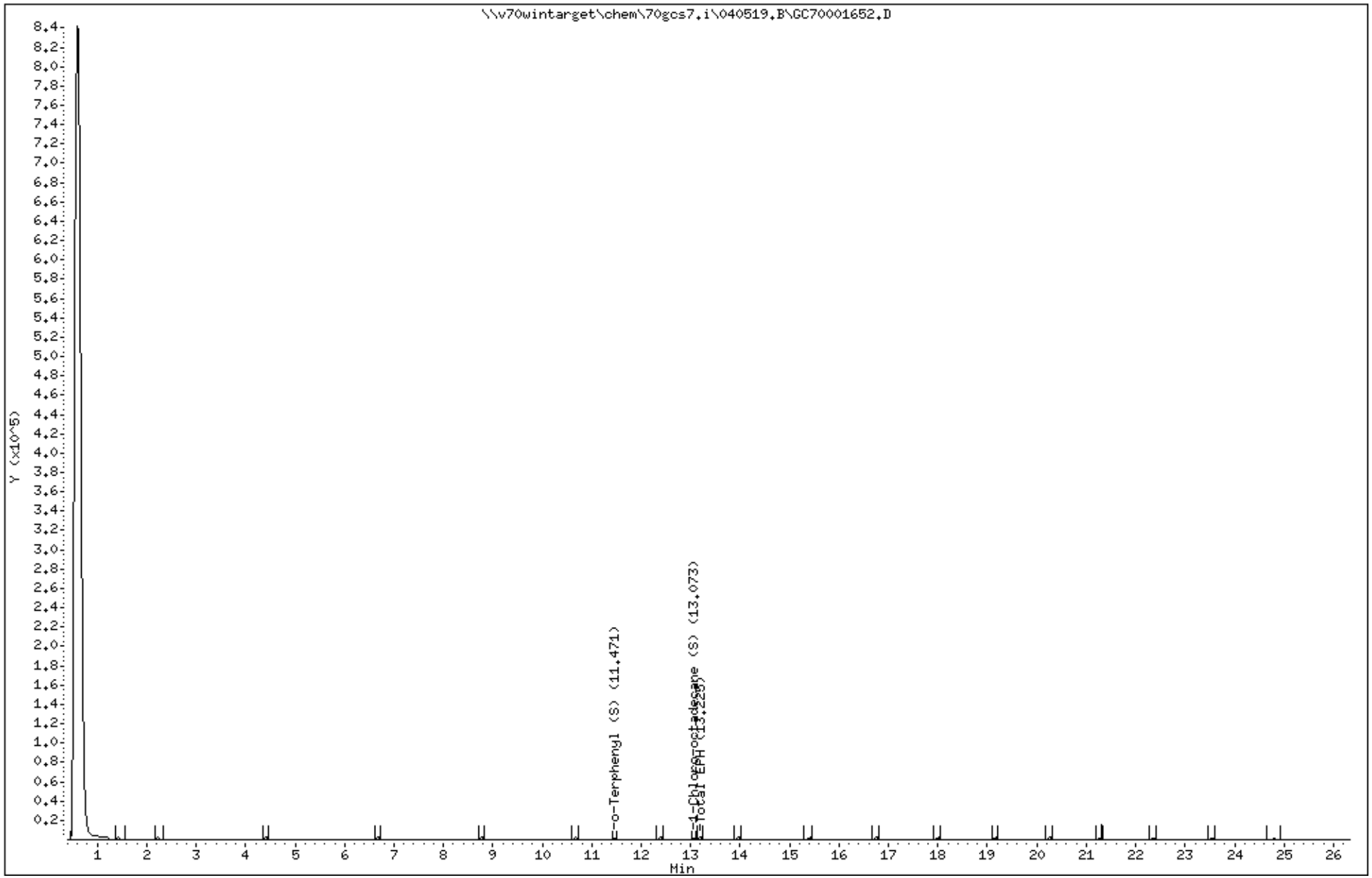
QC Flag Legend

M - Compound response manually integrated.

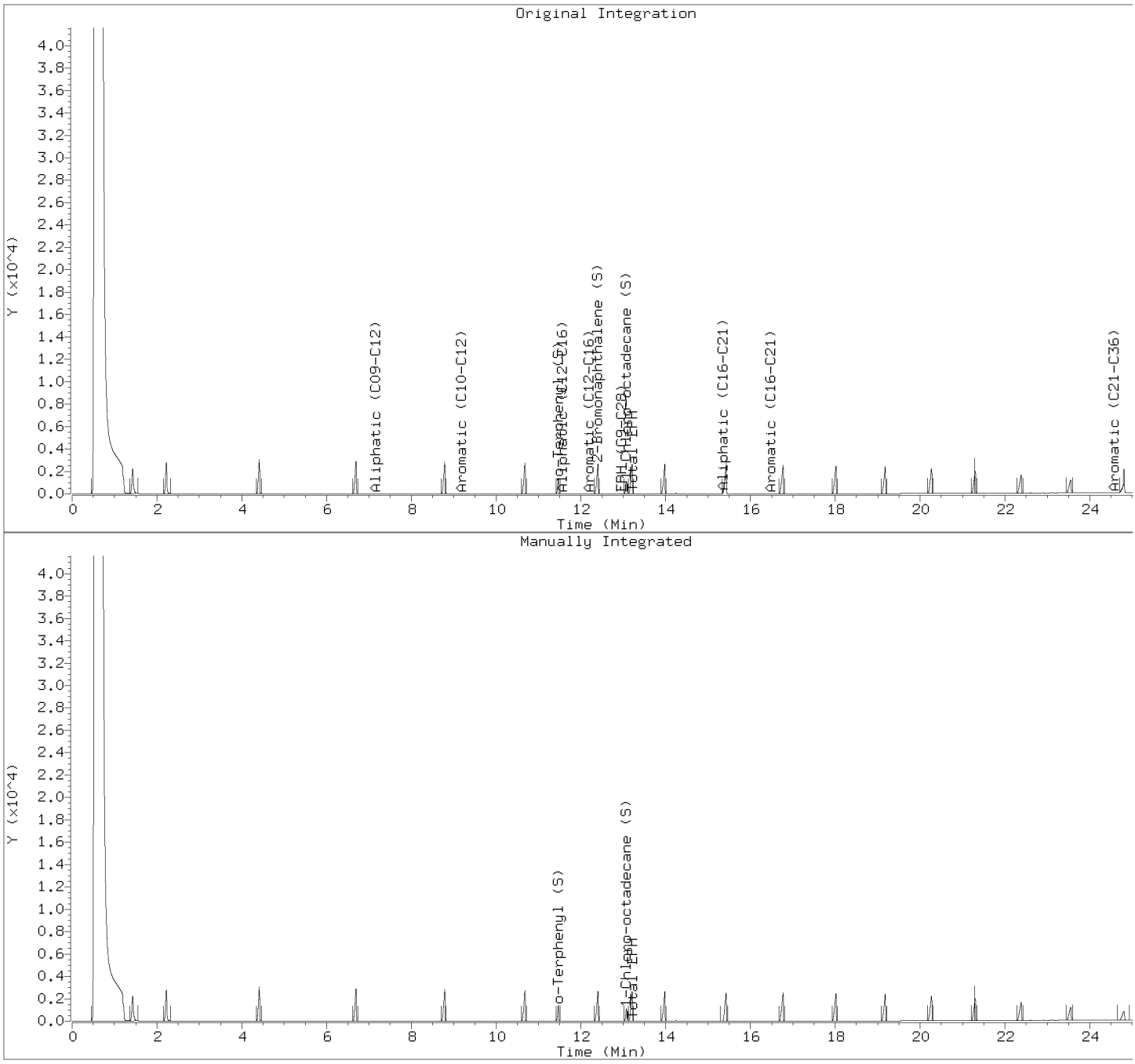
Review Codes Legend

:

Data File: \\v70wintarget\chem\70gcs7.i\040519.B\GC70001652.D
Date : 05-APR-2019 19:09
Client ID: CCV
Instrument: 70gcs7.i
Sample Info: CCV, 64076:1
Purge Volume: 1000.0
Operator: JKB
Column phase: RTX-CLP2
Column diameter: 0.32



Data File: \\v70wintarget\chem\70gcs7.i\040519.B/GC70001652.D (ManInt: TEPH.sub Orig: all.sub)
Injection Date: 05-APR-2019 19:09 Operator: JKB
Instrument: 70gcs7.i
Lab Sample ID: CCV



Manually Integrated Compounds

Compound	Area (before)	Area (after)
Total EPH	89777	103534
o-Terphenyl (S)	2541	2541
1-Chloro-octadecane (S)	2065	2065

Pace Analytical Services, Inc.

NJ EPH

Data file : \\v70wintarget\chem\70gcs7.i\040519.B\GC70001667.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 06-APR-2019 03:41
Operator : JKB Inst ID: 70gcs7.i
Smp Info : ccv, 64076:1
Misc Info : 4765,
Comment : NJ EPH
Method : \\v70wintarget\chem\70gcs7.i\040519.B\NJEPHNonFrac-072218.m
Meth Date : 08-Apr-2019 13:45 70gcs7.i Quant Type: ESTD
Cal Date : 21-JUL-2018 14:50 Cal File: GC70000008.D
Als bottle: 17 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TEPH.sub
Target Version: RC10A

Concentration Formula: Amt * DF * Uf * (Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

					AMOUNTS		
					CAL-AMT	ON-COL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	REVIEW CODE
$ 26 o-Terphenyl (S)	11.464	11.468	-0.004	2672	100.000	104	
$ 28 1-Chloro-octadecane (S)	13.067	13.106	-0.039	2165	100.000	101	
S 33 Total EPH	1.350-25.100			100650	4500.00	4390(M)	BA

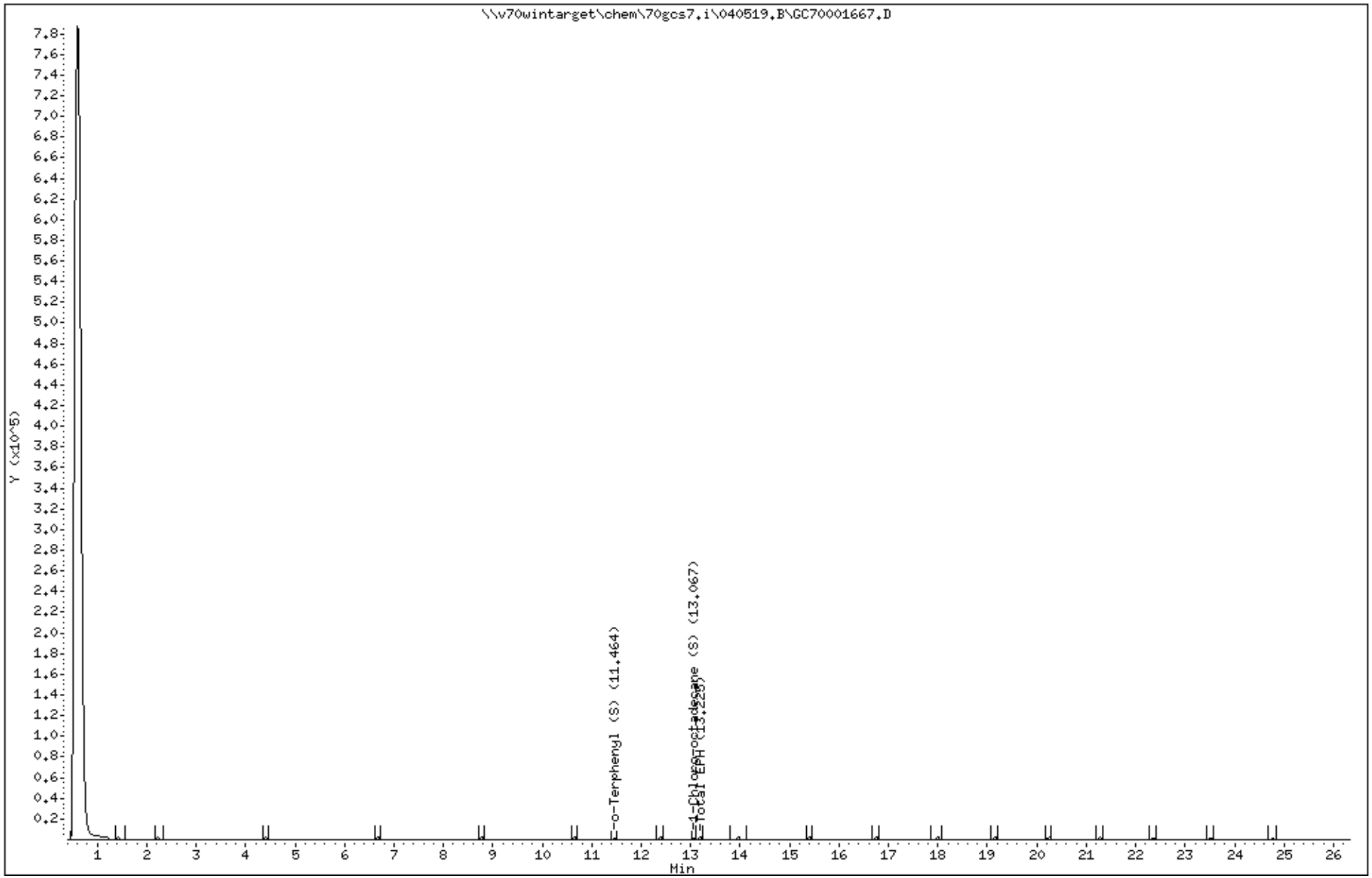
QC Flag Legend

M - Compound response manually integrated.

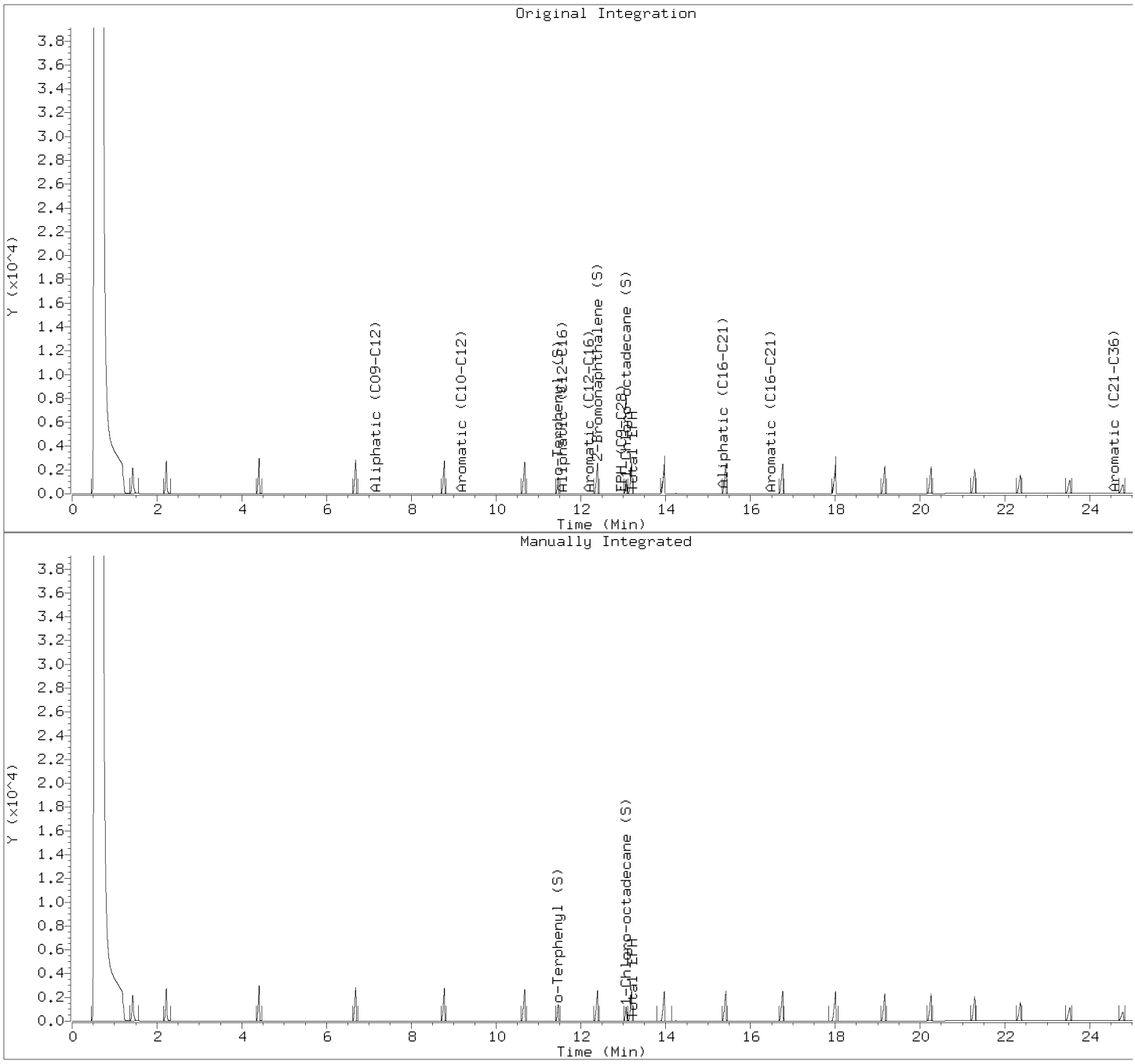
Review Codes Legend

:
BA: Indicates that the baseline had to be adjusted correctly by the analyst.

Data File: \\v70wintarget\chem\70gcs7.i\040519.B\GC70001667.D
Date : 06-APR-2019 03:41
Client ID: CCV
Instrument: 70gcs7.i
Sample Info: CCV, 64076:1
Purge Volume: 1000.0
Operator: JKB
Column phase: RTX-CLP2
Column diameter: 0.32



Data File: \\v70wintarget\chem\70gcs7.i\040519.B/GC70001667.D (ManInt: TEPH.sub Orig: all.sub)
Injection Date: 06-APR-2019 03:41 Operator: JKB
Instrument: 70gcs7.i
Lab Sample ID: CCV



Manually Integrated Compounds

Compound	Area (before)	Area (after)
Total EPH	83939	100650
o-Terphenyl (S)	2672	2672
1-Chloro-octadecane (S)	2165	2165

Pace Analytical Services, Inc.

NJ EPH

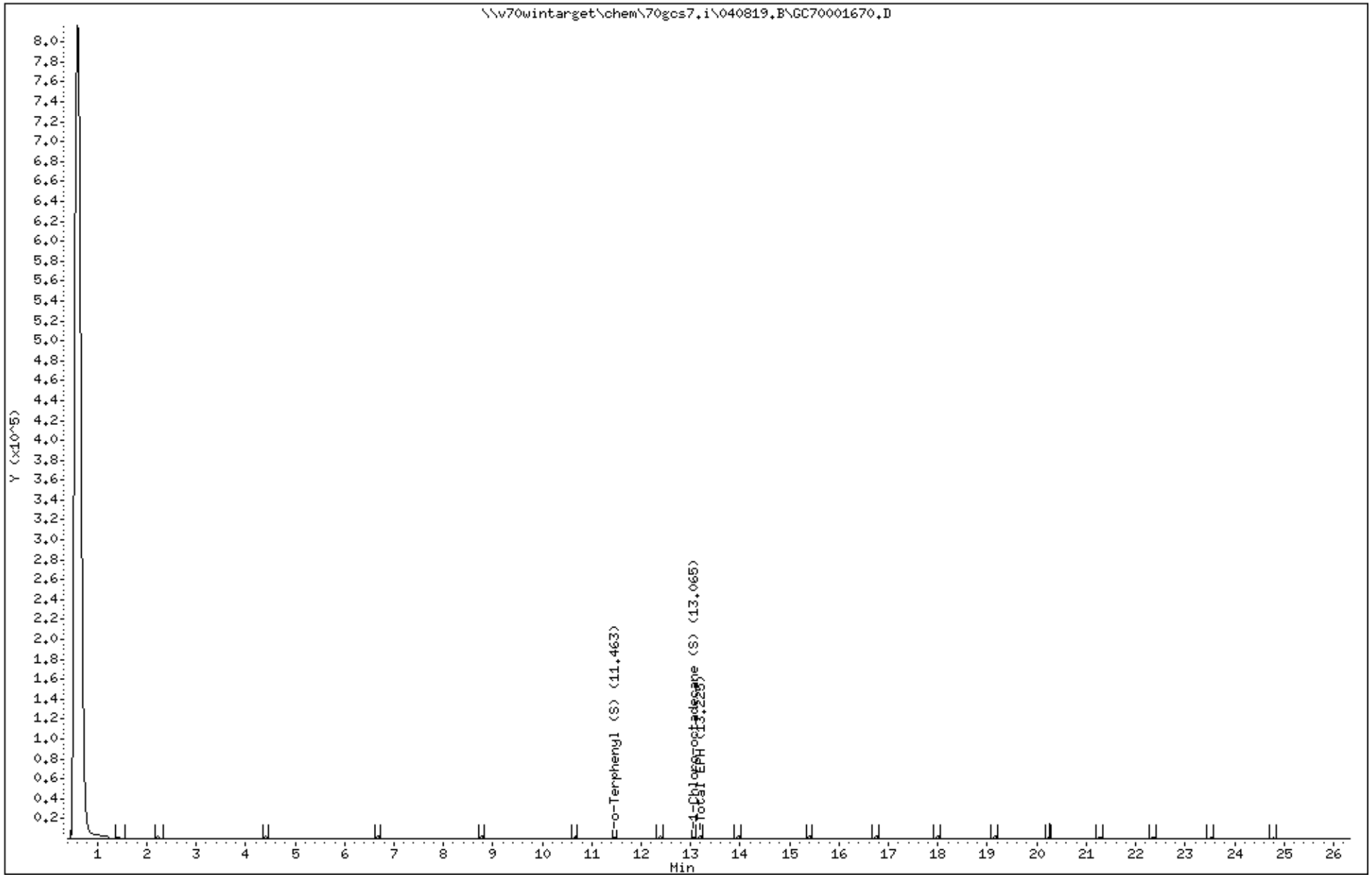
Data file : \\v70wintarget\chem\70gcs7.i\040819.B\GC70001670.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 08-APR-2019 16:58
Operator : JKB Inst ID: 70gcs7.i
Smp Info : ccv, 64076:1
Misc Info : 4765,
Comment : NJ EPH
Method : \\v70wintarget\chem\70gcs7.i\040819.B\NJEPHNonFrac-072218.m
Meth Date : 10-Apr-2019 10:01 70gcs7.i Quant Type: ESTD
Cal Date : 21-JUL-2018 14:50 Cal File: GC70000008.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TEPH.sub
Target Version: RC10A

Concentration Formula: Amt * DF * Uf * (Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

					AMOUNTS		
					CAL-AMT	ON-COL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	REVIEW CODE
$ 26 o-Terphenyl (S)	11.463	11.468	-0.005	2289	100.000	88.8	
$ 28 1-Chloro-octadecane (S)	13.065	13.106	-0.041	1860	100.000	87.1	
S 33 Total EPH	1.350-25.100			91626	4500.00	4000	

Data File: \\v70wintarget\chem\70gcs7.i\040819.B\GC70001670.D
Date : 08-APR-2019 16:58
Client ID: CCV
Instrument: 70gcs7.i
Sample Info: CCV, 64076:1
Purge Volume: 1000.0
Operator: JKB
Column phase: RTX-CLP2
Column diameter: 0.32



Data File: \\v70wintarget\chem\70gcs7.i\040819.B/GC70001670.D (ManInt: TEPH.sub Orig: TEPH.sub)
Injection Date: 08-APR-2019 16:58 Operator: JKB
Instrument: 70gcs7.i
Lab Sample ID: CCV

NO SIGNAL MANUAL INTEGRATIONS DONE FOR THIS DATA FILE

Manually Integrated Compounds

Compound	Area (before)	Area (after)
Total EPH	91626	91626
o-Terphenyl (S)	2289	2289
1-Chloro-octadecane (S)	1860	1860

Pace Analytical Services, Inc.

NJ EPH

Data file : \\v70wintarget\chem\70gcs7.i\040819.B\GC70001677.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 08-APR-2019 20:58
Operator : JKB Inst ID: 70gcs7.i
Smp Info : ccv, 64076:1
Misc Info : 4765,
Comment : NJ EPH
Method : \\v70wintarget\chem\70gcs7.i\040819.B\NJEPHNonFrac-072218.m
Meth Date : 10-Apr-2019 10:01 70gcs7.i Quant Type: ESTD
Cal Date : 21-JUL-2018 14:50 Cal File: GC70000008.D
Als bottle: 9 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TEPH.sub
Target Version: RC10A

Concentration Formula: Amt * DF * Uf * (Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

					AMOUNTS		
					CAL-AMT	ON-COL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	REVIEW CODE
$ 26 o-Terphenyl (S)	11.462	11.468	-0.006	2513	100.000	97.5	
$ 28 1-Chloro-octadecane (S)	13.064	13.106	-0.042	1957	100.000	91.6(M)	
S 33 Total EPH	1.350-25.100			100569	4500.00	4380(M)	

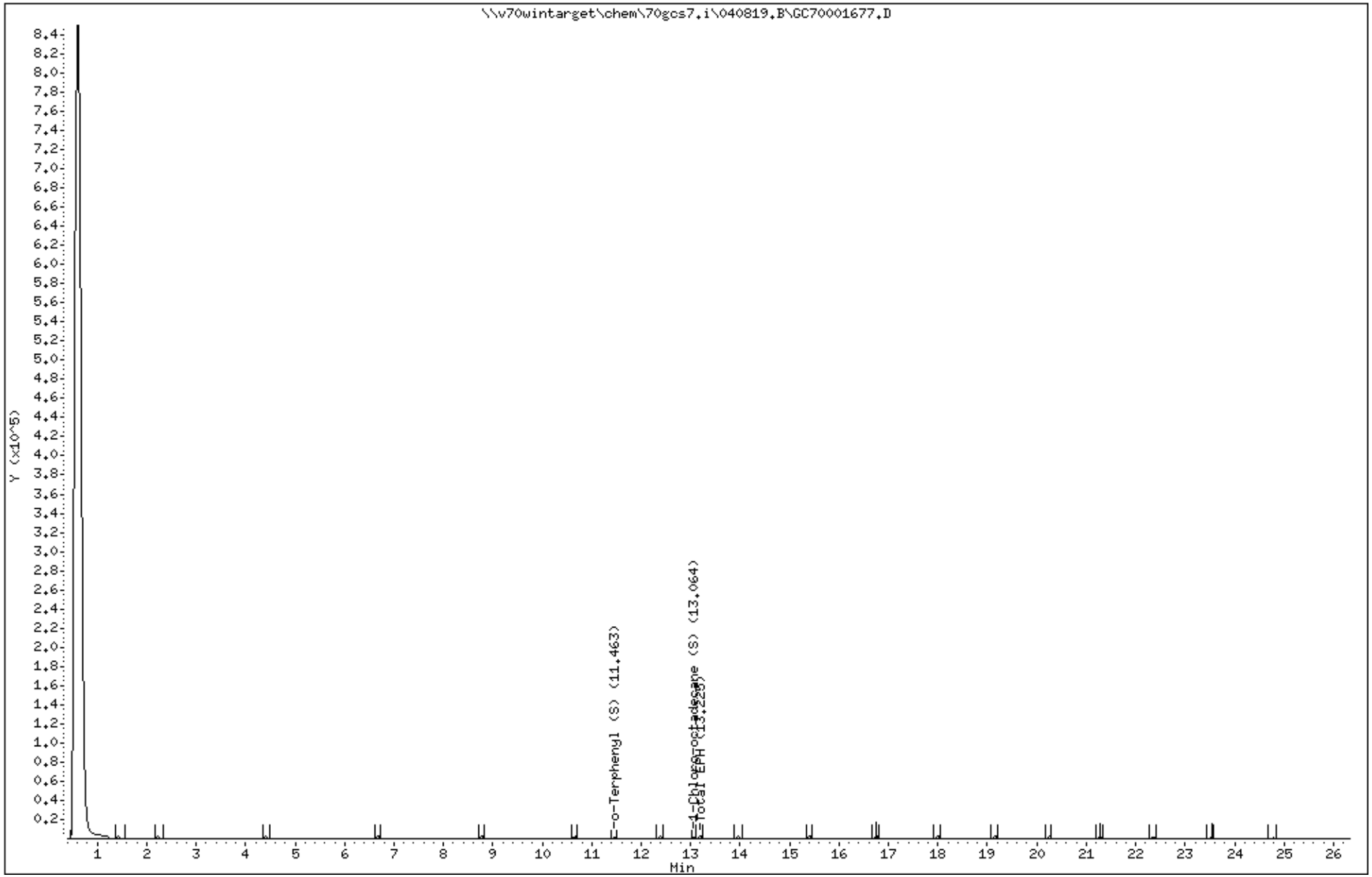
QC Flag Legend

M - Compound response manually integrated.

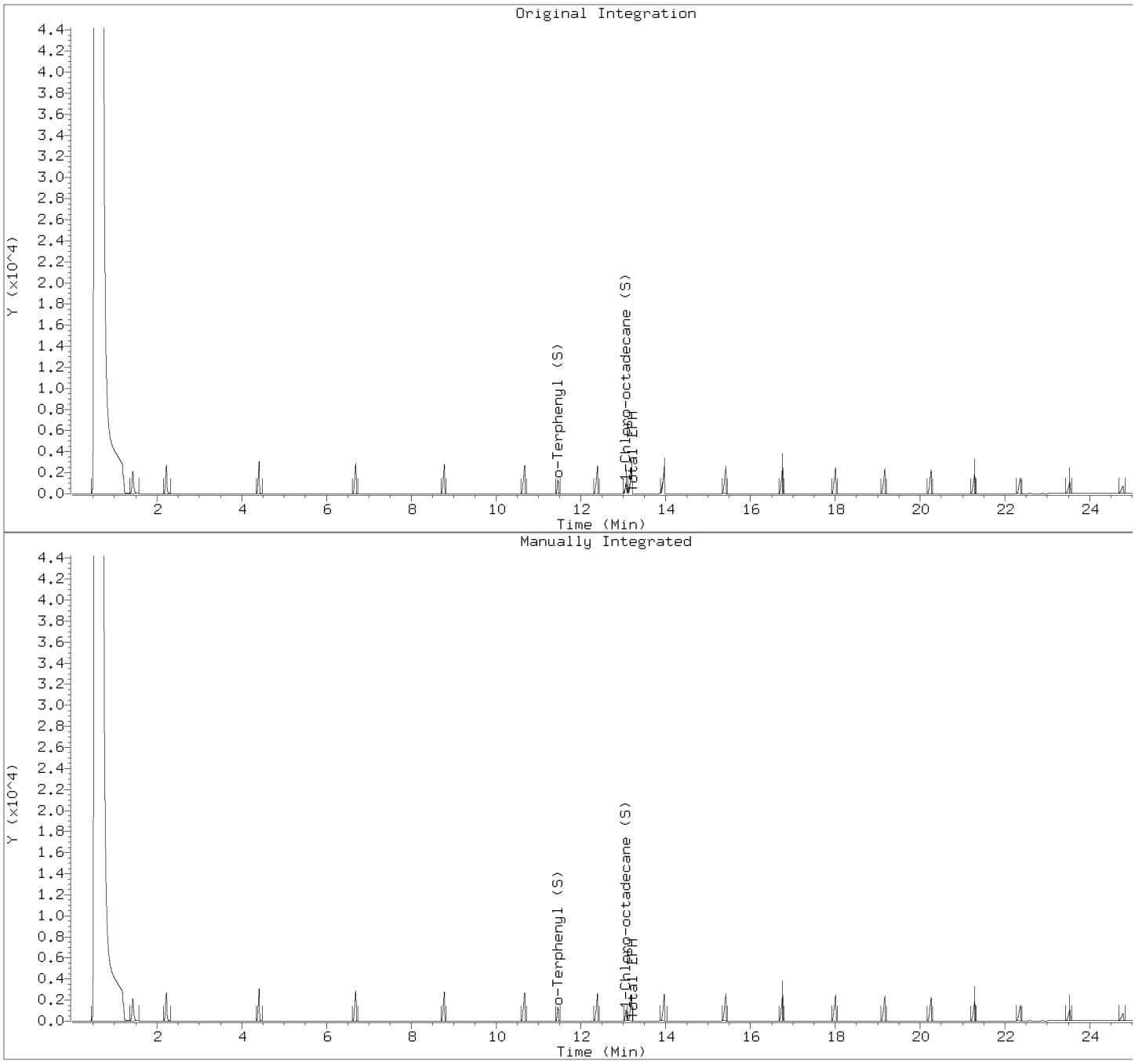
Review Codes Legend

:

Data File: \\v70wintarget\chem\70gcs7.i\040819.B\GC70001677.D
Date : 08-APR-2019 20:58
Client ID: CCV
Instrument: 70gcs7.i
Sample Info: CCV, 64076:1
Purge Volume: 1000.0
Operator: JKB
Column phase: RTX-CLP2
Column diameter: 0.32



Data File: \\v70wintarget\chem\70gcs7.i\040819.B/GC70001677.D (ManInt: TEPH.sub Orig: TEPH.sub)
Injection Date: 08-APR-2019 20:58 Operator: JKB
Instrument: 70gcs7.i
Lab Sample ID: CCV



Manually Integrated Compounds

Compound	Area (before)	Area (after)
Total EPH	90459	100569
o-Terphenyl (S)	2513	2513
1-Chloro-octadecane (S)	272	1957

SAMPLE NO.

BLANK

GCV FID - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Pace Analytical - New York Contract: 84849 - 3/22

Date Received: Matrix: Solid SDG No.: 7083318

Date Extracted: 04/02/2019 13:07 Lab Sample ID: 498079

Date Analyzed: 04/05/2019 19:43 Lab File ID: 040519.B\GC70001653.D

Initial wt/vol: 10 g Final wt/vol: 1 mL Dilution: 1 Instrument: 70GCS7 Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: mg/kg	Q
	Total EPH	<80.0	U

Pace Analytical Services, Inc.

NJ EPH

Data file : \\v70wintarget\chem\70gcs7.i\040519.B\GC70001653.D
Lab Smp Id: 498079 Client Smp ID: MB
Inj Date : 05-APR-2019 19:43
Operator : JKB Inst ID: 70gcs7.i
Smp Info : 498079,
Misc Info : 6509,
Comment : NJ EPH
Method : \\v70wintarget\chem\70gcs7.i\040519.B\NJEPHNonFrac-072218.m
Meth Date : 08-Apr-2019 13:45 70gcs7.i Quant Type: ESTD
Cal Date : 21-JUL-2018 14:50 Cal File: GC70000008.D
Als bottle: 3 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TEPH.sub
Target Version: RC10A

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVar

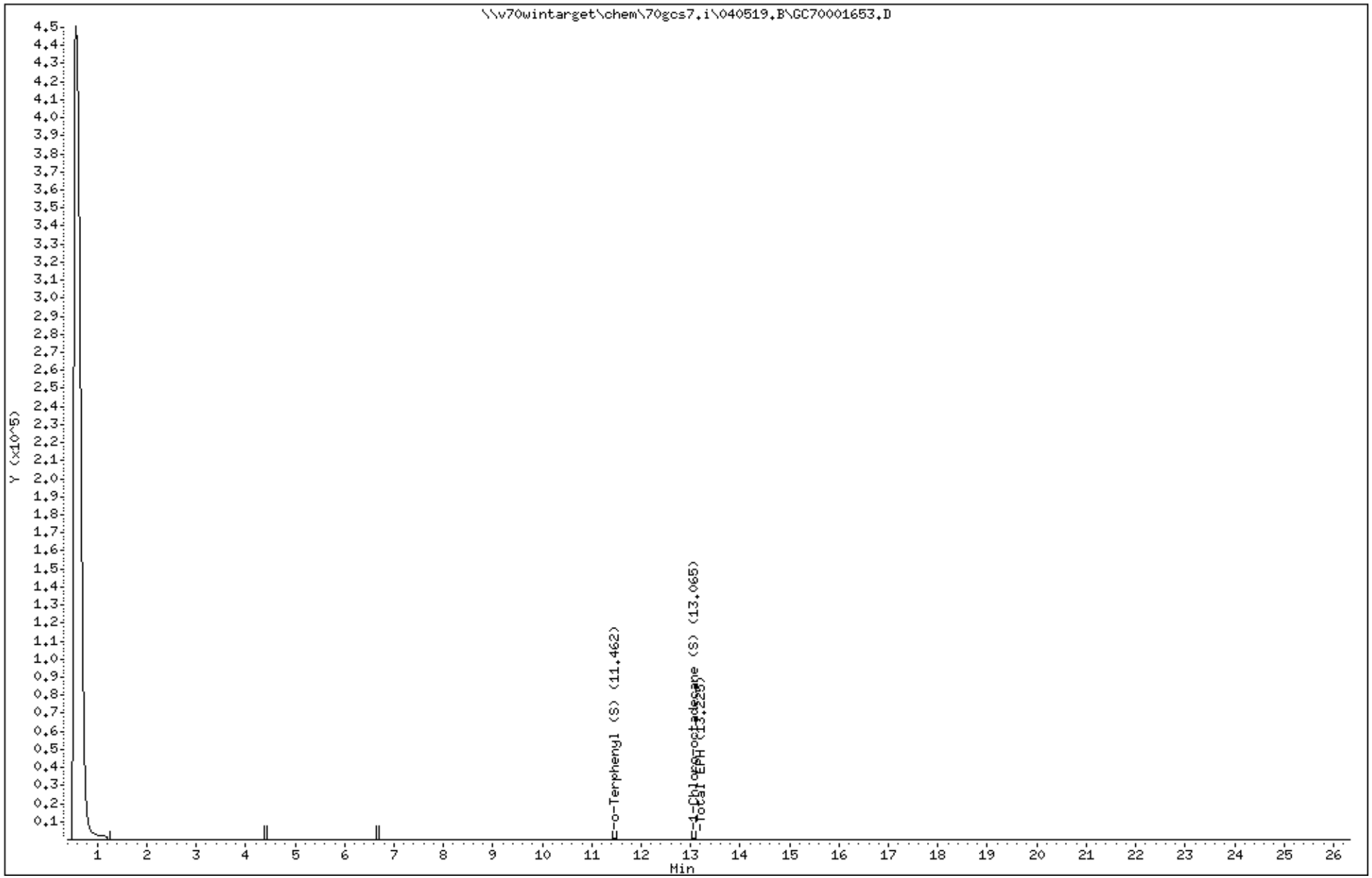
Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	Correction factor
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	10.000	Weight of Sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)	REVIEW CODE
$ 26 o-Terphenyl (S)	11.461	11.468	-0.007	1763	68.4129	6.84	
$ 28 1-Chloro-octadecane (S)	13.064	13.106	-0.042	1603	75.0410	7.50(R)	
S 33 Total EPH	1.350-25.100			60	2.61634	0.262	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: \\v70wintarget\chem\70gcs7.i\040519.B\GC70001653.D
Date : 05-APR-2019 19:43
Client ID: MB
Instrument: 70gcs7.i
Sample Info: 498079,
Volume Injected (uL): 1.0
Operator: JKB
Column phase: RTX-CLP2
Column diameter: 0.32



Data File: \\v70wintarget\chem\70gcs7.i\040519.B/GC70001653.D (ManInt: TEPH.sub Orig: all.sub)
Injection Date: 05-APR-2019 19:43 Operator: JKB
Instrument: 70gcs7.i
Lab Sample ID: 498079

NO SIGNAL MANUAL INTEGRATIONS DONE FOR THIS DATA FILE

Manually Integrated Compounds

Compound	Area (before)	Area (after)
Total EPH	60	60
o-Terphenyl (S)	1763	1763
1-Chloro-octadecane (S)	1603	1603

SAMPLE NO.

LCS

GCV FID - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Pace Analytical - New York Contract: 84849 - 3/22

Date Received: Matrix: Solid SDG No.: 7083318

Date Extracted: 04/02/2019 13:07 Lab Sample ID: 498080

Date Analyzed: 04/05/2019 20:17 Lab File ID: 040519.B\GC70001654.D

Initial wt/vol: 10 g Final wt/vol: 1 mL Dilution: 1 Instrument: 70GCS7 Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: mg/kg	Q
	Total EPH	273	

Pace Analytical Services, Inc.

NJ EPH

Data file : \\v70wintarget\chem\70gcs7.i\040519.B\GC70001654.D
Lab Smp Id: 498080 Client Smp ID: MBLCS
Inj Date : 05-APR-2019 20:17
Operator : JKB Inst ID: 70gcs7.i
Smp Info : 498080,
Misc Info : 6509,
Comment   : NJ EPH
Method   : \\v70wintarget\chem\70gcs7.i\040519.B\NJEPHNonFrac-072218.m
Meth Date : 08-Apr-2019 13:45 70gcs7.i Quant Type: ESTD
Cal Date : 21-JUL-2018 14:50 Cal File: GC70000008.D
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TEPH.sub
Target Version: RC10A

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVar

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	Correction factor
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	10.000	Weight of Sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS		
					ON-COLUMN	FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(mg/Kg)	REVIEW CODE
$ 26 o-Terphenyl (S)	11.465	11.468	-0.003	2398	93.0539	9.30	
$ 28 1-Chloro-octadecane (S)	13.072	13.106	-0.034	1987	93.0171	9.30(R)	
S 33 Total EPH	1.350-25.100			62502	2725.44	272(M)	BA

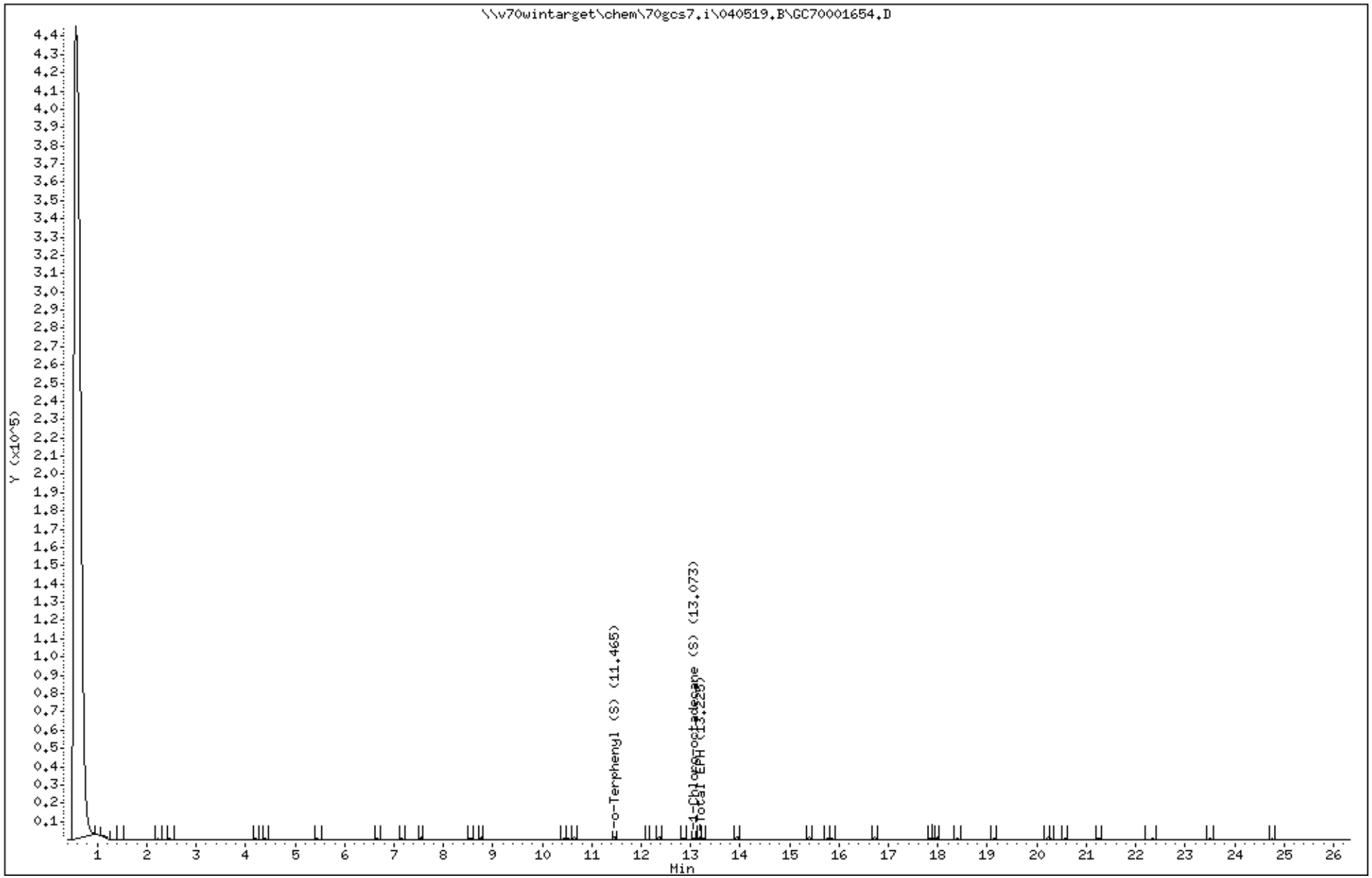
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

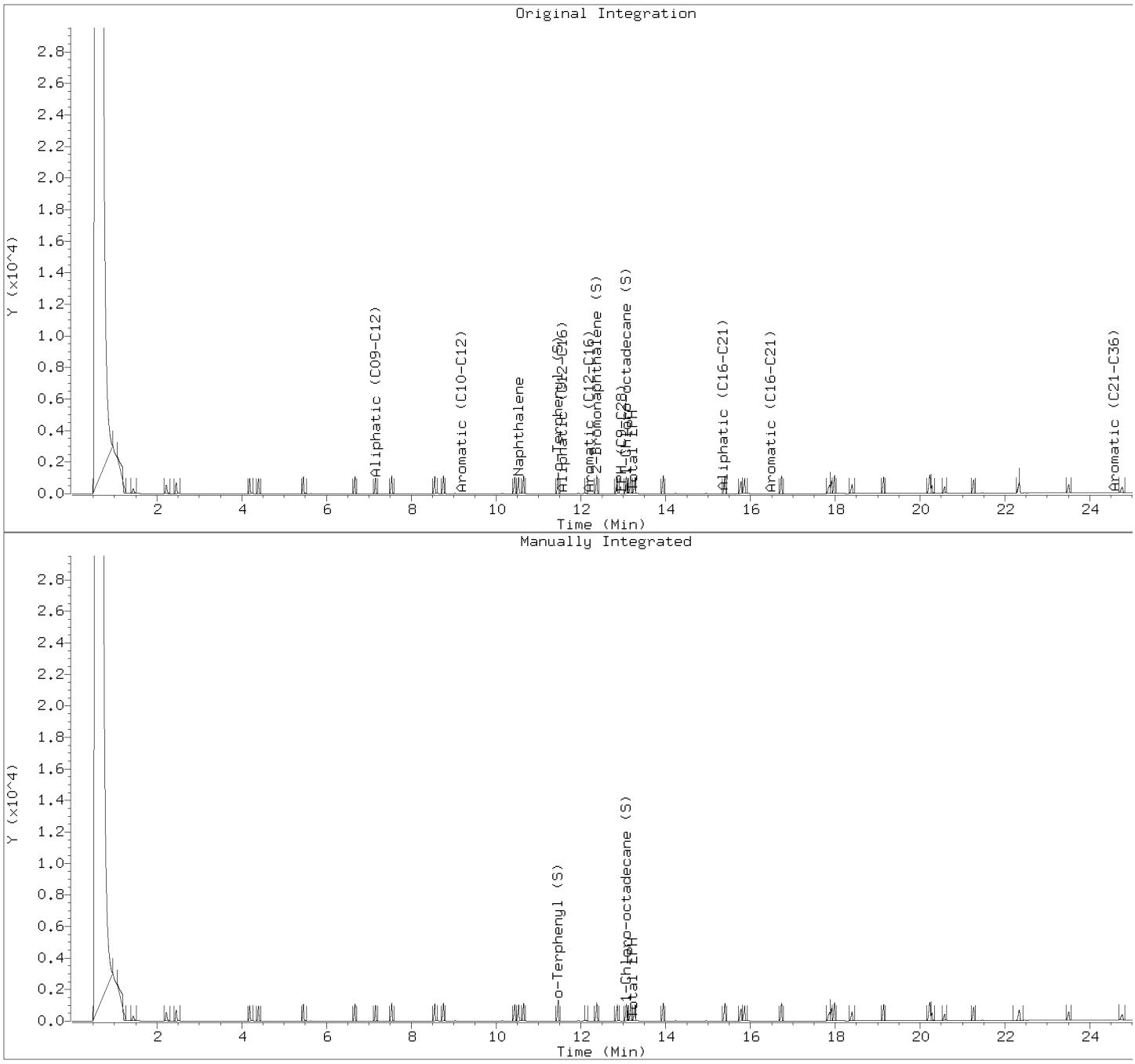
Review Codes Legend

:
BA: Indicates that the baseline had to be adjusted correctly by the analyst.

Data File: \\v70wintarget\chem\70gcs7.i\040519.B\GC70001654.D
Date : 05-APR-2019 20:17
Client ID: MBLCS
Instrument: 70gcs7.i
Sample Info: 498080,
Volume Injected (uL): 1.0
Operator: JKB
Column phase: RTX-CLP2
Column diameter: 0.32



Data File: \\v70wintarget\chem\70gcs7.i\040519.B/GC70001654.D (ManInt: TEPH.sub Orig: all.sub)
Injection Date: 05-APR-2019 20:17 Operator: JKB
Instrument: 70gcs7.i
Lab Sample ID: 498080



Manually Integrated Compounds

Compound	Area (before)	Area (after)
Total EPH	57041	62502
o-Terphenyl (S)	2398	2398
1-Chloro-octadecane (S)	1987	1987

SAMPLE NO.

LCSD

GCV FID - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Pace Analytical - New York Contract: 84849 - 3/22

Date Received: Matrix: Solid SDG No.: 7083318

Date Extracted: 04/02/2019 13:07 Lab Sample ID: 498081

Date Analyzed: 04/05/2019 20:51 Lab File ID: 040519.B\GC70001655.D

Initial wt/vol: 10 g Final wt/vol: 1 mL Dilution: 1 Instrument: 70GCS7 Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: mg/kg	Q
	Total EPH	256	

Pace Analytical Services, Inc.

NJ EPH

Data file : \\v70wintarget\chem\70gcs7.i\040519.B\GC70001655.D
Lab Smp Id: 498081 Client Smp ID: MBLCSD
Inj Date : 05-APR-2019 20:51
Operator : JKB Inst ID: 70gcs7.i
Smp Info : 498081,
Misc Info : 6509,
Comment : NJ EPH
Method : \\v70wintarget\chem\70gcs7.i\040519.B\NJEPHNonFrac-072218.m
Meth Date : 08-Apr-2019 13:45 70gcs7.i Quant Type: ESTD
Cal Date : 21-JUL-2018 14:50 Cal File: GC70000008.D
Als bottle: 5 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TEPH.sub
Target Version: RC10A

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVar

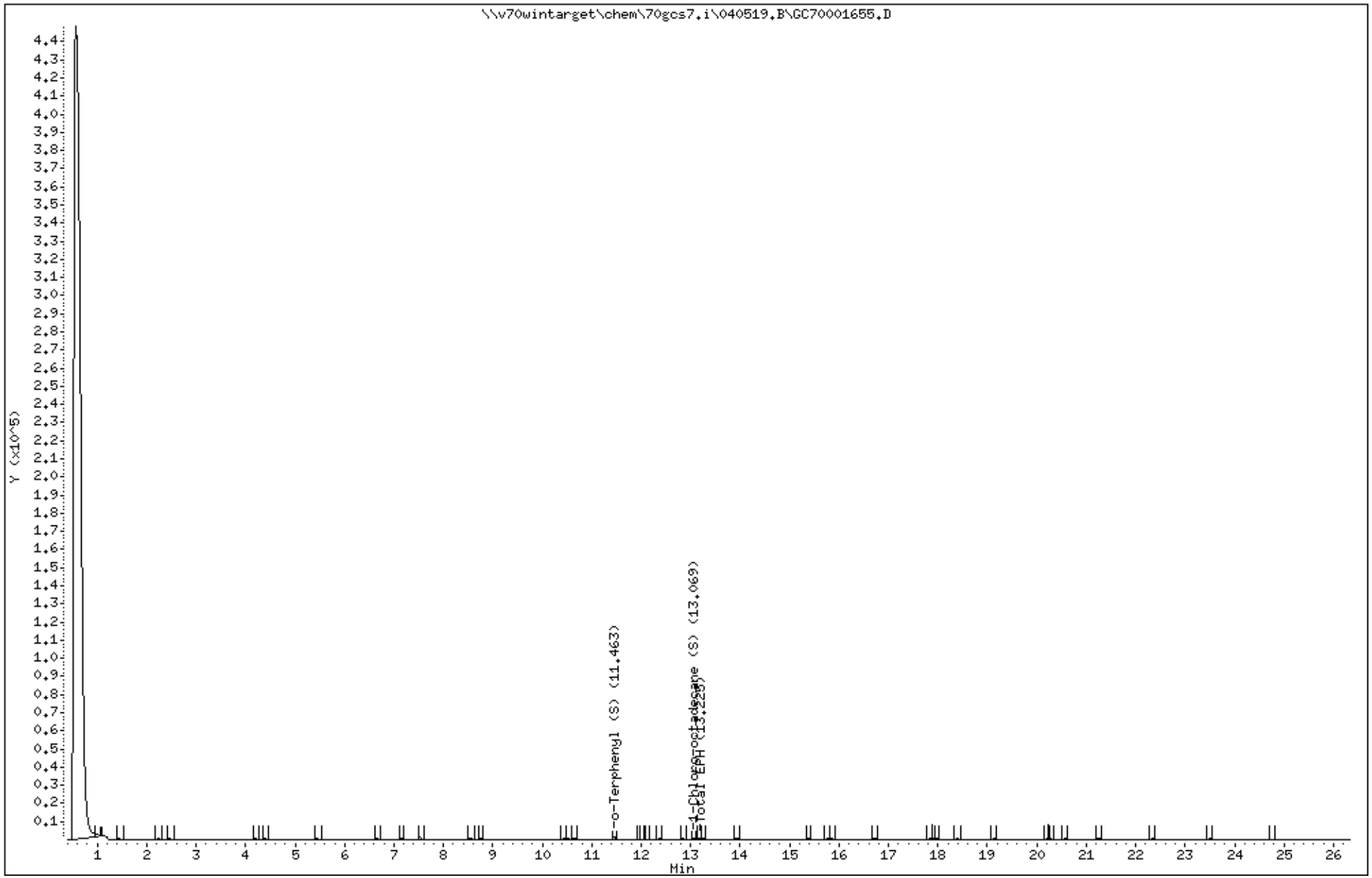
Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	Correction factor
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Ws	10.000	Weight of Sample extracted (g)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS		
					ON-COLUMN	FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(mg/Kg)	REVIEW CODE
$ 26 o-Terphenyl (S)	11.462	11.468	-0.006	2113	81.9946	8.20	
$ 28 1-Chloro-octadecane (S)	13.068	13.106	-0.038	1727	80.8458	8.08(R)	
S 33 Total EPH	1.350-25.100			58606	2555.56	256	

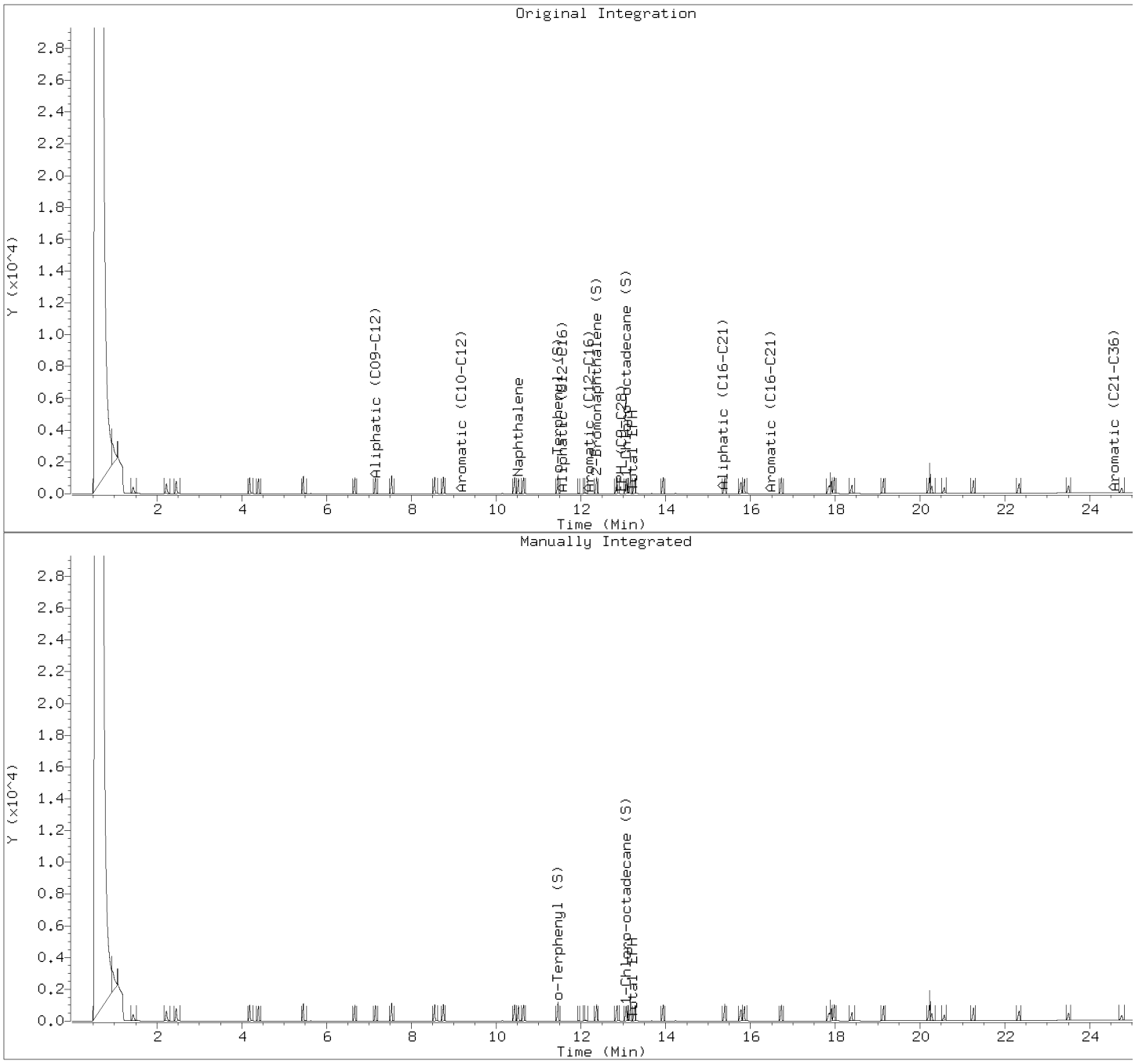
QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: \\v70wintarget\chem\70gcs7.i\040519.B\GC70001655.D
Date : 05-APR-2019 20:51
Client ID: MBLCSD
Instrument: 70gcs7.i
Sample Info: 498081,
Volume Injected (uL): 1.0
Operator: JKB
Column phase: RTX-CLP2
Column diameter: 0.32



Data File: \\v70wintarget\chem\70gcs7.i\040519.B/GC70001655.D (ManInt: TEPH.sub Orig: all.sub)
Injection Date: 05-APR-2019 20:51 Operator: JKB
Instrument: 70gcs7.i
Lab Sample ID: 498081



Manually Integrated Compounds

Compound	Area (before)	Area (after)
Total EPH	54959	58606
o-Terphenyl (S)	2113	2113
1-Chloro-octadecane (S)	1727	1727

SAMPLE NO.

BLANK

GCV FID - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Pace Analytical - New York Contract: 84849 - 3/22

Date Received: Matrix: Water SDG No.: 7083318

Date Extracted: 04/05/2019 20:48 Lab Sample ID: 502342

Date Analyzed: 04/08/2019 17:32 Lab File ID: 040819.B\GC70001671.D

Initial wt/vol: 1000 mL Final wt/vol: 1 mL Dilution: 1 Instrument: 70GCS7 Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
	Total EPH	<100	U

Pace Analytical Services, Inc.

NJ EPH

Data file : \\v70wintarget\chem\70gcs7.i\040819.B\GC70001671.D
Lab Smp Id: 502342 Client Smp ID: MB
Inj Date : 08-APR-2019 17:32
Operator : JKB Inst ID: 70gcs7.i
Smp Info : 502342,
Misc Info : 6519,
Comment : NJ EPH
Method : \\v70wintarget\chem\70gcs7.i\040819.B\NJEPHNonFrac-072218.m
Meth Date : 09-Apr-2019 11:19 jbidas Quant Type: ESTD
Cal Date : 21-JUL-2018 14:50 Cal File: GC70000008.D
Als bottle: 3 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TEPH.sub
Target Version: RC10A
Processing Host: L-23028

Concentration Formula: Amt * DF * Uf * (Vt/Vo) * CpndVariable

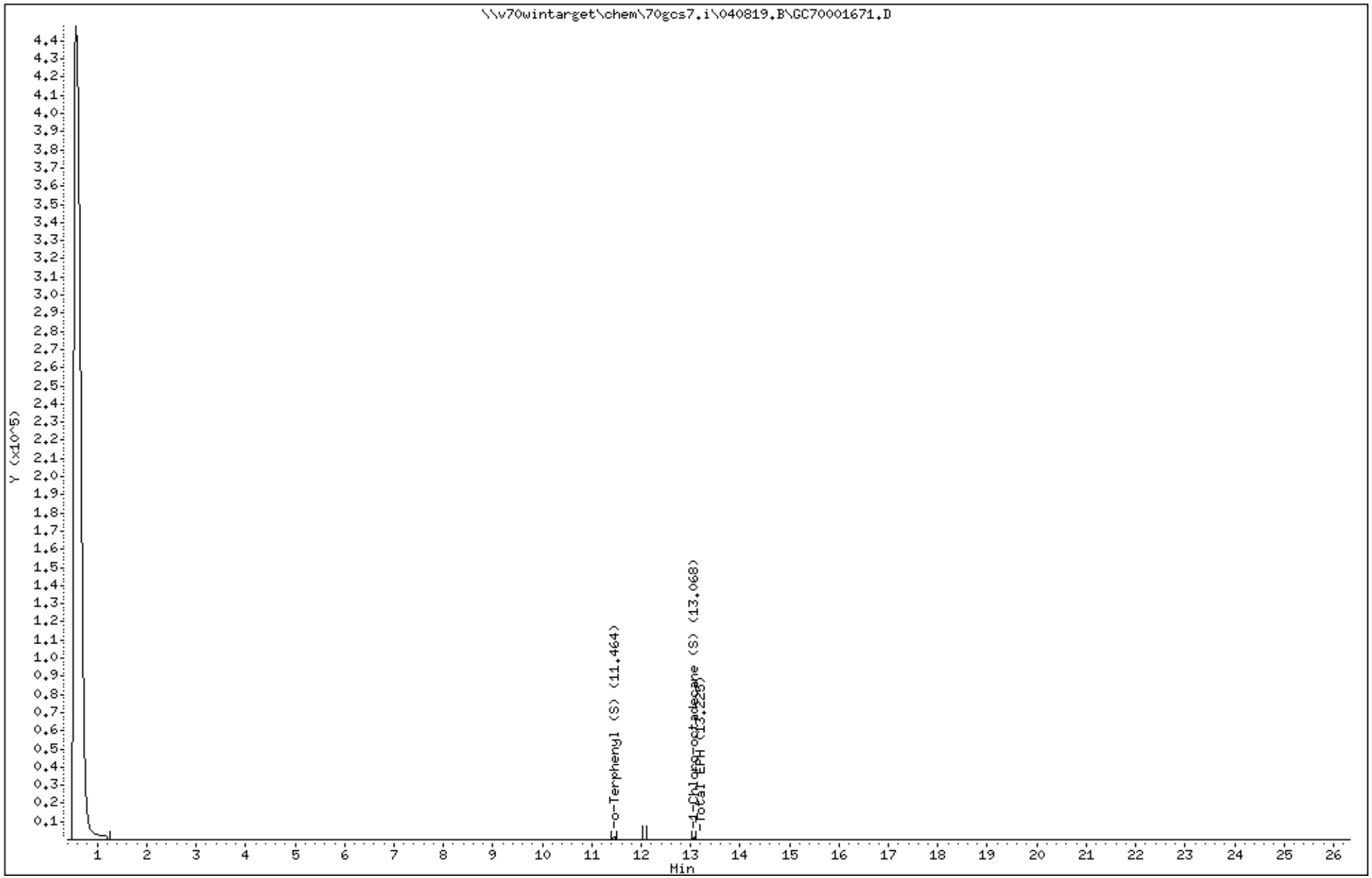
Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 26 o-Terphenyl (S)	11.464	11.468	-0.004	2572	99.8060	99.8	
$ 28 1-Chloro-octadecane (S)	13.068	13.106	-0.038	2113	98.9155	98.9(R)	
S 33 Total EPH	1.350-25.100			61	2.65995	2.66	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: \\v70wintarget\chem\70gcs7.i\040819.B\GC70001671.D
Date : 08-APR-2019 17:32
Client ID: MB
Instrument: 70gcs7.i
Sample Info: 502342,
Purge Volume: 1000.0
Operator: JKB
Column phase: RTX-CLP2
Column diameter: 0.32



Data File: \\v70wintarget\chem\70gcs7.i\040819.B/GC70001671.D (ManInt: TEPH.sub Orig: TEPH.sub)
Injection Date: 08-APR-2019 17:32 Operator: JKB
Instrument: 70gcs7.i
Lab Sample ID: 502342

NO SIGNAL MANUAL INTEGRATIONS DONE FOR THIS DATA FILE

Manually Integrated Compounds

Compound	Area (before)	Area (after)
Total EPH	61	61
o-Terphenyl (S)	2572	2572
1-Chloro-octadecane (S)	2113	2113

SAMPLE NO.

LCS

GCV FID - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Pace Analytical - New York Contract: 84849 - 3/22

Date Received: Matrix: Water SDG No.: 7083318

Date Extracted: 04/05/2019 20:48 Lab Sample ID: 502343

Date Analyzed: 04/08/2019 18:07 Lab File ID: 040819.B\GC70001672.D

Initial wt/vol: 1000 mL Final wt/vol: 1 mL Dilution: 1 Instrument: 70GCS7 Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
	Total EPH	2750	

Pace Analytical Services, Inc.

NJ EPH

Data file : \\v70wintarget\chem\70gcs7.i\040819.B\GC70001672.D
Lab Smp Id: 502343 Client Smp ID: MBLCS
Inj Date : 08-APR-2019 18:07
Operator : JKB Inst ID: 70gcs7.i
Smp Info : 502343,
Misc Info : 6519,
Comment : NJ EPH
Method : \\v70wintarget\chem\70gcs7.i\040819.B\NJEPHNonFrac-072218.m
Meth Date : 09-Apr-2019 11:19 jbidas Quant Type: ESTD
Cal Date : 21-JUL-2018 14:50 Cal File: GC70000008.D
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TEPH.sub
Target Version: RC10A
Processing Host: L-23028

Concentration Formula: Amt * DF * Uf * (Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 26 o-Terphenyl (S)	11.460	11.468	-0.008	2063	80.0543	80.0	
$ 28 1-Chloro-octadecane (S)	13.064	13.106	-0.042	1652	77.3348	77.3(RM)	
S 33 Total EPH	1.350-25.100			62952	2745.07	2740(M)	BA

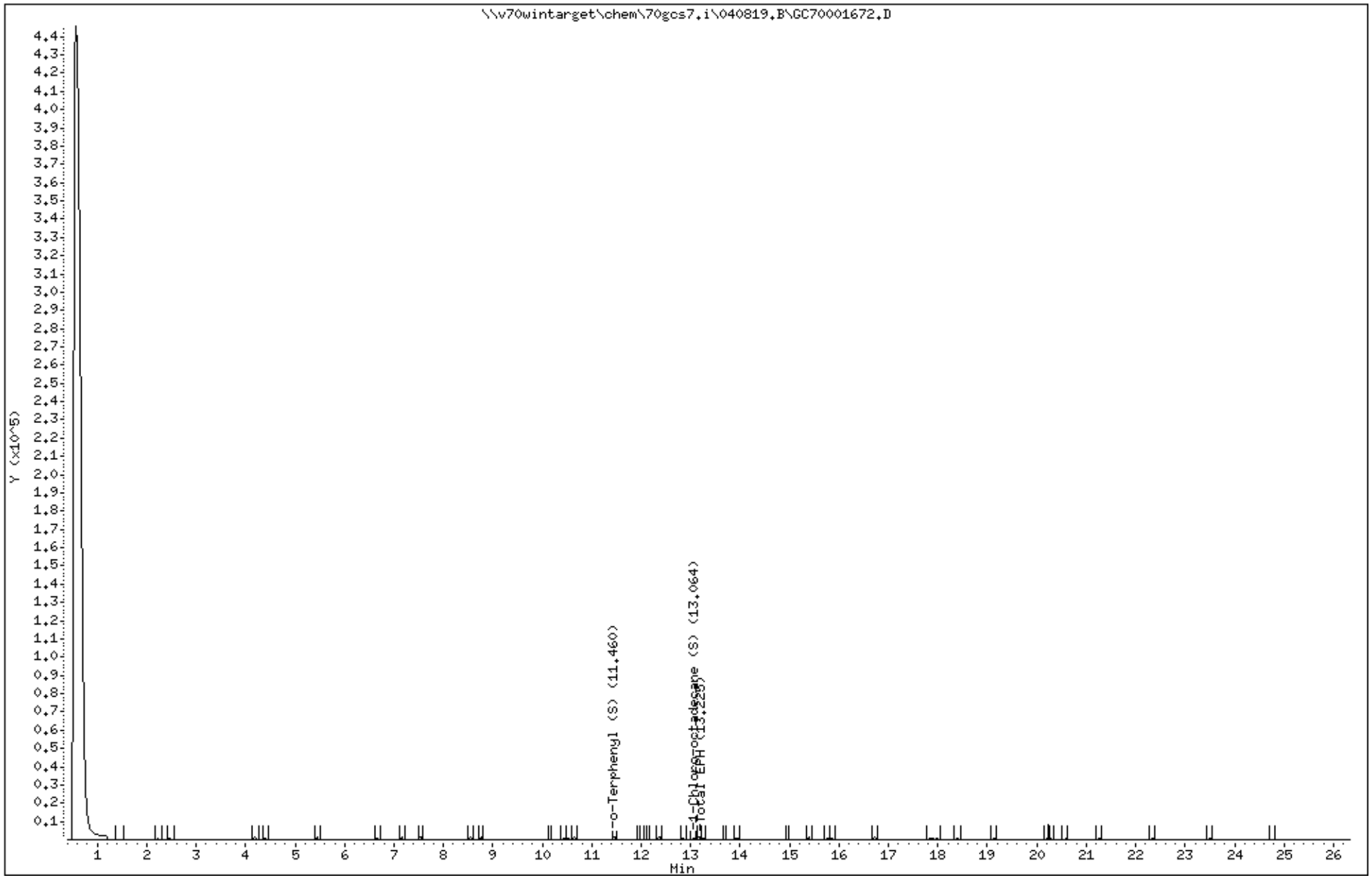
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

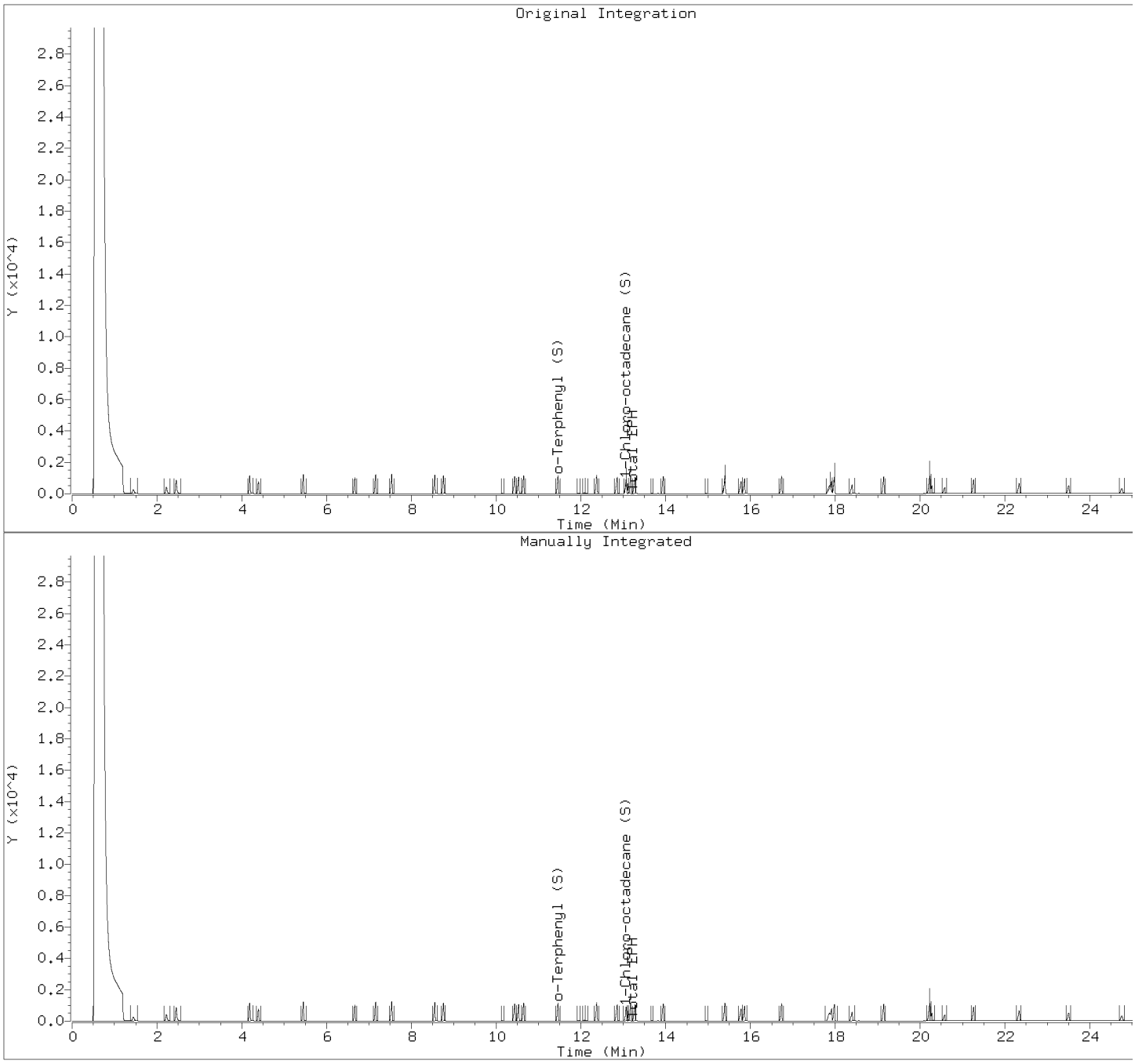
Review Codes Legend

:
BA: Indicates that the baseline had to be adjusted correctly by the analyst.

Data File: \\v70wintarget\chem\70gcs7.i\040819.B\GC70001672.D
Date : 08-APR-2019 18:07
Client ID: MBLCS
Instrument: 70gcs7.i
Sample Info: 502343,
Purge Volume: 1000.0
Operator: JKB
Column phase: RTX-CLP2
Column diameter: 0.32



Data File: \\v70wintarget\chem\70gcs7.i\040819.B/GC70001672.D (ManInt: TEPH.sub Orig: TEPH.sub)
Injection Date: 08-APR-2019 18:07 Operator: JKB
Instrument: 70gcs7.i
Lab Sample ID: 502343



Manually Integrated Compounds

Compound	Area (before)	Area (after)
Total EPH	57330	62952
o-Terphenyl (S)	2063	2063
1-Chloro-octadecane (S)	367	1652

SAMPLE NO.

LCSD

GCV FID - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Pace Analytical - New York Contract: 84849 - 3/22

Date Received: Matrix: Water SDG No.: 7083318

Date Extracted: 04/05/2019 20:48 Lab Sample ID: 502344

Date Analyzed: 04/08/2019 18:41 Lab File ID: 040819.B\GC70001673.D

Initial wt/vol: 1000 mL Final wt/vol: 1 mL Dilution: 1 Instrument: 70GCS7 Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
	Total EPH	2700	

Pace Analytical Services, Inc.

NJ EPH

Data file : \\v70wintarget\chem\70gcs7.i\040819.B\GC70001673.D
Lab Smp Id: 502344 Client Smp ID: MBLCSD
Inj Date : 08-APR-2019 18:41
Operator : JKB Inst ID: 70gcs7.i
Smp Info : 502344,
Misc Info : 6519,
Comment : NJ EPH
Method : \\v70wintarget\chem\70gcs7.i\040819.B\NJEPHNonFrac-072218.m
Meth Date : 09-Apr-2019 11:19 jbidas Quant Type: ESTD
Cal Date : 21-JUL-2018 14:50 Cal File: GC70000008.D
Als bottle: 5 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TEPH.sub
Target Version: RC10A
Processing Host: L-23028

Concentration Formula: Amt * DF * Uf * (Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 26 o-Terphenyl (S)	11.463	11.468	-0.005	2393	92.8599	92.8	
$ 28 1-Chloro-octadecane (S)	13.069	13.106	-0.037	1930	90.3488	90.3(R)	
S 33 Total EPH	1.350-25.100			61944	2701.11	2700(M)	BA

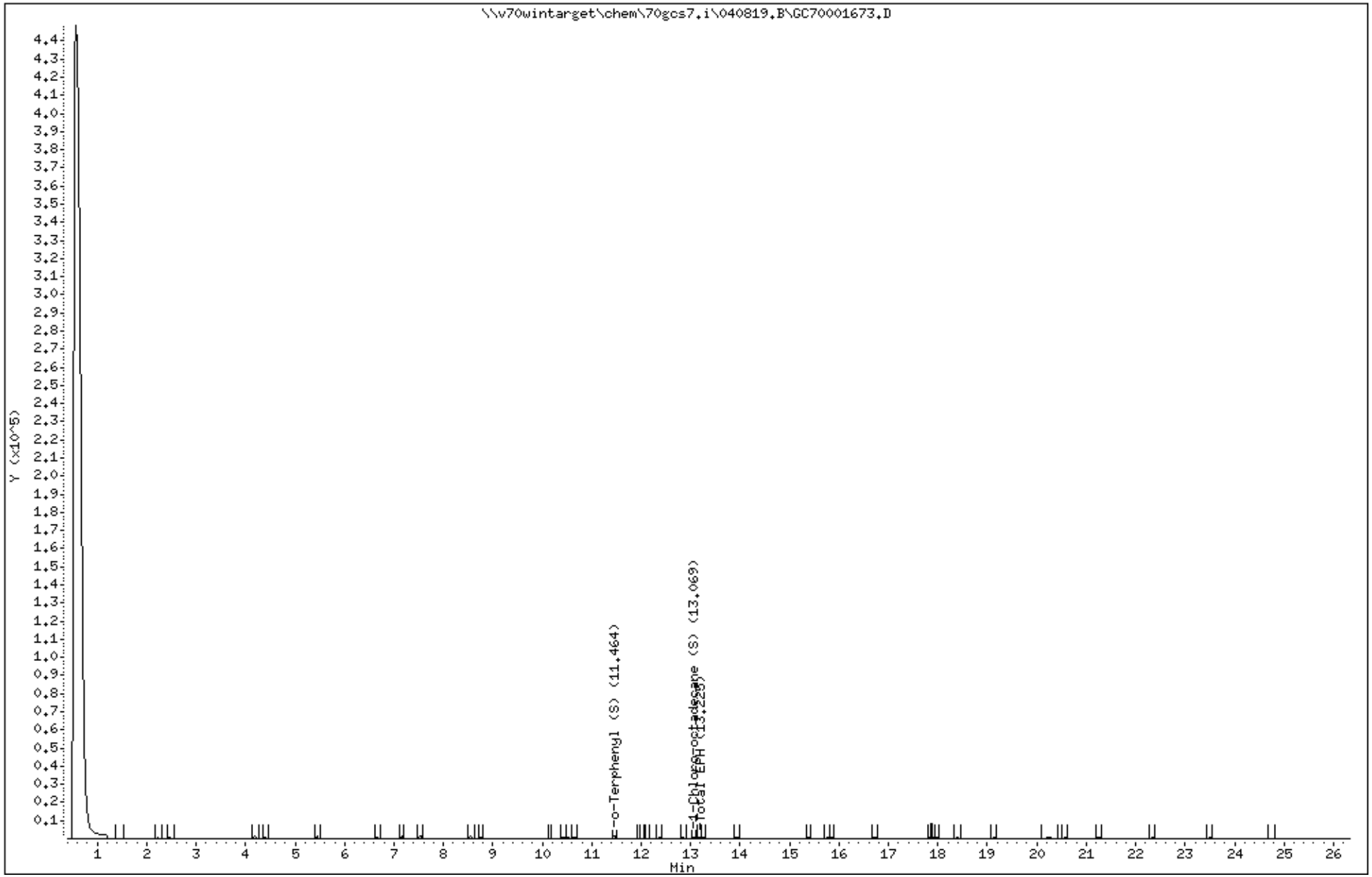
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

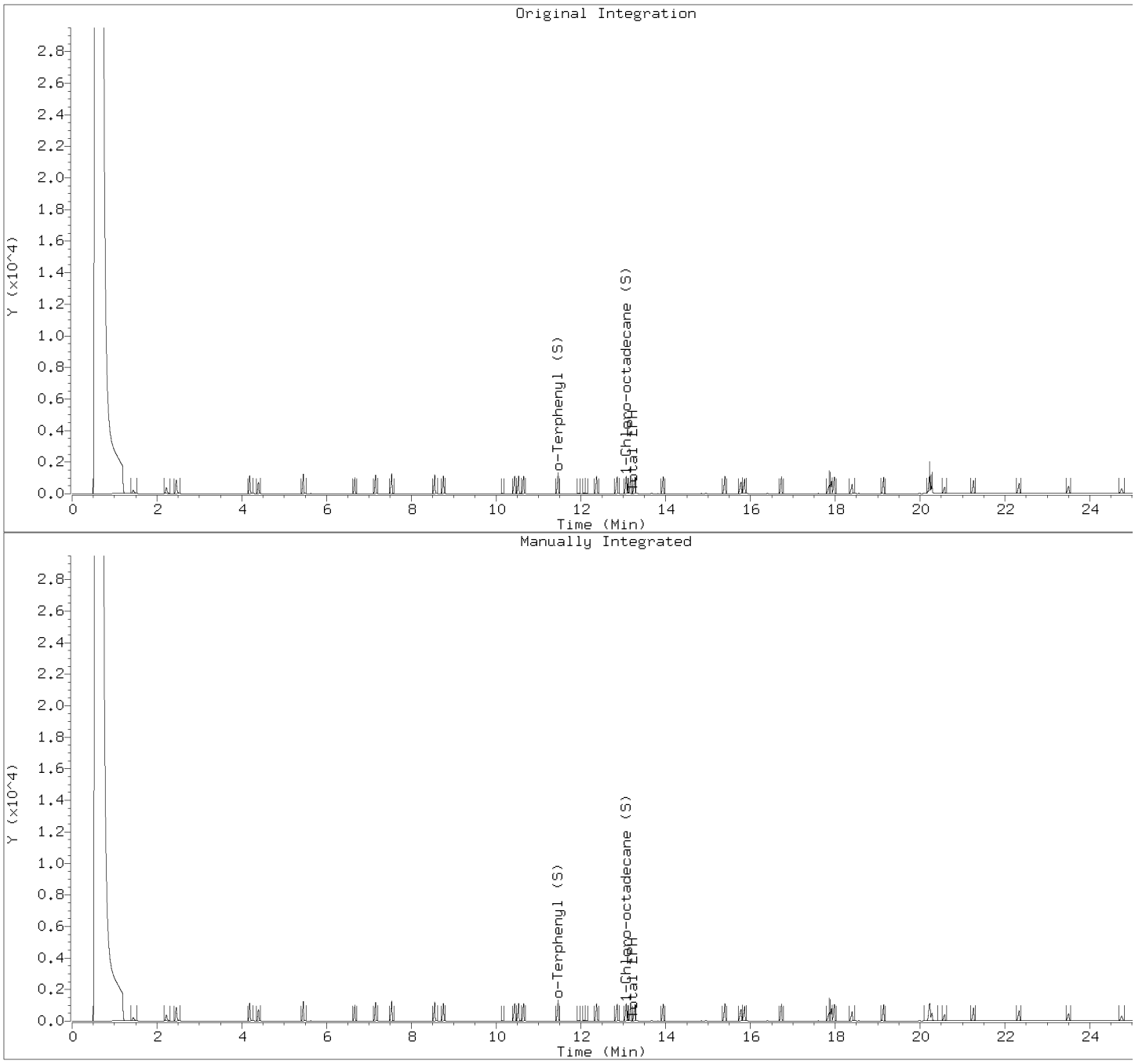
Review Codes Legend

:
BA: Indicates that the baseline had to be adjusted correctly by the analyst.

Data File: \\v70wintarget\chem\70gcs7.i\040819.B\GC70001673.D
Date : 08-APR-2019 18:41
Client ID: MBLCSD
Instrument: 70gcs7.i
Sample Info: 502344,
Purge Volume: 1000.0
Operator: JKB
Column phase: RTX-CLP2
Column diameter: 0.32



Data File: \\v70wintarget\chem\70gcs7.i\040819.B/GC70001673.D (ManInt: TEPH.sub Orig: TEPH.sub)
Injection Date: 08-APR-2019 18:41 Operator: JKB
Instrument: 70gcs7.i
Lab Sample ID: 502344



Manually Integrated Compounds

Compound	Area (before)	Area (after)
Total EPH	60292	61944
o-Terphenyl (S)	2393	2393
1-Chloro-octadecane (S)	1930	1930

SAMPLE NO.

MS

GCV FID - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Pace Analytical - New York Contract: 84849 - 3/22

Date Received: 03/23/2019 11:00 Matrix: Water SDG No.: 7083318

Date Extracted: 04/05/2019 20:48 Lab Sample ID: 502345

Date Analyzed: 04/08/2019 19:49 Lab File ID: 040819.B\GC70001675.D

Initial wt/vol: 1000 mL Final wt/vol: 1 mL Dilution: 1 Instrument: 70GCS7 Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
	Total EPH	2950	

Pace Analytical Services, Inc.

NJ EPH

Data file : \\v70wintarget\chem\70gcs7.i\040819.B\GC70001675.D
Lab Smp Id: 502345 Client Smp ID: FB-03222019MS
Inj Date : 08-APR-2019 19:49
Operator : JKB Inst ID: 70gcs7.i
Smp Info : 502345,
Misc Info : 6519,
Comment : NJ EPH
Method : \\v70wintarget\chem\70gcs7.i\040819.B\NJEPHNonFrac-072218.m
Meth Date : 09-Apr-2019 11:19 jbidas Quant Type: ESTD
Cal Date : 21-JUL-2018 14:50 Cal File: GC70000008.D
Als bottle: 7 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TEPH.sub
Target Version: RC10A
Processing Host: L-23028

Concentration Formula: Amt * DF * Uf * (Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

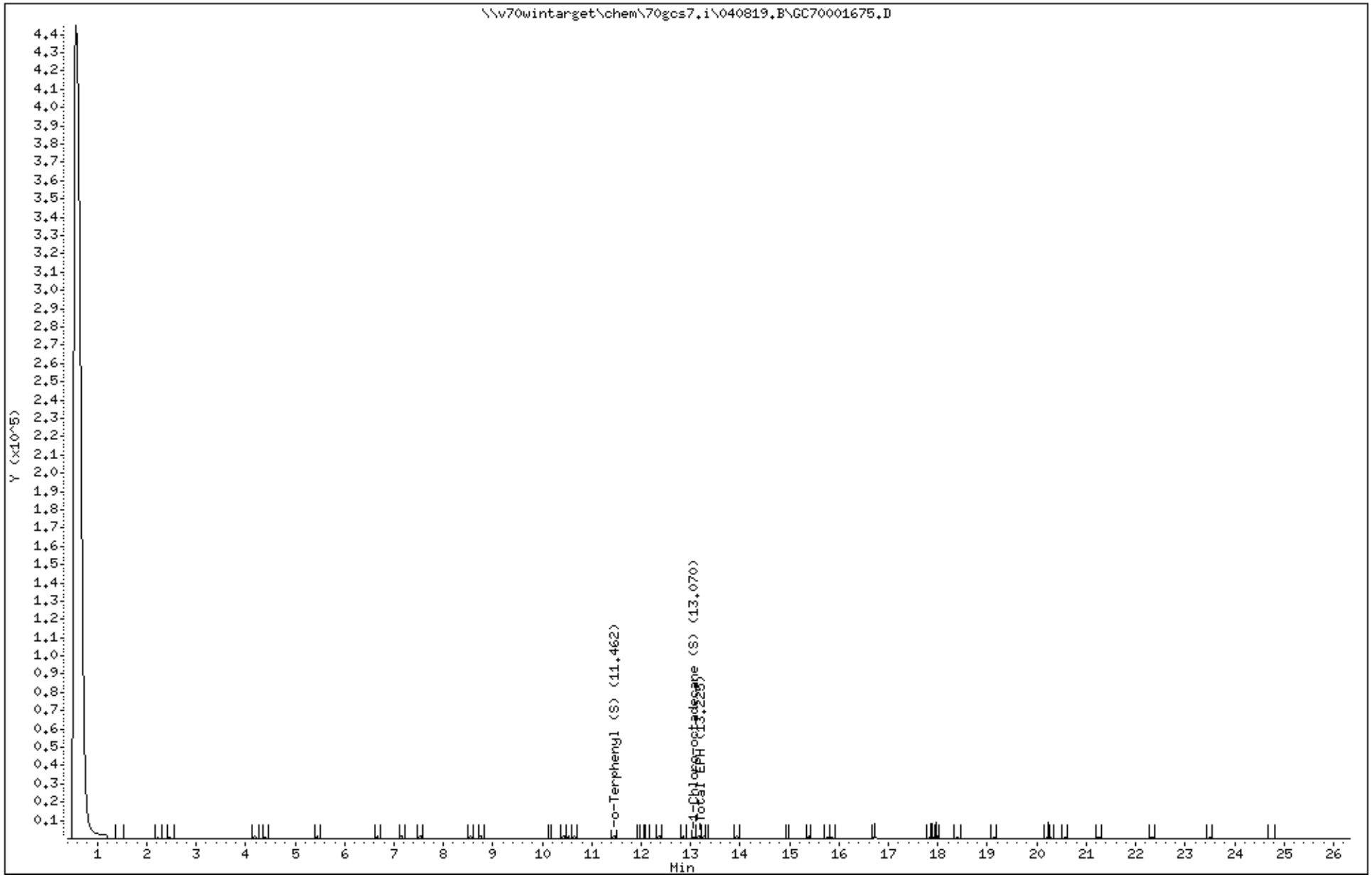
					CONCENTRATIONS		
					ON-COLUMN	FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/L)	REVIEW CODE
$ 26 o-Terphenyl (S)	11.461	11.468	-0.007	2516	97.6329	97.6	
$ 28 1-Chloro-octadecane (S)	13.069	13.106	-0.037	1985	92.9235	92.9(R)	
S 33 Total EPH	1.350-25.100			67667	2950.67	2950	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: \\v70wintarget\chem\70gcs7.i\040819.B\GC70001675.D
Date : 08-APR-2019 19:49
Client ID: FB-03222019MS
Sample Info: 502345,
Purge Volume: 1000.0
Column phase: RTX-CLP2

Instrument: 70gcs7.i
Operator: JKB
Column diameter: 0.32



Data File: \\v70wintarget\chem\70gcs7.i\040819.B/GC70001675.D (ManInt: TEPH.sub Orig: TEPH.sub)
Injection Date: 08-APR-2019 19:49 Operator: JKB
Instrument: 70gcs7.i
Lab Sample ID: 502345

NO SIGNAL MANUAL INTEGRATIONS DONE FOR THIS DATA FILE

Manually Integrated Compounds

Compound	Area (before)	Area (after)
Total EPH	67667	67667
o-Terphenyl (S)	2516	2516
1-Chloro-octadecane (S)	1985	1985

Prep Log Report

Batch Information: OEXT-njephs-7153

Template Version: F-LI-O-003-Rev.02 (13Dec2017)

Prep Method	EPA 3545A	Analysis Method	NJ DEP EPH	Extracted By	HMB	Extracted Date/Time	04/02/2019 13:07:13:823
Instrument	70BAL5	Witnessed By		Conc. Method	Turbovap	Concentrated By	wdw
Concentrated By Date/Time	04/05/2019 13:06:59:071	Extractor ID	ASE001	1:1 MeCl/Acetone	None Added	Methylene Chloride	64699
Hexane	None Added	Acetone	None Added	Ottawa Sand	62798	Sodium Sulfate	65716
Hydromatrix	56370	Filter Paper	16648	Silica Gel Cartridge	None Added	Fractionation Date/Time	
ASE Cell Filters	60735	Reviewed By		Reviewed By Date		Batch Notes	

Sample Information:

QC Rule	Sample Type	Lab Sample ID	TurboVap ID	Initial Weight (g)	pH	Final Volume (mL)	GPC Cleanup	Sample Notes	EPH-SS (uL)	EPHALIP-SPK (uL)	EPHAROM-SPK (uL)
NJEPH S_P	BLANK	**498079**		10		1	No		65542 (50)		
NJEPH S_P	LCS	**498080**		10		1	No		65542 (50)	64836 (100)	53518 (100)
NJEPH S_P	LCSD	**498081**		10		1	No		65542 (50)	64836 (100)	53518 (100)
NJEPH S_P	PS	**7083318001**		10.09		1	No		65542 (50)		
NJEPH S_P	PS	**7083318002**		10.11		1	No		65542 (50)		
NJEPH S_P	PS	**7083528001**		10.05		1	No		65542 (50)		
NJEPH S_P	PS	**7083528002**		10.09		1	No		65542 (50)		
NJEPH S_P	RQS	**7083528003**		10.17		1	No		65542 (50)		
NJEPH S_P	MS	**498082**		10.04		1	No		65542 (50)	64836 (100)	53518 (100)
NJEPH S_P	PS	**7083528004**		10.13		1	No		65542 (50)		

Standard Notes:

53518: OEXT EPH Aromatics LCS Spiking solution **64836: OEXT EPH Aliphatics LCS Spiking solution** **65542: OEXT EPH Surrogate Spiking Solution**

Prep Log Report

Batch Information: OEXT-njephw-7196

Template Version: F-LI-O-001-Rev.01 (11Aug2017)

Prep Method	EPA 3510C	Analysis Method	NJ DEP EPH	Extracted By	HMB	Extracted Date/Time	04/05/2019 20:48:23:101
Concentrated By	hmb	Concentrated By Date/Time	04/05/2019 21:22:35:933	Conc. Method	Bath/NVap	Water Bath ID	
Witnessed By		N-Evap ID		Methylene Chloride	64699	Hexane	65991
Sodium Sulfate	65716	pH Test Strips	64348	pH strips (wide range)	36363	Reviewed By	
Reviewed By Date		Batch Notes					

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Shaker ID	Initial Volume (mL)	pH	Adjusted pH	Adjusted pH	Final Volume (mL)	Sample Notes	EPH-SS (uL)	EPHALIP-SPK (uL)	EPHAROM-SPK (uL)
NJEPH W_P	BLANK	**502342**	Shaker002	1000				1		62664 (50)		
NJEPH W_P	LCS	**502343**	Shaker002	1000				1		62664 (50)	46707 (100)	53513 (100)
NJEPH W_P	LCSD	**502344**	Shaker002	1000				1		62664 (50)	46707 (100)	53513 (100)
NJEPH W_P	PS	**7083318003**	Shaker002	1000				1		62664 (50)		
NJEPH W_P	MS	**502345**	Shaker002	1000				1		62664 (50)	46707 (100)	53513 (100)

Standard Notes:

46707: OEXT EPH Aliphatics LCS Spiking solution **53513: OEXT EPH Aromatics LCS Spiking solution** **62664: OEXT EPH Surrogate Spiking Solution op**

INSTRUMENT RUN LOG
Pace Analytical Services, Inc.

Instrument: 70gcs7.i
Column RTX-CLP2 10m X 0.32mm Helium Method: NJ EPH
Misc. Prep Info [L]:
ISTD lot: Surr. lot:
Lot:
Tune std: _____ Cal. std: _____

Path/File	Smp Info	Mtrx/Batch	Type	DF	Method/Sublist	Date	Time	Oper	Comments
1/GC70000001.D	CAL6, 48747:1	L/5101	CALIB_6	1	NJEPH-ALI-0721	7/21/18	10:50	JKB	
2/GC70000001.D	CAL6, 48747:1	L/4765	CALIB_6	1	NJEPHNonFrac-0	7/21/18	10:50	JKB	
1/GC70000002.D	CAL6, 48747:1	L/5101	CALIB_6	1	NJEPH-ALI-0721	7/21/18	11:24	JKB	
2/GC70000002.D	CAL6, 48747:1	L/4765	CALIB_6	1	NJEPHNonFrac-0	7/21/18	11:24	JKB	
1/GC70000003.D	CAL5, 48746:1	L/5101	CALIB_5	1	NJEPH-ALI-0721	7/21/18	11:59	JKB	
2/GC70000003.D	CAL5, 48746:1	L/4765	CALIB_5	1	NJEPHNonFrac-0	7/21/18	11:59	JKB	
1/GC70000004.D	CAL4, 48745:1	L/5101	CALIB_4	1	NJEPH-ALI-0721	7/21/18	12:33	JKB	
2/GC70000004.D	CAL4, 48745:1	L/4765	CALIB_4	1	NJEPHNonFrac-0	7/21/18	12:33	JKB	
1/GC70000005.D	CAL3, 48744:1	L/5101	CALIB_3	1	NJEPH-ALI-0721	7/21/18	13:07	JKB	
2/GC70000005.D	CAL3, 48744:1	L/4765	CALIB_3	1	NJEPHNonFrac-0	7/21/18	13:07	JKB	
1/GC70000006.D	CAL2, 48743:1	L/5101	CALIB_2	1	NJEPH-ALI-0721	7/21/18	13:41	JKB	
2/GC70000006.D	CAL2, 48743:1	L/4765	CALIB_2	1	NJEPHNonFrac-0	7/21/18	13:41	JKB	
1/GC70000007.D	CAL1, 48742:1	L/5101	CALIB_1	1	NJEPH-ALI-0721	7/21/18	14:16	JKB	
2/GC70000007.D	CAL1, 48742:1	L/4765	CALIB_1	1	NJEPHNonFrac-0	7/21/18	14:16	JKB	
1/GC70000008.D	ICV, 49248:1	L/5101	CCALIB_7	1	NJEPH-ALI-0721	7/21/18	14:50	JKB	
2/GC70000008.D	ICV, 49248:1	L/4765	CCALIB_7	1	NJEPHNonFrac-0	7/21/18	14:50	JKB	
1/GC70000009.D	IBLK	L/	SAMPLE	1	NJEPH-ALI-0721	7/21/18	15:24	JKB	
2/GC70000009.D	IBLK	L/	SAMPLE	1	NJEPHNonFrac-0	7/21/18	15:24	JKB	

Check Maintenance Items Performed:

___ Changed septum ___ Clipped column ___ Changed column (lot #_____)
___ Cleaned liner ___ Changed trap (lot #_____) ___ Other minor parts replaced _____
___ Replaced/Cleaned gold seal ___ Cleaned MS source ___ No maintenance performed today

Additional Comments:

Run Order Verified: _____

File Path 1: \\v70wintarget\chem\70gcs7.i\072218-ALICAL.B
File Path 2: \\v70wintarget\chem\70gcs7.i\072218.b
Matrix Codes: [B]iota, [G]as, [L]iquid, [S]olid, [N]one
Report Date: 12:55 09/11/2018

Reviewed By/Date: JKB 9/11/18 Page: 1 of 1

INSTRUMENT RUN LOG
Pace Analytical Services, Inc.

Instrument: 70gcs7.i
Column RTX-CLP2 10m X 0.32mm Helium — Method: NJ EPH
Misc. Prep Info [L]:
Misc. Prep Info [S]:
ISTD lot: — Surr. lot:
Lot:
Tune std: _____ — Cal. std: _____

Path/File	Smp Info	Mtrx/Batch	Type	DF	Method/Sublist	Date	Time	Oper	Comments
1/GC70001651.D	IBLK,636671:1,47	L/4765	SAMPLE	1	NJEPHNonFrac-0	4/05/19	18:34	JKB	
1/GC70001652.D	CCV, 64076:1	L/4765	CCALIB_5	1	NJEPHNonFrac-0	4/05/19	19:09	JKB	
1/GC70001653.D	498079,	S/6509	BLANK	1	NJEPHNonFrac-0	4/05/19	19:43	JKB	
1/GC70001654.D	498080,	S/6509	LCS	1	NJEPHNonFrac-0	4/05/19	20:17	JKB	
1/GC70001655.D	498081,	S/6509	LCSD	1	NJEPHNonFrac-0	4/05/19	20:51	JKB	
1/GC70001656.D	7083318001,	S/6509	SAMPLE	1	NJEPHNonFrac-0	4/05/19	21:25	JKB	
1/GC70001657.D	7083318002,	S/6509	SAMPLE	1	NJEPHNonFrac-0	4/05/19	21:59	JKB	
1/GC70001658.D	7083528001,	S/6509	SAMPLE	1	NJEPHNonFrac-0	4/05/19	22:33	JKB	
1/GC70001659.D	7083528001X10,	S/6509	SAMPLE	10	NJEPHNonFrac-0	4/05/19	23:07	JKB	
1/GC70001660.D	7083528002,	S/6509	SAMPLE	1	NJEPHNonFrac-0	4/05/19	23:42	JKB	
1/GC70001661.D	7083528002X10,	S/6509	SAMPLE	10	NJEPHNonFrac-0	4/06/19	00:16	JKB	
1/GC70001662.D	7083528003,	S/6509	SAMPLE	1	NJEPHNonFrac-0	4/06/19	00:50	JKB	
1/GC70001663.D	7083528003X10,	S/6509	SAMPLE	10	NJEPHNonFrac-0	4/06/19	01:24	JKB	
1/GC70001664.D	498082,	S/6509	MS	1	NJEPHNonFrac-0	4/06/19	01:58	JKB	
1/GC70001665.D	7083528004,	S/6509	SAMPLE	1	NJEPHNonFrac-0	4/06/19	02:32	JKB	
1/GC70001666.D	7083528004X10,	S/6509	SAMPLE	10	NJEPHNonFrac-0	4/06/19	03:06	JKB	
1/GC70001667.D	CCV, 64076:1	L/4765	CCALIB_5	1	NJEPHNonFrac-0	4/06/19	03:41	JKB	

Check Maintenance Items Performed:

___ Changed septum ___ Clipped column ___ Changed column (lot #_____)
___ Cleaned liner ___ Changed trap (lot #_____) ___ Other minor parts replaced _____
___ Replaced/Cleaned gold seal ___ Cleaned MS source ___ No maintenance performed today

Additional Comments:

Run Order Verified: _____

File Path 1: \\v70wintarget\chem\70gcs7.i\040519.B
Matrix Codes: [B]iota, [G]as, [L]iquid, [S]olid, [N]one
Report Date: 13:46 04/08/2019

Reviewed By/Date: KB 4/8/19 Page: 1 of 1

INSTRUMENT RUN LOG
Pace Analytical Services, Inc.

Instrument: 70gcs7.i
Column RTX-CLP2 10m X 0.32mm Helium Method: NJ EPH
Misc. Prep Info [L]:
ISTD lot: Surr. lot:
Lot:
Tune std: _____ Cal. std: _____

Path/File	Smp Info	Mtrx/Batch	Type	DF	Method/Sublist	Date	Time	Oper	Comments
1/GC70001669.D	IBLK,63667:1,476	L/4765	SAMPLE	1	NJEPHNonFrac-0	4/08/19	16:24	JKB	
1/GC70001670.D	CCV, 64076:1	L/4765	CCALIB_4	1	NJEPHNonFrac-0	4/08/19	16:58	JKB	
1/GC70001671.D	502342,	L/6519	BLANK	1	NJEPHNonFrac-0	4/08/19	17:32	JKB	
1/GC70001672.D	502343,	L/6519	LCS	1	NJEPHNonFrac-0	4/08/19	18:07	JKB	
1/GC70001673.D	502344,	L/6519	LCSD	1	NJEPHNonFrac-0	4/08/19	18:41	JKB	
1/GC70001674.D	7083318003,	L/6519	SAMPLE	1	NJEPHNonFrac-0	4/08/19	19:15	JKB	
1/GC70001675.D	502345,	L/6519	MS	1	NJEPHNonFrac-0	4/08/19	19:49	JKB	
1/GC70001676.D	IBLK,63667:1,476	L/4765	SAMPLE	1	NJEPHNonFrac-0	4/08/19	20:24	JKB	
1/GC70001677.D	CCV, 64076:1	L/4765	CCALIB_4	1	NJEPHNonFrac-0	4/08/19	20:58	JKB	

Check Maintenance Items Performed:

___ Changed septum ___ Clipped column ___ Changed column (lot #_____)
___ Cleaned liner ___ Changed trap (lot #_____) ___ Other minor parts replaced _____
___ Replaced/Cleaned gold seal ___ Cleaned MS source ___ No maintenance performed today

Additional Comments:

Run Order Verified: _____

File Path 1: \\v70wintarget\chem\70gcs7.i\040819.B
Matrix Codes: [B]iota, [G]as, [L]iquid, [S]olid, [N]one
Report Date: 11:32 04/09/2019

Reviewed By/Date: JKB 4/9/19 Page: 1 of 1

Prep Log Report

Batch Information: PMST 1983 040519

Template Version: F-LI-O-018-Rev.01 (16Jan2019)

Analysis Method	ASTM D2216-92M	Analyzed By	AK1	Witnessed By		Instrument	70BAL2
Oven ID	OVEN002	Thermometer ID	TH110	Oven Temp Correction Factor	-0.5	Oven Temp In1 (C) | Corr | Date/Time | Init	112.3 | 111.8 | 04/05/2019 10:14 | AK1
Oven Temp Out1 (C) | Corr | Date/Time | Init	108.6 | 108.1 | 04/08/2019 07:21 | KM1	Desic. In 1 ID | Date/Time | Init	04/08/2019 07:21:12:367 | 04/08/2019 07:21 | KM1	Desic. Out 1 Date/Time | Init	04/08/2019 08:17 | KM1	Reviewed By	
Reviewed By Date		Batch Notes					

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Select	ID	TS Posted (%)	Percent Moisture	Run Date/Time	Posted Dry Weight /w Dish (g)	Dish Weight (g)	Wet Weight /w Dish (g)	Dry Weight 1 (g)	Dry Wt Use 1	Sample Notes
DRY WEIGHT	PS	**7083318001**	Y	1	88.89	11.11	04/05/2019 09:48:54	13.687	1.129	15.257	13.687	M	
DRY WEIGHT	PS	**7083318002**	Y	2	85.44	14.56	04/05/2019 09:49:52	10.224	1.093	11.78	10.224	M	
DRY WEIGHT	PS	**7083311002**	Y	3	89.93	10.07	04/05/2019 09:51:24	12.301	1.098	13.555	12.301	M	
DRY WEIGHT	PS	**7084442001**	Y	4	94.80	5.202	04/05/2019 09:52:13	9.896	1.075	10.38	9.896	M	
DRY WEIGHT	PS	**7084442002**	Y	5	86.68	13.32	04/05/2019 09:53:09	8.362	1.099	9.478	8.362	M	
DRY WEIGHT	PS	**30287307001**	Y	6	78.08	21.92	04/05/2019 09:55:03	10.655	1.115	13.333	10.655	M	
DRY WEIGHT	DUP	**501602**	Y	7	78.78	21.22	04/05/2019 09:56:36	11.744	1.084	14.615	11.744	M	
DRY WEIGHT	PS	**30287307002**	Y	8	76.52	23.48	04/05/2019 09:57:56	10.089	1.112	12.844	10.089	M	
DRY WEIGHT	PS	**30287307003**	Y	9	76.82	23.18	04/05/2019 09:59:15	9.218	1.117	11.663	9.218	M	
DRY WEIGHT	PS	**30287307004**	Y	10	78.12	21.88	04/05/2019 10:00:18	10.77	1.086	13.482	10.77	M	
DRY WEIGHT	PS	**30287307005**	Y	11	81.47	18.53	04/05/2019 10:01:34	12.948	1.106	15.642	12.948	M	
DRY WEIGHT	PS	**30287307006**	Y	12	79.26	20.74	04/05/2019 10:02:54	10.87	1.077	13.432	10.87	M	
DRY WEIGHT	PS	**30287307007**	Y	13	81.29	18.71	04/05/2019 10:04:19	13.241	1.083	16.04	13.241	M	
DRY WEIGHT	PS	**30287307008**	Y	14	81.16	18.84	04/05/2019 10:05:20	13.633	1.074	16.548	13.633	M	
DRY WEIGHT	PS	**30287307009**	Y	15	79.91	20.09	04/05/2019 10:06:23	7.997	1.099	9.731	7.997	M	
DRY WEIGHT	PS	**7084632004**	Y	16	2.660	97.34	04/05/2019 10:11:39	1.475	1.121	14.427	1.475	M	

Appendix C

Monitoring Well Documentation

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201403245

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: ERIC BLOIS, JOURNEYMAN LICENSE # 592949

Permit Issued to: SBI ENVIRONMENTAL WELL DRILLING

Company Address: 17 DEMAREST DR WAYNE, NJ 07470

PROPERTY OWNER

Name: 955 PL VALLEY WAY ASSOC C/O R. KRUVANT

Organization: Owner

Address: 71 Valley Street #204

City: South Orange State: New Jersey Zip Code: 07079

PROPOSED WELL LOCATION

Facility Name: Former BP #84849

Address: 955 Pleasant Valley Way

County: Essex Municipality: West Orange Twp Lot: 8.01 Block: 172.02

Easting (X): 556085 Northing (Y): 714305
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW-16R

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 25

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Air Rotary

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approved by the authority of:
Bob Martin
Commissioner

Terry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

Approval Date: March 20, 2014
Expiration Date: March 20, 2015

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201403245

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: **Former BP Service Station #84849 (vacant land)**

List all AKAs:

Street Address: **955 Pleasant Valley Way**

Municipality: **Township of West Orange** (Township, Borough or City)

County: **Essex** Zip Code: **07052**

Program Interest (PI) Number(s): **016006** Case Tracking Number(s): **95-03-15-1156-05**

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner **955 Pleasant Valley Way Assoc. c/o R. Kruvant**
2. Well Location (Street Address) **955 Pleasant Valley Way**
3. Well Location (Municipal Block and Lot) Block# **172.02** Lot # **8.01**

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): **E201403245**
2. Site Well Number (As shown on application or plans): **MW-16R**
3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:
   Latitude: North **40°47'39.11"** Longitude: West **74°16'08.55"**
4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:
   North **714305.0** East **556069.1**
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): **372.85**
   Elevation Top of Outer casing: **373.09** Elevation of ground: **373.1**
   Check one: ☒ NAVD 88 ☐ NVGD29 ☐ On Site Datum ☐ Other
6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).
   Elevation as per GPS Observations referenced to CORS Stations by NGS OPUS Solution.
   Elevation Datum NAVD'88 (Geoid '12)
7. Significant observations and notes:

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: James W. Ryckman Date 8-23-14

Surveyor's Name: **James W. Ryckman** License Number: **25798**

Firm Name: **Boundary Lines, P.A.** Certificate of Authorization #: **not applicable**

Mailing Address **P.O. Box 433**

City/Town: **Edison** State **New Jersey** Zip Code: **08818-0433**

Phone Number **732-603-9700** Ext.: **--** Fax: **732-603-9725**

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201403246

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: ERIC BLOIS, JOURNEYMAN LICENSE # 592949

Permit Issued to: SBI ENVIRONMENTAL WELL DRILLING

Company Address: 17 DEMAREST DR WAYNE, NJ 07470

PROPERTY OWNER

Name: 955 PL VALLEY WAY ASSOC C/O R. KRUVANT

Organization: Owner

Address: 71 Valley Street #204

City: South Orange State: New Jersey Zip Code: 07079

PROPOSED WELL LOCATION

Facility Name: Former BP #84849

Address: 955 Pleasant Valley Way

County: Essex Municipality: West Orange Twp Lot: 8.01 Block: 172.02

Easting (X): 556104 Northing (Y): 714315
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW-17R

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 25

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Air Rotary

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approved by the authority of:
Bob Martin
Commissioner

Terry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

Approval Date: March 20, 2014
Expiration Date: March 20, 2015

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201403246

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: ERIC BLOIS, JOURNEYMAN LICENSE # 592949

Permit Issued to: SBI ENVIRONMENTAL WELL DRILLING

Company Address: 17 DEMAREST DR WAYNE, NJ 07470

PROPERTY OWNER

Name: 955 PL VALLEY WAY ASSOC C/O R. KRUVANT

Organization: Owner

Address: 71 Valley Street #204

City: South Orange State: New Jersey Zip Code: 07079

PROPOSED WELL LOCATION

Facility Name: Former BP #84849

Address: 955 Pleasant Valley Way

County: Essex Municipality: West Orange Twp Lot: 8.01 Block: 172.02

Easting (X): 556104 Northing (Y): 714315
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW-17R

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 25

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Air Rotary

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approved by the authority of:
Bob Martin
Commissioner

Terry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

Approval Date: March 20, 2014
Expiration Date: March 20, 2015

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201403246

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: **Former BP Service Station #84849 (vacant land)**

List all AKAs:

Street Address: **955 Pleasant Valley Way**

Municipality: **Township of West Orange** (Township, Borough or City)

County: **Essex** Zip Code: **07052**

Program Interest (PI) Number(s): **016006** Case Tracking Number(s): **95-03-15-1156-05**

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner **955 Pleasant Valley Way Assoc. c/o R. Kruvant**
2. Well Location (Street Address) **955 Pleasant Valley Way**
3. Well Location (Municipal Block and Lot) Block# **172.02** Lot # **8.01**

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): **E201403246**
2. Site Well Number (As shown on application or plans): **MW-17R**
3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:
   Latitude: North **40°47'39.12"** Longitude: West **74°16'08.27"**
4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:
   North **714306.6** East **556090.0**
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): **372.06**
   Elevation Top of Outer casing: **372.52** Elevation of ground: **372.5**
   Check one: ☒ NAVD 88 ☐ NVGD29 ☐ On Site Datum ☐ Other
6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).
   Elevation as per GPS Observations referenced to CORS Stations by NGS OPUS Solution.
   Elevation Datum NAVD'88 (Geoid '12)
7. Significant observations and notes:

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: James W. Ryckman Date 8-23-14

Surveyor's Name: **James W. Ryckman** License Number: **25798**

Firm Name: **Boundary Lines, P.A.** Certificate of Authorization #: **not applicable**

Mailing Address **P.O. Box 433**

City/Town: **Edison** State **New Jersey** Zip Code: **08818-0433**

Phone Number **732-603-9700** Ext.: **--** Fax: **732-603-9725**

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201403247

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: ERIC BLOIS, JOURNEYMAN LICENSE # 592949

Permit Issued to: SBI ENVIRONMENTAL WELL DRILLING

Company Address: 17 DEMAREST DR WAYNE, NJ 07470

PROPERTY OWNER

Name: 955 PL VALLEY WAY ASSOC C/O R. KRUVANT

Organization: Owner

Address: 71 Valley Street #204

City: South Orange State: New Jersey Zip Code: 07079

PROPOSED WELL LOCATION

Facility Name: Former BP #84849

Address: 955 Pleasant Valley Way

County: Essex Municipality: West Orange Twp Lot: 8.01 Block: 172.02

Easting (X): 556076 Northing (Y): 714274
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW-18R

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 25

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Air Rotary

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approved by the authority of:
Bob Martin
Commissioner

Terry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

Approval Date: March 20, 2014
Expiration Date: March 20, 2015

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201403247

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: **Former BP Service Station #84849 (vacant land)**

List all AKAs:

Street Address: **955 Pleasant Valley Way**

Municipality: **Township of West Orange** (Township, Borough or City)

County: **Essex** Zip Code: **07052**

Program Interest (PI) Number(s): **016006** Case Tracking Number(s): **95-03-15-1156-05**

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner **955 Pleasant Valley Way Assoc. c/o R. Kruvant**
2. Well Location (Street Address) **955 Pleasant Valley Way**
3. Well Location (Municipal Block and Lot) Block# **172.02** Lot # **8.01**

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): **E201403247**
2. Site Well Number (As shown on application or plans): **MW-18R**
3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:
   Latitude: North **40°47'38.98"** Longitude: West **74°16'08.67"**
4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:
   North **714292.3** East **556059.6**
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): **372.48**
   Elevation Top of Outer casing: **372.99** Elevation of ground: **373.0**
   Check one: ☒ NAVD 88 ☐ NVGD29 ☐ On Site Datum ☐ Other
6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).
   Elevation as per GPS Observations referenced to CORS Stations by NGS OPUS Solution.
   Elevation Datum NAVD'88 (Geoid '12)
7. Significant observations and notes:

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: James W. Ryckman Date 8-23-14

Surveyor's Name: **James W. Ryckman** License Number: **25798**

Firm Name: **Boundary Lines, P.A.** Certificate of Authorization #: **not applicable**

Mailing Address **P.O. Box 433**

City/Town: **Edison** State **New Jersey** Zip Code: **08818-0433**

Phone Number **732-603-9700** Ext.: -- Fax: **732-603-9725**

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
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SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner **955 Pleasant Valley Way Assoc. c/o R. Kruvant**
2. Well Location (Street Address) **955 Pleasant Valley Way**
3. Well Location (Municipal Block and Lot) Block# **172.02** Lot # **8.01**

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): **E201403239**
2. Site Well Number (As shown on application or plans): **IW-1**
3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:
   Latitude: North **40°47'39.35"** Longitude: West **74°16'08.96"**
4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:
   North **714329.9** East **556037.1**
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): **373.41**
   Elevation Top of Outer casing: **373.73** Elevation of ground: **373.7**
   Check one: ☒ NAVD 88 ☐ NVGD29 ☐ On Site Datum ☐ Other
6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).
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7. Significant observations and notes:

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County: **Essex** Zip Code: **07052**

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SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner **955 Pleasant Valley Way Assoc. c/o R. Kruvant**
2. Well Location (Street Address) **955 Pleasant Valley Way**
3. Well Location (Municipal Block and Lot) Block# **172.02** Lot # **8.01**

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): **E201403240**
2. Site Well Number (As shown on application or plans): **IW-2**
3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:
   Latitude: North **40°47'39.42"** Longitude: West **74°16'08.72"**
4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:
   North **714336.3** East **556055.7**
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): **373.24**
   Elevation Top of Outer casing: **373.64** Elevation of ground: **373.6**
   Check one: ☒ NAVD 88 ☐ NVGD29 ☐ On Site Datum ☐ Other
6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).
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SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner **955 Pleasant Valley Way Assoc. c/o R. Kruvant**
2. Well Location (Street Address) **955 Pleasant Valley Way**
3. Well Location (Municipal Block and Lot) Block# **172.02** Lot # **8.01**

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): **E201403241**
2. Site Well Number (As shown on application or plans): **IW-3**
3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:
   Latitude: North **40°47'39.49"** Longitude: West **74°16'08.32"**
4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:
   North **714344.4** East **556086.0**
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): **373.29**
   Elevation Top of Outer casing: **373.56** Elevation of ground: **373.6**
   Check one: ☒ NAVD 88 ☐ NVGD29 ☐ On Site Datum ☐ Other
6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).
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SECTION A. SITE NAME AND LOCATION

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SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner **955 Pleasant Valley Way Assoc. c/o R. Kruvant**
2. Well Location (Street Address) **955 Pleasant Valley Way**
3. Well Location (Municipal Block and Lot) Block# **172.02** Lot # **8.01**

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): **E201403242**
2. Site Well Number (As shown on application or plans): **IW-4**
3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:
   Latitude: North **40°47'37.96"** Longitude: West **74°16'08.82"**
4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:
   North **714188.9** East **556048.0**
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): **371.49**
   Elevation Top of Outer casing: **371.86** Elevation of ground: **371.9**
   Check one: ☒ NAVD 88 ☐ NVGD29 ☐ On Site Datum ☐ Other
6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).
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Phone Number **732-603-9700** Ext.: -- Fax: **732-603-9725**

Appendix D

Groundwater Analytical Lab Reports

New Jersey
ACCUTEST LABORATORIES

05/27/14

Technical Report for

Atlantic Richfield Company

ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Accutest Job Number: JB67153

Sampling Date: 05/15/14

Report to:

Envirotrac
400 E Corporate Court
South Plainfield, NJ 07080
donnan@envirotrac.com

ATTN: Donna Nicholls

Total number of pages in report: **103**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Kelly Patterson 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, OH VAP (CL0056), PA, RI, SC, TN, VA, WV, DoD ELAP (L-A-B L2248)

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Accutest Laboratories is the sole authority for authorizing edits or modifications to this document. Unauthorized modification of this report is strictly prohibited.

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Accutest Laboratories

Sample Summary

Atlantic Richfield Company

Job No: JB67153

ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JB67153-1	05/15/14	13:08		05/16/14	AQ	Ground Water	MW-16R
JB67153-2	05/15/14	13:34		05/16/14	AQ	Ground Water	MW-17R
JB67153-3	05/15/14	14:07		05/16/14	AQ	Ground Water	MW-18R

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Atlantic Richfield Company	**Job No**	JB67153
Site:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ	**Report Date**	5/27/2014 12:05:16 P

On 05/16/2014, 3 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 4 C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of JB67153 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix: AQ **Batch ID:** V4B1802

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB67227-5MS, JB67227-5MSD were used as the QC samples indicated.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

Summary of Hits

Job Number: JB67153
Account: Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Collected: 05/15/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB67153-1	**MW-16R**					
Ethylbenzene		0.29 J	0.50	0.21	ug/l	SW846 8260B
Methylcyclohexane		0.59 J	5.0	0.15	ug/l	SW846 8260B
Methyl Tert Butyl Ether		2.1	1.0	0.29	ug/l	SW846 8260B
Tert Butyl Alcohol		13.9 J	25	1.9	ug/l	SW846 8260B
m,p-Xylene		0.91 J	1.0	0.40	ug/l	SW846 8260B
o-Xylene		0.31 J	1.0	0.19	ug/l	SW846 8260B
Xylene (total)		1.2	1.0	0.19	ug/l	SW846 8260B
Total TIC, Volatile		5.6 J			ug/l	
Total Alkanes		16 J			ug/l	
JB67153-2	**MW-17R**					
No hits reported in this sample.						
JB67153-3	**MW-18R**					
Benzene		114	2.5	1.4	ug/l	SW846 8260B
Cyclohexane		87.7	25	0.90	ug/l	SW846 8260B
Ethylbenzene		542	2.5	1.0	ug/l	SW846 8260B
Isopropylbenzene		53.0	5.0	1.1	ug/l	SW846 8260B
Methylcyclohexane		103	25	0.77	ug/l	SW846 8260B
Methyl Tert Butyl Ether		3.0 J	5.0	1.4	ug/l	SW846 8260B
Toluene		398	5.0	2.2	ug/l	SW846 8260B
m,p-Xylene		1970	5.0	2.0	ug/l	SW846 8260B
o-Xylene		505	5.0	0.97	ug/l	SW846 8260B
Xylene (total)		2470	5.0	0.97	ug/l	SW846 8260B
Total TIC, Volatile		2100 J			ug/l	
Total Alkanes		1360 J			ug/l	

New Jersey ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID: MW-16R
Lab Sample ID: JB67153-1 **Date Sampled:** 05/15/14
Matrix: AQ - Ground Water **Date Received:** 05/16/14
Method: SW846 8260B **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B41634.D	1	05/20/14	TP	n/a	n/a	V4B1802
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	0.50	0.28	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.21	ug/l	
75-25-2	Bromoform	ND	2.0	0.30	ug/l	
74-83-9	Bromomethane	ND	2.0	0.56	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	3.2	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.23	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.35	ug/l	
75-00-3	Chloroethane	ND	1.0	0.39	ug/l	
67-66-3	Chloroform	ND	1.0	0.25	ug/l	
74-87-3	Chloromethane	ND	1.0	0.36	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.18	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.3	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.19	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.16	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.20	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.31	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.30	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.63	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.22	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.34	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.24	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.38	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.28	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
123-91-1	1,4-Dioxane	ND	130	73	ug/l	
100-41-4	Ethylbenzene	0.29	0.50	0.21	ug/l	J
76-13-1	Freon 113	ND	5.0	0.77	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-16R		
Lab Sample ID:	JB67153-1	**Date Sampled:**	05/15/14
Matrix:	AQ - Ground Water	**Date Received:**	05/16/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.5	ug/l	
108-87-2	Methylcyclohexane	0.59	5.0	0.15	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	2.1	1.0	0.29	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.5	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.86	ug/l	
100-42-5	Styrene	ND	2.0	0.30	ug/l	
75-65-0	Tert Butyl Alcohol	13.9	25	1.9	ug/l	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.44	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.24	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	0.33	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.41	ug/l	
	m,p-Xylene	0.91	1.0	0.40	ug/l	J
95-47-6	o-Xylene	0.31	1.0	0.19	ug/l	J
1330-20-7	Xylene (total)	1.2	1.0	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		79-120%
17060-07-0	1,2-Dichloroethane-D4	102%		72-123%
2037-26-5	Toluene-D8	91%		78-119%
460-00-4	4-Bromofluorobenzene	98%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
124-38-9	Carbon dioxide	3.44	340	ug/l	JNB
	alcohols	10.92	5.6	ug/l	J
	Total TIC, Volatile		5.6	ug/l	J
	Total Alkanes		16	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-17R		
Lab Sample ID:	JB67153-2	**Date Sampled:**	05/15/14
Matrix:	AQ - Ground Water	**Date Received:**	05/16/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B41635.D	1	05/20/14	TP	n/a	n/a	V4B1802
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	0.50	0.28	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.21	ug/l	
75-25-2	Bromoform	ND	2.0	0.30	ug/l	
74-83-9	Bromomethane	ND	2.0	0.56	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	3.2	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.23	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.35	ug/l	
75-00-3	Chloroethane	ND	1.0	0.39	ug/l	
67-66-3	Chloroform	ND	1.0	0.25	ug/l	
74-87-3	Chloromethane	ND	1.0	0.36	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.18	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.3	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.19	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.16	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.20	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.31	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.30	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.63	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.22	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.34	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.24	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.38	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.28	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
123-91-1	1,4-Dioxane	ND	130	73	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.21	ug/l	
76-13-1	Freon 113	ND	5.0	0.77	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-17R		
Lab Sample ID:	JB67153-2	**Date Sampled:**	05/15/14
Matrix:	AQ - Ground Water	**Date Received:**	05/16/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.5	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.15	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.29	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.5	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.86	ug/l	
100-42-5	Styrene	ND	2.0	0.30	ug/l	
75-65-0	Tert Butyl Alcohol	ND	25	1.9	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.44	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.24	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	0.33	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.41	ug/l	
	m,p-Xylene	ND	1.0	0.40	ug/l	
95-47-6	o-Xylene	ND	1.0	0.19	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		79-120%
17060-07-0	1,2-Dichloroethane-D4	101%		72-123%
2037-26-5	Toluene-D8	93%		78-119%
460-00-4	4-Bromofluorobenzene	99%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
124-38-9	Carbon dioxide	3.44	240	ug/l	JNB
	Total TIC, Volatile		0	ug/l	
	Total Alkanes		0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID: MW-18R
Lab Sample ID: JB67153-3 **Date Sampled:** 05/15/14
Matrix: AQ - Ground Water **Date Received:** 05/16/14
Method: SW846 8260B **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B41636.D	5	05/20/14	TP	n/a	n/a	V4B1802
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	17	ug/l	
71-43-2	Benzene	114	2.5	1.4	ug/l	
74-97-5	Bromochloromethane	ND	25	2.1	ug/l	
75-27-4	Bromodichloromethane	ND	5.0	1.1	ug/l	
75-25-2	Bromoform	ND	10	1.5	ug/l	
74-83-9	Bromomethane	ND	10	2.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	50	16	ug/l	
75-15-0	Carbon disulfide	ND	10	0.91	ug/l	
56-23-5	Carbon tetrachloride	ND	5.0	1.1	ug/l	
108-90-7	Chlorobenzene	ND	5.0	1.7	ug/l	
75-00-3	Chloroethane	ND	5.0	1.9	ug/l	
67-66-3	Chloroform	ND	5.0	1.2	ug/l	
74-87-3	Chloromethane	ND	5.0	1.8	ug/l	
110-82-7	Cyclohexane	87.7	25	0.90	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	25	6.3	ug/l	
124-48-1	Dibromochloromethane	ND	5.0	0.96	ug/l	
106-93-4	1,2-Dibromoethane	ND	5.0	0.80	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.0	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.6	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.5	ug/l	
75-71-8	Dichlorodifluoromethane	ND	25	3.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	5.0	1.3	ug/l	
107-06-2	1,2-Dichloroethane	ND	5.0	1.1	ug/l	
75-35-4	1,1-Dichloroethene	ND	5.0	1.7	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	5.0	1.2	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	1.9	ug/l	
78-87-5	1,2-Dichloropropane	ND	5.0	1.4	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	0.76	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.0	ug/l	
123-91-1	1,4-Dioxane	ND	630	360	ug/l	
100-41-4	Ethylbenzene	542	2.5	1.0	ug/l	
76-13-1	Freon 113	ND	25	3.8	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-18R
Lab Sample ID: JB67153-3 **Date Sampled:** 05/15/14
Matrix: AQ - Ground Water **Date Received:** 05/16/14
Method: SW846 8260B **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	25	8.5	ug/l	
98-82-8	Isopropylbenzene	53.0	5.0	1.1	ug/l	
79-20-9	Methyl Acetate	ND	25	7.5	ug/l	
108-87-2	Methylcyclohexane	103	25	0.77	ug/l	
1634-04-4	Methyl Tert Butyl Ether	3.0	5.0	1.4	ug/l	J
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	25	7.4	ug/l	
75-09-2	Methylene chloride	ND	10	4.3	ug/l	
100-42-5	Styrene	ND	10	1.5	ug/l	
75-65-0	Tert Butyl Alcohol	ND	130	9.4	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	0.98	ug/l	
127-18-4	Tetrachloroethene	ND	5.0	1.3	ug/l	
108-88-3	Toluene	398	5.0	2.2	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	25	1.2	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	25	1.1	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.2	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.1	ug/l	
79-01-6	Trichloroethene	ND	5.0	2.5	ug/l	
75-69-4	Trichlorofluoromethane	ND	25	1.7	ug/l	
75-01-4	Vinyl chloride	ND	5.0	2.1	ug/l	
	m,p-Xylene	1970	5.0	2.0	ug/l	
95-47-6	o-Xylene	505	5.0	0.97	ug/l	
1330-20-7	Xylene (total)	2470	5.0	0.97	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		79-120%
17060-07-0	1,2-Dichloroethane-D4	104%		72-123%
2037-26-5	Toluene-D8	92%		78-119%
460-00-4	4-Bromofluorobenzene	96%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
124-38-9	Carbon dioxide	3.44	330	ug/l	JNB
	alkene	5.78	110	ug/l	J
	alkene	8.24	360	ug/l	J
	alkene	9.45	110	ug/l	J
	C3 alkyl benzene	14.43	250	ug/l	J
	C3 alkyl benzene	14.46	150	ug/l	J
108-67-8	Benzene, 1,3,5-trimethyl-	14.52	180	ug/l	JN
	C3 alkyl benzene	14.78	160	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-18R		
Lab Sample ID:	JB67153-3	**Date Sampled:**	05/15/14
Matrix:	AQ - Ground Water	**Date Received:**	05/16/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
95-63-6	Benzene, 1,2,4-trimethyl-	14.95	570	ug/l	JN
496-11-7	Indane	15.72	110	ug/l	JN
	C4 alkyl benzene	16.11	100	ug/l	J
	Total TIC, Volatile		2100	ug/l	J
	Total Alkanes		1360	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

New Jersey ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

GW

ACCUTEST Laboratories

Mid Atlantic

2235 Route 130, Dayton, NJ 08810

Tel. (732) 329-0200 Fax: (732) 329-3499/3480

Chain Of Custody Record

10/04

☐ SCIENCE & ENGINEERING
☐ TECHNICAL SERVICES
☑ BILL CONSULTANT

Accutest Job #

Accutest Quote #

DATE: May 2014

PAGE: 1 of 1

CONSULTANT: EnviroTrac Ltd.

ADDRESS: 400 E Corporate Court

CITY: South Plainfield, NJ 07080

TELEPHONE: (908) 757-1900 FAX: (908) 757-0017 E-MAIL: christineh@envirotrac.com

SITE ADDRESS (Street and City): 945 Pleasant Vally Way, West Orange

PROJECT NAME: BP 84849

PROJECT CONTACT (Report to): Christine Hahn

CONSULTANT PROJECT NO.

LAB JOB NUMBER (SDG): JB67153

TURNAROUND TIME (BUSINESS DAYS): ☑ STANDARD ☐ 7 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS

DATA DELIVERABLES (CHECK ONE) ☐ COMMA ☐ COMMB ☑ NJ REDT2 ☐ FULL T1 ☐ OTHER

SPECIAL INSTRUCTIONS OR NOTES :

REQUESTED ANALYSIS if more than one method is listed, circle one

LAB Sample #	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VO+10, MTBE,TBA via 8260	Total Iron 200.7	Container PID Readings or Laboratory Notes
1	MW-16R	5-16-14	1308	GW	3					3	X		V351
2	MW-17R	1	1334	GW	3					3	X		
3	MW-18R	1	1407	GW	3					3	X		

Relinquished by: (Sampler Signature)	Received by: (Signature)	Date: 5-16-14	Time: 11:00
Relinquished by: (Signature)	Received by: (Signature)	Date: 5/16/14	Time: 1100
Relinquished by: (Signature)	Received by: (Signature)	Date: 5/16/14	Time: 1305

SAMPLE RECEIVED @ LAB: ☑ ICE? ☐ NO

SAMPLE TEMP UPON RECEIPT: _____ Degrees C

4.0°C-B

DG

12/A1

JB67153: Chain of Custody

Page 1 of 3

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JB67153 **Client:** **Project:**

Date / Time Received: 5/16/2014 **Delivery Method:** **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (4/4); 0

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Bar Therm		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Accutest Laboratories
V:732.329.0200
2235 US Highway 130
F: 732.329.3499
Dayton, New Jersey
www/accutest.com

JB67153: Chain of Custody
Page 2 of 3

ACCUTEST LABORATORIES

Job Change Order: JB67153

Requested Date:	5/19/2014	**Received Date:**	5/16/2014
Account Name:	Atlantic Richfield Company	**Due Date:**	5/30/2014
Project Description:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, W	**Deliverable:**	REDT2
CSR:	kellyp	**TAT (Days):**	3

==========

Sample #: JB67153-ALL

Dept:

Change:
Please revise TAT to 3 days. Due 5/21

==========

Above Changes Per: Christine Hahn **Date/Time:** 5/19/2014 4:12:05 PM

To Client: This Change Order is confirmation of the revisions, previously discussed with the Accutest Client Service Representative.

JB67153: Chain of Custody
Page 3 of 3

Internal Sample Tracking Chronicle

Atlantic Richfield Company

Job No: JB67153

ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JB67153-1 MW-16R	Collected: 15-MAY-14 13:08 By:		Received: 16-MAY-14 By: AS			
JB67153-1	SW846 8260B	20-MAY-14 14:53	TP			V8260TCL11+
JB67153-2 MW-17R	Collected: 15-MAY-14 13:34 By:		Received: 16-MAY-14 By: AS			
JB67153-2	SW846 8260B	20-MAY-14 15:20	TP			V8260TCL11+
JB67153-3 MW-18R	Collected: 15-MAY-14 14:07 By:		Received: 16-MAY-14 By: AS			
JB67153-3	SW846 8260B	20-MAY-14 15:48	TP			V8260TCL11+

Accutest Internal Chain of Custody

Job Number: JB67153
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Received: 05/16/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB67153-1.2	Secured Storage	Toan Pham	05/20/14 11:25	Retrieve from Storage
JB67153-1.2	Toan Pham	GCMS4B	05/20/14 11:25	Load on Instrument
JB67153-1.2	GCMS4B	Toan Pham	05/21/14 10:26	Unload from Instrument
JB67153-1.2	Toan Pham	Secured Storage	05/21/14 10:26	Return to Storage
JB67153-2.2	Secured Storage	Toan Pham	05/20/14 11:25	Retrieve from Storage
JB67153-2.2	Toan Pham	GCMS4B	05/20/14 11:25	Load on Instrument
JB67153-2.2	GCMS4B	Toan Pham	05/21/14 10:26	Unload from Instrument
JB67153-2.2	Toan Pham	Secured Storage	05/21/14 10:26	Return to Storage
JB67153-3.1	Secured Storage	Toan Pham	05/20/14 10:34	Retrieve from Storage
JB67153-3.1	Toan Pham	Secured Storage	05/20/14 10:54	Return to Storage

New Jersey ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: JB67153
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4B1802-MB	4B41627.D	1	05/20/14	TP	n/a	n/a	V4B1802

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB67153-1, JB67153-2, JB67153-3

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	0.50	0.28	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.21	ug/l	
75-25-2	Bromoform	ND	2.0	0.30	ug/l	
74-83-9	Bromomethane	ND	2.0	0.56	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	3.2	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.23	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.35	ug/l	
75-00-3	Chloroethane	ND	1.0	0.39	ug/l	
67-66-3	Chloroform	ND	1.0	0.25	ug/l	
74-87-3	Chloromethane	ND	1.0	0.36	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.18	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.3	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.19	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.16	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.20	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.31	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.30	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.63	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.22	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.34	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.24	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.38	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.28	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
123-91-1	1,4-Dioxane	ND	130	73	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.21	ug/l	
76-13-1	Freon 113	ND	5.0	0.77	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.5	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.15	ug/l	

Method Blank Summary

Job Number: JB67153
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4B1802-MB	4B41627.D	1	05/20/14	TP	n/a	n/a	V4B1802

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB67153-1, JB67153-2, JB67153-3

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.29	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.5	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.86	ug/l	
100-42-5	Styrene	ND	2.0	0.30	ug/l	
75-65-0	Tert Butyl Alcohol	ND	25	1.9	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.44	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.24	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	0.33	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.41	ug/l	
	m,p-Xylene	ND	1.0	0.40	ug/l	
95-47-6	o-Xylene	ND	1.0	0.19	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.19	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	79-120%
17060-07-0	1,2-Dichloroethane-D4	103%	72-123%
2037-26-5	Toluene-D8	92%	78-119%
460-00-4	4-Bromofluorobenzene	98%	74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
124-38-9	Carbon dioxide	3.44	34	ug/l	JN
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: JB67153
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4B1802-BS	4B41628.D	1	05/20/14	TP	n/a	n/a	V4B1802

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB67153-1, JB67153-2, JB67153-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	57.9	116	52-152
71-43-2	Benzene	50	46.0	92	80-121
74-97-5	Bromochloromethane	50	51.7	103	82-125
75-27-4	Bromodichloromethane	50	51.8	104	83-127
75-25-2	Bromoform	50	55.5	111	74-131
74-83-9	Bromomethane	50	55.1	110	45-155
78-93-3	2-Butanone (MEK)	50	54.5	109	67-136
75-15-0	Carbon disulfide	50	47.5	95	69-129
56-23-5	Carbon tetrachloride	50	56.1	112	77-138
108-90-7	Chlorobenzene	50	47.1	94	82-119
75-00-3	Chloroethane	50	63.7	127	61-151
67-66-3	Chloroform	50	51.6	103	79-124
74-87-3	Chloromethane	50	43.7	87	48-148
110-82-7	Cyclohexane	50	49.9	100	72-129
96-12-8	1,2-Dibromo-3-chloropropane	50	51.3	103	66-137
124-48-1	Dibromochloromethane	50	50.3	101	81-127
106-93-4	1,2-Dibromoethane	50	50.5	101	79-122
95-50-1	1,2-Dichlorobenzene	50	47.1	94	81-121
541-73-1	1,3-Dichlorobenzene	50	46.7	93	81-119
106-46-7	1,4-Dichlorobenzene	50	48.6	97	80-116
75-71-8	Dichlorodifluoromethane	50	38.4	77	33-161
75-34-3	1,1-Dichloroethane	50	49.7	99	78-129
107-06-2	1,2-Dichloroethane	50	52.8	106	75-133
75-35-4	1,1-Dichloroethene	50	50.0	100	74-128
156-59-2	cis-1,2-Dichloroethene	50	47.9	96	78-123
156-60-5	trans-1,2-Dichloroethene	50	45.4	91	75-122
78-87-5	1,2-Dichloropropane	50	47.7	95	80-124
10061-01-5	cis-1,3-Dichloropropene	50	44.4	89	75-114
10061-02-6	trans-1,3-Dichloropropene	50	44.0	88	78-123
123-91-1	1,4-Dioxane	1250	986	79	57-154
100-41-4	Ethylbenzene	50	47.2	94	82-120
76-13-1	Freon 113	50	55.4	111	65-150
591-78-6	2-Hexanone	50	53.0	106	65-135
98-82-8	Isopropylbenzene	50	46.8	94	80-124
79-20-9	Methyl Acetate	50	56.2	112	53-137
108-87-2	Methylcyclohexane	50	50.3	101	62-142

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB67153
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4B1802-BS	4B41628.D	1	05/20/14	TP	n/a	n/a	V4B1802

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB67153-1, JB67153-2, JB67153-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	100	103	103	74-123
108-10-1	4-Methyl-2-pentanone(MIBK)	50	51.1	102	68-135
75-09-2	Methylene chloride	50	48.6	97	75-121
100-42-5	Styrene	50	50.6	101	81-123
75-65-0	Tert Butyl Alcohol	250	255	102	70-132
79-34-5	1,1,2,2-Tetrachloroethane	50	48.3	97	71-123
127-18-4	Tetrachloroethene	50	46.6	93	69-141
108-88-3	Toluene	50	43.4	87	80-122
87-61-6	1,2,3-Trichlorobenzene	50	51.9	104	71-138
120-82-1	1,2,4-Trichlorobenzene	50	48.8	98	77-132
71-55-6	1,1,1-Trichloroethane	50	53.1	106	80-132
79-00-5	1,1,2-Trichloroethane	50	47.5	95	80-127
79-01-6	Trichloroethene	50	48.2	96	82-126
75-69-4	Trichlorofluoromethane	50	52.6	105	63-141
75-01-4	Vinyl chloride	50	46.5	93	53-135
	m,p-Xylene	100	94.8	95	81-121
95-47-6	o-Xylene	50	48.4	97	82-121
1330-20-7	Xylene (total)	150	143	95	82-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	104%	79-120%
17060-07-0	1,2-Dichloroethane-D4	104%	72-123%
2037-26-5	Toluene-D8	92%	78-119%
460-00-4	4-Bromofluorobenzene	96%	74-119%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB67153
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB67227-5MS	4B41638.D	10	05/20/14	TP	n/a	n/a	V4B1802
JB67227-5MSD	4B41639.D	10	05/20/14	TP	n/a	n/a	V4B1802
JB67227-5	4B41630.D	10	05/20/14	TP	n/a	n/a	V4B1802

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB67153-1, JB67153-2, JB67153-3

CAS No.	Compound	JB67227-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		500	525	105	500	539	108	3	44-160/20
71-43-2	Benzene	ND		500	429	86	500	432	86	1	50-136/12
74-97-5	Bromochloromethane	ND		500	498	100	500	506	101	2	74-131/11
75-27-4	Bromodichloromethane	ND		500	525	105	500	519	104	1	74-132/11
75-25-2	Bromoform	ND		500	535	107	500	531	106	1	68-136/12
74-83-9	Bromomethane	ND		500	615	123	500	570	114	8	37-157/21
78-93-3	2-Butanone (MEK)	ND		500	511	102	500	506	101	1	60-145/15
75-15-0	Carbon disulfide	ND		500	366	73	500	384	77	5	37-143/17
56-23-5	Carbon tetrachloride	ND		500	497	99	500	510	102	3	46-152/17
108-90-7	Chlorobenzene	ND		500	487	97	500	481	96	1	70-127/12
75-00-3	Chloroethane	ND		500	581	116	500	568	114	2	44-147/16
67-66-3	Chloroform	ND		500	494	99	500	496	99	0	67-129/12
74-87-3	Chloromethane	ND		500	509	102	500	524	105	3	40-149/19
110-82-7	Cyclohexane	ND		500	476	95	500	486	97	2	31-153/21
96-12-8	1,2-Dibromo-3-chloropropane	ND		500	450	90	500	467	93	4	61-144/14
124-48-1	Dibromochloromethane	ND		500	530	106	500	520	104	2	74-131/10
106-93-4	1,2-Dibromoethane	ND		500	506	101	500	505	101	0	74-129/10
95-50-1	1,2-Dichlorobenzene	ND		500	490	98	500	484	97	1	73-126/11
541-73-1	1,3-Dichlorobenzene	ND		500	497	99	500	486	97	2	71-124/12
106-46-7	1,4-Dichlorobenzene	ND		500	504	101	500	497	99	1	71-123/12
75-71-8	Dichlorodifluoromethane	ND		500	536	107	500	551	110	3	20-161/25
75-34-3	1,1-Dichloroethane	ND		500	465	93	500	468	94	1	61-134/12
107-06-2	1,2-Dichloroethane	ND		500	499	100	500	498	100	0	68-137/11
75-35-4	1,1-Dichloroethene	ND		500	426	85	500	442	88	4	40-143/17
156-59-2	cis-1,2-Dichloroethene	ND		500	464	93	500	470	94	1	59-133/12
156-60-5	trans-1,2-Dichloroethene	ND		500	428	86	500	436	87	2	55-132/14
78-87-5	1,2-Dichloropropane	ND		500	497	99	500	488	98	2	70-128/11
10061-01-5	cis-1,3-Dichloropropene	ND		500	511	102	500	485	97	5	73-127/11
10061-02-6	trans-1,3-Dichloropropene	ND		500	513	103	500	477	95	7	72-128/11
123-91-1	1,4-Dioxane	ND		12500	9770	78	12500	11600	93	17	49-161/26
100-41-4	Ethylbenzene	477		500	914	87	500	912	87	0	49-137/13
76-13-1	Freon 113	ND		500	493	99	500	509	102	3	32-161/23
591-78-6	2-Hexanone	ND		500	537	107	500	508	102	6	59-145/14
98-82-8	Isopropylbenzene	71.0		500	576	101	500	556	97	4	57-136/14
79-20-9	Methyl Acetate	ND		500	518	104	500	522	104	1	46-148/15
108-87-2	Methylcyclohexane	ND		500	473	95	500	487	97	3	30-155/21

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB67153
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB67227-5MS	4B41638.D	10	05/20/14	TP	n/a	n/a	V4B1802
JB67227-5MSD	4B41639.D	10	05/20/14	TP	n/a	n/a	V4B1802
JB67227-5	4B41630.D	10	05/20/14	TP	n/a	n/a	V4B1802

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB67153-1, JB67153-2, JB67153-3

CAS No.	Compound	JB67227-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	ND		500	487	97	500	496	99	2	64-134/11
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		500	524	105	500	501	100	4	63-144/13
75-09-2	Methylene chloride	ND		500	452	90	500	466	93	3	64-128/11
100-42-5	Styrene	ND		500	559	112	500	560	112	0	67-130/12
75-65-0	Tert Butyl Alcohol	ND		2500	2530	101	2500	2580	103	2	64-154/16
79-34-5	1,1,2,2-Tetrachloroethane	ND		500	521	104	500	490	98	6	68-131/11
127-18-4	Tetrachloroethene	ND		500	474	95	500	477	95	1	48-143/15
108-88-3	Toluene	222		500	677	91	500	645	85	5	54-137/13
87-61-6	1,2,3-Trichlorobenzene	ND		500	430	86	500	448	90	4	62-143/13
120-82-1	1,2,4-Trichlorobenzene	ND		500	445	89	500	465	93	4	66-138/12
71-55-6	1,1,1-Trichloroethane	ND		500	502	100	500	514	103	2	52-145/16
79-00-5	1,1,2-Trichloroethane	ND		500	539	108	500	504	101	7	73-130/10
79-01-6	Trichloroethene	ND		500	476	95	500	475	95	0	54-141/13
75-69-4	Trichlorofluoromethane	ND		500	542	108	500	559	112	3	33-159/25
75-01-4	Vinyl chloride	ND		500	526	105	500	548	110	4	36-149/19
	m,p-Xylene	2210		1000	2980	77	1000	2980	77	0	50-137/12
95-47-6	o-Xylene	1700		500	2180	96	500	2210	102	1	60-134/12
1330-20-7	Xylene (total)	3920		1500	5160	83	1500	5190	85	1	53-136/12

CAS No.	Surrogate Recoveries	MS	MSD	JB67227-5	Limits
1868-53-7	Dibromofluoromethane	100%	101%	101%	79-120%
17060-07-0	1,2-Dichloroethane-D4	104%	103%	100%	72-123%
2037-26-5	Toluene-D8	102%	98%	110%	78-119%
460-00-4	4-Bromofluorobenzene	101%	96%	108%	74-119%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JB67153
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample: V4B1763-BFB
Lab File ID: 4B40650.D
Instrument ID: GCMS4B
Injection Date: 04/15/14
Injection Time: 11:25

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.99 - 40.0% of mass 95	14224	17.9		Pass
75	30.0 - 60.0% of mass 95	35957	45.2		Pass
95	Base peak, 100% relative abundance	79482	100.0		Pass
96	5.0 - 9.0% of mass 95	5420	6.82		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	65813	82.8		Pass
175	5.0 - 9.0% of mass 174	5674	7.14	(8.62) [a]	Pass
176	95.0 - 101.0% of mass 174	64386	81.0	(97.8) [a]	Pass
177	5.0 - 9.0% of mass 176	4366	5.49	(6.78) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V4B1763-IC1763	4B40651.D	04/15/14	12:01	00:36	Initial cal 0.2
V4B1763-IC1763	4B40652.D	04/15/14	12:28	01:03	Initial cal 0.5
V4B1763-IC1763	4B40653.D	04/15/14	12:56	01:31	Initial cal 1
V4B1763-IC1763	4B40654.D	04/15/14	13:24	01:59	Initial cal 2
V4B1763-IC1763	4B40655.D	04/15/14	13:52	02:27	Initial cal 5
V4B1763-IC1763	4B40656.D	04/15/14	14:20	02:55	Initial cal 10
V4B1763-IC1763	4B40657.D	04/15/14	14:48	03:23	Initial cal 20
V4B1763-ICC1763	4B40658.D	04/15/14	15:15	03:50	Initial cal 50
V4B1763-IC1763	4B40659.D	04/15/14	15:43	04:18	Initial cal 100
V4B1763-IC1763	4B40660.D	04/15/14	16:11	04:46	Initial cal 200
V4B1763-ICV1763	4B40663.D	04/15/14	17:34	06:09	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JB67153
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample:	V4B1763-BFB	**Injection Date:**	04/16/14
Lab File ID:	4B40664.D	**Injection Time:**	08:22
Instrument ID:	GCMS4B		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.99 - 40.0% of mass 95	15413	17.4		Pass
75	30.0 - 60.0% of mass 95	39797	44.9		Pass
95	Base peak, 100% relative abundance	88557	100.0		Pass
96	5.0 - 9.0% of mass 95	6005	6.78		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	75725	85.5		Pass
175	5.0 - 9.0% of mass 174	6230	7.04	(8.23) [a]	Pass
176	95.0 - 101.0% of mass 174	73912	83.5	(97.6) [a]	Pass
177	5.0 - 9.0% of mass 176	4990	5.63	(6.75) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V4B1763-ICV1763	4B40665.D	04/16/14	09:01	00:39	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JB67153
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample:	V4B1802-BFB	**Injection Date:**	05/20/14
Lab File ID:	4B41624.D	**Injection Time:**	09:02
Instrument ID:	GCMS4B		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.99 - 40.0% of mass 95	13682	18.8		Pass
75	30.0 - 60.0% of mass 95	34266	47.2		Pass
95	Base peak, 100% relative abundance	72600	100.0		Pass
96	5.0 - 9.0% of mass 95	4977	6.86		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	61232	84.3		Pass
175	5.0 - 9.0% of mass 174	5312	7.32	(8.68) [a]	Pass
176	95.0 - 101.0% of mass 174	59554	82.0	(97.3) [a]	Pass
177	5.0 - 9.0% of mass 176	3875	5.34	(6.51) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V4B1802-CC1763	4B41625.D	05/20/14	09:34	00:32	Continuing cal 50
V4B1802-MB	4B41627.D	05/20/14	10:43	01:41	Method Blank
V4B1802-BS	4B41628.D	05/20/14	11:18	02:16	Blank Spike
JB67227-5	4B41630.D	05/20/14	12:13	03:11	(used for QC only; not part of job JB67153)
ZZZZZZ	4B41631.D	05/20/14	12:40	03:38	(unrelated sample)
ZZZZZZ	4B41632.D	05/20/14	13:58	04:56	(unrelated sample)
JB67153-1	4B41634.D	05/20/14	14:53	05:51	MW-16R
JB67153-2	4B41635.D	05/20/14	15:20	06:18	MW-17R
JB67153-3	4B41636.D	05/20/14	15:48	06:46	MW-18R
ZZZZZZ	4B41637.D	05/20/14	16:16	07:14	(unrelated sample)
JB67227-5MS	4B41638.D	05/20/14	16:43	07:41	Matrix Spike
JB67227-5MSD	4B41639.D	05/20/14	17:11	08:09	Matrix Spike Duplicate
ZZZZZZ	4B41641.D	05/20/14	18:06	09:04	(unrelated sample)
ZZZZZZ	4B41642.D	05/20/14	18:34	09:32	(unrelated sample)
ZZZZZZ	4B41643.D	05/20/14	19:01	09:59	(unrelated sample)
ZZZZZZ	4B41644.D	05/20/14	19:29	10:27	(unrelated sample)
ZZZZZZ	4B41645.D	05/20/14	19:56	10:54	(unrelated sample)

Volatile Internal Standard Area Summary

Job Number: JB67153
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Check Std:	V4B1802-CC1763	**Injection Date:**	05/20/14
Lab File ID:	4B41625.D	**Injection Time:**	09:34
Instrument ID:	GCMS4B	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	205399	6.88	172603	8.84	260249	9.70	228177	12.89	141746	15.44
Upper Limit [a]	410798	7.38	345206	9.34	520498	10.20	456354	13.39	283492	15.94
Lower Limit [b]	102700	6.38	86302	8.34	130125	9.20	114089	12.39	70873	14.94

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V4B1802-MB	153960	6.87	184610	8.84	288788	9.70	272733	12.89	166936	15.44
V4B1802-BS	183615	6.87	176928	8.84	276969	9.70	242935	12.89	149583	15.44
JB67227-5	152260	6.87	180528	8.84	274662	9.70	337204	12.89	183848	15.44
ZZZZZZ	157389	6.87	195780	8.85	312510	9.70	286340	12.89	172777	15.44
ZZZZZZ	161973	6.88	198367	8.84	305700	9.70	272865	12.89	159111	15.44
JB67153-1	162384	6.87	183898	8.84	285952	9.70	255697	12.89	159929	15.44
JB67153-2	161791	6.88	182828	8.84	280053	9.70	264016	12.89	162784	15.44
JB67153-3	160707	6.87	183468	8.84	295023	9.70	254461	12.89	158002	15.44
ZZZZZZ	164178	6.87	186023	8.84	298017	9.70	258281	12.89	157903	15.44
JB67227-5MS	163870	6.88	192136	8.84	322590	9.71	307058	12.89	173625	15.44
JB67227-5MSD	166089	6.87	187390	8.84	311729	9.70	279941	12.89	168894	15.44
ZZZZZZ	164697	6.88	193904	8.85	307248	9.71	267092	12.89	166422	15.44
ZZZZZZ	163102	6.88	185402	8.85	283465	9.70	272577	12.89	167757	15.44
ZZZZZZ	158883	6.87	184419	8.84	290537	9.70	270266	12.89	167768	15.44
ZZZZZZ	163391	6.87	186722	8.85	291140	9.70	255115	12.89	160402	15.44
ZZZZZZ	163396	6.88	193744	8.85	318024	9.71	292358	12.89	172062	15.44

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: JB67153
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Method: SW846 8260B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JB67153-1	4B41634.D	101	102	91	98
JB67153-2	4B41635.D	103	101	93	99
JB67153-3	4B41636.D	100	104	92	96
JB67227-5MS	4B41638.D	100	104	102	101
JB67227-5MSD	4B41639.D	101	103	98	96
V4B1802-BS	4B41628.D	104	104	92	96
V4B1802-MB	4B41627.D	100	103	92	98

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	79-120%
S2 = 1,2-Dichloroethane-D4	72-123%
S3 = Toluene-D8	78-119%
S4 = 4-Bromofluorobenzene	74-119%

Initial Calibration Summary

Job Number: JB67153 **Sample:** V4B1763-ICC1763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4B40658.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Response Factor Report MS4B

Method : C:\MSDCHEM\1\METHODS\M4B1763.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update : Wed Apr 16 12:59:24 2014
Response via : Initial Calibration

Calibration Files
1 =4B40653.D 0.5 =4B40652.D 100 =4B40659.D 50 =4B40658.D
20 =4B40657.D 200 =4B40660.D 5 =4B40655.D 2 =4B40654.D
10 =4B40656.D 0.2 =4B40651.D = =

Compound	1	0.5	100	50	20	200	5	2	10	0.2	Avg	%RSD
1) tert butyl alcohol-d9	----------ISTD----------											
2) tertiary butyl alcohol	1.401	1.119	1.143	1.154	1.089	1.041	1.520	1.102			1.196	14.20
3) 1,4-dioxane	0.105	0.105	0.108	0.103	0.102	0.087	0.128	0.100			0.105	10.90
4) Ethanol											0.000#	-1.00
5) I pentafluorobenzene	----------ISTD----------											
6) CHLOROTRIFLUOROETHENE											0.000#	-1.00
7) chlorodifluoromethane	0.876	0.764	0.863	0.844	0.863	0.864	0.749	0.862	0.817	0.966	0.847	7.20
8) dichlorodifluoromethane	0.837	0.912	0.996	0.930	0.991	0.968	0.799	0.718	0.975		0.903	10.82
9) Freon 114											0.000#	-1.00
10) chloromethane	0.386	0.405	0.364	0.348	0.337	0.359	0.267	0.325	0.308		0.344	12.08
11) vinyl chloride	1.053	1.200	1.167	1.092	1.105	1.139	0.870	0.884	1.047		1.062	10.92
12) bromomethane	0.557	0.704	0.479	0.516	0.599		0.539	0.511	0.608		0.564	12.69
13) chloroethane	0.314		0.353	0.380	0.429		0.375	0.312	0.433		0.371	13.19
14) vinyl bromide	0.655			0.652	0.657		0.543	0.620	0.613		0.623	7.04
15) trichlorofluoromethane			1.079	1.006	1.037	1.068	0.806		0.986		0.997	10.03
16) 1,3-butadiene	0.548			0.511	0.490		0.408	0.482	0.461		0.484	9.82
17) Pentane	1.022			1.008	1.078		0.959	0.959	1.065		1.015	5.00
18) freon 123a											0.000#	-1.00
19) ethyl ether	0.300		0.345	0.336	0.316	0.334	0.297	0.290	0.316		0.317	6.40
20) 2-chloropropane	1.273	1.253	1.195	1.150	1.097	1.152	1.007	0.931	1.055		1.124	10.02
21) acrolein	0.145			0.154	0.152		0.138	0.147	0.151		0.148	4.11
22) 1,1-dichloroethene	1.070		0.705	0.689	0.657	0.677	0.691	0.771	0.691		0.744	18.26

----- Linear regression ----- Coefficient = 0.9993

Initial Calibration Summary

Job Number: JB67153 **Sample:** V4B1763-ICC1763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4B40658.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Response Ratio = 0.00531 + 0.68125 *A

23)	acetone										
		0.070	0.069	0.068	0.068	0.063	0.068		0.068		3.31
24)	allyl chloride										
		0.377	0.371	0.338	0.394	0.338	0.347		0.361		6.44
25)	acetonitrile										
		0.064	0.064	0.068	0.061	0.063	0.066		0.064		3.88
26)	iodomethane										
	1.276	1.305	1.349	1.300	1.244	1.295	1.148	1.069	1.206		1.243	7.14
27)	carbon disulfide										
	2.683	2.700	2.737	2.623	2.602	2.579	2.461	2.165	2.525		2.564	6.74
28)	methylene chloride										
	0.800	0.941	0.764	0.751	0.732	0.728	0.704	0.684	0.730		0.759	10.02
29)	methyl acetate										
	0.078	0.110	0.111	0.112	0.111	0.096	0.109	0.108			0.104	11.30
30)	1-chloropropane										
		1.174	1.176	1.274	1.131	1.711	1.422		1.315		16.77

----- Linear regression ----- Coefficient = 0.9998
Response Ratio = 0.05932 + 1.12422 *A

31)	methyl tert butyl ether										
	2.145	2.386	2.089	2.044	2.034	1.954	1.933	1.942	2.027	2.062	6.80
32)	trans-1,2-dichloroethene										
	0.829	0.635	0.634	0.624	0.603	0.624	0.635	0.632		0.652	11.12
33)	di-isopropyl ether										
	2.185	2.359	2.074	2.083	2.122	2.050	1.863	2.153	2.029	2.102	6.34
34)	2-butanone										
		0.088	0.084	0.082	0.084	0.072	0.068	0.079		0.079	9.01
35)	1,1-dichloroethane										
	1.220	1.238	1.208	1.193	1.158	1.154	1.089	0.997	1.138	1.351	1.175	8.00
36)	chloroprene										
	0.895	0.751	0.846	0.847	0.831	0.844	0.725	0.859	0.804	0.822	6.57
37)	acrylonitrile										
	0.265	0.274	0.271	0.267	0.265	0.256	0.251	0.255	0.256	0.262	3.12
38)	vinyl acetate										
		0.100	0.099	0.097	0.100	0.077	0.099	0.095		0.095	8.49
39)	ethyl tert-butyl ether										
	2.288	2.435	2.170	2.191	2.224	2.152	1.959	2.225	2.117	2.196	5.86
40)	ethyl acetate										
		0.095	0.094	0.095	0.096	0.086	0.101	0.097		0.095	4.82
41)	2,2-dichloropropane										
	0.992	1.035	0.945	0.933	0.914	0.869	0.879	0.835	0.903	0.923	6.75
42)	cis-1,2-dichloroethene										
	0.714	0.785	0.685	0.680	0.649	0.649	0.621	0.590	0.639	0.734	0.675	8.57
43)	methylacrylate										
	0.087	0.107	0.104	0.098	0.104	0.083	0.106	0.096		0.098	9.09
44)	propionitrile										
	0.114	0.113	0.112	0.110	0.107	0.107	0.103	0.110	0.109	0.109	3.23
45)	bromochloromethane										
	0.283	0.291	0.343	0.335	0.318	0.325	0.301	0.280	0.317	0.310	7.28
46)	tetrahydrofuran										
		0.255	0.254	0.253	0.238	0.263	0.319	0.264		0.264	9.80
47)	chloroform										
	0.705	0.741	0.698	0.684	0.664	0.666	0.627	0.590	0.661	0.654	0.669	6.27
48)	T-BUTYL FORMATE										
	0.633	0.702	0.600	0.606	0.625	0.569	0.552	0.638	0.607		0.615	7.05
49)	dibromofluoromethane (s)										
	0.524	0.472	0.567	0.560	0.557	0.562	0.488	0.507	0.534		0.530	6.57
50)	1,2-dichloroethane-d4 (s)										

Initial Calibration Summary

Job Number: JB67153 **Sample:** V4B1763-ICC1763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4B40658.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	0.656	0.583	0.623	0.620	0.619	0.610	0.544	0.568	0.604		0.603	5.54
51)	freon 113											
	0.397		0.504	0.477	0.492	0.496	0.426	0.444	0.473		0.464	8.13
52)	methacrylonitrile											
	0.452	0.486	0.431	0.419	0.404	0.412	0.385	0.411	0.412		0.424	7.01
53)	1,1,1-trichloroethane											
	0.868	0.913	0.950	0.910	0.875	0.911	0.810	0.713	0.836	0.807	0.859	8.13
54)	cyclohexane											
	1.026	1.010	1.066	1.023	1.013	1.013	0.952	0.836	1.007	0.832	0.978	8.24
55)	iso-butyl alcohol											
		0.037	0.036	0.035	0.037	0.034		0.035			0.036	3.73
56)	I 1,4-difluorobenzene	----------ISTD----------										
57)	epichlorohydrin											
	0.050		0.044	0.045	0.045	0.046	0.042	0.051	0.045		0.046	6.53
58)	n-butyl alcohol											
		0.016	0.016	0.016	0.016	0.014	0.020	0.015			0.016	12.54
59)	carbon tetrachloride											
	0.465	0.506	0.505	0.499	0.481	0.477	0.447	0.377	0.475		0.470	8.47
60)	1,1-dichloropropene											
	0.499	0.538	0.508	0.502	0.482	0.482	0.460	0.427	0.483	0.575	0.496	8.21
61)	hexane											
	0.408	0.319	0.399	0.382	0.405	0.385	0.350	0.424	0.396	0.462	0.393	9.91
62)	Tert Amyl alcohol											
											0.000#	-1.00
63)	benzene											
	1.638	1.752	1.477	1.476	1.439	1.369	1.369	1.333	1.430	1.911	1.519	12.40
64)	iso-octane											
	1.432	1.178	1.496	1.459	1.508	1.422	1.260	1.431	1.485		1.408	8.04
65)	tert-amyl methyl ether											
	0.297	0.333	0.283	0.288	0.290	0.268	0.259	0.300	0.278		0.288	7.37
66)	heptane											
	0.221	0.170	0.220	0.211	0.222	0.215	0.199	0.219	0.222		0.211	8.09
67)	isopropyl acetate											
	0.159	0.200	0.177	0.176	0.171	0.178	0.154	0.173	0.169		0.173	7.57
68)	1,2-dichloroethane											
	0.476	0.524	0.480	0.475	0.459	0.457	0.435	0.435	0.457	0.518	0.472	6.42
69)	trichloroethene											
	0.400	0.405	0.383	0.377	0.360	0.367	0.328	0.310	0.353	0.360	0.364	8.15
70)	Tert-amyl Ethyl Ether											
											0.000#	-1.00
71)	ethyl acrylate											
	0.529			0.512	0.510		0.445	0.517	0.516		0.505	5.93
72)	2-nitropropane											
		0.160	0.158	0.155	0.155	0.153	0.179	0.160			0.160	5.47
73)	2-chloroethyl vinyl ether											
	0.279	0.323	0.248	0.256	0.263	0.243	0.244	0.277	0.267		0.267	9.36
74)	methyl methacrylate											
	0.071		0.104	0.101	0.095	0.102	0.091	0.090	0.096		0.094	11.29
75)	1,2-dichloropropane											
	0.379	0.410	0.390	0.386	0.374	0.365	0.363	0.342	0.374	0.345	0.373	5.47
76)	dibromomethane											
	0.234	0.254	0.254	0.250	0.239	0.242	0.229	0.225	0.236	0.231	0.239	4.37
77)	methylcyclohexane											
	0.660	0.557	0.689	0.669	0.695	0.676	0.588	0.664	0.671		0.652	7.22
78)	bromodichloromethane											
	0.483	0.511	0.516	0.505	0.476	0.498	0.440	0.440	0.471	0.455	0.479	5.87
79)	cis-1,3-dichloropropene											
	0.623	0.671	0.636	0.623	0.600	0.617	0.574	0.575	0.617	0.685	0.622	5.79
80)	toluene-d8 (s)											

Initial Calibration Summary

Job Number: JB67153 **Sample:** V4B1763-ICC1763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4B40658.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

```
      1.231 1.177 1.242 1.228 1.220 1.227 1.130 1.138 1.239 1.419  1.225    6.50
 81)  4-methyl-2-pentanone
      0.156 0.204 0.192 0.183 0.174 0.189 0.164 0.159 0.180        0.178    9.10
 82)  toluene
      0.919 0.987 0.879 0.859 0.823 0.843 0.807 0.787 0.868 1.054  0.883    9.42
 83)  3-methyl-1-butanol
      0.036       0.025 0.025 0.025 0.025 0.022 0.034 0.024        0.027   18.00
            ----- Linear regression -----  Coefficient =  0.9999
              Response Ratio = -0.00246 + 0.02514 *A

 84)  trans-1,3-dichloropropene
      0.578 0.640 0.559 0.556 0.536 0.549 0.541 0.525 0.572 0.640  0.570    7.07
 85)  ethyl methacrylate
      0.494 0.517 0.511 0.490 0.466 0.514 0.449 0.449 0.490 0.512  0.489    5.33
 86)  1,1,2-trichloroethane
      0.276 0.298 0.294 0.290 0.279 0.289 0.271 0.277 0.293 0.224  0.279    7.67
 87)  2-hexanone
      0.141       0.171 0.163 0.158 0.176 0.152 0.147 0.164        0.159    7.57

 88) I   chlorobenzene-d5      ----------------ISTD--------------------
 89)  tetrachloroethene
      0.365 0.335 0.338 0.325 0.304 0.316 0.276 0.266 0.298 0.343  0.317    9.81
 90)  1,3-dichloropropane
      0.634 0.651 0.617 0.608 0.585 0.574 0.553 0.574 0.583 0.703  0.608    7.38
 91)  butyl acetate
      0.346       0.292 0.290 0.297 0.291 0.257 0.357 0.285        0.302   11.01
 92)  3,3-DIMETHYL-1-BUTANOL
      0.084       0.072 0.068 0.068 0.070 0.053 0.082 0.059        0.070   15.00
            ----- Linear regression -----  Coefficient =  0.9979
              Response Ratio = -0.00006 + 0.06958 *A

 93)  dibromochloromethane
      0.391 0.431 0.454 0.434 0.406 0.431 0.372 0.355 0.393 0.363  0.403    8.39
 94)  1,2-dibromoethane
      0.400 0.401 0.415 0.400 0.391 0.395 0.359 0.369 0.384 0.401  0.391    4.28
 95)  chlorobenzene
      1.132 1.208 1.116 1.085 1.035 1.063 0.968 0.949 1.026 1.159  1.074    7.68
 96)  1,1,1,2-tetrachloroethane
      0.415 0.440 0.455 0.442 0.418 0.417 0.376 0.365 0.395 0.428  0.415    7.00
 97)  ethylbenzene
      1.931 2.059 1.856 1.822 1.780 1.745 1.637 1.635 1.754 2.256  1.847   10.41
 98)  m,p-xylene
      0.697 0.785 0.692 0.683 0.664 0.651 0.612 0.597 0.649 0.790  0.682    9.42
 99)  o-xylene
      0.745 0.805 0.755 0.730 0.703 0.703 0.636 0.637 0.675 0.704  0.709    7.42
100)  styrene
      1.140 1.278 1.229 1.212 1.169 1.175 0.990 1.015 1.118 1.316  1.164    8.95
101)  bromoform
      0.271 0.278 0.352 0.337 0.314 0.338 0.268 0.281 0.301 0.347  0.309   10.71

102) I   1,4-dichlorobenzene-d ----------------ISTD--------------------
103)  isopropylbenzene
      3.597 3.753 3.315 3.334 3.152 3.167 3.109 2.869 3.229        3.281    8.05
104)  4-bromofluorobenzene (s)
      1.007 0.951 0.895 0.918 0.918 0.917 0.841 0.904 0.930        0.920    4.82
105)  cyclohexanone
      0.061       0.053 0.058 0.052 0.043 0.051 0.059 0.057        0.054   10.46
106)  bromobenzene
      0.888 0.976 0.824 0.842 0.812 0.807 0.789 0.793 0.829 0.928  0.849    7.33
107)  1,1,2,2-tetrachloroethane
```

Initial Calibration Summary

Job Number: JB67153 **Sample:** V4B1763-ICC1763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4B40658.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

```
       1.056 1.184 1.043 1.045 1.002 1.006 1.004 1.021 1.025        1.043    5.40
108)  trans-1,4-dichloro-2-butene
       0.270 0.252 0.301 0.290 0.279 0.281 0.255 0.273 0.288        0.277    5.81
109)  1,2,3-trichloropropane
       0.229 0.152 0.223 0.226 0.225 0.210 0.214 0.232 0.232        0.216   11.58
110)  n-propylbenzene
       4.263 4.485 3.741 3.791 3.685 3.560 3.608 3.453 3.798        3.820    8.84
111)  4-ETHYLTOLUENE
                                                                    0.000#  -1.00
112)  2-chlorotoluene
       0.888 0.935 0.788 0.795 0.758 0.764 0.765 0.740 0.789 0.969  0.819    9.87
113)  4-chlorotoluene
       2.703 2.857 2.362 2.379 2.294 2.337 2.208 2.238 2.382        2.418    9.00
114)  1,3,5-trimethylbenzene
       3.063 3.307 2.929 2.906 2.748 2.811 2.712 2.538 2.844        2.873    7.66
115)  tert-butylbenzene
       2.616 2.912 2.657 2.564 2.322 2.556 2.271 2.161 2.359        2.491    9.35
116)  pentachloroethane
       0.502 0.522 0.557 0.547 0.491 0.544 0.473 0.454 0.489        0.509    7.03
117)  1,2,4-trimethylbenzene
       3.038 3.394 2.886 2.880 2.747 2.780 2.656 2.635 2.838        2.873    8.06
118)  sec-butylbenzene
       4.264 4.375 4.037 3.997 3.759 3.876 3.663 3.440 3.892        3.922    7.38
119)  1,3-dichlorobenzene
       1.822 1.972 1.756 1.720 1.642 1.671 1.543 1.588 1.683 2.065  1.746    9.46
120)  p-isopropyltoluene
       3.592 3.765 3.401 3.348 3.187 3.279 3.095 2.986 3.292        3.327    7.22
121)  1,4-dichlorobenzene
       1.808 2.009 1.806 1.749 1.658 1.701 1.548 1.551 1.672        1.723    8.31
122)  benzyl chloride
                   2.005 1.962 1.965 1.899 1.805       1.939        1.929    3.63
123)  1,2-dichlorobenzene
       1.889 1.959 1.831 1.763 1.690 1.717 1.614 1.655 1.700 2.084  1.790    8.32
124)  1,4-DIETHYLBENZENE
                                                                    0.000#  -1.00
125)  n-butylbenzene
       1.909 1.924 1.848 1.785 1.713 1.729 1.612 1.569 1.743 2.090  1.792    8.68
126)  1,2,4,5-TETRAMETHYLBENZENE
                                                                    0.000#  -1.00
127)  1,2-dibromo-3-chloropropane
                   0.246 0.235 0.230 0.227 0.253 0.298 0.243        0.247    9.71
128)  1,3,5-TRICHLOROBENZENE
       1.802 1.860 1.800 1.755 1.646 1.615 1.584 1.500 1.671        1.693    7.02
129)  1,2,4-trichlorobenzene
       1.704 1.686 1.648 1.681 1.565 1.438 1.492 1.436 1.544        1.577    6.79
130)  hexachlorobutadiene
       0.856 0.833 0.779 0.801 0.754 0.684 0.706 0.679 0.755 0.850  0.770    8.57
131)  naphthalene
       3.847 3.980 3.750 3.949 3.718 3.208 3.578 3.542 3.690        3.696    6.40
132)  1,2,3-trichlorobenzene
       1.482 1.493 1.434 1.554 1.442 1.192 1.370 1.338 1.435        1.415    7.45
133)  hexachloroethane
                   0.626 0.599 0.515 0.622 0.444 0.398 0.485        0.527   17.20
             ----- Linear regression -----  Coefficient =  0.9984
               Response Ratio = -0.01485 + 0.62090 *A

 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          M4B1763.M         Wed Apr 16 13:05:38 2014   GCMS4B
```

Initial Calibration Verification

Job Number: JB67153 **Sample:** V4B1763-ICV1763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4B40663.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\MSDChem\1\DATA\4B40663.D Vial: 14
Acq On : 15 Apr 2014 5:34 pm Operator: TOANP
Sample : icv1763-50 Inst : MS4B
Misc : MS65913,V4B1763,w,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M4B1763.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update : Wed Apr 16 12:59:24 2014
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1		tert butyl alcohol-d9	1.000	1.000	0.0	101	0.00	6.91
2	M	tertiary butyl alcohol	1.196	1.158	3.2	102	0.00	7.00
3	M	1,4-dioxane	0.105	0.110	-4.8	102	0.00	10.42
4		Ethanol		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	102	0.00	8.85
6		CHLOROTRIFLUOROETHENE		----------NA----------				
7	M	chlorodifluoromethane	0.847	0.795	6.1	96	0.00	3.89
8	M	dichlorodifluoromethane	0.903	0.930	-3.0	102	0.00	3.88
9		Freon 114		----------NA----------				
10	M	chloromethane	0.344	0.357	-3.8	105	0.00	4.18
11	M	vinyl chloride	1.062	1.120	-5.5	105	0.00	4.43
12	M	bromomethane	0.564	0.521	7.6	103	0.00	5.01
13	M	chloroethane	0.371	0.381	-2.7	102	0.00	5.14
14		vinyl bromide	0.623	0.644	-3.4	101	0.00	5.48
15	M	trichlorofluoromethane	0.997	1.007	-1.0	102	0.00	5.58
16		1,3-butadiene	0.484	0.513	-6.0	102	0.00	4.43
17		Pentane	1.015	1.039	-2.4	105	0.00	5.62
18		freon 123a		----------NA----------				
19	M	ethyl ether	0.317	0.346	-9.1	105	0.00	5.88
20		2-chloropropane	1.124	1.109	1.3	98	0.00	6.10
21	M	acrolein	0.148	0.151	-2.0	100	0.00	6.16
		----------	True	Calc.	% Drift	----------		
22	M	1,1-dichloroethene	50.000	51.384	-2.8	105	0.00	6.31
		----------	AvgRF	CCRF	% Dev	----------		
23	M	acetone	0.068	0.073	-7.4	107	0.00	6.36
24	M	allyl chloride	0.361	0.507	-40.4#	140	0.00	6.74
25	M	acetonitrile	0.064	0.063	1.6	101	0.00	6.77
26	M	iodomethane	1.243	1.296	-4.3	102	0.00	6.57
27	M	carbon disulfide	2.564	2.600	-1.4	101	0.01	6.69
28	M	methylene chloride	0.759	0.751	1.1	102	0.00	6.95
29	M	methyl acetate	0.104	0.106	-1.9	98	0.00	6.73
		----------	True	Calc.	% Drift	----------		
30		1-chloropropane	50.000	49.343	1.3	102	0.00	6.95
		----------	AvgRF	CCRF	% Dev	----------		
31	M	methyl tert butyl ether	2.062	1.957	5.1	98	0.00	7.18
32	M	trans-1,2-dichloroethene	0.652	0.621	4.8	100	0.00	7.24
33	M	di-isopropyl ether	2.102	2.050	2.5	100	0.00	7.67

Initial Calibration Verification

Job Number: JB67153 **Sample:** V4B1763-ICV1763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4B40663.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

34	M	2-butanone	0.079	0.085	-7.6	103	0.00	8.39
35	M	1,1-dichloroethane	1.175	1.188	-1.1	102	0.00	7.76
36	M	chloroprene	0.822	0.745	9.4	90	0.00	7.84
37	M	acrylonitrile	0.262	0.269	-2.7	103	0.00	7.25
38	M	vinyl acetate	0.095	0.102	-7.4	106	0.00	7.72
39	M	ethyl tert-butyl ether	2.196	2.119	3.5	99	0.00	8.10
40	M	ethyl acetate	0.095	0.092	3.2	99	0.00	8.37
41	M	2,2-dichloropropane	0.923	0.866	6.2	95	0.00	8.42
42	M	cis-1,2-dichloroethene	0.675	0.668	1.0	100	0.00	8.42
43		methylacrylate	0.098	0.106	-8.2	104	0.00	8.46
44	M	propionitrile	0.109	0.111	-1.8	103	0.00	8.53
45	M	bromochloromethane	0.310	0.329	-6.1	100	0.00	8.72
46	M	tetrahydrofuran	0.264	0.251	4.9	101	0.00	8.73
47	M	chloroform	0.669	0.681	-1.8	102	0.00	8.76
48	M	T-BUTYL FORMATE	0.615	0.603	2.0	102	0.00	8.77
49	S	dibromofluoromethane (s)	0.530	0.606	-14.3	111	0.00	8.94
50	S	1,2-dichloroethane-d4 (s)	0.603	0.663	-10.0	109	0.00	9.33
51	M	freon 113	0.464	0.472	-1.7	101	0.00	6.24
52	M	methacrylonitrile	0.424	0.416	1.9	102	0.00	8.67
53	M	1,1,1-trichloroethane	0.859	0.900	-4.8	101	0.00	8.97
54	M	cyclohexane	0.978	1.035	-5.8	103	0.00	9.02
55		iso-butyl alcohol	0.036	0.037	-2.8	105	0.00	9.14
56	I	1,4-difluorobenzene	1.000	1.000	0.0	101	0.00	9.71
57	M	epichlorohydrin	0.046	0.037	19.6	82	0.00	10.96
58	M	n-butyl alcohol	0.016	0.016	0.0	102	0.00	9.84
59	M	carbon tetrachloride	0.470	0.502	-6.8	101	0.00	9.14
60	M	1,1-dichloropropene	0.496	0.481	3.0	97	0.00	9.12
61	M	hexane		----------NA----------				
62		Tert Amyl alcohol		----------NA----------				
63	M	benzene	1.519	1.474	3.0	101	0.00	9.38
64	m	iso-octane	1.408	1.398	0.7	97	0.00	9.32
65	M	tert-amyl methyl ether	0.288	0.284	1.4	100	0.00	9.37
66	M	heptane	0.211	0.194	8.1	92	0.00	9.46
67	M	isopropyl acetate	0.173	0.177	-2.3	101	0.00	9.27
68	M	1,2-dichloroethane	0.472	0.473	-0.2	100	0.00	9.42
69	M	trichloroethene	0.364	0.369	-1.4	99	0.00	10.03
70		Tert-amyl Ethyl Ether		----------NA----------				
71		ethyl acrylate	0.505	0.509	-0.8	100	0.00	10.02
72	M	2-nitropropane	0.160	0.161	-0.6	102	0.00	10.83
73	M	2-chloroethyl vinyl ether	0.267	0.260	2.6	102	0.00	10.80
74	M	methyl methacrylate	0.094	0.103	-9.6	103	0.00	10.27
75	M	1,2-dichloropropane	0.373	0.385	-3.2	100	0.00	10.31
76	M	dibromomethane	0.239	0.247	-3.3	99	0.00	10.48
77	M	methylcyclohexane	0.652	0.657	-0.8	99	0.00	10.22
78	M	bromodichloromethane	0.479	0.497	-3.8	99	0.00	10.59
79	M	cis-1,3-dichloropropene	0.622	0.593	4.7	96	0.00	11.03
80	S	toluene-d8 (s)	1.225	1.332	-8.7	109	0.00	11.30
81	M	4-methyl-2-pentanone	0.178	0.190	-6.7	104	0.00	11.12
82	M	toluene	0.883	0.849	3.9	100	0.00	11.38
		----------	True	Calc.	% Drift	----------		
83	M	3-methyl-1-butanol	1000.000	1011.115	-1.1	104	0.00	11.14
		----------	AvgRF	CCRF	% Dev	----------		
84	M	trans-1,3-dichloropropene	0.570	0.540	5.3	98	0.00	11.61
85	M	ethyl methacrylate	0.489	0.510	-4.3	105	0.00	11.55
86	M	1,1,2-trichloroethane	0.279	0.291	-4.3	101	0.00	11.84
87	M	2-hexanone	0.159	0.173	-8.8	107	0.00	11.99

Initial Calibration Verification

Job Number: JB67153 **Sample:** V4B1763-ICV1763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4B40663.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

88	I	chlorobenzene-d5	1.000	1.000	0.0	107	0.00	12.90
89	M	tetrachloroethene	0.317	0.305	3.8	101	0.00	11.97
90	M	1,3-dichloropropane	0.608	0.588	3.3	103	0.00	12.03
91	M	butyl acetate	0.302	0.289	4.3	107	0.00	12.04
			True	Calc.	% Drift			
92	M	3,3-DIMETHYL-1-BUTANOL	500.000	483.384	3.3	105	0.00	12.17
			AvgRF	CCRF	% Dev			
93	M	dibromochloromethane	0.403	0.410	-1.7	101	0.00	12.31
94	M	1,2-dibromoethane	0.391	0.392	-0.3	105	0.00	12.47
95	M	chlorobenzene	1.074	1.075	-0.1	106	0.00	12.94
96	M	1,1,1,2-tetrachloroethane	0.415	0.409	1.4	99	0.00	13.00
97	M	ethylbenzene	1.847	1.773	4.0	104	0.00	12.97
98	M	m,p-xylene	0.682	0.665	2.5	104	0.00	13.09
99	M	o-xylene	0.709	0.695	2.0	102	0.00	13.55
100	M	styrene	1.164	1.173	-0.8	104	0.00	13.56
101	M	bromoform	0.309	0.327	-5.8	104	0.00	13.89
102	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	107	0.00	15.44
103	M	isopropylbenzene	3.281	3.157	3.8	101	0.00	13.91
104	S	4-bromofluorobenzene (s)	0.920	0.984	-7.0	115	0.00	14.16
105		cyclohexanone	0.054	0.036	33.3#	68	0.00	14.15
106	M	bromobenzene	0.849	0.824	2.9	105	0.00	14.37
107	M	1,1,2,2-tetrachloroethane	1.043	0.970	7.0	99	0.00	14.30
108	M	trans-1,4-dichloro-2-bute	0.277	0.272	1.8	100	0.00	14.34
109	M	1,2,3-trichloropropane	0.216	0.217	-0.5	103	0.00	14.38
110	M	n-propylbenzene	3.820	3.837	-0.4	108	0.00	14.36
111		4-ETHYLTOLUENE		----------NA----------				
112	M	2-chlorotoluene	0.819	0.768	6.2	103	0.00	14.54
113	M	4-chlorotoluene	2.418	2.288	5.4	103	0.00	14.65
114	M	1,3,5-trimethylbenzene	2.873	2.767	3.7	102	0.00	14.52
115	M	tert-butylbenzene	2.491	2.414	3.1	101	0.00	14.91
116	M	pentachloroethane	0.509	0.512	-0.6	100	0.00	15.03
117	M	1,2,4-trimethylbenzene	2.873	2.901	-1.0	108	0.00	14.96
118	M	sec-butylbenzene	3.922	3.798	3.2	102	0.00	15.14
119	M	1,3-dichlorobenzene	1.746	1.672	4.2	104	0.00	15.38
120	M	p-isopropyltoluene	3.327	3.263	1.9	104	0.00	15.27
121	M	1,4-dichlorobenzene	1.723	1.708	0.9	104	0.00	15.47
122		benzyl chloride	1.929	1.917	0.6	105	0.00	15.61
123	M	1,2-dichlorobenzene	1.790	1.741	2.7	106	0.00	15.91
124		1,4-DIETHYLBENZENE		----------NA----------				
125	M	n-butylbenzene	1.792	1.775	0.9	106	0.00	15.73
126		1,2,4,5-TETRAMETHYLBENZEN		----------NA----------				
127	M	1,2-dibromo-3-chloropropa	0.247	0.234	5.3	107	0.00	16.78
128		1,3,5-TRICHLOROBENZENE	1.693	1.759	-3.9	107	0.00	16.94
129	M	1,2,4-trichlorobenzene	1.577	1.613	-2.3	103	0.00	17.62
130	M	hexachlorobutadiene	0.770	0.768	0.3	103	0.00	17.71
131	M	naphthalene	3.696	3.712	-0.4	101	0.00	17.93
132	M	1,2,3-trichlorobenzene	1.415	1.450	-2.5	100	0.00	18.19
			True	Calc.	% Drift			
133	m	hexachloroethane	50.000	47.631	4.7	103	0.00	16.17

(#) = Out of Range SPCC's out = 0 CCC's out = 0
4B40658.D M4B1763.M Wed Apr 16 13:05:16 2014 GCMS4B

Initial Calibration Verification

Job Number: JB67153 **Sample:** V4B1763-ICV1763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4B40665.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\MSDChem\1\DATA\4B40665.D Vial: 16
Acq On : 16 Apr 2014 9:01 am Operator: TOANP
Sample : icv1763-50 Inst : MS4B
Misc : MS65913,V4B1763,w,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M4B1763.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update : Wed Apr 16 12:59:24 2014
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1		tert butyl alcohol-d9	1.000	1.000	0.0	118	-0.02	6.88
2	M	tertiary butyl alcohol		----------	NA	----------		
3	M	1,4-dioxane		----------	NA	----------		
4		Ethanol		----------	NA	----------		
5	I	pentafluorobenzene	1.000	1.000	0.0	95	0.00	8.85
6		CHLOROTRIFLUOROETHENE		----------	NA	----------		
7	M	chlorodifluoromethane		----------	NA	----------		
8	M	dichlorodifluoromethane		----------	NA	----------		
9		Freon 114		----------	NA	----------		
10	M	chloromethane		----------	NA	----------		
11	M	vinyl chloride		----------	NA	----------		
12	M	bromomethane		----------	NA	----------		
13	M	chloroethane		----------	NA	----------		
14		vinyl bromide		----------	NA	----------		
15	M	trichlorofluoromethane		----------	NA	----------		
16		1,3-butadiene		----------	NA	----------		
17		Pentane		----------	NA	----------		
18		freon 123a		----------	NA	----------		
19	M	ethyl ether		----------	NA	----------		
20		2-chloropropane		----------	NA	----------		
21	M	acrolein		----------	NA	----------		
		----------	True	Calc.	% Drift	----------		
22	M	1,1-dichloroethene		----------	NA	----------		
		----------	AvgRF	CCRF	% Dev	----------		
23	M	acetone		----------	NA	----------		
24	M	allyl chloride		----------	NA	----------		
25	M	acetonitrile		----------	NA	----------		
26	M	iodomethane		----------	NA	----------		
27	M	carbon disulfide		----------	NA	----------		
28	M	methylene chloride		----------	NA	----------		
29	M	methyl acetate		----------	NA	----------		
		----------	True	Calc.	% Drift	----------		
30		1-chloropropane		----------	NA	----------		
		----------	AvgRF	CCRF	% Dev	----------		
31	M	methyl tert butyl ether		----------	NA	----------		
32	M	trans-1,2-dichloroethene		----------	NA	----------		
33	M	di-isopropyl ether		----------	NA	----------		

Initial Calibration Verification

Job Number: JB67153 **Sample:** V4B1763-ICV1763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4B40665.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

34	M	2-butanone		----------NA----------				
35	M	1,1-dichloroethane		----------NA----------				
36	M	chloroprene		----------NA----------				
37	M	acrylonitrile		----------NA----------				
38	M	vinyl acetate		----------NA----------				
39	M	ethyl tert-butyl ether		----------NA----------				
40	M	ethyl acetate		----------NA----------				
41	M	2,2-dichloropropane		----------NA----------				
42	M	cis-1,2-dichloroethene		----------NA----------				
43		methylacrylate		----------NA----------				
44	M	propionitrile		----------NA----------				
45	M	bromochloromethane		----------NA----------				
46	M	tetrahydrofuran		----------NA----------				
47	M	chloroform		----------NA----------				
48	M	T-BUTYL FORMATE		----------NA----------				
49	S	dibromofluoromethane (s)	0.530	0.519	2.1	88	-0.01	8.93
50	S	1,2-dichloroethane-d4 (s)	0.603	0.563	6.6	86	-0.01	9.33
51	M	freon 113		----------NA----------				
52	M	methacrylonitrile		----------NA----------				
53	M	1,1,1-trichloroethane		----------NA----------				
54	M	cyclohexane		----------NA----------				
55		iso-butyl alcohol		----------NA----------				
56	I	1,4-difluorobenzene	1.000	1.000	0.0	90	0.00	9.71
57	M	epichlorohydrin		----------NA----------				
58	M	n-butyl alcohol		----------NA----------				
59	M	carbon tetrachloride		----------NA----------				
60	M	1,1-dichloropropene		----------NA----------				
61	M	hexane	0.393	0.406	-3.3	95	-0.01	7.44
62		Tert Amyl alcohol		----------NA----------				
63	M	benzene		----------NA----------				
64	m	iso-octane		----------NA----------				
65	M	tert-amyl methyl ether		----------NA----------				
66	M	heptane		----------NA----------				
67	M	isopropyl acetate		----------NA----------				
68	M	1,2-dichloroethane		----------NA----------				
69	M	trichloroethene		----------NA----------				
70		Tert-amyl Ethyl Ether		----------NA----------				
71		ethyl acrylate		----------NA----------				
72	M	2-nitropropane		----------NA----------				
73	M	2-chloroethyl vinyl ether		----------NA----------				
74	M	methyl methacrylate		----------NA----------				
75	M	1,2-dichloropropane		----------NA----------				
76	M	dibromomethane		----------NA----------				
77	M	methylcyclohexane		----------NA----------				
78	M	bromodichloromethane		----------NA----------				
79	M	cis-1,3-dichloropropene		----------NA----------				
80	S	toluene-d8 (s)	1.225	1.249	-2.0	91	0.00	11.30
81	M	4-methyl-2-pentanone		----------NA----------				
82	M	toluene		----------NA----------				
		----------	True	Calc.	% Drift	----------		
83	M	3-methyl-1-butanol		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
84	M	trans-1,3-dichloropropene		----------NA----------				
85	M	ethyl methacrylate		----------NA----------				
86	M	1,1,2-trichloroethane		----------NA----------				
87	M	2-hexanone		----------NA----------				

Initial Calibration Verification

Job Number: JB67153 **Sample:** V4B1763-ICV1763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4B40665.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

88	I	chlorobenzene-d5	1.000	1.000	0.0	97	0.00	12.90
89	M	tetrachloroethene		----------NA----------				
90	M	1,3-dichloropropane		----------NA----------				
91	M	butyl acetate		----------NA----------				
		----------	True	Calc.	% Drift	----------		
92	M	3,3-DIMETHYL-1-BUTANOL		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
93	M	dibromochloromethane		----------NA----------				
94	M	1,2-dibromoethane		----------NA----------				
95	M	chlorobenzene		----------NA----------				
96	M	1,1,1,2-tetrachloroethane		----------NA----------				
97	M	ethylbenzene		----------NA----------				
98	M	m,p-xylene		----------NA----------				
99	M	o-xylene		----------NA----------				
100	M	styrene		----------NA----------				
101	M	bromoform		----------NA----------				
102	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	105	0.00	15.44
103	M	isopropylbenzene		----------NA----------				
104	S	4-bromofluorobenzene (s)	0.920	0.846	8.0	97	0.00	14.15
105		cyclohexanone		----------NA----------				
106	M	bromobenzene		----------NA----------				
107	M	1,1,2,2-tetrachloroethane		----------NA----------				
108	M	trans-1,4-dichloro-2-bute		----------NA----------				
109	M	1,2,3-trichloropropane		----------NA----------				
110	M	n-propylbenzene		----------NA----------				
111		4-ETHYLTOLUENE		----------NA----------				
112	M	2-chlorotoluene		----------NA----------				
113	M	4-chlorotoluene		----------NA----------				
114	M	1,3,5-trimethylbenzene		----------NA----------				
115	M	tert-butylbenzene		----------NA----------				
116	M	pentachloroethane		----------NA----------				
117	M	1,2,4-trimethylbenzene		----------NA----------				
118	M	sec-butylbenzene		----------NA----------				
119	M	1,3-dichlorobenzene		----------NA----------				
120	M	p-isopropyltoluene		----------NA----------				
121	M	1,4-dichlorobenzene		----------NA----------				
122		benzyl chloride		----------NA----------				
123	M	1,2-dichlorobenzene		----------NA----------				
124		1,4-DIETHYLBENZENE		----------NA----------				
125	M	n-butylbenzene		----------NA----------				
126		1,2,4,5-TETRAMETHYLBENZEN		----------NA----------				
127	M	1,2-dibromo-3-chloropropa		----------NA----------				
128		1,3,5-TRICHLOROBENZENE		----------NA----------				
129	M	1,2,4-trichlorobenzene		----------NA----------				
130	M	hexachlorobutadiene		----------NA----------				
131	M	naphthalene		----------NA----------				
132	M	1,2,3-trichlorobenzene		----------NA----------				
		----------	True	Calc.	% Drift	----------		
133	m	hexachloroethane		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
4B40658.D M4B1763.M Wed Apr 16 13:09:17 2014 GCMS4B

Continuing Calibration Summary

Job Number: JB67153 **Sample:** V4B1802-CC1763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4B41625.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\MSDChem\1\DATA\4B41625.D Vial: 2
Acq On : 20 May 2014 9:34 am Operator: TOANP
Sample : cc1763-50 Inst : MS4B
Misc : MS67789,V4B1802,w,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4B1763.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update : Wed Apr 16 12:59:24 2014
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1		tert butyl alcohol-d9	1.000	1.000	0.0	112	-0.03	6.88
2	M	tertiary butyl alcohol	1.196	1.150	3.8	112	-0.03	6.97
3	M	1,4-dioxane	0.105	0.074	29.5#	77	-0.02	10.40
4		Ethanol		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	81	-0.01	8.84
6		CHLOROTRIFLUOROETHENE		----------NA----------				
7	M	chlorodifluoromethane	0.847	0.659	22.2#	63	0.00	3.89
8	M	dichlorodifluoromethane	0.903	0.803	11.1	70	0.00	3.87
9		Freon 114		----------NA----------				
10	M	chloromethane	0.344	0.322	6.4	75	0.00	4.18
11	M	vinyl chloride	1.062	0.968	8.9	72	0.00	4.43
12	M	bromomethane	0.564	0.663	-17.6	104	0.00	5.01
13	M	chloroethane	0.371	0.393	-5.9	84	0.00	5.13
14		vinyl bromide	0.623	0.706	-13.3	87	0.00	5.48
15	M	trichlorofluoromethane	0.997	0.927	7.0	74	0.00	5.57
16		1,3-butadiene	0.484	0.561	-15.9	89	0.00	4.43
17		Pentane	1.015	1.056	-4.0	85	0.00	5.62
18		freon 123a		----------NA----------				
19	M	ethyl ether	0.317	0.323	-1.9	78	-0.02	5.87
20		2-chloropropane	1.124	1.051	6.5	74	-0.02	6.09
21	M	acrolein	0.148	0.174	-17.6	91	-0.02	6.15
		----------	True	Calc.	% Drift	----------		
22	M	1,1-dichloroethene	50.000	46.753	6.5	75	0.00	6.30
		----------	AvgRF	CCRF	% Dev	----------		
23	M	acetone	0.068	0.086	-26.5#	101	-0.01	6.35
24	M	allyl chloride	0.361	0.340	5.8	74	-0.02	6.73
25	M	acetonitrile	0.064	0.077	-20.3#	97	-0.01	6.77
26	M	iodomethane	1.243	1.248	-0.4	77	-0.01	6.56
27	M	carbon disulfide	2.564	2.400	6.4	74	0.00	6.68
28	M	methylene chloride	0.759	0.744	2.0	80	-0.02	6.93
29	M	methyl acetate	0.104	0.127	-22.1#	93	-0.01	6.72
		----------	True	Calc.	% Drift	----------		
30		1-chloropropane	50.000	48.750	2.5	79	-0.01	6.94
		----------	AvgRF	CCRF	% Dev	----------		
31	M	methyl tert butyl ether	2.062	2.133	-3.4	84	-0.02	7.16
32	M	trans-1,2-dichloroethene	0.652	0.589	9.7	75	-0.01	7.23
33	M	di-isopropyl ether	2.102	2.001	4.8	78	-0.01	7.66

Continuing Calibration Summary

Job Number: JB67153 **Sample:** V4B1802-CC1763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4B41625.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

34	M	2-butanone	0.079	0.086	-8.9	83	-0.02	8.37
35	M	1,1-dichloroethane	1.175	1.132	3.7	77	-0.01	7.75
36	M	chloroprene	0.822	0.759	7.7	72	-0.01	7.83
37	M	acrylonitrile	0.262	0.299	-14.1	90	-0.01	7.24
38	M	vinyl acetate	0.095	0.094	1.1	77	-0.02	7.70
39	M	ethyl tert-butyl ether	2.196	2.116	3.6	78	-0.02	8.08
40	M	ethyl acetate	0.095	0.094	1.1	80	-0.02	8.36
41	M	2,2-dichloropropane	0.923	0.980	-6.2	85	0.00	8.42
42	M	cis-1,2-dichloroethene	0.675	0.655	3.0	78	-0.01	8.41
43		methylacrylate	0.098	0.100	-2.0	78	-0.02	8.44
44	M	propionitrile	0.109	0.122	-11.9	89	-0.02	8.51
45	M	bromochloromethane	0.310	0.326	-5.2	78	-0.01	8.70
46	M	tetrahydrofuran	0.264	0.275	-4.2	88	-0.02	8.72
47	M	chloroform	0.669	0.678	-1.3	80	-0.02	8.74
48	M	T-BUTYL FORMATE	0.615	0.709	-15.3	94	-0.01	8.76
49	S	dibromofluoromethane (s)	0.530	0.558	-5.3	80	-0.02	8.93
50	S	1,2-dichloroethane-d4 (s)	0.603	0.620	-2.8	81	-0.02	9.32
51	M	freon 113	0.464	0.412	11.2	70	0.00	6.24
52	M	methacrylonitrile	0.424	0.423	0.2	82	-0.02	8.65
53	M	1,1,1-trichloroethane	0.859	0.878	-2.2	78	0.00	8.97
54	M	cyclohexane	0.978	0.929	5.0	73	0.00	9.01
55		iso-butyl alcohol	0.036	0.043	-19.4	97	-0.02	9.13
56	I	1,4-difluorobenzene	1.000	1.000	0.0	76	-0.01	9.70
57	M	epichlorohydrin	0.046	0.052	-13.0	87	-0.01	10.95
58	M	n-butyl alcohol	0.016	0.019	-18.7	90	-0.02	9.82
59	M	carbon tetrachloride	0.470	0.516	-9.8	78	0.00	9.14
60	M	1,1-dichloropropene	0.496	0.457	7.9	69	-0.01	9.11
61	M	hexane	0.393	0.299	23.9#	59	-0.01	7.44
62		Tert Amyl alcohol		----------NA----------				
63	M	benzene	1.519	1.380	9.2	71	-0.01	9.37
64	m	iso-octane	1.408	1.234	12.4	64	0.00	9.31
65	M	tert-amyl methyl ether	0.288	0.309	-7.3	81	-0.01	9.36
66	M	heptane	0.211	0.160	24.2#	57	0.00	9.45
67	M	isopropyl acetate	0.173	0.181	-4.6	78	-0.01	9.26
68	M	1,2-dichloroethane	0.472	0.494	-4.7	79	-0.02	9.41
69	M	trichloroethene	0.364	0.332	8.8	67	-0.01	10.02
70		Tert-amyl Ethyl Ether		----------NA----------				
71		ethyl acrylate	0.505	0.535	-5.9	79	-0.02	10.01
72	M	2-nitropropane	0.160	0.177	-10.6	85	-0.02	10.82
73	M	2-chloroethyl vinyl ether	0.267	0.218	18.4	64	-0.01	10.79
74	M	methyl methacrylate	0.094	0.100	-6.4	76	-0.01	10.26
75	M	1,2-dichloropropane	0.373	0.351	5.9	69	-0.01	10.30
76	M	dibromomethane	0.239	0.241	-0.8	73	-0.01	10.47
77	M	methylcyclohexane	0.652	0.584	10.4	66	0.00	10.21
78	M	bromodichloromethane	0.479	0.485	-1.3	73	-0.01	10.58
79	M	cis-1,3-dichloropropene	0.622	0.562	9.6	68	-0.01	11.02
80	S	toluene-d8 (s)	1.225	1.148	6.3	71	-0.01	11.29
81	M	4-methyl-2-pentanone	0.178	0.196	-10.1	81	-0.02	11.10
82	M	toluene	0.883	0.762	13.7	67	0.00	11.37
		----------	True	Calc.	% Drift	----------		
83	M	3-methyl-1-butanol	1000.000	1287.678	-28.8#	100	-0.01	11.13
		----------	AvgRF	CCRF	% Dev	----------		
84	M	trans-1,3-dichloropropene	0.570	0.519	8.9	71	-0.01	11.60
85	M	ethyl methacrylate	0.489	0.479	2.0	74	0.00	11.55
86	M	1,1,2-trichloroethane	0.279	0.269	3.6	70	-0.01	11.83
87	M	2-hexanone	0.159	0.176	-10.7	82	0.00	11.98

Continuing Calibration Summary

Job Number: JB67153 **Sample:** V4B1802-CC1763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4B41625.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

88	I	chlorobenzene-d5	1.000	1.000	0.0	74	0.00	12.89
89	M	tetrachloroethene	0.317	0.276	12.9	63	-0.01	11.96
90	M	1,3-dichloropropane	0.608	0.581	4.4	70	-0.01	12.02
91	M	butyl acetate	0.302	0.315	-4.3	80	0.00	12.04
			True	Calc.	% Drift			
92	M	3,3-DIMETHYL-1-BUTANOL	500.000	664.258	-32.9#	100	-0.01	12.16
			AvgRF	CCRF	% Dev			
93	M	dibromochloromethane	0.403	0.410	-1.7	70	-0.01	12.30
94	M	1,2-dibromoethane	0.391	0.399	-2.0	74	-0.01	12.46
95	M	chlorobenzene	1.074	0.984	8.4	67	-0.01	12.93
96	M	1,1,1,2-tetrachloroethane	0.415	0.449	-8.2	75	-0.01	12.99
97	M	ethylbenzene	1.847	1.697	8.1	69	0.00	12.97
98	M	m,p-xylene	0.682	0.622	8.8	67	-0.01	13.08
99	M	o-xylene	0.709	0.685	3.4	69	-0.01	13.54
100	M	styrene	1.164	1.138	2.2	69	-0.01	13.55
101	M	bromoform	0.309	0.345	-11.7	76	-0.01	13.88
102	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	77	0.00	15.44
103	M	isopropylbenzene	3.281	2.982	9.1	69	0.00	13.90
104	S	4-bromofluorobenzene (s)	0.920	0.873	5.1	73	-0.01	14.15
105		cyclohexanone	0.054	0.183	-238.9#	243#	-0.01	14.14
106	M	bromobenzene	0.849	0.780	8.1	71	0.00	14.37
107	M	1,1,2,2-tetrachloroethane	1.043	1.061	-1.7	78	0.00	14.28
108	M	trans-1,4-dichloro-2-bute	0.277	0.330	-19.1	87	-0.01	14.33
109	M	1,2,3-trichloropropane	0.216	0.247	-14.4	84	-0.01	14.37
110	M	n-propylbenzene	3.820	3.397	11.1	69	0.00	14.35
111		4-ETHYLTOLUENE		----------NA----------				
112	M	2-chlorotoluene	0.819	0.707	13.7	68	0.00	14.53
113	M	4-chlorotoluene	2.418	2.221	8.1	72	0.00	14.64
114	M	1,3,5-trimethylbenzene	2.873	2.608	9.2	69	0.00	14.52
115	M	tert-butylbenzene	2.491	2.186	12.2	65	-0.01	14.90
116	M	pentachloroethane	0.509	0.536	-5.3	75	-0.01	15.02
117	M	1,2,4-trimethylbenzene	2.873	2.608	9.2	69	0.00	14.95
118	M	sec-butylbenzene	3.922	3.387	13.6	65	0.00	15.14
119	M	1,3-dichlorobenzene	1.746	1.610	7.8	72	-0.01	15.37
120	M	p-isopropyltoluene	3.327	2.835	14.8	65	-0.01	15.26
121	M	1,4-dichlorobenzene	1.723	1.648	4.4	72	-0.01	15.46
122		benzyl chloride	1.929	2.357	-22.2#	92	0.00	15.60
123	M	1,2-dichlorobenzene	1.790	1.674	6.5	73	0.00	15.91
124		1,4-DIETHYLBENZENE		----------NA----------				
125	M	n-butylbenzene	1.792	1.558	13.1	67	0.00	15.72
126		1,2,4,5-TETRAMETHYLBENZEN		----------NA----------				
127	M	1,2-dibromo-3-chloropropa	0.247	0.276	-11.7	90	-0.01	16.77
128		1,3,5-TRICHLOROBENZENE	1.693	1.537	9.2	67	0.00	16.93
129	M	1,2,4-trichlorobenzene	1.577	1.534	2.7	70	-0.01	17.61
130	M	hexachlorobutadiene	0.770	0.565	26.6#	54	0.00	17.71
131	M	naphthalene	3.696	4.179	-13.1	81	-0.01	17.92
132	M	1,2,3-trichlorobenzene	1.415	1.506	-6.4	74	0.00	18.18
			True	Calc.	% Drift			
133	m	hexachloroethane	50.000	42.226	15.5	65	0.00	16.17

(#) = Out of Range SPCC's out = 0 CCC's out = 0
4B40658.D M4B1763.M Tue May 20 16:19:58 2014 GCMS4B

New Jersey ACCUTEST LABORATORIES

GC/MS Volatiles

Raw Data

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41634.D
Acq On : 20 May 2014 2:53 pm
Operator : TOANP
Sample : jb67153-1
Misc : MS67717,V4B1802,w,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 20 16:26:59 2014
Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Apr 16 12:59:24 2014
Response via : Initial Calibration

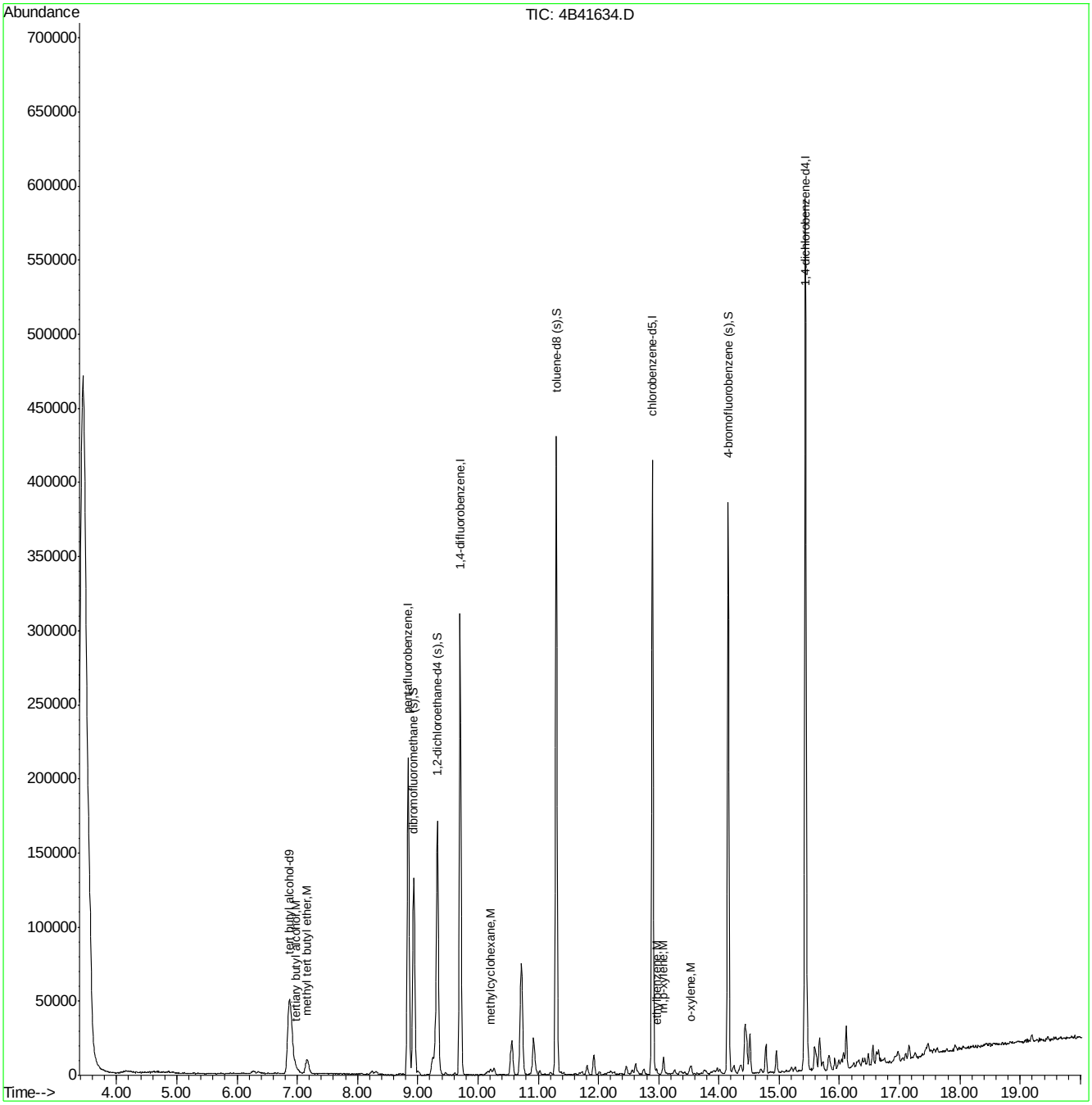
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.87	65	162384	500.00	ug/L	-0.04
5) pentafluorobenzene	8.84	168	183898	50.00	ug/L	-0.01
56) 1,4-difluorobenzene	9.70	114	285952	50.00	ug/L	-0.01
88) chlorobenzene-d5	12.89	117	255697	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	15.44	152	159929	50.00	ug/L	0.00
System Monitoring Compounds						
49) dibromofluoromethane (s)	8.93	113	98471	50.50	ug/L	-0.01
Spiked Amount 50.000	Range 79 - 120		Recovery = 101.00%			
50) 1,2-dichloroethane-d4 (s)	9.33	65	113114	50.99	ug/L	-0.01
Spiked Amount 50.000	Range 72 - 123		Recovery = 101.98%			
80) toluene-d8 (s)	11.30	98	320504	45.74	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 91.48%			
104) 4-bromofluorobenzene (s)	14.15	95	144806	49.21	ug/L	-0.01
Spiked Amount 50.000	Range 74 - 119		Recovery = 98.42%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	6.98	59	5382	13.85	ug/L	86
31) methyl tert butyl ether	7.16	73	15728	2.07	ug/L	96
77) methylcyclohexane	10.21	83	2197	0.59	ug/L	78
97) ethylbenzene	12.96	91	2777	0.29	ug/L	91
98) m,p-xylene	13.08	106	3163	0.91	ug/L	98
99) o-xylene	13.53	106	1137	0.31	ug/L	85

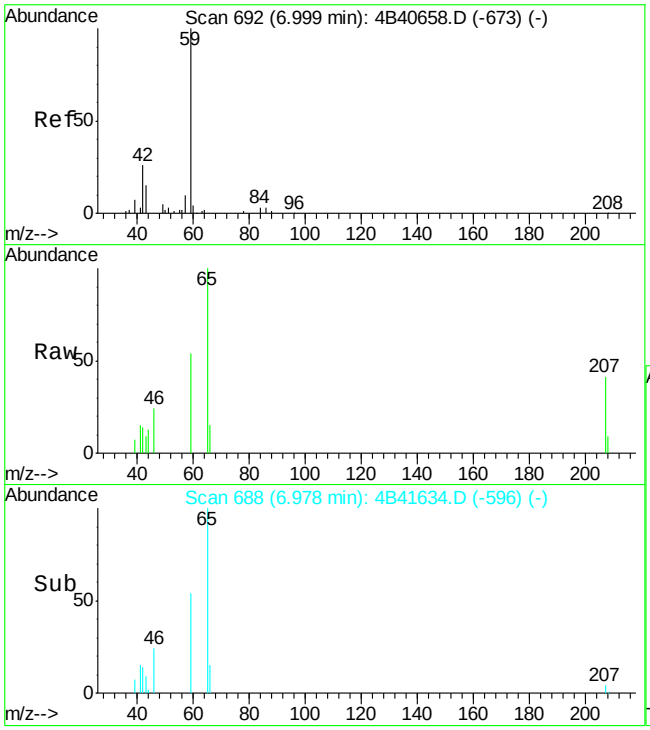
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41634.D
Acq On : 20 May 2014 2:53 pm
Operator : TOANP
Sample : jb67153-1
Misc : MS67717,V4B1802,w,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 20 16:26:59 2014
Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Apr 16 12:59:24 2014
Response via : Initial Calibration

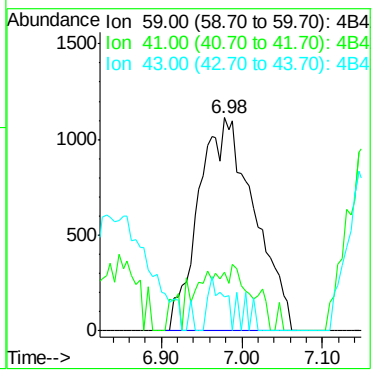


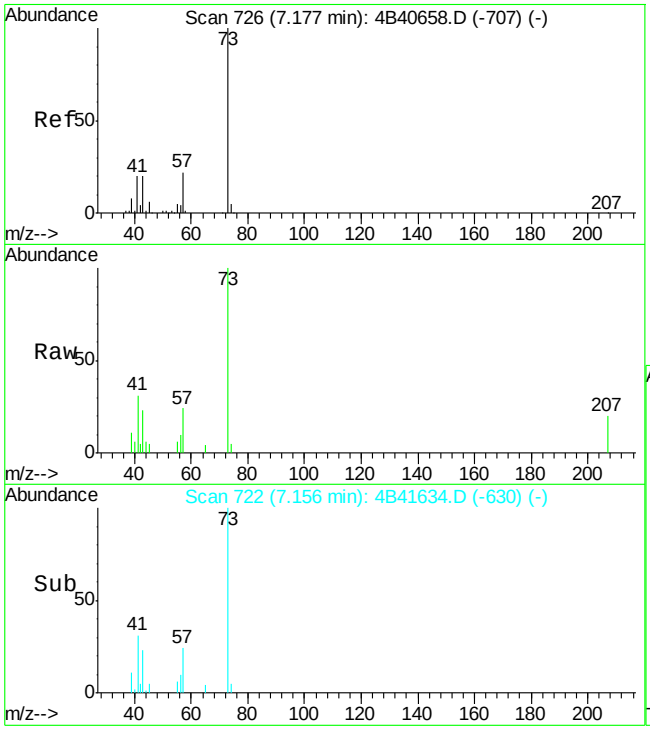


#2
tertiary butyl alcohol
Concen: 13.85 ug/L
RT: 6.98 min Scan# 688
Delta R.T. -0.02 min
Lab File: 4B41634.D
Acq: 20 May 2014 2:53 pm

Tgt Ion: 59 Resp: 5382

Ion	Ratio	Lower	Upper
59	100		
41	27.5	0.0	33.1
43	16.2	0.0	45.4

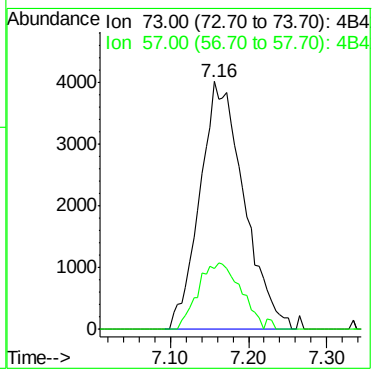


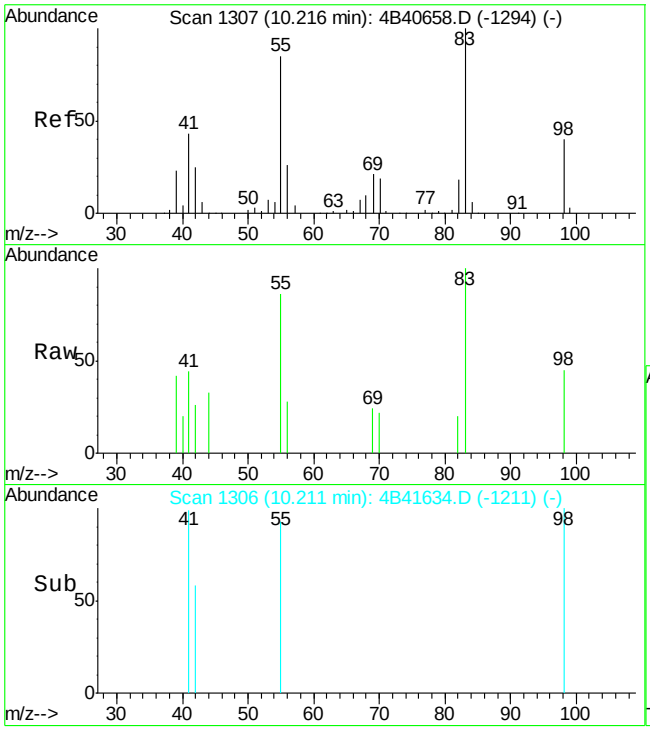


#31
methyl tert butyl ether
Concen: 2.07 ug/L
RT: 7.16 min Scan# 722
Delta R.T. -0.02 min
Lab File: 4B41634.D
Acq: 20 May 2014 2:53 pm

Tgt Ion: 73 Resp: 15728

Ion	Ratio	Lower	Upper
73	100		
57	24.4	0.0	66.9

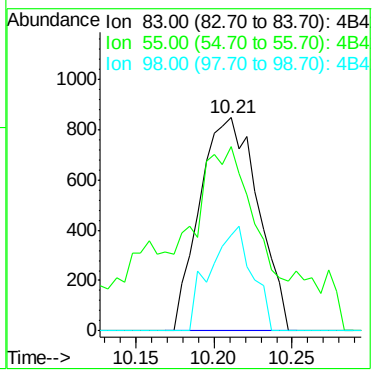


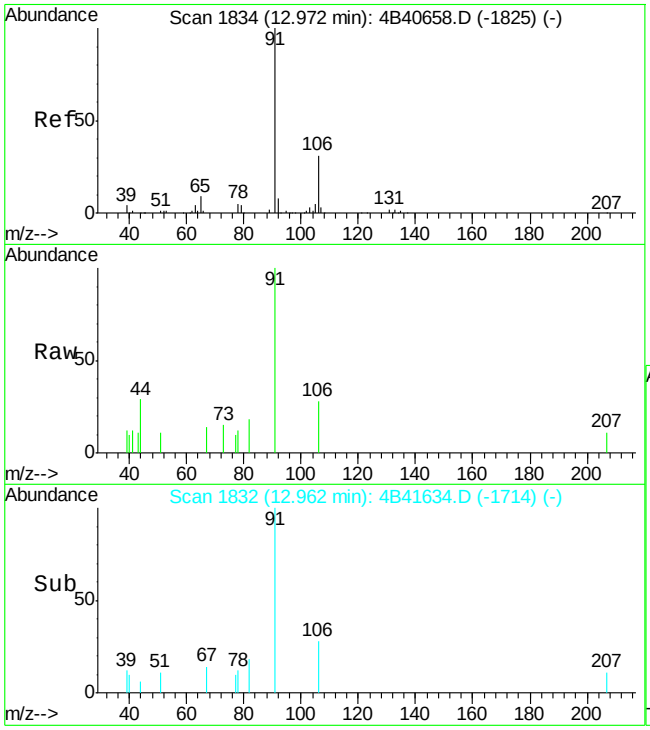


#77
methylcyclohexane
Concen: 0.59 ug/L
RT: 10.21 min Scan# 1306
Delta R.T. -0.01 min
Lab File: 4B41634.D
Acq: 20 May 2014 2:53 pm

Tgt Ion: 83 Resp: 2197

Ion	Ratio	Lower	Upper
83	100		
55	58.2	54.7	114.7
98	44.7	10.3	70.3

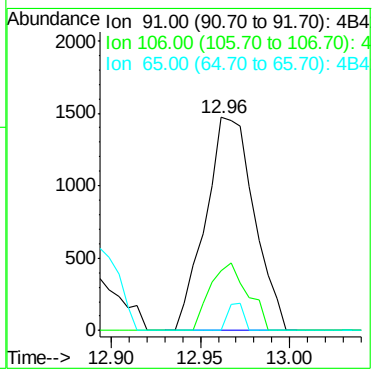


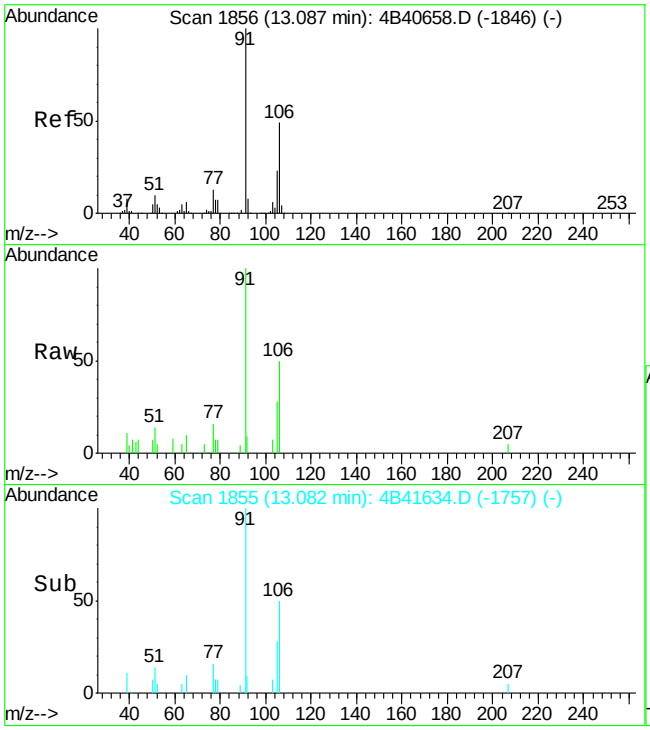


#97
ethylbenzene
Concen: 0.29 ug/L
RT: 12.96 min Scan# 1832
Delta R.T. -0.01 min
Lab File: 4B41634.D
Acq: 20 May 2014 2:53 pm

Tgt Ion: 91 Resp: 2777

Ion	Ratio	Lower	Upper
91	100		
106	28.1	0.6	60.6
65	0.0	0.0	38.9

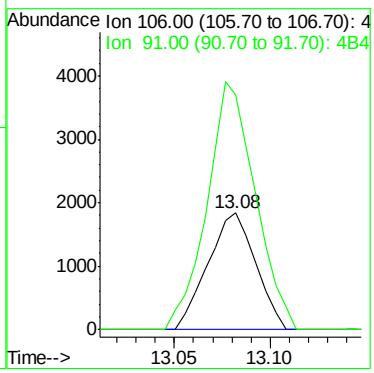


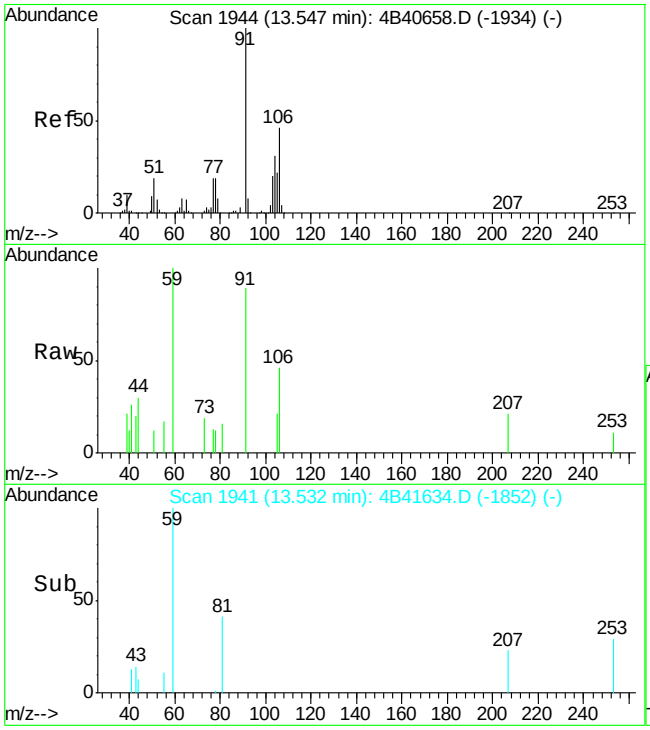


#98
m,p-xylene
Concen: 0.91 ug/L
RT: 13.08 min Scan# 1855
Delta R.T. -0.01 min
Lab File: 4B41634.D
Acq: 20 May 2014 2:53 pm

Tgt Ion:106 Resp: 3163

Ion	Ratio	Lower	Upper
106	100		
91	200.4	173.6	233.6

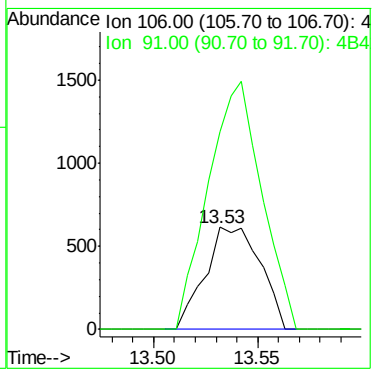




#99
o-xylene
Concen: 0.31 ug/L
RT: 13.53 min Scan# 1941
Delta R.T. -0.02 min
Lab File: 4B41634.D
Acq: 20 May 2014 2:53 pm

Tgt Ion:106 Resp: 1137

Ion	Ratio	Lower	Upper
106	100		
91	192.8	186.8	246.8



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\
Data File : 4B41634.D
Acq On : 20 May 2014 2:53 pm
Operator : TOANP
Sample : jb67153-1
Misc : MS67717,V4B1802,w,,,,1
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.05 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.443	3	12	70	rVB	468030	3377233	100.00%	32.391%
2	6.267	541	552	562	rBV4	2075	6854	0.20%	0.066%
3	6.356	562	569	574	rBV4	1293	3166	0.09%	0.030%
4	6.874	650	668	708	rVV2	50497	288030	8.53%	2.762%
5	7.167	708	724	741	rVV2	9411	39542	1.17%	0.379%
6	8.244	920	930	935	rBV5	2335	6649	0.20%	0.064%
7	8.296	935	940	951	rVV4	2129	6496	0.19%	0.062%
8	8.840	1033	1044	1054	rVV	214168	497424	14.73%	4.771%
9	8.934	1054	1062	1073	rVV	132947	310356	9.19%	2.977%
10	9.002	1073	1075	1086	rVB5	2874	5499	0.16%	0.053%
11	9.253	1112	1123	1124	rBV3	12056	25298	0.75%	0.243%
12	9.327	1125	1137	1157	rVB3	171678	449954	13.32%	4.315%
13	9.457	1157	1162	1170	rBV3	1760	3708	0.11%	0.036%
14	9.620	1186	1193	1199	rBV2	1756	2944	0.09%	0.028%
15	9.703	1199	1209	1226	rVV	311528	646633	19.15%	6.202%
16	10.158	1285	1296	1301	rBV5	2199	7617	0.23%	0.073%
17	10.211	1301	1306	1311	rVV4	3937	9753	0.29%	0.094%
18	10.263	1311	1316	1328	rVB2	4499	12050	0.36%	0.116%
19	10.561	1361	1373	1384	rBV4	23432	62150	1.84%	0.596%
20	10.723	1388	1404	1418	rBV	75200	206040	6.10%	1.976%
21	10.922	1425	1442	1455	rBV2	25475	72281	2.14%	0.693%
22	11.026	1455	1462	1470	rVV5	2666	6359	0.19%	0.061%
23	11.194	1488	1494	1502	rBV5	1693	4288	0.13%	0.041%
24	11.298	1502	1514	1525	rVV	430685	834206	24.70%	8.001%
25	11.366	1525	1527	1533	rVV3	2361	3649	0.11%	0.035%
26	11.419	1534	1537	1545	rVV4	1676	2639	0.08%	0.025%
27	11.722	1590	1595	1603	rVV3	2438	5310	0.16%	0.051%
28	11.811	1603	1612	1623	rVV2	6611	14565	0.43%	0.140%
29	11.926	1626	1634	1643	rBV2	13377	30315	0.90%	0.291%
30	12.020	1643	1652	1658	rVB2	2215	5330	0.16%	0.051%
31	12.151	1671	1677	1682	rVV5	1833	4393	0.13%	0.042%
32	12.203	1682	1687	1693	rVV6	2785	6539	0.19%	0.063%
33	12.266	1693	1699	1705	rVB3	1986	4551	0.13%	0.044%
34	12.460	1727	1736	1747	rVV2	5897	14257	0.42%	0.137%

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\
Data File : 4B41634.D
Acq On : 20 May 2014 2:53 pm
Operator : TOANP
Sample : jb67153-1
Misc : MS67717,V4B1802,w,,,,1
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.05 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

35	12.564	1747	1756	1759	rVV3	3373	7527	0.22%	0.072%
36	12.616	1759	1766	1779	rVV3	7927	20064	0.59%	0.192%
37	12.758	1786	1793	1804	rVB4	3898	8180	0.24%	0.078%
38	12.894	1810	1819	1830	rBV	414590	770889	22.83%	7.394%
39	12.962	1830	1832	1844	rVB2	3854	6292	0.19%	0.060%
40	13.077	1844	1854	1869	rBV2	11689	25196	0.75%	0.242%
41	13.260	1883	1889	1895	rBV3	2706	5633	0.17%	0.054%
42	13.349	1900	1906	1908	rBV3	1944	2883	0.09%	0.028%
43	13.432	1918	1922	1929	rVB4	1707	2748	0.08%	0.026%
44	13.532	1929	1941	1949	rBV5	5796	16391	0.49%	0.157%
45	13.772	1965	1987	1999	rBV3	3069	11401	0.34%	0.109%
46	13.872	2001	2006	2010	rBV6	1443	2670	0.08%	0.026%
47	13.914	2010	2014	2017	rVV4	2053	3592	0.11%	0.034%
48	13.966	2017	2024	2030	rVV5	3889	9750	0.29%	0.094%
49	14.013	2030	2033	2042	rVB5	3102	5410	0.16%	0.052%
50	14.149	2045	2059	2071	rBV	385726	698105	20.67%	6.695%
51	14.248	2071	2078	2089	rVB2	5438	12672	0.38%	0.122%
52	14.363	2089	2100	2106	rBV5	5681	17635	0.52%	0.169%
53	14.437	2106	2114	2123	rVV4	33145	100789	2.98%	0.967%
54	14.510	2123	2128	2137	rVB2	26390	50898	1.51%	0.488%
55	14.698	2156	2164	2170	rBV6	2861	6261	0.19%	0.060%
56	14.782	2170	2180	2187	rVB	19601	37297	1.10%	0.358%
57	14.954	2204	2213	2225	rBV	15056	28462	0.84%	0.273%
58	15.117	2238	2244	2248	rBV6	1451	2270	0.07%	0.022%
59	15.205	2254	2261	2266	rBV3	3131	5573	0.17%	0.053%
60	15.263	2266	2272	2280	rVB7	3225	6199	0.18%	0.059%
61	15.436	2291	2305	2323	rBV	588706	1077499	31.90%	10.334%
62	15.587	2326	2334	2344	rBV3	15600	43220	1.28%	0.415%
63	15.671	2344	2350	2356	rVV3	20910	43323	1.28%	0.416%
64	15.728	2357	2361	2371	rVB3	6740	11809	0.35%	0.113%
65	15.828	2371	2380	2391	rBV5	10558	30643	0.91%	0.294%
66	15.922	2391	2398	2404	rBV	8639	14532	0.43%	0.139%
67	15.985	2404	2410	2415	rBV6	6460	12776	0.38%	0.123%
68	16.032	2415	2419	2422	rVV4	5227	8379	0.25%	0.080%
69	16.068	2422	2426	2429	rVV2	9934	15584	0.46%	0.149%
70	16.110	2429	2434	2445	rVB	28791	49217	1.46%	0.472%
71	16.241	2446	2459	2463	rBV7	3644	8897	0.26%	0.085%

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\
Data File : 4B41634.D
Acq On : 20 May 2014 2:53 pm
Operator : TOANP
Sample : jb67153-1
Misc : MS67717,V4B1802,w,,,,1
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.05 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

72	16.325	2463	2475	2481	rVB6	4598	12760	0.38%	0.122%
73	16.382	2481	2486	2489	rBV6	5729	8838	0.26%	0.085%
74	16.424	2490	2494	2499	rVV4	4931	5990	0.18%	0.057%
75	16.476	2499	2504	2511	rVB4	7555	11152	0.33%	0.107%
76	16.560	2513	2520	2526	rBV2	13780	24870	0.74%	0.239%
77	16.618	2526	2531	2534	rVV	8331	13960	0.41%	0.134%
78	16.649	2534	2537	2542	rVV3	9127	13354	0.40%	0.128%
79	16.686	2542	2544	2547	rVV3	3952	3762	0.11%	0.036%
80	16.748	2547	2556	2563	rVB9	3327	9408	0.28%	0.090%
81	16.832	2569	2572	2578	rVB8	2199	3798	0.11%	0.036%
82	16.973	2580	2599	2608	rBV8	7674	33533	0.99%	0.322%
83	17.052	2611	2614	2617	rVB4	1722	2329	0.07%	0.022%
84	17.104	2619	2624	2628	rBV4	3854	5492	0.16%	0.053%
85	17.156	2628	2634	2640	rBV2	8989	16028	0.47%	0.154%
86	17.250	2647	2652	2660	rBV9	3616	7594	0.22%	0.073%
87	17.329	2663	2667	2668	rBV3	1950	2284	0.07%	0.022%
88	17.381	2672	2677	2681	rBV6	2407	3362	0.10%	0.032%
89	17.475	2681	2695	2701	rBV6	8573	31130	0.92%	0.299%
90	17.570	2708	2713	2718	rBV9	3327	5356	0.16%	0.051%
91	17.622	2718	2723	2730	rVV4	3638	7050	0.21%	0.068%
92	17.779	2748	2753	2758	rBV8	2474	4731	0.14%	0.045%
93	17.915	2775	2779	2786	rBV3	4279	9183	0.27%	0.088%
94	18.056	2802	2806	2814	rBV7	2437	5978	0.18%	0.057%
95	18.302	2852	2853	2859	rVB4	1481	2319	0.07%	0.022%
96	18.506	2887	2892	2893	rVB5	2695	3557	0.11%	0.034%
97	18.699	2926	2929	2932	rBV4	1944	2431	0.07%	0.023%
98	19.118	3008	3009	3013	rBV4	2519	2403	0.07%	0.023%
99	19.191	3018	3023	3030	rVB8	4682	9579	0.28%	0.092%
100	19.458	3071	3074	3082	rVB7	3490	7567	0.22%	0.073%

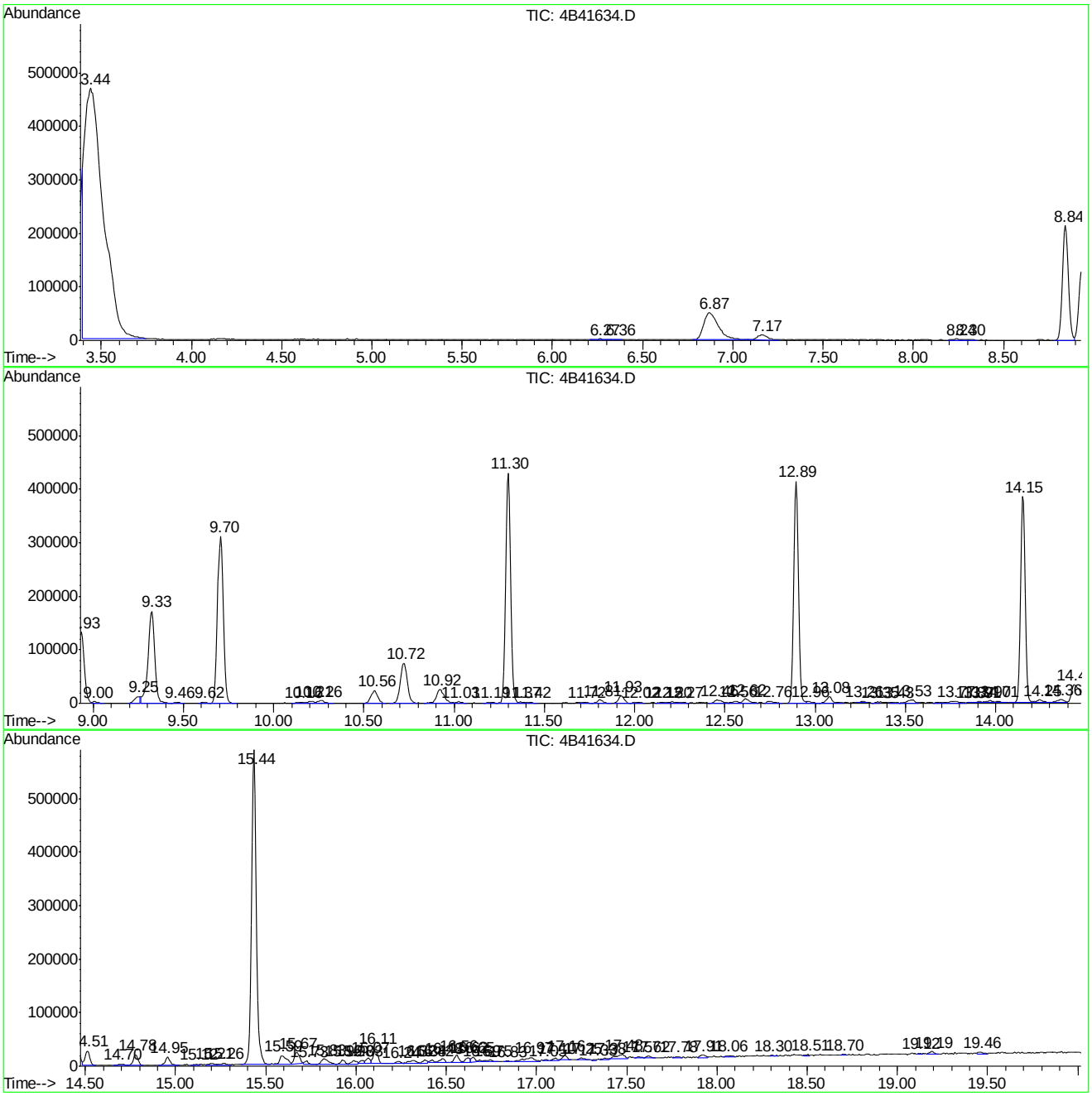
Sum of corrected areas: 10426542

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\
Data File : 4B41634.D
Acq On : 20 May 2014 2:53 pm
Operator : TOANP
Sample : jb67153-1
Misc : MS67717,V4B1802,w,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\
Data File : 4B41634.D
Acq On : 20 May 2014 2:53 pm
Operator : TOANP
Sample : jb67153-1
Misc : MS67717,V4B1802,w,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

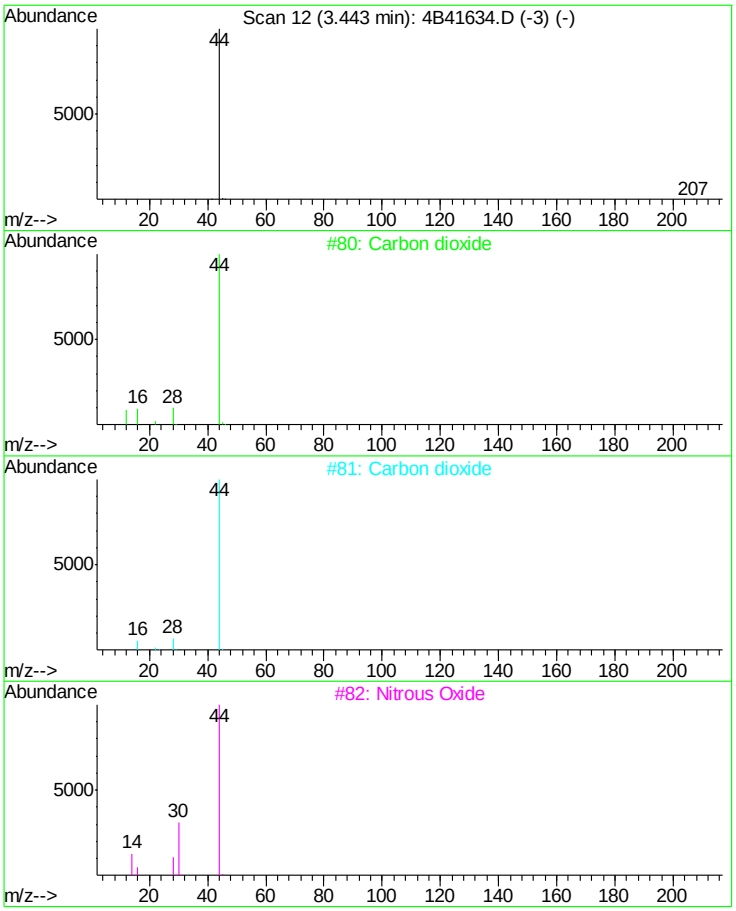
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

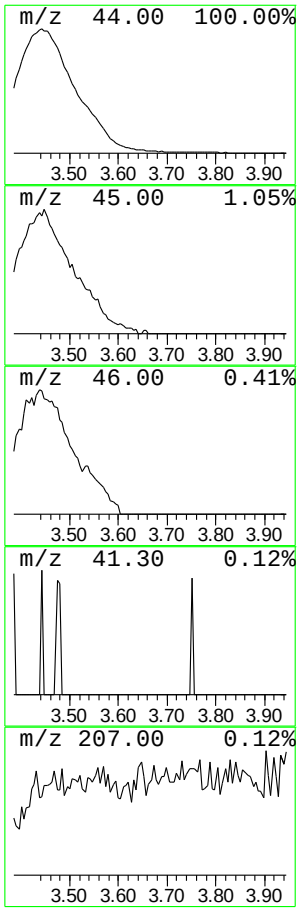
****

Peak Number 1 Carbon dioxide Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.44	339.47 ug/L	3377230	pentafluorobenzene	8.84

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	3
3	Nitrous Oxide	44	N2O	010024-97-2	3
4	Nitrous Oxide	44	N2O	010024-97-2	3
5	Ethylene oxide	44	C2H4O	000075-21-8	2





Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\
Data File : 4B41634.D
Acq On : 20 May 2014 2:53 pm
Operator : TOANP
Sample : jb67153-1
Misc : MS67717,V4B1802,w,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

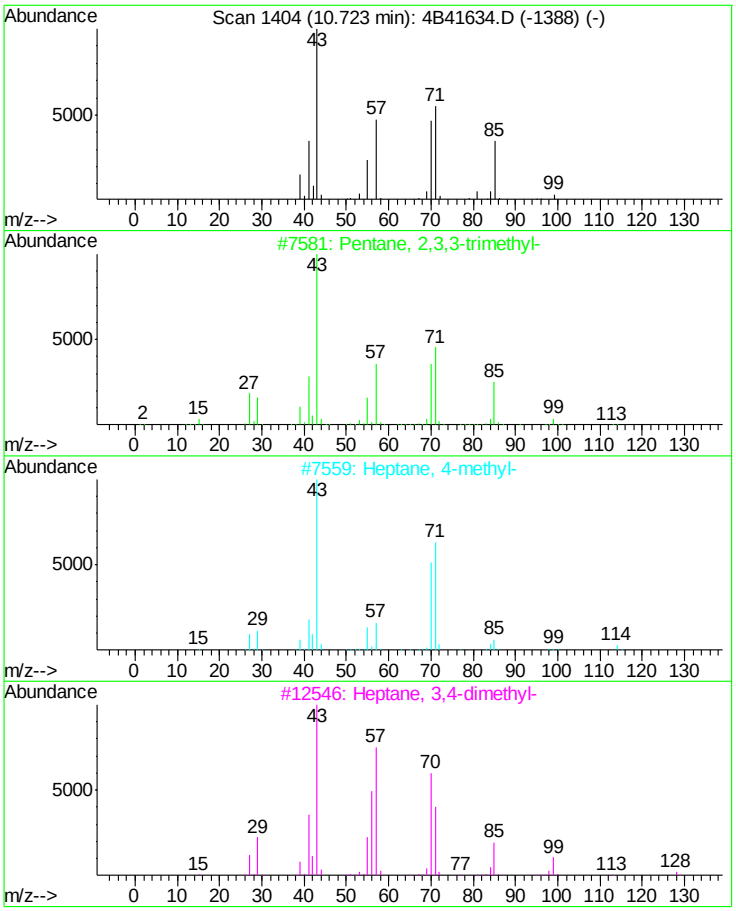
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

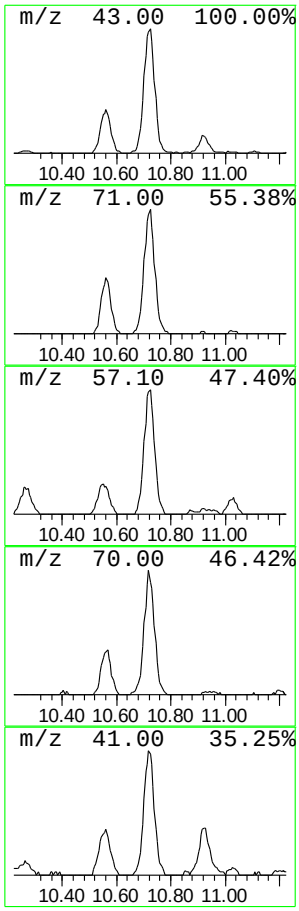
****

Peak Number 2 Pentane, 2,3,3-trimethyl- Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.72	15.93 ug/L	206040	1,4-difluorobenzene	9.70

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	83
2	Heptane, 4-methyl-	114	C8H18	000589-53-7	64
3	Heptane, 3,4-dimethyl-	128	C9H20	000922-28-1	64
4	Octane, 4-methyl-	128	C9H20	002216-34-4	64
5	Hexane, 2,3,4-trimethyl-	128	C9H20	000921-47-1	59





Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\
Data File : 4B41634.D
Acq On : 20 May 2014 2:53 pm
Operator : TOANP
Sample : jb67153-1
Misc : MS67717,V4B1802,w,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

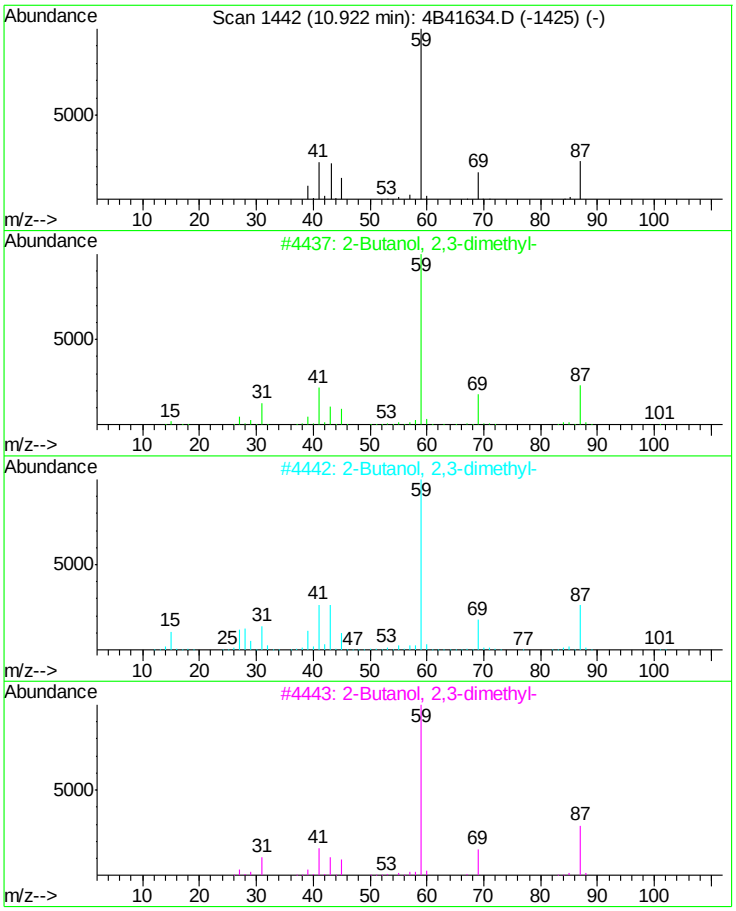
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

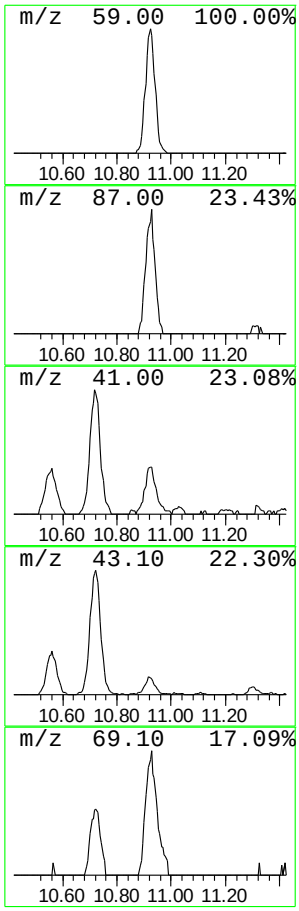
****

Peak Number 3 2-Butanol, 2,3-dimethyl- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.92	5.59 ug/L	72281	1,4-difluorobenzene	9.70

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Butanol, 2,3-dimethyl-	102	C6H14O	000594-60-5	83
2	2-Butanol, 2,3-dimethyl-	102	C6H14O	000594-60-5	83
3	2-Butanol, 2,3-dimethyl-	102	C6H14O	000594-60-5	78
4	3-Pentanol, 2,2-dimethyl-	116	C7H16O	003970-62-5	40
5	Propane, 2-ethoxy-2-methyl-	102	C6H14O	000637-92-3	38





Tentatively Identified Compound (LSC) summary

Data Path : C:\MSDChem\1\DATA\
Data File : 4B41634.D
Acq On : 20 May 2014 2:53 pm
Operator : TOANP
Sample : jb67153-1
Misc : MS67717,V4B1802,w,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Carbon dioxide	3.44	339.5	ug/L	3377230	2	8.84	497424	50.0
Pentane, 2,3,3-tr...	10.72	15.9	ug/L	206040	3	9.70	646633	50.0
2-Butanol, 2,3-di...	10.92	5.6	ug/L	72281	3	9.70	646633	50.0

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41635.D
Acq On : 20 May 2014 3:20 pm
Operator : TOANP
Sample : jb67153-2
Misc : MS67717,V4B1802,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 20 16:27:52 2014
Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Apr 16 12:59:24 2014
Response via : Initial Calibration

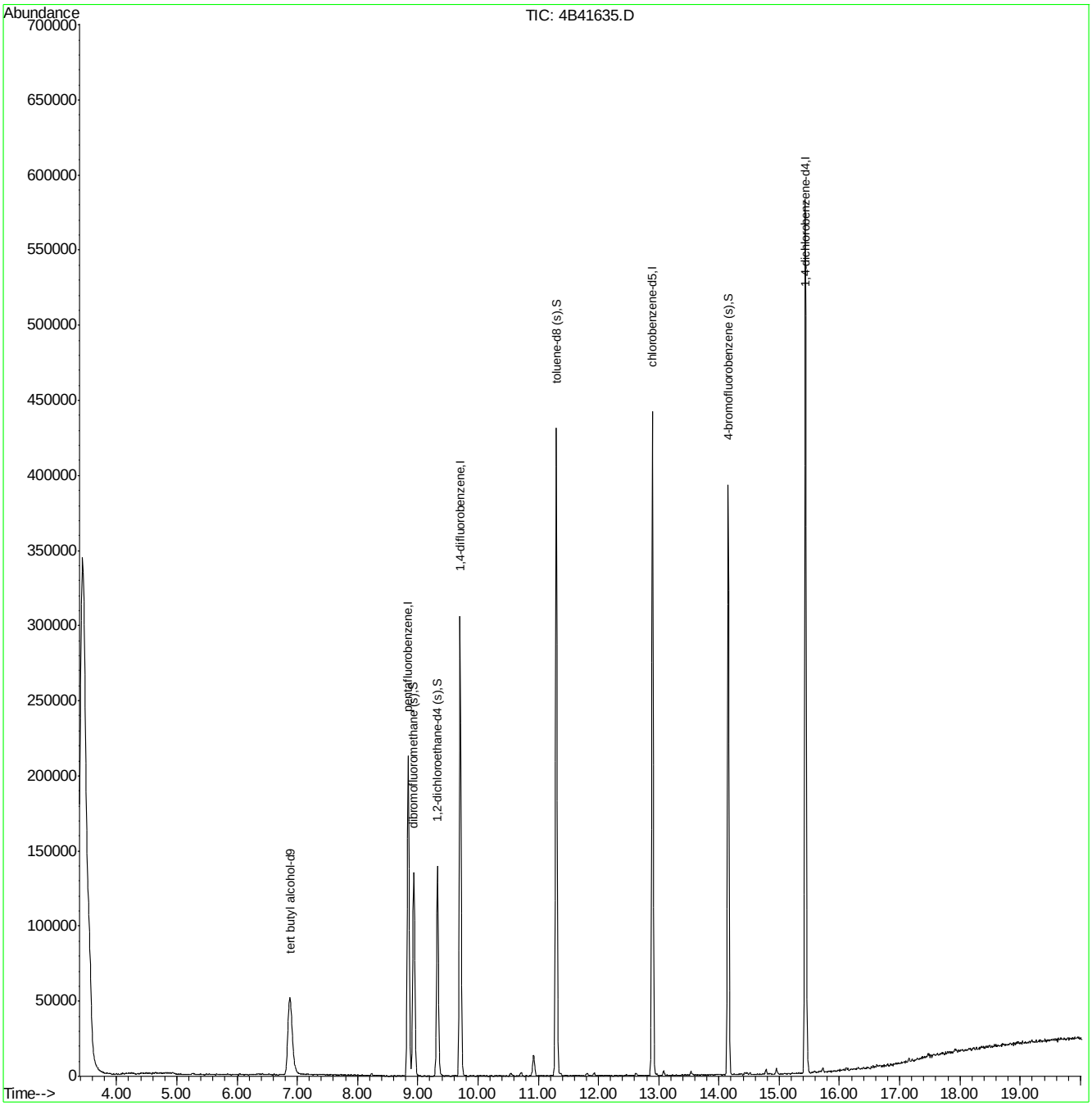
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.88	65	161791	500.00	ug/L	-0.03
5) pentafluorobenzene	8.84	168	182828	50.00	ug/L	-0.01
56) 1,4-difluorobenzene	9.70	114	280053	50.00	ug/L	-0.01
88) chlorobenzene-d5	12.89	117	264016	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	15.44	152	162784	50.00	ug/L	0.00
System Monitoring Compounds						
49) dibromofluoromethane (s)	8.93	113	100001	51.58	ug/L	-0.01
Spiked Amount 50.000	Range 79 - 120		Recovery = 103.16%			
50) 1,2-dichloroethane-d4 (s)	9.33	65	111432	50.52	ug/L	-0.01
Spiked Amount 50.000	Range 72 - 123		Recovery = 101.04%			
80) toluene-d8 (s)	11.30	98	320166	46.65	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 93.30%			
104) 4-bromofluorobenzene (s)	14.15	95	148167	49.47	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 98.94%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41635.D
Acq On : 20 May 2014 3:20 pm
Operator : TOANP
Sample : jb67153-2
Misc : MS67717,V4B1802,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 20 16:27:52 2014
Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Apr 16 12:59:24 2014
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\
Data File : 4B41635.D
Acq On : 20 May 2014 3:20 pm
Operator : TOANP
Sample : jb67153-2
Misc : MS67717,V4B1802,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.05 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.437	3	11	84	rVB	343349	2362715	100.00%	29.688%
2	3.845	88	89	95	rVV2	749	984	0.04%	0.012%
3	3.898	95	99	104	rVB2	761	1042	0.04%	0.013%
4	4.280	171	172	178	rVB3	1014	1133	0.05%	0.014%
5	4.478	208	210	216	rVV2	643	1073	0.05%	0.013%
6	4.656	238	244	246	rVV2	764	1033	0.04%	0.013%
7	4.933	293	297	301	rVB3	865	1152	0.05%	0.014%
8	5.258	353	359	362	rBV3	884	1560	0.07%	0.020%
9	6.178	530	535	537	rVB3	578	868	0.04%	0.011%
10	6.879	651	669	704	rBV2	51392	276555	11.70%	3.475%
11	7.486	781	785	792	rBV3	506	1126	0.05%	0.014%
12	8.228	922	927	935	rVB2	1186	2095	0.09%	0.026%
13	8.605	995	999	1007	rBB	415	981	0.04%	0.012%
14	8.840	1030	1044	1054	rBV	213049	491669	20.81%	6.178%
15	8.934	1054	1062	1080	rVB	135660	310125	13.13%	3.897%
16	9.327	1121	1137	1155	rBV	139842	303689	12.85%	3.816%
17	9.703	1198	1209	1227	rBV	306438	632085	26.75%	7.942%
18	9.876	1233	1242	1243	rBV	405	873	0.04%	0.011%
19	10.551	1363	1371	1380	rVB2	1922	4242	0.18%	0.053%
20	10.718	1395	1403	1412	rBV4	2244	5028	0.21%	0.063%
21	10.917	1430	1441	1454	rVB2	13660	33576	1.42%	0.422%
22	11.299	1504	1514	1525	rBV	431548	821579	34.77%	10.323%
23	11.367	1526	1527	1535	rVB2	1939	2804	0.12%	0.035%
24	11.811	1605	1612	1622	rBV2	1885	3804	0.16%	0.048%
25	11.931	1626	1635	1640	rVB2	1984	4042	0.17%	0.051%
26	12.460	1732	1736	1743	rBV3	1176	1664	0.07%	0.021%
27	12.611	1758	1765	1774	rBV2	1562	3180	0.13%	0.040%
28	12.894	1808	1819	1832	rVV	441968	793213	33.57%	9.967%
29	12.967	1832	1833	1840	rVB2	1521	1870	0.08%	0.023%
30	13.082	1849	1855	1862	rVB3	3096	5084	0.22%	0.064%
31	13.291	1890	1895	1898	rBV2	586	908	0.04%	0.011%
32	13.380	1910	1912	1917	rVV4	609	918	0.04%	0.012%
33	13.432	1917	1922	1927	rVV4	610	1194	0.05%	0.015%
34	13.480	1927	1931	1934	rVV3	513	965	0.04%	0.012%

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\
Data File : 4B41635.D
Acq On : 20 May 2014 3:20 pm
Operator : TOANP
Sample : jb67153-2
Misc : MS67717,V4B1802,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.05 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

35	13.537	1936	1942	1951	rVV3	2943	5432	0.23%	0.068%
36	13.966	2018	2024	2026	rBV3	733	1379	0.06%	0.017%
37	14.086	2042	2047	2050	rBV3	529	910	0.04%	0.011%
38	14.154	2050	2060	2072	rBV	393260	702737	29.74%	8.830%
39	14.248	2073	2078	2083	rVV5	569	958	0.04%	0.012%
40	14.358	2093	2099	2105	rVB3	920	2184	0.09%	0.027%
41	14.431	2105	2113	2114	rBV4	1391	2289	0.10%	0.029%
42	14.458	2116	2118	2124	rVV2	1694	2441	0.10%	0.031%
43	14.510	2124	2128	2133	rVB3	1365	2178	0.09%	0.027%
44	14.782	2170	2180	2187	rVV2	3468	6465	0.27%	0.081%
45	14.954	2204	2213	2224	rBV3	4265	7040	0.30%	0.088%
46	15.436	2291	2305	2322	rBV	582161	1028016	43.51%	12.917%
47	15.587	2331	2334	2340	rBV4	1727	2704	0.11%	0.034%
48	15.681	2350	2352	2354	rVV3	1185	954	0.04%	0.012%
49	15.723	2354	2360	2366	rVB2	2880	5231	0.22%	0.066%
50	15.812	2374	2377	2379	rBV4	997	993	0.04%	0.012%
51	15.849	2382	2384	2387	rVB2	1055	940	0.04%	0.012%
52	15.901	2387	2394	2399	rBV4	1147	2761	0.12%	0.035%
53	15.974	2406	2408	2413	rVB4	1148	1647	0.07%	0.021%
54	16.006	2413	2414	2417	rBV2	1624	1353	0.06%	0.017%
55	16.058	2419	2424	2426	rVV3	711	1079	0.05%	0.014%
56	16.105	2429	2433	2439	rBV5	2133	3930	0.17%	0.049%
57	16.147	2439	2441	2444	rVB3	1298	864	0.04%	0.011%
58	16.178	2444	2447	2449	rBV3	925	952	0.04%	0.012%
59	16.283	2466	2467	2470	rBV3	1179	1069	0.05%	0.013%
60	16.309	2470	2472	2478	rVB5	1295	1670	0.07%	0.021%
61	16.398	2485	2489	2492	rVB4	1257	1267	0.05%	0.016%
62	16.466	2495	2502	2503	rBV5	1677	2558	0.11%	0.032%
63	16.529	2512	2514	2515	rBV2	1913	1350	0.06%	0.017%
64	16.555	2515	2519	2523	rVV6	2309	4069	0.17%	0.051%
65	16.618	2527	2531	2538	rVV9	2149	4266	0.18%	0.054%
66	16.680	2538	2543	2546	rVB5	1253	2273	0.10%	0.029%
67	16.743	2554	2555	2560	rBV4	1481	1625	0.07%	0.020%
68	16.853	2573	2576	2578	rBV4	1495	1570	0.07%	0.020%
69	16.921	2583	2589	2592	rBV8	1822	3202	0.14%	0.040%
70	16.973	2595	2599	2601	rVV3	885	967	0.04%	0.012%
71	17.036	2608	2611	2613	rBV3	1218	1070	0.05%	0.013%

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\
Data File : 4B41635.D
Acq On : 20 May 2014 3:20 pm
Operator : TOANP
Sample : jb67153-2
Misc : MS67717,V4B1802,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.05 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

72	17.099	2621	2623	2626	rBV4	1512	1741	0.07%	0.022%
73	17.156	2627	2634	2640	rVV7	3306	6079	0.26%	0.076%
74	17.209	2640	2644	2649	rBV7	1524	2098	0.09%	0.026%
75	17.292	2653	2660	2664	rBV7	1464	2624	0.11%	0.033%
76	17.366	2670	2674	2675	rBV4	1639	1391	0.06%	0.017%
77	17.486	2690	2697	2701	rVB7	3058	6056	0.26%	0.076%
78	17.523	2701	2704	2707	rBV4	1761	2400	0.10%	0.030%
79	17.570	2707	2713	2715	rBV5	2272	4109	0.17%	0.052%
80	17.648	2727	2728	2731	rBV3	1126	881	0.04%	0.011%
81	17.685	2731	2735	2736	rBV3	1608	1895	0.08%	0.024%
82	17.700	2737	2738	2741	rVB2	1091	978	0.04%	0.012%
83	17.763	2746	2750	2751	rBV3	2398	1848	0.08%	0.023%
84	17.794	2752	2756	2759	rBV6	1834	2548	0.11%	0.032%
85	17.815	2759	2760	2764	rBV3	1255	1581	0.07%	0.020%
86	17.920	2773	2780	2781	rBV5	2637	3065	0.13%	0.039%
87	18.077	2809	2810	2813	rBV2	1319	1367	0.06%	0.017%
88	18.134	2819	2821	2822	rBV2	1609	1357	0.06%	0.017%
89	18.223	2832	2838	2844	rBV10	2389	6293	0.27%	0.079%
90	18.281	2845	2849	2853	rVB6	1910	2823	0.12%	0.035%
91	18.317	2853	2856	2858	rBV3	1893	1764	0.07%	0.022%
92	18.406	2872	2873	2876	rBV3	1495	1265	0.05%	0.016%
93	18.427	2876	2877	2880	rBV3	1579	1565	0.07%	0.020%
94	18.574	2900	2905	2908	rBV7	1789	2492	0.11%	0.031%
95	18.762	2938	2941	2944	rBV4	1531	1735	0.07%	0.022%
96	18.893	2965	2966	2970	rBV4	2190	2255	0.10%	0.028%
97	18.935	2971	2974	2975	rVB3	1599	1471	0.06%	0.018%
98	19.034	2992	2993	2996	rBV3	2596	2078	0.09%	0.026%
99	19.452	3070	3073	3074	rBV3	1616	1288	0.05%	0.016%
100	19.636	3106	3108	3112	rBV5	3111	4203	0.18%	0.053%

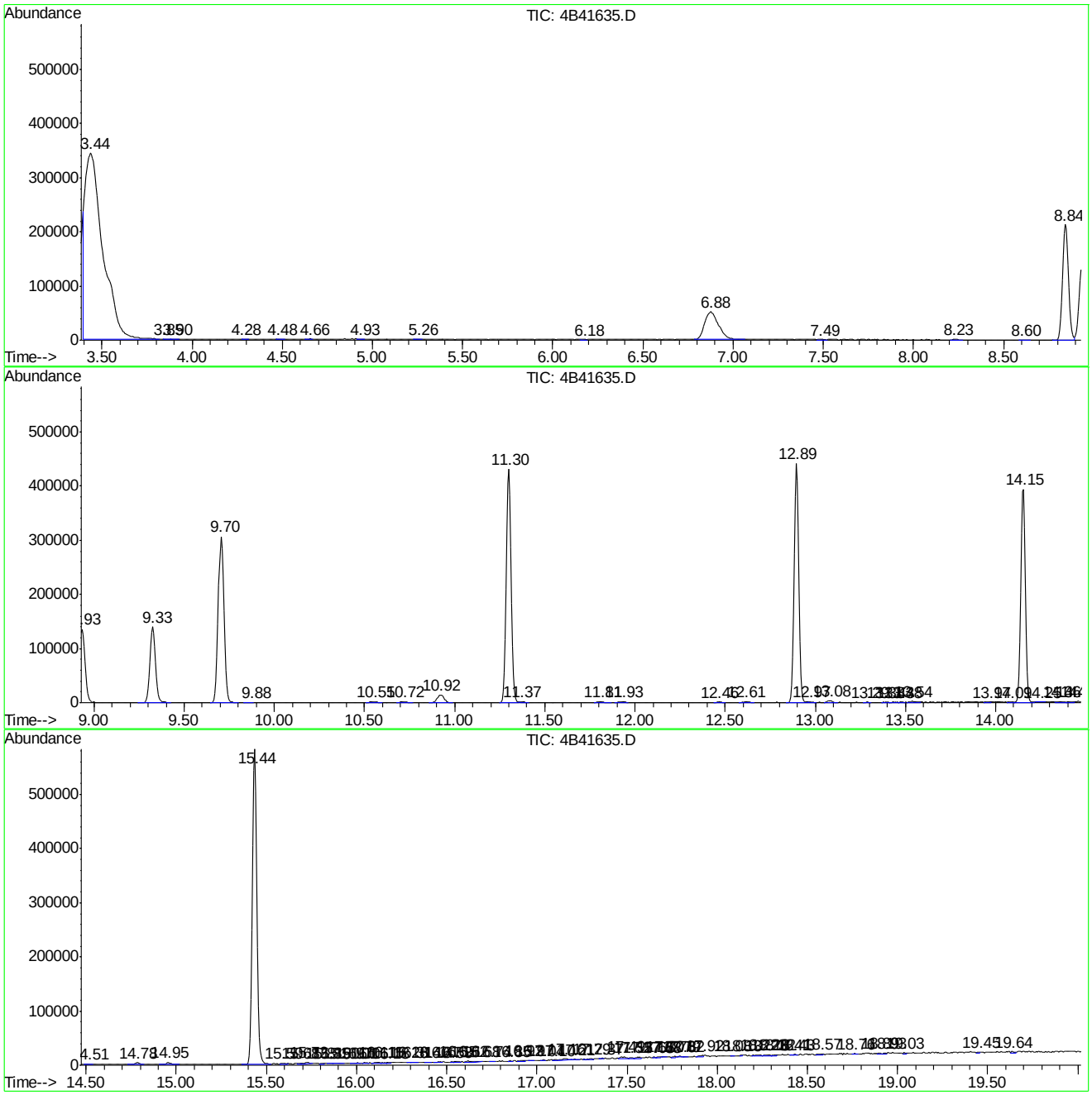
Sum of corrected areas: 7958472

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\
Data File : 4B41635.D
Acq On : 20 May 2014 3:20 pm
Operator : TOANP
Sample : jb67153-2
Misc : MS67717,V4B1802,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\
Data File : 4B41635.D
Acq On : 20 May 2014 3:20 pm
Operator : TOANP
Sample : jb67153-2
Misc : MS67717,V4B1802,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

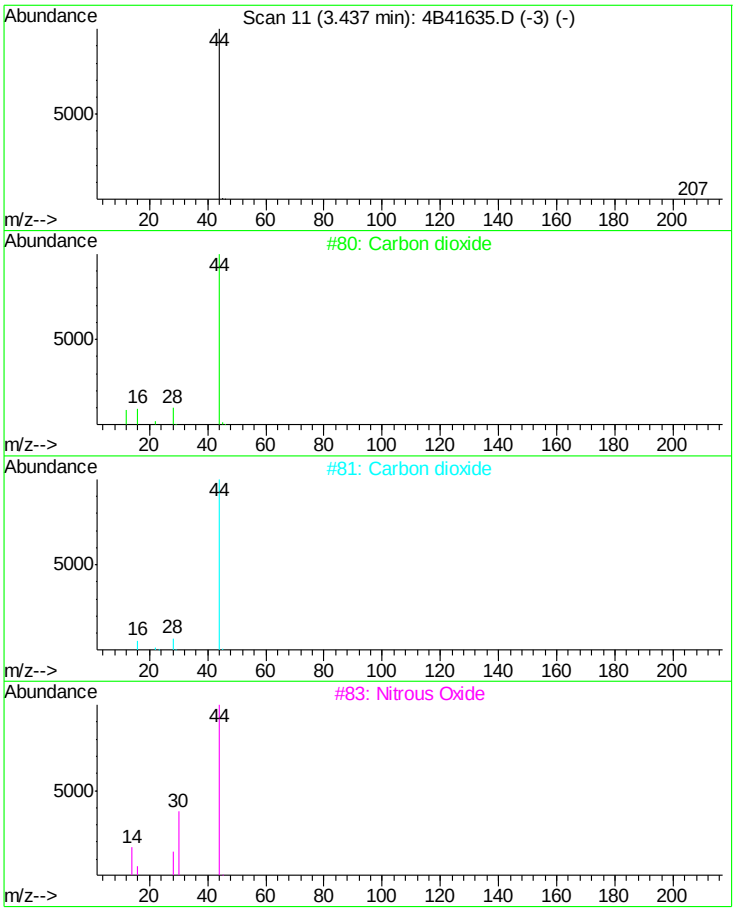
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

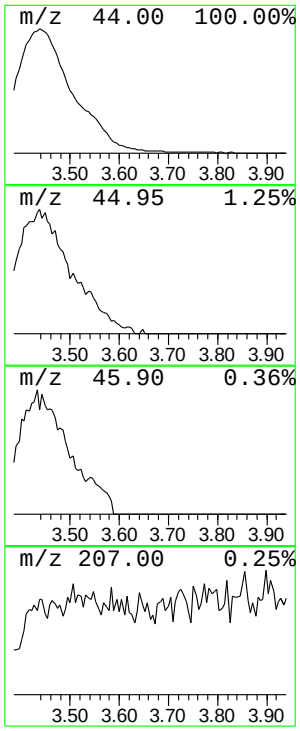
****

Peak Number 1 Carbon dioxide Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.44	240.28 ug/L	2362720	pentafluorobenzene	8.84

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	3
3	Nitrous Oxide	44	N2O	010024-97-2	3
4	Nitrous Oxide	44	N2O	010024-97-2	3
5	Ethyne, fluoro-	44	C2HF	002713-09-9	2





Tentatively Identified Compound (LSC) summary

Data Path : C:\MSDChem\1\DATA\
Data File : 4B41635.D
Acq On : 20 May 2014 3:20 pm
Operator : TOANP
Sample : jb67153-2
Misc : MS67717,V4B1802,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Carbon dioxide	3.44	240.3	ug/L	2362720	2	8.84	491669	50.0

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41636.D
Acq On : 20 May 2014 3:48 pm
Operator : TOANP
Sample : jb67153-3
Misc : MS67717,V4B1802,w,,,,5
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 20 16:33:05 2014
Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Apr 16 12:59:24 2014
Response via : Initial Calibration

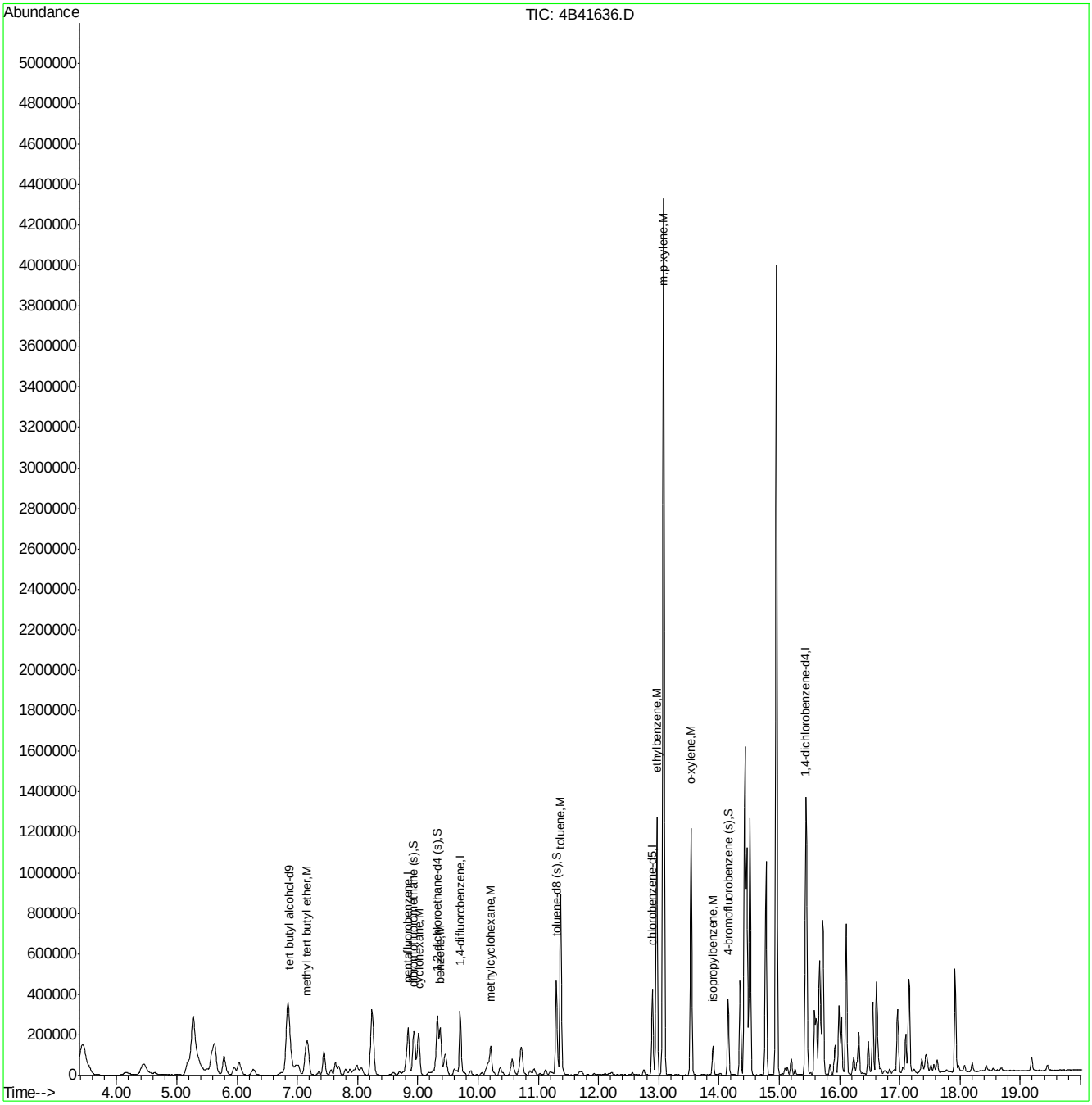
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.87	65	160707	500.00	ug/L	-0.04
5) pentafluorobenzene	8.84	168	183468	50.00	ug/L	-0.01
56) 1,4-difluorobenzene	9.70	114	295023	50.00	ug/L	-0.01
88) chlorobenzene-d5	12.89	117	254461	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	15.44	152	158002	50.00	ug/L	0.00
System Monitoring Compounds						
49) dibromofluoromethane (s)	8.93	113	97170	49.95	ug/L	-0.01
Spiked Amount 50.000	Range 79 - 120		Recovery = 99.90%			
50) 1,2-dichloroethane-d4 (s)	9.33	65	115638	52.25	ug/L	-0.01
Spiked Amount 50.000	Range 72 - 123		Recovery = 104.50%			
80) toluene-d8 (s)	11.30	98	332045	45.93	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 91.86%			
104) 4-bromofluorobenzene (s)	14.15	95	140006	48.16	ug/L	-0.01
Spiked Amount 50.000	Range 74 - 119		Recovery = 96.32%			
Target Compounds						Qvalue
31) methyl tert butyl ether	7.17	73	4466	0.59	ug/L	# 1
54) cyclohexane	9.02	84	62942	17.54	ug/L	82
63) benzene	9.37	78	204233	22.78	ug/L	97
77) methylcyclohexane	10.21	83	78940	20.51	ug/L	96
82) toluene	11.37	92	414353	79.56	ug/L	97
97) ethylbenzene	12.97	91	1019117	108.39	ug/L	98
98) m,p-xylene	13.08	106	1364281	393.06	ug/L	96
99) o-xylene	13.54	106	364586	101.00	ug/L	97
103) isopropylbenzene	13.90	105	109894	10.60	ug/L	99

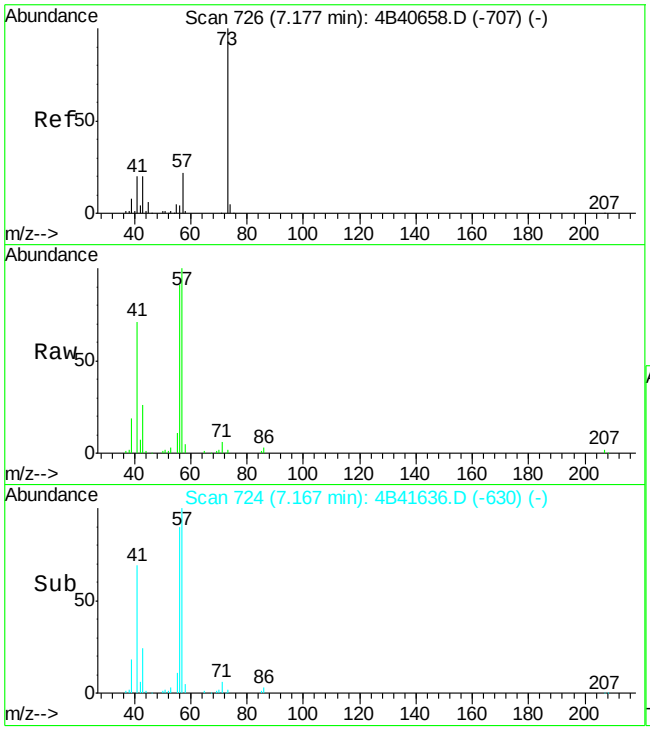
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41636.D
Acq On : 20 May 2014 3:48 pm
Operator : TOANP
Sample : jb67153-3
Misc : MS67717,V4B1802,w,,,,5
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 20 16:33:05 2014
Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Apr 16 12:59:24 2014
Response via : Initial Calibration

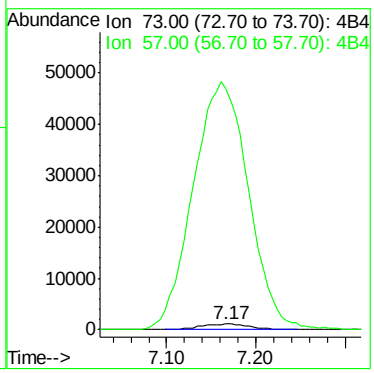


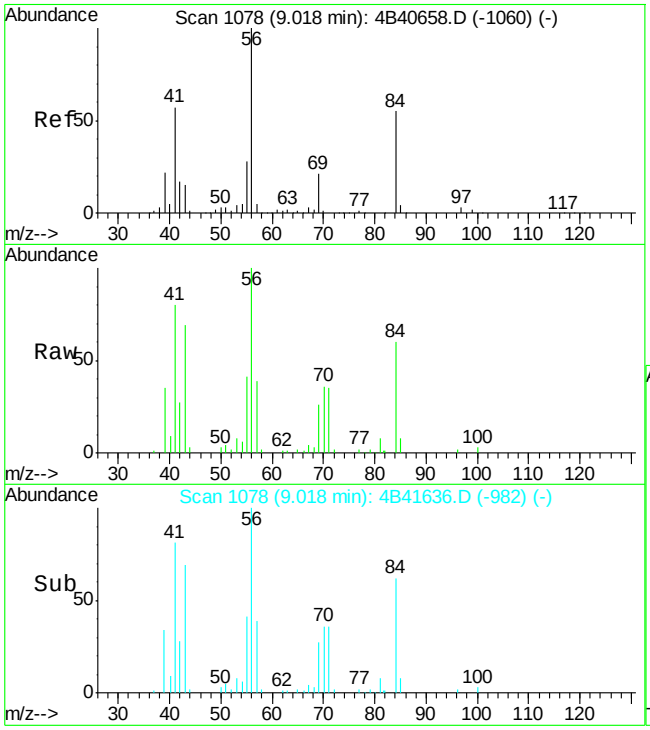


#31
methyl tert butyl ether
Concen: 0.59 ug/L
RT: 7.17 min Scan# 724
Delta R.T. -0.01 min
Lab File: 4B41636.D
Acq: 20 May 2014 3:48 pm

Tgt Ion: 73 Resp: 4466

Ion	Ratio	Lower	Upper
73	100		
57	4063.4	0.0	66.9#

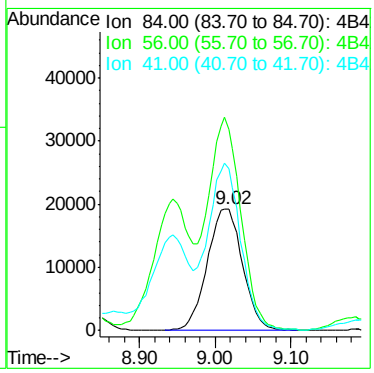


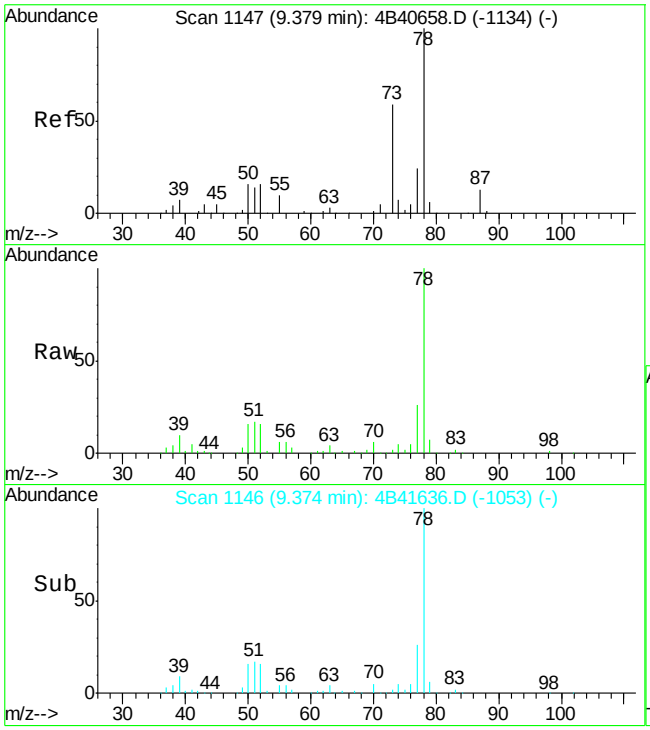


#54
cyclohexane
Concen: 17.54 ug/L
RT: 9.02 min Scan# 1078
Delta R.T. 0.00 min
Lab File: 4B41636.D
Acq: 20 May 2014 3:48 pm

Tgt Ion: 84 Resp: 62942

Ion	Ratio	Lower	Upper
84	100		
56	165.3	152.5	212.5
41	132.8	74.8	134.8

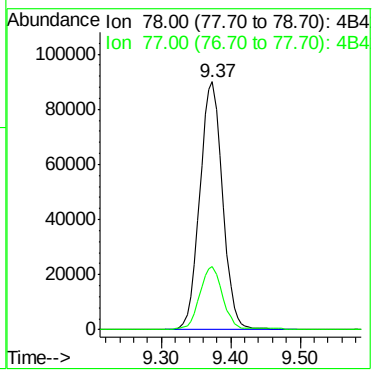


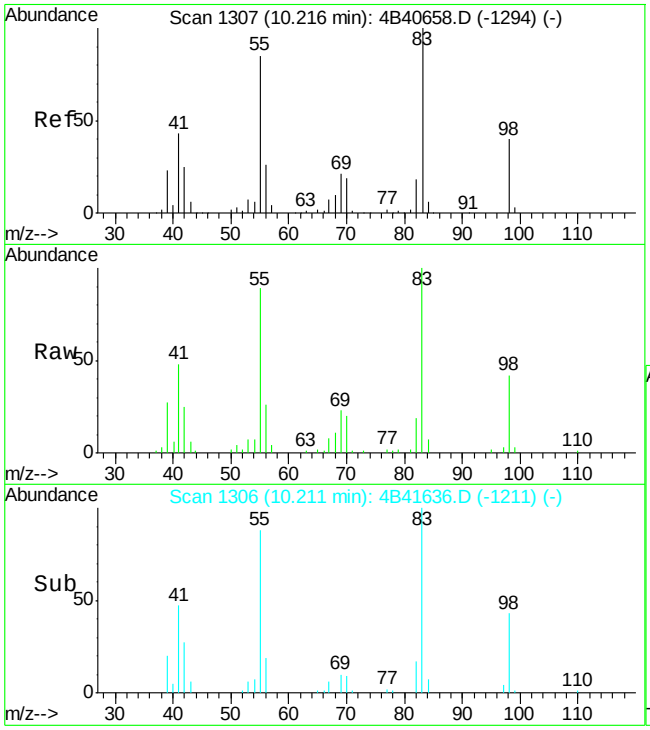


#63
benzene
Concen: 22.78 ug/L
RT: 9.37 min Scan# 1146
Delta R.T. -0.01 min
Lab File: 4B41636.D
Acq: 20 May 2014 3:48 pm

Tgt Ion: 78 Resp: 204233

Ion	Ratio	Lower	Upper
78	100		
77	25.7	0.0	54.4

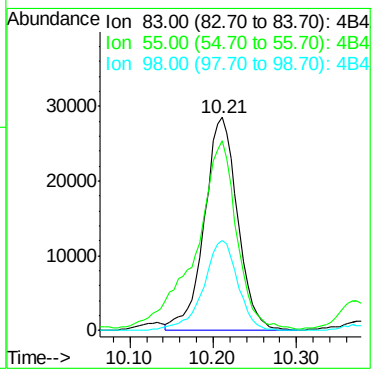


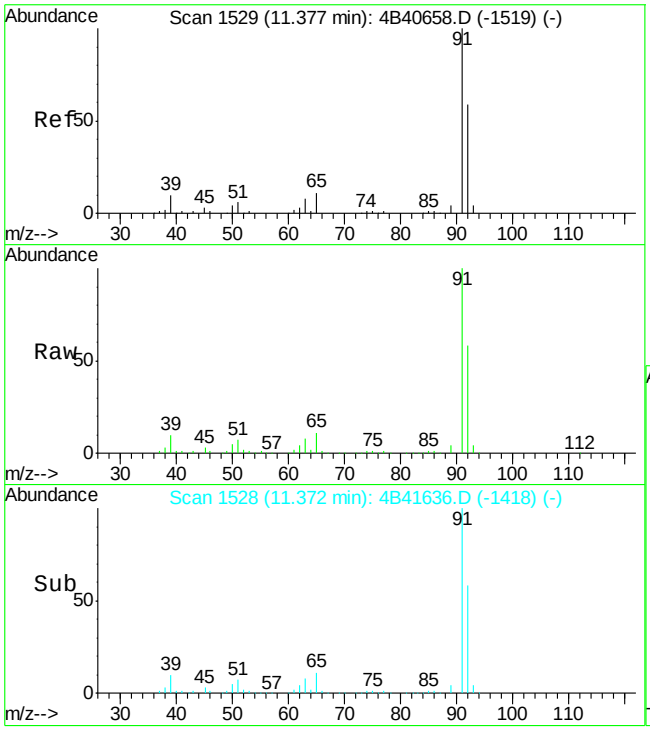


#77
methylcyclohexane
Concen: 20.51 ug/L
RT: 10.21 min Scan# 1306
Delta R.T. -0.01 min
Lab File: 4B41636.D
Acq: 20 May 2014 3:48 pm

Tgt Ion: 83 Resp: 78940

Ion	Ratio	Lower	Upper
83	100		
55	88.0	54.7	114.7
98	42.3	10.3	70.3

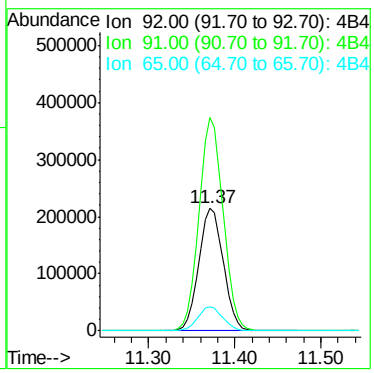


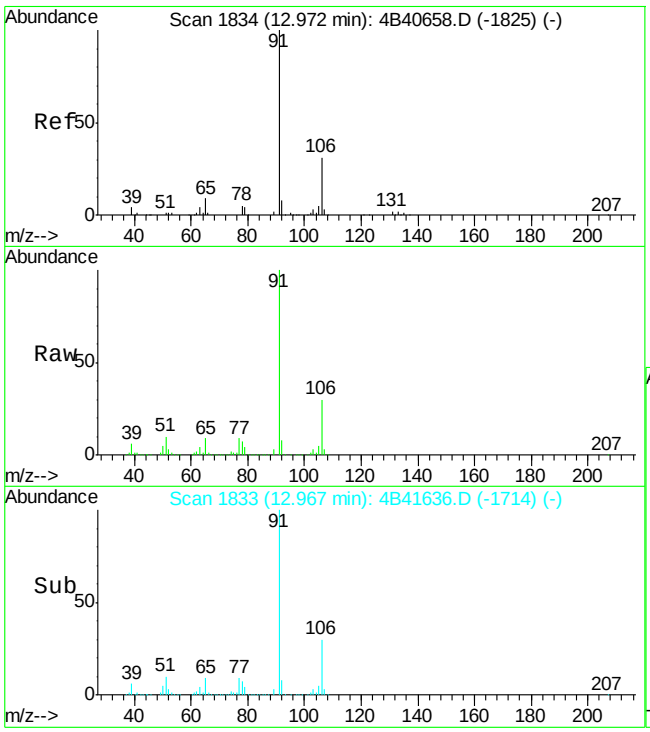


#82
toluene
Concen: 79.56 ug/L
RT: 11.37 min Scan# 1528
Delta R.T. -0.01 min
Lab File: 4B41636.D
Acq: 20 May 2014 3:48 pm

Tgt Ion: 92 Resp: 414353

Ion	Ratio	Lower	Upper
92	100		
91	173.4	138.7	198.7
65	19.9	0.0	49.4

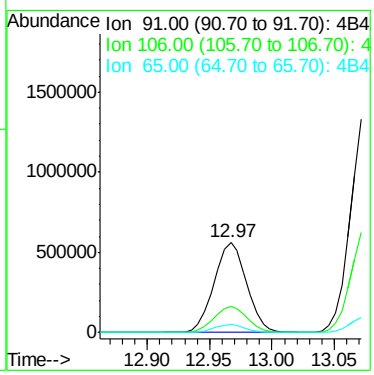


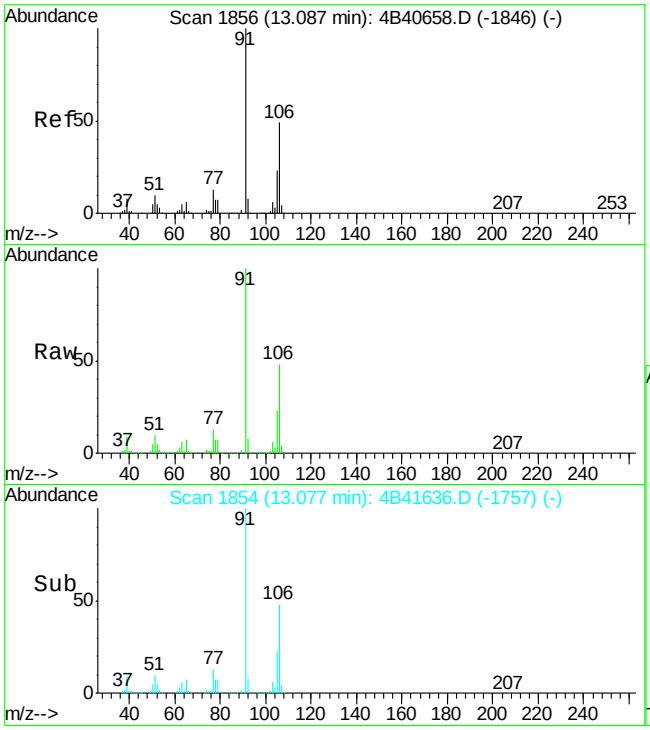


#97
ethylbenzene
Concen: 108.39 ug/L
RT: 12.97 min Scan# 1833
Delta R.T. -0.01 min
Lab File: 4B41636.D
Acq: 20 May 2014 3:48 pm

Tgt Ion: 91 Resp: 1019117

Ion	Ratio	Lower	Upper
91	100		
106	29.5	0.6	60.6
65	8.9	0.0	38.9

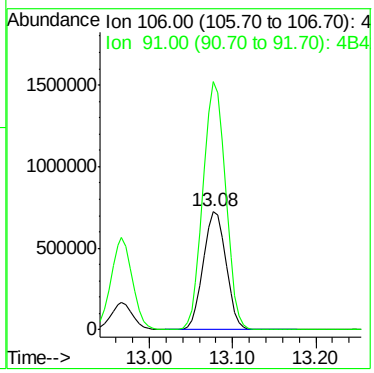


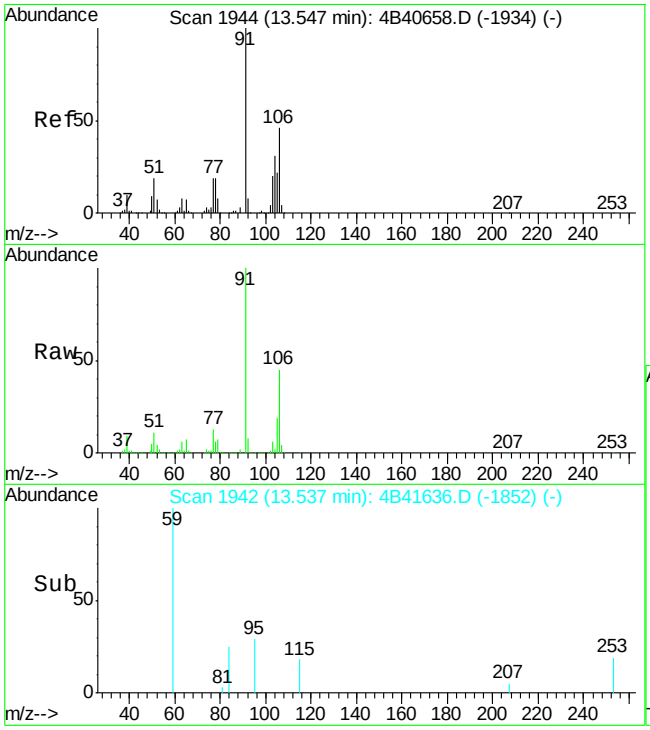


#98
m,p-xylene
Concen: 393.06 ug/L
RT: 13.08 min Scan# 1854
Delta R.T. -0.01 min
Lab File: 4B41636.D
Acq: 20 May 2014 3:48 pm

Tgt Ion:106 Resp: 1364281

Ion	Ratio	Lower	Upper
106	100		
91	209.1	173.6	233.6

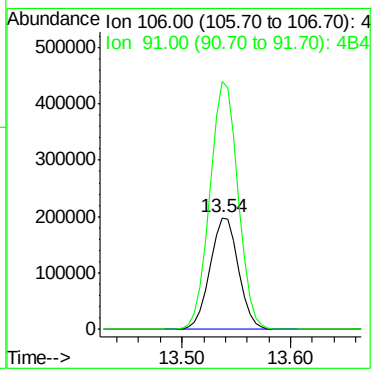


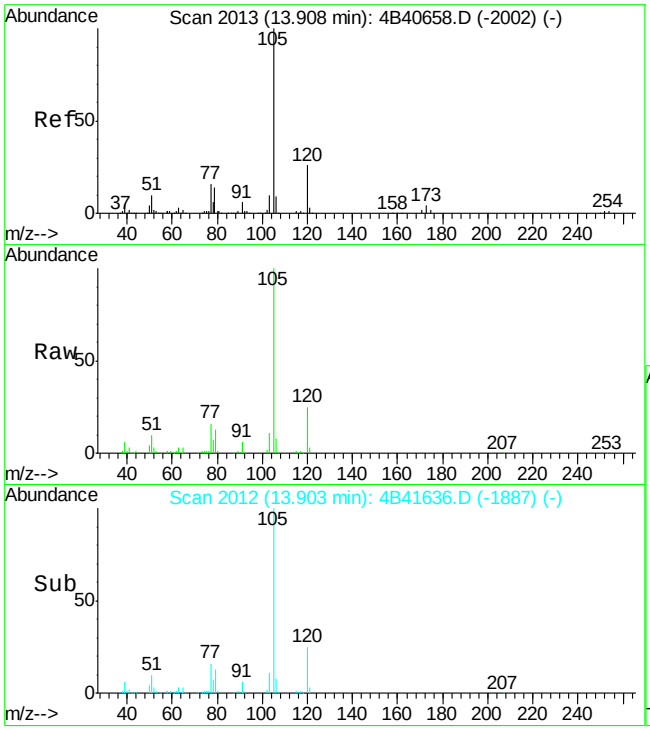


#99
o-xylene
Concen: 101.00 ug/L
RT: 13.54 min Scan# 1942
Delta R.T. -0.01 min
Lab File: 4B41636.D
Acq: 20 May 2014 3:48 pm

Tgt Ion:106 Resp: 364586

Ion	Ratio	Lower	Upper
106	100		
91	221.8	186.8	246.8

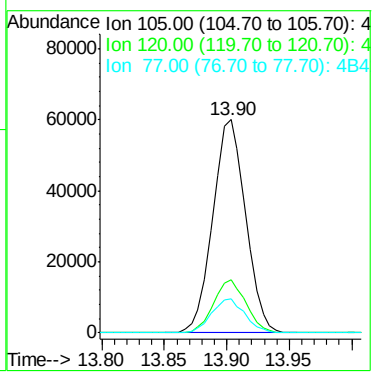




#103
isopropylbenzene
Concen: 10.60 ug/L
RT: 13.90 min Scan# 2012
Delta R.T. -0.01 min
Lab File: 4B41636.D
Acq: 20 May 2014 3:48 pm

Tgt Ion:105 Resp: 109894

Ion	Ratio	Lower	Upper
105	100		
120	25.0	0.0	55.7
77	15.9	0.0	45.7



7.1.5
7

LSC Area Percent Report

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41636.D
Acq On : 20 May 2014 3:48 pm
Operator : TOANP
Sample : jb67153-3
Misc : MS67717,V4B1802,w,,,,5
ALS Vial : 13 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.05 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.437	3	11	68	rVB	152221	1044927	12.91%	1.549%
2	4.159	125	149	169	rBV4	12818	90276	1.12%	0.134%
3	4.447	182	204	233	rVV2	54459	387904	4.79%	0.575%
4	4.630	233	239	262	rVV4	10425	43505	0.54%	0.064%
5	5.273	325	362	398	rBV2	290778	2125717	26.26%	3.151%
6	5.519	400	409	410	rVV6	31130	90848	1.12%	0.135%
7	5.629	410	430	447	rVV2	156069	928877	11.47%	1.377%
8	5.780	449	459	480	rVV2	91661	346707	4.28%	0.514%
9	5.953	480	492	499	rVV2	40191	138753	1.71%	0.206%
10	6.037	499	508	531	rVB2	62059	252939	3.12%	0.375%
11	6.267	536	552	576	rVV2	29182	121682	1.50%	0.180%
12	6.842	621	662	682	rVV3	356654	1852792	22.88%	2.746%
13	6.999	683	692	707	rVV4	50383	266418	3.29%	0.395%
14	7.161	707	723	745	rVB2	169235	747134	9.23%	1.107%
15	7.360	750	761	767	rVV3	17813	51329	0.63%	0.076%
16	7.444	767	777	790	rVV2	117862	345205	4.26%	0.512%
17	7.559	790	799	805	rVV3	26112	69733	0.86%	0.103%
18	7.632	805	813	819	rVV2	62235	170608	2.11%	0.253%
19	7.684	819	823	835	rVV	44557	112635	1.39%	0.167%
20	7.805	835	846	853	rVV3	29195	88288	1.09%	0.131%
21	7.873	853	859	865	rVV3	29184	79158	0.98%	0.117%
22	7.988	865	881	889	rVV5	49830	238607	2.95%	0.354%
23	8.061	889	895	914	rVB3	37693	126940	1.57%	0.188%
24	8.239	914	929	953	rBV	325689	1129005	13.94%	1.673%
25	8.594	978	997	1007	rVV6	15102	54980	0.68%	0.081%
26	8.694	1007	1016	1023	rVV2	17446	53947	0.67%	0.080%
27	8.840	1023	1044	1053	rVV2	236647	782064	9.66%	1.159%
28	8.934	1053	1062	1069	rVV3	218228	621555	7.68%	0.921%
29	9.013	1069	1077	1096	rVB2	209612	640929	7.92%	0.950%
30	9.185	1096	1110	1115	rBV6	14205	46460	0.57%	0.069%
31	9.327	1115	1137	1142	rVV3	293411	903722	11.16%	1.339%
32	9.374	1142	1146	1155	rVV	235439	575532	7.11%	0.853%
33	9.452	1155	1161	1179	rVB5	105081	329344	4.07%	0.488%
34	9.609	1179	1191	1201	rBV5	30135	115387	1.43%	0.171%

LSC Area Percent Report

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41636.D
Acq On : 20 May 2014 3:48 pm
Operator : TOANP
Sample : jb67153-3
Misc : MS67717,V4B1802,w,,,,5
ALS Vial : 13 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.05 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

35	9.703	1201	1209	1220	rVV	318711	721393	8.91%	1.069%
36	9.876	1232	1242	1254	rVB4	22165	60321	0.75%	0.089%
37	10.211	1283	1306	1326	rVV3	143907	582677	7.20%	0.864%
38	10.367	1326	1336	1359	rVB2	40965	122202	1.51%	0.181%
39	10.566	1359	1374	1388	rBV3	79329	258257	3.19%	0.383%
40	10.718	1388	1403	1422	rVB3	137769	446675	5.52%	0.662%
41	10.864	1422	1431	1437	rBV2	22257	54525	0.67%	0.081%
42	10.927	1437	1443	1456	rVV2	29446	85791	1.06%	0.127%
43	11.126	1470	1481	1488	rVV5	26123	64609	0.80%	0.096%
44	11.204	1488	1496	1506	rVV4	18559	64233	0.79%	0.095%
45	11.298	1506	1514	1521	rVV	464725	936305	11.56%	1.388%
46	11.372	1521	1528	1544	rVV	893722	1762785	21.77%	2.613%
47	11.722	1591	1595	1604	rVB4	18238	39586	0.49%	0.059%
48	12.752	1784	1792	1799	rBV2	27855	56224	0.69%	0.083%
49	12.894	1808	1819	1826	rBV	424742	786031	9.71%	1.165%
50	12.967	1826	1833	1843	rVB	1273329	2309801	28.53%	3.424%
51	13.077	1843	1854	1867	rBV	4329124	8096361	100.00%	12.000%
52	13.537	1931	1942	1961	rVB	1218363	2244839	27.73%	3.327%
53	13.903	1998	2012	2022	rBV	143537	270883	3.35%	0.401%
54	14.149	2049	2059	2073	rBV	375574	685224	8.46%	1.016%
55	14.353	2086	2098	2105	rBV	468477	842124	10.40%	1.248%
56	14.431	2105	2113	2116	rVV	1621905	3026778	37.38%	4.486%
57	14.463	2116	2119	2124	rVV	1123920	1811512	22.37%	2.685%
58	14.515	2124	2129	2142	rVB	1268984	2205119	27.24%	3.268%
59	14.782	2170	2180	2190	rBV	1054167	1910486	23.60%	2.832%
60	14.954	2199	2213	2226	rBV	3995664	7027076	86.79%	10.415%
61	15.096	2234	2240	2244	rVV	29485	53627	0.66%	0.079%
62	15.137	2244	2248	2253	rVV	35417	58267	0.72%	0.086%
63	15.200	2253	2260	2267	rVB	74752	129721	1.60%	0.192%
64	15.263	2267	2272	2283	rVB	27220	45258	0.56%	0.067%
65	15.446	2295	2307	2319	rBV2	1373794	3056318	37.75%	4.530%
66	15.587	2326	2334	2337	rBV	318503	576210	7.12%	0.854%
67	15.619	2338	2340	2344	rVV	274509	357012	4.41%	0.529%
68	15.671	2344	2350	2355	rVV2	559584	1194284	14.75%	1.770%
69	15.723	2355	2360	2373	rVB	763877	1367432	16.89%	2.027%
70	15.843	2373	2383	2390	rBV2	49898	94254	1.16%	0.140%
71	15.927	2390	2399	2405	rBV	147498	269640	3.33%	0.400%

LSC Area Percent Report

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41636.D
Acq On : 20 May 2014 3:48 pm
Operator : TOANP
Sample : jb67153-3
Misc : MS67717,V4B1802,w,,,,5
ALS Vial : 13 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.05 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

72	16.995	2405	2412	2416	rVV2	333758	640573	7.91%	0.949%
73	16.032	2416	2419	2426	rVV	281410	444709	5.49%	0.659%
74	16.110	2426	2434	2446	rVB	743588	1274711	15.74%	1.889%
75	16.241	2447	2459	2464	rBV2	83691	175878	2.17%	0.261%
76	16.319	2464	2474	2482	rVB2	202518	435124	5.37%	0.645%
77	16.476	2497	2504	2511	rBV	162064	291642	3.60%	0.432%
78	16.555	2511	2519	2525	rVV	351403	597273	7.38%	0.885%
79	16.618	2525	2531	2541	rVV	448404	868806	10.73%	1.288%
80	16.686	2542	2544	2550	rVB	28823	38056	0.47%	0.056%
81	16.754	2550	2557	2566	rBV6	14522	43174	0.53%	0.064%
82	16.916	2578	2588	2591	rBV5	21030	51430	0.64%	0.076%
83	16.963	2591	2597	2607	rVB2	312428	573431	7.08%	0.850%
84	17.052	2607	2614	2618	rBV3	27229	56731	0.70%	0.084%
85	17.099	2618	2623	2628	rVV	187997	322108	3.98%	0.477%
86	17.156	2628	2634	2643	rVV	459562	823337	10.17%	1.220%
87	17.235	2643	2649	2660	rVB4	19520	55126	0.68%	0.082%
88	17.365	2660	2674	2681	rBV4	69429	180730	2.23%	0.268%
89	17.433	2681	2687	2698	rVV5	90137	261901	3.23%	0.388%
90	17.517	2698	2703	2708	rVV3	35794	64402	0.80%	0.095%
91	17.569	2708	2713	2718	rVV2	37169	69031	0.85%	0.102%
92	17.622	2718	2723	2733	rVB	60493	123331	1.52%	0.183%
93	17.920	2771	2780	2788	rBV	511007	915842	11.31%	1.357%
94	17.977	2788	2791	2799	rVV4	30215	54867	0.68%	0.081%
95	18.077	2802	2810	2819	rVB3	31731	66627	0.82%	0.099%
96	18.208	2825	2835	2844	rBV	45722	88932	1.10%	0.132%
97	18.438	2870	2879	2894	rBV	28826	72869	0.90%	0.108%
98	18.683	2920	2926	2939	rVB2	17566	37963	0.47%	0.056%
99	19.191	3012	3023	3031	rBV	68900	137057	1.69%	0.203%
100	19.452	3066	3073	3086	rVB	25633	54586	0.67%	0.081%

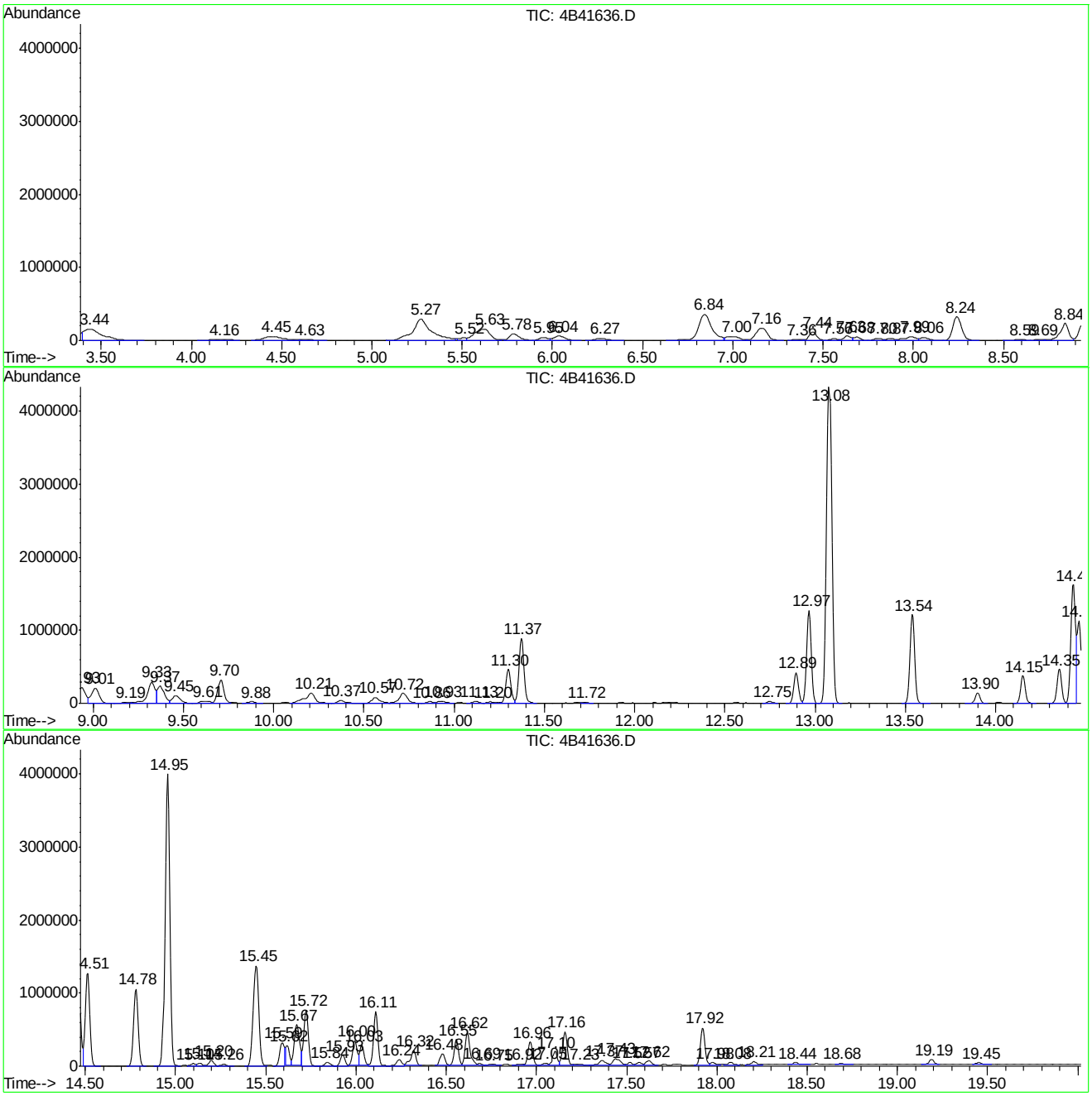
Sum of corrected areas: 67467994

LSC Report - Integrated Chromatogram

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41636.D
Acq On : 20 May 2014 3:48 pm
Operator : TOANP
Sample : jb67153-3
Misc : MS67717,V4B1802,w,,,,5
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p



Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41636.D
Acq On : 20 May 2014 3:48 pm
Operator : TOANP
Sample : jb67153-3
Misc : MS67717,V4B1802,w,,,,5
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

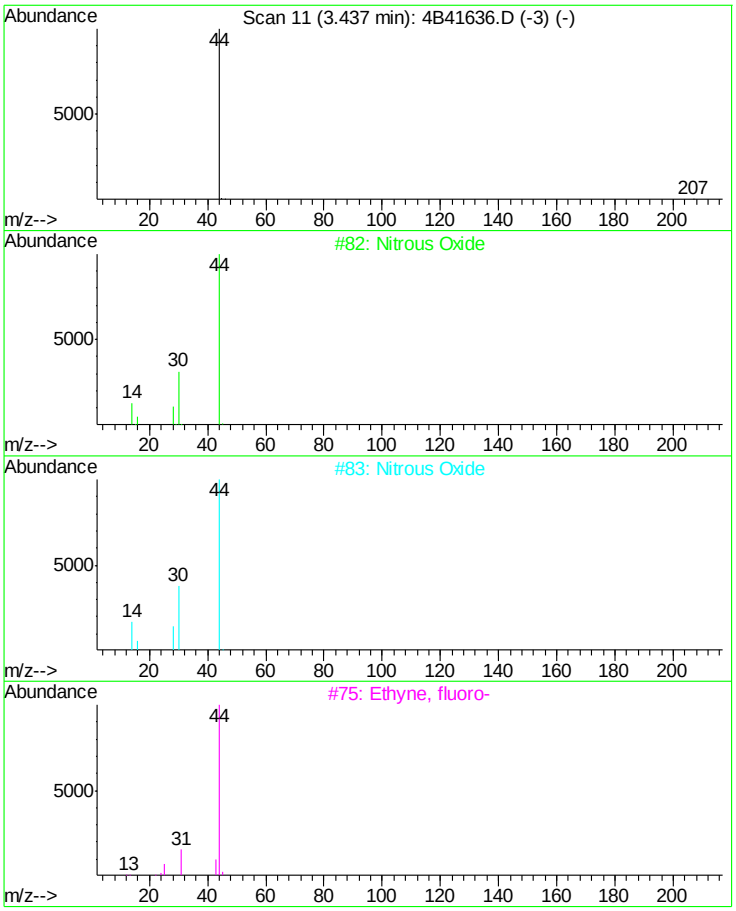
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

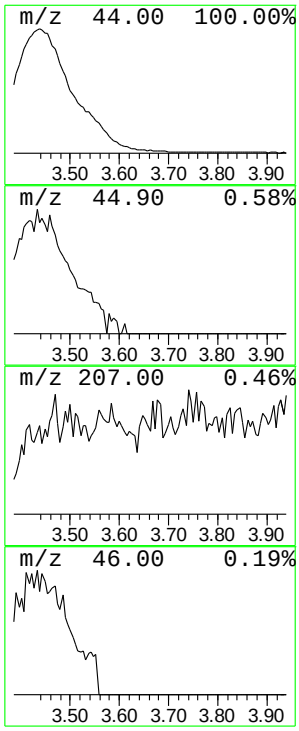
****

Peak Number 1 Nitrous Oxide Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.44	66.81 ug/L	1044930	pentafluorobenzene	8.84

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Nitrous Oxide	44	N2O	010024-97-2	3
2	Nitrous Oxide	44	N2O	010024-97-2	3
3	Ethyne, fluoro-	44	C2HF	002713-09-9	2
4	Carbon dioxide	44	CO2	000124-38-9	2
5	Carbon dioxide	44	CO2	000124-38-9	2





Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41636.D
Acq On : 20 May 2014 3:48 pm
Operator : TOANP
Sample : jb67153-3
Misc : MS67717,V4B1802,w,,,,5
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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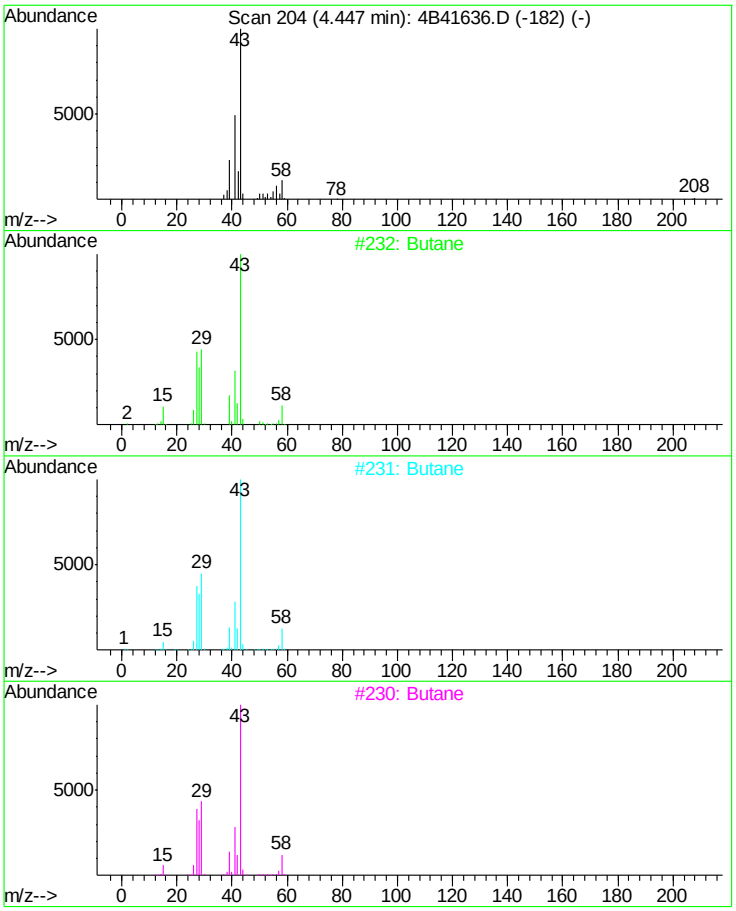
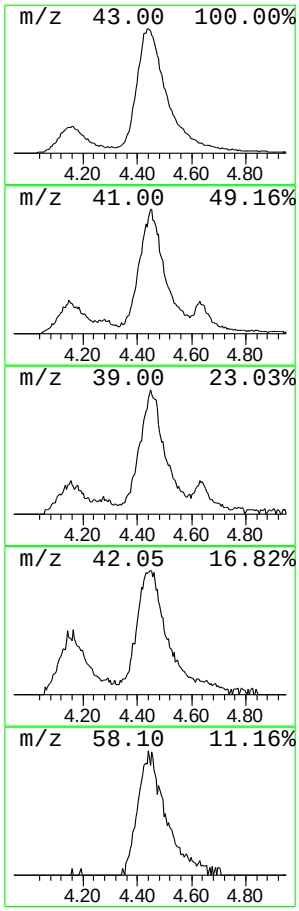
Peak Number 2 Butane Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.45	24.80 ug/L	387904	pentafluorobenzene	8.84

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	45
2	Butane	58	C4H10	000106-97-8	9
3	Butane	58	C4H10	000106-97-8	9
4	Propane, 2-nitro-	89	C3H7NO2	000079-46-9	9
5	1-Propanol, 2-methyl-	74	C4H10O	000078-83-1	9





Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41636.D
Acq On : 20 May 2014 3:48 pm
Operator : TOANP
Sample : jb67153-3
Misc : MS67717,V4B1802,w,,,,5
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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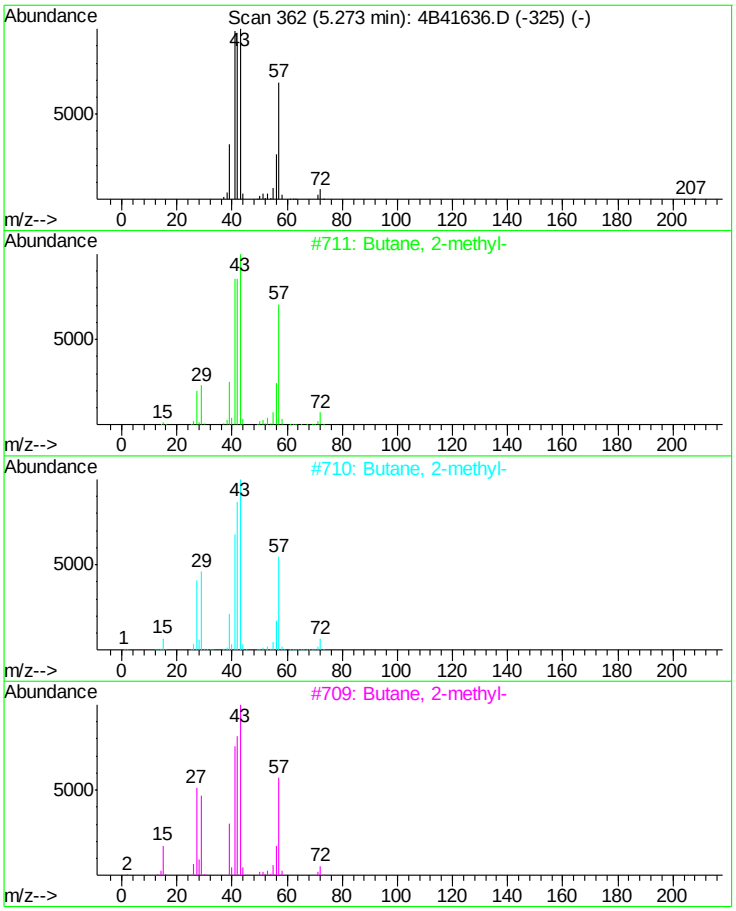
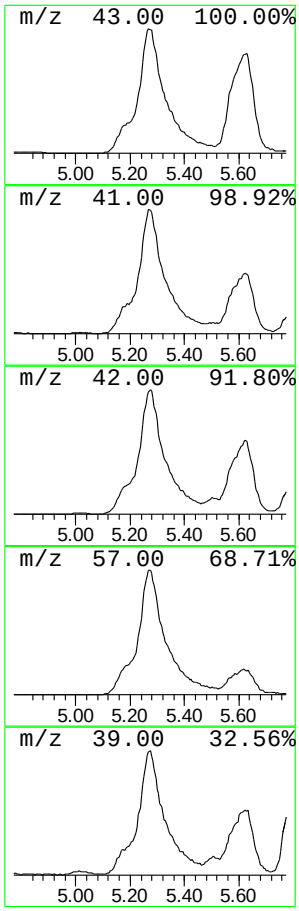
Peak Number 3 Butane, 2-methyl- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.27	135.90 ug/L	2125720	pentafluorobenzene	8.84

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	91
2	Butane, 2-methyl-	72	C5H12	000078-78-4	80
3	Butane, 2-methyl-	72	C5H12	000078-78-4	80
4	3-Buten-1-ol	72	C4H8O	000627-27-0	38
5	Cyclobutane, methyl-	70	C5H10	000598-61-8	37





Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41636.D
Acq On : 20 May 2014 3:48 pm
Operator : TOANP
Sample : jb67153-3
Misc : MS67717,V4B1802,w,,,,5
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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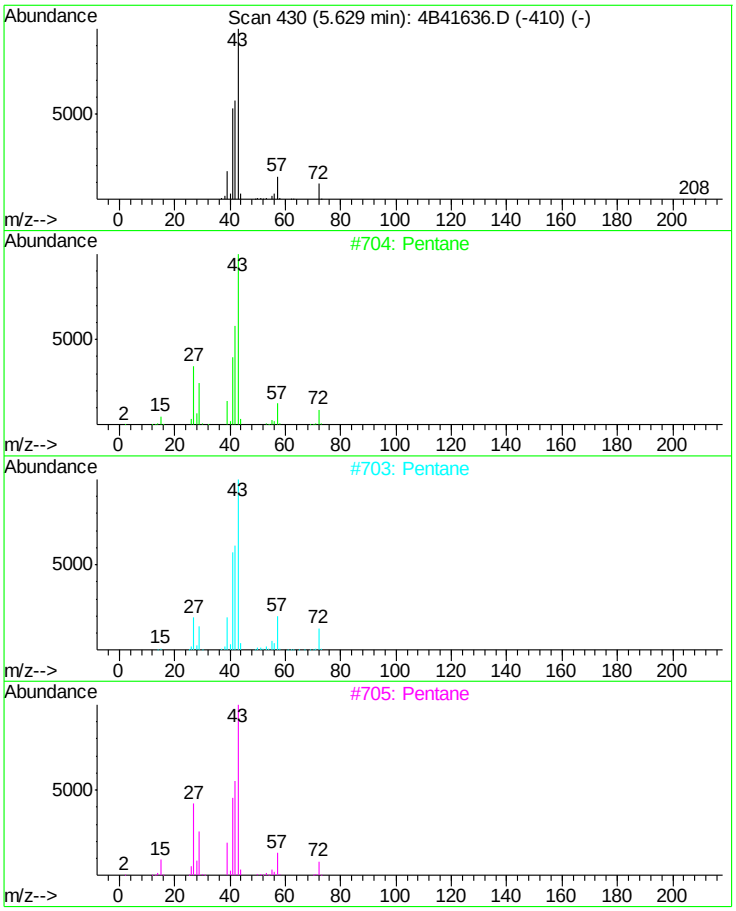
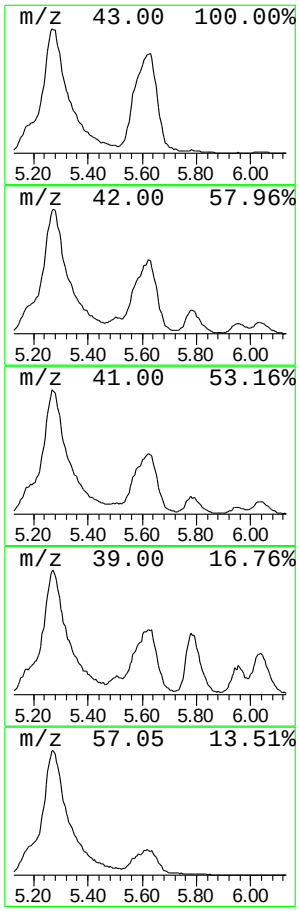
Peak Number 4 Pentane Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.63	59.39 ug/L	928877	pentafluorobenzene	8.84

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	86
2	Pentane	72	C5H12	000109-66-0	80
3	Pentane	72	C5H12	000109-66-0	80
4	Pentane	72	C5H12	000109-66-0	64
5	Butane, 2-methyl-	72	C5H12	000078-78-4	42





Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41636.D
Acq On : 20 May 2014 3:48 pm
Operator : TOANP
Sample : jb67153-3
Misc : MS67717,V4B1802,w,,,,5
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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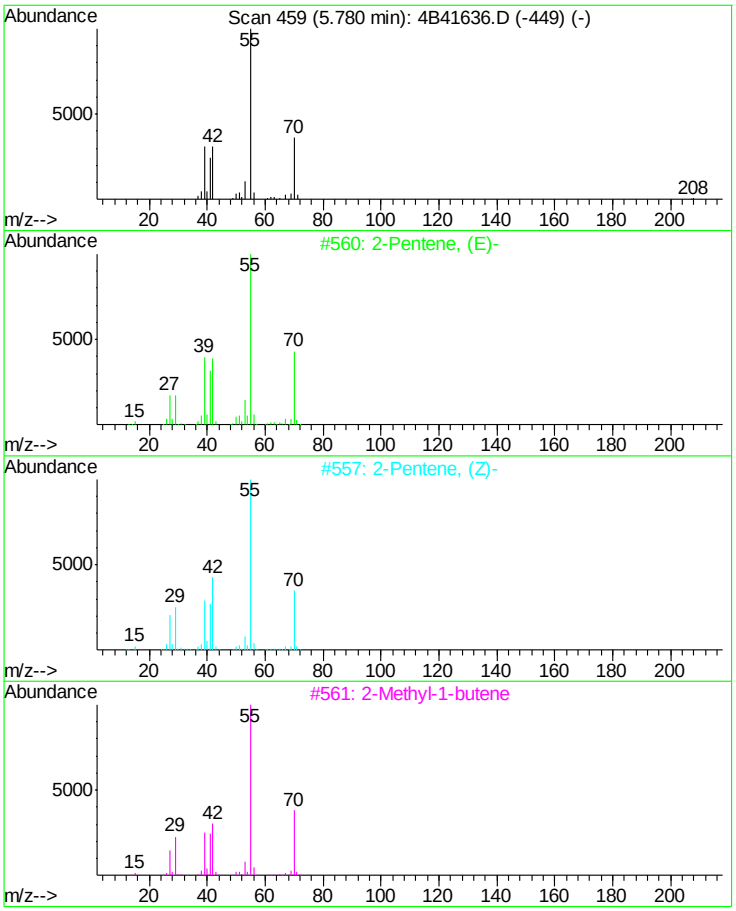
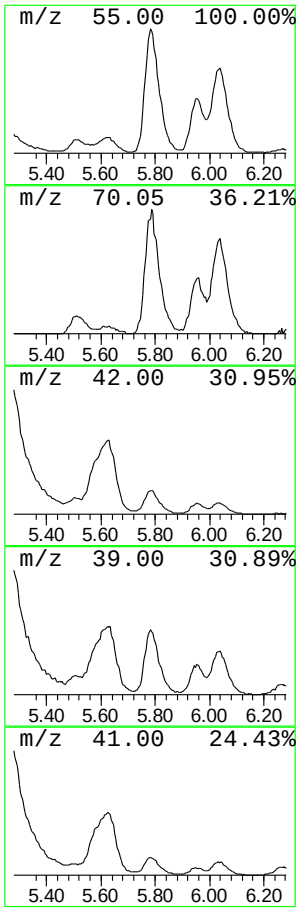
Peak Number 5 2-Pentene, (E)- Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.78	22.17 ug/L	346707	pentafluorobenzene	8.84

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentene, (E)-	70	C5H10	000646-04-8	90
2	2-Pentene, (Z)-	70	C5H10	000627-20-3	90
3	2-Methyl-1-butene	70	C5H10	000563-46-2	87
4	2-Butene, 2-methyl-	70	C5H10	000513-35-9	87
5	2-Butene, 2-methyl-	70	C5H10	000513-35-9	87





Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41636.D
Acq On : 20 May 2014 3:48 pm
Operator : TOANP
Sample : jb67153-3
Misc : MS67717,V4B1802,w,,,,5
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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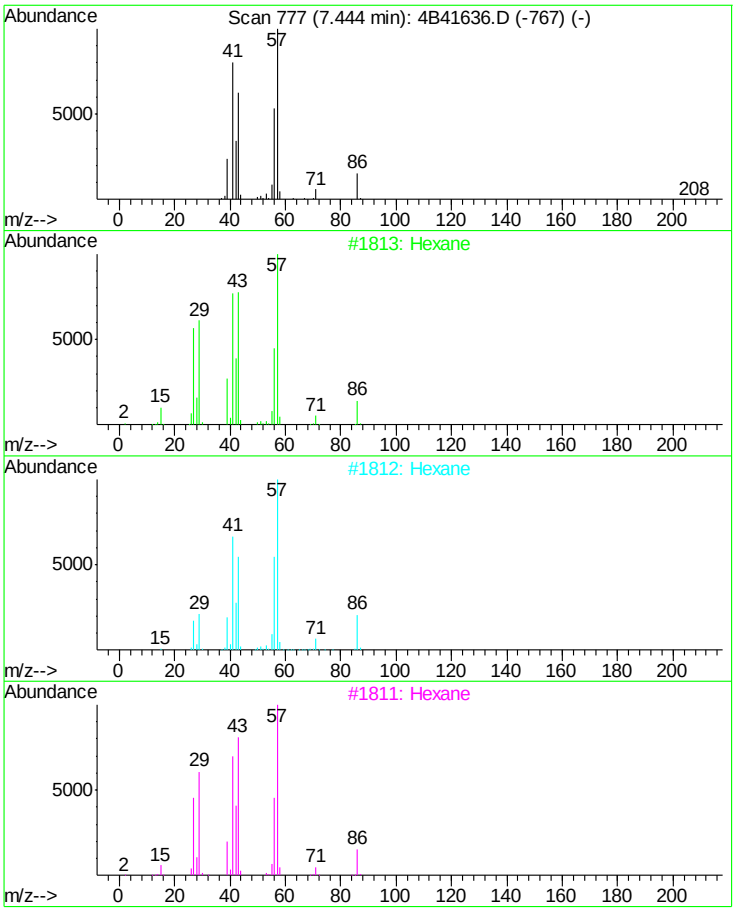
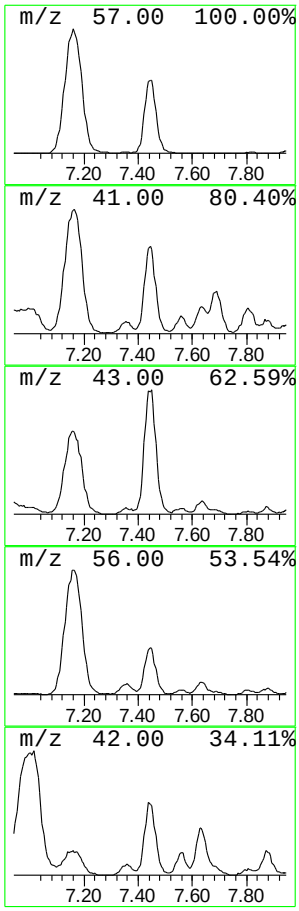
Peak Number 6 Hexane Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.44	22.07 ug/L	345205	pentafluorobenzene	8.84

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexane	86	C6H14	000110-54-3	91
2	Hexane	86	C6H14	000110-54-3	87
3	Hexane	86	C6H14	000110-54-3	72
4	Furan, tetrahydro-3-methyl-	86	C5H10O	013423-15-9	43
5	Furan, tetrahydro-3-methyl-	86	C5H10O	013423-15-9	42





Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41636.D
Acq On : 20 May 2014 3:48 pm
Operator : TOANP
Sample : jb67153-3
Misc : MS67717,V4B1802,w,,,,5
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

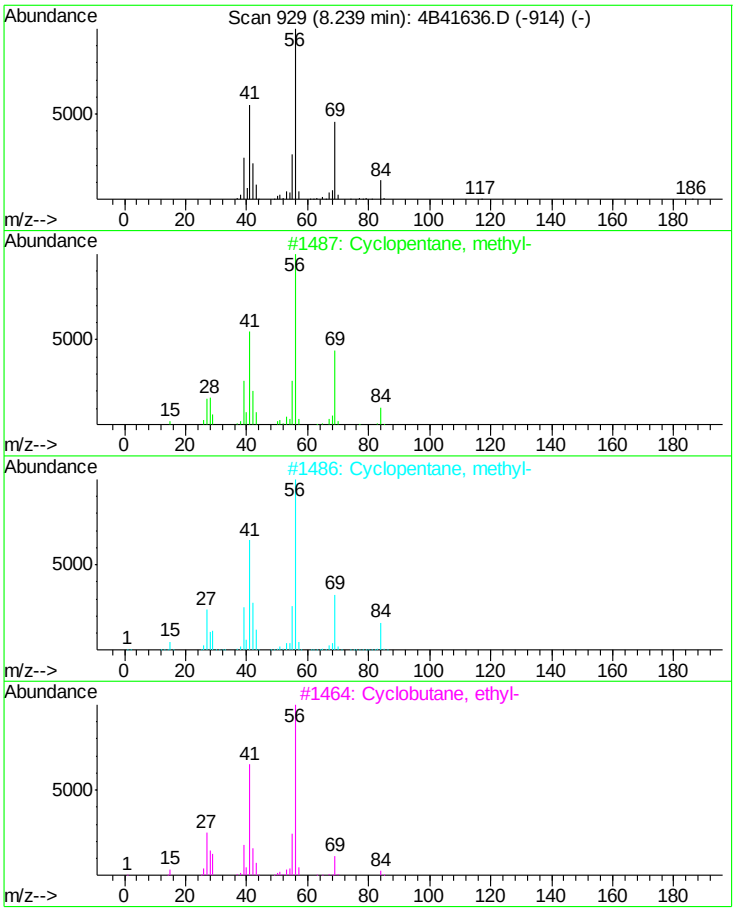
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

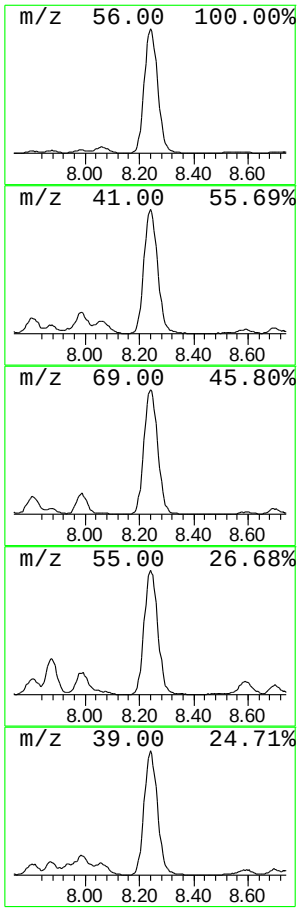
****

Peak Number 7 Cyclopentane, methyl- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.24	72.18 ug/L	1129010	pentafluorobenzene	8.84

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	91
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	90
3	Cyclobutane, ethyl-	84	C6H12	004806-61-5	80
4	Tetramethylene diisocyanate	140	C6H8N2O2	004538-37-8	78
5	Cyclopentane, methyl-	84	C6H12	000096-37-7	78





Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41636.D
Acq On : 20 May 2014 3:48 pm
Operator : TOANP
Sample : jb67153-3
Misc : MS67717,V4B1802,w,,,,5
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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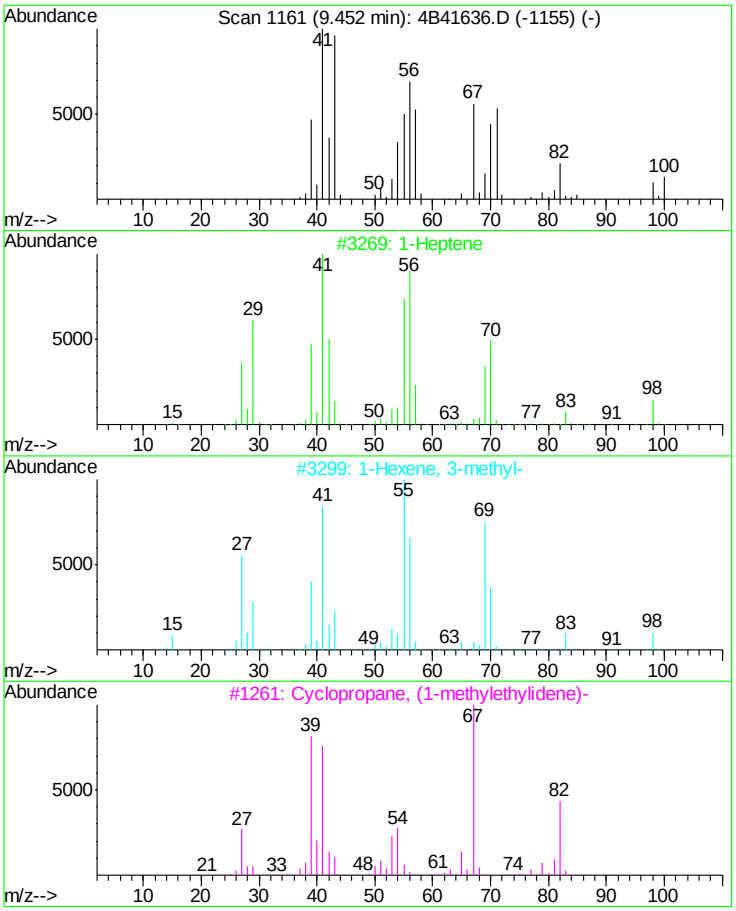
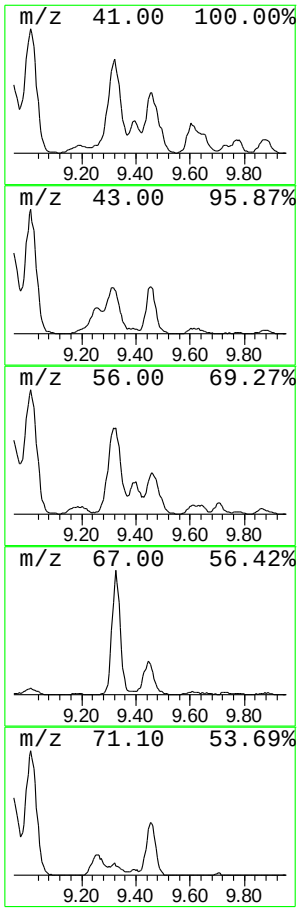
Peak Number 8 1-Heptene Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.45	22.83 ug/L	329344	1,4-difluorobenzene	9.70

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Heptene	98	C7H14	000592-76-7	55
2	1-Hexene, 3-methyl-	98	C7H14	003404-61-3	43
3	Cyclopropane, (1-methylethylidene)-	82	C6H10	004741-86-0	30
4	Ethylidenecyclobutane	82	C6H10	001528-21-8	30
5	Cyclobutanone, 2,2-dimethyl-	98	C6H10O	001192-14-9	27





Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41636.D
Acq On : 20 May 2014 3:48 pm
Operator : TOANP
Sample : jb67153-3
Misc : MS67717,V4B1802,w,,,,5
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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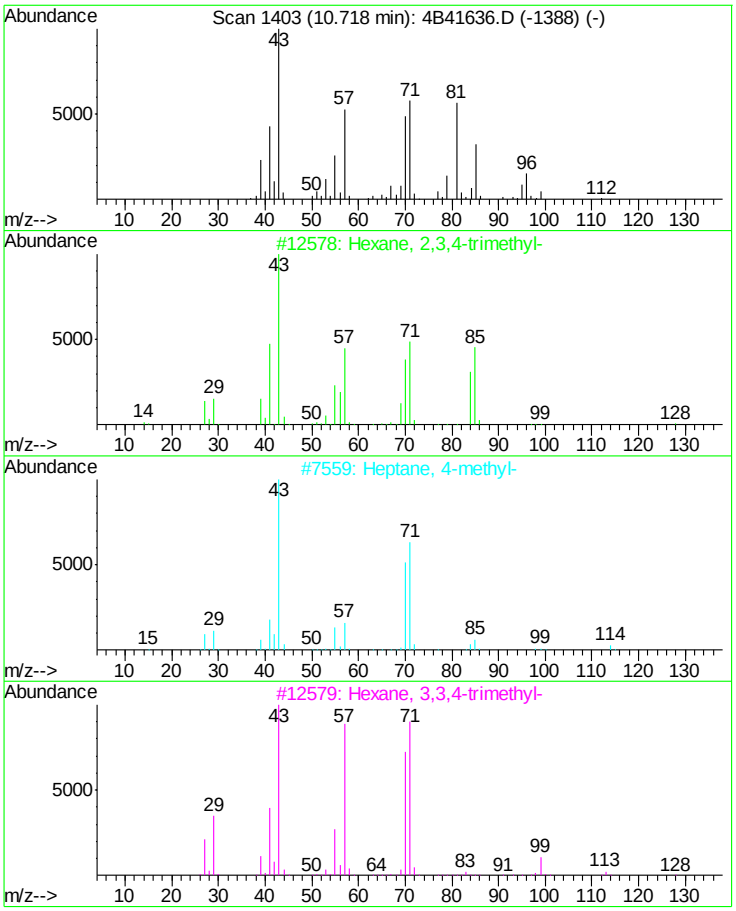
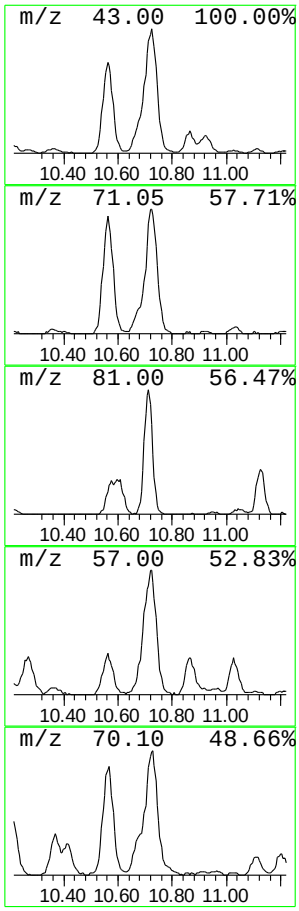
Peak Number 9 Hexane, 2,3,4-trimethyl- Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.72	30.96 ug/L	446675	1,4-difluorobenzene	9.70

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexane, 2,3,4-trimethyl-	128	C9H20	000921-47-1	53
2	Heptane, 4-methyl-	114	C8H18	000589-53-7	50
3	Hexane, 3,3,4-trimethyl-	128	C9H20	016747-31-2	47
4	Hexane, 3-methyl-	100	C7H16	000589-34-4	47
5	Pentane, 3-ethyl-2-methyl-	114	C8H18	000609-26-7	47





Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41636.D
Acq On : 20 May 2014 3:48 pm
Operator : TOANP
Sample : jb67153-3
Misc : MS67717,V4B1802,w,,,,5
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

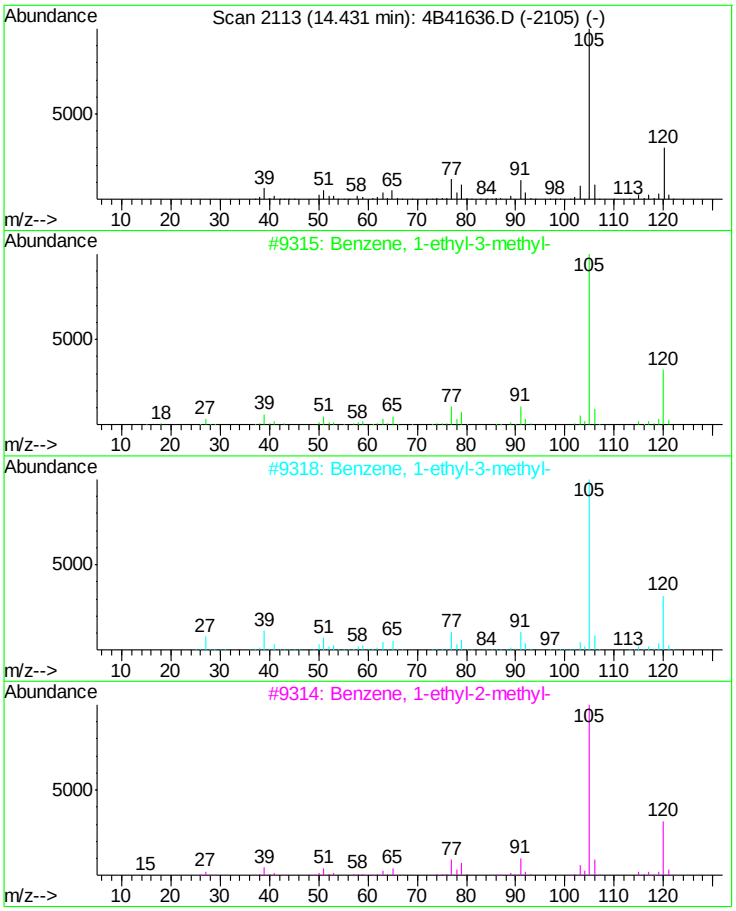
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

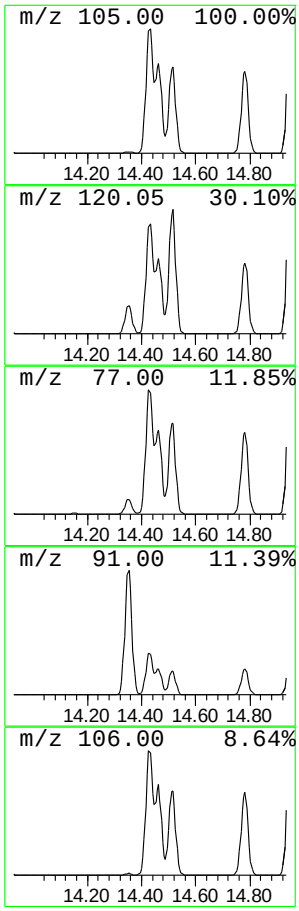
****

Peak Number 10 Benzene, 1-ethyl-3-methyl- Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.43	49.52 ug/L	3026780	1,4-dichlorobenzene-d4	15.44

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	95
2	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	94
3	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
4	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
5	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91





Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41636.D
Acq On : 20 May 2014 3:48 pm
Operator : TOANP
Sample : jb67153-3
Misc : MS67717,V4B1802,w,,,,5
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

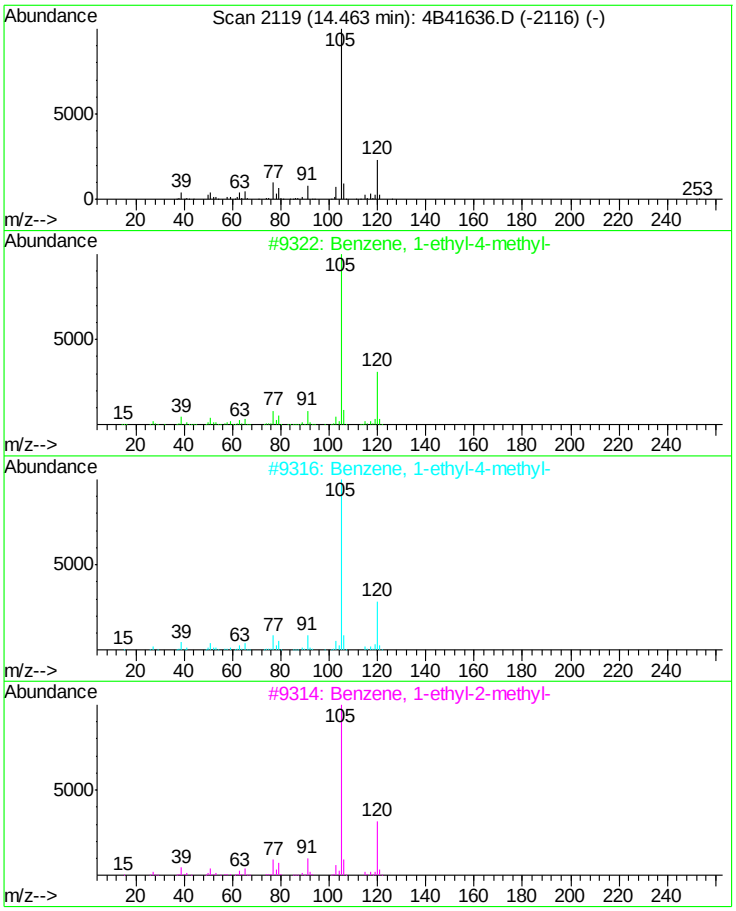
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

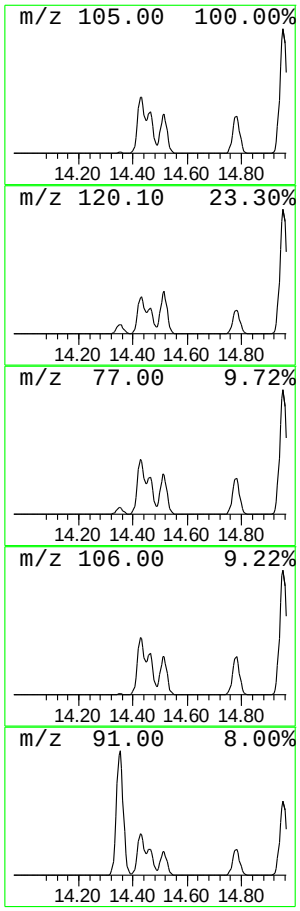
****

Peak Number 11 Benzene, 1-ethyl-4-methyl- Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.46	29.64 ug/L	1811510	1,4-dichlorobenzene-d4	15.44

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91
2	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91
3	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	91
4	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	91
5	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91





Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41636.D
Acq On : 20 May 2014 3:48 pm
Operator : TOANP
Sample : jb67153-3
Misc : MS67717,V4B1802,w,,,,5
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

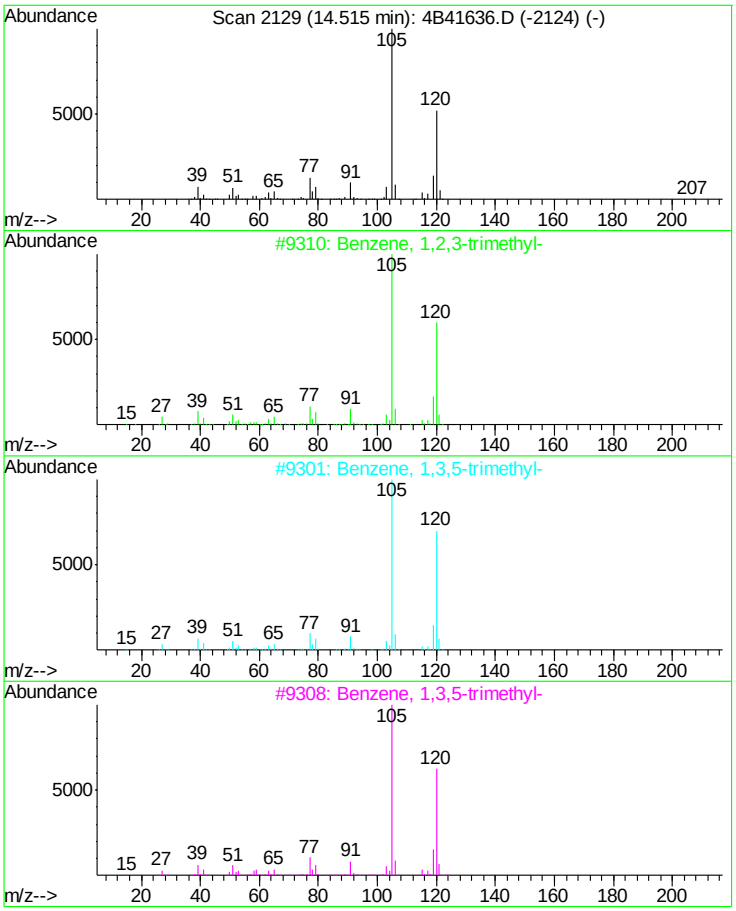
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

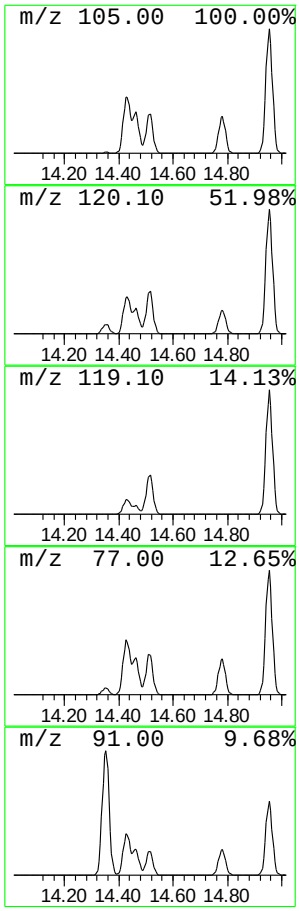
****

Peak Number 12 Benzene, 1,2,3-trimethyl- Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.52	36.07 ug/L	2205120	1,4-dichlorobenzene-d4	15.44

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
5	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94





Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41636.D
Acq On : 20 May 2014 3:48 pm
Operator : TOANP
Sample : jb67153-3
Misc : MS67717,V4B1802,w,,,,5
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

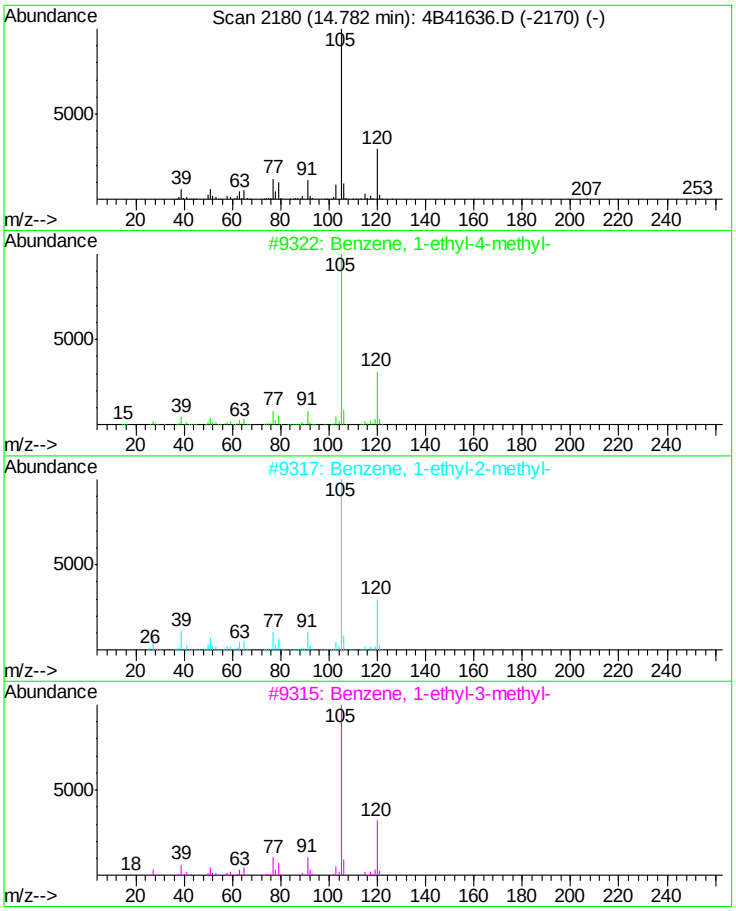
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

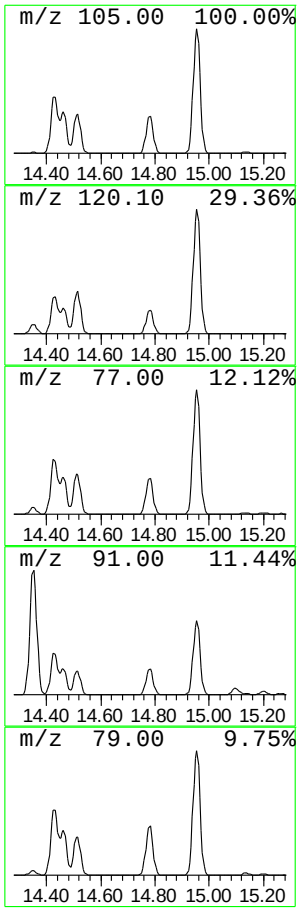
****

Peak Number 13 Benzene, 1-ethyl-4-methyl- Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.78	31.25 ug/L	1910490	1,4-dichlorobenzene-d4	15.44

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	91
3	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91
4	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	91
5	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	91





Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41636.D
Acq On : 20 May 2014 3:48 pm
Operator : TOANP
Sample : jb67153-3
Misc : MS67717,V4B1802,w,,,,5
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

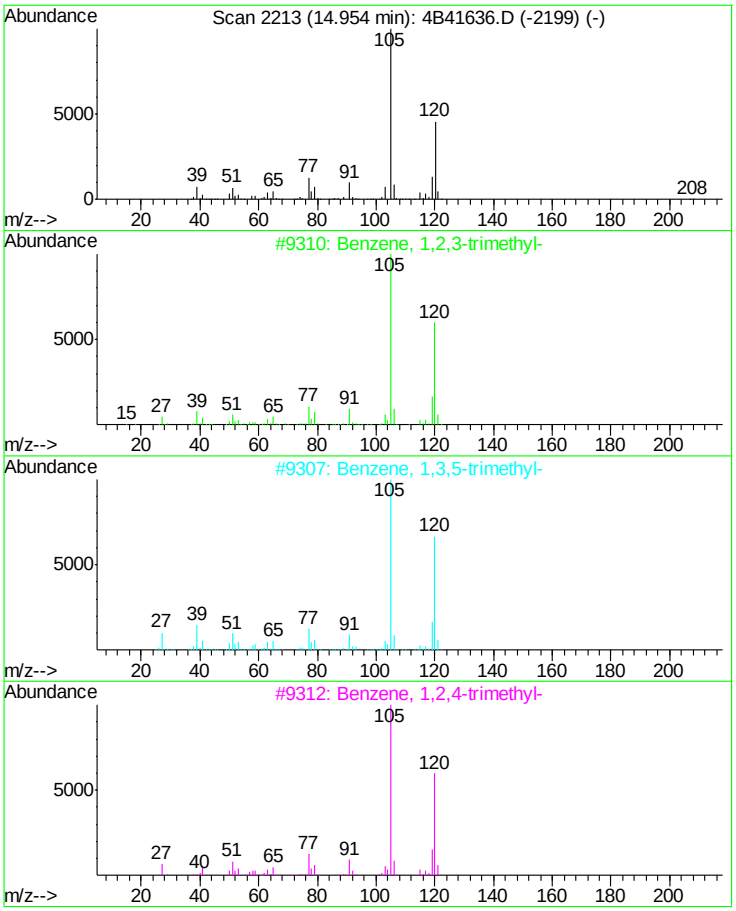
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

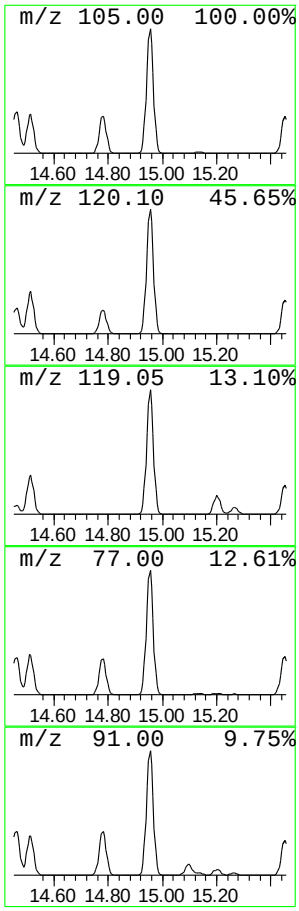
****

Peak Number 14 Benzene, 1,2,3-trimethyl- Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.95	114.96 ug/L	7027080	1,4-dichlorobenzene-d4	15.44

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
5	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	91





Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41636.D
Acq On : 20 May 2014 3:48 pm
Operator : TOANP
Sample : jb67153-3
Misc : MS67717,V4B1802,w,,,,5
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

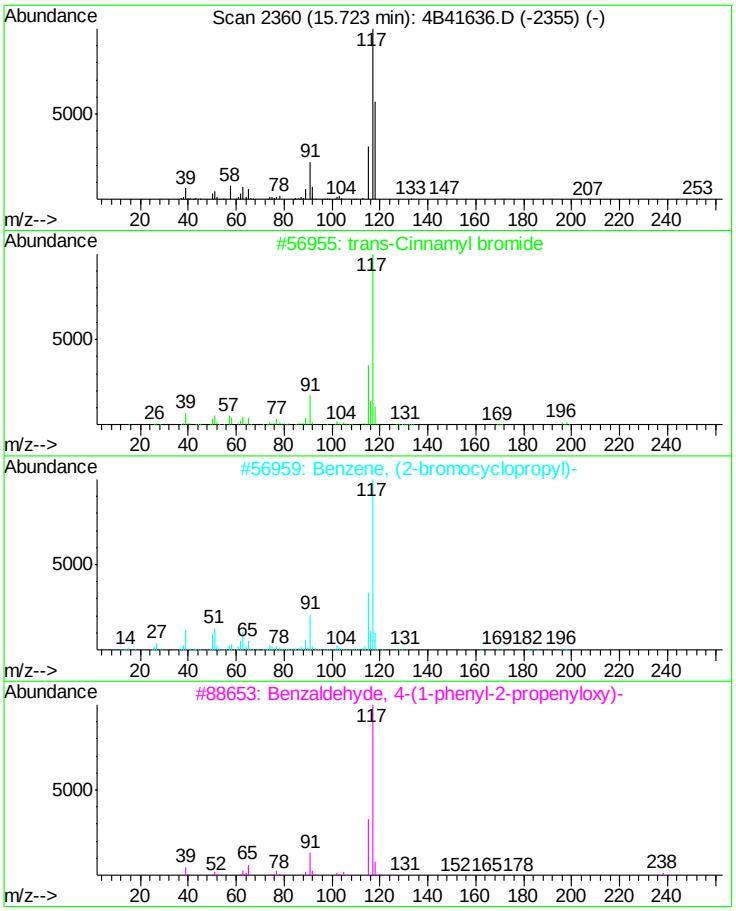
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

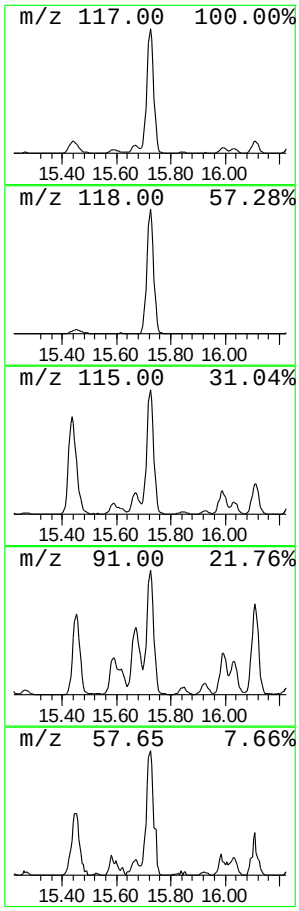
****

Peak Number 15 trans-Cinnamyl bromide Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.72	22.37 ug/L	1367430	1,4-dichlorobenzene-d4	15.44

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	trans-Cinnamyl bromide	196	C9H9Br	026146-77-0	59
2	Benzene, (2-bromocyclopropyl)-	196	C9H9Br	036617-02-4	53
3	Benzaldehyde, 4-(1-phenyl-2-prop...	238	C16H14O2	1000277-56-1	42
4	Benzene, (2-bromocyclopropyl)-	196	C9H9Br	036617-02-4	32
5	Indole	117	C8H7N	000120-72-9	23





Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41636.D
Acq On : 20 May 2014 3:48 pm
Operator : TOANP
Sample : jb67153-3
Misc : MS67717,V4B1802,w,,,,5
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

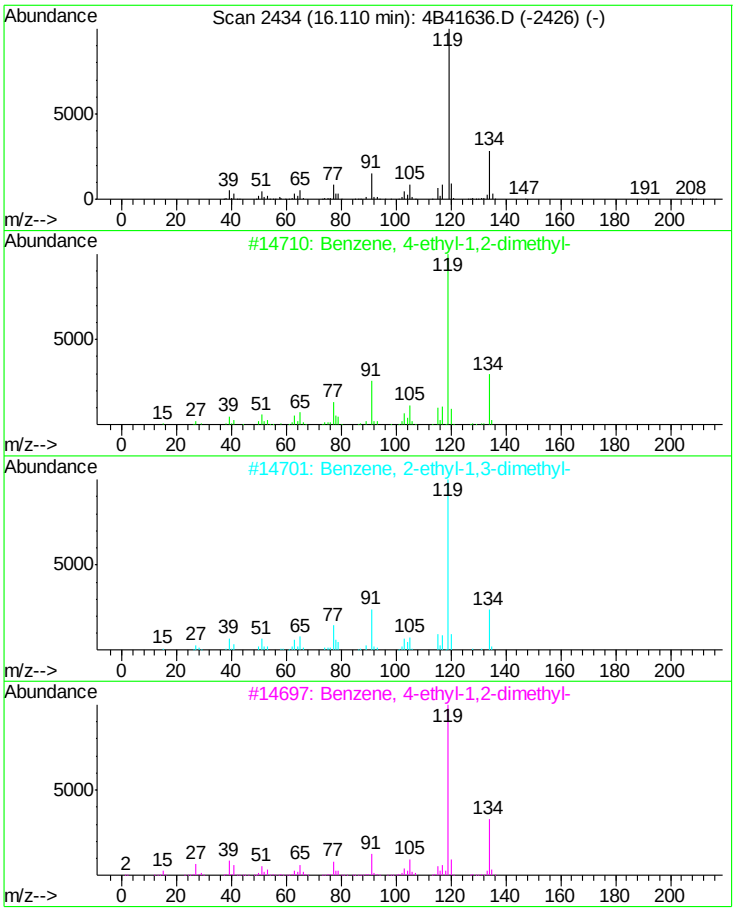
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

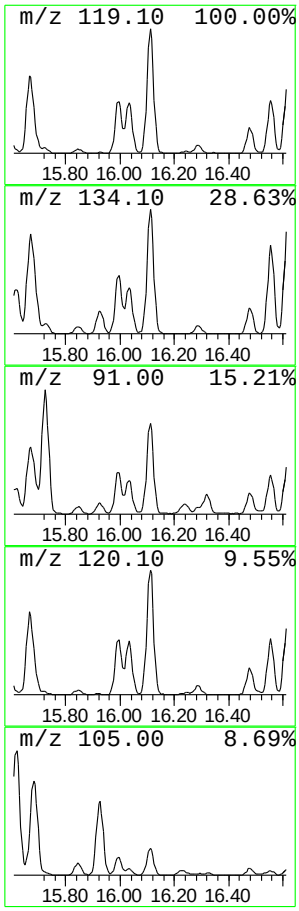
****

Peak Number 16 Benzene, 4-ethyl-1,2-dimethyl- Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.11	20.85 ug/L	1274710	1,4-dichlorobenzene-d4	15.44

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	95
2	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14	002870-04-4	95
3	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	94
4	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	94
5	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	94





Tentatively Identified Compound (LSC) summary

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41636.D
Acq On : 20 May 2014 3:48 pm
Operator : TOANP
Sample : jb67153-3
Misc : MS67717,V4B1802,w,,,,5
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Nitrous Oxide	3.44	66.8	ug/L	1044930	2	8.84	782064	50.0
Butane	4.45	24.8	ug/L	387904	2	8.84	782064	50.0
Butane, 2-methyl-	5.27	135.9	ug/L	2125720	2	8.84	782064	50.0
Pentane	5.63	59.4	ug/L	928877	2	8.84	782064	50.0
2-Pentene, (E)-	5.78	22.2	ug/L	346707	2	8.84	782064	50.0
Hexane	7.44	22.1	ug/L	345205	2	8.84	782064	50.0
Cyclopentane, met...	8.24	72.2	ug/L	1129010	2	8.84	782064	50.0
1-Heptene	9.45	22.8	ug/L	329344	3	9.70	721393	50.0
Hexane, 2,3,4-tri...	10.72	31.0	ug/L	446675	3	9.70	721393	50.0
Benzene, 1-ethyl-...	14.43	49.5	ug/L	3026780	5	15.44	3056320	50.0
Benzene, 1-ethyl-...	14.46	29.6	ug/L	1811510	5	15.44	3056320	50.0
Benzene, 1,2,3-tr...	14.52	36.1	ug/L	2205120	5	15.44	3056320	50.0
Benzene, 1-ethyl-...	14.78	31.3	ug/L	1910490	5	15.44	3056320	50.0
Benzene, 1,2,3-tr...	14.95	115.0	ug/L	7027080	5	15.44	3056320	50.0
trans-Cinnamyl br...	15.72	22.4	ug/L	1367430	5	15.44	3056320	50.0
Benzene, 4-ethyl-...	16.11	20.9	ug/L	1274710	5	15.44	3056320	50.0

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41627.D
Acq On : 20 May 2014 10:43 am
Operator : TOANP
Sample : MB
Misc : MS67787,V4B1802,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 20 16:21:15 2014
Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Apr 16 12:59:24 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.87	65	153960	500.00	ug/L	-0.03
5) pentafluorobenzene	8.84	168	184610	50.00	ug/L	-0.01
56) 1,4-difluorobenzene	9.70	114	288788	50.00	ug/L	-0.01
88) chlorobenzene-d5	12.89	117	272733	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	15.44	152	166936	50.00	ug/L	0.00

System Monitoring Compounds						
49) dibromofluoromethane (s)	8.93	113	97861	49.99	ug/L	-0.01
Spiked Amount 50.000	Range 79 - 120		Recovery = 99.98%			
50) 1,2-dichloroethane-d4 (s)	9.33	65	114300	51.32	ug/L	-0.01
Spiked Amount 50.000	Range 72 - 123		Recovery = 102.64%			
80) toluene-d8 (s)	11.30	98	324879	45.91	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 91.82%			
104) 4-bromofluorobenzene (s)	14.15	95	151262	49.24	ug/L	-0.01
Spiked Amount 50.000	Range 74 - 119		Recovery = 98.48%			

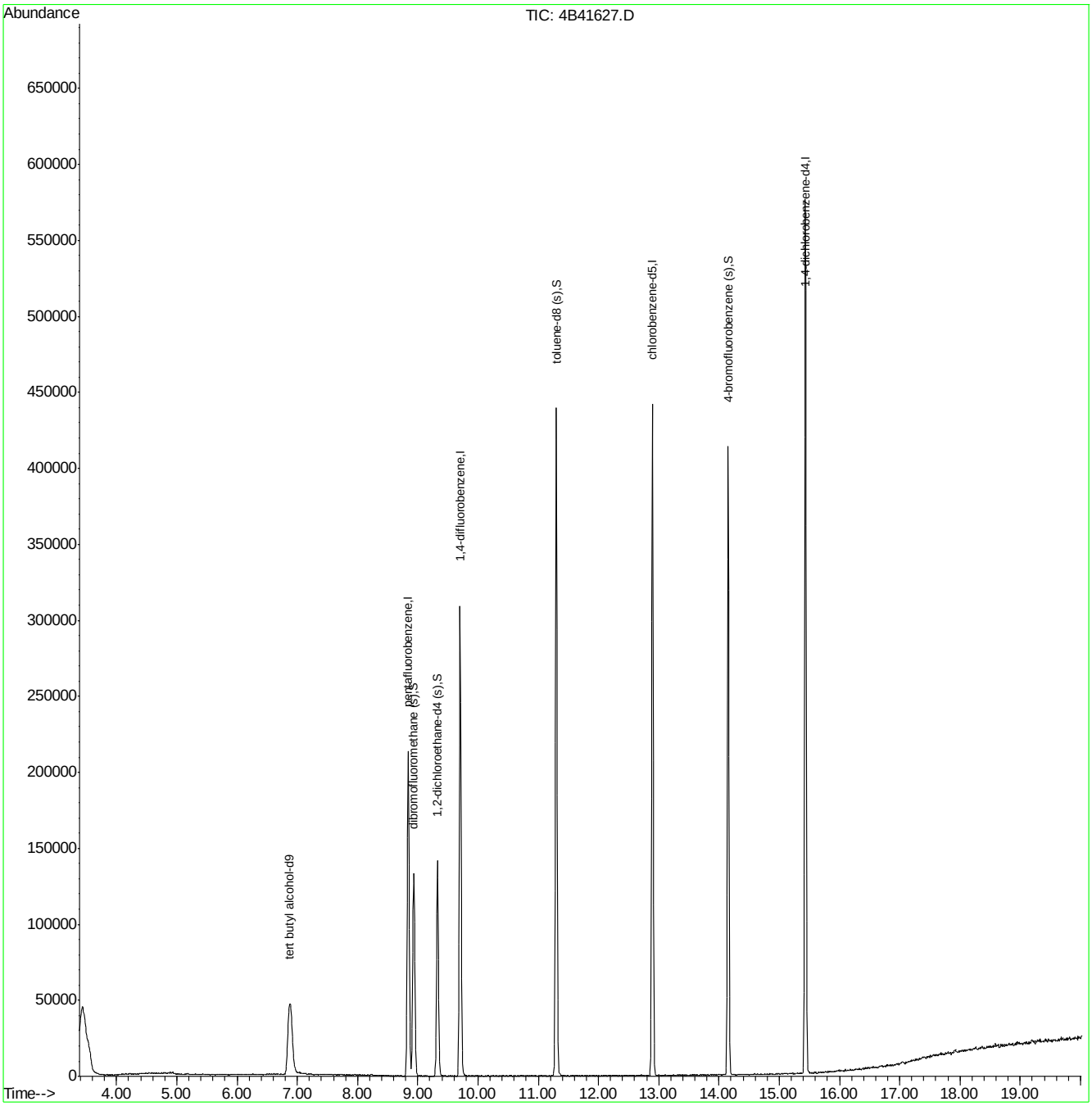
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B41627.D
Acq On : 20 May 2014 10:43 am
Operator : TOANP
Sample : MB
Misc : MS67787,V4B1802,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 20 16:21:15 2014
Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Apr 16 12:59:24 2014
Response via : Initial Calibration



ACCUTEST LABORATORIES JB67153

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\
Data File : 4B41627.D
Acq On : 20 May 2014 10:43 am
Operator : TOANP
Sample : MB
Misc : MS67787,V4B1802,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.05 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.437	3	11	58	rVB	44357	336526	32.95%	5.734%
2	4.102	134	138	142	rBV3	630	959	0.09%	0.016%
3	4.143	142	146	147	rBV2	823	730	0.07%	0.012%
4	4.536	218	221	225	rVB3	693	979	0.10%	0.017%
5	4.572	225	228	231	rBV5	857	974	0.10%	0.017%
6	4.651	239	243	246	rBV	834	787	0.08%	0.013%
7	4.745	256	261	265	rVB4	565	917	0.09%	0.016%
8	4.802	269	272	274	rVB2	824	777	0.08%	0.013%
9	4.891	280	289	292	rBV5	1103	1911	0.19%	0.033%
10	4.933	293	297	307	rVB4	1542	2741	0.27%	0.047%
11	5.074	320	324	327	rVB2	534	687	0.07%	0.012%
12	5.137	332	336	337	rBV2	568	756	0.07%	0.013%
13	5.289	360	365	367	rVV	466	753	0.07%	0.013%
14	5.639	431	432	438	rBV	452	740	0.07%	0.013%
15	6.032	501	507	513	rVB3	426	900	0.09%	0.015%
16	6.157	528	531	535	rBV2	433	671	0.07%	0.011%
17	6.262	548	551	554	rBV2	838	673	0.07%	0.011%
18	6.408	577	579	584	rVB2	576	753	0.07%	0.013%
19	6.460	584	589	596	rBV3	651	1651	0.16%	0.028%
20	6.576	607	611	614	rVB3	599	737	0.07%	0.013%
21	6.607	614	617	619	rBV3	770	785	0.08%	0.013%
22	6.659	623	627	628	rVB3	891	691	0.07%	0.012%
23	6.727	637	640	646	rVB3	599	759	0.07%	0.013%
24	6.874	650	668	698	rBV2	46366	253130	24.79%	4.313%
25	7.099	708	711	717	rVB3	514	767	0.08%	0.013%
26	7.632	809	813	816	rVB3	762	880	0.09%	0.015%
27	7.690	819	824	826	rVB2	730	931	0.09%	0.016%
28	7.705	826	827	832	rBV3	815	942	0.09%	0.016%
29	8.228	921	927	934	rVB3	643	1138	0.11%	0.019%
30	8.547	986	988	994	rVB2	570	790	0.08%	0.013%
31	8.840	1032	1044	1054	rBV	213460	495964	48.56%	8.450%
32	8.934	1054	1062	1077	rVB	133498	308768	30.23%	5.261%
33	9.327	1124	1137	1151	rBV	141624	306624	30.02%	5.224%
34	9.703	1196	1209	1232	rVB	309452	650534	63.70%	11.084%

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\
Data File : 4B41627.D
Acq On : 20 May 2014 10:43 am
Operator : TOANP
Sample : MB
Misc : MS67787,V4B1802,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.05 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

35	11.298	1502	1514	1534	rBV	439875	840766	82.32%	14.325%
36	12.250	1689	1696	1701	rBV2	578	723	0.07%	0.012%
37	12.894	1808	1819	1832	rVV	441832	818944	80.19%	13.953%
38	13.406	1915	1917	1919	rBV	646	657	0.06%	0.011%
39	13.506	1932	1936	1938	rBV2	467	697	0.07%	0.012%
40	13.574	1948	1949	1958	rVB3	327	700	0.07%	0.012%
41	13.689	1967	1971	1975	rBV2	610	656	0.06%	0.011%
42	13.866	1999	2005	2007	rVB4	625	1096	0.11%	0.019%
43	13.893	2007	2010	2013	rBV2	525	848	0.08%	0.014%
44	14.149	2049	2059	2077	rBV	413665	721015	70.60%	12.285%
45	14.322	2087	2092	2093	rBV3	502	700	0.07%	0.012%
46	14.520	2126	2130	2134	rBV3	537	862	0.08%	0.015%
47	14.698	2159	2164	2168	rVB4	620	1074	0.11%	0.018%
48	14.954	2212	2213	2217	rBV2	667	832	0.08%	0.014%
49	15.195	2255	2259	2264	rVV2	506	748	0.07%	0.013%
50	15.300	2272	2279	2281	rBV5	960	1547	0.15%	0.026%
51	15.436	2295	2305	2321	rBV	575189	1021292	100.00%	17.401%
52	15.587	2329	2334	2336	rBV4	753	920	0.09%	0.016%
53	15.650	2343	2346	2348	rBV3	1079	1107	0.11%	0.019%
54	15.781	2364	2371	2373	rVB5	671	1094	0.11%	0.019%
55	15.838	2378	2382	2386	rBV3	791	1135	0.11%	0.019%
56	15.990	2405	2411	2413	rVB6	1048	1344	0.13%	0.023%
57	16.016	2414	2416	2420	rVV3	706	704	0.07%	0.012%
58	16.063	2420	2425	2428	rVB5	800	1140	0.11%	0.019%
59	16.100	2428	2432	2437	rBV4	1571	2281	0.22%	0.039%
60	16.147	2437	2441	2443	rBV3	805	837	0.08%	0.014%
61	16.178	2445	2447	2450	rVB3	871	839	0.08%	0.014%
62	16.246	2456	2460	2461	rBV3	604	657	0.06%	0.011%
63	16.335	2475	2477	2480	rVB3	1047	861	0.08%	0.015%
64	16.403	2482	2490	2491	rVV6	1284	1866	0.18%	0.032%
65	16.424	2491	2494	2495	rBV2	1334	904	0.09%	0.015%
66	16.539	2512	2516	2518	rBV5	1026	794	0.08%	0.014%
67	16.560	2518	2520	2523	rVV4	1307	971	0.10%	0.017%
68	16.675	2534	2542	2543	rBV7	1215	2237	0.22%	0.038%
69	16.743	2552	2555	2559	rBV5	882	1257	0.12%	0.021%
70	16.774	2559	2561	2563	rBV2	1226	1040	0.10%	0.018%
71	16.842	2572	2574	2578	rVB5	999	1108	0.11%	0.019%

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\
Data File : 4B41627.D
Acq On : 20 May 2014 10:43 am
Operator : TOANP
Sample : MB
Misc : MS67787,V4B1802,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.05 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

72	16.910	2582	2587	2588	rBV3	951	1230	0.12%	0.021%
73	16.947	2590	2594	2596	rBV3	1089	1304	0.13%	0.022%
74	16.968	2596	2598	2601	rVB3	1284	1384	0.14%	0.024%
75	16.994	2601	2603	2604	rBV2	1219	811	0.08%	0.014%
76	17.052	2607	2614	2616	rBV6	1366	1753	0.17%	0.030%
77	17.099	2621	2623	2624	rBV2	1356	819	0.08%	0.014%
78	17.151	2629	2633	2634	rBV3	1112	1325	0.13%	0.023%
79	17.277	2656	2657	2659	rBV2	933	723	0.07%	0.012%
80	17.313	2663	2664	2666	rBV2	1114	885	0.09%	0.015%
81	17.386	2673	2678	2679	rBV5	1226	1604	0.16%	0.027%
82	17.454	2688	2691	2692	rBV2	1364	895	0.09%	0.015%
83	17.512	2700	2702	2704	rBV3	1592	1336	0.13%	0.023%
84	17.543	2706	2708	2711	rBV4	1144	1445	0.14%	0.025%
85	17.664	2729	2731	2733	rBV2	1644	1046	0.10%	0.018%
86	17.758	2747	2749	2751	rBV3	1686	1099	0.11%	0.019%
87	17.925	2774	2781	2789	rBV9	2506	6756	0.66%	0.115%
88	18.265	2834	2846	2851	rBV9	2687	7465	0.73%	0.127%
89	18.589	2905	2908	2910	rBV4	2503	1804	0.18%	0.031%
90	18.678	2921	2925	2929	rBV7	2052	2980	0.29%	0.051%
91	18.710	2930	2931	2936	rVB5	1656	1684	0.16%	0.029%
92	18.741	2936	2937	2941	rBV4	1916	1850	0.18%	0.032%
93	18.929	2967	2973	2975	rBV7	2270	3266	0.32%	0.056%
94	18.987	2981	2984	2985	rVB3	1161	1022	0.10%	0.017%
95	19.076	2996	3001	3002	rBV5	1476	2137	0.21%	0.036%
96	19.144	3012	3014	3016	rVB2	1934	1146	0.11%	0.020%
97	19.259	3034	3036	3038	rBV3	2673	2288	0.22%	0.039%
98	19.416	3064	3066	3067	rBV	2069	1161	0.11%	0.020%
99	19.709	3119	3122	3125	rVB4	1841	1790	0.18%	0.030%
100	19.954	3168	3169	3171	rBV2	2614	1587	0.16%	0.027%

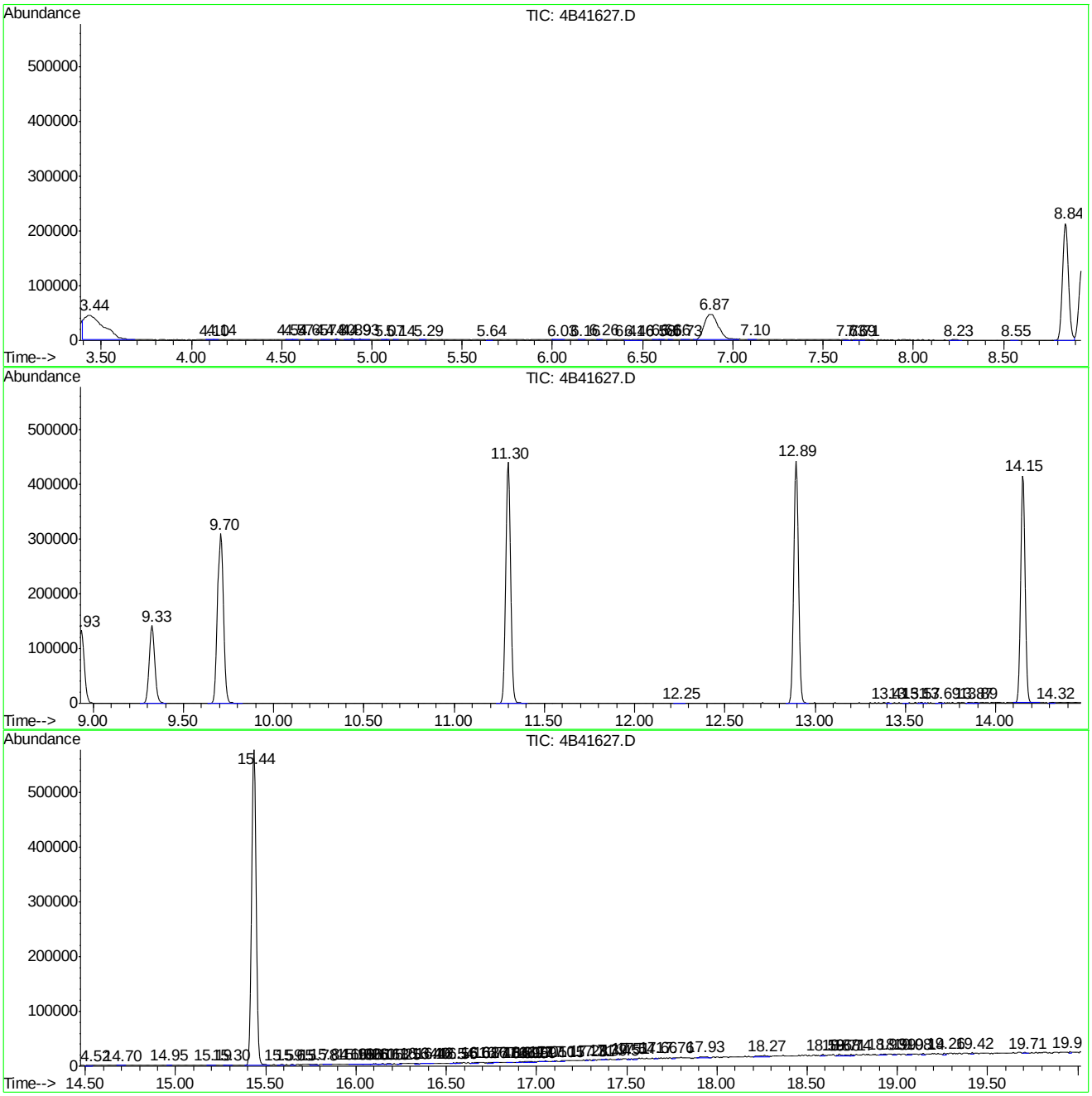
Sum of corrected areas: 5869173

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\
Data File : 4B41627.D
Acq On : 20 May 2014 10:43 am
Operator : TOANP
Sample : MB
Misc : MS67787,V4B1802,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p



ACCUTEST LABORATORIES JB67153

Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\
Data File : 4B41627.D
Acq On : 20 May 2014 10:43 am
Operator : TOANP
Sample : MB
Misc : MS67787,V4B1802,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

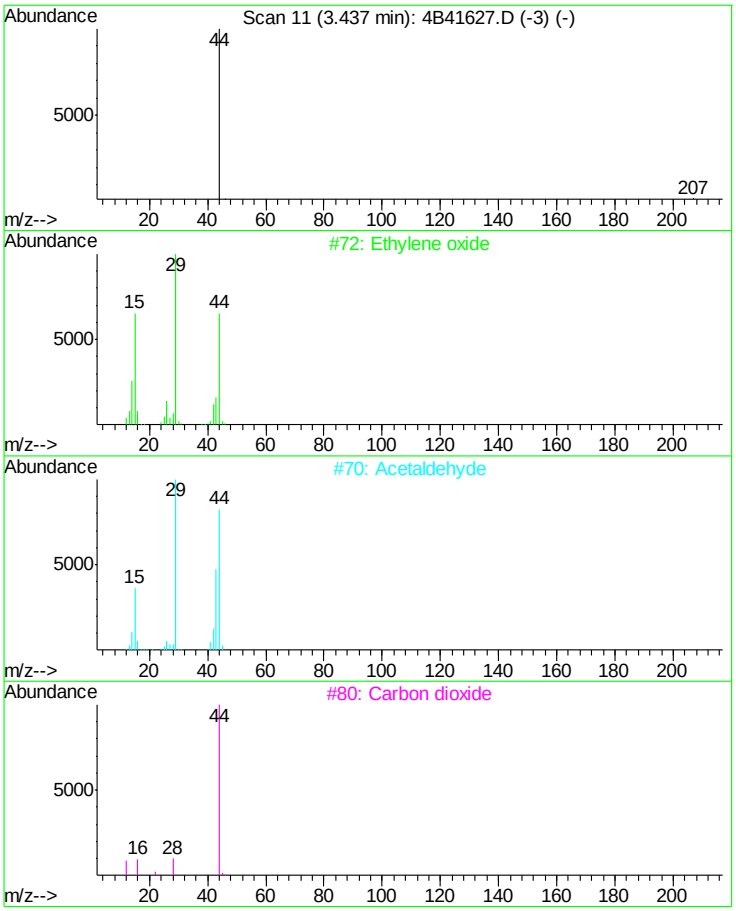
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

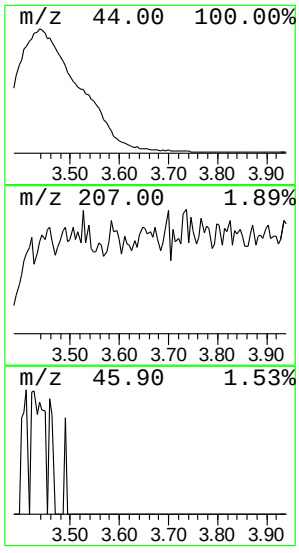
****

Peak Number 1 Ethylene oxide Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.44	33.93 ug/L	336526	pentafluorobenzene	8.84

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Ethylene oxide	44	C2H4O	000075-21-8	3
2	Acetaldehyde	44	C2H4O	000075-07-0	2
3	Carbon dioxide	44	CO2	000124-38-9	2
4	Ethyne, fluoro-	44	C2HF	002713-09-9	2
5	Acetaldehyde	44	C2H4O	000075-07-0	2





Tentatively Identified Compound (LSC) summary

Data Path : C:\MSDChem\1\DATA\
Data File : 4B41627.D
Acq On : 20 May 2014 10:43 am
Operator : TOANP
Sample : MB
Misc : MS67787,V4B1802,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B1763.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Ethylene oxide	3.44	33.9	ug/L	336526	2	8.84	495964	50.0

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2425 New Holland Pike, Lancaster, PA 17601 · 717-656-2300 · Fax: 717-656-2681 · www.LancasterLabs.com

Type III Data Package

Prepared for:

Atlantic Richfield (ENV-NNJ)
501 WestLake Park Boulevard
Houston TX 77079

Project: BP 84849
Water Sample
Collected on 07/04/14

SDG# NNS22

GROUP	SAMPLE NUMBERS
1487712	7527284

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-13-10
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman **Date: 07/17/2014**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Loran Carter at (717) 556-7252.

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Sample Reference List for SDG Number NNS22
with a Data Package Type of III

12697 - Atlantic Richfield (ENV-NNJ)

Project: BP 84849

Lab Sample Number	Lab Sample Code	Client Sample Description
7527284	PVV18	MW-18R Water BP 84849 COC:

eurofins | Lancaster Laboratories Environmental

Sample pH Log

SDG: NNS22

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	Res. Cl. Present?	Corrective Substance	CS Lot #
7527284	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA

Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 · 717-656-2300 Fax: 717-656-2681 · www.lancasterlabs.com

01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030B, December 1996.

10335 8260 Ext. Water Master w/GRO

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8260B, December 1996

Analysis Reports / Field Chain of Custody

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Atlantic Richfield (ENV-NNJ)
501 WestLake Park Boulevard
Houston TX 77079

July 14, 2014

Project: BP 84849

Submittal Date: 07/09/2014
Group Number: 1487712
SDG: NNS22
PO Number: 00896-0005
Release Number: MILLER
State of Sample Origin: NJ

Client Sample Description	Lancaster Labs (LL) #
MW-18R Water	7527284

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO EnviroTrac Ltd. Attn: Donna Nicholls

Respectfully Submitted,

Amek Carter
Specialist

(717) 556-7252

Project Name: BP 84849
LL Group #: 1487712

General Comments:

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client. The compliance signature is located on the cover page of the Analysis Reports.

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below. Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Trip blank vials were not received by the laboratory for this sample group.

Analysis Specific Comments:

No additional comments are necessary.

Sample Description: MW-18R Water
BP 84849 COC:
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 7527284
LL Group # 1487712
Account # 12697

Project Name: BP 84849

Collected: 07/04/2014 12:40 by RD

Submitted: 07/09/2014 19:45
Reported: 07/14/2014 12:58

Atlantic Richfield (ENV-NNJ)
501 WestLake Park Boulevard
Houston TX 77079

PVV18 SDG#: NNS22-01*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l		ug/l	ug/l	
10335	Acetone	67-64-1	38	J	30	100	5
10335	Benzene	71-43-2	63		2.5	5.0	5
10335	Bromodichloromethane	75-27-4	N.D.		2.5	5.0	5
10335	Bromoform	75-25-2	N.D.		2.5	20	5
10335	Bromomethane	74-83-9	N.D.		2.5	5.0	5
10335	2-Butanone	78-93-3	N.D.		15	50	5
10335	t-Butyl alcohol	75-65-0	N.D.		25	100	5
10335	Carbon Disulfide	75-15-0	N.D.		5.0	25	5
10335	Carbon Tetrachloride	56-23-5	N.D.		2.5	5.0	5
10335	Chlorobenzene	108-90-7	N.D.		2.5	5.0	5
10335	Chloroethane	75-00-3	N.D.		2.5	5.0	5
10335	Chloroform	67-66-3	N.D.		2.5	5.0	5
10335	Chloromethane	74-87-3	N.D.		2.5	5.0	5
10335	Dibromochloromethane	124-48-1	N.D.		2.5	5.0	5
10335	1,1-Dichloroethane	75-34-3	N.D.		2.5	5.0	5
10335	1,2-Dichloroethane	107-06-2	N.D.		2.5	5.0	5
10335	1,1-Dichloroethene	75-35-4	N.D.		2.5	5.0	5
10335	cis-1,2-Dichloroethene	156-59-2	N.D.		2.5	5.0	5
10335	trans-1,2-Dichloroethene	156-60-5	N.D.		2.5	5.0	5
10335	1,2-Dichloropropane	78-87-5	N.D.		2.5	5.0	5
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.		2.5	5.0	5
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.		2.5	5.0	5
10335	Ethylbenzene	100-41-4	320		2.5	5.0	5
10335	2-Hexanone	591-78-6	N.D.		15	50	5
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		2.5	5.0	5
10335	4-Methyl-2-pentanone	108-10-1	N.D.		15	50	5
10335	Methylene Chloride	75-09-2	N.D.		10	15	5
10335	Styrene	100-42-5	N.D.		5.0	25	5
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		2.5	5.0	5
10335	Tetrachloroethene	127-18-4	N.D.		2.5	5.0	5
10335	Toluene	108-88-3	210		2.5	5.0	5
10335	1,1,1-Trichloroethane	71-55-6	N.D.		2.5	5.0	5
10335	1,1,2-Trichloroethane	79-00-5	N.D.		2.5	5.0	5
10335	Trichloroethene	79-01-6	N.D.		2.5	5.0	5
10335	Vinyl Chloride	75-01-4	N.D.		2.5	5.0	5
10335	Xylene (Total)	1330-20-7	1,600		2.5	5.0	5

00890 VOA GC/MS Library Search (10)

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.

General Sample Comments

State of New Jersey Lab Certification No. PA011
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: MW-18R Water
BP 84849 COC:
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 7527284
LL Group # 1487712
Account # 12697

Project Name: BP 84849

Collected: 07/04/2014 12:40 by RD

Submitted: 07/09/2014 19:45
Reported: 07/14/2014 12:58

Atlantic Richfield (ENV-NNJ)
501 WestLake Park Boulevard
Houston TX 77079

PVV18 SDG#: NNS22-01*

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	TCL+MTBE,TBA by 8260	SW-846 8260B	1	T141921AA	07/11/2014 16:46	Linda C Pape	5
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T141921AA	07/11/2014 16:46	Linda C Pape	5

*=This limit was used in the evaluation of the final result

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

PVV18

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 7527284
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:SH08363.i/14jul11a.b/tl11s17.d
Level: (low/med) LOW Date Received: 07/09/14
% Moisture: not dec. Date Analyzed: 07/11/14
Column: (pack/cap) CAP Dilution Factor: 5.0

Number TICs found: 10

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.79	580	J
2.		Unknown	2.99	370	J
3.		Unknown	4.16	700	J
4.		Unknown	5.84	320	J
5.		Unknown	12.30	570	J
6.		Unknown	12.34	420	J
7.		Unknown	12.38	500	J
8.		Unknown	12.53	400	J
9.		Unknown	12.66	1500	J
10.		Unknown	12.97	410	J
11.					
12.	VOCTIC	Total VOC TICs		5800	J
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

page 1 of 1

FORM I VOA-TIC

Quality Control Summary

Client Name: Atlantic Richfield (ENV-NNJ) Group Number: 1487712
Reported: 07/14/14 at 12:58 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: T141921AA	Sample number(s): 7527284								
Acetone	N.D.	6.0	20	ug/l	118	124	43-149	5	30
Benzene	N.D.	0.50	1.0	ug/l	110	114	78-120	3	30
Bromodichloromethane	N.D.	0.50	1.0	ug/l	89	96	73-120	8	30
Bromoform	N.D.	0.50	4.0	ug/l	81	84	61-120	3	30
Bromomethane	N.D.	0.50	1.0	ug/l	100	98	58-120	2	30
2-Butanone	N.D.	3.0	10	ug/l	107	113	54-133	6	30
t-Butyl alcohol	N.D.	5.0	20	ug/l	105	107	75-120	1	30
Carbon Disulfide	N.D.	1.0	5.0	ug/l	97	98	58-126	1	30
Carbon Tetrachloride	N.D.	0.50	1.0	ug/l	90	92	74-130	3	30
Chlorobenzene	N.D.	0.50	1.0	ug/l	98	101	80-120	3	30
Chloroethane	N.D.	0.50	1.0	ug/l	100	102	56-120	2	30
Chloroform	N.D.	0.50	1.0	ug/l	99	102	80-122	3	30
Chloromethane	N.D.	0.50	1.0	ug/l	106	108	63-120	2	30
Dibromochloromethane	N.D.	0.50	1.0	ug/l	86	90	72-120	5	30
1,1-Dichloroethane	N.D.	0.50	1.0	ug/l	102	106	80-120	3	30
1,2-Dichloroethane	N.D.	0.50	1.0	ug/l	96	103	65-135	7	30
1,1-Dichloroethene	N.D.	0.50	1.0	ug/l	104	102	76-124	2	30
cis-1,2-Dichloroethene	N.D.	0.50	1.0	ug/l	105	106	80-120	2	30
trans-1,2-Dichloroethene	N.D.	0.50	1.0	ug/l	109	107	80-120	2	30
1,2-Dichloropropane	N.D.	0.50	1.0	ug/l	102	110	80-120	8	30
cis-1,3-Dichloropropene	N.D.	0.50	1.0	ug/l	97	104	80-120	7	30
trans-1,3-Dichloropropene	N.D.	0.50	1.0	ug/l	91	94	76-120	3	30
Ethylbenzene	N.D.	0.50	1.0	ug/l	92	93	79-120	2	30
2-Hexanone	N.D.	3.0	10	ug/l	99	103	44-126	4	30
Methyl Tertiary Butyl Ether	N.D.	0.50	1.0	ug/l	100	107	75-120	7	30
4-Methyl-2-pentanone	N.D.	3.0	10	ug/l	105	111	51-124	5	30
Methylene Chloride	N.D.	2.0	3.0	ug/l	112	115	80-120	3	30
Styrene	N.D.	1.0	5.0	ug/l	96	99	80-120	3	30
1,1,2,2-Tetrachloroethane	N.D.	0.50	1.0	ug/l	96	99	70-120	3	30
Tetrachloroethene	N.D.	0.50	1.0	ug/l	91	95	80-120	4	30
Toluene	N.D.	0.50	1.0	ug/l	92	94	80-120	3	30
1,1,1-Trichloroethane	N.D.	0.50	1.0	ug/l	88	91	66-126	4	30
1,1,2-Trichloroethane	N.D.	0.50	1.0	ug/l	99	99	80-120	0	30
Trichloroethene	N.D.	0.50	1.0	ug/l	98	101	80-120	3	30
Vinyl Chloride	N.D.	0.50	1.0	ug/l	98	99	63-120	1	30
Xylene (Total)	N.D.	0.50	1.0	ug/l	97	99	80-120	2	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Atlantic Richfield (ENV-NNJ) Group Number: 1487712
Reported: 07/14/14 at 12:58 PM

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PPL + Xylene (total) by 8260
Batch number: T141921AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7527284	98	102	94	96
Blank	103	111	97	93
LCS	97	104	94	93
LCSD	101	103	94	93
Limits:	80-116	77-113	80-113	78-113

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

12697 / 1487712 / 7527284

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

BP/ARC Project Name: BP West Orange | **Req Due Date (mm/dd/yy):** Standard | **Rush TAT:** Yes ___ No ___

BP/ARC Facility No: #84849 | **Lab Work Order Number:**

Lab Name:	Lancaster	BP/ARC Facility Address:	945 Pleasant ValleyWay	Consultant/Contractor:	EnviroTrac
Lab Address:	2425 New Holland Pike Lancaster, PA 17605	City, State, ZIP Code:	West Orange, New Jersey	Consultant/Contractor Project No:	84849
Lab PM:	Jessica Oknefski	Lead Regulatory Agency:	NJDEP	Address:	400E Corporate Court
Lab Phone:	717-656-2300	California Global ID No.:		Consultant/Contractor PM:	Kevin Toth
Lab Shipping Accnt:		Enfos Proposal No:	00896-0005	Phone:	908-757-1900
Lab Bottle Order No:		Accounting Mode:	Provision 10 OOC-BU ___ OOC-RM ___	Email EDD To:	
Other Info:		Stage:	40 Activity: 80	Invoice To:	BP/ARC ___ Contractor ___

BP/ARC EBM: Greg Miller

EBM Phone:

EBM Email: Gregory.Miller2@BP.com

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Matrix:	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol		Requested Analyses: VO+10, BTEX, MTBE, TBA										Report Type & QC Level / Comments
	MW-18R	7-4-14	1240		X			3				X			X										

Report Type & QC Level: Standard ___ Full Data Package ___

Comments: Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

Sampler's Name:	R. DELACRUZ	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation / Date / Time
Sampler's Company:	EnviroTrac Ltd.		7-6	1500	7-9-14 14:50
Shipment Method:	Ship Date:		7-9-14	14:50	7/9/14 14:50
Shipment Tracking No:			7/9/14	19:45	7/9/14 1945

Special Instructions:

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Sample Administration Receipt Documentation Log

Doc Log ID: 19583

Group Number(s): 1487712

Client: Envirotrac

Delivery and Receipt Information

Delivery Method:	ELLE Courier	Arrival Timestamp:	07/09/2014 19:45
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NJ		

Arrival Condition Summary

Shipping Container Sealed:	No	Total Trip Blank Qty:	0
Custody Seal Present:	No	Trip Blank Type:	N/A
Custody Seal Intact:	N/A	Air Quality Samples Present:	No
Samples Chilled:	Yes	Air Quality Flow Controllers Present:	N/A
Paperwork Enclosed:	Yes	Flow Controller Quantity:	0
Samples Intact:	Yes	Air Quality Returns:	N/A
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		
Sample IDs on COC match Containers:	Yes		
Sample Date/Times match COC:	Yes		
VOA Vial Headspace ≥ 6mm:	N/A		
VOA IDs (≥ 6mm):	N/A		

Unpacked by Christine Knoedler (1259) at 20:57 on 07/09/2014

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Samples Collected Same Day as Receipt?	Elevated Temp?
1	DT131	1.3	DT	Wet	Y	Bagged	N	N

2425 New Holland Pike
Lancaster, PA 17601-5436
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Data Qualifiers:

C – result confirmed by reanalysis.

J - estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: Atlantic Richfield (ENV-NNJ)
SDG: NNS22

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
7527284	MW-18R	X		5	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

Trip blank vials were not received by the laboratory for this sample delivery group.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, laboratory spike data (LCS) are provided.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
MS = Matrix Spike	MDL = Method Detection Limit

Case Narrative/Conformance Summary

CLIENT: Atlantic Richfield (ENV-NNJ)
SDG: NNS22

GC/MS Volatiles

Fraction: Volatiles by GC/MS

MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: Atlantic Richfield (ENV-NNJ)
SDG: NNS22

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
TCL+MTBE,TBA by 8260	T141921AA	VBLKT81	07/11/2014 09:51:00
		LCST81	07/11/2014 10:24:00
		LCDT81	07/11/2014 10:48:00
		7527284	07/11/2014 16:46:00

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: NNS22
Matrix: LIQUID

Fraction: Volatiles by GC/MS

T141921AA / VBLKT81 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Chloromethane	07/11/14	N.D.	ug/l	0.5	1
Vinyl Chloride	07/11/14	N.D.	ug/l	0.5	1
Bromomethane	07/11/14	N.D.	ug/l	0.5	1
Chloroethane	07/11/14	N.D.	ug/l	0.5	1
1,1-Dichloroethene	07/11/14	N.D.	ug/l	0.5	1
Acetone	07/11/14	N.D.	ug/l	6	20
Carbon Disulfide	07/11/14	N.D.	ug/l	1	5
Methylene Chloride	07/11/14	N.D.	ug/l	2	3
t-Butyl alcohol	07/11/14	N.D.	ug/l	5	20
trans-1,2-Dichloroethene	07/11/14	N.D.	ug/l	0.5	1
Methyl Tertiary Butyl Ether	07/11/14	N.D.	ug/l	0.5	1
1,1-Dichloroethane	07/11/14	N.D.	ug/l	0.5	1
2-Butanone	07/11/14	N.D.	ug/l	3	10
cis-1,2-Dichloroethene	07/11/14	N.D.	ug/l	0.5	1
Chloroform	07/11/14	N.D.	ug/l	0.5	1
1,1,1-Trichloroethane	07/11/14	N.D.	ug/l	0.5	1
Carbon Tetrachloride	07/11/14	N.D.	ug/l	0.5	1
Benzene	07/11/14	N.D.	ug/l	0.5	1
1,2-Dichloroethane	07/11/14	N.D.	ug/l	0.5	1
Trichloroethene	07/11/14	N.D.	ug/l	0.5	1
1,2-Dichloropropane	07/11/14	N.D.	ug/l	0.5	1
Bromodichloromethane	07/11/14	N.D.	ug/l	0.5	1
cis-1,3-Dichloropropene	07/11/14	N.D.	ug/l	0.5	1
4-Methyl-2-pentanone	07/11/14	N.D.	ug/l	3	10
Toluene	07/11/14	N.D.	ug/l	0.5	1
trans-1,3-Dichloropropene	07/11/14	N.D.	ug/l	0.5	1
1,1,2-Trichloroethane	07/11/14	N.D.	ug/l	0.5	1
Tetrachloroethene	07/11/14	N.D.	ug/l	0.5	1
2-Hexanone	07/11/14	N.D.	ug/l	3	10
Dibromochloromethane	07/11/14	N.D.	ug/l	0.5	1
Chlorobenzene	07/11/14	N.D.	ug/l	0.5	1
Ethylbenzene	07/11/14	N.D.	ug/l	0.5	1
Xylene (Total)	07/11/14	N.D.	ug/l	0.5	1
Styrene	07/11/14	N.D.	ug/l	1	5
Bromoform	07/11/14	N.D.	ug/l	0.5	4
1,1,2,2-Tetrachloroethane	07/11/14	N.D.	ug/l	0.5	1

Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: NNS22
Matrix: LIQUID

Fraction: Volatiles by GC/MS

T141921AA	Dibromofluoromethane		1,2-Dichloroethane-d4		Toluene-d8		4-Bromofluorobenzene	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKT81	103	80 - 116	111	77 - 113	97	80 - 113	93	78 - 113
LCST81	97	80 - 116	104	77 - 113	94	80 - 113	93	78 - 113
LCDT81	101	80 - 116	103	77 - 113	94	80 - 113	93	78 - 113
7527284	98	80 - 116	102	77 - 113	94	80 - 113	96	78 - 113

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCST81 LCSD: LCDT81	Batch: **T141921AA** (Sample number(s): 7527284)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Chloromethane	20	21.15	21.65	106	108	63-120	2	30
Vinyl Chloride	20	19.58	19.83	98	99	63-120	1	30
Bromomethane	20	20	19.52	100	98	58-120	2	30
Chloroethane	20	20.04	20.39	100	102	56-120	2	30
1,1-Dichloroethene	20	20.75	20.35	104	102	76-124	2	30
Acetone	150	176.96	185.74	118	124	43-149	5	30
Carbon Disulfide	20	19.47	19.68	97	98	58-126	1	30
Methylene Chloride	20	22.47	23.06	112	115	80-120	3	30
t-Butyl alcohol	200	210.68	213.29	105	107	75-120	1	30
trans-1,2-Dichloroethene	20	21.86	21.43	109	107	80-120	2	30
Methyl Tertiary Butyl Ether	20	19.9	21.44	100	107	75-120	7	30
1,1-Dichloroethane	20	20.45	21.14	102	106	80-120	3	30
2-Butanone	150	160.61	169.74	107	113	54-133	6	30
cis-1,2-Dichloroethene	20	20.9	21.27	105	106	80-120	2	30
Chloroform	20	19.86	20.38	99	102	80-122	3	30
1,1,1-Trichloroethane	20	17.52	18.16	88	91	66-126	4	30
Carbon Tetrachloride	20	17.91	18.43	90	92	74-130	3	30
Benzene	20	22.09	22.76	110	114	78-120	3	30
1,2-Dichloroethane	20	19.13	20.62	96	103	65-135	7	30
Trichloroethene	20	19.57	20.15	98	101	80-120	3	30
1,2-Dichloropropane	20	20.44	22.04	102	110	80-120	8	30
Bromodichloromethane	20	17.76	19.15	89	96	73-120	8	30
cis-1,3-Dichloropropene	20	19.33	20.79	97	104	80-120	7	30
4-Methyl-2-pentanone	100	105.12	111.01	105	111	51-124	5	30
Toluene	20	18.34	18.84	92	94	80-120	3	30
trans-1,3-Dichloropropene	20	18.12	18.72	91	94	76-120	3	30
1,1,2-Trichloroethane	20	19.84	19.8	99	99	80-120	0	30
Tetrachloroethene	20	18.11	18.91	91	95	80-120	4	30
2-Hexanone	100	98.74	103.18	99	103	44-126	4	30
Dibromochloromethane	20	17.17	18.07	86	90	72-120	5	30
Chlorobenzene	20	19.62	20.29	98	101	80-120	3	30
Ethylbenzene	20	18.33	18.62	92	93	79-120	2	30
Xylene (Total)	60	58.46	59.48	97	99	80-120	2	30
Styrene	20	19.16	19.71	96	99	80-120	3	30
Bromoform	20	16.3	16.81	81	84	61-120	3	30
1,1,2,2-Tetrachloroethane	20	19.28	19.79	96	99	70-120	3	30

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.: NNS22

Lab File ID: tu12t02.d BFB Injection Date: 06/12/14

Instrument ID: SH08363 BFB Injection Time: 08:28

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	29.84
75	30.0 - 60.0% of mass 95	47.99
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.84
173	Less than 2.0% of mass 174	0.26 (0.34)1
174	Greater than 50.0% of mass 95	75.17
175	5.0 - 9.0% of mass 174	5.54 (7.38)1
176	Greater than 95.0%, but less than 101.0% of mass 174	74.18 (98.68)1
177	5.0 - 9.0% of mass 176	5.26 (7.10)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	tu12i01.d	06/12/14	09:10
02	VSTD100	tu12i02.d	06/12/14	09:34
03	VSTD50	tu12i03.d	06/12/14	09:58
04	VSTD20	tu12i04.d	06/12/14	10:21
05	VSTD10	tu12i05.d	06/12/14	10:45
06	VSTD4	tu12i06.d	06/12/14	11:08
07	VSTD1	tu12i07.d	06/12/14	11:32
08	0.5PPBMDL - 0.5PBBMDL	tu12m01.d	06/12/14	11:56
09	LCSTIVC	tu12v01.d	06/12/14	12:19

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.: NNS22

Lab File ID: tl11t02.d BFB Injection Date: 07/11/14

Instrument ID: SH08363 BFB Injection Time: 08:32

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	32.55
75	30.0 - 60.0% of mass 95	48.36
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.69
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	77.73
175	5.0 - 9.0% of mass 174	6.03 (7.76)1
176	Greater than 95.0%, but less than 101.0% of mass 174	74.44 (95.77)1
177	5.0 - 9.0% of mass 176	5.17 (6.94)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	tl11c01.d	07/11/14	09:03
02	VBLKT81	tl11b01.d	07/11/14	09:51
03	VBLKT99	tl11b05.d	07/11/14	09:51
04	LCST81	tl11s01.d	07/11/14	10:24
05	LCST99	tl11s31.d	07/11/14	10:24
06	LCDT81	tl11s02.d	07/11/14	10:48
07	7527864	tl11s03.d	07/11/14	11:12
08	7527865	tl11s04.d	07/11/14	11:36
09	7527947	tl11s05.d	07/11/14	11:59
10	7527982	tl11s06.d	07/11/14	12:23
11	7525415	tl11s07.d	07/11/14	12:47
12	7525416MS	tl11s08.d	07/11/14	13:11
13	7525417MSD	tl11s09.d	07/11/14	13:35
14	7527983	tl11s10.d	07/11/14	13:59
15	7527712	tl11s11.d	07/11/14	14:23
16	7527711	tl11s12.d	07/11/14	14:47
17	7527241	tl11s13.d	07/11/14	15:11
18	7527292	tl11s14.d	07/11/14	15:34
19	7527293	tl11s15.d	07/11/14	15:58
20	7527294	tl11s16.d	07/11/14	16:22
21	7527284	tl11s17.d	07/11/14	16:46
22	7527132	tl11s19.d	07/11/14	17:34

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.: NNS22

Lab File ID: tl11t02.d BFB Injection Date: 07/11/14

Instrument ID: SH08363 BFB Injection Time: 08:32

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	32.55
75	30.0 - 60.0% of mass 95	48.36
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.69
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	77.73
175	5.0 - 9.0% of mass 174	6.03 (7.76)1
176	Greater than 95.0%, but less than 101.0% of mass 174	74.44 (95.77)1
177	5.0 - 9.0% of mass 176	5.17 (6.94)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	7527132DL	tl11s21.d	07/11/14	17:58
24	7525870	tl11s22.d	07/11/14	18:22
25	7525870DL	tl11s23.d	07/11/14	18:46
26	7523898	tl11s24.d	07/11/14	19:09
27	7528673	tl11s25.d	07/11/14	19:33
28	7528674	tl11s26.d	07/11/14	19:57
29	7528675	tl11s27.d	07/11/14	20:21

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: SH08363 Calibration Date(s): 06/12/14 06/12/14

Heated Purge: (Y/N) Y Calibration Times: 09:10 11:32

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = tu12i07.d RRF 4 = tu12i06.d RRF 10= tu12i05.d
RRF 20= tu12i04.d RRF 50= tu12i03.d RRF100= tu12i02.d RRF300= tu12i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	$\overline{RRF}$	% RSD	CAL. METHOD	
Dichlorodifluoromethane	0.3840	0.4453	0.4910	0.4559	0.4539	0.4798	0.5122	0.4603	9	AVG	
Chloromethane	#1.0775	1.0863	1.1509	1.1089	0.9812	0.9770	1.0520	1.0619	6	AVG	#
Vinyl Chloride	*0.5546	0.6742	0.7172	0.6530	0.5898	0.5872	0.6286	0.6292	9	AVG	*
Bromomethane	0.3707	0.3886	0.4207	0.3970	0.3617	0.3627	0.3817	0.3833	6	AVG	
Chloroethane		0.3467	0.3876	0.3499	0.3144	0.3164	0.3380	0.3422	8	AVG	
Dichlorofluoromethane	0.7983	0.8500	0.8775	0.8210	0.7009	0.7795	0.8097	0.8053	7	AVG	
Trichlorofluoromethane	0.4115	0.5252	0.5470	0.4867	0.4616	0.4906	0.5035	0.4894	9	AVG	
Ethyl ether		0.4058	0.4542	0.4109	0.3766	0.4098	0.4103	0.4113	6	AVG	
Freon 123a		0.4763	0.4800	0.4699	0.3976	0.4577	0.4539	0.4559	7	AVG	
Acrolein		2.5622	2.8217	2.4982	2.1015	2.5469	2.5203	2.5085	9	AVG	
1,1-Dichloroethene	*0.2306	0.2555	0.2479	0.2397	0.2164	0.2342	0.2490	0.2390	6	AVG	*
Acetone		0.0861	0.0789	0.0736	0.0621	0.0755	0.0649	0.0735	12	AVG	
Freon 113		0.2690	0.2381	0.2532	0.2304	0.2565	0.2699	0.2528	6	AVG	
2-Propanol		1.1862	1.2105	1.0980	1.0405	1.2299	1.1840	1.1582	6	AVG	
Methyl Iodide	0.4615	0.5378	0.5357	0.5313	0.4796	0.5132	0.5371	0.5138	6	AVG	
Carbon Disulfide		1.0596	0.9974	1.0126	0.9138	0.9805	1.0319	0.9993	5	AVG	
Allyl Chloride		1.2130	1.2137	1.1181	0.9860	1.0826	1.0791	1.1154	8	AVG	
Methyl Acetate		0.9658	1.0087	0.9452	0.8314	0.9589	0.9308	0.9401	6	AVG	
Methylene Chloride	0.3632	0.3276	0.3382	0.3461	0.3075	0.3354	0.3389	0.3367	5	AVG	
t-Butyl alcohol	1.3642	1.4127	1.4452	1.3637	1.2530	1.4269	1.3611	1.3752	5	AVG	
Acrylonitrile		0.3410	0.3606	0.3393	0.2867	0.3451	0.3258	0.3331	8	AVG	
trans-1,2-Dichloroethene	0.2546	0.2860	0.2871	0.2866	0.2613	0.2790	0.2937	0.2783	5	AVG	
Methyl Tertiary Butyl Ether	0.9033	0.9910	0.9307	0.9663	0.8853	0.9812	0.9858	0.9491	4	AVG	
n-Hexane		0.4998	0.4514	0.4569	0.4479	0.4814	0.5658	0.4839	9	AVG	
1,1-Dichloroethane	#0.6652	0.7195	0.7035	0.7130	0.6406	0.6927	0.7066	0.6916	4	AVG	#
di-Isopropyl ether	2.1299	2.3462	2.2733	2.3288	2.0835	2.2928	2.1128	2.2239	5	AVG	
2-Chloro-1,3-butadiene		0.7468	0.7341	0.7455	0.6794	0.7325	0.7551	0.7322	4	AVG	
Ethyl t-butyl ether	1.2330	1.3911	1.3588	1.3708	1.2414	1.3716	1.3432	1.3300	5	AVG	
cis-1,2-Dichloroethene	0.2899	0.3412	0.3116	0.3225	0.2888	0.3212	0.3235	0.3141	6	AVG	
2-Butanone		0.7247	0.7634	0.7198	0.6113	0.7450	0.6733	0.7063	8	AVG	
2,2-Dichloropropane	0.3510	0.4138	0.3970	0.4030	0.3652	0.3987	0.4126	0.3916	6	AVG	
Propionitrile		1.8338	1.9295	1.8237	1.7010	1.8972	1.9260	1.8519	5	AVG	
Methacrylonitrile		0.2157	0.2213	0.2210	0.2044	0.2292	0.2285	0.2200	4	AVG	
Bromochloromethane		0.1895	0.1933	0.1792	0.1544	0.1749	0.1736	0.1775	8	AVG	
Tetrahydrofuran		1.2954	1.3744	1.2265	1.0400	1.2354	1.2652	1.2395	9	AVG	
Chloroform	*0.5536	0.6199	0.6175	0.6189	0.5501	0.5980	0.6080	0.5951	5	AVG	*
1,1,1-Trichloroethane	0.3692	0.4172	0.3943	0.4143	0.3656	0.4092	0.4094	0.3970	5	AVG	
Cyclohexane		0.6872	0.6061	0.6240	0.5876	0.6278	0.6920	0.6374	7	AVG	
Cyclohexane(2)		0.3784	0.4130	0.3292	0.3260	0.3401	0.3861	0.3621	10	AVG	
Cyclohexane(3)		0.1579	0.1482	0.1384	0.1300	0.1416	0.1554	0.1452	7	AVG	
1,1-Dichloropropene	0.3821	0.4569	0.4264	0.4287	0.3930	0.4277	0.4454	0.4229	6	AVG	
Carbon Tetrachloride	0.2881	0.3757	0.3386	0.3546	0.3183	0.3528	0.3628	0.3416	9	AVG	
Isobutyl Alcohol		0.8746	0.8781	0.8339	0.7440	0.8476	0.8607	0.8398	6	AVG	
Benzene	1.1722	1.2462	1.1804	1.2073	1.0836	1.1797	1.1557	1.1750	4	AVG	
1,2-Dichloroethane	0.5458	0.6458	0.6224	0.6133	0.5527	0.6086	0.6026	0.5987	6	AVG	
1,2-Dichloroethane(2)		0.0356	0.0340	0.0391	0.0357	0.0378	0.0380	0.0367	5	AVG	
t-Amyl methyl ether	0.8445	0.9529	0.9262	0.9424	0.8649	0.9609	0.9502	0.9203	5	AVG	
n-Heptane		0.8687	0.7376	0.7017	0.7156	0.7703	0.9564	0.7917	13	AVG	
n-Butanol		0.4418	0.4633	0.4501	0.4000	0.4643	0.4934	0.4522	7	AVG	
Trichloroethene	0.2801	0.3200	0.3150	0.3106	0.2802	0.3065	0.3094	0.3031	5	AVG	
Methylcyclohexane		0.4775	0.4551	0.4385	0.3900	0.4436	0.4598	0.4441	7	AVG	
Methylcyclohexane(2)		0.1873	0.1847	0.1799	0.1599	0.1790	0.1839	0.1791	6	AVG	

Minimum RRF for SPCC(#) = 0.10
(0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %RSD for CCC(*) = 30%

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: SH08363 Calibration Date(s): 06/12/14 06/12/14

Heated Purge: (Y/N) Y Calibration Times: 09:10 11:32

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = tu12i07.d RRF 4 = tu12i06.d RRF 10= tu12i05.d
RRF 20= tu12i04.d RRF 50= tu12i03.d RRF100= tu12i02.d RRF300= tu12i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	$\overline{RRF}$	% RSD	CAL. METHOD	
1,2-Dichloropropane	*0.3913	0.4139	0.4097	0.4096	0.3734	0.4021	0.4121	0.4017	4	AVG	*
Dibromomethane	0.2774	0.2850	0.2728	0.2847	0.2564	0.2854	0.2838	0.2779	4	AVG	
1,4-Dioxane		0.0664	0.0782	0.0723	0.0669	0.0780	0.0789	0.0734	8	AVG	
Methyl Methacrylate		0.3448	0.3460	0.3560	0.3258	0.3571	0.3629	0.3487	4	AVG	
Bromodichloromethane	0.4582	0.5222	0.4880	0.5041	0.4508	0.5029	0.5075	0.4905	5	AVG	
2-Nitropropane		0.2662	0.2911	0.2983	0.2576	0.3351	0.3348	0.2972	11	AVG	
2-Chloroethyl Vinyl Ether		0.3586	0.3798	0.3751	0.3229	0.3769	0.3749	0.3647	6	AVG	
cis-1,3-Dichloropropene	0.4830	0.5633	0.5501	0.5648	0.5311	0.5869	0.5959	0.5536	7	AVG	
4-Methyl-2-pentanone		1.3685	1.4411	1.3852	1.1732	1.2941		1.3324	8	AVG	
Toluene	*0.9317	0.9811	0.9228	0.9433	0.8496	0.9264	0.9915	0.9352	5	AVG	*
trans-1,3-Dichloropropene	0.6189	0.7068	0.7294	0.7649	0.6876	0.7874	0.8437	0.7341	10	AVG	
Ethyl Methacrylate		0.7833	0.7940	0.8241	0.7533	0.8691	0.8604	0.8140	6	AVG	
1,1,2-Trichloroethane	0.3832	0.4371	0.4186	0.4320	0.3802	0.4344	0.4430	0.4184	6	AVG	
Tetrachloroethene	0.4216	0.4130	0.4139	0.4064	0.3984	0.3973	0.4387	0.4128	3	AVG	
1,3-Dichloropropane	0.7310	0.8705	0.8104	0.8360	0.7366	0.8377	0.8575	0.8114	7	AVG	
2-Hexanone		1.4809	1.6321	1.5764	1.3236	1.4894		1.5005	8	AVG	
Dibromochloromethane	0.4686	0.5248	0.5144	0.5317	0.4669	0.5380	0.5633	0.5154	7	AVG	
1,2-Dibromoethane	0.5259	0.5251	0.5295	0.5365	0.4825	0.5400	0.5505	0.5271	4	AVG	
Chlorobenzene	#1.0319	1.0446	1.0022	1.0229	0.9265	1.0261	1.0912	1.0208	5	AVG	#
1,1,1,2-Tetrachloroethane	0.3603	0.3727	0.3593	0.3661	0.3522	0.3881	0.4252	0.3748	7	AVG	
Ethylbenzene	*	1.8178	1.7847	1.7638	1.6385	1.8789	1.4998	1.7306	8	AVG	*
m+p-Xylene		0.6182	0.6099	0.5966	0.5394	0.6122	0.6604	0.6061	6	AVG	
o-Xylene		0.5940	0.5638	0.5809	0.5305	0.5994	0.6661	0.5891	8	AVG	
Styrene		1.0430	1.0221	1.0494	0.9630	1.0949	1.1332	1.0509	6	AVG	
Bromoform	#	0.4021	0.3898	0.4205	0.3882	0.4690	0.4917	0.4269	10	AVG	#
Isopropylbenzene		1.4579	1.4141	1.4230	1.3192	1.4228	1.3604	1.3996	4	AVG	
Bromobenzene		0.9502	0.9480	0.9588	0.9083	0.9896	1.0390	0.9657	5	AVG	
1,1,2,2-Tetrachloroethane	#1.9044	1.8445	1.8104	1.8770	1.6987	1.8928	1.8706	1.8426	4	AVG	#
1,2,3-Trichloropropane		0.4026	0.4098	0.4124	0.3797	0.4253	0.4280	0.4096	4	AVG	
trans-1,4-Dichloro-2-butene		0.7397	0.7756	0.7654	0.7368	0.8318	0.7446	0.7656	5	AVG	
n-Propylbenzene		4.2962	4.0037	4.0442	3.9299	4.0815	3.0396	3.8992	11	AVG	
2-Chlorotoluene		0.7551	0.7470	0.7253	0.7160	0.7278	0.7617	0.7388	2	AVG	
4-Chlorotoluene		0.8261	0.8026	0.8038	0.7506	0.7874	0.8248	0.7992	4	AVG	
1,3,5-Trimethylbenzene		2.7239	2.5990	2.5643	2.4745	2.5655	2.5235	2.5751	3	AVG	
tert-Butylbenzene		0.4775	0.4646	0.4636	0.4437	0.4491	0.5137	0.4687	5	AVG	
Pentachloroethane		0.5444	0.5886	0.5601	0.4941	0.5734	0.6168	0.5629	7	AVG	
1,2,4-Trimethylbenzene		2.8206	2.6947	2.6843	2.6011	2.7054	2.5934	2.6832	3	AVG	
sec-Butylbenzene		3.1613	2.9499	2.9119	2.9222	2.8524	2.7988	2.9327	4	AVG	
1,3-Dichlorobenzene		1.5323	1.5512	1.5273	1.4529	1.5820	1.7243	1.5617	6	AVG	
p-Isopropyltoluene		2.5383	2.4710	2.4810	2.4393	2.5080	2.7328	2.5284	4	AVG	
1,4-Dichlorobenzene		1.7118	1.6422	1.6093	1.5572	1.5952	1.7805	1.6494	5	AVG	
1,2,3-Trimethylbenzene		3.2328	3.2170	2.9323	2.7498	3.0234	2.5901	2.9576	9	AVG	
Benzyl Chloride		2.3475	2.4244	2.4903	2.3982	2.7702	2.3526	2.4639	6	AVG	
1,3-Diethylbenzene		1.7609	1.8225	1.6426	1.5044	1.6440	1.6678	1.6737	7	AVG	
1,4-Diethylbenzene		1.8059	1.8487	1.7234	1.5446	1.7211	1.7480	1.7319	6	AVG	
1,2-Dichlorobenzene		1.6372	1.5200	1.4709	1.4413	1.5078	1.5593	1.5228	5	AVG	
n-Butylbenzene		1.6480	1.5989	1.5352	1.5573	1.5566	1.8382	1.6224	7	AVG	
1,2-Diethylbenzene		1.4467	1.4281	1.3039	1.2140	1.3002	1.3351	1.3380	7	AVG	
1,2-Dibromo-3-chloropropane		0.3480	0.3563	0.3632	0.3378	0.3829	0.3618	0.3583	4	AVG	
1,3,5-Trichlorobenzene		1.0944	1.0024	0.9775	1.0062	1.0213	1.1269	1.0381	6	AVG	
1,2,4-Trichlorobenzene		0.9132	0.9452	0.9312	0.9400	0.9706	1.0321	0.9554	4	AVG	
Hexachlorobutadiene		0.4607	0.4503	0.4042	0.4023	0.4382	0.4980	0.4423	8	AVG	

Minimum RRF for SPCC(#) = 0.10
(0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %RSD for CCC(*) = 30%

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: SH08363 Calibration Date(s): 06/12/14 06/12/14

Heated Purge: (Y/N) Y Calibration Times: 09:10 11:32

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = tu12i07.d RRF 4 = tu12i06.d RRF 10= tu12i05.d
RRF 20= tu12i04.d RRF 50= tu12i03.d RRF100= tu12i02.d RRF300= tu12i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	$\overline{RRF}$	% RSD	CAL. METHOD
Naphthalene		2.8980	2.8010	2.8883	2.8043	3.0409	2.7173	2.8583	4	AVG
1,2,3-Trichlorobenzene		0.9192	0.9011	0.8973	0.8775	0.9103	0.9746	0.9134	4	AVG
Dibromofluoromethane	0.3288	0.3310	0.3298	0.3382	0.3297	0.3254	0.3294	0.3303	1	AVG
Dibromofluoromethane(2)		0.3417	0.3364	0.3399	0.3361	0.3368	0.3326	0.3372	1	AVG
1,2-Dichloroethane-d4	0.0707	0.0698	0.0702	0.0701	0.0727	0.0704	0.0703	0.0706	1	AVG
1,2-Dichloroethane-d4(2)		0.4604	0.4536	0.4561	0.4590	0.4419	0.4345	0.4509	2	AVG
1,2-Dichloroethane-d4(3)		0.0442	0.0448	0.0457	0.0461	0.0455	0.0464	0.0454	2	AVG
Toluene-d8	1.2977	1.3187	1.3166	1.3303	1.3088	1.2960	1.3241	1.3131	1	AVG
Toluene-d8(2)		0.8567	0.8412	0.8439	0.8461	0.8484	0.8670	0.8505	1	AVG
4-Bromofluorobenzene	0.5599	0.5679	0.5638	0.5745	0.5770	0.5706	0.5719	0.5694	1	AVG
4-Bromofluorobenzene(2)		0.4244	0.4111	0.4218	0.4138	0.4223	0.4273	0.4201	1	AVG

Average %RSD 6

Minimum RRF for SPCC(#) = 0.10
(0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %RSD for CCC(*) = 30%

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/SH08363.i/14jun12a.b/tu12i01.d	VSTD300
/chem/SH08363.i/14jun12a.b/tu12i02.d	VSTD100
/chem/SH08363.i/14jun12a.b/tu12i03.d	VSTD050
/chem/SH08363.i/14jun12a.b/tu12i04.d	VSTD020
/chem/SH08363.i/14jun12a.b/tu12i05.d	VSTD010
/chem/SH08363.i/14jun12a.b/tu12i06.d	VSTD004
/chem/SH08363.i/14jun12a.b/tu12i07.d	VSTD001

Area Summary

File ID:

Internal Standard Name	tu12i01.d	tu12i02.d	tu12i03.d	tu12i04.d	tu12i05.d	tu12i06.d	tu12i07.d	Avg. Area	%RS
t-Butyl alcohol-d10	290070	322064	305420	307336	293848	293290	303378	302201	4
Fluorobenzene	879443	901118	889898	893423	897189	873861	880806	887963	1
Chlorobenzene-d5	604549	631277	630919	627937	632674	618625	622329	624044	2
1,4-Dichlorobenzene-d4	298266	301415	287991	298706	298730	293572	286043	294960	2

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	tu12i01.d	tu12i02.d	tu12i03.d	tu12i04.d	tu12i05.d	tu12i06.d	tu12i07.d	Avg. RT
t-Butyl alcohol-d10	4.142	4.142	4.135	4.127	4.127	4.149	4.157	4.140
Fluorobenzene	7.574	7.581	7.581	7.574	7.574	7.574	7.581	7.577
Chlorobenzene-d5	11.057	11.057	11.057	11.057	11.057	11.057	11.057	11.057
1,4-Dichlorobenzene-d4	12.949	12.949	12.949	12.949	12.949	12.949	12.949	12.949

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 06/12/2014 at 13:49.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: SH08363 ICV Date: 06/12/14 Time: 12:19

Lab File ID: tu12v01.d Init. Calib. Date(s): 06/12/14 06/12/14

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Dichlorodifluoromethane	0.4603	0.4949	21.51	20	8	
#	Chloromethane	1.0619	1.0955	20.63	20	3	#
*	Vinyl Chloride	0.6292	0.6394	20.32	20	2	*
	Bromomethane	0.3833	0.3973	20.73	20	4	
	Chloroethane	0.3422	0.3459	20.22	20	1	
	Dichlorofluoromethane	0.8053	0.8022	19.92	20	0	
	Trichlorofluoromethane	0.4894	0.4972	20.32	20	2	
	Ethyl ether	0.4113	0.4536	22.06	20	10	
	Freon 123a	0.4559	0.4673	20.50	20	2	
	Acrolein	2.5085	2.2929	137.11	150	-9	
*	1,1-Dichloroethene	0.2390	0.2612	21.85	20	9	*
	Acetone	0.0735	0.0721	147.07	150	-2	
	Freon 113	0.2528	0.2623	20.75	20	4	
	2-Propanol	1.1582	1.1588	150.08	150	0	
	Methyl Iodide	0.5138	0.5486	21.36	20	7	
	Carbon Disulfide	0.9993	0.9897	19.81	20	-1	
	Allyl Chloride	1.1154	1.1055	19.82	20	-1	
	Methyl Acetate	0.9401	0.9588	20.40	20	2	
	Methylene Chloride	0.3367	0.3561	21.15	20	6	
	t-Butyl alcohol	1.3752	1.4281	207.68	200	4	
	Acrylonitrile	0.3331	0.3437	103.18	100	3	
	trans-1,2-Dichloroethene	0.2783	0.3053	21.94	20	10	
	Methyl Tertiary Butyl Ether	0.9491	0.9587	20.20	20	1	
	n-Hexane	0.4839	0.7055	29.16	20	46	
#	1,1-Dichloroethane	0.6916	0.7279	21.05	20	5	#
	di-Isopropyl ether	2.2239	2.3706	21.32	20	7	
	2-Chloro-1,3-butadiene	0.7322	0.7690	21.00	20	5	
	Ethyl t-butyl ether	1.3300	1.4026	21.09	20	5	
	cis-1,2-Dichloroethene	0.3141	0.3298	21.00	20	5	
	2-Butanone	0.7063	0.7094	150.66	150	0	
	2,2-Dichloropropane	0.3916	0.4063	20.75	20	4	
	Propionitrile	1.8519	1.8964	153.61	150	2	
	Methacrylonitrile	0.2200	0.2347	160.04	150	7	
	Bromochloromethane	0.1775	0.1757	19.80	20	-1	
	Tetrahydrofuran	1.2395	1.1371	91.73	100	-8	
*	Chloroform	0.5951	0.6194	20.81	20	4	*

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: SH08363 ICV Date: 06/12/14 Time: 12:19

Lab File ID: tu12v01.d Init. Calib. Date(s): 06/12/14 06/12/14

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	1,1,1-Trichloroethane	0.3970	0.4020	20.25	20	1	
	Cyclohexane	0.6374	0.7195	22.57	20	13	
	1,1-Dichloropropene	0.4229	0.4479	21.18	20	6	
	Carbon Tetrachloride	0.3416	0.3583	20.98	20	5	
	Isobutyl Alcohol	0.8398	0.8054	479.50	500	-4	
	Benzene	1.1750	1.2112	20.62	20	3	
	1,2-Dichloroethane	0.5987	0.6238	20.84	20	4	
	t-Amyl methyl ether	0.9203	0.9417	20.47	20	2	
	n-Heptane	0.7917	0.9100	22.99	20	15	
	n-Butanol	0.4522	0.4255	940.95	1000	-6	
	Trichloroethene	0.3031	0.3196	21.09	20	5	
	Methylcyclohexane	0.4441	0.4507	20.30	20	1	
*	1,2-Dichloropropane	0.4017	0.4200	20.91	20	5	*
	Dibromomethane	0.2779	0.2827	20.35	20	2	
	1,4-Dioxane	0.0734	0.0730	496.79	500	-1	
	Methyl Methacrylate	0.3487	0.3499	20.07	20	0	
	Bromodichloromethane	0.4905	0.4835	19.72	20	-1	
	2-Nitropropane	0.2972	0.2523	16.98	20	-15	
	2-Chloroethyl Vinyl Ether	0.3647	0.3699	20.28	20	1	
	cis-1,3-Dichloropropene	0.5536	0.5602	20.24	20	1	
	4-Methyl-2-pentanone	1.3324	1.3385	100.46	100	0	
*	Toluene	0.9352	0.9473	20.26	20	1	*
	trans-1,3-Dichloropropene	0.7341	0.7589	20.68	20	3	
	Ethyl Methacrylate	0.8140	0.8377	20.58	20	3	
	1,1,2-Trichloroethane	0.4184	0.4237	20.26	20	1	
	Tetrachloroethene	0.4128	0.4258	20.63	20	3	
	1,3-Dichloropropane	0.8114	0.8213	20.24	20	1	
	2-Hexanone	1.5005	1.4982	99.85	100	0	
	Dibromochloromethane	0.5154	0.5200	20.18	20	1	
	1,2-Dibromoethane	0.5271	0.5544	21.03	20	5	
#	Chlorobenzene	1.0208	0.9952	19.50	20	-3	#
	1,1,1,2-Tetrachloroethane	0.3748	0.3813	20.34	20	2	
*	Ethylbenzene	1.7306	1.8408	21.27	20	6	*
	m+p-Xylene	0.6061	0.6099	40.25	40	1	
	o-Xylene	0.5891	0.5961	20.24	20	1	
	Styrene	1.0509	1.0643	20.25	20	1	

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: SH08363 ICV Date: 06/12/14 Time: 12:19

Lab File ID: tu12v01.d Init. Calib. Date(s): 06/12/14 06/12/14

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Bromoform	0.4269	0.4096	19.19	20	-4	#
	Isopropylbenzene	1.3996	1.5133	21.62	20	8	
	Bromobenzene	0.9657	0.9407	19.48	20	-3	
#	1,1,2,2-Tetrachloroethane	1.8426	1.7739	19.25	20	-4	#
	1,2,3-Trichloropropane	0.4096	0.4101	20.02	20	0	
	trans-1,4-Dichloro-2-butene	0.7656	0.8208	107.20	100	7	
	n-Propylbenzene	3.8992	4.3068	22.09	20	10	
	2-Chlorotoluene	0.7388	0.7818	21.16	20	6	
	4-Chlorotoluene	0.7992	0.8333	20.85	20	4	
	1,3,5-Trimethylbenzene	2.5751	2.7843	21.63	20	8	
	tert-Butylbenzene	0.4687	0.4926	21.02	20	5	
	Pentachloroethane	0.5629	0.5488	19.50	20	-3	
	1,2,4-Trimethylbenzene	2.6832	2.8530	21.27	20	6	
	sec-Butylbenzene	2.9327	2.8908	19.71	20	-1	
	1,3-Dichlorobenzene	1.5617	1.5542	19.90	20	0	
	p-Isopropyltoluene	2.5284	2.6963	21.33	20	7	
	1,4-Dichlorobenzene	1.6494	1.6034	19.44	20	-3	
	1,2,3-Trimethylbenzene	2.9576	2.8908	19.55	20	-2	
	Benzyl Chloride	2.4639	2.4515	19.90	20	-1	
	1,3-Diethylbenzene	1.6737	1.5550	18.58	20	-7	
	1,4-Diethylbenzene	1.7319	1.7404	20.10	20	0	
	1,2-Dichlorobenzene	1.5228	1.5506	20.37	20	2	
	n-Butylbenzene	1.6224	1.7144	21.13	20	6	
	1,2-Diethylbenzene	1.3380	1.3544	20.25	20	1	
	1,2-Dibromo-3-chloropropane	0.3583	0.3526	19.68	20	-2	
	1,3,5-Trichlorobenzene	1.0381	1.0696	20.61	20	3	
	1,2,4-Trichlorobenzene	0.9554	0.9951	20.83	20	4	
	Hexachlorobutadiene	0.4423	0.4770	21.57	20	8	
	Naphthalene	2.8583	2.9001	20.29	20	1	
	1,2,3-Trichlorobenzene	0.9134	0.9221	20.19	20	1	

Average %Drift 4

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem/SH08363.i/14jun12a.b/tu12i07.d
/chem/SH08363.i/14jun12a.b/tu12i06.d
/chem/SH08363.i/14jun12a.b/tu12i05.d
/chem/SH08363.i/14jun12a.b/tu12i04.d
/chem/SH08363.i/14jun12a.b/tu12i03.d
/chem/SH08363.i/14jun12a.b/tu12i02.d
/chem/SH08363.i/14jun12a.b/tu12i01.d

File /chem/SH08363.i/14jun12a.b/tu12i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem/SH08363.i/14jul11a.b/tl11c01.d

RT Summary

File ID:

Internal Standard Name	tl11c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	4.120	4.135	Yes
Fluorobenzene	7.567	7.581	Yes
Chlorobenzene-d5	11.050	11.057	Yes
1,4-Dichlorobenzene-d4	12.942	12.949	Yes

A "No" indicates the retention time is greater than 30 seconds from the referenced ICAL standard.

Area Summary

File ID:

Internal Standard Name	tl11c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	290739	305420	152710	610840	Yes
Fluorobenzene	759524	889898	444949	1779796	Yes
Chlorobenzene-d5	548924	630919	315460	1261838	Yes
1,4-Dichlorobenzene-d4	278352	287991	143996	575982	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 07/11/2014 at 09:41

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: SH08363 Calibration Date: 07/11/14 Time: 09:03

Lab File ID: tl11c01.d Init. Calib. Date(s): 06/12/14 06/12/14

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Dichlorodifluoromethane	0.4603	0.5167	56.12	50	12	
#	Chloromethane	1.0619	1.2584	59.25	50	19	#
*	Vinyl Chloride	0.6292	0.6839	54.34	50	9	*
	Bromomethane	0.3833	0.3904	50.92	50	2	
	Chloroethane	0.3422	0.3613	52.80	50	6	
	Trichlorofluoromethane	0.4894	0.5128	52.39	50	5	
	Acrolein	2.5085	2.7335	544.86	500	9	
*	1,1-Dichloroethene	0.2390	0.2565	53.66	50	7	*
	Acetone	0.0735	0.0914	124.26	100	24	
	Freon 113	0.2528	0.2960	58.52	50	17	
	2-Propanol	1.1582	1.3071	282.14	250	13	
	Methyl Iodide	0.5138	0.5976	58.16	50	16	
	Carbon Disulfide	0.9993	1.2251	61.30	50	23	
	Allyl Chloride	1.1154	1.1660	52.27	50	5	
	Methyl Acetate	0.9401	1.0783	57.35	50	15	
	Methylene Chloride	0.3367	0.3773	56.03	50	12	
	t-Butyl alcohol	1.3752	1.3811	251.06	250	0	
	Acrylonitrile	0.3331	0.3948	59.26	50	19	
	trans-1,2-Dichloroethene	0.2783	0.3057	54.91	50	10	
	Methyl Tertiary Butyl Ether	0.9491	0.9949	52.42	50	5	
	n-Hexane	0.4839	0.5543	57.28	50	15	
#	1,1-Dichloroethane	0.6916	0.7142	51.64	50	3	#
	di-Isopropyl ether	2.2239	2.4144	54.28	50	9	
	2-Chloro-1,3-butadiene	0.7322	0.7643	52.19	50	4	
	Ethyl t-butyl ether	1.3300	1.2923	48.58	50	-3	
	cis-1,2-Dichloroethene	0.3141	0.3284	52.28	50	5	
	2-Butanone	0.7063	0.7401	104.78	100	5	
	2,2-Dichloropropane	0.3916	0.4030	51.45	50	3	
	Propionitrile	1.8519	1.9617	264.82	250	6	
	Methacrylonitrile	0.2200	0.2469	140.25	125	12	
	Bromochloromethane	0.1775	0.1887	53.16	50	6	
	Tetrahydrofuran	1.2395	1.2038	97.12	100	-3	
*	Chloroform	0.5951	0.5909	49.65	50	-1	*
	1,1,1-Trichloroethane	0.3970	0.3744	47.15	50	-6	
	Cyclohexane	0.6374	0.7194	56.43	50	13	
	Cyclohexane(2)	0.3621	0.3863	53.34	50	7	

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: SH08363 Calibration Date: 07/11/14 Time: 09:03

Lab File ID: tl11c01.d Init. Calib. Date(s): 06/12/14 06/12/14

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Cyclohexane(3)	0.1452	0.1648	56.73	50	13	
	1,1-Dichloropropene	0.4229	0.4374	51.72	50	3	
	Carbon Tetrachloride	0.3416	0.3261	47.74	50	-5	
	Isobutyl Alcohol	0.8398	0.8277	616.02	625	-1	
	Benzene	1.1750	1.3259	56.42	50	13	
	1,2-Dichloroethane	0.5987	0.5765	48.14	50	-4	
	1,2-Dichloroethane(2)	0.0367	0.0403	54.93	50	10	
	t-Amyl methyl ether	0.9203	0.9481	51.51	50	3	
	n-Heptane	0.7917	0.9380	59.24	50	18	
	n-Butanol	0.4522	0.4308	1190.99	1250	-5	
	Trichloroethene	0.3031	0.2936	48.43	50	-3	
	Methylcyclohexane	0.4441	0.4410	49.66	50	-1	
	Methylcyclohexane(2)	0.1791	0.1792	50.03	50	0	
*	1,2-Dichloropropane	0.4017	0.4155	51.71	50	3	*
	Dibromomethane	0.2779	0.2767	49.78	50	0	
	1,4-Dioxane	0.0734	0.0813	692.20	625	11	
	Methyl Methacrylate	0.3487	0.3704	53.11	50	6	
	Bromodichloromethane	0.4905	0.4689	47.79	50	-4	
	2-Nitropropane	0.2972	0.3044	102.43	100	2	
	2-Chloroethyl Vinyl Ether	0.3647	0.3568	48.91	50	-2	
	cis-1,3-Dichloropropene	0.5536	0.5873	53.04	50	6	
	4-Methyl-2-pentanone	1.3324	1.3946	104.67	100	5	
*	Toluene	0.9352	0.8994	48.09	50	-4	*
	trans-1,3-Dichloropropene	0.7341	0.7287	49.63	50	-1	
	Ethyl Methacrylate	0.8140	0.8491	52.16	50	4	
	1,1,2-Trichloroethane	0.4184	0.4220	50.43	50	1	
	Tetrachloroethene	0.4128	0.3990	48.33	50	-3	
	1,3-Dichloropropane	0.8114	0.8489	52.31	50	5	
	2-Hexanone	1.5005	1.5253	101.65	100	2	
	Dibromochloromethane	0.5154	0.4859	47.14	50	-6	
	1,2-Dibromoethane	0.5271	0.5321	50.47	50	1	
#	Chlorobenzene	1.0208	1.0891	53.35	50	7	#
	1,1,1,2-Tetrachloroethane	0.3748	0.3478	46.40	50	-7	
*	Ethylbenzene	1.7306	1.7106	49.42	50	-1	*
	m+p-Xylene	0.6061	0.6485	106.99	100	7	
	o-Xylene	0.5891	0.6317	53.62	50	7	

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: SH08363 Calibration Date: 07/11/14 Time: 09:03

Lab File ID: tl11c01.d Init. Calib. Date(s): 06/12/14 06/12/14

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Styrene	1.0509	1.1023	52.44	50	5	
#	Bromoform	0.4269	0.3976	46.57	50	-7	#
	Isopropylbenzene	1.3996	1.4624	52.25	50	4	
	Bromobenzene	0.9657	0.9636	49.89	50	0	
#	1,1,2,2-Tetrachloroethane	1.8426	1.8514	50.24	50	0	#
	1,2,3-Trichloropropane	0.4096	0.4099	50.03	50	0	
	trans-1,4-Dichloro-2-butene	0.7656	0.7570	123.58	125	-1	
	n-Propylbenzene	3.8992	3.8592	49.49	50	-1	
	2-Chlorotoluene	0.7388	0.7616	51.54	50	3	
	4-Chlorotoluene	0.7992	0.7746	48.46	50	-3	
	1,3,5-Trimethylbenzene	2.5751	2.5894	50.28	50	1	
	tert-Butylbenzene	0.4687	0.4880	52.06	50	4	
	Pentachloroethane	0.5629	0.5295	47.03	50	-6	
	1,2,4-Trimethylbenzene	2.6832	2.6838	50.01	50	0	
	sec-Butylbenzene	2.9327	3.2270	55.02	50	10	
	1,3-Dichlorobenzene	1.5617	1.6001	51.23	50	2	
	p-Isopropyltoluene	2.5284	2.6324	52.06	50	4	
	1,4-Dichlorobenzene	1.6494	1.6204	49.12	50	-2	
	1,2,3-Trimethylbenzene	2.9576	2.7290	46.14	50	-8	
	Benzyl Chloride	2.4639	2.3228	47.14	50	-6	
	1,3-Diethylbenzene	1.6737	1.5239	45.52	50	-9	
	1,4-Diethylbenzene	1.7319	1.5519	44.80	50	-10	
	1,2-Dichlorobenzene	1.5228	1.5414	50.61	50	1	
	n-Butylbenzene	1.6224	1.6358	50.41	50	1	
	1,2-Diethylbenzene	1.3380	1.2174	45.49	50	-9	
	1,2-Dibromo-3-chloropropane	0.3583	0.3479	48.55	50	-3	
	1,3,5-Trichlorobenzene	1.0381	1.0230	49.27	50	-1	
	1,2,4-Trichlorobenzene	0.9554	0.9337	48.86	50	-2	
	Hexachlorobutadiene	0.4423	0.4302	48.64	50	-3	
	Naphthalene	2.8583	2.8083	49.13	50	-2	
	1,2,3-Trichlorobenzene	0.9134	0.8630	47.24	50	-6	
	Dibromofluoromethane	0.3303	0.3267	49.45	50	-1	
	Dibromofluoromethane(2)	0.3372	0.3429	50.83	50	2	
	1,2-Dichloroethane-d4	0.0706	0.0755	53.50	50	7	
	1,2-Dichloroethane-d4(2)	0.4509	0.4253	47.15	50	-6	

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: SH08363 Calibration Date: 07/11/14 Time: 09:03

Lab File ID: tl11c01.d Init. Calib. Date(s): 06/12/14 06/12/14

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,2-Dichloroethane-d4(3)	0.0454	0.0486	53.51	50	7
Toluene-d8	1.3131	1.2491	47.56	50	-5
Toluene-d8(2)	0.8505	0.8443	49.64	50	-1
4-Bromofluorobenzene	0.5694	0.5568	48.90	50	-2
4-Bromofluorobenzene(2)	0.4201	0.4234	50.40	50	1

Average %Drift 6

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.: NNS22

Lab File ID (Standard): tl11c01.d Date Analyzed: 07/11/14

Instrument ID: SH08363 Time Analyzed: 09:03

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

		IS1(TBA) AREA #	RT #	IS2(FBZ) AREA #	RT #	IS3(CBZ) AREA #	RT #	IS4(DCB) AREA #	RT #
	12 HOUR STD	290739	4.120	759524	7.567	548924	11.050	278352	12.942
	UPPER LIMIT	581478	4.620	1519048	8.067	1097848	11.550	556704	13.442
	LOWER LIMIT	145370	3.620	379762	7.067	274462	10.550	139176	12.442
	LAB SAMPLE ID								
01	VBLKT81	261192	4.113	690486	7.559	517653	11.050	242559	12.942
02	VBLKT99	261192	4.113	690486	7.559	517653	11.050	242559	12.942
03	LCST81	285942	4.120	754427	7.559	564255	11.050	279550	12.942
04	LCST99	285942	4.120	754427	7.559	564255	11.050	279550	12.942
05	LCDT81	285959	4.098	735361	7.552	561186	11.043	268843	12.935
06	7527864	277459	4.113	724908	7.559	548292	11.050	253048	12.942
07	7527865	264161	4.105	714695	7.552	530277	11.043	247002	12.942
08	7527947	256697	4.105	699820	7.559	528667	11.050	246832	12.942
09	7527982	250439	4.120	695246	7.559	520617	11.050	243595	12.942
10	7525415	244302	4.113	692530	7.559	509811	11.050	244063	12.942
11	7525416MS	261370	4.120	707593	7.559	547153	11.050	270487	12.942
12	7525417MSD	281044	4.113	741103	7.559	570557	11.050	276972	12.942
13	7527983	278971	4.120	728553	7.559	543606	11.050	247106	12.942
14	7527712	262650	4.120	716792	7.559	527692	11.050	241360	12.942
15	7527711	240167	4.120	704984	7.559	529298	11.050	240858	12.942
16	7527241	204833	4.105	705392	7.552	530971	11.043	251269	12.935
17	7527292	256754	4.127	720982	7.559	520496	11.050	244379	12.942
18	7527293	245640	4.120	689231	7.567	515324	11.050	239297	12.942
19	7527294	250576	4.113	674954	7.559	513915	11.050	236305	12.949
20	7527284	268131	4.120	719105	7.559	537543	11.050	266732	12.949
21	7527132	265753	4.105	733208	7.559	547158	11.050	250951	12.942
22	7527132DL	258263	4.113	716235	7.567	533642	11.050	246783	12.949

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.: NNS22

Lab File ID (Standard): tl11c01.d Date Analyzed: 07/11/14

Instrument ID: SH08363 Time Analyzed: 09:03

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

		IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	290739	4.120	759524	7.567	548924	11.050	278352	12.942
	UPPER LIMIT	581478	4.620	1519048	8.067	1097848	11.550	556704	13.442
	LOWER LIMIT	145370	3.620	379762	7.067	274462	10.550	139176	12.442
	LAB SAMPLE ID								
23	7525870	311018	4.113	745291	7.559	560786	11.043	268287	12.942
24	7525870DL	280678	4.113	731104	7.567	549592	11.050	249435	12.942
25	7523898	276664	4.120	720211	7.567	540373	11.050	245518	12.949
26	7528673	268063	4.120	711545	7.567	528194	11.050	247731	12.949
27	7528674	239603	4.113	707948	7.559	519398	11.050	240217	12.942
28	7528675	202754	4.105	693884	7.552	513339	11.043	245439	12.942

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

Sample Data

Volatiles by GC/MS

Fraction: Volatiles by GC/MS

10335: TCL+MTBE,TBA by 8260 Analyte Name	Default MDL	Default LOQ	Units
Chloromethane	0.5	1	ug/l
Vinyl Chloride	0.5	1	ug/l
Bromomethane	0.5	1	ug/l
Chloroethane	0.5	1	ug/l
1,1-Dichloroethene	0.5	1	ug/l
Acetone	6	20	ug/l
Carbon Disulfide	1	5	ug/l
Methylene Chloride	2	3	ug/l
t-Butyl alcohol	5	20	ug/l
trans-1,2-Dichloroethene	0.5	1	ug/l
Methyl Tertiary Butyl Ether	0.5	1	ug/l
1,1-Dichloroethane	0.5	1	ug/l
2-Butanone	3	10	ug/l
cis-1,2-Dichloroethene	0.5	1	ug/l
Chloroform	0.5	1	ug/l
1,1,1-Trichloroethane	0.5	1	ug/l
Carbon Tetrachloride	0.5	1	ug/l
Benzene	0.5	1	ug/l
1,2-Dichloroethane	0.5	1	ug/l
Trichloroethene	0.5	1	ug/l
1,2-Dichloropropane	0.5	1	ug/l
Bromodichloromethane	0.5	1	ug/l
cis-1,3-Dichloropropene	0.5	1	ug/l
4-Methyl-2-pentanone	3	10	ug/l
Toluene	0.5	1	ug/l
trans-1,3-Dichloropropene	0.5	1	ug/l
1,1,2-Trichloroethane	0.5	1	ug/l
Tetrachloroethene	0.5	1	ug/l
2-Hexanone	3	10	ug/l
Dibromochloromethane	0.5	1	ug/l
Chlorobenzene	0.5	1	ug/l
Ethylbenzene	0.5	1	ug/l
Xylene (Total)	0.5	1	ug/l
Styrene	1	5	ug/l
Bromoform	0.5	4	ug/l
1,1,2,2-Tetrachloroethane	0.5	1	ug/l

Data file: /chem/SH08363.i/14jul11a.b/tl11s17.d Injection date and time: **11-JUL-2014 16:46**
Data file Sample Info. Line: PVV18;7527284;1;0;;NNS22;;;tl11b01; Instrument ID: **SH08363.i** Batch: **T141921AA**
Date, time and analyst ID of latest file update: 11-Jul-2014 20:05 akr02850

Blank Data file reference: **/chem/SH08363.i/14jul11a.b/tl11b01.d**

Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: **10442**
Calibration date and time (Last Method Edit): 11-JUL-2014 15:37
Mid Level Daily Calibration Standard Reference: **/chem/SH08363.i/14jul11a.b/tl11c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **5.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 1 ml

Analysis Comments:2706-664

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.120	(0.000)	331	65	268131	(-8)	250.00	
66) Fluorobenzene	7.559	(0.007)	800	96	719105	(-5)	50.00	
100) Chlorobenzene-d5	11.050	(0.000)	1276	117	537543	(-2)	50.00	
131) 1,4-Dichlorobenzene-d4	12.949	(-0.007)	1535	152	266732	(-4)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.679	(0.000)	113	233331	49.113	98%		80 - 116
57) 1,2-Dichloroethane-d4	(2)	7.134	(0.000)	102	51847	51.064	102%		77 - 113
83) Toluene-d8	(3)	9.576	(0.000)	98	664458	47.067	94%		80 - 113
114) 4-Bromofluorobenzene	(3)	12.062	(0.000)	95	293164	47.894	96%		78 - 113

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Chloromethane	(2)				Not Detected					3	5
6) Vinyl Chloride	(2)				Not Detected					3	5
8) Bromomethane	(2)				Not Detected					3	5
9) Chloroethane	(2)				Not Detected					3	5
17) 1,1-Dichloroethene	(2)				Not Detected					3	5
18) Acetone	(2)	3.519	(-0.001)	58	8038M	7.602	38.01		J	30	100
23) Carbon Disulfide	(2)				Not Detected					5	25
28) Methylene Chloride	(2)				Not Detected					10	15
30) t-Butyl alcohol	(1)				Not Detected					25	100
32) trans-1,2-Dichloroethene	(2)				Not Detected					3	5
33) Methyl Tertiary Butyl Ether	(2)				Not Detected					3	5
36) 1,1-Dichloroethane	(2)				Not Detected					3	5
42) cis-1,2-Dichloroethene	(2)				Not Detected					3	5
44) 2-Butanone	(2)				Not Detected					15	50
51) Chloroform	(2)				Not Detected					3	5
53) 1,1,1-Trichloroethane	(2)				Not Detected					3	5
56) Carbon Tetrachloride	(2)				Not Detected					3	5
60) Benzene	(2)	7.163	(-0.000)	78	213190	12.616	63.08			3	5
61) 1,2-Dichloroethane	(2)				Not Detected					3	5
71) Trichloroethene	(2)				Not Detected					3	5
73) 1,2-Dichloropropane	(2)				Not Detected					3	5
78) Bromodichloromethane	(2)				Not Detected					3	5
81) cis-1,3-Dichloropropene	(2)				Not Detected					3	5
82) 4-Methyl-2-pentanone	(2)				Not Detected					15	50
88) Toluene	(3)	9.657	(0.000)	92	429015	42.670	213.35			3	5
89) trans-1,3-Dichloropropene	(3)				Not Detected					3	5
92) 1,1,2-Trichloroethane	(3)				Not Detected					3	5
93) Tetrachloroethene	(3)				Not Detected					3	5
96) 2-Hexanone	(3)				Not Detected					15	50
97) Dibromochloromethane	(3)				Not Detected					3	5

M = Compound was manually integrated.

Digitally signed by Amanda K. Richards on 07/11/2014 at 20:05. Target 3.5 esignature user ID: akr02850

Data file: /chem/SH08363.i/14jul11a.b/tl11s17.d Injection date and time: **11-JUL-2014 16:46**
Data file Sample Info. Line: PVV18;7527284;1;0;;NNS22;;;tl11b01; Instrument ID: **SH08363.i** Batch: **T141921AA**
Date, time and analyst ID of latest file update: 11-Jul-2014 20:05 akr02850

Blank Data file reference: **/chem/SH08363.i/14jul11a.b/tl11b01.d**

Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: **10442**
Calibration date and time (Last Method Edit): 11-JUL-2014 15:37
Mid Level Daily Calibration Standard Reference: **/chem/SH08363.i/14jul11a.b/tl11c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **5.00**

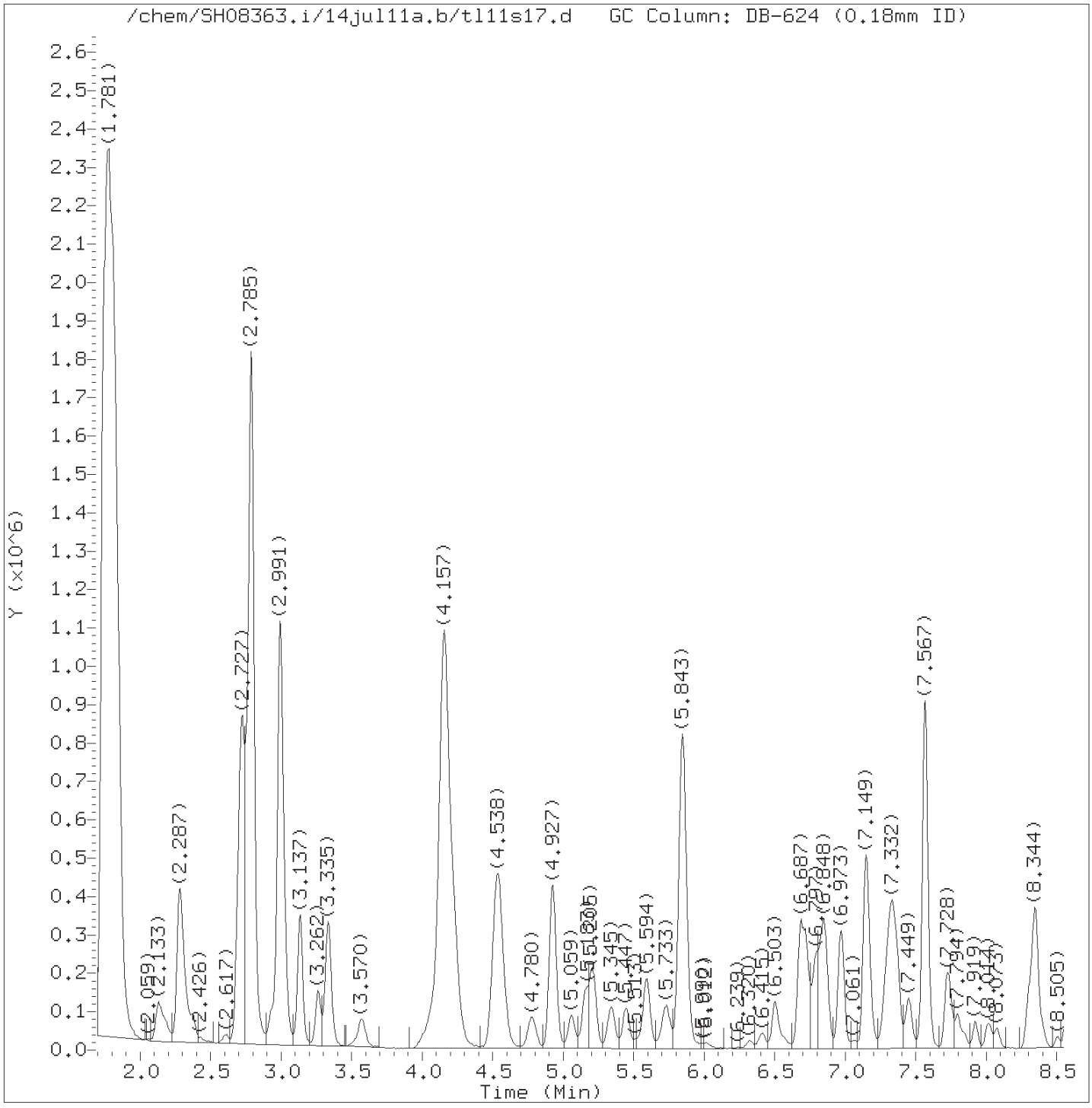
Volume Purged (Vt): 5 ml Sample Volume (Vo): 1 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
102) Chlorobenzene	(3)			Not Detected					3	5
104) Ethylbenzene	(3)	11.167(-0.000)	91	1200688	64.535	322.68			3	5
106) m+p-Xylene	(3)	11.277(0.000)	106	1710249	262.453	1312.27			3	5
107) o-Xylene	(3)	11.615(-0.000)	106	371990	58.735	293.68			3	5
108) Xylene (Total)	(3)		106	2082239	321.188	1605.94			3	5
109) Styrene	(3)			Not Detected					5	25
110) Bromoform	(3)			Not Detected					3	20
116) 1,1,2,2-Tetrachloroethane	(4)			Not Detected					3	5

Total number of targets = 38

Digitally signed by Amanda K. Richards on 07/11/2014 at 20:05. Target 3.5 esignature user ID: akr02850

Secondary review performed and digitally signed by Kenneth L. Boley on 07/14/2014 at 08:32. Parallax ID: klb01296



Total Ion Chromatogram (TIC)

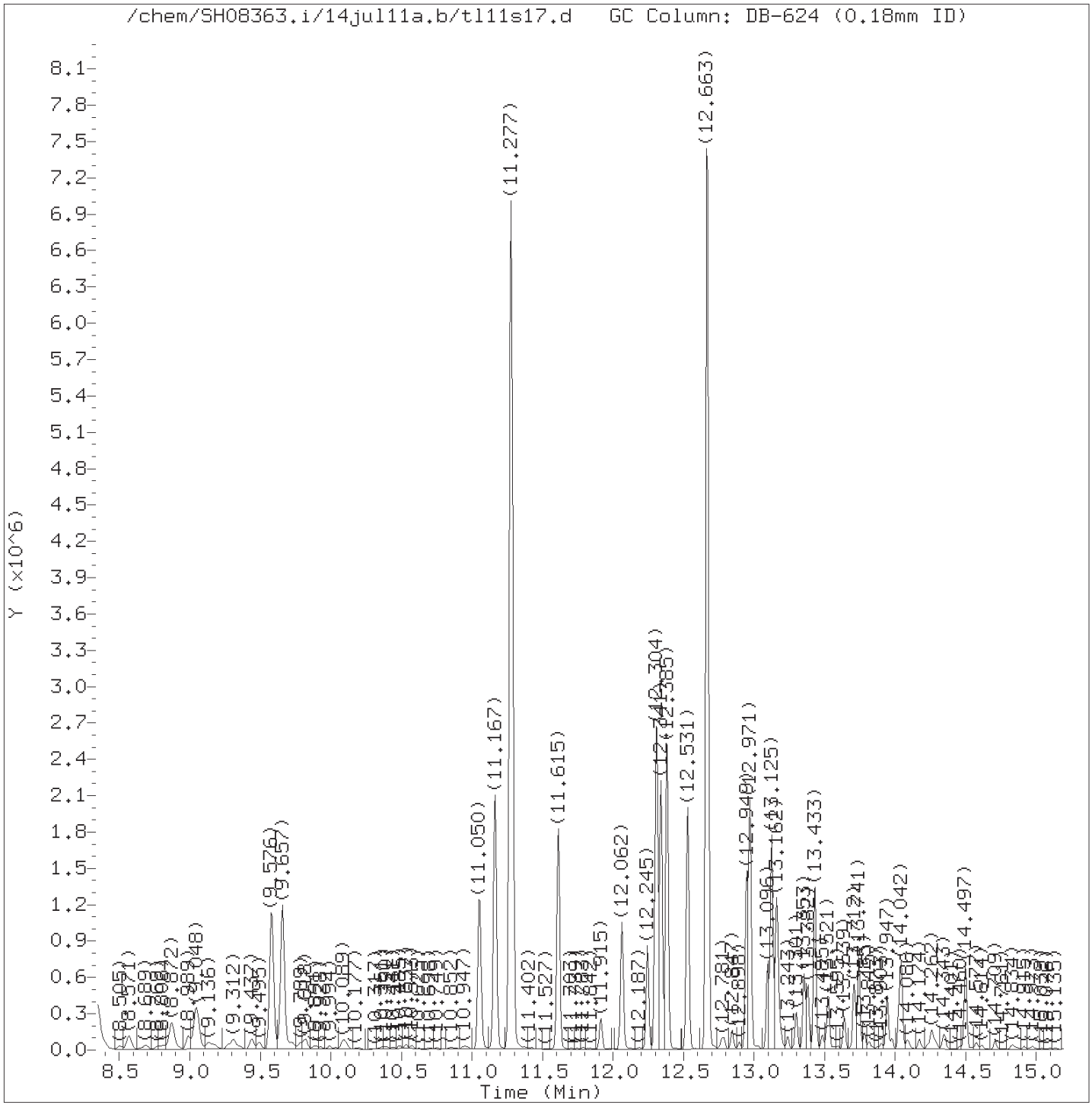
Target Revision 3.5

Data File: /chem/SH08363.i/14jul11a.b/tl11s17.d Instrument ID: SH08363.i
Injection date and time: 11-JUL-2014 16:46 Analyst ID: LCP00895

Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: 10442
Calibration date and time: 11-JUL-2014 15:37
Date, time and analyst ID of latest file update: 11-Jul-2014 20:05 akr02850

Sample Name: PVV18 Lab Sample ID: 7527284

Digitally signed by Amanda K. Richards
on 07/11/2014 at 20:05.
Target 3.5 esignature user ID: akr02850



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/SH08363.i/14jul11a.b/tl11s17.d Instrument ID: SH08363.i
Injection date and time: 11-JUL-2014 16:46 Analyst ID: LCP00895

Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: 10442
Calibration date and time: 11-JUL-2014 15:37
Date, time and analyst ID of latest file update: 11-Jul-2014 20:05 akr02850

Sample Name: PVV18 Lab Sample ID: 7527284

Digitally signed by Amanda K. Richards
on 07/11/2014 at 20:05.
Target 3.5 esignature user ID: akr02850

Quant Report

Target Revision 3.5

Data File: /chem/SH08363.i/14jul11a.b/tl11s17.d Instrument ID: SH08363.i
Injection date and time: 11-JUL-2014 16:46 Analyst ID: LCP00895

Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: 10442
Calibration date and time: 11-JUL-2014 15:37
Date, time and analyst ID of latest file update: 11-Jul-2014 20:05 akr02850

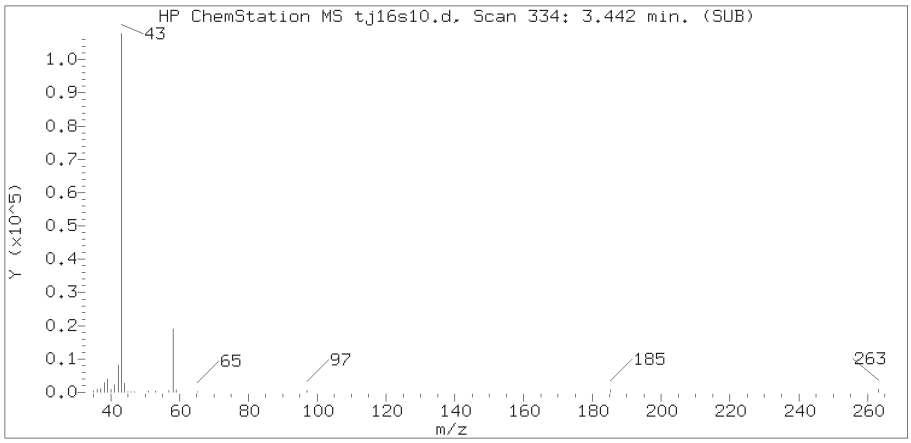
Sample Name: PVV18 Lab Sample ID: 7527284

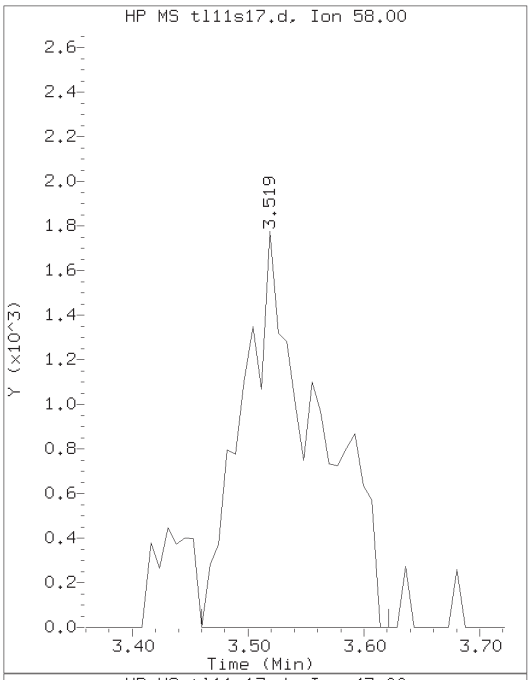
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
18) Acetone	(2)	3.519	58	8038M	7.602
29)*t-Butyl alcohol-d10	(1)	4.120	65	268131	250.000
52)$Dibromofluoromethane	(2)	6.679	113	233331	49.113
57)$1,2-Dichloroethane-d4	(2)	7.134	102	51847	51.064
60) Benzene	(2)	7.163	78	213190	12.616
66)*Fluorobenzene	(2)	7.559	96	719105	50.000
108) Xylene (Total)	(3)		106	2082239	321.188
83)$Toluene-d8	(3)	9.576	98	664458	47.067
88) Toluene	(3)	9.657	92	429015	42.670
100)*Chlorobenzene-d5	(3)	11.050	117	537543	50.000
104) Ethylbenzene	(3)	11.167	91	1200688	64.535
106) m+p-Xylene	(3)	11.277	106	1710249	262.453
107) o-Xylene	(3)	11.615	106	371990	58.735
114)$4-Bromofluorobenzene	(3)	12.062	95	293164	47.894
131)*1,4-Dichlorobenzene-d4	(4)	12.949	152	266732	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

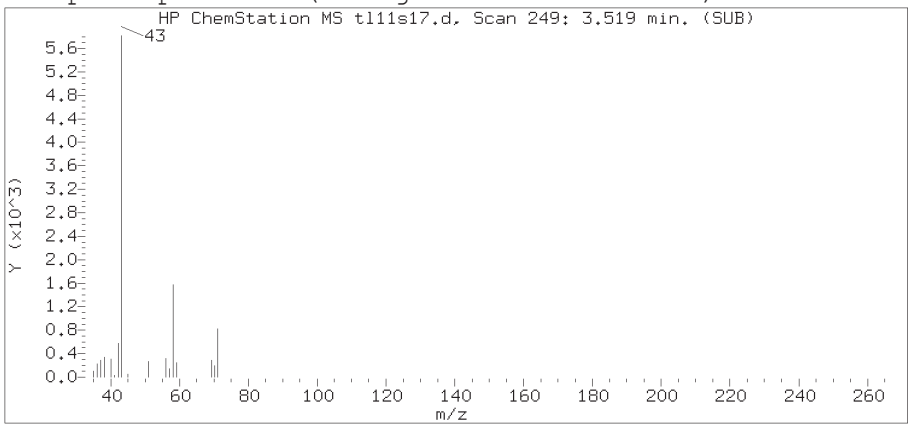
Digitally signed by Amanda K. Richards
on 07/11/2014 at 20:05.
Target 3.5 esignature user ID: akr02850

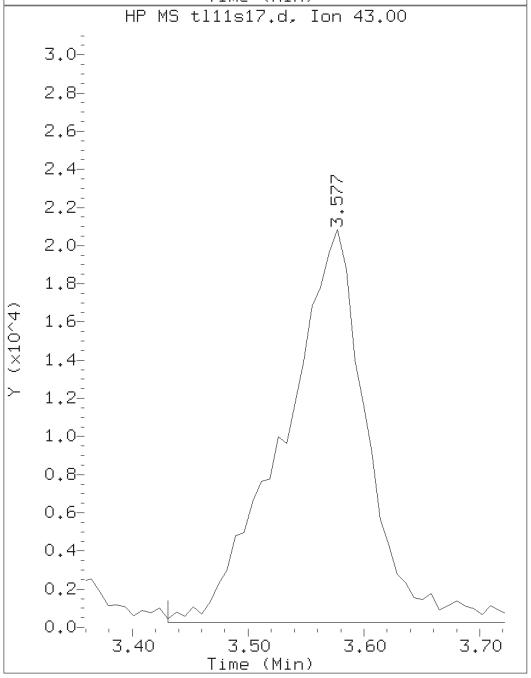
Reference Standard Spectrum for Acetone



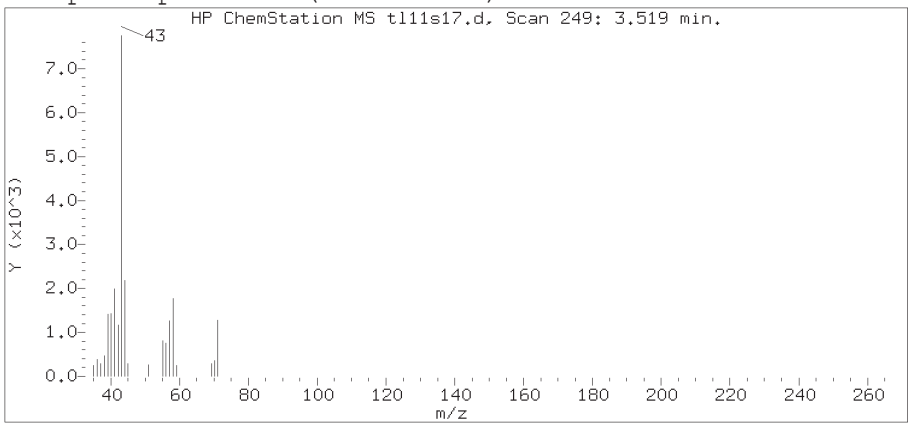


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/SH08363.i/14jul11a.b/tl11s17.d Instrument ID: SH08363.i
Injection date and time: 11-JUL-2014 16:46 Analyst ID: LCP00895

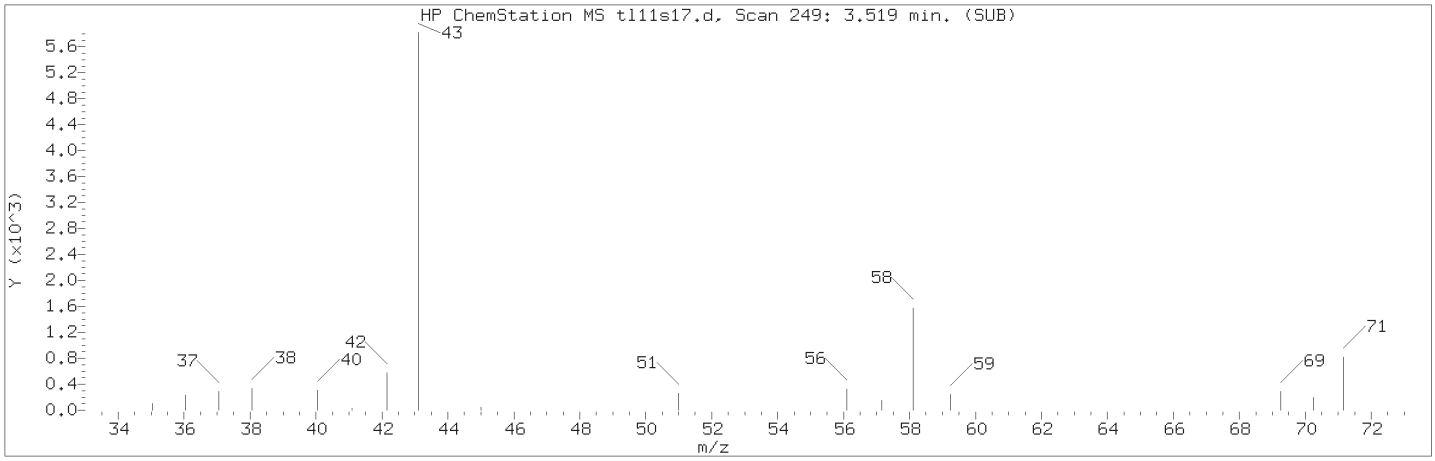
Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: 10442
Calibration date and time: 11-JUL-2014 15:37
Date, time and analyst ID of latest file update: 11-Jul-2014 20:05 akr02850

Sample Name: PVV18 Lab Sample ID: 7527284

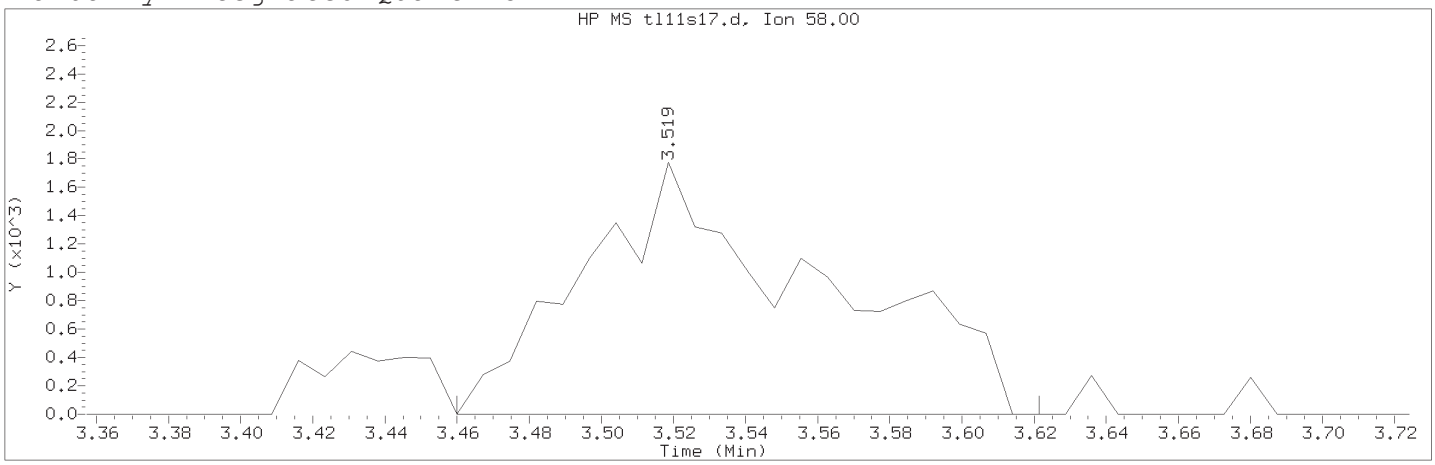
Compound Number : 18
Compound Name : Acetone
Scan Number : 249
Retention Time (minutes): 3.519
Relative Retention Time :-0.00142
Quant Ion : 58.00
Area (flag) : 8038M
On-Column Amount (ng) : 7.6021

Digitally signed by Amanda K. Richards on 07/11/2014 at 20:05.
Target 3.5 esignature [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SH08363.i/14jul11a.b/tl11s17.d Instrument ID: SH08363.i
Injection date and time: 11-JUL-2014 16:46 Analyst ID: LCP00895

Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: 10442
Calibration date and time: 11-JUL-2014 15:37
Date, time and analyst ID of latest file update: 11-Jul-2014 20:05 akr02850

Sample Name: PVV18 Lab Sample ID: 7527284

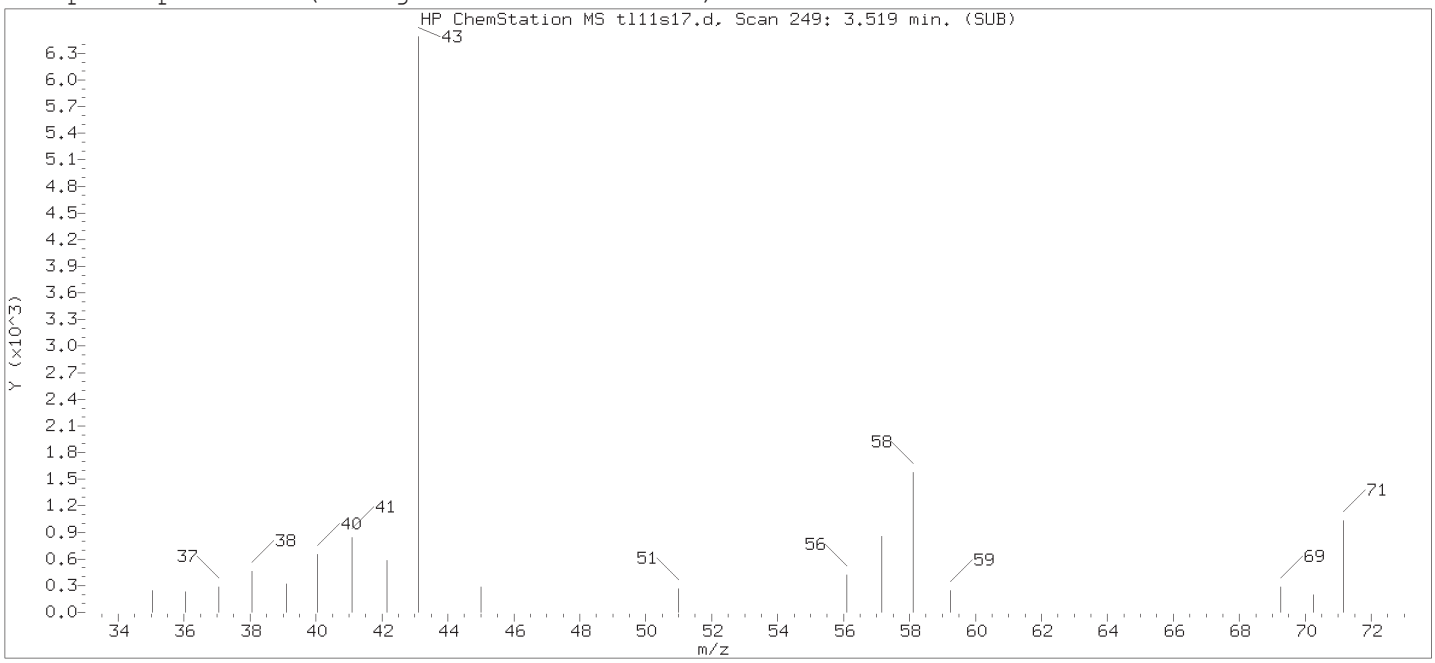
Compound Number : 18
Compound Name : Acetone
Scan Number : 249
Retention Time (minutes): 3.519
Quant Ion : 58.00
Area (flag) : 8038M
On-Column Amount (ng) : 7.6021
Integration start scan : 240 Integration stop scan: 262
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

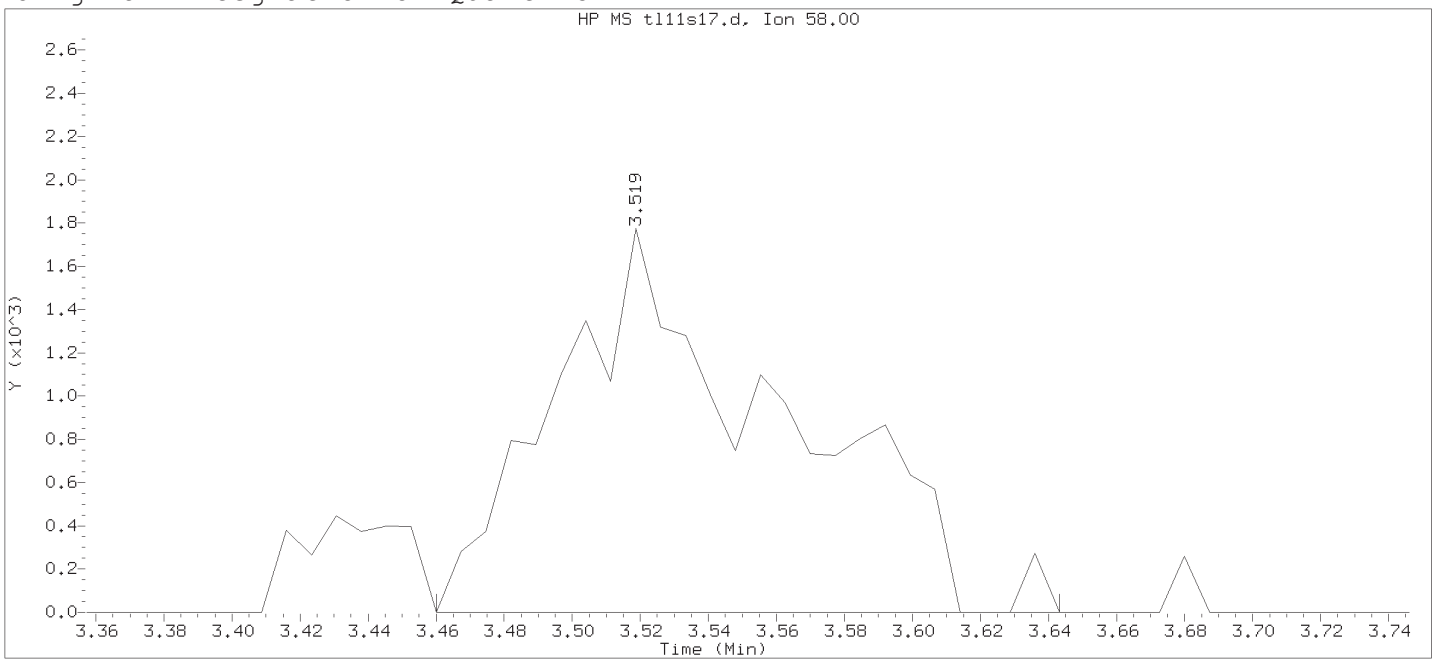
Analyst responsible for change: Digitally signed by Amanda K. Richards on 07/11/2014 at 20:05.
Target 3.5 esignature user ID: akr02850

Secondary review performed and digitally signed by Kenneth L. Boley on 07/14/2014 at 08:32.
Parallax ID: klb01296

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/SH08363.i/14jul11a.b/tl11s17.d Instrument ID: SH08363.i
Injection date and time: 11-JUL-2014 16:46 Analyst ID: LCP00895

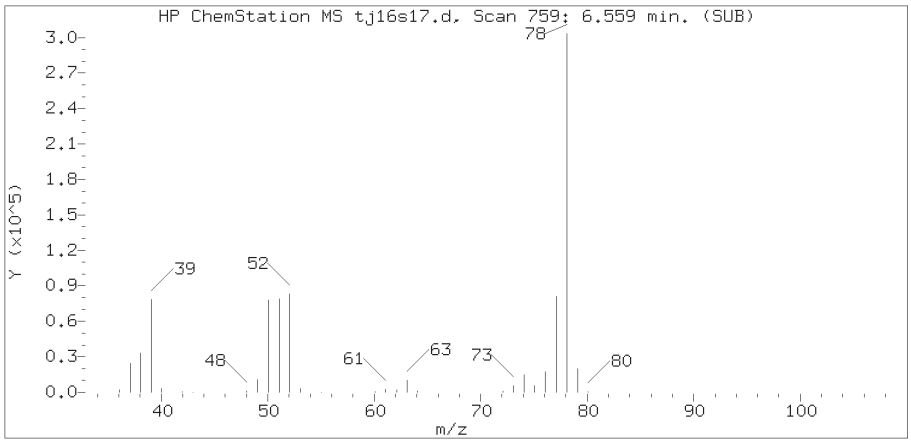
Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: 10442
Calibration date and time: 11-JUL-2014 15:37
Date, time and analyst ID of latest file update: 11-Jul-2014 19:16 Automation

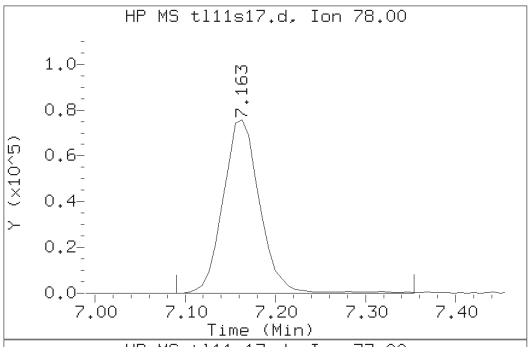
Sample Name: PVV18 Lab Sample ID: 7527284

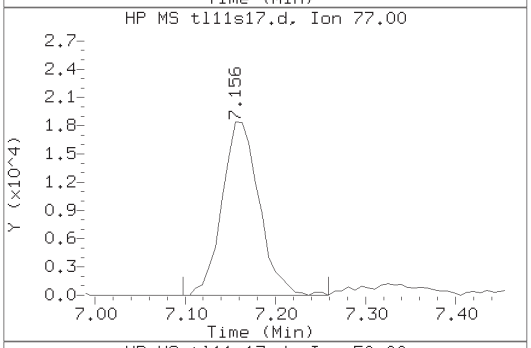
Compound Number	: 18		
Compound Name	: Acetone		
Scan Number	: 249		
Retention Time (minutes)	: 3.519		
Quant Ion	: 58.00		
Area	: 8158		
On-column Amount (ng)	: 7.7160		
Integration start scan	: 240	Integration stop scan:	265
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Amanda K. Richards on 07/11/2014 at 20:05.
Target 3.5 esignature used: ADR_SH08363

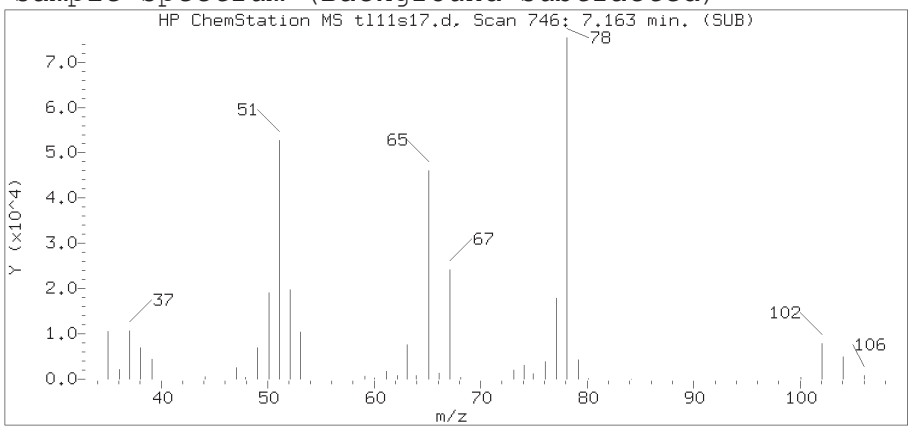
Reference Standard Spectrum for Benzene

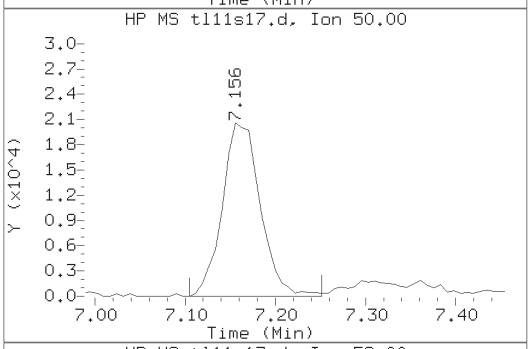




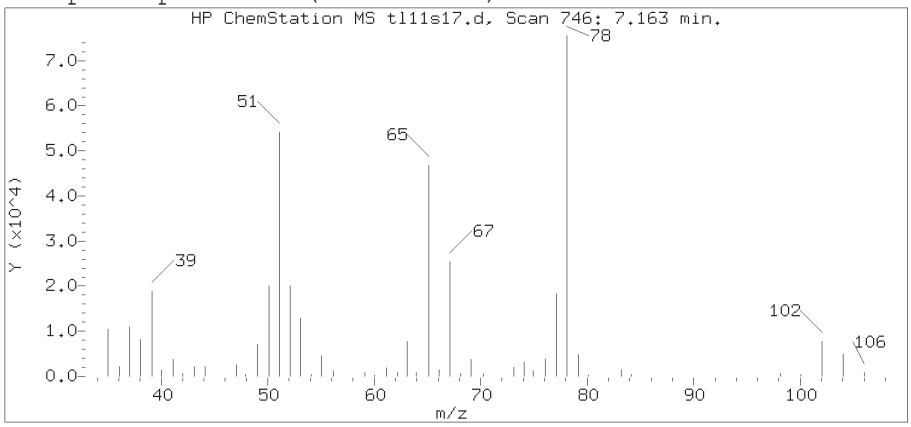


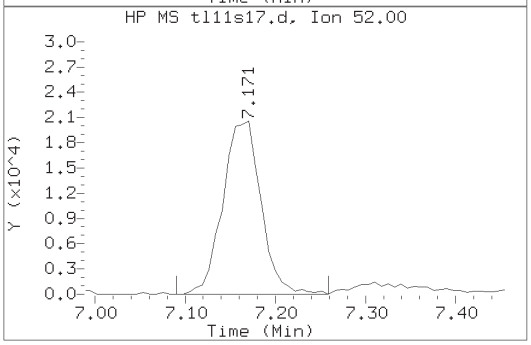
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/SH08363.i/14jul11a.b/tl11s17.d Instrument ID: SH08363.i
Injection date and time: 11-JUL-2014 16:46 Analyst ID: LCP00895

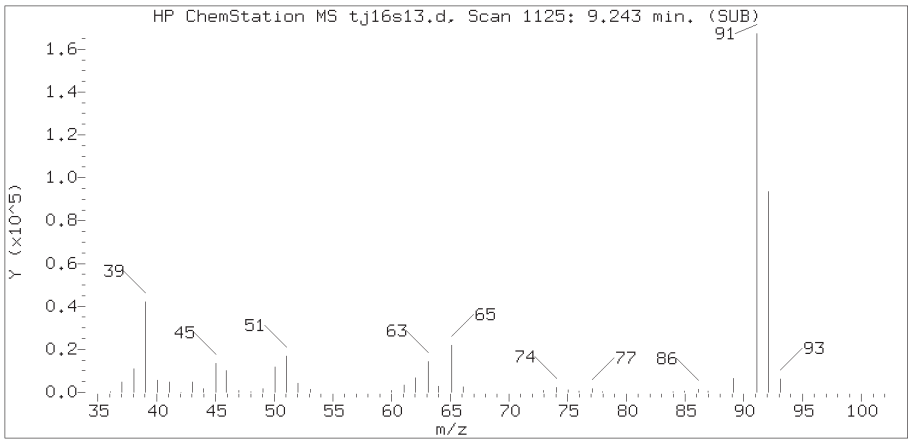
Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: 10442
Calibration date and time: 11-JUL-2014 15:37
Date, time and analyst ID of latest file update: 11-Jul-2014 20:05 akr02850

Sample Name: PVV18 Lab Sample ID: 7527284

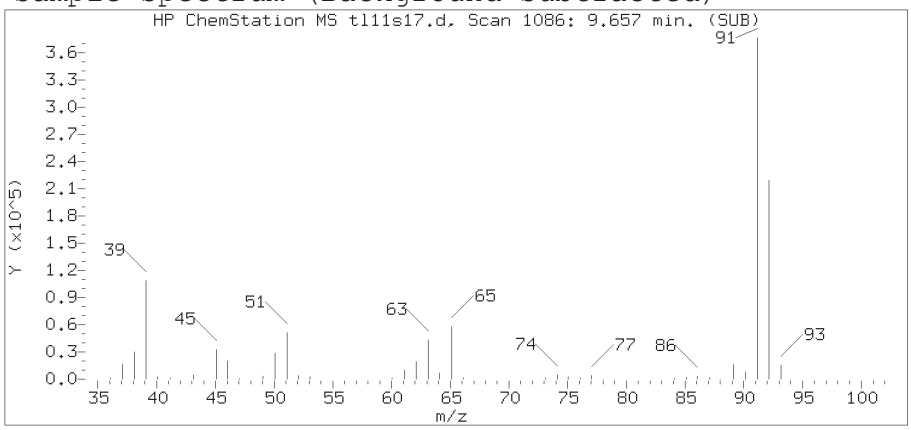
Compound Number : 60
Compound Name : Benzene
Scan Number : 746
Retention Time (minutes): 7.163
Relative Retention Time :-0.00092
Quant Ion : 78.00
Area (flag) : 213190
On-Column Amount (ng) : 12.6156

Digitally signed by Amanda K. Richards on 07/11/2014 at 20:05.
Target 3.5 esignature used. DoD ID: akr02850

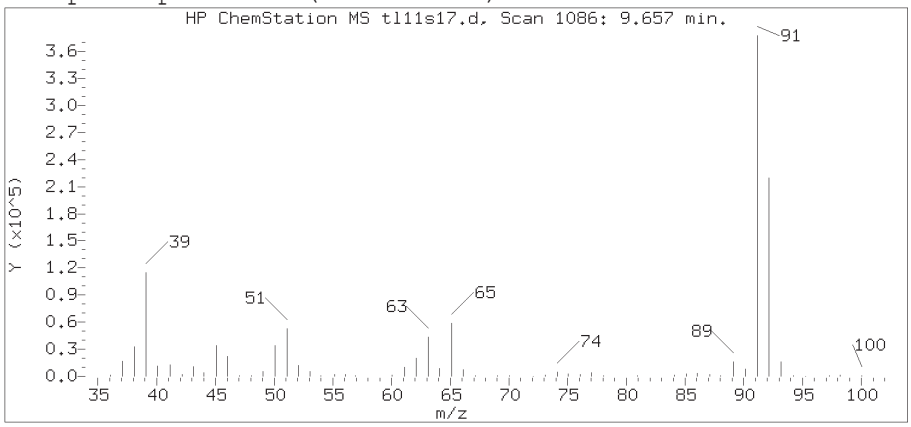
Reference Standard Spectrum for Toluene

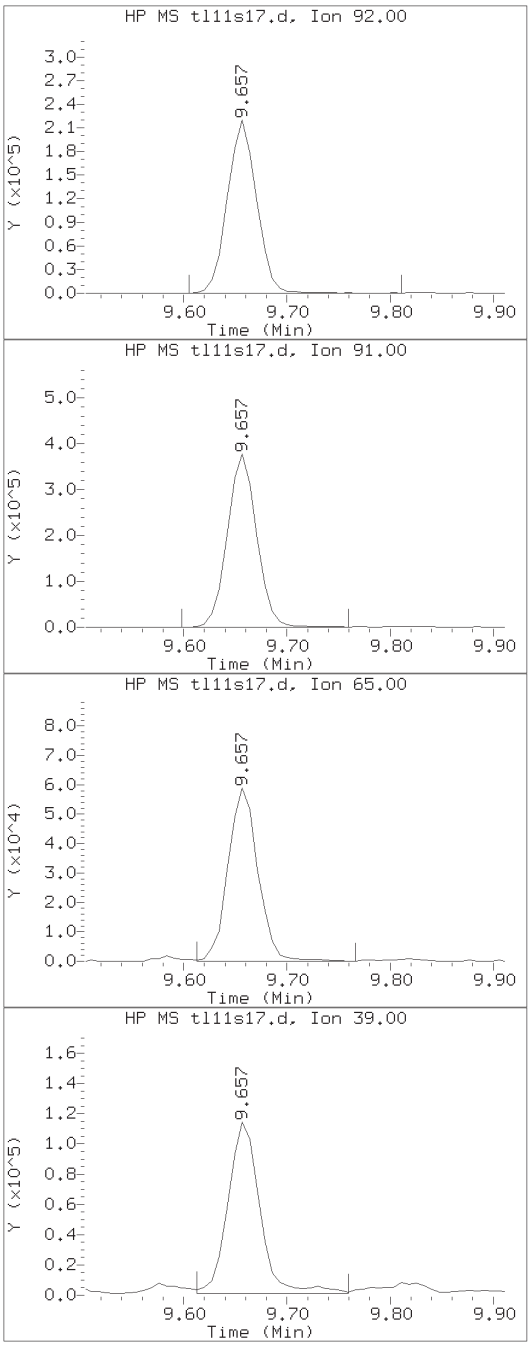


Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)





Data File: /chem/SH08363.i/14jul11a.b/tl11s17.d Instrument ID: SH08363.i
Injection date and time: 11-JUL-2014 16:46 Analyst ID: LCP00895

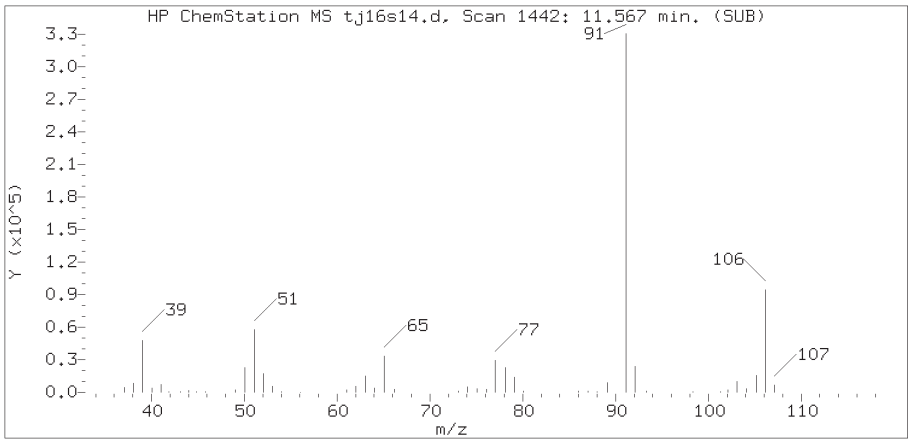
Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: 10442
Calibration date and time: 11-JUL-2014 15:37
Date, time and analyst ID of latest file update: 11-Jul-2014 20:05 akr02850

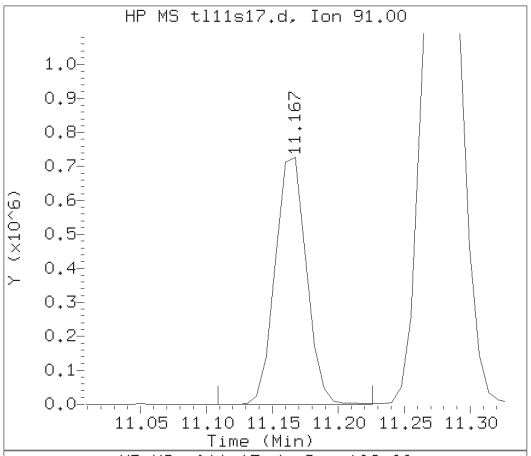
Sample Name: PVV18 Lab Sample ID: 7527284

Compound Number	: 88
Compound Name	: Toluene
Scan Number	: 1086
Retention Time (minutes)	: 9.657
Relative Retention Time	: 0.00000
Quant Ion	: 92.00
Area (flag)	: 429015
On-Column Amount (ng)	: 42.6696

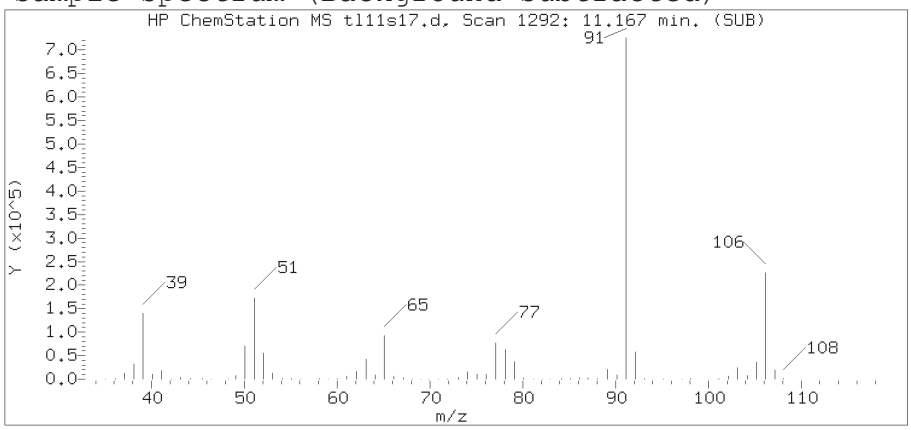
Digitally signed by Amanda K. Richards on 07/11/2014 at 20:05.
Target 3.5 esignature [illegible]

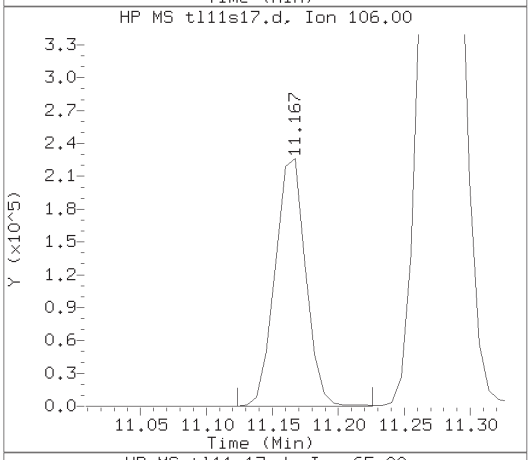
Reference Standard Spectrum for Ethylbenzene



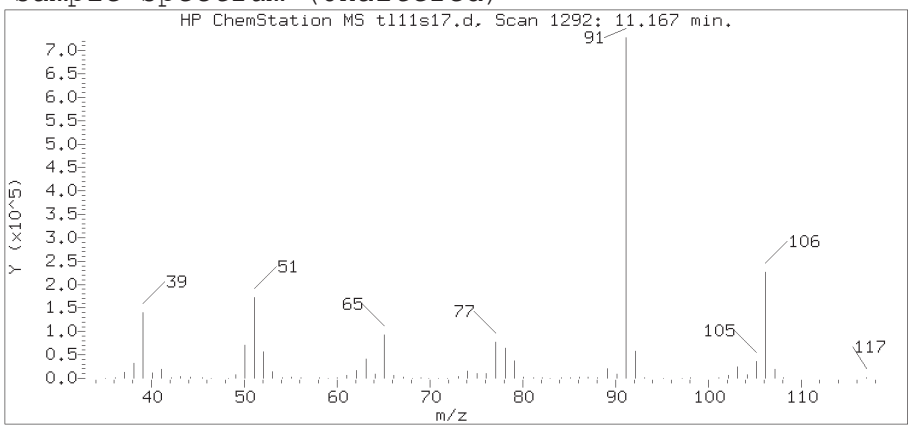


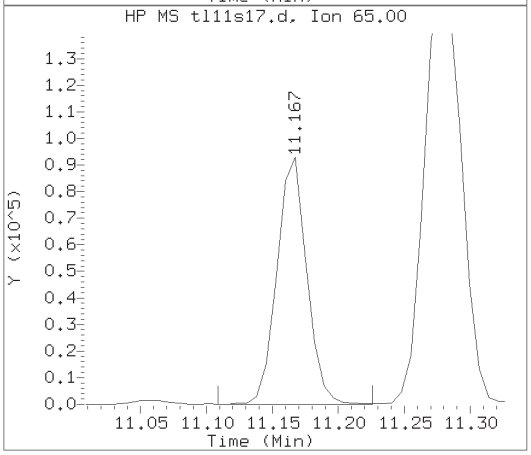
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/SH08363.i/14jul11a.b/tl11s17.d Instrument ID: SH08363.i
Injection date and time: 11-JUL-2014 16:46 Analyst ID: LCP00895

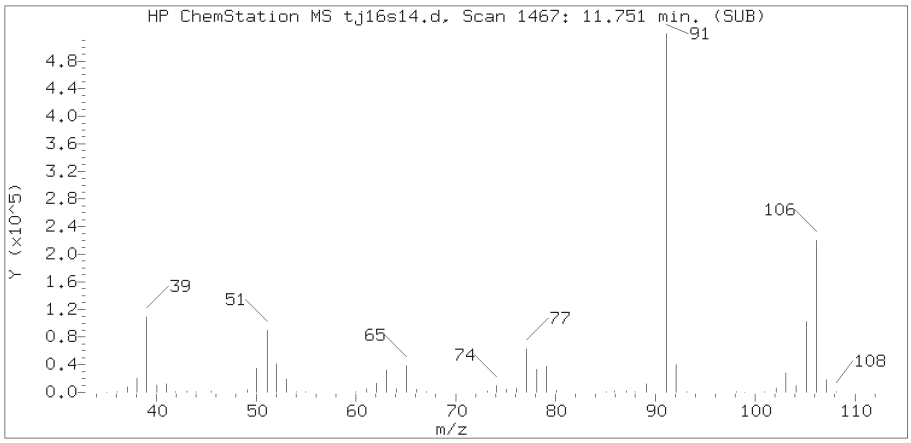
Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: 10442
Calibration date and time: 11-JUL-2014 15:37
Date, time and analyst ID of latest file update: 11-Jul-2014 20:05 akr02850

Sample Name: PVV18 Lab Sample ID: 7527284

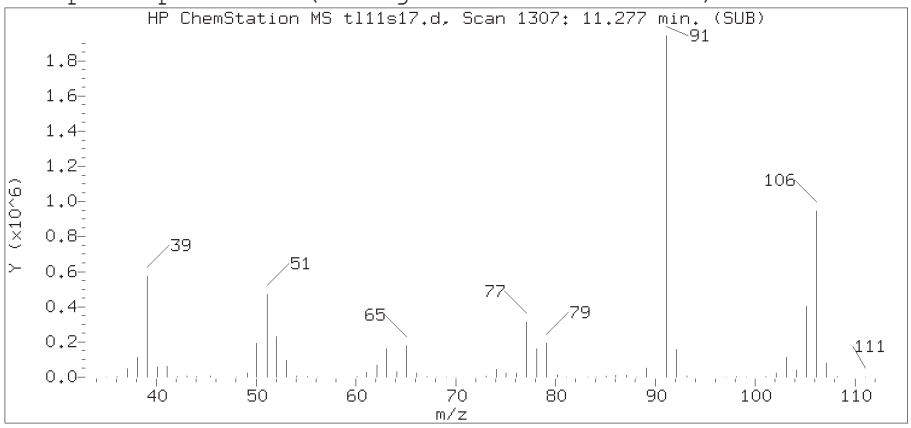
Compound Number : 104
Compound Name : Ethylbenzene
Scan Number : 1292
Retention Time (minutes): 11.167
Relative Retention Time :-0.00066
Quant Ion : 91.00
Area (flag) : 1200688
On-Column Amount (ng) : 64.5354

Digitally signed by Amanda K. Richards on 07/11/2014 at 20:05.
Target 3.5 esignature [illegible]

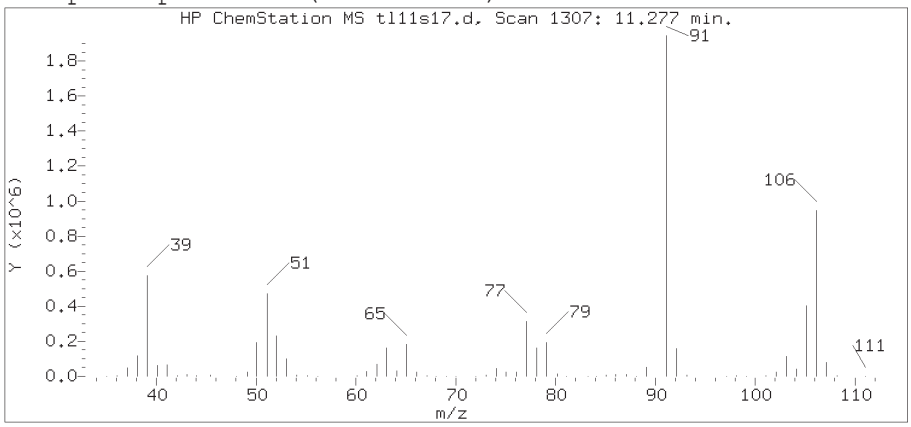
Reference Standard Spectrum for m+p-Xylene

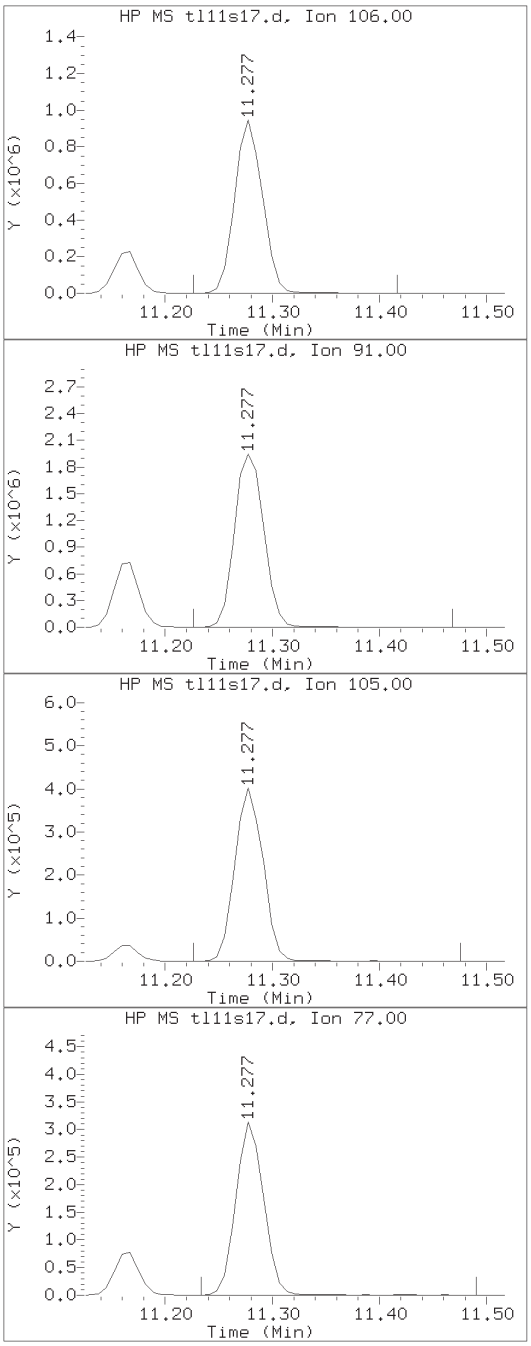


Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)





Data File: /chem/SH08363.i/14jul11a.b/tl11s17.d Instrument ID: SH08363.i
Injection date and time: 11-JUL-2014 16:46 Analyst ID: LCP00895

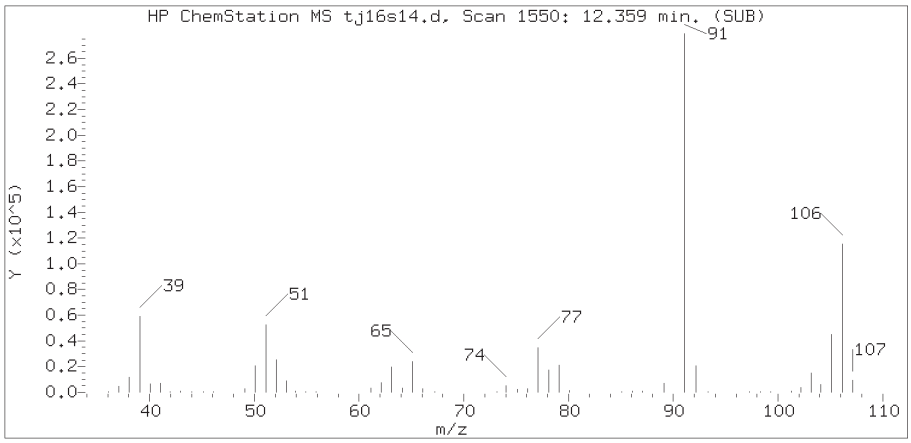
Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: 10442
Calibration date and time: 11-JUL-2014 15:37
Date, time and analyst ID of latest file update: 11-Jul-2014 20:05 akr02850

Sample Name: PVV18 Lab Sample ID: 7527284

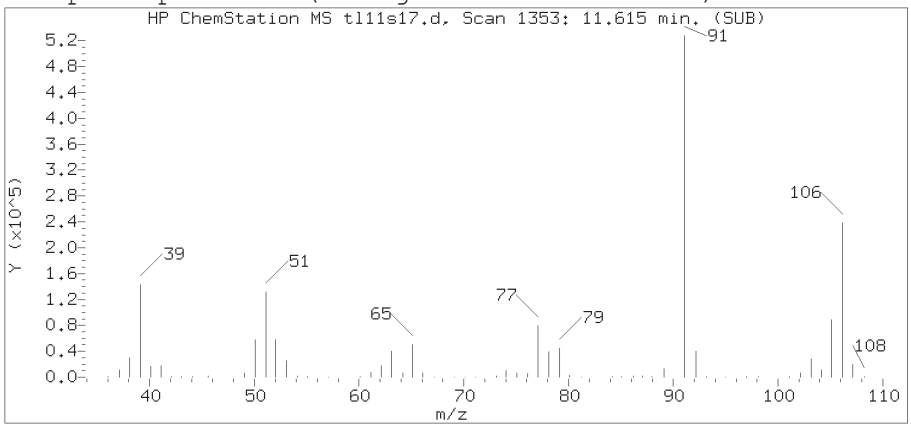
Compound Number : 106
Compound Name : m+p-Xylene
Scan Number : 1307
Retention Time (minutes): 11.277
Relative Retention Time : 0.00000
Quant Ion : 106.00
Area (flag) : 1710249
On-Column Amount (ng) : 262.4531

Digitally signed by Amanda K. Richards on 07/11/2014 at 20:05.
Target 3.5 esignature u[illegible]

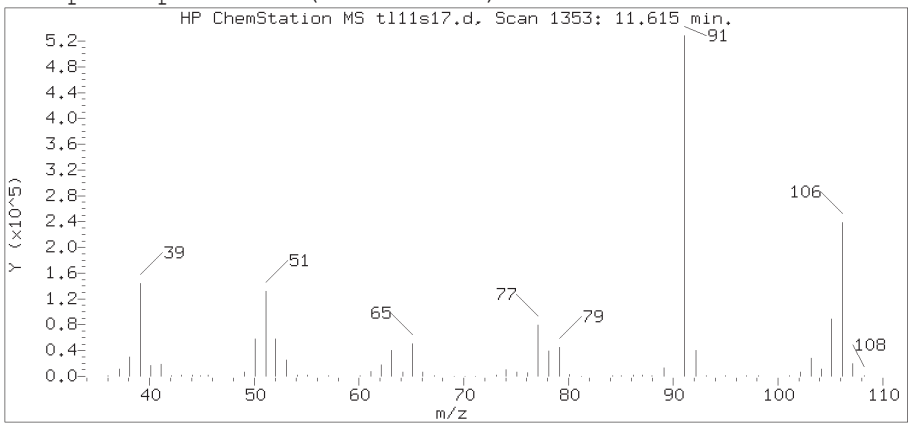
Reference Standard Spectrum for o-Xylene

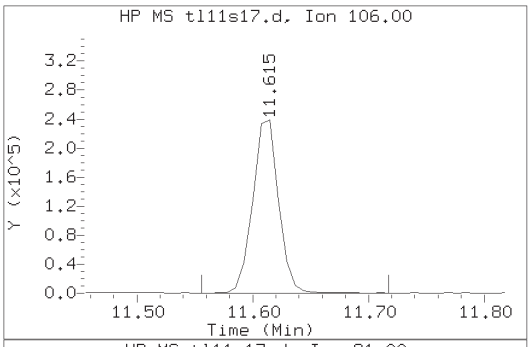


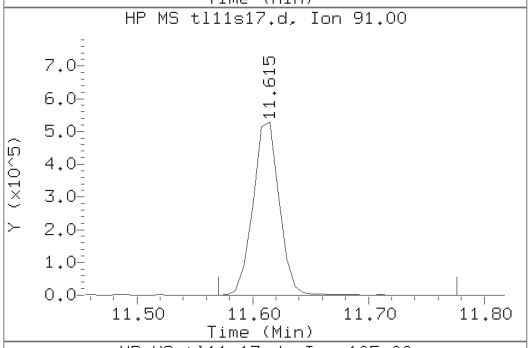
Sample Spectrum (Background Subtracted)

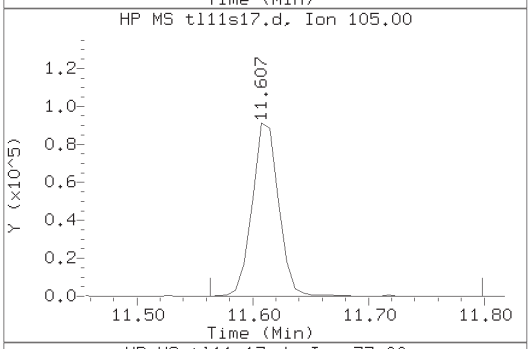


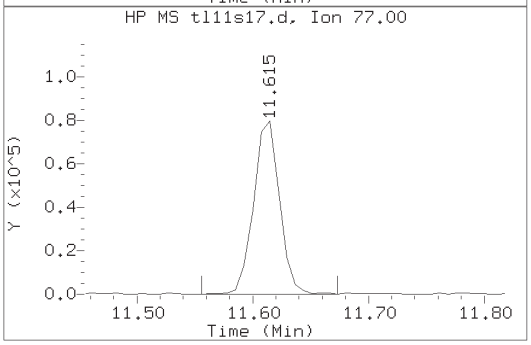
Sample Spectrum (Unaltered)











Data File: /chem/SH08363.i/14jul11a.b/tl11s17.d Instrument ID: SH08363.i
Injection date and time: 11-JUL-2014 16:46 Analyst ID: LCP00895

Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: 10442
Calibration date and time: 11-JUL-2014 15:37
Date, time and analyst ID of latest file update: 11-Jul-2014 20:05 akr02850

Sample Name: PVV18 Lab Sample ID: 7527284

Compound Number : 107
Compound Name : o-Xylene
Scan Number : 1353
Retention Time (minutes): 11.615
Relative Retention Time :-0.00066
Quant Ion : 106.00
Area (flag) : 371990
On-Column Amount (ng) : 58.7353

Digitally signed by Amanda K. Richards on 07/11/2014 at 20:05.
Target 3.5 esignature [illegible]

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

PVV18

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 7527284

Sample wt/vol: 5.0 (g/mL)mL Lab File ID:SH08363.i/14jul11a.b/tl11s17.d

Level: (low/med) LOW Date Received: 07/09/14

% Moisture: not dec. Date Analyzed: 07/11/14

Column: (pack/cap) CAP Dilution Factor: 5.0

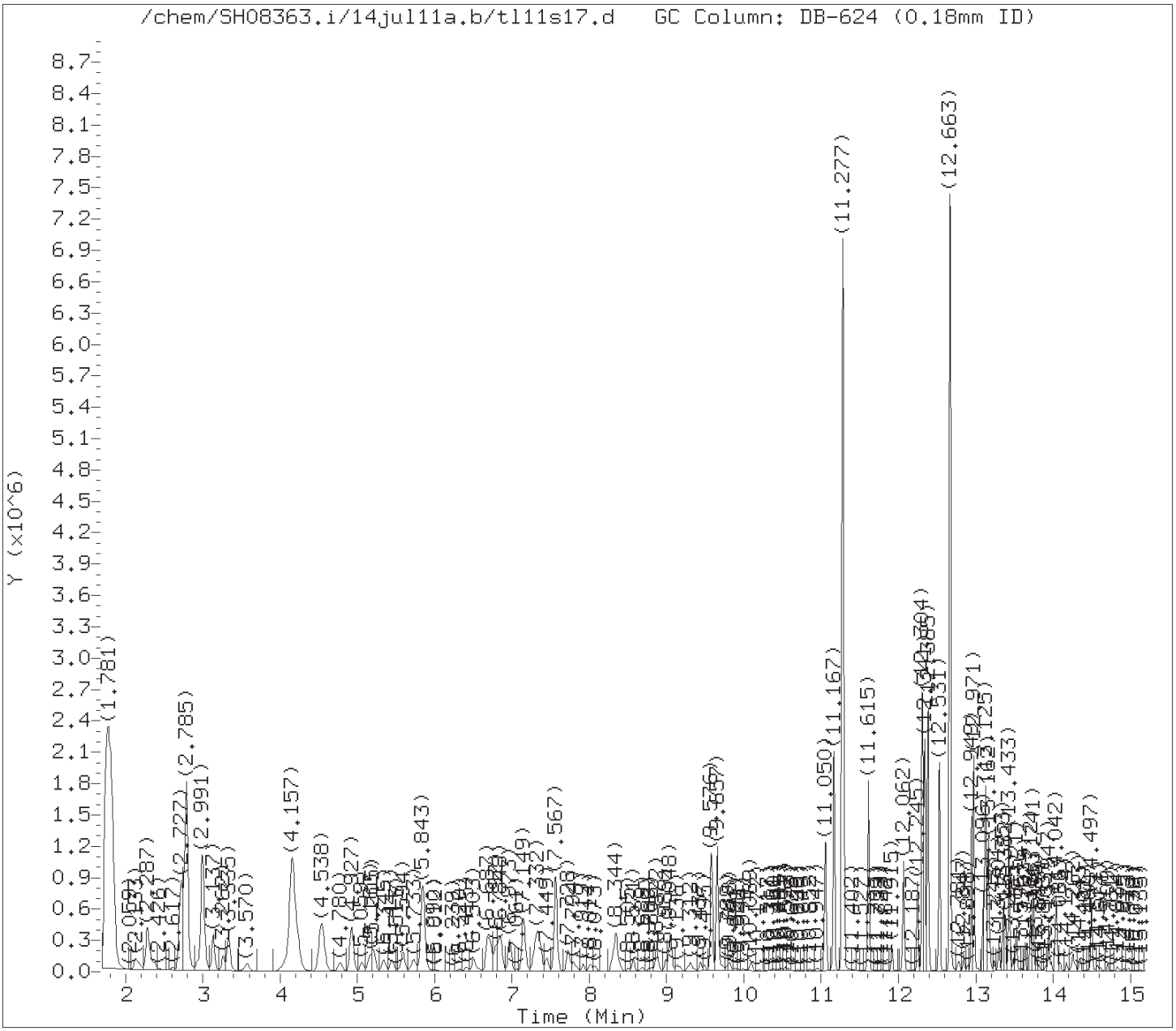
Number TICs found: 10

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.79	580	J
2.		Unknown	2.99	370	J
3.		Unknown	4.16	700	J
4.		Unknown	5.84	320	J
5.		Unknown	12.30	570	J
6.		Unknown	12.34	420	J
7.		Unknown	12.38	500	J
8.		Unknown	12.53	400	J
9.		Unknown	12.66	1500	J
10.		Unknown	12.97	410	J
11.					
12.	VOCTIC	Total VOC TICs		5800	J
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

page 1 of 1

FORM I VOA-TIC



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

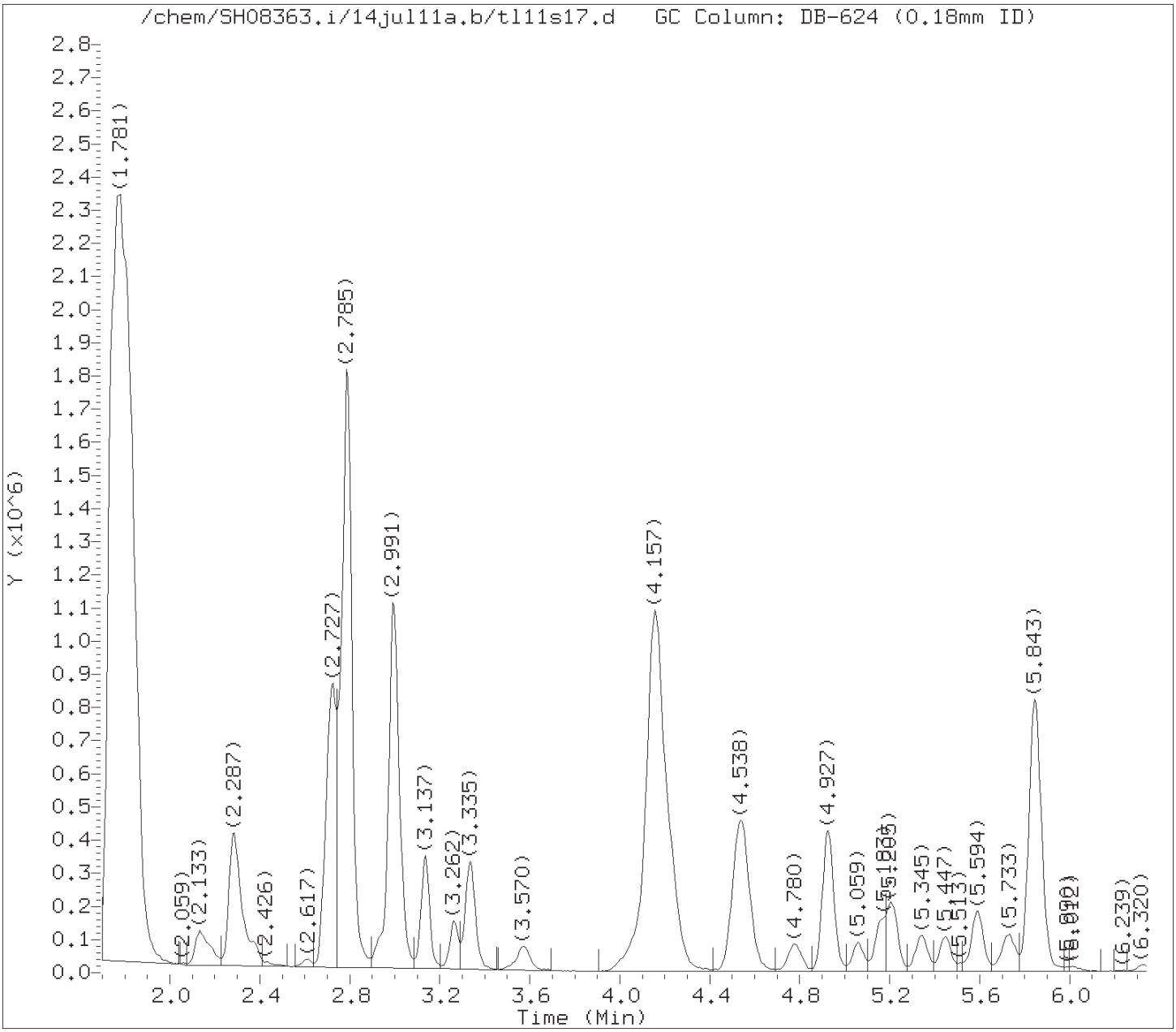
Data File: /chem/SH08363.i/14jul11a.b/tl11s17.d Instrument ID: SH08363.i
Injection date and time: 11-JUL-2014 16:46 Analyst ID: LCP00895

Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: 10442
Calibration date and time: 11-JUL-2014 15:37
Date, time and analyst ID of latest file update: 11-Jul-2014 20:05 akr02850

Sample Name: PVV18 Lab Sample ID: 7527284

Chromatogram Start Time (min.): 1.700
Chromatogram End Time (min.): 15.193

Digitally signed by Amanda K. Richards on 07/11/2014 at 20:06.
Target 3.5 esignature user ID: akr02850



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/SH08363.i/14jul11a.b/tl11s17.d Instrument ID: SH08363.i
Injection date and time: 11-JUL-2014 16:46 Analyst ID: LCP00895

Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: 10442
Calibration date and time: 11-JUL-2014 15:37
Date, time and analyst ID of latest file update: 11-Jul-2014 20:05 akr02850

Sample Name: PVV18 Lab Sample ID: 7527284

Internal Standard referenced: t-Butyl alcohol-d10 at 4.120 minutes
Chromatogram Start Time (min.): 1.700
Chromatogram End Time (min.): 5.840

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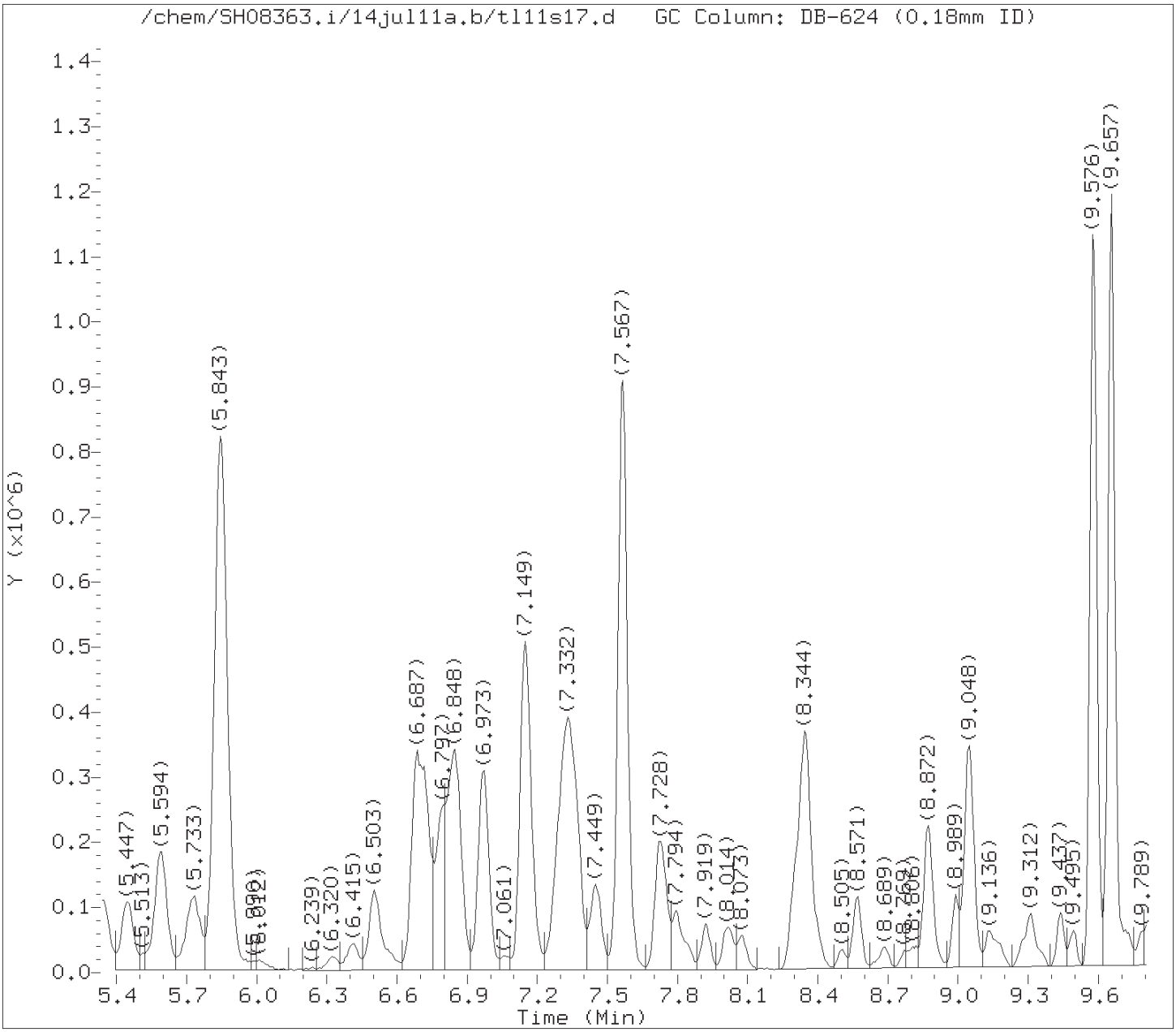
Target 3.5 esignature user ID: akr02850



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/SH08363.i/14jul11a.b/tl11s17.d Instrument ID: SH08363.i
Injection date and time: 11-JUL-2014 16:46 Analyst ID: LCP00895

Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: 10442
Calibration date and time: 11-JUL-2014 15:37
Date, time and analyst ID of latest file update: 11-Jul-2014 20:05 akr02850

Sample Name: PVV18 Lab Sample ID: 7527284

Internal Standard referenced: Fluorobenzene at 7.559 minutes
Chromatogram Start Time (min.): 5.840
Chromatogram End Time (min.): 9.305

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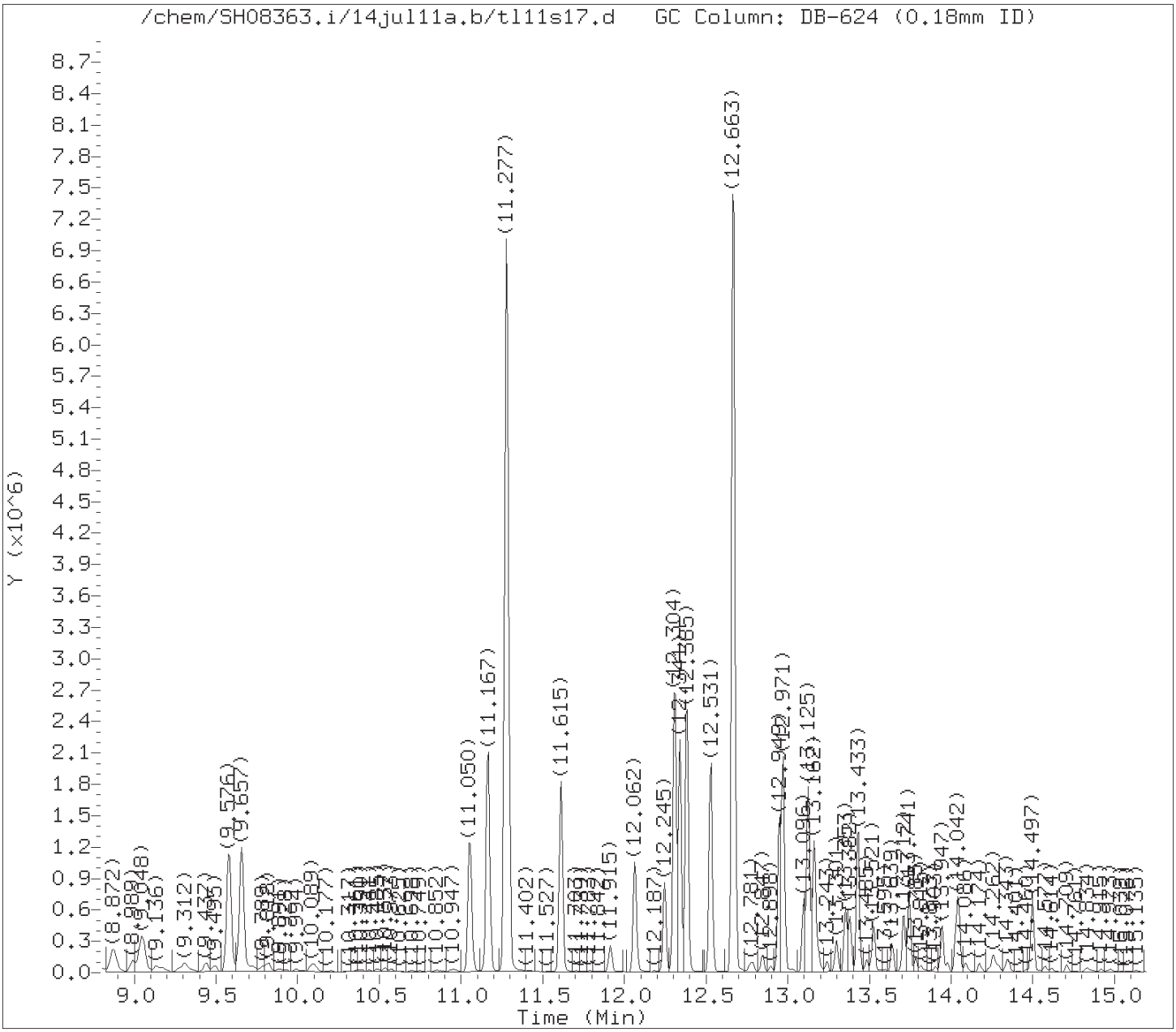
Target 3.5 esignature user ID: akr02850



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/SH08363.i/14jul11a.b/tl11s17.d Instrument ID: SH08363.i
Injection date and time: 11-JUL-2014 16:46 Analyst ID: LCP00895

Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: 10442
Calibration date and time: 11-JUL-2014 15:37
Date, time and analyst ID of latest file update: 11-Jul-2014 20:05 akr02850

Sample Name: PVV18 Lab Sample ID: 7527284

Internal Standard referenced: Chlorobenzene-d5 at 11.050 minutes
Chromatogram Start Time (min.): 9.305
Chromatogram End Time (min.): 12.000

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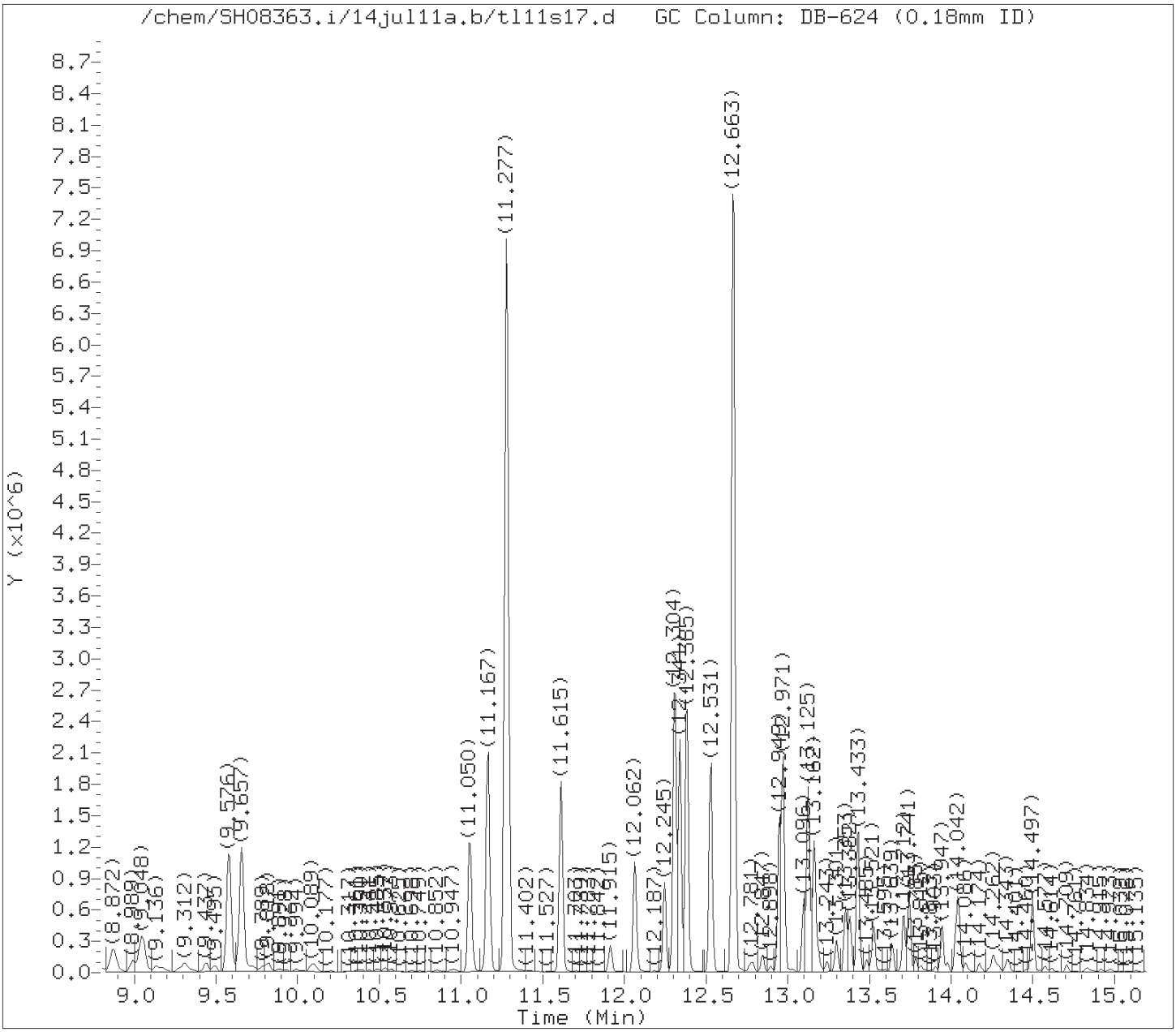
Target 3.5 esignature user ID: akr02850



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/SH08363.i/14jul11a.b/tl11s17.d Instrument ID: SH08363.i
Injection date and time: 11-JUL-2014 16:46 Analyst ID: LCP00895

Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: 10442
Calibration date and time: 11-JUL-2014 15:37
Date, time and analyst ID of latest file update: 11-Jul-2014 20:05 akr02850

Sample Name: PVV18 Lab Sample ID: 7527284

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 12.949 minutes
Chromatogram Start Time (min.): 12.000
Chromatogram End Time (min.): 15.193

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Target 3.5 esignature user ID: akr02850

Lancaster Laboratories

Data file : /chem/SH08363.i/14jul11a.b/tl11s17.d
Lab Smp Id: 7527284 Client Smp ID: PVV18
Inj Date : 11-JUL-2014 16:46
Operator : LCP00895 Inst ID: SH08363.i
Smp Info : PVV18;7527284;1;0;;NNS22;;;tl11b01;
Misc Info : 10442.sub;T141921AA;;1;5;;;038a
Comment :
Method : /chem/SH08363.i/14jul11a.b/m8260b5.m
Meth Date : 11-Jul-2014 15:37 akr02850 Quant Type: ISTD
Cal Date : 12-JUN-2014 11:32 Cal File: tu12i07.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10442.sub
Target Version: 3.50
Processing Host: d21cs05

Concentration Formula: Amt * DF * (Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	5.00000	normal purge volume
Vo	1.00000	sample volume

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 29 t-Butyl alcohol-d10	4.120	7248098	250.000
* 66 Fluorobenzene	7.559	2598518	50.000
* 131 1,4-Dichlorobenzene-d4	12.949	1807204	50.000

	CONCENTRATIONS			QUANT			
RT	AREA	ON-COL(ug/L)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
1.781	16626916	573.492347	2867.46174	0		0	29

Air Peak - Do not report CAS #:

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Target 3.5 esignature user ID: akr02850

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/L)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Butane, 2-methyl-				CAS #: 78-78-4			
2.785	6073809	116.870607	584.353036	83	NIST11.l	714	66
Butane, 2-methyl-				CAS #: 78-78-4			
2.991	3827152	73.6410388	368.205194	72	NIST11.l	713	66
Butane, 2,3-dimethyl-				CAS #: 79-29-8			
4.157	7248099	139.465978	697.329891	58	NIST11.l	1831	66(L)
1-Pentene, 2-methyl-				CAS #: 763-29-1			
5.843	3290045	63.3061713	316.530856	90	NIST11.l	1478	66
Benzene, 1-ethyl-2-methyl-				CAS #: 611-14-3			
12.304	4102342	113.499688	567.498439	94	NIST11.l	9425	131
Benzene, 1-ethyl-4-methyl-				CAS #: 622-96-8			
12.341	3012805	83.3554100	416.777050	91	NIST11.l	9429	131
Benzene, 1,2,3-trimethyl-				CAS #: 526-73-8			
12.385	3630163	100.435897	502.179483	95	NIST11.l	9418	131
Benzene, 1-ethyl-2-methyl-				CAS #: 611-14-3			
12.531	2889305	79.9385396	399.692698	93	NIST11.l	9422	131
Benzene, 1,2,3-trimethyl-				CAS #: 526-73-8			
12.663	10753131	297.507372	1487.53686	95	NIST11.l	9418	131
Mesitylene				CAS #: 108-67-8			
12.971	2966776	82.0819340	410.409670	94	NIST11.l	9401	131

QC Flag Legend

L - Operator selected an alternate library search match.

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Target 3.5 esignature user ID: akr02850

Data File: /chem/SH08363.i/14jul11a.b/tl11s17.d

Date : 11-JUL-2014 16:46

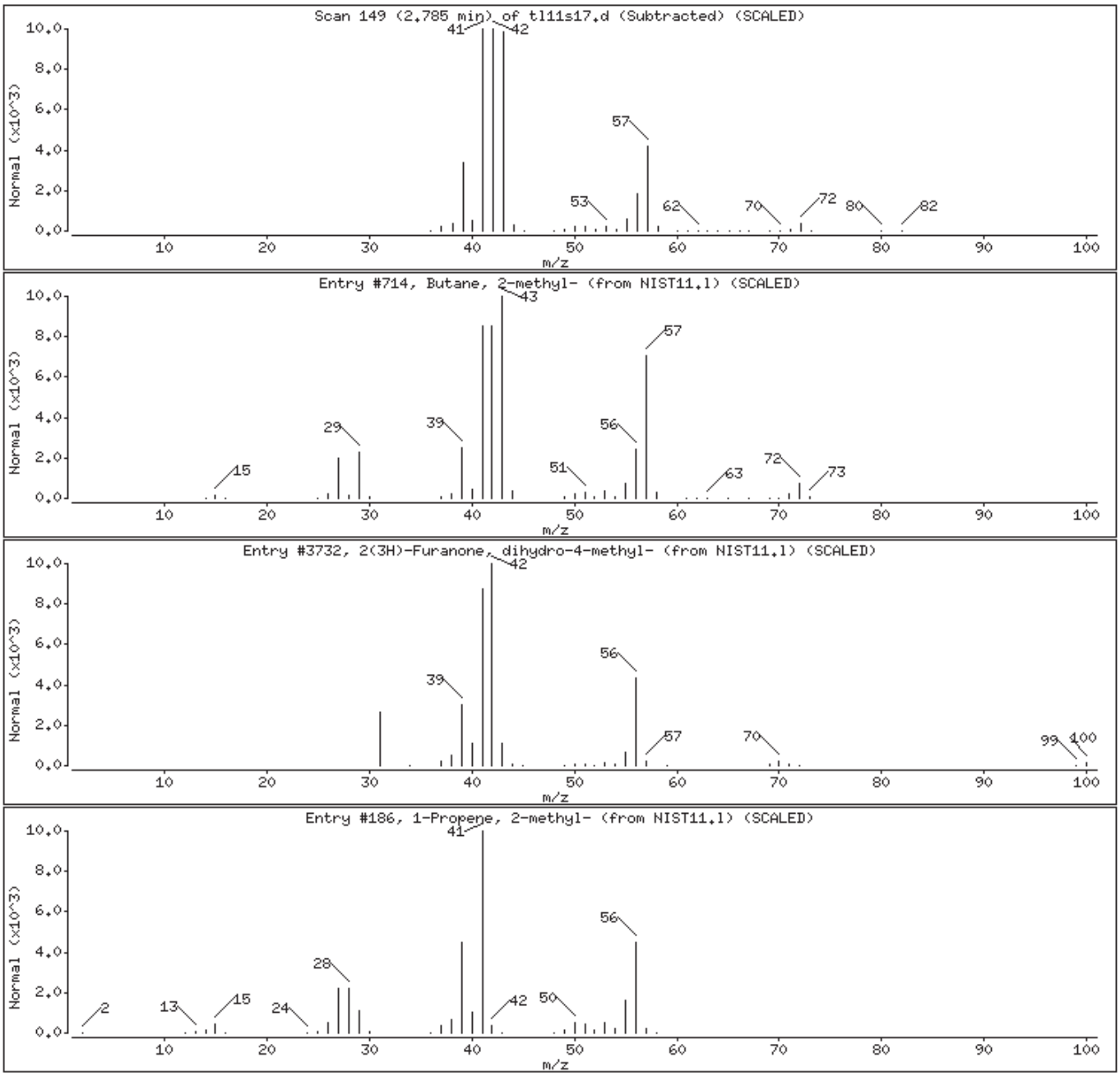
Client ID: PVV18 Instrument: SH08363.i

Sample Info: PVV18;7527284;1;0;;NNS22;;;tl11b01;

Purge Volume: 1.0 Operator: LCP00895

Column phase: DB-624 Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Butane, 2-methyl-	78-78-4	NIST11.l	714	83	C5H12	72
2(3H)-Furanone, dihydro-4-methyl-	1679-49-8	NIST11.l	3732	38	C5H8O2	100
1-Propene, 2-methyl-	115-11-7	NIST11.l	186	10	C4H8	56



Digitally signed by Amanda K. Richards on 07/11/2014 at 20:06.
Target 3.5 esignature user ID: akr02850

Data File: /chem/SH08363.i/14jul11a.b/tl11s17.d

Date : 11-JUL-2014 16:46

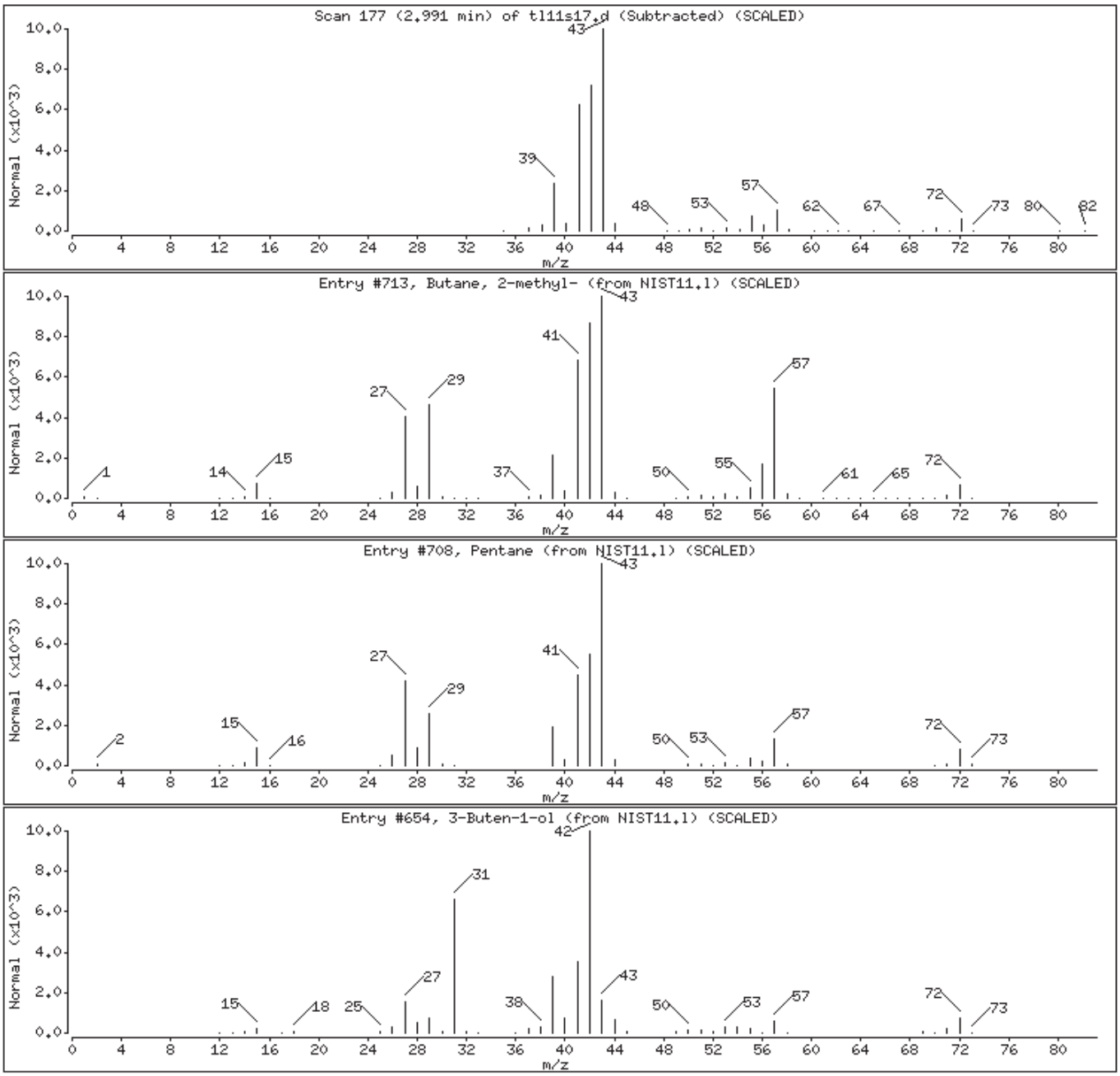
Client ID: PVV18 Instrument: SH08363.i

Sample Info: PVV18;7527284;1;0;;NNS22;;;tl11b01;

Purge Volume: 1.0 Operator: LCP00895

Column phase: DB-624 Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Butane, 2-methyl-	78-78-4	NIST11.l	713	72	C5H12	72
Pentane	109-66-0	NIST11.l	708	50	C5H12	72
3-Buten-1-ol	627-27-0	NIST11.l	654	38	C4H8O	72



Digitally signed by Amanda K. Richards on 07/11/2014 at 20:06.
Target 3.5 esignature user ID: akr02850

Data File: /chem/SH08363.i/14jul11a.b/tl11s17.d

Date : 11-JUL-2014 16:46

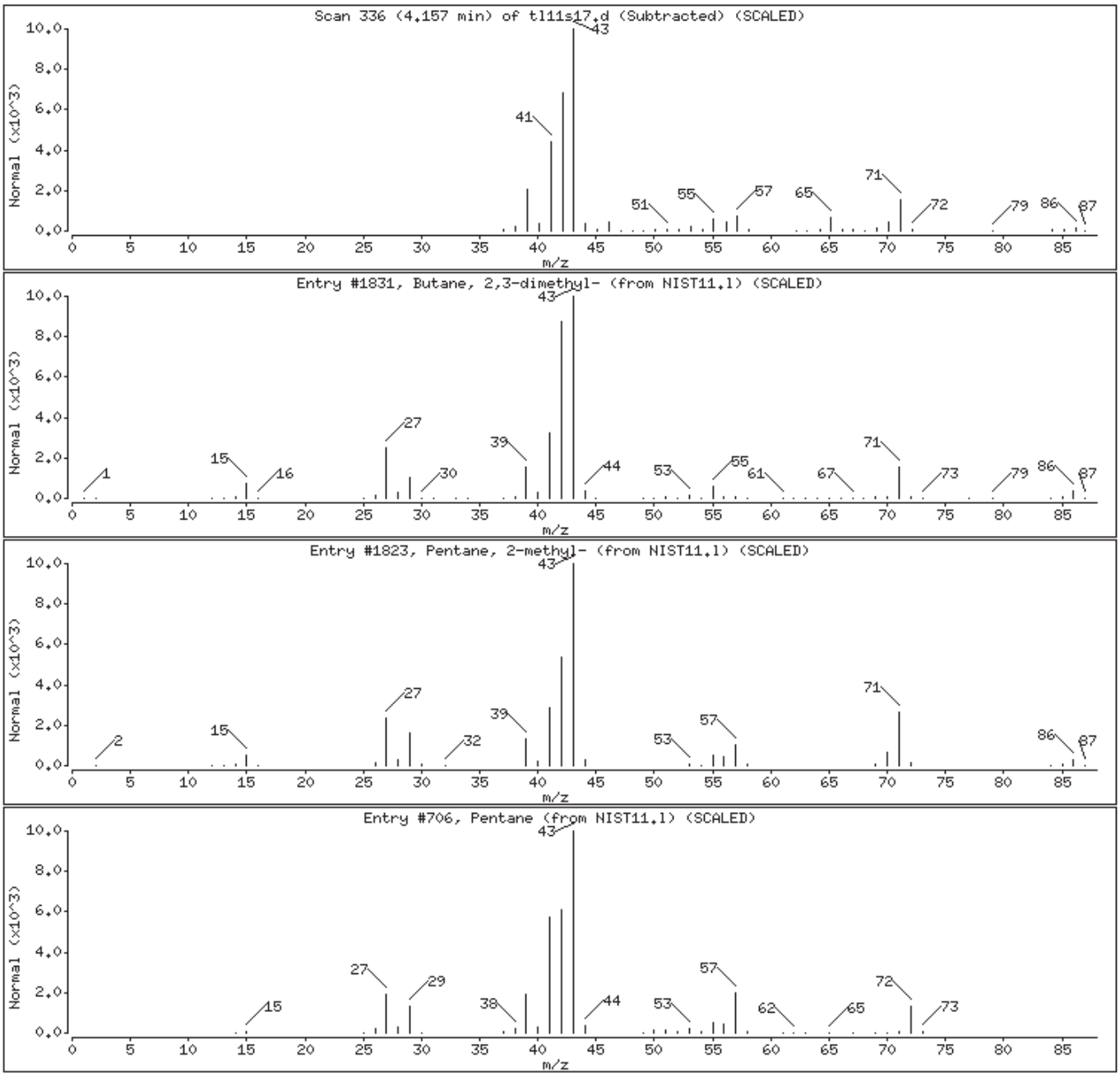
Client ID: PVV18 Instrument: SH08363.i

Sample Info: PVV18;7527284;1;0;;NNS22;;;tl11b01;

Purge Volume: 1.0 Operator: LCP00895

Column phase: DB-624 Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Butane, 2,3-dimethyl-	79-29-8	NIST11.l	1831	58	C6H14	86
Pentane, 2-methyl-	107-83-5	NIST11.l	1823	50	C6H14	86
Pentane	109-66-0	NIST11.l	706	50	C5H12	72



Digitally signed by Amanda K. Richards on 07/11/2014 at 20:06.
Target 3.5 esignature user ID: akr02850

Data File: /chem/SH08363.i/14jul11a.b/tl11s17.d

Date : 11-JUL-2014 16:46

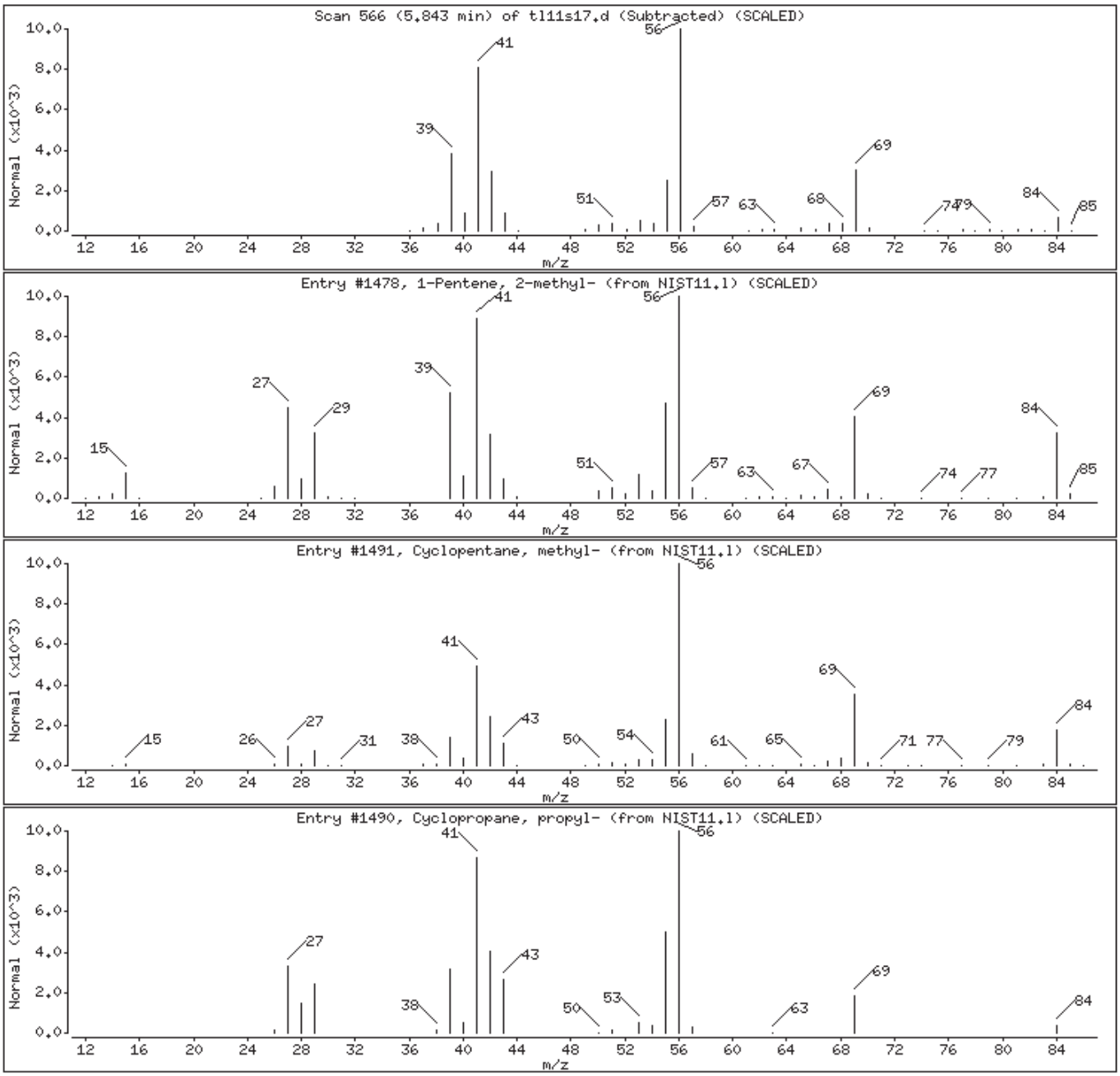
Client ID: PVV18 Instrument: SH08363.i

Sample Info: PVV18;7527284;1;0;;NNS22;;;tl11b01;

Purge Volume: 1.0 Operator: LCP00895

Column phase: DB-624 Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Pentene, 2-methyl-	763-29-1	NIST11.l	1478	90	C6H12	84
Cyclopentane, methyl-	96-37-7	NIST11.l	1491	64	C6H12	84
Cyclopropane, propyl-	2415-72-7	NIST11.l	1490	56	C6H12	84



Digitally signed by Amanda K. Richards on 07/11/2014 at 20:06.
Target 3.5 esignature user ID: akr02850

Data File: /chem/SH08363.i/14jul11a.b/tl11s17.d

Date : 11-JUL-2014 16:46

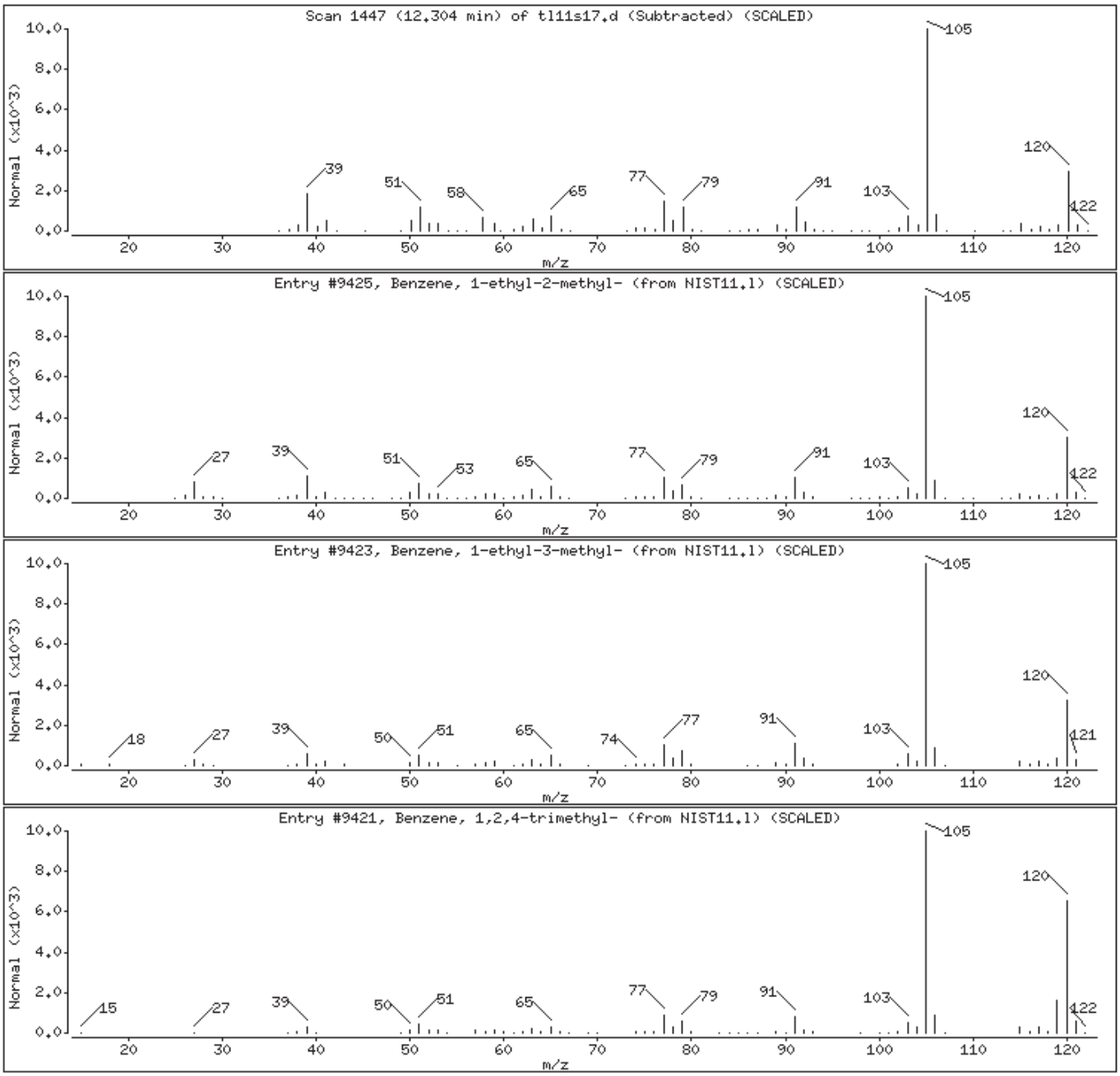
Client ID: PVV18 Instrument: SH08363.i

Sample Info: PVV18;7527284;1;0;;NNS22;;;tl11b01;

Purge Volume: 1.0 Operator: LCP00895

Column phase: DB-624 Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Benzene, 1-ethyl-2-methyl-	611-14-3	NIST11.l	9425	94	C9H12	120
Benzene, 1-ethyl-3-methyl-	620-14-4	NIST11.l	9423	94	C9H12	120
Benzene, 1,2,4-trimethyl-	95-63-6	NIST11.l	9421	91	C9H12	120



Digitally signed by Amanda K. Richards on 07/11/2014 at 20:06.
Target 3.5 esignature user ID: akr02850

Data File: /chem/SH08363.i/14jul11a.b/tl11s17.d

Date : 11-JUL-2014 16:46

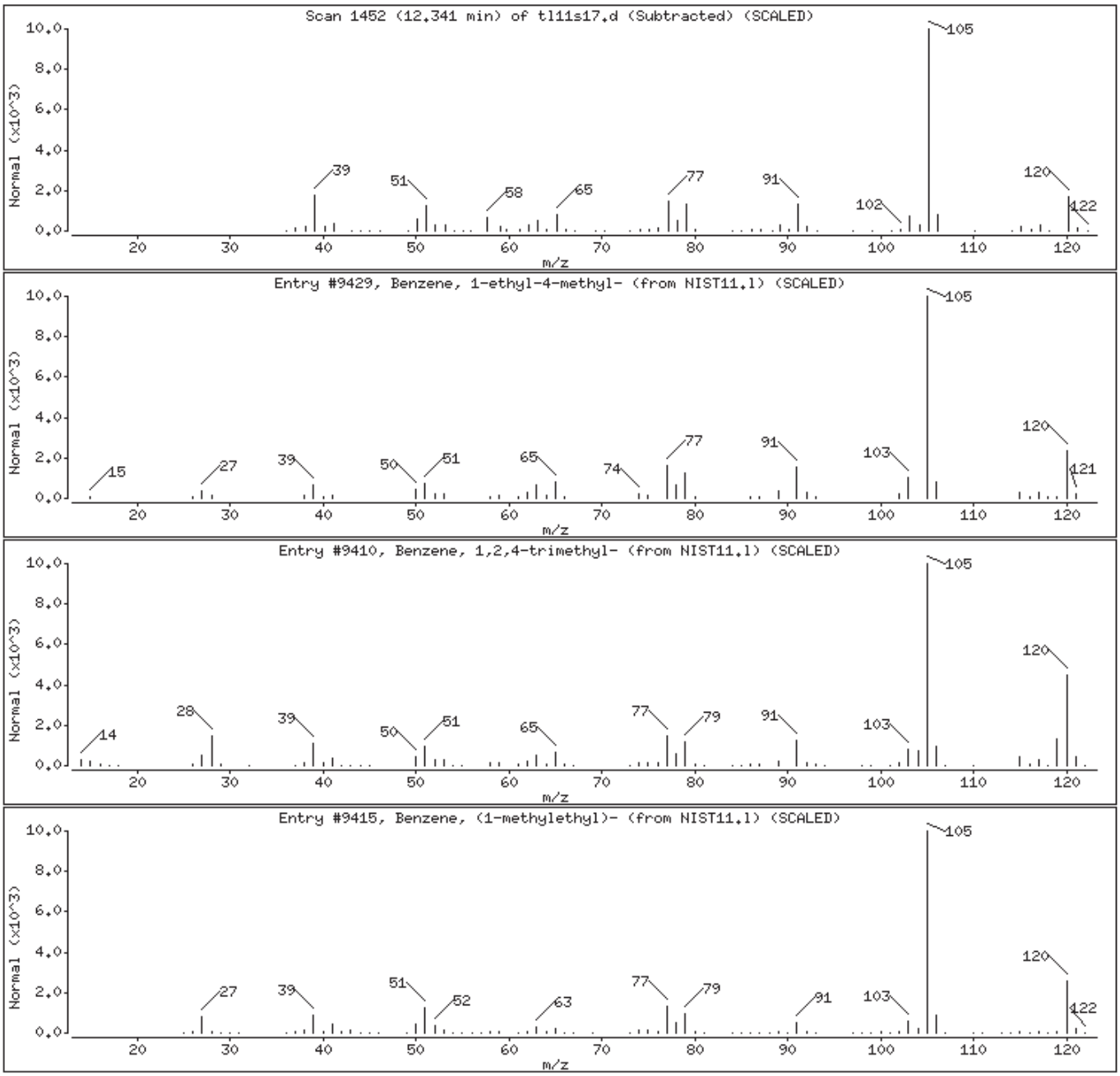
Client ID: PVV18 Instrument: SH08363.i

Sample Info: PVV18;7527284;1;0;;NNS22;;;tl11b01;

Purge Volume: 1.0 Operator: LCP00895

Column phase: DB-624 Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Benzene, 1-ethyl-4-methyl-	622-96-8	NIST11.l	9429	91	C9H12	120
Benzene, 1,2,4-trimethyl-	95-63-6	NIST11.l	9410	91	C9H12	120
Benzene, (1-methylethyl)-	98-82-8	NIST11.l	9415	90	C9H12	120



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Target 3.5 esignature user ID: akr02850

Data File: /chem/SH08363.i/14jul11a.b/tl11s17.d

Date : 11-JUL-2014 16:46

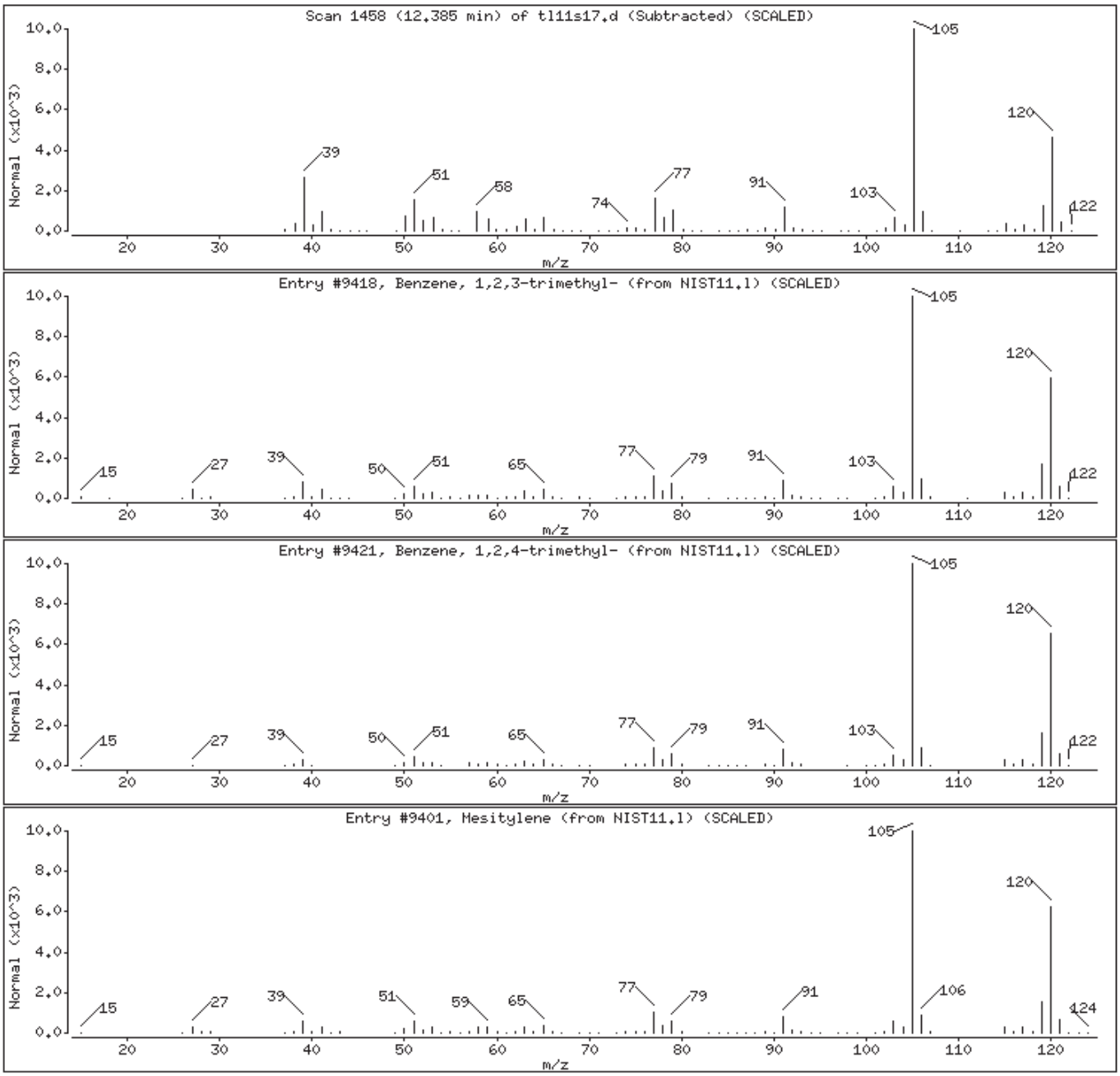
Client ID: PVV18 Instrument: SH08363.i

Sample Info: PVV18;7527284;1;0;;NNS22;;;tl11b01;

Purge Volume: 1.0 Operator: LCP00895

Column phase: DB-624 Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Benzene, 1,2,3-trimethyl-	526-73-8	NIST11.l	9418	95	C9H12	120
Benzene, 1,2,4-trimethyl-	95-63-6	NIST11.l	9421	95	C9H12	120
Mesitylene	108-67-8	NIST11.l	9401	95	C9H12	120



Data File: /chem/SH08363.i/14jul11a.b/tl11s17.d

Date : 11-JUL-2014 16:46

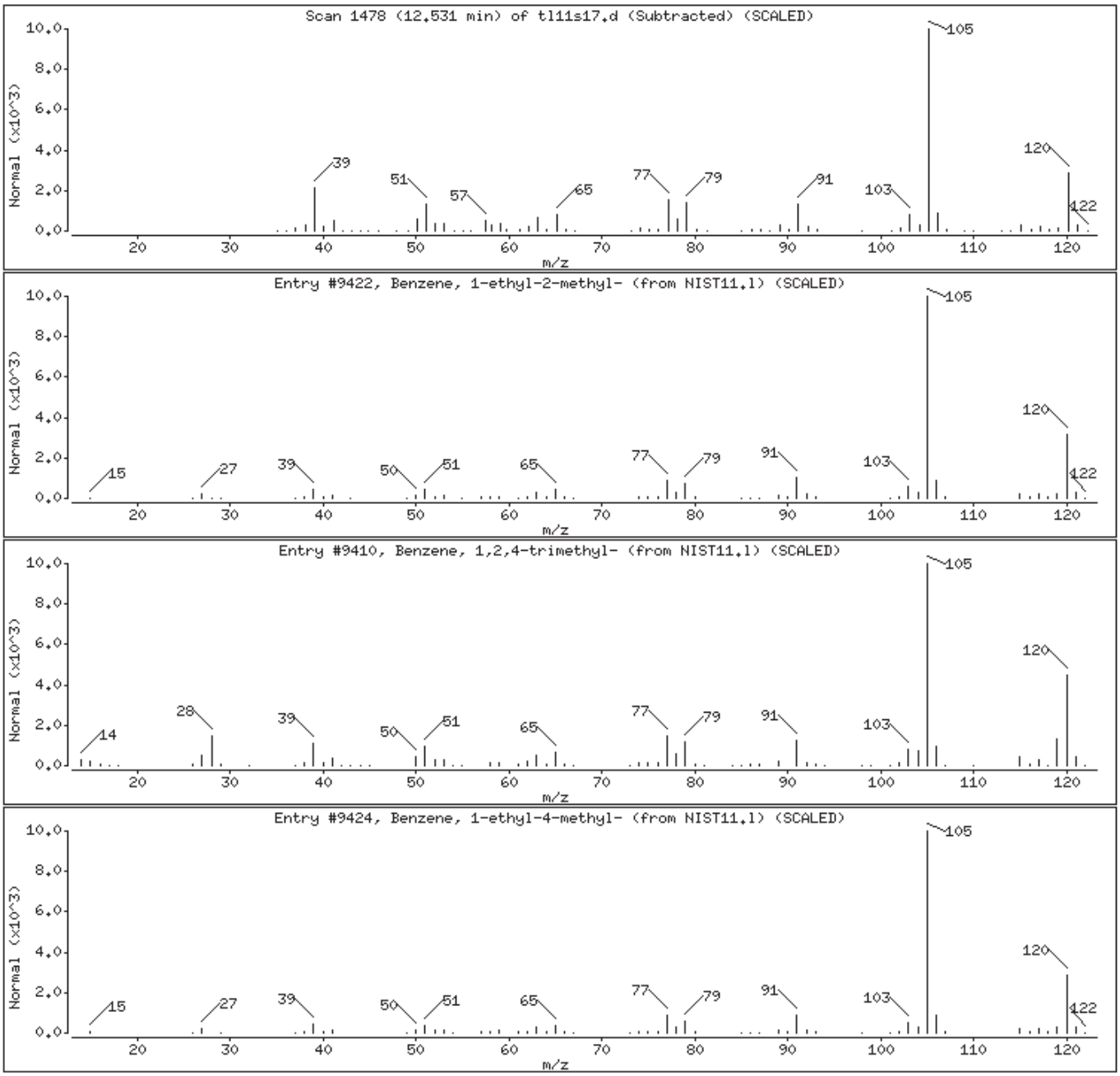
Client ID: PVV18 Instrument: SH08363.i

Sample Info: PVV18;7527284;1;0;;NNS22;;;tl11b01;

Purge Volume: 1.0 Operator: LCP00895

Column phase: DB-624 Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Benzene, 1-ethyl-2-methyl-	611-14-3	NIST11.l	9422	93	C9H12	120
Benzene, 1,2,4-trimethyl-	95-63-6	NIST11.l	9410	91	C9H12	120
Benzene, 1-ethyl-4-methyl-	622-96-8	NIST11.l	9424	90	C9H12	120



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Target 3.5 esignature user ID: akr02850

Data File: /chem/SH08363.i/14jul11a.b/tl11s17.d

Date : 11-JUL-2014 16:46

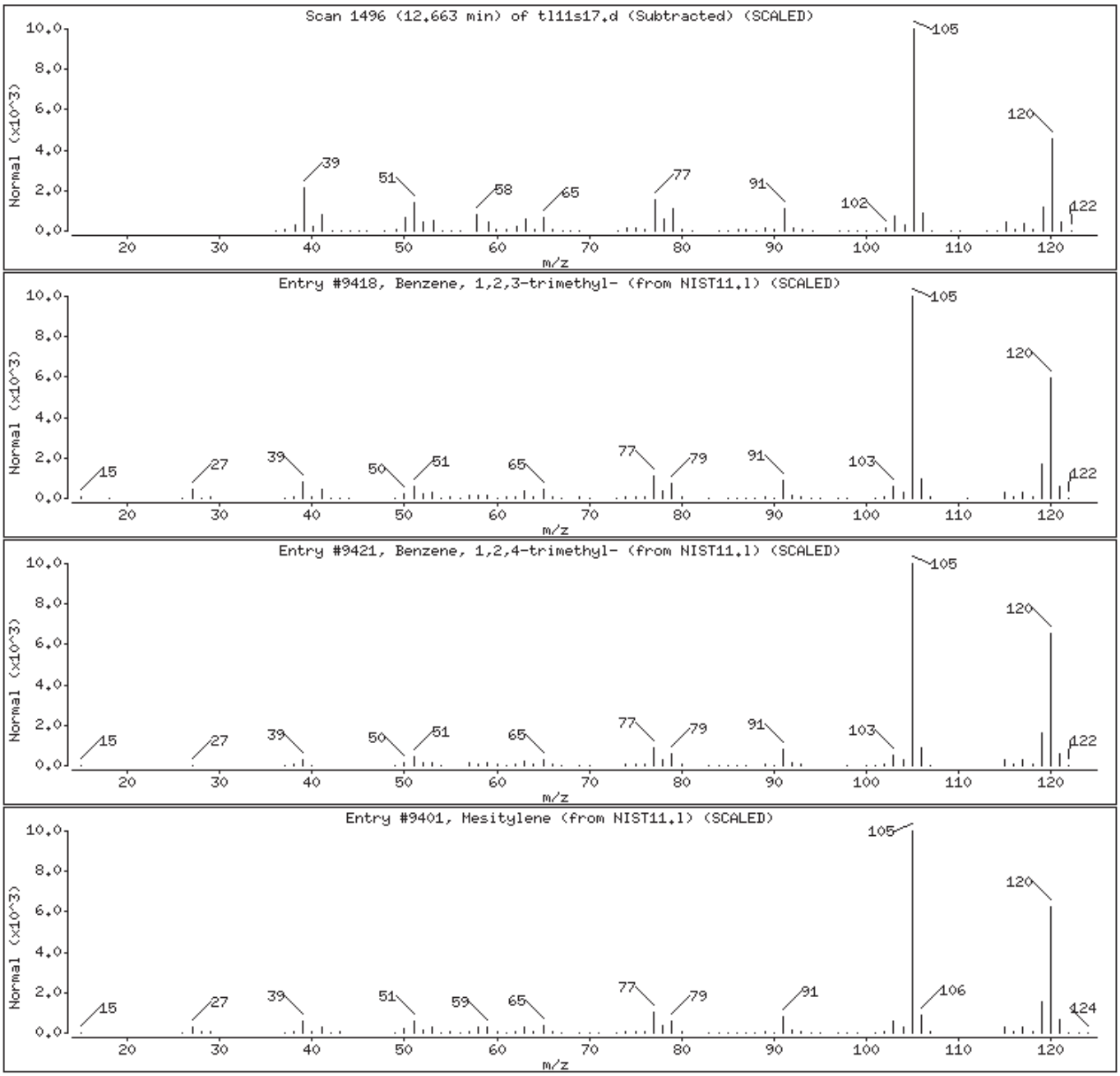
Client ID: PVV18 Instrument: SH08363.i

Sample Info: PVV18;7527284;1;0;;NNS22;;;tl11b01;

Purge Volume: 1.0 Operator: LCP00895

Column phase: DB-624 Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Benzene, 1,2,3-trimethyl-	526-73-8	NIST11.l	9418	95	C9H12	120
Benzene, 1,2,4-trimethyl-	95-63-6	NIST11.l	9421	95	C9H12	120
Mesitylene	108-67-8	NIST11.l	9401	94	C9H12	120



Digitally signed by Amanda K. Richards on 07/11/2014 at 20:06.
Target 3.5 esignature user ID: akr02850

Data File: /chem/SH08363.i/14jul11a.b/tl11s17.d

Date : 11-JUL-2014 16:46

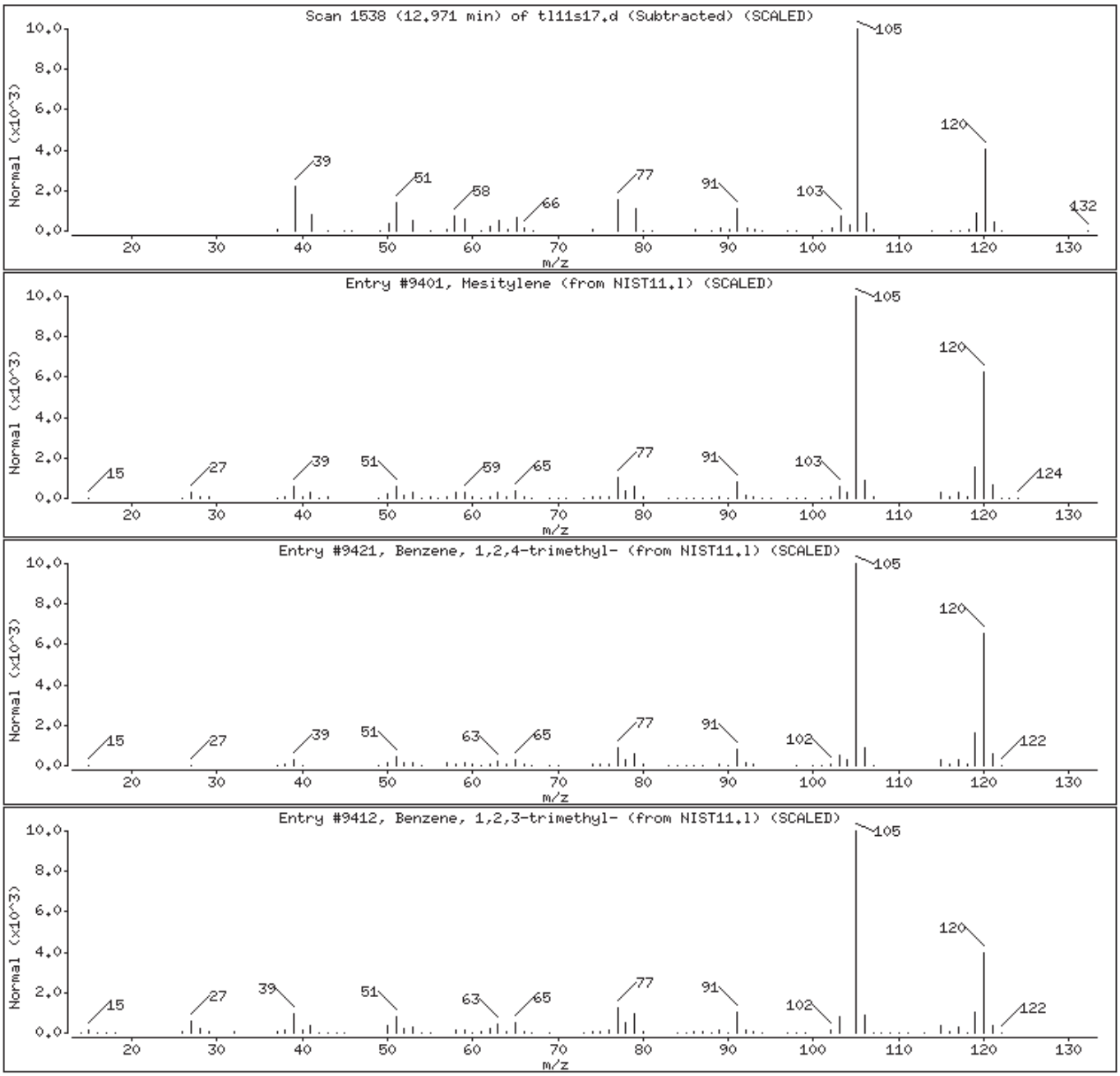
Client ID: PVV18 Instrument: SH08363.i

Sample Info: PVV18;7527284;1;0;;NNS22;;;tl11b01;

Purge Volume: 1.0 Operator: LCP00895

Column phase: DB-624 Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Mesitylene	108-67-8	NIST11.l	9401	94	C9H12	120
Benzene, 1,2,4-trimethyl-	95-63-6	NIST11.l	9421	94	C9H12	120
Benzene, 1,2,3-trimethyl-	526-73-8	NIST11.l	9412	91	C9H12	120



Digitally signed by Amanda K. Richards on 07/11/2014 at 20:06.
Target 3.5 esignature user ID: akr02850

Raw QC Data

Volatiles by GC/MS

Analysis Summary for GC/MS Volatiles

Data file: /chem/SH08363.i/14jul11a.b/tl11b01.d Injection date and time: **11-JUL-2014 09:51**
Data file Sample Info. Line: VBLKT81;VBLKT81;1;3;;;;;; Instrument ID: **SH08363.i** Batch: **T141921AA**
Date, time and analyst ID of latest file update: 11-Jul-2014 10:30 lcp00895

Blank Data file reference: **/chem/SH08363.i/14jul11a.b/tl11b01.d**

Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: **8260W-FEE**
Calibration date and time (Last Method Edit): 11-JUL-2014 09:41
Mid Level Daily Calibration Standard Reference: **/chem/SH08363.i/14jul11a.b/tl11c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.113	(0.007)	330	65	261192	(-10)	250.00	
66) Fluorobenzene	7.559	(0.007)	800	96	690486	(-9)	50.00	
100) Chlorobenzene-d5	11.050	(0.000)	1276	117	517653	(-6)	50.00	
131) 1,4-Dichlorobenzene-d4	12.942	(0.000)	1534	152	242559	(-13)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.679	(0.000)	113	233974	51.290	103%		80 - 116
57) 1,2-Dichloroethane-d4	(2)	7.134	(0.000)	102	54032	55.422	111%		77 - 113
83) Toluene-d8	(3)	9.576	(0.000)	98	661550	48.661	97%		80 - 113
114) 4-Bromofluorobenzene	(3)	12.062	(0.000)	95	273563	46.409	93%		78 - 113

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)				Not Detected					0.5	1
4) Chloromethane	(2)				Not Detected					0.5	1
6) Vinyl Chloride	(2)				Not Detected					0.5	1
8) Bromomethane	(2)				Not Detected					0.5	1
9) Chloroethane	(2)				Not Detected					0.5	1
12) Trichlorofluoromethane	(2)				Not Detected					0.5	1
16) Acrolein	(1)				Not Detected					40	100
17) 1,1-Dichloroethene	(2)				Not Detected					0.5	1
18) Acetone	(2)				Not Detected					6	20
19) Freon 113	(2)				Not Detected					2	10
21) 2-Propanol	(1)				Not Detected					50	100
22) Methyl Iodide	(2)				Not Detected					0.5	1
23) Carbon Disulfide	(2)				Not Detected					1	5
25) Allyl Chloride	(2)				Not Detected					1	5
27) Methyl Acetate	(2)				Not Detected					1	5
28) Methylene Chloride	(2)				Not Detected					2	3
30) t-Butyl alcohol	(1)				Not Detected					5	20
31) Acrylonitrile	(2)				Not Detected					4	20
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.5	1
33) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.5	1
34) n-Hexane	(2)				Not Detected					2	5
36) 1,1-Dichloroethane	(2)				Not Detected					0.5	1
38) di-Isopropyl ether	(2)				Not Detected					0.5	1
39) 2-Chloro-1,3-butadiene	(2)				Not Detected					1	5
40) Ethyl t-butyl ether	(2)				Not Detected					0.5	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.5	1
43) 1,2-Dichloroethene (Total)	(2)				Not Detected					0.5	1
44) 2-Butanone	(2)				Not Detected					3	10
45) 2,2-Dichloropropane	(2)				Not Detected					0.5	1
47) Propionitrile	(1)				Not Detected					30	100
48) Methacrylonitrile	(2)				Not Detected					10	50

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Data file: /chem/SH08363.i/14jul11a.b/tl11b01.d Injection date and time: **11-JUL-2014 09:51**
Data file Sample Info. Line: VBLKT81;VBLKT81;1;3;;;;;; Instrument ID: **SH08363.i** Batch: **T141921AA**
Date, time and analyst ID of latest file update: 11-Jul-2014 10:30 lcp00895

Blank Data file reference: **/chem/SH08363.i/14jul11a.b/tl11b01.d**

Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: **8260W-FEE**
Calibration date and time (Last Method Edit): 11-JUL-2014 09:41
Mid Level Daily Calibration Standard Reference: **/chem/SH08363.i/14jul11a.b/tl11c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
49) Bromochloromethane	(2)				Not Detected					1	5
50) Tetrahydrofuran	(1)				Not Detected					4	10
51) Chloroform	(2)				Not Detected					0.5	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.5	1
54) Cyclohexane	(2)				Not Detected					2	5
55) 1,1-Dichloropropene	(2)				Not Detected					1	5
56) Carbon Tetrachloride	(2)				Not Detected					0.5	1
58) Isobutyl Alcohol	(1)				Not Detected					100	250
60) Benzene	(2)				Not Detected					0.5	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.5	1
65) t-Amyl methyl ether	(2)				Not Detected					0.5	1
67) n-Heptane	(2)				Not Detected					2	5
69) n-Butanol	(1)				Not Detected					100	250
71) Trichloroethene	(2)				Not Detected					0.5	1
72) Methylcyclohexane	(2)				Not Detected					1	5
73) 1,2-Dichloropropane	(2)				Not Detected					0.5	1
74) Dibromomethane	(2)				Not Detected					0.5	1
75) 1,4-Dioxane	(1)				Not Detected					70	250
76) Methyl Methacrylate	(2)				Not Detected					1	5
78) Bromodichloromethane	(2)				Not Detected					0.5	1
79) 2-Nitropropane	(2)				Not Detected					2	10
80) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					2	10
81) cis-1,3-Dichloropropene	(2)				Not Detected					0.5	1
82) 4-Methyl-2-pentanone	(2)				Not Detected					3	10
88) Toluene	(3)				Not Detected					0.5	1
89) trans-1,3-Dichloropropene	(3)				Not Detected					0.5	1
90) 1,3-Dichloropropene (total)	(3)				Not Detected					1	5
91) Ethyl Methacrylate	(3)				Not Detected					1	5
92) 1,1,2-Trichloroethane	(3)				Not Detected					0.5	1
93) Tetrachloroethene	(3)				Not Detected					0.5	1
94) 1,3-Dichloropropane	(3)				Not Detected					0.5	1
96) 2-Hexanone	(3)				Not Detected					3	10
97) Dibromochloromethane	(3)				Not Detected					0.5	1
99) 1,2-Dibromoethane	(3)				Not Detected					0.5	1
102) Chlorobenzene	(3)				Not Detected					0.5	1
103) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.5	1
104) Ethylbenzene	(3)				Not Detected					0.5	1
106) m+p-Xylene	(3)				Not Detected					0.5	1
107) o-Xylene	(3)				Not Detected					0.5	1
108) Xylene (Total)	(3)				Not Detected					0.5	1
109) Styrene	(3)				Not Detected					1	5
110) Bromoform	(3)				Not Detected					0.5	4
111) Isopropylbenzene	(3)				Not Detected					1	5
115) Bromobenzene	(4)				Not Detected					1	5
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.5	1
117) 1,2,3-Trichloropropane	(4)				Not Detected					1	5
118) trans-1,4-Dichloro-2-butene	(4)				Not Detected					15	50
119) n-Propylbenzene	(4)				Not Detected					1	5
120) 2-Chlorotoluene	(4)				Not Detected					1	5
121) 4-Chlorotoluene	(4)				Not Detected					1	5
122) 1,3,5-Trimethylbenzene	(4)				Not Detected					1	5
124) tert-Butylbenzene	(4)				Not Detected					1	5
125) Pentachloroethane	(4)				Not Detected					1	5
126) 1,2,4-Trimethylbenzene	(4)				Not Detected					1	5

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Data file: /chem/SH08363.i/14jul11a.b/tl11b01.d Injection date and time: **11-JUL-2014 09:51**
Data file Sample Info. Line: VBLKT81;VBLKT81;1;3;;;;;; Instrument ID: **SH08363.i** Batch: **T141921AA**
Date, time and analyst ID of latest file update: 11-Jul-2014 10:30 lcp00895

Blank Data file reference: **/chem/SH08363.i/14jul11a.b/tl11b01.d**

Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: **8260W-FEE**
Calibration date and time (Last Method Edit): 11-JUL-2014 09:41
Mid Level Daily Calibration Standard Reference: **/chem/SH08363.i/14jul11a.b/tl11c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
127) sec-Butylbenzene	(4)				Not Detected					1	5
129) 1,3-Dichlorobenzene	(4)				Not Detected					1	5
130) p-Isopropyltoluene	(4)				Not Detected					1	5
133) 1,4-Dichlorobenzene	(4)				Not Detected					1	5
134) 1,2,3-Trimethylbenzene	(4)				Not Detected					1	5
135) Benzyl Chloride	(4)				Not Detected					1	5
136) 1,3-Diethylbenzene	(4)				Not Detected					1	5
137) 1,4-Diethylbenzene	(4)				Not Detected					1	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					1	5
139) n-Butylbenzene	(4)				Not Detected					1	5
140) 1,2-Diethylbenzene	(4)				Not Detected					1	5
141) Diethylbenzene (total)	(4)				Not Detected					1	5
142) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					2	5
144) 1,3,5-Trichlorobenzene	(4)				Not Detected					1	5
146) 1,2,4-Trichlorobenzene	(4)				Not Detected					1	5
147) Hexachlorobutadiene	(4)				Not Detected					2	5
148) Naphthalene	(4)				Not Detected					1	5
149) 1,2,3-Trichlorobenzene	(4)				Not Detected					1	5

Total number of targets = 103

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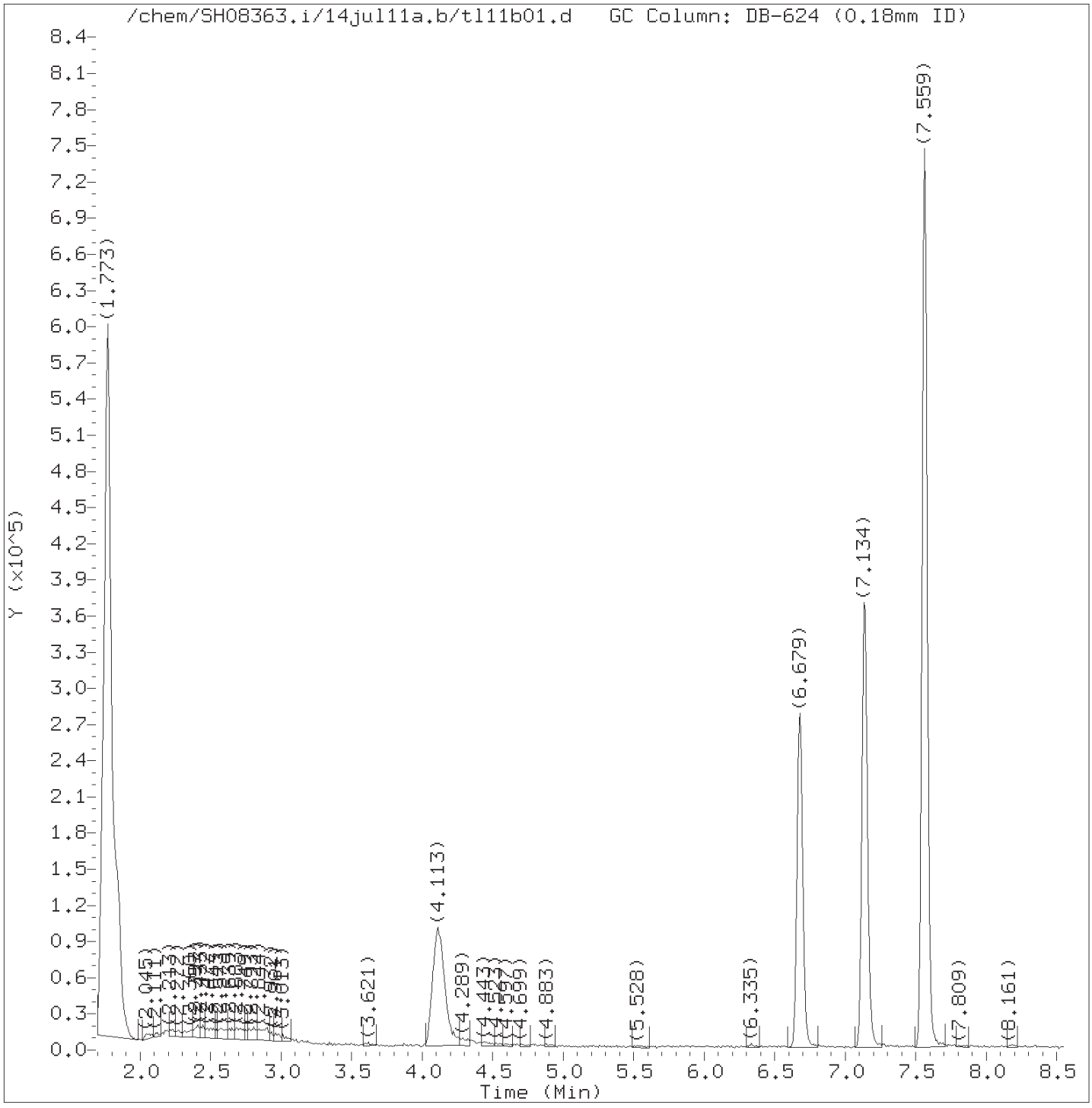
Secondary review performed and digitally signed by Kenneth L. Boley on 07/14/2014 at 08:31. Parallax ID: klb01296



Total Ion Chromatogram (TIC)

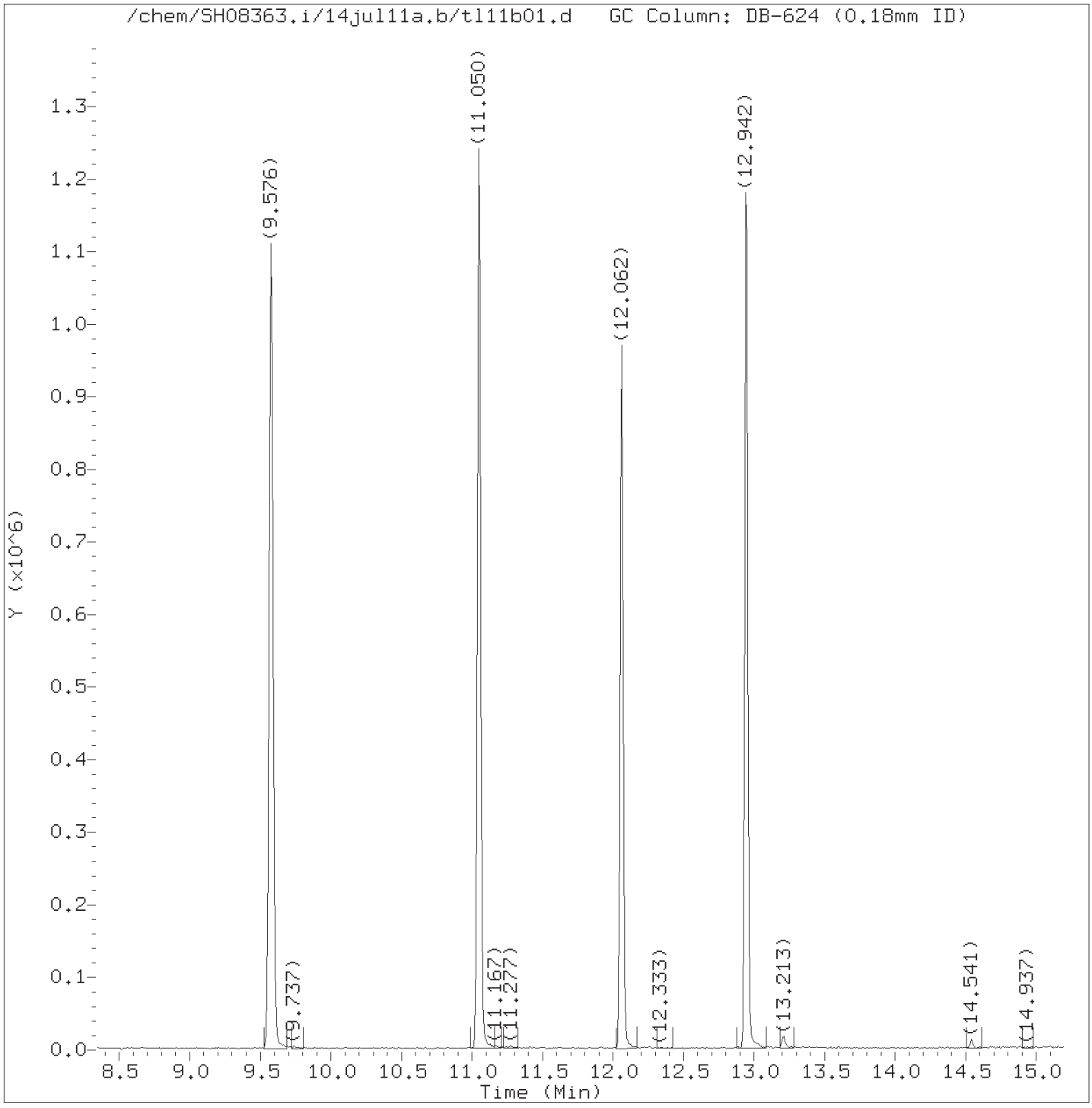
Target Revision 3.5

Data File: /chem/SH08363.i/14jul11a.b/tl11b01.d Instrument ID: SH08363.i
Injection date and time: 11-JUL-2014 09:51 Analyst ID: LCP00895

Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: 8260W-FEE
Calibration date and time: 11-JUL-2014 09:41
Date, time and analyst ID of latest file update: 11-Jul-2014 10:30 lcp00895

Sample Name: VBLKT81 Lab Sample ID: VBLKT81

Digitally signed by Linda C. Pape
on 07/11/2014 at 10:30.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/SH08363.i/14jul11a.b/tl11b01.d Instrument ID: SH08363.i
Injection date and time: 11-JUL-2014 09:51 Analyst ID: LCP00895

Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: 8260W-FEE
Calibration date and time: 11-JUL-2014 09:41
Date, time and analyst ID of latest file update: 11-Jul-2014 10:30 lcp00895

Sample Name: VBLKT81 Lab Sample ID: VBLKT81

Digitally signed by Linda C. Pape
on 07/11/2014 at 10:30.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem/SH08363.i/14jul11a.b/tl11b01.d Instrument ID: SH08363.i
Injection date and time: 11-JUL-2014 09:51 Analyst ID: LCP00895

Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: 8260W-FEE
Calibration date and time: 11-JUL-2014 09:41
Date, time and analyst ID of latest file update: 11-Jul-2014 10:30 lcp00895

Sample Name: VBLKT81 Lab Sample ID: VBLKT81

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.113	65	261192	250.000
52)$Dibromofluoromethane	(2)	6.679	113	233974	51.290
57)$1,2-Dichloroethane-d4	(2)	7.134	102	54032	55.422
66)*Fluorobenzene	(2)	7.559	96	690486	50.000
83)$Toluene-d8	(3)	9.576	98	661550	48.661
100)*Chlorobenzene-d5	(3)	11.050	117	517653	50.000
114)$4-Bromofluorobenzene	(3)	12.062	95	273563	46.409
131)*1,4-Dichlorobenzene-d4	(4)	12.942	152	242559	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 07/11/2014 at 10:30.
Target 3.5 esignature user ID: lcp00895

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

VBLKT81

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: VBLKT81

Sample wt/vol: 5.0 (g/mL)mL Lab File ID:SH08363.i/14jul11a.b/tl11b01.d

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 07/11/14

Column: (pack/cap) CAP Dilution Factor: 1.0

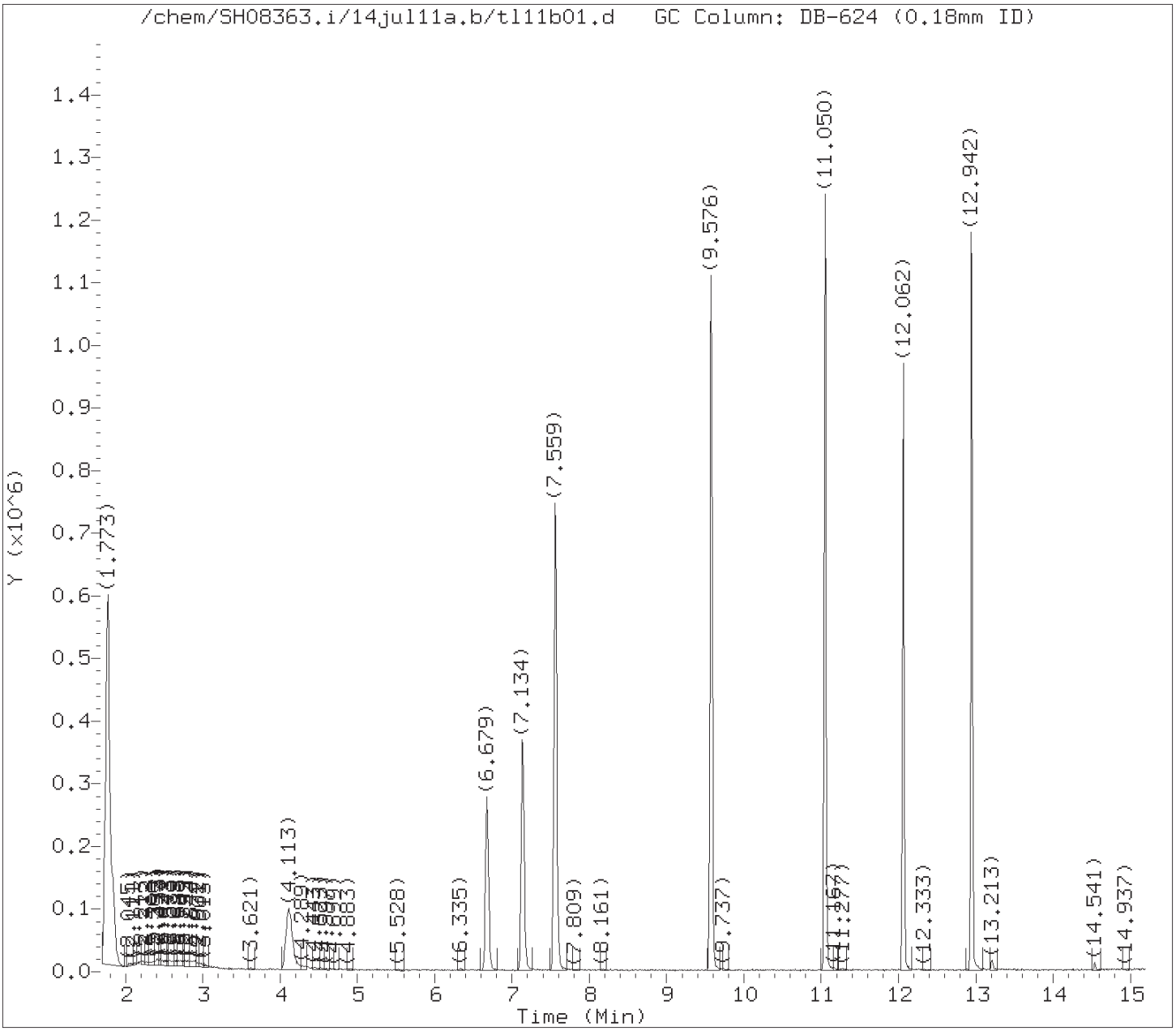
Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

page 1 of 1

FORM I VOA-TIC



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/SH08363.i/14jul11a.b/tl11b01.d Instrument ID: SH08363.i
Injection date and time: 11-JUL-2014 09:51 Analyst ID: LCP00895

Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: 8260W-FEE
Calibration date and time: 11-JUL-2014 09:41
Date, time and analyst ID of latest file update: 11-Jul-2014 10:30 lcp00895

Sample Name: VBLKT81 Lab Sample ID: VBLKT81

Chromatogram Start Time (min.): 1.700
Chromatogram End Time (min.): 15.193

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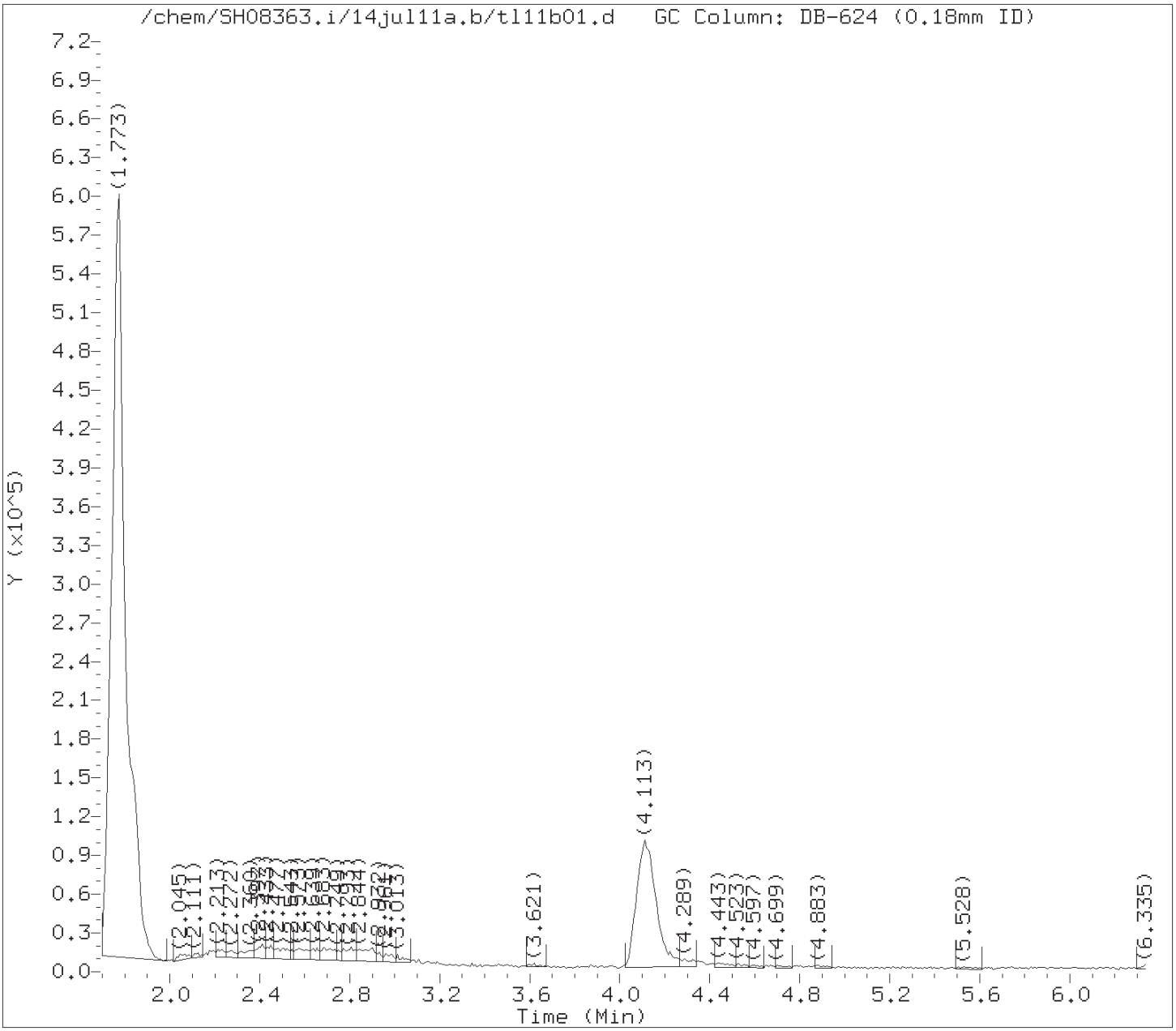
Target 3.5 esignature user ID: lcp00895



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/SH08363.i/14jul11a.b/tl11b01.d Instrument ID: SH08363.i
Injection date and time: 11-JUL-2014 09:51 Analyst ID: LCP00895

Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: 8260W-FEE
Calibration date and time: 11-JUL-2014 09:41
Date, time and analyst ID of latest file update: 11-Jul-2014 10:30 lcp00895

Sample Name: VBLKT81 Lab Sample ID: VBLKT81

Internal Standard referenced: t-Butyl alcohol-d10 at 4.113 minutes
Chromatogram Start Time (min.): 1.700
Chromatogram End Time (min.): 5.836

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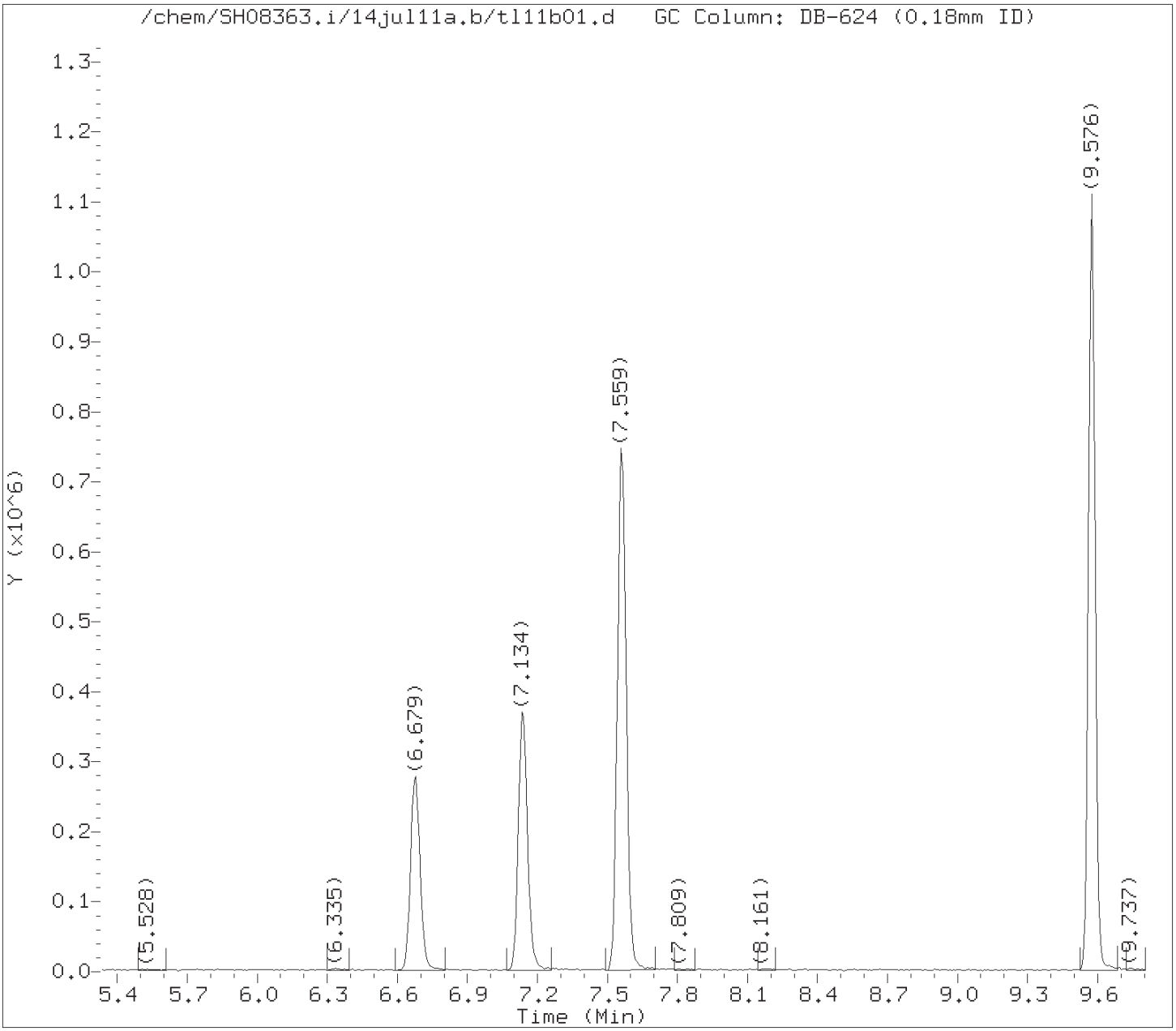
Target 3.5 esignature user ID: lcp00895



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/SH08363.i/14jul11a.b/tl11b01.d Instrument ID: SH08363.i
Injection date and time: 11-JUL-2014 09:51 Analyst ID: LCP00895

Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: 8260W-FEE
Calibration date and time: 11-JUL-2014 09:41
Date, time and analyst ID of latest file update: 11-Jul-2014 10:30 lcp00895

Sample Name: VBLKT81 Lab Sample ID: VBLKT81

Internal Standard referenced: Fluorobenzene at 7.559 minutes
Chromatogram Start Time (min.): 5.836
Chromatogram End Time (min.): 9.305

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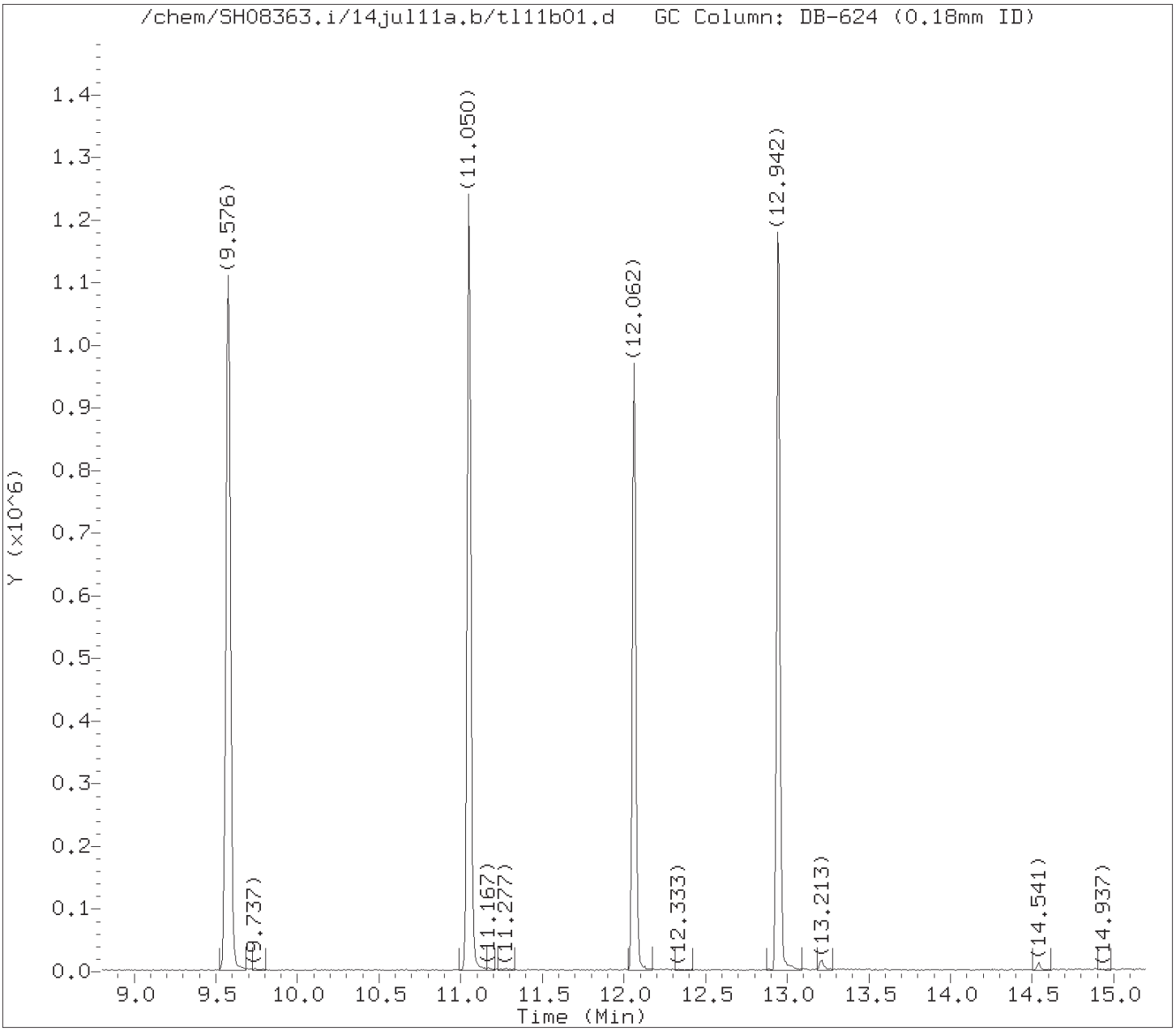
Target 3.5 esignature user ID: lcp00895



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/SH08363.i/14jul11a.b/tl11b01.d Instrument ID: SH08363.i
Injection date and time: 11-JUL-2014 09:51 Analyst ID: LCP00895

Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: 8260W-FEE
Calibration date and time: 11-JUL-2014 09:41
Date, time and analyst ID of latest file update: 11-Jul-2014 10:30 lcp00895

Sample Name: VBLKT81 Lab Sample ID: VBLKT81

Internal Standard referenced: Chlorobenzene-d5 at 11.050 minutes
Chromatogram Start Time (min.): 9.305
Chromatogram End Time (min.): 11.996

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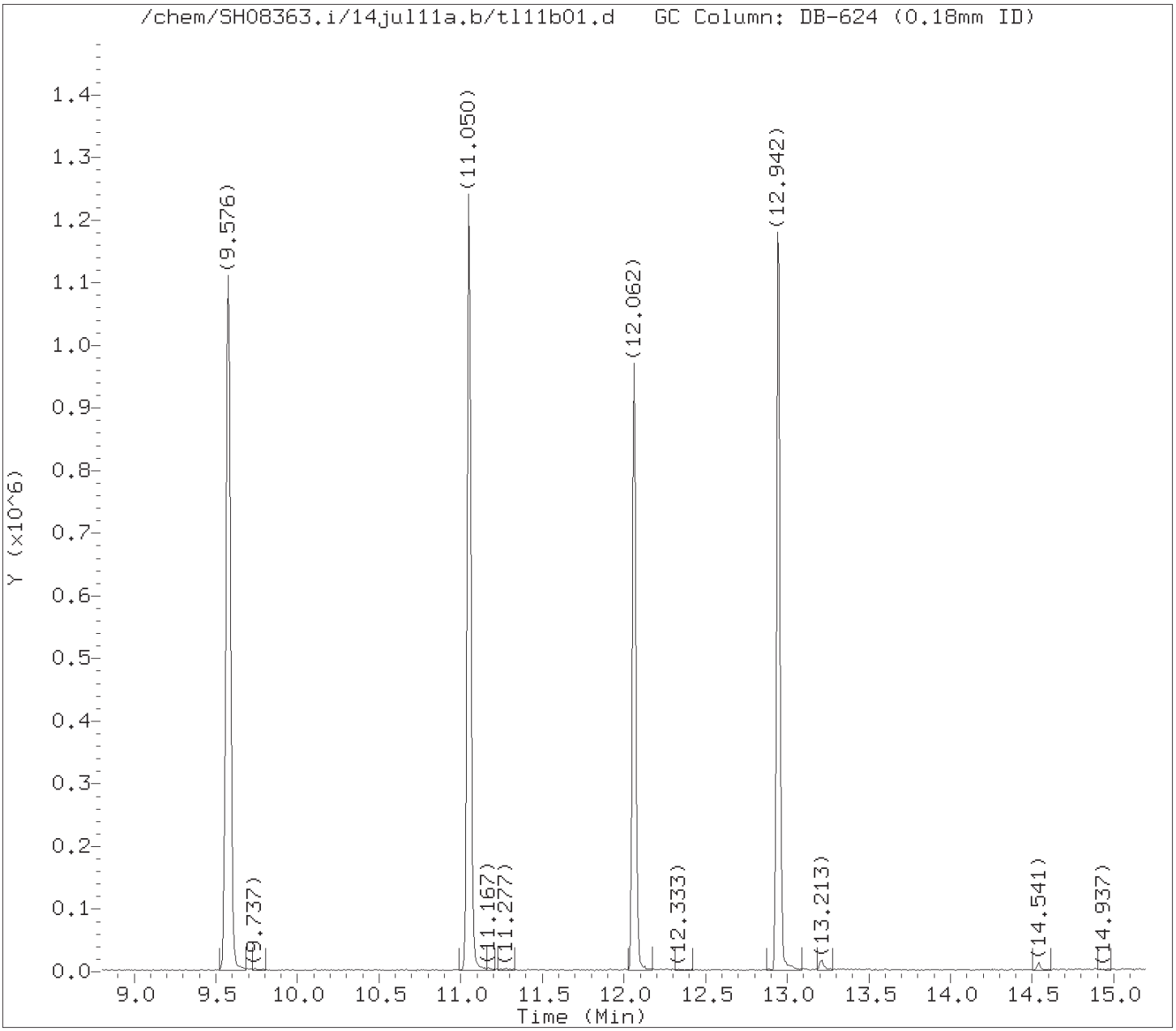
Target 3.5 esignature user ID: lcp00895



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/SH08363.i/14jul11a.b/tl11b01.d Instrument ID: SH08363.i
Injection date and time: 11-JUL-2014 09:51 Analyst ID: LCP00895

Method used: /chem/SH08363.i/14jul11a.b/m8260b5.m Sublist used: 8260W-FEE
Calibration date and time: 11-JUL-2014 09:41
Date, time and analyst ID of latest file update: 11-Jul-2014 10:30 lcp00895

Sample Name: VBLKT81 Lab Sample ID: VBLKT81

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 12.942 minutes
Chromatogram Start Time (min.): 11.996
Chromatogram End Time (min.): 15.193

Digitally signed by Linda C. Pape on 07/11/2014 at 10:30.
Target 3.5 esignature user ID: lcp00895

Lancaster Laboratories

Data file : /chem/SH08363.i/14jul11a.b/tl11b01.d
Lab Smp Id: VBLKT81 Client Smp ID: VBLKT81
Inj Date : 11-JUL-2014 09:51
Operator : LCP00895 Inst ID: SH08363.i
Smp Info : VBLKT81;VBLKT81;1;3;;;;;;
Misc Info : 8260W-FEE.sub;T141921AA;;5;5;;;
Comment :
Method : /chem/SH08363.i/14jul11a.b/m8260b5.m
Meth Date : 11-Jul-2014 10:30 lcp00895 Quant Type: ISTD
Cal Date : 12-JUN-2014 11:32 Cal File: tu12i07.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8260W-FEE.sub
Target Version: 3.50
Processing Host: d21cs05

Concentration Formula: Amt * DF * (Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	5.00000	normal purge volume
Vo	5.00000	sample volume

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 29 t-Butyl alcohol-d10	4.113	593006	250.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/L)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Air Peak - Do not report				CAS #:			
1.773	2581562	1088.33717	1088.33717	0		0	29

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Target 3.5 esignature user ID: lcp00895

New Jersey ACCUTEST LABORATORIES

11/11/14

Technical Report for

Atlantic Richfield Company

ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Accutest Job Number: JB77674

Sampling Date: 09/23/14

Report to:

EnviroTrac, Ltd

donnan@envirotrac.com

ATTN: Donna Nicholls

Total number of pages in report: **538**

NELAP ACCREDITED TNI LABORATORY

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Kelly Patterson 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, OH VAP (CL0056), AZ (AZ0786), PA, RI, SC, TN, VA, WV, DoD ELAP (L-A-B L2248)

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Sample Summary

Atlantic Richfield Company

Job No: JB77674

ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JB77674-1	09/23/14	10:45	KCM	09/25/14	AQ	Ground Water	MW-1
JB77674-2	09/23/14	11:00	KCM	09/25/14	AQ	Ground Water	MW-3
JB77674-3	09/23/14	11:15	KCM	09/25/14	AQ	Ground Water	MW-11
JB77674-4	09/23/14	12:00	KCM	09/25/14	AQ	Ground Water	MW-19
JB77674-5	09/23/14	15:08	KCM	09/25/14	AQ	Ground Water	MW-6
JB77674-6	09/23/14	13:10	KCM	09/25/14	AQ	Ground Water	MW-12
JB77674-7	09/23/14	13:34	KCM	09/25/14	AQ	Ground Water	MW-2
JB77674-8	09/23/14	13:55	KCM	09/25/14	AQ	Ground Water	MW-14
JB77674-9	09/23/14	14:18	KCM	09/25/14	AQ	Ground Water	MW-16R
JB77674-10	09/23/14	14:33	KCM	09/25/14	AQ	Ground Water	MW-17R
JB77674-11	09/23/14	15:00	KCM	09/25/14	AQ	Ground Water	MW-18R

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Atlantic Richfield Company	**Job No**	JB77674
Site:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ	**Report Date**	10/9/2014 2:42:39 PM

On 09/25/2014, 11 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 4.1 C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of JB77674 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix: AQ **Batch ID:** V1A6195

- All samples were analyzed within the recommended method holding time.
- Sample(s) JB77674-1MS, JB77674-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Matrix: AQ **Batch ID:** V1A6201

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB77542-6MS, JB77542-6MSD were used as the QC samples indicated.

Matrix: AQ **Batch ID:** V2A6440

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB77682-4MS, JB77682-4MSD were used as the QC samples indicated.

Matrix: AQ **Batch ID:** V3A5854

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB77623-7MS, JB77623-7MSD were used as the QC samples indicated.

Metals By Method EPA 200.7

Matrix: AQ **Batch ID:** MP82364

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB78176-1F, JB78176-1FMSD, JB77674-7MS, JB78176-1FSDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Iron are outside control limits for sample MP82364-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- JB77674-11 for Iron: Elevated detection limit due to dilution required for high interfering element.
- JB77674-6 for Iron: Elevated detection limit due to dilution required for high interfering element.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

Summary of Hits

Job Number: JB77674
Account: Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Collected: 09/23/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB77674-1	**MW-1**					
Methyl Tert Butyl Ether		0.65 J	1.0	0.26	ug/l	SW846 8260B
Total Alkanes		65 J			ug/l	
Iron		2350	100		ug/l	EPA 200.7
JB77674-2	**MW-3**					
Benzene		18.3	0.50	0.21	ug/l	SW846 8260B
Cyclohexane		5.3	5.0	0.37	ug/l	SW846 8260B
Isopropylbenzene		2.7	1.0	0.26	ug/l	SW846 8260B
Methylcyclohexane		3.3 J	5.0	0.22	ug/l	SW846 8260B
Methyl Tert Butyl Ether		2.2	1.0	0.26	ug/l	SW846 8260B
Toluene		0.43 J	1.0	0.22	ug/l	SW846 8260B
m,p-Xylene		3.6	1.0	0.45	ug/l	SW846 8260B
Xylene (total)		3.6	1.0	0.20	ug/l	SW846 8260B
Total TIC, Volatile		42.2 J			ug/l	
Total Alkanes		51 J			ug/l	
Iron		551	100		ug/l	EPA 200.7
JB77674-3	**MW-11**					
Acetone		20.7	10	2.6	ug/l	SW846 8260B
Benzene		4.2	0.50	0.21	ug/l	SW846 8260B
2-Butanone (MEK)		20.3	10	2.5	ug/l	SW846 8260B
Cyclohexane		39.4	5.0	0.37	ug/l	SW846 8260B
Ethylbenzene		44.4	1.0	0.40	ug/l	SW846 8260B
2-Hexanone		14.2	5.0	1.7	ug/l	SW846 8260B
Isopropylbenzene		4.8	1.0	0.26	ug/l	SW846 8260B
Methylcyclohexane		36.8	5.0	0.22	ug/l	SW846 8260B
4-Methyl-2-pentanone(MIBK)		17.7	5.0	1.1	ug/l	SW846 8260B
Tert Butyl Alcohol		196	10	4.7	ug/l	SW846 8260B
Toluene		18.8	1.0	0.22	ug/l	SW846 8260B
m,p-Xylene		202	1.0	0.45	ug/l	SW846 8260B
o-Xylene		71.9	1.0	0.20	ug/l	SW846 8260B
Xylene (total)		274	1.0	0.20	ug/l	SW846 8260B
Total TIC, Volatile		740 J			ug/l	
Total Alkanes		4653 J			ug/l	
Iron		29000	100		ug/l	EPA 200.7
JB77674-4	**MW-19**					
Benzene		64.7	0.50	0.21	ug/l	SW846 8260B
Cyclohexane		10.8	5.0	0.37	ug/l	SW846 8260B
Isopropylbenzene		1.3	1.0	0.26	ug/l	SW846 8260B

Summary of Hits

Job Number: JB77674
Account: Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Collected: 09/23/14

Lab Sample ID / Client Sample ID / Analyte	Result/ Qual	RL	MDL	Units	Method
Methylcyclohexane	3.3 J	5.0	0.22	ug/l	SW846 8260B
Methyl Tert Butyl Ether	3.5	1.0	0.26	ug/l	SW846 8260B
Toluene	1.1	1.0	0.22	ug/l	SW846 8260B
m,p-Xylene	1.6	1.0	0.45	ug/l	SW846 8260B
Xylene (total)	1.6	1.0	0.20	ug/l	SW846 8260B
Total TIC, Volatile	22 J			ug/l	
Total Alkanes	224.4 J			ug/l	
Iron	29100	100		ug/l	EPA 200.7
JB77674-5 MW-6					
Benzene	4.3	0.50	0.21	ug/l	SW846 8260B
Cyclohexane	27.5	5.0	0.37	ug/l	SW846 8260B
Ethylbenzene	0.84 J	1.0	0.40	ug/l	SW846 8260B
Isopropylbenzene	16.9	1.0	0.26	ug/l	SW846 8260B
Methylcyclohexane	24.7	5.0	0.22	ug/l	SW846 8260B
Methyl Tert Butyl Ether	0.47 J	1.0	0.26	ug/l	SW846 8260B
Toluene	5.4	1.0	0.22	ug/l	SW846 8260B
m,p-Xylene	10.3	1.0	0.45	ug/l	SW846 8260B
o-Xylene	0.24 J	1.0	0.20	ug/l	SW846 8260B
Xylene (total)	10.5	1.0	0.20	ug/l	SW846 8260B
Total TIC, Volatile	664 J			ug/l	
Total Alkanes	557 J			ug/l	
Iron	1320000	400		ug/l	EPA 200.7
JB77674-6 MW-12					
Acetone	8.9 J	10	2.6	ug/l	SW846 8260B
Benzene	82.3	0.50	0.21	ug/l	SW846 8260B
Cyclohexane	24.6	5.0	0.37	ug/l	SW846 8260B
Ethylbenzene	99.5	1.0	0.40	ug/l	SW846 8260B
Isopropylbenzene	10.0	1.0	0.26	ug/l	SW846 8260B
Methylcyclohexane	39.8	5.0	0.22	ug/l	SW846 8260B
Methyl Tert Butyl Ether	3.0	1.0	0.26	ug/l	SW846 8260B
4-Methyl-2-pentanone(MIBK)	5.3	5.0	1.1	ug/l	SW846 8260B
Tert Butyl Alcohol	17.8	10	4.7	ug/l	SW846 8260B
Toluene	72.3	1.0	0.22	ug/l	SW846 8260B
m,p-Xylene	276	1.0	0.45	ug/l	SW846 8260B
o-Xylene	75.2	1.0	0.20	ug/l	SW846 8260B
Xylene (total)	351	1.0	0.20	ug/l	SW846 8260B
Total TIC, Volatile	237 J			ug/l	
Total Alkanes	1785 J			ug/l	
Iron [a]	105000	200		ug/l	EPA 200.7

Summary of Hits

Job Number: JB77674
Account: Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Collected: 09/23/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB77674-7	**MW-2**					
Benzene		3.9	0.50	0.21	ug/l	SW846 8260B
Cyclohexane		2.9 J	5.0	0.37	ug/l	SW846 8260B
Isopropylbenzene		3.0	1.0	0.26	ug/l	SW846 8260B
Methylcyclohexane		1.6 J	5.0	0.22	ug/l	SW846 8260B
Methyl Tert Butyl Ether		0.57 J	1.0	0.26	ug/l	SW846 8260B
Toluene		0.25 J	1.0	0.22	ug/l	SW846 8260B
m,p-Xylene		0.69 J	1.0	0.45	ug/l	SW846 8260B
Xylene (total)		0.69 J	1.0	0.20	ug/l	SW846 8260B
Total TIC, Volatile		59.4 J			ug/l	
Total Alkanes		32.1 J			ug/l	
Iron		655	100		ug/l	EPA 200.7
JB77674-8	**MW-14**					
Benzene		36.7	0.50	0.21	ug/l	SW846 8260B
Cyclohexane		16.3	5.0	0.37	ug/l	SW846 8260B
Ethylbenzene		26.0	1.0	0.40	ug/l	SW846 8260B
Isopropylbenzene		6.7	1.0	0.26	ug/l	SW846 8260B
Methylcyclohexane		29.4	5.0	0.22	ug/l	SW846 8260B
Methyl Tert Butyl Ether		1.4	1.0	0.26	ug/l	SW846 8260B
Toluene		3.9	1.0	0.22	ug/l	SW846 8260B
m,p-Xylene		43.4	1.0	0.45	ug/l	SW846 8260B
o-Xylene		9.0	1.0	0.20	ug/l	SW846 8260B
Xylene (total)		52.4	1.0	0.20	ug/l	SW846 8260B
Total TIC, Volatile		641 J			ug/l	
Total Alkanes		133 J			ug/l	
Iron		820	100		ug/l	EPA 200.7
JB77674-9	**MW-16R**					
Acetone		5.6 J	10	2.6	ug/l	SW846 8260B
Benzene		153	0.50	0.21	ug/l	SW846 8260B
Cyclohexane		13.2	5.0	0.37	ug/l	SW846 8260B
Ethylbenzene		5.1	1.0	0.40	ug/l	SW846 8260B
Isopropylbenzene		0.30 J	1.0	0.26	ug/l	SW846 8260B
Methylcyclohexane		3.3 J	5.0	0.22	ug/l	SW846 8260B
Methyl Tert Butyl Ether		6.9	1.0	0.26	ug/l	SW846 8260B
Tert Butyl Alcohol		27.7	10	4.7	ug/l	SW846 8260B
Toluene		70.0	1.0	0.22	ug/l	SW846 8260B
m,p-Xylene		91.8	1.0	0.45	ug/l	SW846 8260B
o-Xylene		42.0	1.0	0.20	ug/l	SW846 8260B
Xylene (total)		134	1.0	0.20	ug/l	SW846 8260B
Total TIC, Volatile		313 J			ug/l	

Summary of Hits

Job Number: JB77674
Account: Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Collected: 09/23/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Total Alkanes		660 J			ug/l	
Iron		40500	100		ug/l	EPA 200.7
JB77674-10	**MW-17R**					
Benzene		557	2.5	1.0	ug/l	SW846 8260B
Cyclohexane		145	25	1.9	ug/l	SW846 8260B
Ethylbenzene		1860	50	20	ug/l	SW846 8260B
Isopropylbenzene		119	5.0	1.3	ug/l	SW846 8260B
Methylcyclohexane		102	25	1.1	ug/l	SW846 8260B
Methyl Tert Butyl Ether		6.7	5.0	1.3	ug/l	SW846 8260B
Tert Butyl Alcohol		41.7 J	50	23	ug/l	SW846 8260B
Toluene		2740	50	11	ug/l	SW846 8260B
m,p-Xylene		6290	50	22	ug/l	SW846 8260B
o-Xylene		2150	50	10	ug/l	SW846 8260B
Xylene (total)		8440	50	10	ug/l	SW846 8260B
Total TIC, Volatile		2710 J			ug/l	
Total Alkanes		1300 J			ug/l	
Iron		36000	100		ug/l	EPA 200.7
JB77674-11	**MW-18R**					
Benzene		124	0.50	0.21	ug/l	SW846 8260B
2-Butanone (MEK)		14.3	10	2.5	ug/l	SW846 8260B
Cyclohexane		121	5.0	0.37	ug/l	SW846 8260B
Ethylbenzene		472	50	20	ug/l	SW846 8260B
Isopropylbenzene		67.6	1.0	0.26	ug/l	SW846 8260B
Methylcyclohexane		142 J	250	11	ug/l	SW846 8260B
Methyl Tert Butyl Ether		5.9	1.0	0.26	ug/l	SW846 8260B
4-Methyl-2-pentanone(MIBK)		8.6	5.0	1.1	ug/l	SW846 8260B
Tert Butyl Alcohol		11.4	10	4.7	ug/l	SW846 8260B
Toluene		71.0	1.0	0.22	ug/l	SW846 8260B
m,p-Xylene		1070	50	22	ug/l	SW846 8260B
o-Xylene		100	1.0	0.20	ug/l	SW846 8260B
Xylene (total)		1170	50	10	ug/l	SW846 8260B
Total TIC, Volatile		607 J			ug/l	
Total Alkanes		691 J			ug/l	
Iron [a]		71700	200		ug/l	EPA 200.7

(a) Elevated detection limit due to dilution required for high interfering element.

New Jersey ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Accutest LabLink@824342 08:45 11-Nov-2014

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	JB77674-1	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A143594.D	1	09/30/14	DS	n/a	n/a	V1A6195
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.6	ug/l	
71-43-2	Benzene	ND	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	JB77674-1	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.65	1.0	0.26	ug/l	J
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	ND	1.0	0.45	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		79-120%
17060-07-0	1,2-Dichloroethane-D4	87%		72-123%
2037-26-5	Toluene-D8	100%		78-119%
460-00-4	4-Bromofluorobenzene	98%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	
	Total Alkanes		65	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	JB77674-1	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	2350	100	ug/l	1	10/03/14	10/07/14	ND	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35094
(2) Prep QC Batch: MP82364

RL = Reporting Limit

Accutest LabLink@824342 08:45 11-Nov-2014

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	JB77674-2	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A143595.D	1	09/30/14	DS	n/a	n/a	V1A6195
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.6	ug/l	
71-43-2	Benzene	18.3	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	5.3	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	JB77674-2	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	2.7	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	3.3	5.0	0.22	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	2.2	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	0.43	1.0	0.22	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	3.6	1.0	0.45	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	3.6	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		79-120%
17060-07-0	1,2-Dichloroethane-D4	89%		72-123%
2037-26-5	Toluene-D8	102%		78-119%
460-00-4	4-Bromofluorobenzene	98%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	alkene	8.64	6.2	ug/l	J
	alkene	10.22	13	ug/l	J
	C3 alkyl benzene	16.67	9.4	ug/l	J
496-11-7	Indane	18.00	7.8	ug/l	JN
	1H-Indene-dihydro-methyl- isomer	19.44	5.8	ug/l	J
	Total TIC, Volatile		42.2	ug/l	J
	Total Alkanes		51	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	JB77674-2	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	551	100	ug/l	1	10/03/14	10/07/14	ND	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35094
(2) Prep QC Batch: MP82364

RL = Reporting Limit

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Report of Analysis

Client Sample ID:	MW-11		
Lab Sample ID:	JB77674-3	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A135325.D	1	10/05/14	JM	n/a	n/a	V3A5854
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	20.7	10	2.6	ug/l	
71-43-2	Benzene	4.2	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	20.3	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	39.4	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	44.4	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-11		
Lab Sample ID:	JB77674-3	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	14.2	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	4.8	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	36.8	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	17.7	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	196	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	18.8	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	202	1.0	0.45	ug/l	
95-47-6	o-Xylene	71.9	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	274	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		79-120%
17060-07-0	1,2-Dichloroethane-D4	102%		72-123%
2037-26-5	Toluene-D8	114%		78-119%
460-00-4	4-Bromofluorobenzene	106%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	alkene	5.28	81	ug/l	J
	alkene	6.83	130	ug/l	J
	alkene	7.05	57	ug/l	J
	alkene	7.16	110	ug/l	J
	alkene	8.41	130	ug/l	J
	alkene	10.00	170	ug/l	J
	C3 alkyl benzene	17.09	62	ug/l	J
	Total TIC, Volatile		740	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-11		
Lab Sample ID:	JB77674-3	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total Alkanes		4653	ug/l	J

ND = Not detected MDL = Method Detection Limit
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E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-11		
Lab Sample ID:	JB77674-3	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	29000	100	ug/l	1	10/03/14	10/07/14	ND	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35094
(2) Prep QC Batch: MP82364

RL = Reporting Limit

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Report of Analysis

Client Sample ID:	MW-19		
Lab Sample ID:	JB77674-4	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A135321.D	1	10/05/14	JM	n/a	n/a	V3A5854
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.6	ug/l	
71-43-2	Benzene	64.7	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	10.8	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-19		
Lab Sample ID:	JB77674-4	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	1.3	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	3.3	5.0	0.22	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	3.5	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	1.1	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	1.6	1.0	0.45	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	1.6	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		79-120%
17060-07-0	1,2-Dichloroethane-D4	100%		72-123%
2037-26-5	Toluene-D8	110%		78-119%
460-00-4	4-Bromofluorobenzene	100%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	alkene	9.99	22	ug/l	J
	Total TIC, Volatile		22	ug/l	J
	Total Alkanes		224.4	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-19		
Lab Sample ID:	JB77674-4	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	29100	100	ug/l	1	10/03/14	10/07/14	ND	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35094
(2) Prep QC Batch: MP82364

RL = Reporting Limit

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Report of Analysis

Client Sample ID:	MW-6		
Lab Sample ID:	JB77674-5	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A135324.D	1	10/05/14	JM	n/a	n/a	V3A5854
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.6	ug/l	
71-43-2	Benzene	4.3	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	27.5	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	0.84	1.0	0.40	ug/l	J
76-13-1	Freon 113	ND	5.0	0.45	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-6		
Lab Sample ID:	JB77674-5	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	16.9	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	24.7	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.47	1.0	0.26	ug/l	J
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	5.4	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	10.3	1.0	0.45	ug/l	
95-47-6	o-Xylene	0.24	1.0	0.20	ug/l	J
1330-20-7	Xylene (total)	10.5	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		79-120%
17060-07-0	1,2-Dichloroethane-D4	103%		72-123%
2037-26-5	Toluene-D8	111%		78-119%
460-00-4	4-Bromofluorobenzene	104%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	alkene	8.40	54	ug/l	J
	alkene	9.99	110	ug/l	J
	C3 alkyl benzene	16.51	41	ug/l	J
	C4 alkyl benzene	17.70	62	ug/l	J
	unknown	17.85	92	ug/l	J
	C4 alkyl benzene	18.22	63	ug/l	J
	1H-Indene-dihydro-methyl- isomer	18.44	48	ug/l	J
	C4 alkyl benzene	18.67	65	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-6		
Lab Sample ID:	JB77674-5	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	1H-Indene-dihydro-methyl- isomer	19.09	49	ug/l	J
	1H-Indene-dihydro-methyl- isomer	19.29	80	ug/l	J
	Total TIC, Volatile		664	ug/l	J
	Total Alkanes		557	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-6		
Lab Sample ID:	JB77674-5	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	1320000	400	ug/l	2	10/03/14	10/08/14	MET	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35124
(2) Prep QC Batch: MP82364

RL = Reporting Limit

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Report of Analysis

Client Sample ID:	MW-12		
Lab Sample ID:	JB77674-6	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A135326.D	1	10/05/14	JM	n/a	n/a	V3A5854
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	8.9	10	2.6	ug/l	J
71-43-2	Benzene	82.3	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	24.6	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	99.5	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-12		
Lab Sample ID:	JB77674-6	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	10.0	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	39.8	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	3.0	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	5.3	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	17.8	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	72.3	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	276	1.0	0.45	ug/l	
95-47-6	o-Xylene	75.2	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	351	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		79-120%
17060-07-0	1,2-Dichloroethane-D4	107%		72-123%
2037-26-5	Toluene-D8	116%		78-119%
460-00-4	4-Bromofluorobenzene	111%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	alkene	9.99	95	ug/l	J
	alkene	13.34	41	ug/l	J
	ketones	14.11	51	ug/l	J
	C3 alkyl benzene	17.09	50	ug/l	J
	Total TIC, Volatile		237	ug/l	J
	Total Alkanes		1785	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-12		
Lab Sample ID:	JB77674-6	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron [a]	105000	200	ug/l	2	10/03/14	10/08/14	MET	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35124
(2) Prep QC Batch: MP82364

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit

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Report of Analysis

Client Sample ID:	MW-2		
Lab Sample ID:	JB77674-7	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A143746.D	1	10/03/14	DS	n/a	n/a	V1A6201
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.6	ug/l	
71-43-2	Benzene	3.9	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	2.9	5.0	0.37	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-2		
Lab Sample ID:	JB77674-7	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	3.0	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	1.6	5.0	0.22	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	0.57	1.0	0.26	ug/l	J
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	0.25	1.0	0.22	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	0.69	1.0	0.45	ug/l	J
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	0.69	1.0	0.20	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		79-120%
17060-07-0	1,2-Dichloroethane-D4	90%		72-123%
2037-26-5	Toluene-D8	99%		78-119%
460-00-4	4-Bromofluorobenzene	99%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	alkene	6.37	16	ug/l	J
	alkene	10.22	7.5	ug/l	J
496-11-7	Indane	18.00	11	ug/l	JN
	1H-Indene-dihydro-methyl- isomer	18.60	11	ug/l	J
	C4 alkyl benzene	18.84	6.7	ug/l	J
	1H-Indene-dihydro-methyl- isomer	19.44	7.2	ug/l	J
	Total TIC, Volatile		59.4	ug/l	J
	Total Alkanes		32.1	ug/l	J

ND = Not detected MDL = Method Detection Limit
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E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-2		
Lab Sample ID:	JB77674-7	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	655	100	ug/l	1	10/03/14	10/06/14	ND	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35094
(2) Prep QC Batch: MP82364

RL = Reporting Limit

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Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	JB77674-8	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A143607.D	1	09/30/14	DS	n/a	n/a	V1A6195
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.6	ug/l	
71-43-2	Benzene	36.7	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	16.3	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	26.0	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	JB77674-8	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	6.7	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	29.4	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.4	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	3.9	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	43.4	1.0	0.45	ug/l	
95-47-6	o-Xylene	9.0	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	52.4	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		79-120%
17060-07-0	1,2-Dichloroethane-D4	83%		72-123%
2037-26-5	Toluene-D8	102%		78-119%
460-00-4	4-Bromofluorobenzene	100%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	alkene	10.22	33	ug/l	J
	C3 alkyl benzene	16.67	34	ug/l	J
	C3 alkyl benzene	17.09	41	ug/l	J
108-67-8	Benzene, 1,3,5-trimethyl-	17.25	160	ug/l	JN
	C4 alkyl benzene	17.88	39	ug/l	J
	C4 alkyl benzene	17.98	74	ug/l	J
	C4 alkyl benzene	18.40	72	ug/l	J
	1H-Indene-dihydro-methyl- isomer	18.60	30	ug/l	J

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J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	JB77674-8	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	C4 alkyl benzene	18.84	37	ug/l	J
	C4 alkyl benzene	18.90	40	ug/l	J
	1H-Indene-dihydro-methyl- isomer	19.25	38	ug/l	J
	1H-Indene-dihydro-methyl- isomer	19.44	43	ug/l	J
	Total TIC, Volatile		641	ug/l	J
	Total Alkanes		133	ug/l	J

ND = Not detected MDL = Method Detection Limit
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J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	JB77674-8	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	820	100	ug/l	1	10/03/14	10/07/14	ND	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35094
(2) Prep QC Batch: MP82364

RL = Reporting Limit

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Report of Analysis

Client Sample ID:	MW-16R		
Lab Sample ID:	JB77674-9	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A135323.D	1	10/05/14	JM	n/a	n/a	V3A5854
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	5.6	10	2.6	ug/l	J
71-43-2	Benzene	153	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	13.2	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	5.1	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-16R		
Lab Sample ID:	JB77674-9	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	0.30	1.0	0.26	ug/l	J
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	3.3	5.0	0.22	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	6.9	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	27.7	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	70.0	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	91.8	1.0	0.45	ug/l	
95-47-6	o-Xylene	42.0	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	134	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		79-120%
17060-07-0	1,2-Dichloroethane-D4	103%		72-123%
2037-26-5	Toluene-D8	112%		78-119%
460-00-4	4-Bromofluorobenzene	102%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	alkene	5.27	23	ug/l	J
	alkene	6.83	18	ug/l	J
	alkene	7.16	42	ug/l	J
	alkene	8.22	35	ug/l	J
	alkene	8.40	66	ug/l	J
	alkene	9.99	37	ug/l	J
108-67-8	Benzene, 1,3,5-trimethyl-	16.66	16	ug/l	JN
	C3 alkyl benzene	16.92	14	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-16R		
Lab Sample ID:	JB77674-9	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
95-63-6	Benzene, 1,2,4-trimethyl-	17.09	22	ug/l	JN
496-11-7	Indane	17.85	27	ug/l	JN
	C4 alkyl benzene	18.22	13	ug/l	J
	Total TIC, Volatile		313	ug/l	J
	Total Alkanes		660	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-16R		
Lab Sample ID:	JB77674-9	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	40500	100	ug/l	1	10/03/14	10/07/14	ND	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35094
(2) Prep QC Batch: MP82364

RL = Reporting Limit

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Report of Analysis

Client Sample ID:	MW-17R		
Lab Sample ID:	JB77674-10	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A143609.D	5	09/30/14	DS	n/a	n/a	V1A6195
Run #2	1A143736.D	50	10/03/14	DS	n/a	n/a	V1A6201

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	13	ug/l	
71-43-2	Benzene	557	2.5	1.0	ug/l	
74-97-5	Bromochloromethane	ND	5.0	2.4	ug/l	
75-27-4	Bromodichloromethane	ND	5.0	1.4	ug/l	
75-25-2	Bromoform	ND	5.0	1.6	ug/l	
74-83-9	Bromomethane	ND	10	1.9	ug/l	
78-93-3	2-Butanone (MEK)	ND	50	12	ug/l	
75-15-0	Carbon disulfide	ND	10	2.5	ug/l	
56-23-5	Carbon tetrachloride	ND	5.0	1.2	ug/l	
108-90-7	Chlorobenzene	ND	5.0	1.4	ug/l	
75-00-3	Chloroethane	ND	5.0	2.8	ug/l	
67-66-3	Chloroform	ND	5.0	1.0	ug/l	
74-87-3	Chloromethane	ND	5.0	1.7	ug/l	
110-82-7	Cyclohexane	145	25	1.9	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	5.9	ug/l	
124-48-1	Dibromochloromethane	ND	5.0	1.2	ug/l	
106-93-4	1,2-Dibromoethane	ND	5.0	1.1	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.0	0.80	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.3	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.2	ug/l	
75-71-8	Dichlorodifluoromethane	ND	10	3.6	ug/l	
75-34-3	1,1-Dichloroethane	ND	5.0	1.7	ug/l	
107-06-2	1,2-Dichloroethane	ND	5.0	1.5	ug/l	
75-35-4	1,1-Dichloroethene	ND	5.0	2.5	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	5.0	1.6	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	2.6	ug/l	
78-87-5	1,2-Dichloropropane	ND	5.0	2.2	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.4	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.6	ug/l	
123-91-1	1,4-Dioxane	ND	630	250	ug/l	
100-41-4	Ethylbenzene	1860 [a]	50	20	ug/l	
76-13-1	Freon 113	ND	25	2.2	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-17R		
Lab Sample ID:	JB77674-10	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	25	8.7	ug/l	
98-82-8	Isopropylbenzene	119	5.0	1.3	ug/l	
79-20-9	Methyl Acetate	ND	25	15	ug/l	
108-87-2	Methylcyclohexane	102	25	1.1	ug/l	
1634-04-4	Methyl Tert Butyl Ether	6.7	5.0	1.3	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	25	5.3	ug/l	
75-09-2	Methylene chloride	ND	10	4.1	ug/l	
100-42-5	Styrene	ND	5.0	1.3	ug/l	
75-65-0	Tert Butyl Alcohol	41.7	50	23	ug/l	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	2.0	ug/l	
127-18-4	Tetrachloroethene	ND	5.0	1.8	ug/l	
108-88-3	Toluene	2740 [a]	50	11	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.3	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.1	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.6	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.4	ug/l	
79-01-6	Trichloroethene	ND	5.0	1.2	ug/l	
75-69-4	Trichlorofluoromethane	ND	10	1.4	ug/l	
75-01-4	Vinyl chloride	ND	5.0	0.87	ug/l	
	m,p-Xylene	6290 [a]	50	22	ug/l	
95-47-6	o-Xylene	2150 [a]	50	10	ug/l	
1330-20-7	Xylene (total)	8440 [a]	50	10	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%	94%	79-120%
17060-07-0	1,2-Dichloroethane-D4	83%	90%	72-123%
2037-26-5	Toluene-D8	107%	103%	78-119%
460-00-4	4-Bromofluorobenzene	96%	100%	74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	alkene	7.11	230	ug/l	J
	alkene	7.44	210	ug/l	J
	alkene	10.22	300	ug/l	J
	C3 alkyl benzene	16.75	370	ug/l	J
	C3 alkyl benzene	16.78	140	ug/l	J
	C3 alkyl benzene	16.83	190	ug/l	J
	C3 alkyl benzene	17.09	200	ug/l	J
	C3 alkyl benzene	17.26	670	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-17R		
Lab Sample ID:	JB77674-10	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
496-11-7	Indane	18.00	250	ug/l	JN
91-20-3	Naphthalene	20.22	150	ug/l	JN
	Total TIC, Volatile		2710	ug/l	J
	Total Alkanes		1300	ug/l	J

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-17R		
Lab Sample ID:	JB77674-10	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	36000	100	ug/l	1	10/03/14	10/07/14	ND	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35094
(2) Prep QC Batch: MP82364

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-18R		
Lab Sample ID:	JB77674-11	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2A151106.D	1	09/30/14	DS	n/a	n/a	V2A6440
Run #2	1A143737.D	50	10/03/14	DS	n/a	n/a	V1A6201

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.6	ug/l	
71-43-2	Benzene	124	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	14.3	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	121	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	472 [a]	50	20	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	

ND = Not detected MDL = Method Detection Limit
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E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-18R		
Lab Sample ID:	JB77674-11	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	67.6	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	142 [a]	250	11	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	5.9	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	8.6	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	11.4	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	71.0	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	1070 [a]	50	22	ug/l	
95-47-6	o-Xylene	100	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	1170 [a]	50	10	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%	95%	79-120%
17060-07-0	1,2-Dichloroethane-D4	83%	88%	72-123%
2037-26-5	Toluene-D8	96%	102%	78-119%
460-00-4	4-Bromofluorobenzene	90%	104%	74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	alkene	9.66	110	ug/l	J
	alkene	11.10	90	ug/l	J
	alkene	12.05	44	ug/l	J
	C3 alkyl benzene	15.69	54	ug/l	J
108-67-8	Benzene, 1,3,5-trimethyl-	15.76	47	ug/l	JN
	C3 alkyl benzene	15.98	42	ug/l	J
95-63-6	Benzene, 1,2,4-trimethyl-	16.13	180	ug/l	JN
	C4 alkyl benzene	17.12	40	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-18R		
Lab Sample ID:	JB77674-11	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		607	ug/l	J
	Total Alkanes		691	ug/l	J

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-18R		
Lab Sample ID:	JB77674-11	**Date Sampled:**	09/23/14
Matrix:	AQ - Ground Water	**Date Received:**	09/25/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron [a]	71700	200	ug/l	2	10/03/14	10/08/14	MET	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35124
(2) Prep QC Batch: MP82364

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit

New Jersey ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

ACCUTEST Laboratories
Mid Atlantic
2235 Route 130, Dayton, NJ 08810
Tel. (732) 329-0200 Fax: (732) 329-3499/3480

GW **Chain Of Custody Record**

10/04

☐ SCIENCE & ENGINEERING
☐ TECHNICAL SERVICES
☑ BILL CONSULTANT

Accutest Job #
Accutest Quote #

DATE: Sept 2014
PAGE: 1 of 1

CONSULTANT: EnviroTrac Ltd.
ADDRESS: 400 E Corporate Court
CITY: South Plainfield, NJ 07080
TELEPHONE: (908) 757-1900 FAX: (908) 757-0017 E-MAIL: christineh@envirotrac.com

SITE ADDRESS (Street and City): 945 Pleasant Valley Way, West Orange
PROJECT NAME: BP # 84849
PROJECT CONTACT (Report to): Christine Hahn
Enfos Project No.
SAMPLER NAME(S) (Print): Kevin C. Mallon
LAB JOB NUMBER (SDG): JB77674

TURNAROUND TIME (BUSINESS DAYS): ☑ STANDARD ☐ 7 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS
DATA DELIVERABLES (CHECK ONE) ☐ COMMA ☐ COMMB ☑ NJ REDT2 ☐ FULL T1 ☐ OTHER

SPECIAL INSTRUCTIONS OR NOTES : ALL SAMPLES RECEIVED PRESERVED AS APPLICABLE

REQUESTED ANALYSIS if more than one method is listed, circle one

LAB Sample #	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VOs-10,MTBE, TBA by EPA 8260	Sulfate via 300/SW846/ 9056A	Nitrate via 300	Total Iron via 200.7	Total Manganese via 200.7	Container PID Readings or Laboratory Notes
1	MW-1	9/23/14	1045	GW	3	1				4	X			X		AB V875
2	MW-3		1100	GW	3	1				4	X			X		
3	MW-11		1115	GW	3	1				4	X			X		
4	MW-19		1200	GW	3	1				4	X			X		
5	MW-6		1508	GW	3	1				4	X			X		
6	MW-12		1310	GW	3	1				4	X			X		
7	MW-2		1334	GW	3	1				4	X			X		
8	MW-14		1355	GW	3	1				4	X			X		
9	MW-16R		1418	GW	3	1				4	X			X		
10	MW-17R		1433	GW	3	1				4	X			X		
11	MW-18R		1500	GW	3	1				4	X			X		

Relinquished by: (Sampler Signature)	Received by: (Signature)	Date: 9/25/14	Time: 14:00
Relinquished by: (Signature)	Received by: (Signature)	Date: 9/25/14	Time: 1400
Relinquished by: (Signature)	Received by: (Signature)	Date: 9/25/14	Time: 1450

3B Down

SAMPLE RECEIVED @ LAB ☐ YES ☐ NO SAMPLE TEMP UPON RECEIPT: 4.1 Degrees C

JB77674: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JB77674 **Client:** **Project:**

Date / Time Received: 9/25/2014 **Delivery Method:** **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (4.1/4.1); 0

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

JB77674: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Atlantic Richfield Company

Job No: JB77674

ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JB77674-1 MW-1	Collected: 23-SEP-14 10:45 By: KCM		Received: 25-SEP-14 By: MB			
JB77674-1	SW846 8260B	30-SEP-14 10:57	DS			V8260TCL11+
JB77674-1	EPA 200.7	07-OCT-14 01:13	ND	03-OCT-14	MS	FE
JB77674-2 MW-3	Collected: 23-SEP-14 11:00 By: KCM		Received: 25-SEP-14 By: MB			
JB77674-2	SW846 8260B	30-SEP-14 11:24	DS			V8260TCL11+
JB77674-2	EPA 200.7	07-OCT-14 01:31	ND	03-OCT-14	MS	FE
JB77674-3 MW-11	Collected: 23-SEP-14 11:15 By: KCM		Received: 25-SEP-14 By: MB			
JB77674-3	SW846 8260B	05-OCT-14 15:28	JM			V8260TCL11+
JB77674-3	EPA 200.7	07-OCT-14 01:36	ND	03-OCT-14	MS	FE
JB77674-4 MW-19	Collected: 23-SEP-14 12:00 By: KCM		Received: 25-SEP-14 By: MB			
JB77674-4	SW846 8260B	05-OCT-14 13:28	JM			V8260TCL11+
JB77674-4	EPA 200.7	07-OCT-14 01:42	ND	03-OCT-14	MS	FE
JB77674-5 MW-6	Collected: 23-SEP-14 15:08 By: KCM		Received: 25-SEP-14 By: MB			
JB77674-5	SW846 8260B	05-OCT-14 14:58	JM			V8260TCL11+
JB77674-5	EPA 200.7	08-OCT-14 18:18	MET	03-OCT-14	MS	FE
JB77674-6 MW-12	Collected: 23-SEP-14 13:10 By: KCM		Received: 25-SEP-14 By: MB			
JB77674-6	SW846 8260B	05-OCT-14 15:58	JM			V8260TCL11+
JB77674-6	EPA 200.7	08-OCT-14 18:24	MET	03-OCT-14	MS	FE
JB77674-7 MW-2	Collected: 23-SEP-14 13:34 By: KCM		Received: 25-SEP-14 By: MB			
JB77674-7	SW846 8260B	03-OCT-14 17:38	DS			V8260TCL11+

Internal Sample Tracking Chronicle

Atlantic Richfield Company

Job No: JB77674

ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JB77674-7	EPA 200.7	06-OCT-14 22:09	ND	03-OCT-14	MS	FE
JB77674-8	Collected: 23-SEP-14 13:55 By: KCM		Received: 25-SEP-14 By: MB			
MW-14						
JB77674-8	SW846 8260B	30-SEP-14 16:58	DS			V8260TCL11+
JB77674-8	EPA 200.7	07-OCT-14 01:59	ND	03-OCT-14	MS	FE
JB77674-9	Collected: 23-SEP-14 14:18 By: KCM		Received: 25-SEP-14 By: MB			
MW-16R						
JB77674-9	SW846 8260B	05-OCT-14 14:28	JM			V8260TCL11+
JB77674-9	EPA 200.7	07-OCT-14 02:05	ND	03-OCT-14	MS	FE
JB77674-10	Collected: 23-SEP-14 14:33 By: KCM		Received: 25-SEP-14 By: MB			
MW-17R						
JB77674-10	SW846 8260B	30-SEP-14 17:55	DS			V8260TCL11+
JB77674-10	SW846 8260B	03-OCT-14 12:58	DS			V8260TCL11+
JB77674-10	EPA 200.7	07-OCT-14 02:11	ND	03-OCT-14	MS	FE
JB77674-11	Collected: 23-SEP-14 15:00 By: KCM		Received: 25-SEP-14 By: MB			
MW-18R						
JB77674-11	SW846 8260B	30-SEP-14 19:12	DS			V8260TCL11+
JB77674-11	SW846 8260B	03-OCT-14 13:27	DS			V8260TCL11+
JB77674-11	EPA 200.7	08-OCT-14 18:30	MET	03-OCT-14	MS	FE

Accutest Internal Chain of Custody

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Received: 09/25/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB77674-1.1	Secured Storage	Todd Shoemaker	10/03/14 13:17	Retrieve from Storage
JB77674-1.1	Todd Shoemaker	Secured Staging Area	10/03/14 13:18	Return to Storage
JB77674-1.1	Secured Staging Area	Masooda Sultani	10/03/14 16:45	Retrieve from Storage
JB77674-1.1	Masooda Sultani	Secured Storage	10/03/14 17:19	Return to Storage
JB77674-1.1	Shirley Grzybowski		11/03/14 09:18	Disposed
JB77674-1.1.1	Masooda Sultani	Metals Digestion	10/03/14 17:13	Digestate from JB77674-1.1
JB77674-1.1.1	Metals Digestion	Masooda Sultani	10/03/14 17:14	Digestate from JB77674-1.1
JB77674-1.1.1	Masooda Sultani	Metals Digestate Storage	10/03/14 17:14	Return to Storage
JB77674-1.1.1	Metals Digestate Storage	Nancy Duan	10/07/14 16:19	Retrieve from Storage
JB77674-1.1.1	Nancy Duan	Metals Digestate Storage	10/07/14 16:54	Return to Storage
JB77674-1.1.1	Metals Digestate Storage	Thomas Gabriel	10/09/14 08:50	Retrieve from Storage
JB77674-1.1.1	Thomas Gabriel	Metals Digestate Storage	10/09/14 08:53	Return to Storage
JB77674-1.3	Secured Storage	Dejana Salaj	09/29/14 13:34	Retrieve from Storage
JB77674-1.3	Dejana Salaj	GCMS1A	09/29/14 13:34	Load on Instrument
JB77674-1.3	GCMS1A	Dejana Salaj	10/01/14 11:35	Unload from Instrument
JB77674-1.3	Dejana Salaj	Secured Storage	10/01/14 11:36	Return to Storage
JB77674-1.3	Shirley Grzybowski		11/03/14 09:18	Disposed
JB77674-2.1	Secured Storage	Todd Shoemaker	10/03/14 13:17	Retrieve from Storage
JB77674-2.1	Todd Shoemaker	Secured Staging Area	10/03/14 13:18	Return to Storage
JB77674-2.1	Secured Staging Area	Masooda Sultani	10/03/14 16:45	Retrieve from Storage
JB77674-2.1	Masooda Sultani	Secured Storage	10/03/14 17:19	Return to Storage
JB77674-2.1	Shirley Grzybowski		11/03/14 09:18	Disposed
JB77674-2.1.1	Masooda Sultani	Metals Digestion	10/03/14 17:13	Digestate from JB77674-2.1
JB77674-2.1.1	Metals Digestion	Masooda Sultani	10/03/14 17:14	Digestate from JB77674-2.1
JB77674-2.1.1	Masooda Sultani	Metals Digestate Storage	10/03/14 17:14	Return to Storage
JB77674-2.1.1	Metals Digestate Storage	Nancy Duan	10/07/14 16:19	Retrieve from Storage
JB77674-2.1.1	Nancy Duan	Metals Digestate Storage	10/07/14 16:54	Return to Storage
JB77674-2.1.1	Metals Digestate Storage	Thomas Gabriel	10/09/14 08:50	Retrieve from Storage
JB77674-2.1.1	Thomas Gabriel	Metals Digestate Storage	10/09/14 08:53	Return to Storage
JB77674-2.3	Secured Storage	Dejana Salaj	09/29/14 13:34	Retrieve from Storage
JB77674-2.3	Dejana Salaj	GCMS1A	09/29/14 13:34	Load on Instrument
JB77674-2.3	GCMS1A	Dejana Salaj	10/01/14 11:35	Unload from Instrument
JB77674-2.3	Dejana Salaj	Secured Storage	10/01/14 11:36	Return to Storage
JB77674-2.3	Shirley Grzybowski		11/03/14 09:18	Disposed
JB77674-3.1	Secured Storage	Todd Shoemaker	10/03/14 13:17	Retrieve from Storage
JB77674-3.1	Todd Shoemaker	Secured Staging Area	10/03/14 13:18	Return to Storage
JB77674-3.1	Secured Staging Area	Masooda Sultani	10/03/14 16:45	Retrieve from Storage
JB77674-3.1	Masooda Sultani	Secured Storage	10/03/14 17:19	Return to Storage

Accutest Internal Chain of Custody

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Received: 09/25/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB77674-3.1	Shirley Grzybowski		11/03/14 09:18	Disposed
JB77674-3.1.1	Masooda Sultani	Metals Digestion	10/03/14 17:13	Digestate from JB77674-3.1
JB77674-3.1.1	Metals Digestion	Masooda Sultani	10/03/14 17:14	Digestate from JB77674-3.1
JB77674-3.1.1	Masooda Sultani	Metals Digestate Storage	10/03/14 17:14	Return to Storage
JB77674-3.1.1	Metals Digestate Storage	Nancy Duan	10/07/14 16:19	Retrieve from Storage
JB77674-3.1.1	Nancy Duan	Metals Digestate Storage	10/07/14 16:54	Return to Storage
JB77674-3.1.1	Metals Digestate Storage	Thomas Gabriel	10/09/14 08:50	Retrieve from Storage
JB77674-3.1.1	Thomas Gabriel	Metals Digestate Storage	10/09/14 08:53	Return to Storage
JB77674-3.2	Secured Storage	Dejana Salaj	09/29/14 13:34	Retrieve from Storage
JB77674-3.2	Dejana Salaj	GCMS1A	09/29/14 13:34	Load on Instrument
JB77674-3.2	GCMS1A	Dejana Salaj	10/01/14 11:35	Unload from Instrument
JB77674-3.2	Dejana Salaj	Secured Storage	10/01/14 11:36	Return to Storage
JB77674-3.2	Shirley Grzybowski		11/03/14 09:18	Disposed
JB77674-3.3	Secured Storage	Dejana Salaj	10/05/14 12:37	Retrieve from Storage
JB77674-3.3	Dejana Salaj	GCMS3A	10/05/14 12:37	Load on Instrument
JB77674-3.3	GCMS3A	Jemima Merilan	10/06/14 11:45	Unload from Instrument
JB77674-3.3	Jemima Merilan	Secured Storage	10/06/14 11:45	Return to Storage
JB77674-3.3	Shirley Grzybowski		11/03/14 09:18	Disposed
JB77674-4.1	Secured Storage	Todd Shoemaker	10/03/14 13:17	Retrieve from Storage
JB77674-4.1	Todd Shoemaker	Secured Staging Area	10/03/14 13:18	Return to Storage
JB77674-4.1	Secured Staging Area	Masooda Sultani	10/03/14 16:45	Retrieve from Storage
JB77674-4.1	Masooda Sultani	Secured Storage	10/03/14 17:19	Return to Storage
JB77674-4.1	Shirley Grzybowski		11/03/14 09:18	Disposed
JB77674-4.1.1	Masooda Sultani	Metals Digestion	10/03/14 17:13	Digestate from JB77674-4.1
JB77674-4.1.1	Metals Digestion	Masooda Sultani	10/03/14 17:14	Digestate from JB77674-4.1
JB77674-4.1.1	Masooda Sultani	Metals Digestate Storage	10/03/14 17:14	Return to Storage
JB77674-4.1.1	Metals Digestate Storage	Nancy Duan	10/07/14 16:19	Retrieve from Storage
JB77674-4.1.1	Nancy Duan	Metals Digestate Storage	10/07/14 16:54	Return to Storage
JB77674-4.1.1	Metals Digestate Storage	Thomas Gabriel	10/09/14 08:50	Retrieve from Storage
JB77674-4.1.1	Thomas Gabriel	Metals Digestate Storage	10/09/14 08:53	Return to Storage
JB77674-4.2	Secured Storage	Dejana Salaj	10/05/14 12:37	Retrieve from Storage
JB77674-4.2	Dejana Salaj	GCMS3A	10/05/14 12:37	Load on Instrument
JB77674-4.2	GCMS3A	Jemima Merilan	10/06/14 11:45	Unload from Instrument
JB77674-4.2	Jemima Merilan	Secured Storage	10/06/14 11:45	Return to Storage
JB77674-4.2	Shirley Grzybowski		11/03/14 09:18	Disposed
JB77674-4.3	Secured Storage	Dejana Salaj	09/29/14 13:34	Retrieve from Storage
JB77674-4.3	Dejana Salaj	GCMS1A	09/29/14 13:34	Load on Instrument

Accutest Internal Chain of Custody

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Received: 09/25/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB77674-4.3	GCMS1A	Dejana Salaj	10/01/14 11:35	Unload from Instrument
JB77674-4.3	Dejana Salaj	Secured Storage	10/01/14 11:36	Return to Storage
JB77674-4.3	Shirley Grzybowski		11/03/14 09:18	Disposed
JB77674-5.1	Secured Storage	Todd Shoemaker	10/03/14 13:17	Retrieve from Storage
JB77674-5.1	Todd Shoemaker	Secured Staging Area	10/03/14 13:18	Return to Storage
JB77674-5.1	Secured Staging Area	Masooda Sultani	10/03/14 16:45	Retrieve from Storage
JB77674-5.1	Masooda Sultani	Secured Storage	10/03/14 17:19	Return to Storage
JB77674-5.1	Shirley Grzybowski		11/03/14 09:18	Disposed
JB77674-5.1.1	Masooda Sultani	Metals Digestion	10/03/14 17:13	Digestate from JB77674-5.1
JB77674-5.1.1	Metals Digestion	Masooda Sultani	10/03/14 17:14	Digestate from JB77674-5.1
JB77674-5.1.1	Masooda Sultani	Metals Digestate Storage	10/03/14 17:14	Return to Storage
JB77674-5.1.1	Metals Digestate Storage	Nancy Duan	10/07/14 16:19	Retrieve from Storage
JB77674-5.1.1	Nancy Duan	Metals Digestate Storage	10/07/14 16:54	Return to Storage
JB77674-5.1.1	Metals Digestate Storage	Thomas Gabriel	10/09/14 08:50	Retrieve from Storage
JB77674-5.1.1	Thomas Gabriel	Metals Digestate Storage	10/09/14 08:53	Return to Storage
JB77674-5.2	Secured Storage	Dejana Salaj	10/05/14 12:37	Retrieve from Storage
JB77674-5.2	Dejana Salaj	GCMS3A	10/05/14 12:37	Load on Instrument
JB77674-5.2	GCMS3A	Jemima Merilan	10/06/14 11:45	Unload from Instrument
JB77674-5.2	Jemima Merilan	Secured Storage	10/06/14 11:45	Return to Storage
JB77674-5.2	Shirley Grzybowski		11/03/14 09:18	Disposed
JB77674-5.3	Secured Storage	Dejana Salaj	09/29/14 13:34	Retrieve from Storage
JB77674-5.3	Dejana Salaj	GCMS1A	09/29/14 13:34	Load on Instrument
JB77674-5.3	GCMS1A	Dejana Salaj	10/01/14 11:35	Unload from Instrument
JB77674-5.3	Dejana Salaj	Secured Storage	10/01/14 11:36	Return to Storage
JB77674-5.3	Shirley Grzybowski		11/03/14 09:18	Disposed
JB77674-6.1	Secured Storage	Todd Shoemaker	10/03/14 13:17	Retrieve from Storage
JB77674-6.1	Todd Shoemaker	Secured Staging Area	10/03/14 13:18	Return to Storage
JB77674-6.1	Secured Staging Area	Masooda Sultani	10/03/14 16:45	Retrieve from Storage
JB77674-6.1	Masooda Sultani	Secured Storage	10/03/14 17:19	Return to Storage
JB77674-6.1	Shirley Grzybowski		11/03/14 09:18	Disposed
JB77674-6.1.1	Masooda Sultani	Metals Digestion	10/03/14 17:13	Digestate from JB77674-6.1
JB77674-6.1.1	Metals Digestion	Masooda Sultani	10/03/14 17:14	Digestate from JB77674-6.1
JB77674-6.1.1	Masooda Sultani	Metals Digestate Storage	10/03/14 17:14	Return to Storage
JB77674-6.1.1	Metals Digestate Storage	Nancy Duan	10/07/14 16:19	Retrieve from Storage
JB77674-6.1.1	Nancy Duan	Metals Digestate Storage	10/07/14 16:54	Return to Storage
JB77674-6.1.1	Metals Digestate Storage	Thomas Gabriel	10/09/14 08:50	Retrieve from Storage
JB77674-6.1.1	Thomas Gabriel	Metals Digestate Storage	10/09/14 08:53	Return to Storage

Accutest Internal Chain of Custody

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Received: 09/25/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB77674-6.2	Secured Storage	Dejana Salaj	09/29/14 13:34	Retrieve from Storage
JB77674-6.2	Dejana Salaj	GCMS1A	09/29/14 13:34	Load on Instrument
JB77674-6.2	GCMS1A	Dejana Salaj	10/01/14 11:35	Unload from Instrument
JB77674-6.2	Dejana Salaj	Secured Storage	10/01/14 11:36	Return to Storage
JB77674-6.2	Shirley Grzybowski		11/03/14 09:18	Disposed
JB77674-6.3	Secured Storage	Dejana Salaj	10/05/14 12:37	Retrieve from Storage
JB77674-6.3	Dejana Salaj	GCMS3A	10/05/14 12:37	Load on Instrument
JB77674-6.3	GCMS3A	Jemima Merilan	10/06/14 11:45	Unload from Instrument
JB77674-6.3	Jemima Merilan	Secured Storage	10/06/14 11:45	Return to Storage
JB77674-6.3	Shirley Grzybowski		11/03/14 09:18	Disposed
JB77674-7.1	Secured Storage	Todd Shoemaker	10/03/14 13:17	Retrieve from Storage
JB77674-7.1	Todd Shoemaker	Secured Staging Area	10/03/14 13:18	Return to Storage
JB77674-7.1	Secured Staging Area	Masooda Sultani	10/03/14 16:45	Retrieve from Storage
JB77674-7.1	Masooda Sultani	Secured Storage	10/03/14 17:19	Return to Storage
JB77674-7.1	Shirley Grzybowski		11/03/14 09:18	Disposed
JB77674-7.1.1	Masooda Sultani	Metals Digestion	10/03/14 17:13	Digestate from JB77674-7.1
JB77674-7.1.1	Metals Digestion	Masooda Sultani	10/03/14 17:14	Digestate from JB77674-7.1
JB77674-7.1.1	Masooda Sultani	Metals Digestate Storage	10/03/14 17:14	Return to Storage
JB77674-7.1.1	Metals Digestate Storage	Nancy Duan	10/07/14 16:19	Retrieve from Storage
JB77674-7.1.1	Nancy Duan	Metals Digestate Storage	10/07/14 16:54	Return to Storage
JB77674-7.1.1	Metals Digestate Storage	Thomas Gabriel	10/09/14 08:50	Retrieve from Storage
JB77674-7.1.1	Thomas Gabriel	Metals Digestate Storage	10/09/14 08:53	Return to Storage
JB77674-7.2	Secured Storage	Dejana Salaj	09/29/14 13:34	Retrieve from Storage
JB77674-7.2	Dejana Salaj	GCMS1A	09/29/14 13:34	Load on Instrument
JB77674-7.2	GCMS1A	Dejana Salaj	10/01/14 11:35	Unload from Instrument
JB77674-7.2	Dejana Salaj	Secured Storage	10/01/14 11:36	Return to Storage
JB77674-7.2	Shirley Grzybowski		11/03/14 09:18	Disposed
JB77674-7.3	Secured Storage	Dejana Salaj	10/03/14 10:30	Retrieve from Storage
JB77674-7.3	Dejana Salaj	GCMS1A	10/03/14 10:30	Load on Instrument
JB77674-7.3	GCMS1A	Dejana Salaj	10/05/14 09:25	Unload from Instrument
JB77674-7.3	Dejana Salaj	Secured Storage	10/05/14 09:25	Return to Storage
JB77674-7.3	Shirley Grzybowski		11/03/14 09:18	Disposed
JB77674-8.1	Secured Storage	Todd Shoemaker	10/03/14 13:17	Retrieve from Storage
JB77674-8.1	Todd Shoemaker	Secured Staging Area	10/03/14 13:18	Return to Storage
JB77674-8.1	Secured Staging Area	Masooda Sultani	10/03/14 16:45	Retrieve from Storage
JB77674-8.1	Masooda Sultani	Secured Storage	10/03/14 17:19	Return to Storage
JB77674-8.1	Shirley Grzybowski		11/03/14 09:18	Disposed

Accutest Internal Chain of Custody

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Received: 09/25/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB77674-8.1.1	Masooda Sultani	Metals Digestion	10/03/14 17:13	Digestate from JB77674-8.1
JB77674-8.1.1	Metals Digestion	Masooda Sultani	10/03/14 17:14	Digestate from JB77674-8.1
JB77674-8.1.1	Masooda Sultani	Metals Digestate Storage	10/03/14 17:14	Return to Storage
JB77674-8.1.1	Metals Digestate Storage	Nancy Duan	10/07/14 16:19	Retrieve from Storage
JB77674-8.1.1	Nancy Duan	Metals Digestate Storage	10/07/14 16:54	Return to Storage
JB77674-8.1.1	Metals Digestate Storage	Thomas Gabriel	10/09/14 08:50	Retrieve from Storage
JB77674-8.1.1	Thomas Gabriel	Metals Digestate Storage	10/09/14 08:53	Return to Storage
JB77674-8.3	Secured Storage	Dejana Salaj	09/29/14 13:34	Retrieve from Storage
JB77674-8.3	Dejana Salaj	GCMS1A	09/29/14 13:34	Load on Instrument
JB77674-8.3	GCMS1A	Dejana Salaj	10/01/14 11:35	Unload from Instrument
JB77674-8.3	Dejana Salaj	Secured Storage	10/01/14 11:36	Return to Storage
JB77674-8.3	Shirley Grzybowski		11/03/14 09:18	Disposed
JB77674-9.1	Secured Storage	Todd Shoemaker	10/03/14 13:17	Retrieve from Storage
JB77674-9.1	Todd Shoemaker	Secured Staging Area	10/03/14 13:18	Return to Storage
JB77674-9.1	Secured Staging Area	Masooda Sultani	10/03/14 16:45	Retrieve from Storage
JB77674-9.1	Masooda Sultani	Secured Storage	10/03/14 17:19	Return to Storage
JB77674-9.1	Shirley Grzybowski		11/03/14 09:18	Disposed
JB77674-9.1.1	Masooda Sultani	Metals Digestion	10/03/14 17:13	Digestate from JB77674-9.1
JB77674-9.1.1	Metals Digestion	Masooda Sultani	10/03/14 17:14	Digestate from JB77674-9.1
JB77674-9.1.1	Masooda Sultani	Metals Digestate Storage	10/03/14 17:14	Return to Storage
JB77674-9.1.1	Metals Digestate Storage	Nancy Duan	10/07/14 16:19	Retrieve from Storage
JB77674-9.1.1	Nancy Duan	Metals Digestate Storage	10/07/14 16:54	Return to Storage
JB77674-9.1.1	Metals Digestate Storage	Thomas Gabriel	10/09/14 08:50	Retrieve from Storage
JB77674-9.1.1	Thomas Gabriel	Metals Digestate Storage	10/09/14 08:53	Return to Storage
JB77674-9.2	Secured Storage	Dejana Salaj	09/29/14 13:34	Retrieve from Storage
JB77674-9.2	Dejana Salaj	GCMS1A	09/29/14 13:34	Load on Instrument
JB77674-9.2	GCMS1A	Dejana Salaj	10/01/14 11:35	Unload from Instrument
JB77674-9.2	Dejana Salaj	Secured Storage	10/01/14 11:36	Return to Storage
JB77674-9.2	Shirley Grzybowski		11/03/14 09:18	Disposed
JB77674-9.3	Secured Storage	Dejana Salaj	10/05/14 12:37	Retrieve from Storage
JB77674-9.3	Dejana Salaj	GCMS3A	10/05/14 12:37	Load on Instrument
JB77674-9.3	GCMS3A	Jemima Merilan	10/06/14 11:45	Unload from Instrument
JB77674-9.3	Jemima Merilan	Secured Storage	10/06/14 11:45	Return to Storage
JB77674-9.3	Shirley Grzybowski		11/03/14 09:18	Disposed
JB77674-10.1	Secured Storage	Todd Shoemaker	10/03/14 13:17	Retrieve from Storage
JB77674-10.1	Todd Shoemaker	Secured Staging Area	10/03/14 13:18	Return to Storage
JB77674-10.1	Secured Staging Area	Masooda Sultani	10/03/14 16:45	Retrieve from Storage
JB77674-10.1	Masooda Sultani	Secured Storage	10/03/14 17:19	Return to Storage

Accutest Internal Chain of Custody

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Received: 09/25/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB77674-10.1	Shirley Grzybowski		11/03/14 09:18	Disposed
JB77674-10.1.1	Masooda Sultani	Metals Digestion	10/03/14 17:13	Digestate from JB77674-10.1
JB77674-10.1.1	Metals Digestion	Masooda Sultani	10/03/14 17:14	Digestate from JB77674-10.1
JB77674-10.1.1	Masooda Sultani	Metals Digestate Storage	10/03/14 17:14	Return to Storage
JB77674-10.1.1	Metals Digestate Storage	Nancy Duan	10/07/14 16:19	Retrieve from Storage
JB77674-10.1.1	Nancy Duan	Metals Digestate Storage	10/07/14 16:54	Return to Storage
JB77674-10.1.1	Metals Digestate Storage	Thomas Gabriel	10/09/14 08:50	Retrieve from Storage
JB77674-10.1.1	Thomas Gabriel	Metals Digestate Storage	10/09/14 08:53	Return to Storage
JB77674-10.2	Secured Storage	Dejana Salaj	10/03/14 10:28	Retrieve from Storage
JB77674-10.2	Dejana Salaj	Secured Storage	10/03/14 17:03	Return to Storage
JB77674-10.2	Shirley Grzybowski		11/03/14 09:18	Disposed
JB77674-10.3	Secured Storage	HeeEun Ahn	09/29/14 10:50	Retrieve from Storage
JB77674-10.3	HeeEun Ahn	Secured Storage	09/29/14 17:15	Return to Storage
JB77674-10.3	Shirley Grzybowski		11/03/14 09:18	Disposed
JB77674-11.1	Secured Storage	Todd Shoemaker	10/03/14 13:17	Retrieve from Storage
JB77674-11.1	Todd Shoemaker	Secured Staging Area	10/03/14 13:18	Return to Storage
JB77674-11.1	Secured Staging Area	Masooda Sultani	10/03/14 16:45	Retrieve from Storage
JB77674-11.1	Masooda Sultani	Secured Storage	10/03/14 17:19	Return to Storage
JB77674-11.1	Shirley Grzybowski		11/03/14 09:18	Disposed
JB77674-11.1.1	Masooda Sultani	Metals Digestion	10/03/14 17:13	Digestate from JB77674-11.1
JB77674-11.1.1	Metals Digestion	Masooda Sultani	10/03/14 17:14	Digestate from JB77674-11.1
JB77674-11.1.1	Masooda Sultani	Metals Digestate Storage	10/03/14 17:14	Return to Storage
JB77674-11.1.1	Metals Digestate Storage	Nancy Duan	10/07/14 16:19	Retrieve from Storage
JB77674-11.1.1	Nancy Duan	Metals Digestate Storage	10/07/14 16:54	Return to Storage
JB77674-11.1.1	Metals Digestate Storage	Thomas Gabriel	10/09/14 08:50	Retrieve from Storage
JB77674-11.1.1	Thomas Gabriel	Metals Digestate Storage	10/09/14 08:53	Return to Storage
JB77674-11.2	Secured Storage	Dejana Salaj	09/29/14 13:46	Retrieve from Storage
JB77674-11.2	Dejana Salaj	GCMS2A	09/29/14 13:46	Load on Instrument
JB77674-11.2	GCMS2A	Dejana Salaj	10/01/14 11:36	Unload from Instrument
JB77674-11.2	Dejana Salaj	Secured Storage	10/01/14 11:36	Return to Storage
JB77674-11.2	Shirley Grzybowski		11/03/14 09:18	Disposed
JB77674-11.3	Secured Storage	HeeEun Ahn	09/29/14 10:50	Retrieve from Storage
JB77674-11.3	HeeEun Ahn	Secured Storage	09/29/14 17:15	Return to Storage
JB77674-11.3	Shirley Grzybowski		11/03/14 09:18	Disposed

New Jersey ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A6195-MB	1A143591.D	1	09/30/14	DS	n/a	n/a	V1A6195

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB77674-1, JB77674-2, JB77674-8, JB77674-10

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.6	ug/l	
71-43-2	Benzene	ND	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	

Method Blank Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A6195-MB	1A143591.D	1	09/30/14	DS	n/a	n/a	V1A6195

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB77674-1, JB77674-2, JB77674-8, JB77674-10

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	ND	1.0	0.45	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	96%	79-120%
17060-07-0	1,2-Dichloroethane-D4	87%	72-123%
2037-26-5	Toluene-D8	97%	78-119%
460-00-4	4-Bromofluorobenzene	97%	74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2A6440-MB	2A151097.D	1	09/30/14	DS	n/a	n/a	V2A6440

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB77674-11

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.6	ug/l	
71-43-2	Benzene	ND	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	

Method Blank Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2A6440-MB	2A151097.D	1	09/30/14	DS	n/a	n/a	V2A6440

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB77674-11

CAS No.	Compound	Result	RL	MDL	Units	Q
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	92%	79-120%
17060-07-0	1,2-Dichloroethane-D4	87%	72-123%
2037-26-5	Toluene-D8	97%	78-119%
460-00-4	4-Bromofluorobenzene	92%	74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A6201-MB	1A143729.D	1	10/03/14	DS	n/a	n/a	V1A6201

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB77674-7, JB77674-10, JB77674-11

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.6	ug/l	
71-43-2	Benzene	ND	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	

Method Blank Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A6201-MB	1A143729.D	1	10/03/14	DS	n/a	n/a	V1A6201

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB77674-7, JB77674-10, JB77674-11

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	ND	1.0	0.45	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	95%	79-120%
17060-07-0	1,2-Dichloroethane-D4	89%	72-123%
2037-26-5	Toluene-D8	100%	78-119%
460-00-4	4-Bromofluorobenzene	100%	74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3A5854-MB	3A135318.D	1	10/05/14	JM	n/a	n/a	V3A5854

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB77674-3, JB77674-4, JB77674-5, JB77674-6, JB77674-9

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.6	ug/l	
71-43-2	Benzene	ND	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	

Method Blank Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3A5854-MB	3A135318.D	1	10/05/14	JM	n/a	n/a	V3A5854

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB77674-3, JB77674-4, JB77674-5, JB77674-6, JB77674-9

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	ND	1.0	0.45	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	109%	79-120%
17060-07-0	1,2-Dichloroethane-D4	100%	72-123%
2037-26-5	Toluene-D8	109%	78-119%
460-00-4	4-Bromofluorobenzene	99%	74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A6195-BS	1A143592.D	1	09/30/14	DS	n/a	n/a	V1A6195

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB77674-1, JB77674-2, JB77674-8, JB77674-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	54.0	108	52-152
71-43-2	Benzene	50	51.8	104	80-121
74-97-5	Bromochloromethane	50	51.8	104	82-125
75-27-4	Bromodichloromethane	50	50.3	101	83-127
75-25-2	Bromoform	50	44.6	89	74-131
74-83-9	Bromomethane	50	48.9	98	45-155
78-93-3	2-Butanone (MEK)	50	56.5	113	67-136
75-15-0	Carbon disulfide	50	59.0	118	69-129
56-23-5	Carbon tetrachloride	50	49.5	99	77-138
108-90-7	Chlorobenzene	50	51.9	104	82-119
75-00-3	Chloroethane	50	61.0	122	61-151
67-66-3	Chloroform	50	50.3	101	79-124
74-87-3	Chloromethane	50	54.8	110	48-148
110-82-7	Cyclohexane	50	56.8	114	72-129
96-12-8	1,2-Dibromo-3-chloropropane	50	51.7	103	66-137
124-48-1	Dibromochloromethane	50	45.5	91	81-127
106-93-4	1,2-Dibromoethane	50	48.5	97	79-122
95-50-1	1,2-Dichlorobenzene	50	50.4	101	81-121
541-73-1	1,3-Dichlorobenzene	50	49.0	98	81-119
106-46-7	1,4-Dichlorobenzene	50	50.7	101	80-116
75-71-8	Dichlorodifluoromethane	50	51.8	104	33-161
75-34-3	1,1-Dichloroethane	50	54.0	108	78-129
107-06-2	1,2-Dichloroethane	50	45.7	91	75-133
75-35-4	1,1-Dichloroethene	50	57.0	114	74-128
156-59-2	cis-1,2-Dichloroethene	50	51.9	104	78-123
156-60-5	trans-1,2-Dichloroethene	50	48.8	98	75-122
78-87-5	1,2-Dichloropropane	50	53.7	107	80-124
10061-01-5	cis-1,3-Dichloropropene	50	50.6	101	75-114
10061-02-6	trans-1,3-Dichloropropene	50	48.4	97	78-123
123-91-1	1,4-Dioxane	1250	1320	106	57-154
100-41-4	Ethylbenzene	50	50.3	101	82-120
76-13-1	Freon 113	50	62.7	125	65-150
591-78-6	2-Hexanone	50	52.1	104	65-135
98-82-8	Isopropylbenzene	50	55.1	110	80-124
79-20-9	Methyl Acetate	50	44.0	88	53-137
108-87-2	Methylcyclohexane	50	55.9	112	62-142

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A6195-BS	1A143592.D	1	09/30/14	DS	n/a	n/a	V1A6195

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB77674-1, JB77674-2, JB77674-8, JB77674-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	100	96.1	96	74-123
108-10-1	4-Methyl-2-pentanone(MIBK)	50	54.8	110	68-135
75-09-2	Methylene chloride	50	53.4	107	75-121
100-42-5	Styrene	50	48.2	96	81-123
75-65-0	Tert Butyl Alcohol	250	248	99	70-132
79-34-5	1,1,2,2-Tetrachloroethane	50	49.9	100	71-123
127-18-4	Tetrachloroethene	50	47.7	95	69-141
108-88-3	Toluene	50	52.5	105	80-122
87-61-6	1,2,3-Trichlorobenzene	50	53.8	108	71-138
120-82-1	1,2,4-Trichlorobenzene	50	55.1	110	77-132
71-55-6	1,1,1-Trichloroethane	50	53.6	107	80-132
79-00-5	1,1,2-Trichloroethane	50	51.8	104	80-127
79-01-6	Trichloroethene	50	52.5	105	82-126
75-69-4	Trichlorofluoromethane	50	51.3	103	63-141
75-01-4	Vinyl chloride	50	56.2	112	53-135
	m,p-Xylene	100	101	101	81-121
95-47-6	o-Xylene	50	51.1	102	82-121
1330-20-7	Xylene (total)	150	152	101	82-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	79-120%
17060-07-0	1,2-Dichloroethane-D4	90%	72-123%
2037-26-5	Toluene-D8	103%	78-119%
460-00-4	4-Bromofluorobenzene	102%	74-119%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2A6440-BS	2A151098.D	1	09/30/14	DS	n/a	n/a	V2A6440

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB77674-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	42.9	86	52-152
71-43-2	Benzene	50	53.8	108	80-121
74-97-5	Bromochloromethane	50	53.1	106	82-125
75-27-4	Bromodichloromethane	50	54.0	108	83-127
75-25-2	Bromoform	50	46.7	93	74-131
74-83-9	Bromomethane	50	48.3	97	45-155
78-93-3	2-Butanone (MEK)	50	50.4	101	67-136
75-15-0	Carbon disulfide	50	53.8	108	69-129
56-23-5	Carbon tetrachloride	50	53.8	108	77-138
108-90-7	Chlorobenzene	50	52.3	105	82-119
75-00-3	Chloroethane	50	58.2	116	61-151
67-66-3	Chloroform	50	54.2	108	79-124
74-87-3	Chloromethane	50	46.9	94	48-148
110-82-7	Cyclohexane	50	58.1	116	72-129
96-12-8	1,2-Dibromo-3-chloropropane	50	46.3	93	66-137
124-48-1	Dibromochloromethane	50	49.7	99	81-127
106-93-4	1,2-Dibromoethane	50	52.7	105	79-122
95-50-1	1,2-Dichlorobenzene	50	50.0	100	81-121
541-73-1	1,3-Dichlorobenzene	50	49.8	100	81-119
106-46-7	1,4-Dichlorobenzene	50	49.4	99	80-116
75-71-8	Dichlorodifluoromethane	50	50.6	101	33-161
75-34-3	1,1-Dichloroethane	50	56.0	112	78-129
107-06-2	1,2-Dichloroethane	50	52.7	105	75-133
75-35-4	1,1-Dichloroethene	50	57.8	116	74-128
156-59-2	cis-1,2-Dichloroethene	50	54.0	108	78-123
156-60-5	trans-1,2-Dichloroethene	50	55.0	110	75-122
78-87-5	1,2-Dichloropropane	50	56.4	113	80-124
10061-01-5	cis-1,3-Dichloropropene	50	50.5	101	75-114
10061-02-6	trans-1,3-Dichloropropene	50	47.1	94	78-123
123-91-1	1,4-Dioxane	1250	1240	99	57-154
76-13-1	Freon 113	50	59.4	119	65-150
591-78-6	2-Hexanone	50	48.9	98	65-135
98-82-8	Isopropylbenzene	50	52.9	106	80-124
79-20-9	Methyl Acetate	50	46.7	93	53-137
1634-04-4	Methyl Tert Butyl Ether	100	105	105	74-123
108-10-1	4-Methyl-2-pentanone(MIBK)	50	50.9	102	68-135

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2A6440-BS	2A151098.D	1	09/30/14	DS	n/a	n/a	V2A6440

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB77674-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
75-09-2	Methylene chloride	50	52.5	105	75-121
100-42-5	Styrene	50	54.2	108	81-123
75-65-0	Tert Butyl Alcohol	250	265	106	70-132
79-34-5	1,1,2,2-Tetrachloroethane	50	44.6	89	71-123
127-18-4	Tetrachloroethene	50	69.0	138	69-141
108-88-3	Toluene	50	56.4	113	80-122
87-61-6	1,2,3-Trichlorobenzene	50	45.5	91	71-138
120-82-1	1,2,4-Trichlorobenzene	50	50.1	100	77-132
71-55-6	1,1,1-Trichloroethane	50	51.3	103	80-132
79-00-5	1,1,2-Trichloroethane	50	54.8	110	80-127
79-01-6	Trichloroethene	50	55.2	110	82-126
75-69-4	Trichlorofluoromethane	50	53.1	106	63-141
75-01-4	Vinyl chloride	50	51.8	104	53-135
95-47-6	o-Xylene	50	52.8	106	82-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	93%	79-120%
17060-07-0	1,2-Dichloroethane-D4	87%	72-123%
2037-26-5	Toluene-D8	96%	78-119%
460-00-4	4-Bromofluorobenzene	89%	74-119%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A6201-BS	1A143730.D	1	10/03/14	DS	n/a	n/a	V1A6201

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB77674-7, JB77674-10, JB77674-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	60.0	120	52-152
71-43-2	Benzene	50	50.3	101	80-121
74-97-5	Bromochloromethane	50	51.2	102	82-125
75-27-4	Bromodichloromethane	50	49.9	100	83-127
75-25-2	Bromoform	50	44.7	89	74-131
74-83-9	Bromomethane	50	53.2	106	45-155
78-93-3	2-Butanone (MEK)	50	59.7	119	67-136
75-15-0	Carbon disulfide	50	52.4	105	69-129
56-23-5	Carbon tetrachloride	50	45.8	92	77-138
108-90-7	Chlorobenzene	50	50.2	100	82-119
75-00-3	Chloroethane	50	63.6	127	61-151
67-66-3	Chloroform	50	50.1	100	79-124
74-87-3	Chloromethane	50	60.0	120	48-148
110-82-7	Cyclohexane	50	51.2	102	72-129
96-12-8	1,2-Dibromo-3-chloropropane	50	53.1	106	66-137
124-48-1	Dibromochloromethane	50	45.6	91	81-127
106-93-4	1,2-Dibromoethane	50	48.6	97	79-122
95-50-1	1,2-Dichlorobenzene	50	50.2	100	81-121
541-73-1	1,3-Dichlorobenzene	50	48.2	96	81-119
106-46-7	1,4-Dichlorobenzene	50	49.9	100	80-116
75-71-8	Dichlorodifluoromethane	50	56.9	114	33-161
75-34-3	1,1-Dichloroethane	50	53.0	106	78-129
107-06-2	1,2-Dichloroethane	50	46.2	92	75-133
75-35-4	1,1-Dichloroethene	50	51.3	103	74-128
156-59-2	cis-1,2-Dichloroethene	50	51.2	102	78-123
156-60-5	trans-1,2-Dichloroethene	50	46.9	94	75-122
78-87-5	1,2-Dichloropropane	50	52.6	105	80-124
10061-01-5	cis-1,3-Dichloropropene	50	49.0	98	75-114
10061-02-6	trans-1,3-Dichloropropene	50	46.9	94	78-123
123-91-1	1,4-Dioxane	1250	1240	99	57-154
100-41-4	Ethylbenzene	50	48.7	97	82-120
76-13-1	Freon 113	50	58.5	117	65-150
591-78-6	2-Hexanone	50	52.6	105	65-135
98-82-8	Isopropylbenzene	50	53.0	106	80-124
79-20-9	Methyl Acetate	50	47.1	94	53-137
108-87-2	Methylcyclohexane	50	50.9	102	62-142

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A6201-BS	1A143730.D	1	10/03/14	DS	n/a	n/a	V1A6201

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB77674-7, JB77674-10, JB77674-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	100	95.2	95	74-123
108-10-1	4-Methyl-2-pentanone(MIBK)	50	57.2	114	68-135
75-09-2	Methylene chloride	50	50.6	101	75-121
100-42-5	Styrene	50	47.2	94	81-123
75-65-0	Tert Butyl Alcohol	250	245	98	70-132
79-34-5	1,1,2,2-Tetrachloroethane	50	51.5	103	71-123
127-18-4	Tetrachloroethene	50	45.1	90	69-141
108-88-3	Toluene	50	49.3	99	80-122
87-61-6	1,2,3-Trichlorobenzene	50	54.4	109	71-138
120-82-1	1,2,4-Trichlorobenzene	50	55.6	111	77-132
71-55-6	1,1,1-Trichloroethane	50	50.0	100	80-132
79-00-5	1,1,2-Trichloroethane	50	50.2	100	80-127
79-01-6	Trichloroethene	50	50.4	101	82-126
75-69-4	Trichlorofluoromethane	50	53.9	108	63-141
75-01-4	Vinyl chloride	50	59.3	119	53-135
	m,p-Xylene	100	97.0	97	81-121
95-47-6	o-Xylene	50	49.8	100	82-121
1330-20-7	Xylene (total)	150	147	98	82-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	79-120%
17060-07-0	1,2-Dichloroethane-D4	93%	72-123%
2037-26-5	Toluene-D8	100%	78-119%
460-00-4	4-Bromofluorobenzene	103%	74-119%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3A5854-BS	3A135319.D	1	10/05/14	JM	n/a	n/a	V3A5854

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB77674-3, JB77674-4, JB77674-5, JB77674-6, JB77674-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	44.3	89	52-152
71-43-2	Benzene	50	53.2	106	80-121
74-97-5	Bromochloromethane	50	52.8	106	82-125
75-27-4	Bromodichloromethane	50	53.3	107	83-127
75-25-2	Bromoform	50	47.6	95	74-131
74-83-9	Bromomethane	50	31.3	63	45-155
78-93-3	2-Butanone (MEK)	50	45.2	90	67-136
75-15-0	Carbon disulfide	50	50.7	101	69-129
56-23-5	Carbon tetrachloride	50	52.3	105	77-138
108-90-7	Chlorobenzene	50	53.8	108	82-119
75-00-3	Chloroethane	50	43.5	87	61-151
67-66-3	Chloroform	50	50.4	101	79-124
74-87-3	Chloromethane	50	27.7	55	48-148
110-82-7	Cyclohexane	50	50.4	101	72-129
96-12-8	1,2-Dibromo-3-chloropropane	50	43.5	87	66-137
124-48-1	Dibromochloromethane	50	51.7	103	81-127
106-93-4	1,2-Dibromoethane	50	51.6	103	79-122
95-50-1	1,2-Dichlorobenzene	50	51.1	102	81-121
541-73-1	1,3-Dichlorobenzene	50	51.1	102	81-119
106-46-7	1,4-Dichlorobenzene	50	52.8	106	80-116
75-71-8	Dichlorodifluoromethane	50	34.6	69	33-161
75-34-3	1,1-Dichloroethane	50	52.0	104	78-129
107-06-2	1,2-Dichloroethane	50	50.0	100	75-133
75-35-4	1,1-Dichloroethene	50	49.2	98	74-128
156-59-2	cis-1,2-Dichloroethene	50	47.3	95	78-123
156-60-5	trans-1,2-Dichloroethene	50	50.3	101	75-122
78-87-5	1,2-Dichloropropane	50	52.2	104	80-124
10061-01-5	cis-1,3-Dichloropropene	50	53.1	106	75-114
10061-02-6	trans-1,3-Dichloropropene	50	50.8	102	78-123
123-91-1	1,4-Dioxane	1250	1560	125	57-154
100-41-4	Ethylbenzene	50	53.1	106	82-120
76-13-1	Freon 113	50	56.6	113	65-150
591-78-6	2-Hexanone	50	47.4	95	65-135
98-82-8	Isopropylbenzene	50	53.8	108	80-124
79-20-9	Methyl Acetate	50	42.7	85	53-137
108-87-2	Methylcyclohexane	50	53.4	107	62-142

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3A5854-BS	3A135319.D	1	10/05/14	JM	n/a	n/a	V3A5854

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB77674-3, JB77674-4, JB77674-5, JB77674-6, JB77674-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	100	96.2	96	74-123
108-10-1	4-Methyl-2-pentanone(MIBK)	50	50.4	101	68-135
75-09-2	Methylene chloride	50	49.5	99	75-121
100-42-5	Styrene	50	53.6	107	81-123
75-65-0	Tert Butyl Alcohol	250	280	112	70-132
79-34-5	1,1,2,2-Tetrachloroethane	50	47.6	95	71-123
127-18-4	Tetrachloroethene	50	50.2	100	69-141
108-88-3	Toluene	50	52.3	105	80-122
87-61-6	1,2,3-Trichlorobenzene	50	51.3	103	71-138
120-82-1	1,2,4-Trichlorobenzene	50	51.4	103	77-132
71-55-6	1,1,1-Trichloroethane	50	53.2	106	80-132
79-00-5	1,1,2-Trichloroethane	50	52.5	105	80-127
79-01-6	Trichloroethene	50	51.0	102	82-126
75-69-4	Trichlorofluoromethane	50	36.6	73	63-141
75-01-4	Vinyl chloride	50	29.7	59	53-135
	m,p-Xylene	100	110	110	81-121
95-47-6	o-Xylene	50	50.7	101	82-121
1330-20-7	Xylene (total)	150	160	107	82-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	110%	79-120%
17060-07-0	1,2-Dichloroethane-D4	102%	72-123%
2037-26-5	Toluene-D8	115%	78-119%
460-00-4	4-Bromofluorobenzene	109%	74-119%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB77674-1MS	1A143597.D	1	09/30/14	DS	n/a	n/a	V1A6195
JB77674-1MSD	1A143598.D	1	09/30/14	DS	n/a	n/a	V1A6195
JB77674-1	1A143594.D	1	09/30/14	DS	n/a	n/a	V1A6195

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB77674-1, JB77674-2, JB77674-8, JB77674-10

CAS No.	Compound	JB77674-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50	53.8	108	50	52.9	106	2	44-160/20
71-43-2	Benzene	ND		50	43.8	88	50	43.8	88	0	50-136/12
74-97-5	Bromochloromethane	ND		50	45.6	91	50	44.8	90	2	74-131/11
75-27-4	Bromodichloromethane	ND		50	44.2	88	50	44.4	89	0	74-132/11
75-25-2	Bromoform	ND		50	43.2	86	50	43.7	87	1	68-136/12
74-83-9	Bromomethane	ND		50	39.6	79	50	41.1	82	4	37-157/21
78-93-3	2-Butanone (MEK)	ND		50	53.0	106	50	52.7	105	1	60-145/15
75-15-0	Carbon disulfide	ND		50	44.0	88	50	46.0	92	4	37-143/17
56-23-5	Carbon tetrachloride	ND		50	39.8	80	50	41.4	83	4	46-152/17
108-90-7	Chlorobenzene	ND		50	46.0	92	50	46.5	93	1	70-127/12
75-00-3	Chloroethane	ND		50	39.9	80	50	42.5	85	6	44-147/16
67-66-3	Chloroform	ND		50	42.5	85	50	41.6	83	2	67-129/12
74-87-3	Chloromethane	ND		50	43.5	87	50	44.1	88	1	40-149/19
110-82-7	Cyclohexane	ND		50	44.3	89	50	45.6	91	3	31-153/21
96-12-8	1,2-Dibromo-3-chloropropane	ND		50	51.0	102	50	51.4	103	1	61-144/14
124-48-1	Dibromochloromethane	ND		50	42.7	85	50	43.5	87	2	74-131/10
106-93-4	1,2-Dibromoethane	ND		50	45.3	91	50	46.2	92	2	74-129/10
95-50-1	1,2-Dichlorobenzene	ND		50	46.5	93	50	47.1	94	1	73-126/11
541-73-1	1,3-Dichlorobenzene	ND		50	45.0	90	50	45.4	91	1	71-124/12
106-46-7	1,4-Dichlorobenzene	ND		50	46.5	93	50	47.0	94	1	71-123/12
75-71-8	Dichlorodifluoromethane	ND		50	37.3	75	50	38.7	77	4	20-161/25
75-34-3	1,1-Dichloroethane	ND		50	44.3	89	50	43.5	87	2	61-134/12
107-06-2	1,2-Dichloroethane	ND		50	40.3	81	50	39.7	79	1	68-137/11
75-35-4	1,1-Dichloroethene	ND		50	43.7	87	50	44.8	90	2	40-143/17
156-59-2	cis-1,2-Dichloroethene	ND		50	43.8	88	50	43.2	86	1	59-133/12
156-60-5	trans-1,2-Dichloroethene	ND		50	41.6	83	50	40.7	81	2	55-132/14
78-87-5	1,2-Dichloropropane	ND		50	47.2	94	50	47.9	96	1	70-128/11
10061-01-5	cis-1,3-Dichloropropene	ND		50	46.0	92	50	47.4	95	3	73-127/11
10061-02-6	trans-1,3-Dichloropropene	ND		50	43.8	88	50	45.0	90	3	72-128/11
123-91-1	1,4-Dioxane	ND		1250	1160	93	1250	1220	98	5	49-161/26
100-41-4	Ethylbenzene	ND		50	44.3	89	50	44.8	90	1	49-137/13
76-13-1	Freon 113	ND		50	49.0	98	50	50.5	101	3	32-161/23
591-78-6	2-Hexanone	ND		50	49.8	100	50	50.9	102	2	59-145/14
98-82-8	Isopropylbenzene	ND		50	47.4	95	50	48.8	98	3	57-136/14
79-20-9	Methyl Acetate	ND		50	44.0	88	50	42.9	86	3	46-148/15
108-87-2	Methylcyclohexane	ND		50	46.2	92	50	48.4	97	5	30-155/21

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB77674-1MS	1A143597.D	1	09/30/14	DS	n/a	n/a	V1A6195
JB77674-1MSD	1A143598.D	1	09/30/14	DS	n/a	n/a	V1A6195
JB77674-1	1A143594.D	1	09/30/14	DS	n/a	n/a	V1A6195

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB77674-1, JB77674-2, JB77674-8, JB77674-10

CAS No.	Compound	JB77674-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	0.65	J	50	43.4	86	50	44.7	88	3	64-134/11
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		50	51.6	103	50	53.4	107	3	63-144/13
75-09-2	Methylene chloride	ND		50	44.2	88	50	45.3	91	2	64-128/11
100-42-5	Styrene	ND		50	43.7	87	50	44.1	88	1	67-130/12
75-65-0	Tert Butyl Alcohol	ND		250	236	94	250	241	96	2	64-154/16
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	49.3	99	50	49.8	100	1	68-131/11
127-18-4	Tetrachloroethene	ND		50	40.6	81	50	41.5	83	2	48-143/15
108-88-3	Toluene	ND		50	43.8	88	50	45.6	91	4	54-137/13
87-61-6	1,2,3-Trichlorobenzene	ND		50	50.9	102	50	51.9	104	2	62-143/13
120-82-1	1,2,4-Trichlorobenzene	ND		50	51.0	102	50	52.0	104	2	66-138/12
71-55-6	1,1,1-Trichloroethane	ND		50	41.9	84	50	43.4	87	4	52-145/16
79-00-5	1,1,2-Trichloroethane	ND		50	45.8	92	50	46.9	94	2	73-130/10
79-01-6	Trichloroethene	ND		50	44.2	88	50	44.7	89	1	54-141/13
75-69-4	Trichlorofluoromethane	ND		50	44.5	89	50	45.4	91	2	33-159/25
75-01-4	Vinyl chloride	ND		50	46.2	92	50	47.3	95	2	36-149/19
	m,p-Xylene	ND		100	89.0	89	100	90.4	90	2	50-137/12
95-47-6	o-Xylene	ND		50	45.2	90	50	46.5	93	3	60-134/12
1330-20-7	Xylene (total)	ND		150	134	89	150	137	91	2	53-136/12

CAS No.	Surrogate Recoveries	MS	MSD	JB77674-1	Limits
1868-53-7	Dibromofluoromethane	97%	94%	94%	79-120%
17060-07-0	1,2-Dichloroethane-D4	88%	86%	87%	72-123%
2037-26-5	Toluene-D8	100%	102%	100%	78-119%
460-00-4	4-Bromofluorobenzene	102%	101%	98%	74-119%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB77682-4MS	2A151103.D	1	09/30/14	DS	n/a	n/a	V2A6440
JB77682-4MSD	2A151104.D	1	09/30/14	DS	n/a	n/a	V2A6440
JB77682-4	2A151102.D	1	09/30/14	DS	n/a	n/a	V2A6440

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB77674-11

CAS No.	Compound	JB77682-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50	36.3	73	50	33.8	68	7	44-160/20
71-43-2	Benzene	ND		50	47.1	94	50	44.9	90	5	50-136/12
74-97-5	Bromochloromethane	ND		50	46.2	92	50	45.7	91	1	74-131/11
75-27-4	Bromodichloromethane	ND		50	46.7	93	50	44.4	89	5	74-132/11
75-25-2	Bromoform	ND		50	41.9	84	50	39.8	80	5	68-136/12
74-83-9	Bromomethane	ND		50	51.1	102	50	48.3	97	6	37-157/21
78-93-3	2-Butanone (MEK)	ND		50	44.5	89	50	42.4	85	5	60-145/15
75-15-0	Carbon disulfide	ND		50	47.1	94	50	43.6	87	8	37-143/17
56-23-5	Carbon tetrachloride	ND		50	46.5	93	50	43.5	87	7	46-152/17
108-90-7	Chlorobenzene	ND		50	47.8	96	50	46.0	92	4	70-127/12
75-00-3	Chloroethane	ND		50	50.8	102	50	49.3	99	3	44-147/16
67-66-3	Chloroform	ND		50	47.4	95	50	45.1	90	5	67-129/12
74-87-3	Chloromethane	ND		50	52.1	104	50	48.9	98	6	40-149/19
110-82-7	Cyclohexane	ND		50	50.0	100	50	48.4	97	3	31-153/21
96-12-8	1,2-Dibromo-3-chloropropane	ND		50	39.2	78	50	37.7	75	4	61-144/14
124-48-1	Dibromochloromethane	ND		50	45.6	91	50	43.5	87	5	74-131/10
106-93-4	1,2-Dibromoethane	ND		50	47.7	95	50	45.9	92	4	74-129/10
95-50-1	1,2-Dichlorobenzene	ND		50	45.0	90	50	44.3	89	2	73-126/11
541-73-1	1,3-Dichlorobenzene	ND		50	46.2	92	50	45.0	90	3	71-124/12
106-46-7	1,4-Dichlorobenzene	ND		50	45.2	90	50	44.4	89	2	71-123/12
75-71-8	Dichlorodifluoromethane	ND		50	57.7	115	50	51.7	103	11	20-161/25
75-34-3	1,1-Dichloroethane	ND		50	48.6	97	50	46.6	93	4	61-134/12
107-06-2	1,2-Dichloroethane	ND		50	44.7	89	50	42.4	85	5	68-137/11
75-35-4	1,1-Dichloroethene	ND		50	50.4	101	50	47.5	95	6	40-143/17
156-59-2	cis-1,2-Dichloroethene	ND		50	48.2	96	50	46.4	93	4	59-133/12
156-60-5	trans-1,2-Dichloroethene	ND		50	49.6	99	50	47.9	96	3	55-132/14
78-87-5	1,2-Dichloropropane	ND		50	48.9	98	50	47.1	94	4	70-128/11
10061-01-5	cis-1,3-Dichloropropene	ND		50	47.1	94	50	45.1	90	4	73-127/11
10061-02-6	trans-1,3-Dichloropropene	ND		50	44.6	89	50	42.7	85	4	72-128/11
123-91-1	1,4-Dioxane	ND		1250	1160	93	1250	1380	110	17	49-161/26
76-13-1	Freon 113	ND		50	57.2	114	50	54.8	110	4	32-161/23
591-78-6	2-Hexanone	ND		50	43.9	88	50	41.7	83	5	59-145/14
98-82-8	Isopropylbenzene	ND		50	48.1	96	50	47.3	95	2	57-136/14
79-20-9	Methyl Acetate	ND		50	48.5	97	50	46.1	92	5	46-148/15
1634-04-4	Methyl Tert Butyl Ether	ND		50	46.2	92	50	44.7	89	3	64-134/11
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		50	46.1	92	50	44.4	89	4	63-144/13

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB77682-4MS	2A151103.D	1	09/30/14	DS	n/a	n/a	V2A6440
JB77682-4MSD	2A151104.D	1	09/30/14	DS	n/a	n/a	V2A6440
JB77682-4	2A151102.D	1	09/30/14	DS	n/a	n/a	V2A6440

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB77674-11

CAS No.	Compound	JB77682-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
75-09-2	Methylene chloride	ND		50	46.1	92	50	44.3	89	4	64-128/11
100-42-5	Styrene	ND		50	50.1	100	50	47.8	96	5	67-130/12
75-65-0	Tert Butyl Alcohol	ND		250	252	101	250	259	104	3	64-154/16
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	42.0	84	50	41.2	82	2	68-131/11
127-18-4	Tetrachloroethene	ND		50	49.8	100	50	47.8	96	4	48-143/15
108-88-3	Toluene	ND		50	50.8	102	50	48.5	97	5	54-137/13
87-61-6	1,2,3-Trichlorobenzene	ND		50	39.3	79	50	39.4	79	0	62-143/13
120-82-1	1,2,4-Trichlorobenzene	ND		50	43.2	86	50	43.1	86	0	66-138/12
71-55-6	1,1,1-Trichloroethane	ND		50	44.8	90	50	42.1	84	6	52-145/16
79-00-5	1,1,2-Trichloroethane	ND		50	49.0	98	50	46.8	94	5	73-130/10
79-01-6	Trichloroethene	ND		50	48.6	97	50	46.0	92	5	54-141/13
75-69-4	Trichlorofluoromethane	ND		50	60.1	120	50	55.3	111	8	33-159/25
75-01-4	Vinyl chloride	ND		50	60.0	120	50	55.7	111	7	36-149/19
95-47-6	o-Xylene	ND		50	48.2	96	50	46.5	93	4	60-134/12

CAS No.	Surrogate Recoveries	MS	MSD	JB77682-4	Limits
1868-53-7	Dibromofluoromethane	92%	94%	94%	79-120%
17060-07-0	1,2-Dichloroethane-D4	85%	83%	85%	72-123%
2037-26-5	Toluene-D8	97%	96%	98%	78-119%
460-00-4	4-Bromofluorobenzene	90%	90%	92%	74-119%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB77542-6MS	1A143738.D	1	10/03/14	DS	n/a	n/a	V1A6201
JB77542-6MSD	1A143739.D	1	10/03/14	DS	n/a	n/a	V1A6201
JB77542-6	1A143733.D	1	10/03/14	DS	n/a	n/a	V1A6201

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB77674-7, JB77674-10, JB77674-11

CAS No.	Compound	JB77542-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50	61.1	122	50	60.4	121	1	44-160/20
71-43-2	Benzene	ND		50	52.6	105	50	50.9	102	3	50-136/12
74-97-5	Bromochloromethane	ND		50	54.5	109	50	52.9	106	3	74-131/11
75-27-4	Bromodichloromethane	ND		50	52.0	104	50	50.6	101	3	74-132/11
75-25-2	Bromoform	ND		50	48.4	97	50	48.3	97	0	68-136/12
74-83-9	Bromomethane	ND		50	55.3	111	50	55.3	111	0	37-157/21
78-93-3	2-Butanone (MEK)	ND		50	62.3	125	50	61.8	124	1	60-145/15
75-15-0	Carbon disulfide	ND		50	56.4	113	50	54.3	109	4	37-143/17
56-23-5	Carbon tetrachloride	ND		50	50.2	100	50	48.5	97	3	46-152/17
108-90-7	Chlorobenzene	ND		50	53.9	108	50	52.8	106	2	70-127/12
75-00-3	Chloroethane	ND		50	57.8	116	50	56.5	113	2	44-147/16
67-66-3	Chloroform	ND		50	51.9	104	50	49.4	99	5	67-129/12
74-87-3	Chloromethane	ND		50	66.3	133	50	63.4	127	4	40-149/19
110-82-7	Cyclohexane	ND		50	58.0	116	50	55.9	112	4	31-153/21
96-12-8	1,2-Dibromo-3-chloropropane	ND		50	56.6	113	50	56.0	112	1	61-144/14
124-48-1	Dibromochloromethane	ND		50	49.6	99	50	49.0	98	1	74-131/10
106-93-4	1,2-Dibromoethane	ND		50	51.8	104	50	52.0	104	0	74-129/10
95-50-1	1,2-Dichlorobenzene	ND		50	54.5	109	50	52.7	105	3	73-126/11
541-73-1	1,3-Dichlorobenzene	ND		50	52.4	105	50	51.2	102	2	71-124/12
106-46-7	1,4-Dichlorobenzene	ND		50	53.8	108	50	52.6	105	2	71-123/12
75-71-8	Dichlorodifluoromethane	ND		50	62.9	126	50	61.4	123	2	20-161/25
75-34-3	1,1-Dichloroethane	ND		50	55.3	111	50	52.5	105	5	61-134/12
107-06-2	1,2-Dichloroethane	ND		50	47.1	94	50	45.8	92	3	68-137/11
75-35-4	1,1-Dichloroethene	ND		50	55.4	111	50	53.7	107	3	40-143/17
156-59-2	cis-1,2-Dichloroethene	ND		50	54.6	109	50	52.2	104	4	59-133/12
156-60-5	trans-1,2-Dichloroethene	ND		50	51.9	104	50	49.8	100	4	55-132/14
78-87-5	1,2-Dichloropropane	ND		50	56.5	113	50	55.1	110	3	70-128/11
10061-01-5	cis-1,3-Dichloropropene	ND		50	55.4	111	50	54.8	110	1	73-127/11
10061-02-6	trans-1,3-Dichloropropene	ND		50	51.2	102	50	51.0	102	0	72-128/11
123-91-1	1,4-Dioxane	ND		1250	1280	102	1250	1240	99	3	49-161/26
100-41-4	Ethylbenzene	ND		50	52.7	105	50	51.2	102	3	49-137/13
76-13-1	Freon 113	ND		50	57.9	116	50	56.7	113	2	32-161/23
591-78-6	2-Hexanone	ND		50	54.6	109	50	54.9	110	1	59-145/14
98-82-8	Isopropylbenzene	ND		50	58.8	118	50	56.4	113	4	57-136/14
79-20-9	Methyl Acetate	ND		50	49.8	100	50	48.8	98	2	46-148/15
108-87-2	Methylcyclohexane	ND		50	55.7	111	50	53.9	108	3	30-155/21

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB77542-6MS	1A143738.D	1	10/03/14	DS	n/a	n/a	V1A6201
JB77542-6MSD	1A143739.D	1	10/03/14	DS	n/a	n/a	V1A6201
JB77542-6	1A143733.D	1	10/03/14	DS	n/a	n/a	V1A6201

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB77674-7, JB77674-10, JB77674-11

CAS No.	Compound	JB77542-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	3.3		50	55.1	104	50	54.1	102	2	64-134/11
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		50	60.2	120	50	60.8	122	1	63-144/13
75-09-2	Methylene chloride	ND		50	55.1	110	50	53.0	106	4	64-128/11
100-42-5	Styrene	ND		50	50.8	102	50	49.6	99	2	67-130/12
75-65-0	Tert Butyl Alcohol	10.8		250	263	101	250	264	101	0	64-154/16
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	57.1	114	50	56.3	113	1	68-131/11
127-18-4	Tetrachloroethene	ND		50	49.2	98	50	48.3	97	2	48-143/15
108-88-3	Toluene	ND		50	53.2	106	50	52.3	105	2	54-137/13
87-61-6	1,2,3-Trichlorobenzene	ND		50	57.9	116	50	56.6	113	2	62-143/13
120-82-1	1,2,4-Trichlorobenzene	ND		50	59.1	118	50	57.4	115	3	66-138/12
71-55-6	1,1,1-Trichloroethane	ND		50	55.3	111	50	52.7	105	5	52-145/16
79-00-5	1,1,2-Trichloroethane	ND		50	53.0	106	50	52.8	106	0	73-130/10
79-01-6	Trichloroethene	ND		50	53.5	107	50	52.1	104	3	54-141/13
75-69-4	Trichlorofluoromethane	ND		50	61.2	122	50	59.6	119	3	33-159/25
75-01-4	Vinyl chloride	ND		50	66.3	133	50	65.0	130	2	36-149/19
	m,p-Xylene	ND		100	106	106	100	103	103	3	50-137/12
95-47-6	o-Xylene	ND		50	54.6	109	50	52.7	105	4	60-134/12
1330-20-7	Xylene (total)	ND		150	160	107	150	156	104	3	53-136/12

CAS No.	Surrogate Recoveries	MS	MSD	JB77542-6	Limits
1868-53-7	Dibromofluoromethane	99%	98%	95%	79-120%
17060-07-0	1,2-Dichloroethane-D4	92%	90%	90%	72-123%
2037-26-5	Toluene-D8	101%	102%	102%	78-119%
460-00-4	4-Bromofluorobenzene	103%	103%	100%	74-119%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB77623-7MS	3A135327.D	1	10/05/14	JM	n/a	n/a	V3A5854
JB77623-7MSD	3A135328.D	1	10/05/14	JM	n/a	n/a	V3A5854
JB77623-7	3A135322.D	1	10/05/14	JM	n/a	n/a	V3A5854

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB77674-3, JB77674-4, JB77674-5, JB77674-6, JB77674-9

CAS No.	Compound	JB77623-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	15.9		50	66.1	100	50	66.3	101	0	44-160/20
71-43-2	Benzene	1.9		50	49.5	95	50	48.5	93	2	50-136/12
74-97-5	Bromochloromethane	ND		50	48.2	96	50	49.6	99	3	74-131/11
75-27-4	Bromodichloromethane	ND		50	51.5	103	50	51.7	103	0	74-132/11
75-25-2	Bromoform	ND		50	50.8	102	50	50.2	100	1	68-136/12
74-83-9	Bromomethane	ND		50	44.3	89	50	43.4	87	2	37-157/21
78-93-3	2-Butanone (MEK)	ND		50	43.7	87	50	46.1	92	5	60-145/15
75-15-0	Carbon disulfide	ND		50	36.1	72	50	35.2	70	3	37-143/17
56-23-5	Carbon tetrachloride	ND		50	47.2	94	50	46.5	93	1	46-152/17
108-90-7	Chlorobenzene	ND		50	52.1	104	50	51.1	102	2	70-127/12
75-00-3	Chloroethane	ND		50	47.9	96	50	46.8	94	2	44-147/16
67-66-3	Chloroform	ND		50	47.7	95	50	46.3	93	3	67-129/12
74-87-3	Chloromethane	ND		50	42.9	86	50	42.0	84	2	40-149/19
110-82-7	Cyclohexane	3.7	J	50	46.1	85	50	45.5	84	1	31-153/21
96-12-8	1,2-Dibromo-3-chloropropane	ND		50	49.1	98	50	49.0	98	0	61-144/14
124-48-1	Dibromochloromethane	ND		50	52.0	104	50	52.5	105	1	74-131/10
106-93-4	1,2-Dibromoethane	ND		50	51.9	104	50	52.0	104	0	74-129/10
95-50-1	1,2-Dichlorobenzene	ND		50	53.5	107	50	52.9	106	1	73-126/11
541-73-1	1,3-Dichlorobenzene	ND		50	52.6	105	50	51.6	103	2	71-124/12
106-46-7	1,4-Dichlorobenzene	ND		50	54.1	108	50	53.8	108	1	71-123/12
75-71-8	Dichlorodifluoromethane	ND		50	51.5	103	50	51.4	103	0	20-161/25
75-34-3	1,1-Dichloroethane	ND		50	45.9	92	50	45.9	92	0	61-134/12
107-06-2	1,2-Dichloroethane	ND		50	47.3	95	50	47.8	96	1	68-137/11
75-35-4	1,1-Dichloroethene	ND		50	39.9	80	50	39.2	78	2	40-143/17
156-59-2	cis-1,2-Dichloroethene	ND		50	43.1	86	50	43.2	86	0	59-133/12
156-60-5	trans-1,2-Dichloroethene	ND		50	44.7	89	50	43.6	87	2	55-132/14
78-87-5	1,2-Dichloropropane	ND		50	48.3	97	50	48.2	96	0	70-128/11
10061-01-5	cis-1,3-Dichloropropene	ND		50	53.3	107	50	53.8	108	1	73-127/11
10061-02-6	trans-1,3-Dichloropropene	ND		50	53.7	107	50	54.3	109	1	72-128/11
123-91-1	1,4-Dioxane	ND		1250	1420	114	1250	1450	116	2	49-161/26
100-41-4	Ethylbenzene	1.4		50	52.6	102	50	52.1	101	1	49-137/13
76-13-1	Freon 113	ND		50	32.3	65	50	32.4	65	0	32-161/23
591-78-6	2-Hexanone	ND		50	49.8	100	50	49.3	99	1	59-145/14
98-82-8	Isopropylbenzene	ND		50	54.1	108	50	52.8	106	2	57-136/14
79-20-9	Methyl Acetate	ND		50	39.9	80	50	40.2	80	1	46-148/15
108-87-2	Methylcyclohexane	3.4	J	50	44.0	81	50	42.4	78	4	30-155/21

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB77623-7MS	3A135327.D	1	10/05/14	JM	n/a	n/a	V3A5854
JB77623-7MSD	3A135328.D	1	10/05/14	JM	n/a	n/a	V3A5854
JB77623-7	3A135322.D	1	10/05/14	JM	n/a	n/a	V3A5854

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB77674-3, JB77674-4, JB77674-5, JB77674-6, JB77674-9

CAS No.	Compound	JB77623-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	ND		50	45.0	90	50	45.7	91	2	64-134/11
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		50	52.5	105	50	52.7	105	0	63-144/13
75-09-2	Methylene chloride	ND		50	42.5	85	50	42.2	84	1	64-128/11
100-42-5	Styrene	ND		50	53.5	107	50	52.8	106	1	67-130/12
75-65-0	Tert Butyl Alcohol	ND		250	273	109	250	287	115	5	64-154/16
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	53.4	107	50	53.2	106	0	68-131/11
127-18-4	Tetrachloroethene	ND		50	46.7	93	50	46.0	92	2	48-143/15
108-88-3	Toluene	0.97	J	50	51.0	100	50	49.5	97	3	54-137/13
87-61-6	1,2,3-Trichlorobenzene	ND		50	55.1	110	50	54.0	108	2	62-143/13
120-82-1	1,2,4-Trichlorobenzene	ND		50	54.5	109	50	54.1	108	1	66-138/12
71-55-6	1,1,1-Trichloroethane	ND		50	47.9	96	50	46.7	93	3	52-145/16
79-00-5	1,1,2-Trichloroethane	ND		50	54.0	108	50	53.9	108	0	73-130/10
79-01-6	Trichloroethene	ND		50	48.1	96	50	46.9	94	3	54-141/13
75-69-4	Trichlorofluoromethane	ND		50	49.1	98	50	49.4	99	1	33-159/25
75-01-4	Vinyl chloride	ND		50	44.4	89	50	43.7	87	2	36-149/19
	m,p-Xylene	7.8		100	110	102	100	108	100	2	50-137/12
95-47-6	o-Xylene	3.8		50	53.0	98	50	52.6	98	1	60-134/12
1330-20-7	Xylene (total)	11.6		150	163	101	150	161	100	1	53-136/12

CAS No.	Surrogate Recoveries	MS	MSD	JB77623-7	Limits
1868-53-7	Dibromofluoromethane	109%	109%	110%	79-120%
17060-07-0	1,2-Dichloroethane-D4	100%	100%	102%	72-123%
2037-26-5	Toluene-D8	115%	116%	112%	78-119%
460-00-4	4-Bromofluorobenzene	108%	107%	100%	74-119%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample: V1A6142-BFB
Lab File ID: 1A142295.D
Instrument ID: GCMS1A
Injection Date: 08/27/14
Injection Time: 09:35

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.99 - 40.0% of mass 95	15259	17.8		Pass
75	30.0 - 60.0% of mass 95	40552	47.2		Pass
95	Base peak, 100% relative abundance	85882	100.0		Pass
96	5.0 - 9.0% of mass 95	6025	7.02		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	80776	94.1		Pass
175	5.0 - 9.0% of mass 174	6478	7.54	(8.02) [a]	Pass
176	95.0 - 101.0% of mass 174	78693	91.6	(97.4) [a]	Pass
177	5.0 - 9.0% of mass 176	5496	6.40	(6.98) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V1A6142-IC6142	1A142296.D	08/27/14	10:07	00:32	Initial cal 0.2
V1A6142-IC6142	1A142297.D	08/27/14	10:35	01:00	Initial cal 0.5
V1A6142-IC6142	1A142298.D	08/27/14	11:03	01:28	Initial cal 1.0
V1A6142-IC6142	1A142299.D	08/27/14	11:31	01:56	Initial cal 2.0
V1A6142-IC6142	1A142300.D	08/27/14	11:59	02:24	Initial cal 5.0
V1A6142-IC6142	1A142301.D	08/27/14	12:27	02:52	Initial cal 10
V1A6142-IC6142	1A142302.D	08/27/14	12:55	03:20	Initial cal 20
V1A6142-ICC6142	1A142303.D	08/27/14	13:23	03:48	Initial cal 50
V1A6142-IC6142	1A142304.D	08/27/14	13:51	04:16	Initial cal 100
V1A6142-IC6142	1A142305.D	08/27/14	14:19	04:44	Initial cal 200
V1A6142-ICV6142	1A142308.D	08/27/14	15:42	06:07	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample: V1A6195-BFB
Lab File ID: 1A143589.D
Instrument ID: GCMS1A
Injection Date: 09/30/14
Injection Time: 08:18

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.99 - 40.0% of mass 95	12556	16.0		Pass
75	30.0 - 60.0% of mass 95	34941	44.4		Pass
95	Base peak, 100% relative abundance	78667	100.0		Pass
96	5.0 - 9.0% of mass 95	5503	7.00		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	74619	94.9		Pass
175	5.0 - 9.0% of mass 174	5746	7.30	(7.70) [a]	Pass
176	95.0 - 101.0% of mass 174	72803	92.5	(97.6) [a]	Pass
177	5.0 - 9.0% of mass 176	4912	6.24	(6.75) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V1A6195-CC6142	1A143590.D	09/30/14	08:49	00:31	Continuing cal 20
V1A6195-MB	1A143591.D	09/30/14	09:26	01:08	Method Blank
V1A6195-BS	1A143592.D	09/30/14	10:01	01:43	Blank Spike
JB77674-1	1A143594.D	09/30/14	10:57	02:39	MW-1
JB77674-2	1A143595.D	09/30/14	11:24	03:06	MW-3
JB77674-1MS	1A143597.D	09/30/14	12:20	04:02	Matrix Spike
JB77674-1MSD	1A143598.D	09/30/14	12:48	04:30	Matrix Spike Duplicate
ZZZZZZ	1A143600.D	09/30/14	13:44	05:26	(unrelated sample)
ZZZZZZ	1A143602.D	09/30/14	14:40	06:22	(unrelated sample)
JB77674-8	1A143607.D	09/30/14	16:58	08:40	MW-14
JB77674-10	1A143609.D	09/30/14	17:55	09:37	MW-17R

Instrument Performance Check (BFB)

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample: V1A6201-BFB
Lab File ID: 1A143727.D
Instrument ID: GCMS1A
Injection Date: 10/03/14
Injection Time: 08:21

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.99 - 40.0% of mass 95	13297	17.0		Pass
75	30.0 - 60.0% of mass 95	35272	45.0		Pass
95	Base peak, 100% relative abundance	78394	100.0		Pass
96	5.0 - 9.0% of mass 95	5324	6.79		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	75090	95.8		Pass
175	5.0 - 9.0% of mass 174	5732	7.31	(7.63) [a]	Pass
176	95.0 - 101.0% of mass 174	72098	92.0	(96.0) [a]	Pass
177	5.0 - 9.0% of mass 176	4865	6.21	(6.75) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V1A6201-CC6142	1A143728.D	10/03/14	08:53	00:32	Continuing cal 20
V1A6201-MB	1A143729.D	10/03/14	09:31	01:10	Method Blank
V1A6201-BS	1A143730.D	10/03/14	10:07	01:46	Blank Spike
ZZZZZZ	1A143732.D	10/03/14	11:05	02:44	(unrelated sample)
JB77542-6	1A143733.D	10/03/14	11:33	03:12	(used for QC only; not part of job JB77674)
ZZZZZZ	1A143734.D	10/03/14	12:03	03:42	(unrelated sample)
ZZZZZZ	1A143735.D	10/03/14	12:31	04:10	(unrelated sample)
JB77674-10	1A143736.D	10/03/14	12:58	04:37	MW-17R
JB77674-11	1A143737.D	10/03/14	13:27	05:06	MW-18R
JB77542-6MS	1A143738.D	10/03/14	13:55	05:34	Matrix Spike
JB77542-6MSD	1A143739.D	10/03/14	14:23	06:02	Matrix Spike Duplicate
ZZZZZZ	1A143741.D	10/03/14	15:19	06:58	(unrelated sample)
ZZZZZZ	1A143742.D	10/03/14	15:47	07:26	(unrelated sample)
ZZZZZZ	1A143743.D	10/03/14	16:15	07:54	(unrelated sample)
ZZZZZZ	1A143744.D	10/03/14	16:43	08:22	(unrelated sample)
ZZZZZZ	1A143745.D	10/03/14	17:10	08:49	(unrelated sample)
JB77674-7	1A143746.D	10/03/14	17:38	09:17	MW-2

Instrument Performance Check (BFB)

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample: V2A6388-BFB
Lab File ID: 2A149888.D
Instrument ID: GCMS2A
Injection Date: 08/27/14
Injection Time: 14:19

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	11501	18.9		Pass
75	30.0 - 60.0% of mass 95	29005	47.7		Pass
95	Base peak, 100% relative abundance	60789	100.0		Pass
96	5.0 - 9.0% of mass 95	3976	6.54		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	62013	102.0		Pass
175	5.0 - 9.0% of mass 174	5200	8.55	(8.39) [a]	Pass
176	95.0 - 101.0% of mass 174	61352	100.9	(98.9) [a]	Pass
177	5.0 - 9.0% of mass 176	4048	6.66	(6.60) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2A6388-IC6388	2A149889.D	08/27/14	14:53	00:34	Initial cal 1.0
V2A6388-IC6388	2A149890.D	08/27/14	15:28	01:09	Initial cal 0.2
V2A6388-IC6388	2A149891.D	08/27/14	15:58	01:39	Initial cal 0.5
V2A6388-IC6388	2A149892.D	08/27/14	16:28	02:09	Initial cal 2.0
V2A6388-IC6388	2A149893.D	08/27/14	16:58	02:39	Initial cal 5.0
V2A6388-IC6388	2A149894.D	08/27/14	17:28	03:09	Initial cal 10
V2A6388-IC6388	2A149895.D	08/27/14	17:58	03:39	Initial cal 20
V2A6388-ICC6388	2A149896.D	08/27/14	18:28	04:09	Initial cal 50
V2A6388-IC6388	2A149897.D	08/27/14	18:58	04:39	Initial cal 100
V2A6388-IC6388	2A149898.D	08/27/14	19:28	05:09	Initial cal 200
V2A6388-ICV6388	2A149901.D	08/27/14	20:57	06:38	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample: V2A6440-BFB
Lab File ID: 2A151096.D
Instrument ID: GCMS2A
Injection Date: 09/30/14
Injection Time: 12:41

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	12692	17.9		Pass
75	30.0 - 60.0% of mass 95	33514	47.3		Pass
95	Base peak, 100% relative abundance	70888	100.0		Pass
96	5.0 - 9.0% of mass 95	4782	6.75		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	75389	106.3		Pass
175	5.0 - 9.0% of mass 174	6022	8.50	(7.99) [a]	Pass
176	95.0 - 101.0% of mass 174	74874	105.6	(99.3) [a]	Pass
177	5.0 - 9.0% of mass 176	5171	7.29	(6.91) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2A6440-CC6388	2A151096A.D	09/30/14	13:10	00:29	Continuing cal 20
V2A6440-MB	2A151097.D	09/30/14	13:47	01:06	Method Blank
V2A6440-BS	2A151098.D	09/30/14	14:22	01:41	Blank Spike
ZZZZZZ	2A151100.D	09/30/14	15:28	02:47	(unrelated sample)
JB77682-4	2A151102.D	09/30/14	16:52	04:11	(used for QC only; not part of job JB77674)
JB77682-4MS	2A151103.D	09/30/14	17:43	05:02	Matrix Spike
JB77682-4MSD	2A151104.D	09/30/14	18:12	05:31	Matrix Spike Duplicate
JB77674-11	2A151106.D	09/30/14	19:12	06:31	MW-18R
ZZZZZZ	2A151113.D	09/30/14	22:40	09:59	(unrelated sample)
ZZZZZZ	2A151114.D	09/30/14	23:10	10:29	(unrelated sample)
ZZZZZZ	2A151115.D	09/30/14	23:40	10:59	(unrelated sample)
ZZZZZZ	2A151116.D	10/01/14	00:10	11:29	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample:	V3A5831-BFB	**Injection Date:**	09/23/14
Lab File ID:	3A134838.D	**Injection Time:**	15:00
Instrument ID:	GCMS3A		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	7443	17.5		Pass
75	30.0 - 60.0% of mass 95	19445	45.7		Pass
95	Base peak, 100% relative abundance	42506	100.0		Pass
96	5.0 - 9.0% of mass 95	2901	6.82		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	34146	80.3		Pass
175	5.0 - 9.0% of mass 174	2732	6.43	(8.00) [a]	Pass
176	95.0 - 101.0% of mass 174	33376	78.5	(97.7) [a]	Pass
177	5.0 - 9.0% of mass 176	2217	5.22	(6.64) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3A5831-IC5831	3A134839.D	09/23/14	15:33	00:33	Initial cal 0.5
V3A5831-IC5831	3A134840.D	09/23/14	16:02	01:02	Initial cal 1
V3A5831-IC5831	3A134841.D	09/23/14	16:35	01:35	Initial cal 0.2
V3A5831-IC5831	3A134842.D	09/23/14	17:05	02:05	Initial cal 2
V3A5831-IC5831	3A134843.D	09/23/14	17:34	02:34	Initial cal 5
V3A5831-IC5831	3A134844.D	09/23/14	18:04	03:04	Initial cal 10
V3A5831-IC5831	3A134845.D	09/23/14	18:34	03:34	Initial cal 20
V3A5831-ICC5831	3A134846.D	09/23/14	19:04	04:04	Initial cal 50
V3A5831-IC5831	3A134847.D	09/23/14	19:34	04:34	Initial cal 100
V3A5831-IC5831	3A134848.D	09/23/14	20:04	05:04	Initial cal 200
V3A5831-ICV5831	3A134851.D	09/23/14	21:33	06:33	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample: V3A5831-BFB
Lab File ID: 3A134852.D
Instrument ID: GCMS3A
Injection Date: 09/24/14
Injection Time: 08:51

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	9019	17.7		Pass
75	30.0 - 60.0% of mass 95	23525	46.2		Pass
95	Base peak, 100% relative abundance	50898	100.0		Pass
96	5.0 - 9.0% of mass 95	3664	7.20		Pass
173	Less than 2.0% of mass 174	148	0.29	(0.36) [a]	Pass
174	50.0 - 120.0% of mass 95	41298	81.1		Pass
175	5.0 - 9.0% of mass 174	3133	6.16	(7.59) [a]	Pass
176	95.0 - 101.0% of mass 174	40264	79.1	(97.5) [a]	Pass
177	5.0 - 9.0% of mass 176	2593	5.09	(6.44) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3A5831-ICV5831	3A134853.D	09/24/14	09:29	00:38	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample:	V3A5854-BFB	**Injection Date:**	10/05/14
Lab File ID:	3A135314.D	**Injection Time:**	09:34
Instrument ID:	GCMS3A		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	7527	16.6		Pass
75	30.0 - 60.0% of mass 95	20349	44.8		Pass
95	Base peak, 100% relative abundance	45403	100.0		Pass
96	5.0 - 9.0% of mass 95	2977	6.56		Pass
173	Less than 2.0% of mass 174	132	0.29	(0.35) [a]	Pass
174	50.0 - 120.0% of mass 95	37408	82.4		Pass
175	5.0 - 9.0% of mass 174	2969	6.54	(7.94) [a]	Pass
176	95.0 - 101.0% of mass 174	36411	80.2	(97.3) [a]	Pass
177	5.0 - 9.0% of mass 176	2625	5.78	(7.21) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3A5854-CC5831	3A135316.D	10/05/14	10:39	01:05	Continuing cal 20
V3A5854-MB	3A135318.D	10/05/14	11:46	02:12	Method Blank
V3A5854-BS	3A135319.D	10/05/14	12:28	02:54	Blank Spike
JB77674-4	3A135321.D	10/05/14	13:28	03:54	MW-19
JB77623-7	3A135322.D	10/05/14	13:58	04:24	(used for QC only; not part of job JB77674)
JB77674-9	3A135323.D	10/05/14	14:28	04:54	MW-16R
JB77674-5	3A135324.D	10/05/14	14:58	05:24	MW-6
JB77674-3	3A135325.D	10/05/14	15:28	05:54	MW-11
JB77674-6	3A135326.D	10/05/14	15:58	06:24	MW-12
JB77623-7MS	3A135327.D	10/05/14	16:28	06:54	Matrix Spike
JB77623-7MSD	3A135328.D	10/05/14	16:58	07:24	Matrix Spike Duplicate
ZZZZZZ	3A135329.D	10/05/14	17:27	07:53	(unrelated sample)
ZZZZZZ	3A135330.D	10/05/14	17:59	08:25	(unrelated sample)
ZZZZZZ	3A135332.D	10/05/14	18:59	09:25	(unrelated sample)
ZZZZZZ	3A135333.D	10/05/14	19:29	09:55	(unrelated sample)
ZZZZZZ	3A135334.D	10/05/14	19:59	10:25	(unrelated sample)

Volatile Internal Standard Area Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Check Std: V1A6195-CC6142 **Injection Date:** 09/30/14
Lab File ID: 1A143590.D **Injection Time:** 08:49
Instrument ID: GCMS1A **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	62178	8.51	215645	10.94	247351	11.89	231540	15.21	122868	17.70
Upper Limit [a]	124356	9.01	431290	11.44	494702	12.39	463080	15.71	245736	18.20
Lower Limit [b]	31089	8.01	107823	10.44	123676	11.39	115770	14.71	61434	17.20

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V1A6195-MB	80326	8.51	262511	10.94	281342	11.89	257162	15.21	139641	17.70
V1A6195-BS	69160	8.51	204167	10.94	243852	11.89	235823	15.21	121706	17.70
JB77674-1	84174	8.51	257031	10.94	276067	11.89	261222	15.21	139124	17.70
JB77674-2	81499	8.50	242313	10.94	270249	11.89	264327	15.21	138927	17.70
JB77674-1MS	75149	8.51	220782	10.94	257402	11.89	239080	15.21	124300	17.70
JB77674-1MSD	77277	8.51	220615	10.94	254921	11.89	239941	15.21	125320	17.70
ZZZZZZ	86739	8.50	257846	10.94	288052	11.89	276040	15.21	145027	17.70
ZZZZZZ	87927	8.50	245468	10.94	277066	11.89	264158	15.21	139445	17.70
JB77674-8	85958	8.50	251031	10.94	273408	11.89	273416	15.21	141451	17.70
JB77674-10	93683	8.51	258387	10.94	282379	11.89	295062	15.22	148037	17.70

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Check Std:	V1A6201-CC6142	**Injection Date:**	10/03/14
Lab File ID:	1A143728.D	**Injection Time:**	08:53
Instrument ID:	GCMS1A	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	77288	8.50	215345	10.94	248507	11.89	233407	15.21	120495	17.70
Upper Limit [a]	154576	9.00	430690	11.44	497014	12.39	466814	15.71	240990	18.20
Lower Limit [b]	38644	8.00	107673	10.44	124254	11.39	116704	14.71	60248	17.20

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V1A6201-MB	91440	8.50	261230	10.93	287072	11.89	269228	15.21	139741	17.70
V1A6201-BS	72758	8.51	205706	10.94	245421	11.89	228617	15.21	118352	17.70
ZZZZZZ	77986	8.50	252044	10.94	277680	11.89	265129	15.21	138658	17.70
JB77542-6	80978	8.50	248826	10.94	272577	11.89	265461	15.21	138098	17.70
ZZZZZZ	85874	8.50	246140	10.94	269753	11.89	257401	15.21	134840	17.70
ZZZZZZ	81329	8.50	228102	10.94	253028	11.89	246764	15.21	132943	17.70
JB77674-10	84329	8.51	247209	10.94	275623	11.89	269554	15.21	135008	17.70
JB77674-11	86786	8.51	255800	10.94	279416	11.89	271934	15.21	133901	17.70
JB77542-6MS	75393	8.52	210344	10.94	252885	11.89	233447	15.22	119902	17.70
JB77542-6MSD	77355	8.51	217488	10.94	260216	11.89	242205	15.21	124870	17.70
ZZZZZZ	95126	8.51	266164	10.94	296038	11.89	280330	15.21	144592	17.70
ZZZZZZ	94943	8.50	258664	10.94	289758	11.89	276685	15.21	141321	17.70
ZZZZZZ	89748	8.50	248902	10.94	260636	11.89	262580	15.21	133676	17.70
ZZZZZZ	92249	8.51	236202	10.94	254813	11.89	262182	15.21	134245	17.70
ZZZZZZ	94042	8.51	267940	10.94	287795	11.89	275899	15.21	139981	17.70
JB77674-7	88795	8.50	255682	10.94	282713	11.89	266982	15.21	141175	17.70

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Check Std: V2A6440-CC6388 **Injection Date:** 09/30/14
Lab File ID: 2A151096A.D **Injection Time:** 13:10
Instrument ID: GCMS2A **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	84858	7.94	288011	10.39	295730	11.32	256285	14.35	146536	16.52
Upper Limit [a]	169716	8.44	576022	10.89	591460	11.82	512570	14.85	293072	17.02
Lower Limit [b]	42429	7.44	144006	9.89	147865	10.82	128143	13.85	73268	16.02

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V2A6440-MB	98645	7.94	291152	10.39	290041	11.32	251635	14.36	142810	16.52
V2A6440-BS	89093	7.94	278825	10.39	282872	11.32	241249	14.36	140801	16.52
ZZZZZZ	99548	7.94	294416	10.38	299864	11.32	257615	14.35	145206	16.52
JB77682-4	105714	7.94	308060	10.39	308078	11.32	273964	14.36	154099	16.52
JB77682-4MS	97990	7.94	301585	10.38	305939	11.32	261493	14.36	153315	16.52
JB77682-4MSD	99912	7.94	313127	10.38	320730	11.32	271439	14.35	155537	16.52
JB77674-11	126452	7.94	318916	10.39	321252	11.32	274507	14.35	164770	16.52
ZZZZZZ	123789	7.93	348964	10.38	360712	11.32	310934	14.35	172151	16.52
ZZZZZZ	111237	7.93	353243	10.38	360401	11.32	305637	14.35	168251	16.52
ZZZZZZ	110857	7.93	344448	10.38	352511	11.32	303100	14.35	169739	16.52
ZZZZZZ	104060	7.93	346892	10.39	355498	11.32	307899	14.35	169286	16.52

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Check Std: V3A5854-CC5831 **Injection Date:** 10/05/14
Lab File ID: 3A135316.D **Injection Time:** 10:39
Instrument ID: GCMS3A **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	111527	8.35	169799	10.77	210030	11.74	183127	15.08	105410	17.57
Upper Limit [a]	223054	8.85	339598	11.27	420060	12.24	366254	15.58	210820	18.07
Lower Limit [b]	55764	7.85	84900	10.27	105015	11.24	91564	14.58	52705	17.07

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V3A5854-MB	105026	8.35	167255	10.77	202263	11.74	172781	15.08	111002	17.57
V3A5854-BS	114136	8.36	166798	10.77	207080	11.74	178790	15.08	98813	17.57
JB77674-4	105562	8.35	163941	10.77	196075	11.74	171161	15.08	106443	17.57
JB77623-7	108376	8.35	159380	10.77	192256	11.74	165495	15.08	103094	17.57
JB77674-9	109586	8.35	158855	10.77	195770	11.74	168018	15.08	100406	17.57
JB77674-5	106132	8.35	160233	10.77	194287	11.74	166631	15.08	98619	17.57
JB77674-3	118248	8.35	167249	10.77	203523	11.74	173632	15.08	99983	17.57
JB77674-6	119153	8.36	174034	10.77	211636	11.74	186641	15.08	104290	17.57
JB77623-7MS	128446	8.35	181339	10.77	223778	11.74	199016	15.08	109345	17.57
JB77623-7MSD	123839	8.36	179736	10.77	222696	11.74	198735	15.08	109940	17.57
ZZZZZZ	113356	8.36	174577	10.77	212835	11.74	182536	15.08	111959	17.57
ZZZZZZ	131793	8.35	178815	10.77	220247	11.74	194126	15.08	109373	17.57
ZZZZZZ	108388	8.36	173576	10.77	211829	11.74	184374	15.08	117074	17.57
ZZZZZZ	105658	8.35	172671	10.77	208461	11.74	179233	15.08	114288	17.57
ZZZZZZ	110767	8.36	171232	10.77	212003	11.74	185860	15.08	104370	17.57

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: JB77674
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Method: SW846 8260B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JB77674-1	1A143594.D	94	87	100	98
JB77674-2	1A143595.D	95	89	102	98
JB77674-3	3A135325.D	108	102	114	106
JB77674-4	3A135321.D	109	100	110	100
JB77674-5	3A135324.D	108	103	111	104
JB77674-6	3A135326.D	108	107	116	111
JB77674-7	1A143746.D	96	90	99	99
JB77674-8	1A143607.D	92	83	102	100
JB77674-9	3A135323.D	110	103	112	102
JB77674-10	1A143736.D	94	90	103	100
JB77674-10	1A143609.D	91	83	107	96
JB77674-11	2A151106.D	92	83	96	90
JB77674-11	1A143737.D	95	88	102	104
JB77542-6MS	1A143738.D	99	92	101	103
JB77542-6MSD	1A143739.D	98	90	102	103
JB77623-7MS	3A135327.D	109	100	115	108
JB77623-7MSD	3A135328.D	109	100	116	107
JB77674-1MS	1A143597.D	97	88	100	102
JB77674-1MSD	1A143598.D	94	86	102	101
JB77682-4MS	2A151103.D	92	85	97	90
JB77682-4MSD	2A151104.D	94	83	96	90
V1A6195-BS	1A143592.D	98	90	103	102
V1A6195-MB	1A143591.D	96	87	97	97
V1A6201-BS	1A143730.D	100	93	100	103
V1A6201-MB	1A143729.D	95	89	100	100
V2A6440-BS	2A151098.D	93	87	96	89
V2A6440-MB	2A151097.D	92	87	97	92
V3A5854-BS	3A135319.D	110	102	115	109
V3A5854-MB	3A135318.D	109	100	109	99

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	79-120%
S2 = 1,2-Dichloroethane-D4	72-123%
S3 = Toluene-D8	78-119%
S4 = 4-Bromofluorobenzene	74-119%

Initial Calibration Summary

Job Number: JB77674 **Sample:** V1A6142-ICC6142
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 1A142303.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Response Factor Report MS1A

Method : C:\MSDCHEM\1\METHODS\M1A6142.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update : Wed Aug 27 17:10:31 2014
Response via : Initial Calibration

Calibration Files
1 =1A142298.D 0.5 =1A142297.D 100 =1A142304.D 50 =1A142303.D
20 =1A142302.D 200 =1A142305.D 5 =1A142300.D 2 =1A142299.D
10 =1A142301.D 0.2 =1A142296.D = =

Compound	1	0.5	100	50	20	200	5	2	10	0.2	Avg	%RSD
1) tert butyl alcohol-d9	----------ISTD----------											
2) tertiary butyl alcohol	1.502	1.530	1.553	1.499	1.580	1.459	1.713	1.493			1.541	5.14
3) Ethanol	0.252	0.149	0.165	0.168	0.146	0.180	0.211	0.170			0.180	19.50
----- Linear regression ----- Coefficient = 0.9992												
Response Ratio = 0.06459 + 0.14569 *A												
4) 1,4-dioxane	0.135	0.178	0.179	0.162	0.189	0.151	0.171	0.157			0.165	10.65
5) I pentafluorobenzene	----------ISTD----------											
6) chlorodifluoromethane	0.626	0.644	0.667	0.727	0.721	0.631	0.673	0.695	0.626	0.585	0.660	6.90
7) dichlorodifluoromethane		0.819	0.872	0.832	0.802	0.783	0.690	0.724			0.789	8.00
8) chloromethane	0.787	0.812	0.775	0.853	0.868	0.745	0.863	0.839	0.799	0.849	0.819	5.11
9) vinyl chloride	0.689	0.664	0.713	0.783	0.787	0.691	0.792	0.758	0.741		0.735	6.51
10) bromomethane	0.501	0.559	0.442	0.475	0.501	0.374	0.516	0.500	0.479	0.579	0.493	11.68
11) chloroethane	0.290	0.345	0.353	0.369	0.323	0.358	0.317	0.345			0.338	7.63
12) trichlorofluoromethane	0.590	0.777	0.832	0.831	0.757	0.799	0.674	0.751			0.751	10.99
13) Pentane											0.000#	-1.00
14) ethyl ether	0.309	0.289	0.277	0.285	0.288	0.268	0.271	0.268	0.272		0.281	4.80
15) acrolein	0.098		0.106	0.102		0.106	0.094	0.104			0.102	4.55
16) 1,1-dichloroethene	0.704	0.602	0.684	0.696	0.758	0.657	0.735	0.585	0.700	0.609	0.673	8.66
17) acetone		0.040	0.042	0.042	0.039	0.044		0.042			0.041	4.29
18) allyl chloride	0.251	0.238	0.244	0.248	0.237	0.232	0.201	0.236			0.236	6.54
19) acetonitrile	0.055	0.038	0.040	0.043	0.036	0.047	0.046	0.044			0.044	13.84
20) iodomethane	0.886	0.721	0.910	0.908	0.960	0.877	0.914	0.787	0.897	0.986	0.885	8.79
21) carbon disulfide	1.637	1.489	1.496	1.547	1.622	1.470	1.583	1.392	1.501		1.526	5.14

Initial Calibration Summary

Job Number: JB77674 **Sample:** V1A6142-ICC6142
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 1A142303.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

22) methylene chloride
0.585 0.517 0.496 0.501 0.527 0.476 0.517 0.496 0.499 0.513 6.07
23) methyl acetate
0.442 0.505 0.352 0.374 0.382 0.335 0.390 0.412 0.379 0.397 12.81
24) methyl tert butyl ether
1.551 1.339 1.397 1.436 1.477 1.328 1.475 1.389 1.412 1.816 1.462 9.66
25) trans-1,2-dichloroethene
0.722 0.538 0.592 0.626 0.658 0.582 0.639 0.603 0.625 0.789 0.637 11.33
26) di-isopropyl ether
1.394 1.471 1.389 1.444 1.499 1.325 1.478 1.507 1.375 1.443 1.433 4.16
27) 2-butanone
0.056 0.058 0.057 0.056 0.052 0.042 0.053 0.053 9.83
28) 1,1-dichloroethane
0.896 0.698 0.798 0.821 0.849 0.788 0.800 0.777 0.810 0.896 0.813 7.20
29) chloroprene
0.558 0.607 0.589 0.622 0.637 0.586 0.602 0.634 0.560 0.523 0.592 6.16
30) acrylonitrile
0.201 0.156 0.175 0.178 0.182 0.167 0.178 0.176 0.179 0.207 0.180 8.24
31) vinyl acetate
0.088 0.089 0.087 0.084 0.088 0.081 0.086 0.086 3.36
32) ethyl tert-butyl ether
1.476 1.662 1.495 1.520 1.554 1.439 1.506 1.565 1.419 1.755 1.539 6.65
33) ethyl acetate
0.058 0.061 0.062 0.055 0.065 0.071 0.062 0.062 8.14
34) 2,2-dichloropropane
0.739 0.653 0.615 0.654 0.693 0.573 0.694 0.651 0.647 0.832 0.675 10.55
35) cis-1,2-dichloroethene
0.870 0.708 0.769 0.800 0.815 0.747 0.781 0.768 0.776 0.964 0.800 8.94
36) methylacrylate
0.627 0.477 0.494 0.509 0.515 0.483 0.525 0.553 0.500 0.689 0.537 12.77
37) propionitrile
0.080 0.067 0.065 0.068 0.068 0.064 0.071 0.069 0.068 0.083 0.070 8.82
38) bromochloromethane
0.279 0.214 0.261 0.273 0.276 0.256 0.270 0.273 0.271 0.264 7.53
39) tetrahydrofuran
0.130 0.137 0.141 0.125 0.160 0.177 0.168 0.148 13.48
40) chloroform
0.597 0.541 0.504 0.526 0.546 0.502 0.532 0.539 0.525 0.535 5.22
41) T-BUTYL FORMATE
0.437 0.448 0.452 0.460 0.466 0.439 0.455 0.487 0.439 0.335 0.442 9.19
42) dibromofluoromethane (s)
0.506 0.416 0.420 0.417 0.419 0.371 0.464 0.395 0.426 9.78
43) 1,2-dichloroethane-d4 (s)
0.580 0.486 0.498 0.492 0.478 0.450 0.538 0.478 0.500 8.12
44) freon 113
0.253 0.277 0.359 0.370 0.385 0.354 0.364 0.312 0.326 0.333 13.48
45) methacrylonitrile
0.373 0.286 0.292 0.291 0.279 0.296 0.305 0.286 0.301 10.01
46) 1,1,1-trichloroethane
0.690 0.523 0.693 0.707 0.709 0.675 0.670 0.625 0.656 0.633 0.658 8.39
47) cyclohexane
0.698 0.512 0.645 0.667 0.685 0.647 0.638 0.587 0.606 0.632 9.03
48) iso-butyl alcohol
0.024 0.019 0.020 0.020 0.018 0.020 0.025 0.020 0.021 11.48

49) I 1,4-difluorobenzene ----------ISTD----------
50) epichlorohydrin
0.041 0.047 0.042 0.043 0.044 0.042 0.043 0.048 0.042 0.044 5.71
51) n-butyl alcohol
0.012 0.013 0.012 0.012 0.012 0.012 0.011 0.014 0.011 0.013 0.012 6.96

Initial Calibration Summary

Job Number: JB77674 **Sample:** V1A6142-ICC6142
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 1A142303.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

52) carbon tetrachloride
0.609 0.461 0.514 0.538 0.573 0.504 0.562 0.525 0.534 0.532 0.535 7.54
53) 1,1-dichloropropene
0.550 0.449 0.469 0.497 0.514 0.471 0.510 0.498 0.483 0.524 0.496 6.04
54) hexane
0.482 0.522 0.442 0.467 0.484 0.440 0.472 0.489 0.431 0.427 0.465 6.53
55) 2,2,4-trimethylpentane
1.250 1.319 1.158 1.213 1.307 1.142 1.268 1.334 1.097 1.382 1.247 7.44
56) benzene
1.810 1.522 1.415 1.489 1.533 1.400 1.548 1.565 1.505 1.532 7.74
57) tert-amyl methyl ether
0.264 0.275 0.259 0.266 0.276 0.255 0.282 0.298 0.264 0.271 4.83
58) heptane
0.244 0.243 0.245 0.255 0.261 0.244 0.251 0.254 0.223 0.247 4.34
59) isopropyl acetate
0.707 0.736 0.637 0.676 0.674 0.615 0.717 0.759 0.667 0.818 0.701 8.57
60) 1,2-dichloroethane
0.611 0.478 0.456 0.485 0.505 0.438 0.529 0.528 0.515 0.505 10.01
61) trichloroethene
0.441 0.345 0.402 0.425 0.433 0.397 0.404 0.384 0.401 0.448 0.408 7.49
62) 2-nitropropane
0.407 0.305 0.324 0.339 0.290 0.340 0.396 0.327 0.341 12.02
63) 2-chloroethyl vinyl ether
0.257 0.262 0.255 0.266 0.270 0.248 0.266 0.278 0.257 0.267 0.263 3.22
64) methyl methacrylate
0.303 0.237 0.253 0.263 0.268 0.245 0.277 0.274 0.262 0.297 0.268 7.81
65) 1,2-dichloropropane
0.421 0.314 0.359 0.383 0.390 0.352 0.387 0.376 0.377 0.409 0.377 8.00
66) dibromomethane
0.289 0.201 0.248 0.258 0.266 0.242 0.263 0.268 0.255 0.337 0.263 13.17
67) methylcyclohexane
0.608 0.595 0.636 0.668 0.691 0.624 0.655 0.667 0.581 0.567 0.629 6.56
68) bromodichloromethane
0.594 0.481 0.548 0.570 0.578 0.538 0.564 0.544 0.553 0.609 0.558 6.29
69) cis-1,3-dichloropropene
0.768 0.612 0.648 0.677 0.682 0.636 0.684 0.664 0.653 0.849 0.687 10.24
70) toluene-d8 (s)
1.590 1.327 1.387 1.394 1.292 1.293 1.579 1.352 1.402 8.48
71) 4-methyl-2-pentanone
0.157 0.118 0.145 0.152 0.152 0.143 0.165 0.160 0.148 0.149 9.20
72) toluene
1.111 0.892 0.935 0.979 0.982 0.927 1.005 0.996 0.970 1.060 0.986 6.49
73) 3-methyl-1-butanol
0.021 0.017 0.018 0.019 0.017 0.018 0.022 0.018 0.019 9.51
74) trans-1,3-dichloropropene
0.741 0.684 0.608 0.629 0.629 0.600 0.651 0.632 0.619 0.644 6.83
75) ethyl methacrylate
0.579 0.511 0.491 0.505 0.505 0.482 0.528 0.505 0.495 0.511 5.61
76) 1,1,2-trichloroethane
0.360 0.294 0.308 0.319 0.319 0.301 0.334 0.316 0.306 0.384 0.324 8.65
77) 2-hexanone
0.159 0.127 0.135 0.139 0.125 0.147 0.149 0.137 0.140 8.33

78) I chlorobenzene-d5 ----------ISTD----------
79) tetrachloroethene
0.502 0.382 0.420 0.428 0.465 0.423 0.434 0.421 0.417 0.472 0.436 7.86
80) 1,3-dichloropropane
0.754 0.638 0.612 0.635 0.639 0.609 0.671 0.640 0.630 0.830 0.666 10.66
81) butyl acetate
0.266 0.247 0.252 0.257 0.250 0.256 0.287 0.251 0.258 5.07

Initial Calibration Summary

Job Number: JB77674 **Sample:** V1A6142-ICC6142
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 1A142303.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

82) 3,3-DIMETHYL-1-BUTANOL
0.046 0.049 0.041 0.041 0.041 0.041 0.041 0.048 0.040 0.042 0.043 7.81
83) dibromochloromethane
0.571 0.504 0.518 0.525 0.520 0.519 0.524 0.487 0.495 0.621 0.528 7.49
84) 1,2-dibromoethane
0.502 0.419 0.451 0.455 0.448 0.455 0.448 0.436 0.437 0.544 0.460 7.94
85) chlorobenzene
1.280 1.028 1.171 1.191 1.196 1.187 1.160 1.084 1.122 1.432 1.185 9.31
86) 1,1,1,2-tetrachloroethane
0.499 0.410 0.459 0.463 0.471 0.457 0.471 0.450 0.448 0.543 0.467 7.45
87) ethylbenzene
2.133 1.740 1.898 1.947 1.981 1.909 1.959 1.818 1.856 2.437 1.968 9.93
88) m,p-xylene
0.856 0.684 0.768 0.777 0.779 0.791 0.767 0.730 0.734 0.901 0.779 7.97
89) o-xylene
0.883 0.766 0.865 0.863 0.858 0.873 0.828 0.792 0.801 0.907 0.844 5.37
90) styrene
1.538 1.354 1.387 1.415 1.408 1.398 1.397 1.333 1.328 1.846 1.440 10.71
91) bromoform
0.446 0.405 0.428 0.427 0.407 0.436 0.406 0.377 0.380 0.493 0.420 8.08

92) I 1,4-dichlorobenzene-d ----------ISTD----------
93) isopropylbenzene
4.076 3.453 3.722 3.929 4.035 3.590 3.868 3.634 3.748 4.230 3.828 6.34
94) 4-bromofluorobenzene (s)
1.025 1.072 1.068 1.008 1.015 1.297 1.063 1.078 9.29
95) cyclohexanone
0.033 0.028 0.024 0.023 0.031 0.023 0.028 0.025 0.029 0.027 12.77
96) bromobenzene
1.237 1.220 0.995 1.057 1.071 0.975 1.098 1.097 1.049 1.089 8.21
97) 1,1,2,2-tetrachloroethane
1.196 1.372 1.013 1.066 1.032 0.985 1.113 1.113 1.026 1.102 10.91
98) trans-1,4-dichloro-2-butene
0.324 0.326 0.276 0.288 0.284 0.266 0.311 0.295 0.292 0.296 7.03
99) 1,2,3-trichloropropane
0.337 0.347 0.280 0.297 0.298 0.272 0.322 0.328 0.294 0.308 8.48
100) n-propylbenzene
4.531 3.874 3.790 4.030 4.124 3.742 4.168 3.984 3.966 4.998 4.121 9.24
101) 2-chlorotoluene
1.041 0.899 0.922 0.949 0.969 0.924 0.973 0.887 0.917 1.042 0.952 5.72
102) 4-chlorotoluene
3.081 2.953 2.614 2.699 2.730 2.603 2.774 2.697 2.623 2.753 5.93
103) 1,3,5-trimethylbenzene
3.559 2.961 3.088 3.227 3.271 3.071 3.259 3.130 3.123 3.936 3.263 8.78
104) tert-butylbenzene
3.293 2.727 2.977 3.063 3.060 2.939 2.989 2.761 2.887 3.342 3.004 6.65
105) pentachloroethane
0.734 0.794 0.649 0.689 0.624 0.634 0.715 0.653 0.623 0.795 0.691 9.60
106) 1,2,4-trimethylbenzene
3.570 3.295 3.044 3.195 3.268 3.001 3.291 3.082 3.111 4.101 3.296 9.93
107) sec-butylbenzene
4.672 3.921 4.143 4.310 4.316 4.103 4.167 4.004 3.988 5.008 4.263 7.96
108) 1,2,3-trimethylbenzene
0.000# -1.00
109) 1,3-dichlorobenzene
2.399 2.464 2.008 2.086 2.114 1.963 2.175 2.091 2.018 2.146 8.12
110) p-isopropyltoluene
4.043 3.397 3.604 3.762 3.779 3.565 3.619 3.462 3.506 4.322 3.706 7.71
111) 1,4-dichlorobenzene
2.228 2.299 1.994 2.049 2.040 1.961 2.017 1.954 1.909 2.050 6.33

Initial Calibration Summary

Job Number: JB77674 **Sample:** V1A6142-ICC6142
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 1A142303.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

```
112)  benzyl chloride
       2.041 2.706 2.083 2.136 2.105 2.006 1.994 2.235 1.985        2.143   10.53
113)  1,2-dichlorobenzene
       2.302 2.442 2.068 2.153 2.168 1.989 2.138 2.007 2.020        2.143    6.97
114)  n-butylbenzene
       1.835 1.654 1.833 1.874 1.873 1.821 1.718 1.607 1.669 1.994  1.788    6.79
115)  1,2-dibromo-3-chloropropane
       0.284 0.322 0.316 0.324 0.303 0.308 0.301 0.297 0.269        0.303    5.86
116)  1,3,5-TRICHLOROBENZENE
       1.930 1.972 1.931 2.060 2.012 1.821 1.916 1.832 1.824 2.508  1.981   10.20
117)  1,2,4-trichlorobenzene
       1.752 1.945 1.733 1.850 1.780 1.647 1.644 1.590 1.601        1.727    6.92
118)  hexachlorobutadiene
       0.830 0.704 0.791 0.859 0.872 0.748 0.779 0.726 0.767 0.973  0.805   10.00
119)  naphthalene
       3.918 4.291 3.845 4.059 3.969 3.651 3.844 3.641 3.674 5.000  3.989   10.23
120)  1,2,3-trichlorobenzene
       1.565 1.663 1.559 1.643 1.601 1.493 1.509 1.433 1.461        1.548    5.14
121)  hexachloroethane
       0.645 0.610 0.739 0.765 0.736 0.729 0.686 0.627 0.670 0.583  0.679    9.17
 ----------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          M1A6142.M         Wed Aug 27 17:11:13 2014   RPT1
```

Initial Calibration Verification

Job Number: JB77674 **Sample:** V1A6142-ICV6142
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 1A142308.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\1A142308.D Vial: 14
Acq On : 27 Aug 2014 3:42 pm Operator: DejanaS
Sample : icv6142-50 Inst : MS1A
Misc : MS72476,V1A6142,W,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M1A6142.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update : Wed Aug 27 17:10:31 2014
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1		tert butyl alcohol-d9	1.000	1.000	0.0	102	0.01	8.52
2	M	tertiary butyl alcohol	1.541	1.601	-3.9	105	0.00	8.64
		----------	True	Calc.	% Drift	----------		
3		Ethanol	5000.000	5499.936	-10.0	102	0.00	7.05
		----------	AvgRF	CCRF	% Dev	----------		
4	M	1,4-dioxane	0.165	0.180	-9.1	102	0.00	12.63
5	I	pentafluorobenzene	1.000	1.000	0.0	101	0.00	10.94
6	M	chlorodifluoromethane	0.660	0.629	4.7	88	0.01	4.51
7	M	dichlorodifluoromethane	0.789	1.026	-30.0#	119	0.01	4.47
8	M	chloromethane	0.819	0.885	-8.1	105	0.00	4.93
9	M	vinyl chloride	0.735	0.792	-7.8	103	0.01	5.23
10	M	bromomethane	0.493	0.491	0.4	105	0.00	5.98
11	M	chloroethane	0.338	0.403	-19.2	116	0.00	6.18
12	M	trichlorofluoromethane	0.751	0.853	-13.6	104	0.01	6.76
13		Pentane	----------	----------	NA	----------		
14	M	ethyl ether	0.281	0.290	-3.2	103	0.00	7.24
15	M	acrolein	0.102	0.102	0.0	98	0.01	7.53
16	M	1,1-dichloroethene	0.673	0.716	-6.4	104	0.00	7.71
17	M	acetone	0.041	0.042	-2.4	103	0.00	7.79
18	M	allyl chloride	0.236	0.285	-20.8#	118	0.00	8.32
19	M	acetonitrile	0.044	0.041	6.8	103	0.00	8.30
20	M	iodomethane	0.885	0.939	-6.1	105	0.00	8.02
21	M	carbon disulfide	1.526	1.613	-5.7	106	0.01	8.15
22	M	methylene chloride	0.513	0.506	1.4	102	0.00	8.53
23	M	methyl acetate	0.397	0.323	18.6	87	0.00	8.32
24	M	methyl tert butyl ether	1.462	1.367	6.5	97	0.00	8.92
25	M	trans-1,2-dichloroethene	0.637	0.585	8.2	95	0.00	8.95
26	M	di-isopropyl ether	1.433	1.402	2.2	99	0.00	9.59
27	M	2-butanone	0.053	0.058	-9.4	102	0.00	10.36
28	M	1,1-dichloroethane	0.813	0.818	-0.6	101	0.00	9.58
29	M	chloroprene	0.592	0.626	-5.7	102	0.00	9.70
30	M	acrylonitrile	0.180	0.176	2.2	100	0.00	8.92
31	M	vinyl acetate	0.086	0.089	-3.5	101	0.00	9.58
32	M	ethyl tert-butyl ether	1.539	1.494	2.9	100	0.00	10.09
33	M	ethyl acetate	0.062	0.059	4.8	99	0.00	10.38
34	M	2,2-dichloropropane	0.675	0.672	0.4	104	0.00	10.39
35	M	cis-1,2-dichloroethene	0.800	0.779	2.6	99	0.00	10.37
36		methylacrylate	0.537	0.510	5.0	102	0.00	10.46
37	M	propionitrile	0.070	0.069	1.4	103	0.00	10.47

Initial Calibration Verification

Job Number: JB77674 **Sample:** V1A6142-ICV6142
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 1A142308.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

38	M	bromochloromethane	0.264	0.268	-1.5	100	0.00	10.70
39	M	tetrahydrofuran	0.148	0.136	8.1	101	0.00	10.75
40	M	chloroform	0.535	0.525	1.9	101	0.00	10.77
41	M	T-BUTYL FORMATE	0.442	0.439	0.7	97	0.00	10.83
42	S	dibromofluoromethane (s)	0.426	0.417	2.1	101	0.00	10.98
43	S	1,2-dichloroethane-d4 (s)	0.500	0.485	3.0	99	0.00	11.42
44	M	freon 113	0.333	0.359	-7.8	99	0.00	7.70
45	M	methacrylonitrile	0.301	0.292	3.0	101	0.00	10.66
46	M	1,1,1-trichloroethane	0.658	0.710	-7.9	102	0.00	11.04
47	M	cyclohexane	0.632	0.661	-4.6	101	0.00	11.12
48		iso-butyl alcohol	0.021	0.020	4.8	98	0.00	11.24
49	I	1,4-difluorobenzene	1.000	1.000	0.0	101	0.00	11.89
50	M	epichlorohydrin	0.044	0.043	2.3	101	0.00	13.20
51	M	n-butyl alcohol	0.012	0.012	0.0	101	0.00	12.02
52	M	carbon tetrachloride	0.535	0.548	-2.4	103	0.00	11.25
53	M	1,1-dichloropropene	0.496	0.474	4.4	96	0.00	11.23
54	M	hexane	0.465	0.421	9.5	91	0.00	9.30
55		2,2,4-trimethylpentane	1.247	1.158	7.1	97	0.00	11.53
56	M	benzene	1.532	1.486	3.0	101	0.00	11.50
57	M	tert-amyl methyl ether	0.271	0.259	4.4	99	0.00	11.55
58	M	heptane	0.247	0.232	6.1	92	0.00	11.69
59	M	isopropyl acetate	0.701	0.623	11.1	93	0.00	11.44
60	M	1,2-dichloroethane	0.505	0.484	4.2	101	0.00	11.51
61	M	trichloroethene	0.408	0.422	-3.4	100	0.00	12.24
62	M	2-nitropropane	0.341	0.333	2.3	104	0.00	13.42
63	M	2-chloroethyl vinyl ether	0.263	0.267	-1.5	101	0.00	13.07
64	M	methyl methacrylate	0.268	0.262	2.2	101	0.00	12.53
65	M	1,2-dichloropropane	0.377	0.372	1.3	98	0.00	12.52
66	M	dibromomethane	0.263	0.256	2.7	100	0.00	12.68
67	M	methylcyclohexane	0.629	0.608	3.3	92	0.00	12.48
68	M	bromodichloromethane	0.558	0.570	-2.2	101	0.00	12.81
69	M	cis-1,3-dichloropropene	0.687	0.664	3.3	99	0.00	13.30
70	S	toluene-d8 (s)	1.402	1.399	0.2	102	0.00	13.61
71	M	4-methyl-2-pentanone	0.149	0.157	-5.4	104	0.00	13.42
72	M	toluene	0.986	0.974	1.2	101	0.00	13.69
73	M	3-methyl-1-butanol	0.019	0.019	0.0	103	0.00	13.42
74	M	trans-1,3-dichloropropene	0.644	0.609	5.4	98	0.00	13.89
75	M	ethyl methacrylate	0.511	0.505	1.2	101	0.00	13.89
76	M	1,1,2-trichloroethane	0.324	0.318	1.9	101	0.00	14.12
77	M	2-hexanone	0.140	0.141	-0.7	105	0.00	14.32
78	I	chlorobenzene-d5	1.000	1.000	0.0	102	0.00	15.22
79	M	tetrachloroethene	0.436	0.433	0.7	103	0.00	14.30
80	M	1,3-dichloropropane	0.666	0.629	5.6	101	0.00	14.31
81	M	butyl acetate	0.258	0.249	3.5	101	0.00	14.39
82	M	3,3-DIMETHYL-1-BUTANOL	0.043	0.042	2.3	103	0.00	14.49
83	M	dibromochloromethane	0.528	0.513	2.8	99	0.00	14.59
84	M	1,2-dibromoethane	0.460	0.452	1.7	101	0.00	14.76
85	M	chlorobenzene	1.185	1.182	0.3	101	0.00	15.25
86	M	1,1,1,2-tetrachloroethane	0.467	0.457	2.1	100	0.00	15.31
87	M	ethylbenzene	1.968	1.914	2.7	100	0.00	15.31
88	M	m,p-xylene	0.779	0.765	1.8	100	0.00	15.43
89	M	o-xylene	0.844	0.850	-0.7	100	0.00	15.87
90	M	styrene	1.440	1.388	3.6	100	0.00	15.88
91	M	bromoform	0.420	0.414	1.4	99	0.00	16.16
92	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	101	0.00	17.70
93	M	isopropylbenzene	3.828	3.938	-2.9	101	0.00	16.24
94	S	4-bromofluorobenzene (s)	1.078	1.066	1.1	100	0.00	16.45

Initial Calibration Verification

Job Number: JB77674 **Sample:** V1A6142-ICV6142
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 1A142308.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

95		cyclohexanone	0.027	0.030	-11.1	132	0.00	16.43
96	M	bromobenzene	1.089	1.059	2.8	101	0.00	16.66
97	M	1,1,2,2-tetrachloroethane	1.102	1.026	6.9	97	0.00	16.55
98	M	trans-1,4-dichloro-2-bute	0.296	0.289	2.4	101	0.00	16.60
99	M	1,2,3-trichloropropane	0.308	0.292	5.2	99	0.00	16.64
100	M	n-propylbenzene	4.121	4.215	-2.3	106	0.00	16.68
101	M	2-chlorotoluene	0.952	0.946	0.6	101	0.00	16.83
102	M	4-chlorotoluene	2.753	2.665	3.2	100	0.00	16.94
103	M	1,3,5-trimethylbenzene	3.263	3.197	2.0	100	0.00	16.83
104	M	tert-butylbenzene	3.004	3.149	-4.8	104	0.00	17.22
105	M	pentachloroethane	0.691	0.680	1.6	100	0.00	17.29
106	M	1,2,4-trimethylbenzene	3.296	3.322	-0.8	105	0.00	17.26
107	M	sec-butylbenzene	4.263	4.278	-0.4	100	0.00	17.45
108		1,2,3-trimethylbenzene		----------NA----------				
109	M	1,3-dichlorobenzene	2.146	2.049	4.5	99	0.00	17.64
110	M	p-isopropyltoluene	3.706	3.787	-2.2	102	0.00	17.57
111	M	1,4-dichlorobenzene	2.050	2.024	1.3	100	0.00	17.73
112		benzyl chloride	2.143	2.491	-16.2	118	0.00	17.86
113	M	1,2-dichlorobenzene	2.143	2.129	0.7	100	0.00	18.16
114	M	n-butylbenzene	1.788	1.926	-7.7	104	0.00	18.02
115	M	1,2-dibromo-3-chloropropa	0.303	0.332	-9.6	104	0.00	19.01
116		1,3,5-TRICHLOROBENZENE	1.981	2.025	-2.2	99	0.00	19.21
117	M	1,2,4-trichlorobenzene	1.727	1.841	-6.6	101	0.00	19.91
118	M	hexachlorobutadiene	0.805	0.860	-6.8	101	0.00	20.03
119	M	naphthalene	3.989	4.047	-1.5	101	0.00	20.23
120	M	1,2,3-trichlorobenzene	1.548	1.642	-6.1	101	0.00	20.48
121	m	hexachloroethane	0.679	0.773	-13.8	102	0.00	18.45

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1A142303.D M1A6142.M Wed Aug 27 17:11:03 2014 RPT1

Continuing Calibration Summary

Job Number: JB77674 **Sample:** V1A6195-CC6142
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 1A143590.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\1A\v1a6195-6196\1a143590.d Vial: 2
Acq On : 30 Sep 2014 8:49 am Operator: DejanaS
Sample : cc6142-20 Inst : MS1A
Misc : MS74461,V1A6195,W,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M1A6142.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update : Wed Aug 27 17:10:31 2014
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1		tert butyl alcohol-d9	1.000	1.000	0.0	74	0.00	8.51
2	M	tertiary butyl alcohol	1.541	1.519	1.4	75	0.00	8.64
		----------	True	Calc.	% Drift	----------		
3		Ethanol	2000.000	2454.507	-22.7#	86	0.00	7.04
		----------	AvgRF	CCRF	% Dev	----------		
4	M	1,4-dioxane	0.165	0.168	-1.8	77	0.00	12.63
5	I	pentafluorobenzene	1.000	1.000	0.0	86	0.00	10.94
6	M	chlorodifluoromethane	0.660	0.720	-9.1	86	0.00	4.50
7	M	dichlorodifluoromethane	0.789	0.705	10.6	73	0.01	4.47
8	M	chloromethane	0.819	0.823	-0.5	81	-0.03	4.90
9	M	vinyl chloride	0.735	0.784	-6.7	85	0.00	5.21
10	M	bromomethane	0.493	0.476	3.4	82	0.00	5.98
11	M	chloroethane	0.338	0.334	1.2	77	0.00	6.19
12	M	trichlorofluoromethane	0.751	0.770	-2.5	79	0.00	6.75
13		Pentane	----------	NA	----------			
14	M	ethyl ether	0.281	0.294	-4.6	88	0.00	7.23
15	M	acrolein	0.102	0.071	30.4#	59	0.00	7.52
16	M	1,1-dichloroethene	0.673	0.756	-12.3	86	0.00	7.70
17	M	acetone	0.041	0.053	-29.3#	108	0.00	7.79
18	M	allyl chloride	0.236	0.259	-9.7	89	0.00	8.32
19	M	acetonitrile	0.044	0.043	2.3	87	0.00	8.30
20	M	iodomethane	0.885	0.966	-9.2	86	0.00	8.01
21	M	carbon disulfide	1.526	1.728	-13.2	91	0.00	8.14
22	M	methylene chloride	0.513	0.555	-8.2	90	0.00	8.52
23	M	methyl acetate	0.397	0.353	11.1	79	0.00	8.32
24	M	methyl tert butyl ether	1.462	1.388	5.1	81	0.00	8.92
25	M	trans-1,2-dichloroethene	0.637	0.678	-6.4	88	0.00	8.95
26	M	di-isopropyl ether	1.433	1.530	-6.8	87	0.00	9.58
27	M	2-butanone	0.053	0.058	-9.4	87	0.00	10.36
28	M	1,1-dichloroethane	0.813	0.878	-8.0	89	0.00	9.58
29	M	chloroprene	0.592	0.576	2.7	78	0.00	9.69
30	M	acrylonitrile	0.180	0.176	2.2	83	0.00	8.91
31	M	vinyl acetate	0.086	0.074	14.0	73	0.00	9.58
32	M	ethyl tert-butyl ether	1.539	1.480	3.8	82	0.00	10.09
33	M	ethyl acetate	0.062	0.053	14.5	74	0.00	10.38
34	M	2,2-dichloropropane	0.675	0.639	5.3	79	0.00	10.38
35	M	cis-1,2-dichloroethene	0.800	0.812	-1.5	85	0.00	10.37
36		methylacrylate	0.537	0.454	15.5	76	0.00	10.46
37	M	propionitrile	0.070	0.064	8.6	81	0.00	10.46

Continuing Calibration Summary

Job Number: JB77674 **Sample:** V1A6195-CC6142
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 1A143590.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

38	M	bromochloromethane	0.264	0.275	-4.2	85	0.00	10.70
39	M	tetrahydrofuran	0.148	0.115	22.3#	70	0.00	10.75
40	M	chloroform	0.535	0.547	-2.2	86	0.00	10.76
41	M	T-BUTYL FORMATE	0.442	0.359	18.8	66	0.00	10.82
42	S	dibromofluoromethane (s)	0.426	0.416	2.3	86	0.00	10.97
43	S	1,2-dichloroethane-d4 (s)	0.500	0.439	12.2	77	0.00	11.42
44	M	freon 113	0.333	0.400	-20.1#	89	0.00	7.69
45	M	methacrylonitrile	0.301	0.249	17.3	73	0.00	10.66
46	M	1,1,1-trichloroethane	0.658	0.678	-3.0	82	0.00	11.03
47	M	cyclohexane	0.632	0.674	-6.6	84	0.00	11.11
48		iso-butyl alcohol	0.021	0.017	19.0	70	0.00	11.23
49	I	1,4-difluorobenzene	1.000	1.000	0.0	86	0.00	11.89
50	M	epichlorohydrin	0.044	0.035	20.5#	69	0.00	13.19
51	M	n-butyl alcohol	0.012	0.010#	16.7	71	0.00	12.01
52	M	carbon tetrachloride	0.535	0.541	-1.1	81	0.00	11.24
53	M	1,1-dichloropropene	0.496	0.512	-3.2	85	0.00	11.22
54	M	hexane	0.465	0.469	-0.9	83	0.00	9.30
55		2,2,4-trimethylpentane	1.247	1.221	2.1	80	-0.01	11.51
56	M	benzene	1.532	1.598	-4.3	89	0.00	11.50
57	M	tert-amyl methyl ether	0.271	0.262	3.3	81	0.00	11.55
58	M	heptane	0.247	0.223	9.7	73	0.00	11.69
59	M	isopropyl acetate	0.701	0.583	16.8	74	0.00	11.44
60	M	1,2-dichloroethane	0.505	0.455	9.9	77	0.00	11.51
61	M	trichloroethene	0.408	0.419	-2.7	83	0.00	12.23
62	M	2-nitropropane	0.341	0.250	26.7#	63	0.00	13.42
63	M	2-chloroethyl vinyl ether	0.263	0.247	6.1	78	0.00	13.07
64	M	methyl methacrylate	0.268	0.236	11.9	75	0.00	12.52
65	M	1,2-dichloropropane	0.377	0.406	-7.7	89	0.00	12.52
66	M	dibromomethane	0.263	0.245	6.8	79	0.00	12.67
67	M	methylcyclohexane	0.629	0.688	-9.4	85	0.00	12.47
68	M	bromodichloromethane	0.558	0.538	3.6	80	0.00	12.81
69	M	cis-1,3-dichloropropene	0.687	0.644	6.3	81	0.00	13.29
70	S	toluene-d8 (s)	1.402	1.396	0.4	86	0.00	13.61
71	M	4-methyl-2-pentanone	0.149	0.135	9.4	76	0.00	13.41
72	M	toluene	0.986	0.968	1.8	84	0.00	13.69
73	M	3-methyl-1-butanol	0.019	0.015	21.1#	70	0.00	13.41
74	M	trans-1,3-dichloropropene	0.644	0.564	12.4	77	0.00	13.88
75	M	ethyl methacrylate	0.511	0.449	12.1	76	0.00	13.89
76	M	1,1,2-trichloroethane	0.324	0.299	7.7	80	0.00	14.11
77	M	2-hexanone	0.140	0.131	6.4	81	0.00	14.31
78	I	chlorobenzene-d5	1.000	1.000	0.0	84	0.00	15.21
79	M	tetrachloroethene	0.436	0.557	-27.8#	101	0.00	14.30
80	M	1,3-dichloropropane	0.666	0.620	6.9	82	0.00	14.31
81	M	butyl acetate	0.258	0.241	6.6	79	0.00	14.39
82	M	3,3-DIMETHYL-1-BUTANOL	0.043	0.035	18.6	71	0.00	14.49
83	M	dibromochloromethane	0.528	0.459	13.1	74	0.00	14.58
84	M	1,2-dibromoethane	0.460	0.414	10.0	78	0.00	14.75
85	M	chlorobenzene	1.185	1.189	-0.3	84	0.00	15.25
86	M	1,1,1,2-tetrachloroethane	0.467	0.458	1.9	82	0.00	15.31
87	M	ethylbenzene	1.968	1.961	0.4	83	0.00	15.31
88	M	m,p-xylene	0.779	0.776	0.4	84	0.00	15.42
89	M	o-xylene	0.844	0.841	0.4	82	0.00	15.87
90	M	styrene	1.440	1.361	5.5	81	0.00	15.88
91	M	bromoform	0.420	0.343	18.3	71	0.00	16.15
92	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	81	0.00	17.70
93	M	isopropylbenzene	3.828	4.076	-6.5	82	0.00	16.24
94	S	4-bromofluorobenzene (s)	1.078	1.063	1.4	80	0.00	16.45

Continuing Calibration Summary

Job Number: JB77674 **Sample:** V1A6195-CC6142
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 1A143590.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

95		cyclohexanone	0.027	0.056	-107.4#	147	0.00	16.43
96	M	bromobenzene	1.089	1.089	0.0	82	0.00	16.66
97	M	1,1,2,2-tetrachloroethane	1.102	0.983	10.8	77	0.00	16.55
98	M	trans-1,4-dichloro-2-bute	0.296	0.208	29.7#	59	0.00	16.60
99	M	1,2,3-trichloropropane	0.308	0.272	11.7	74	0.00	16.64
100	M	n-propylbenzene	4.121	4.246	-3.0	83	0.00	16.67
101	M	2-chlorotoluene	0.952	0.992	-4.2	83	0.00	16.83
102	M	4-chlorotoluene	2.753	2.767	-0.5	82	0.00	16.93
103	M	1,3,5-trimethylbenzene	3.263	3.277	-0.4	81	0.00	16.83
104	M	tert-butylbenzene	3.004	3.063	-2.0	81	0.00	17.21
105	M	pentachloroethane	0.691	0.357	48.3#	46#	0.00	17.29
106	M	1,2,4-trimethylbenzene	3.296	3.293	0.1	81	0.00	17.25
107	M	sec-butylbenzene	4.263	4.367	-2.4	82	0.00	17.44
108		1,2,3-trimethylbenzene		----------NA----------				
109	M	1,3-dichlorobenzene	2.146	2.084	2.9	80	0.00	17.64
110	M	p-isopropyltoluene	3.706	3.705	0.0	79	0.00	17.57
111	M	1,4-dichlorobenzene	2.050	2.007	2.1	79	0.00	17.73
112		benzyl chloride	2.143	1.614	24.7#	62	0.00	17.85
113	M	1,2-dichlorobenzene	2.143	2.111	1.5	79	0.00	18.16
114	M	n-butylbenzene	1.788	1.821	-1.8	79	0.00	18.02
115	M	1,2-dibromo-3-chloropropa	0.303	0.250	17.5	67	0.00	19.01
116		1,3,5-TRICHLOROBENZENE	1.981	1.944	1.9	78	0.00	19.21
117	M	1,2,4-trichlorobenzene	1.727	1.689	2.2	77	0.00	19.90
118	M	hexachlorobutadiene	0.805	0.795	1.2	74	0.00	20.03
119	M	naphthalene	3.989	3.505	12.1	71	0.00	20.22
120	M	1,2,3-trichlorobenzene	1.548	1.500	3.1	76	0.00	20.48
121	m	hexachloroethane	0.679	0.691	-1.8	76	0.00	18.45

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1A142302.D M1A6142.M Wed Oct 01 10:57:18 2014 T

Continuing Calibration Summary

Job Number: JB77674 **Sample:** V1A6201-CC6142
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 1A143728.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\1A143728.D Vial: 2
Acq On : 3 Oct 2014 8:53 am Operator: DejanaS
Sample : cc6142-20 Inst : MS1A
Misc : MS74718,V1A6201,W,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M1A6142.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update : Wed Aug 27 17:10:31 2014
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1		tert butyl alcohol-d9	1.000	1.000	0.0	92	0.00	8.50
2	M	tertiary butyl alcohol	1.541	1.470	4.6	90	0.00	8.63
		---------- True	Calc.	% Drift	----------			
3		Ethanol	2000.000	2131.043	-6.6	94	0.00	7.05
		---------- AvgRF	CCRF	% Dev	----------			
4	M	1,4-dioxane	0.165	0.145	12.1	82	0.00	12.63
5	I	pentafluorobenzene	1.000	1.000	0.0	86	0.00	10.94
6	M	chlorodifluoromethane	0.660	0.724	-9.7	86	0.00	4.50
7	M	dichlorodifluoromethane	0.789	0.852	-8.0	88	0.00	4.46
8	M	chloromethane	0.819	0.924	-12.8	91	-0.03	4.90
9	M	vinyl chloride	0.735	0.872	-18.6	95	-0.01	5.21
10	M	bromomethane	0.493	0.500	-1.4	85	-0.01	5.97
11	M	chloroethane	0.338	0.341	-0.9	79	0.00	6.18
12	M	trichlorofluoromethane	0.751	0.815	-8.5	84	0.00	6.74
13		Pentane	----------NA----------					
14	M	ethyl ether	0.281	0.318	-13.2	95	0.00	7.23
15	M	acrolein	0.102	0.060	41.2#	50#	0.00	7.52
16	M	1,1-dichloroethene	0.673	0.738	-9.7	83	0.00	7.70
17	M	acetone	0.041	0.059	-43.9#	120	0.00	7.79
18	M	allyl chloride	0.236	0.262	-11.0	90	0.00	8.31
19	M	acetonitrile	0.044	0.046	-4.5	93	0.00	8.30
20	M	iodomethane	0.885	0.920	-4.0	82	-0.01	8.01
21	M	carbon disulfide	1.526	1.699	-11.3	90	0.00	8.14
22	M	methylene chloride	0.513	0.547	-6.6	89	0.00	8.52
23	M	methyl acetate	0.397	0.406	-2.3	91	-0.01	8.31
24	M	methyl tert butyl ether	1.462	1.452	0.7	84	0.00	8.91
25	M	trans-1,2-dichloroethene	0.637	0.672	-5.5	87	0.00	8.94
26	M	di-isopropyl ether	1.433	1.529	-6.7	87	0.00	9.58
27	M	2-butanone	0.053	0.066	-24.5#	99	0.00	10.35
28	M	1,1-dichloroethane	0.813	0.881	-8.4	89	0.00	9.57
29	M	chloroprene	0.592	0.588	0.7	79	0.00	9.69
30	M	acrylonitrile	0.180	0.204	-13.3	96	0.00	8.91
31	M	vinyl acetate	0.086	0.091	-5.8	89	0.00	9.58
32	M	ethyl tert-butyl ether	1.539	1.481	3.8	82	0.00	10.08
33	M	ethyl acetate	0.062	0.065	-4.8	90	0.00	10.37
34	M	2,2-dichloropropane	0.675	0.719	-6.5	89	0.00	10.38
35	M	cis-1,2-dichloroethene	0.800	0.843	-5.4	88	0.00	10.37
36		methylacrylate	0.537	0.552	-2.8	92	0.00	10.46
37	M	propionitrile	0.070	0.077	-10.0	97	0.00	10.46

Continuing Calibration Summary

Job Number: JB77674 **Sample:** V1A6201-CC6142
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 1A143728.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

38	M	bromochloromethane	0.264	0.277	-4.9	86	0.00	10.69
39	M	tetrahydrofuran	0.148	0.147	0.7	89	0.00	10.75
40	M	chloroform	0.535	0.546	-2.1	86	0.00	10.76
41	M	T-BUTYL FORMATE	0.442	0.415	6.1	76	-0.01	10.82
42	S	dibromofluoromethane (s)	0.426	0.418	1.9	86	0.00	10.97
43	S	1,2-dichloroethane-d4 (s)	0.500	0.459	8.2	80	0.00	11.42
44	M	freon 113	0.333	0.405	-21.6#	90	-0.01	7.69
45	M	methacrylonitrile	0.301	0.297	1.3	87	0.00	10.66
46	M	1,1,1-trichloroethane	0.658	0.660	-0.3	80	0.00	11.03
47	M	cyclohexane	0.632	0.676	-7.0	85	0.00	11.11
48		iso-butyl alcohol	0.021	0.020	4.8	86	0.00	11.23
49	I	1,4-difluorobenzene	1.000	1.000	0.0	86	0.00	11.89
50	M	epichlorohydrin	0.044	0.044	0.0	85	0.00	13.20
51	M	n-butyl alcohol	0.012	0.012	0.0	88	0.00	12.01
52	M	carbon tetrachloride	0.535	0.525	1.9	79	0.00	11.24
53	M	1,1-dichloropropene	0.496	0.519	-4.6	87	0.00	11.22
54	M	hexane	0.465	0.514	-10.5	91	0.00	9.30
55		2,2,4-trimethylpentane	1.247	1.364	-9.4	90	-0.01	11.51
56	M	benzene	1.532	1.605	-4.8	90	0.00	11.50
57	M	tert-amyl methyl ether	0.271	0.264	2.6	82	0.00	11.55
58	M	heptane	0.247	0.274	-10.9	91	0.00	11.69
59	M	isopropyl acetate	0.701	0.671	4.3	86	0.00	11.44
60	M	1,2-dichloroethane	0.505	0.480	5.0	82	0.00	11.51
61	M	trichloroethene	0.408	0.423	-3.7	84	0.00	12.23
62	M	2-nitropropane	0.341	0.317	7.0	80	0.00	13.41
63	M	2-chloroethyl vinyl ether	0.263	0.266	-1.1	85	0.00	13.07
64	M	methyl methacrylate	0.268	0.273	-1.9	87	0.00	12.52
65	M	1,2-dichloropropane	0.377	0.422	-11.9	93	0.00	12.52
66	M	dibromomethane	0.263	0.263	0.0	85	0.00	12.67
67	M	methylcyclohexane	0.629	0.692	-10.0	86	0.00	12.47
68	M	bromodichloromethane	0.558	0.566	-1.4	84	0.00	12.81
69	M	cis-1,3-dichloropropene	0.687	0.698	-1.6	88	0.00	13.29
70	S	toluene-d8 (s)	1.402	1.417	-1.1	87	0.00	13.61
71	M	4-methyl-2-pentanone	0.149	0.170	-14.1	96	0.00	13.41
72	M	toluene	0.986	1.002	-1.6	88	0.00	13.69
73	M	3-methyl-1-butanol	0.019	0.019	0.0	89	0.00	13.42
74	M	trans-1,3-dichloropropene	0.644	0.622	3.4	85	0.00	13.88
75	M	ethyl methacrylate	0.511	0.506	1.0	86	0.00	13.89
76	M	1,1,2-trichloroethane	0.324	0.329	-1.5	89	0.00	14.11
77	M	2-hexanone	0.140	0.150	-7.1	92	0.00	14.31
78	I	chlorobenzene-d5	1.000	1.000	0.0	85	0.00	15.21
79	M	tetrachloroethene	0.436	0.414	5.0	75	0.00	14.30
80	M	1,3-dichloropropane	0.666	0.678	-1.8	90	0.00	14.31
81	M	butyl acetate	0.258	0.275	-6.6	91	0.00	14.39
82	M	3,3-DIMETHYL-1-BUTANOL	0.043	0.043	0.0	90	0.00	14.49
83	M	dibromochloromethane	0.528	0.488	7.6	80	0.00	14.58
84	M	1,2-dibromoethane	0.460	0.453	1.5	86	0.00	14.75
85	M	chlorobenzene	1.185	1.213	-2.4	86	0.00	15.25
86	M	1,1,1,2-tetrachloroethane	0.467	0.471	-0.9	85	0.00	15.31
87	M	ethylbenzene	1.968	2.010	-2.1	86	0.00	15.31
88	M	m,p-xylene	0.779	0.795	-2.1	86	0.00	15.42
89	M	o-xylene	0.844	0.865	-2.5	85	0.00	15.87
90	M	styrene	1.440	1.394	3.2	84	0.00	15.88
91	M	bromoform	0.420	0.374	11.0	78	0.00	16.15
92	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	79	0.00	17.70
93	M	isopropylbenzene	3.828	4.237	-10.7	83	0.00	16.24
94	S	4-bromofluorobenzene (s)	1.078	1.076	0.2	80	0.00	16.45

Continuing Calibration Summary

Job Number: JB77674 **Sample:** V1A6201-CC6142
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 1A143728.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

95		cyclohexanone	0.027	0.070	-159.3#	179	0.00	16.43
96	M	bromobenzene	1.089	1.122	-3.0	83	0.00	16.66
97	M	1,1,2,2-tetrachloroethane	1.102	1.147	-4.1	88	0.00	16.55
98	M	trans-1,4-dichloro-2-bute	0.296	0.226	23.6#	63	0.00	16.60
99	M	1,2,3-trichloropropane	0.308	0.310	-0.6	82	0.00	16.63
100	M	n-propylbenzene	4.121	4.444	-7.8	85	0.00	16.67
101	M	2-chlorotoluene	0.952	1.026	-7.8	84	0.00	16.83
102	M	4-chlorotoluene	2.753	2.868	-4.2	83	0.00	16.93
103	M	1,3,5-trimethylbenzene	3.263	3.430	-5.1	83	0.00	16.83
104	M	tert-butylbenzene	3.004	3.268	-8.8	85	0.00	17.21
105	M	pentachloroethane	0.691	0.708	-2.5	90	0.00	17.29
106	M	1,2,4-trimethylbenzene	3.296	3.455	-4.8	84	0.00	17.25
107	M	sec-butylbenzene	4.263	4.622	-8.4	85	0.00	17.44
108		1,2,3-trimethylbenzene		----------	NA	----------		
109	M	1,3-dichlorobenzene	2.146	2.176	-1.4	82	0.00	17.64
110	M	p-isopropyltoluene	3.706	3.934	-6.2	82	0.00	17.57
111	M	1,4-dichlorobenzene	2.050	2.095	-2.2	81	0.00	17.73
112		benzyl chloride	2.143	2.256	-5.3	85	0.00	17.85
113	M	1,2-dichlorobenzene	2.143	2.213	-3.3	81	0.00	18.16
114	M	n-butylbenzene	1.788	1.963	-9.8	83	0.00	18.02
115	M	1,2-dibromo-3-chloropropa	0.303	0.299	1.3	78	0.00	19.00
116		1,3,5-TRICHLOROBENZENE	1.981	2.085	-5.2	82	0.00	19.21
117	M	1,2,4-trichlorobenzene	1.727	1.851	-7.2	82	0.00	19.90
118	M	hexachlorobutadiene	0.805	0.873	-8.4	79	0.00	20.03
119	M	naphthalene	3.989	4.026	-0.9	80	0.00	20.22
120	M	1,2,3-trichlorobenzene	1.548	1.660	-7.2	82	0.00	20.48
121	m	hexachloroethane	0.679	0.723	-6.5	78	0.00	18.45

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1A142302.D M1A6142.M Fri Oct 03 15:28:26 2014 RPT1

Initial Calibration Summary

Job Number: JB77674 **Sample:** V2A6388-ICC6388
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 2A149896.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Response Factor Report Instrumen

Method : C:\MSDCHEM\1\METHODS\M2A6388.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update : Thu Aug 28 16:51:38 2014
Response via : Initial Calibration

Calibration Files
1 =2A149889.D 2 =2A149892.D 100 =2A149897.D 50 =2A149896.D
20 =2A149895.D 200 =2A149898.D 5 =2A149893.D 0.5 =2A149891.D
10 =2A149894.D 0.2 =2A149890.D = =

Compound	1	2	100	50	20	200	5	0.5	10	0.2	Avg	%RSD
1) I Tert Butyl Alcohol-d9	----------ISTD----------											
2) tertiary butyl alcohol	1.422	1.189	1.240	1.244	1.121	1.222		1.152			1.227	7.92
3) Ethanol	0.124	0.097	0.091	0.099	0.101	0.081	0.098		0.090		0.098	12.88
4) 1,4-dioxane	0.097	0.112	0.113	0.110	0.106	0.102		0.101			0.106	5.90
5) I pentafluorobenzene	----------ISTD----------											
6) FREON 143A											0.000#	-1.00
7) chlorodifluoromethane	0.373	0.421	0.436	0.426	0.427	0.413	0.398		0.360		0.407	6.69
8) dichlorodifluoromethane	0.402	0.525	0.509	0.495	0.494	0.458		0.416			0.471	10.04
9) FREON 142B											0.000#	-1.00
10) chloromethane	0.487	0.466	0.500	0.483	0.480	0.485	0.471	0.447	0.426		0.472	4.79
11) vinyl chloride	0.435	0.429	0.472	0.447	0.453	0.461	0.445	0.316	0.388		0.427	11.25
12) bromomethane	0.353	0.356	0.350	0.336	0.324	0.367	0.319	0.244	0.304		0.328	11.43
13) chloroethane	0.164	0.206	0.234	0.223	0.221	0.228	0.222		0.191		0.211	11.11
14) trichlorofluoromethane	0.481	0.501	0.648	0.643	0.628	0.622	0.591		0.528		0.580	11.57
15) PENTANE											0.000#	-1.00
16) ethyl ether	0.147	0.188	0.180	0.176	0.184	0.167		0.161			0.172	8.47
17) FREON 141B											0.000#	-1.00
18) acrolein	0.067	0.070		0.067	0.065		0.064		0.062		0.066	4.36
19) 1,1-dichloroethene	0.233	0.314	0.370	0.354	0.351	0.366	0.315		0.299		0.325	14.06
20) acetone			0.110	0.118	0.134	0.106	0.127		0.118		0.119	8.69
21) allyl chloride	0.141	0.195	0.192	0.180	0.201	0.159		0.165			0.176	12.41
22) acetonitrile	0.034	0.032	0.031	0.030	0.031	0.028		0.030			0.031	6.49
23) iodomethane												

Initial Calibration Summary

Job Number: JB77674 **Sample:** V2A6388-ICC6388
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 2A149896.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

```
      0.536 0.661 0.763 0.726 0.725 0.739 0.681 0.564 0.645        0.671   11.73
24)  iso-butyl alcohol
                0.013 0.012 0.012 0.013 0.012       0.011        0.012    6.39
25)  carbon disulfide
      0.903 1.111 1.298 1.238 1.229 1.266 1.169 0.917 1.074 0.961  1.117   13.25
26)  methylene chloride
      0.338 0.366 0.402 0.397 0.391 0.398 0.371 0.315 0.343 0.507  0.383   13.73
27)  methyl acetate
                0.057 0.055 0.050 0.057 0.030       0.041        0.048   22.35
            ----- Linear regression -----  Coefficient =  1.0000
              Response Ratio = -0.00300 + 0.05812 *A

28)  methyl tert butyl ether
      0.958 1.058 1.193 1.157 1.129 1.148 1.082 0.839 1.048 1.042  1.065    9.86
29)  trans-1,2-dichloroethene
      0.240 0.323 0.383 0.380 0.372 0.387 0.350       0.329        0.346   14.23
30)  di-isopropyl ether
      1.505 1.138 1.222 1.211 1.177 1.218 1.129 1.098 1.034        1.193   11.13
31)  2-butanone
                0.041 0.040 0.041 0.039 0.031       0.032        0.037   12.59
32)  1,1-dichloroethane
      0.483 0.582 0.673 0.669 0.657 0.677 0.628 0.488 0.589        0.605   12.59
33)  chloroprene
      0.453 0.497 0.539 0.535 0.533 0.536 0.493 0.417 0.441        0.494    9.47
34)  acrylonitrile
      0.089 0.115 0.134 0.131 0.129 0.132 0.115       0.116        0.120   12.49
35)  vinyl acetate
                0.061 0.058 0.050 0.060             0.044        0.055   13.35
36)  ethyl tert-butyl ether
            1.517 1.256 1.229 1.224 1.230 1.300       1.112        1.267    9.79
37)  ethyl acetate
                0.049 0.048 0.049 0.047 0.050       0.045        0.048    3.28
38)  2,2-dichloropropane
      0.452 0.483 0.520 0.516 0.520 0.503 0.500       0.461        0.494    5.33
39)  cis-1,2-dichloroethene
      0.305 0.366 0.417 0.408 0.403 0.418 0.391       0.370        0.385    9.82
40)  methylacrylate
                0.054 0.052 0.049 0.053 0.030       0.042        0.047   20.20
            ----- Linear regression -----  Coefficient =  0.9999
              Response Ratio = -0.00205 + 0.05408 *A

41)  propionitrile
      0.037 0.044 0.053 0.053 0.051 0.051 0.050       0.048        0.048   11.17
42)  bromochloromethane
      0.162 0.198 0.217 0.210 0.211 0.217 0.199       0.197        0.201    8.99
43)  tetrahydrofuran
                0.125 0.125 0.126 0.123 0.140       0.116        0.126    6.47
44)  chloroform
      0.371 0.403 0.458 0.454 0.451 0.452 0.426 0.325 0.403        0.416   10.90
45)  t-butyl formate
      0.484 0.334 0.383 0.371 0.354 0.373 0.329       0.317        0.368   14.24
46)  dibromofluoromethane (s)
      0.373 0.363 0.371 0.360 0.359 0.364 0.313 0.297 0.318        0.346    8.33
47)  1,2-dichloroethane-d4 (s)
      0.448 0.428 0.437 0.434 0.432 0.423 0.364 0.383 0.394        0.416    6.84
48)  freon 113
      0.231 0.277 0.322 0.306 0.319 0.303 0.289       0.249        0.287   11.43
49)  methacrylonitrile
      0.158 0.180 0.229 0.224 0.221 0.224 0.201       0.201        0.205   12.19
50)  1,1,1-trichloroethane
```

```
      0.394 0.532 0.658 0.631 0.627 0.636 0.573       0.544        0.574   15.00
            ----- Linear regression -----  Coefficient =  0.9997
              Response Ratio = -0.00527 + 0.64191 *A

51)  Cyclohexane
      0.372 0.474 0.556 0.529 0.531 0.556 0.498 0.389 0.456        0.485   14.10

52) I   1,4-difluorobenzene   ----------------ISTD--------------------
53)  epichlorohydrin
            0.028 0.033 0.032 0.032 0.032 0.029       0.030        0.031    6.19
54)  n-butyl alcohol
            0.012 0.010 0.011 0.011 0.010 0.010       0.010        0.010    6.19
55)  carbon tetrachloride
      0.416 0.507 0.599 0.587 0.600 0.574 0.557       0.519        0.545   11.48
56)  1,1-dichloropropene
      0.355 0.442 0.501 0.492 0.499 0.495 0.474 0.378 0.437        0.453   12.03
57)  hexane
      0.321 0.372 0.405 0.388 0.396 0.396 0.359 0.272 0.323        0.359   12.49
58)  TERT AMYL ALCOHOL
                                                                   0.000#  -1.00
59)  2,2,4-TRIMETHYLPENTANE
      0.960 1.113 1.252 1.178 1.183 1.209 1.051       0.918        1.108   10.94
60)  benzene
      1.129 1.256 1.422 1.385 1.386 1.422 1.316 1.198 1.272 1.625  1.341   10.43
61)  tert-amyl methyl ether
            0.260 0.269 0.265 0.265 0.264 0.257       0.235        0.259    4.42
62)  heptane
      0.182 0.193 0.231 0.223 0.217 0.221 0.201       0.168        0.205   10.96
63)  isopropyl acetate
            0.641 0.650 0.632 0.647 0.619 0.595       0.605        0.627    3.37
64)  1,2-dichloroethane
      0.405 0.481 0.531 0.529 0.526 0.515 0.507 0.349 0.490        0.481   13.10
65)  Ethyl Acrylate
                                                                   0.000#  -1.00
66)  trichloroethene
      0.249 0.332 0.381 0.376 0.374 0.373 0.350       0.340        0.347   12.53
67)  TERT-AMYL ETHYL ETHER
                                                                   0.000#  -1.00
68)  methyl methacrylate
      0.496 0.481 0.563 0.550 0.557 0.543 0.549       0.520        0.532    5.68
69)  2-nitropropane
      0.145 0.144 0.145 0.142 0.145 0.140 0.142       0.136        0.142    2.21
70)  2-chloroethyl vinyl ether
            0.186 0.214 0.208 0.205 0.214 0.192       0.182        0.200    6.62
71)  1,2-dichloropropane
      0.266 0.308 0.351 0.337 0.338 0.346 0.307 0.245 0.306        0.311   11.74
72)  dibromomethane
      0.172 0.207 0.236 0.233 0.230 0.229 0.219       0.215        0.218    9.64
73)  methylcyclohexane
      0.431 0.523 0.564 0.547 0.544 0.547 0.501 0.378 0.436        0.497   13.23
74)  bromodichloromethane
      0.418 0.455 0.529 0.527 0.510 0.517 0.492 0.392 0.478 0.479  0.480    9.63
75)  cis-1,3-dichloropropene
      0.442 0.504 0.579 0.567 0.557 0.572 0.532 0.432 0.509 0.441  0.513   11.24
76)  toluene-d8 (s)
      1.195 1.105 1.179 1.149 1.160 1.180 0.954 1.108 1.014 1.060  1.110    7.18
77)  4-methyl-2-pentanone
      0.094 0.108 0.123 0.124 0.124 0.120 0.118       0.116        0.116    8.83
78)  toluene
      0.625 0.701 0.848 0.824 0.808 0.841 0.751 0.603 0.731 0.704  0.744   11.75
```

Initial Calibration Summary

Job Number: JB77674 **Sample:** V2A6388-ICC6388
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 2A149896.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

79)	3-methyl-1-butanol											
		0.018	0.015	0.017	0.016	0.014	0.016		0.016		0.016	6.70
80)	trans-1,3-dichloropropene											
	0.406	0.488	0.551	0.540	0.534	0.545	0.506	0.414	0.487	0.521	0.499	10.43
81)	ethyl methacrylate											
	0.341	0.344	0.412	0.403	0.400	0.409	0.372		0.363		0.381	7.66
82)	1,1,2-trichloroethane											
	0.195	0.216	0.262	0.258	0.254	0.259	0.246	0.178	0.226		0.233	13.23
83)	2-hexanone											
		0.092	0.113	0.115	0.112	0.112	0.114		0.103		0.109	7.74
84)	I chlorobenzene-d5	----------ISTD----------										
85)	tetrachloroethene											
	0.307	0.358	0.422	0.427	0.442	0.413	0.396	0.320	0.410		0.388	12.49
86)	1,3-dichloropropane											
	0.461	0.498	0.561	0.561	0.551	0.564	0.552	0.428	0.529	0.523	0.523	8.99
87)	butyl acetate											
		0.222	0.217	0.221	0.228	0.213	0.199		0.211		0.216	4.28
88)	3,3-dimethyl-1-butanol											
		0.042	0.036	0.040	0.041	0.034	0.040		0.040		0.039	7.78
89)	dibromochloromethane											
	0.457	0.431	0.511	0.510	0.489	0.500	0.493	0.432	0.462	0.453	0.474	6.47
90)	1,2-dibromoethane											
	0.341	0.352	0.394	0.392	0.389	0.389	0.369	0.276	0.365		0.363	10.37
91)	chlorobenzene											
	0.980	1.008	1.102	1.092	1.083	1.089	1.013	0.951	0.990	1.221	1.053	7.61
92)	1,1,1,2-tetrachloroethane											
	0.429	0.415	0.476	0.471	0.464	0.469	0.453	0.369	0.429	0.383	0.436	8.67
93)	ethylbenzene											
	1.555	1.644	1.888	1.859	1.811	1.918	1.723	1.544	1.678	1.747	1.737	7.65
94)	m,p-xylene											
	0.556	0.629	0.716	0.706	0.689	0.728	0.653	0.520	0.636	0.655	0.649	10.46
95)	o-xylene											
	0.592	0.633	0.717	0.698	0.688	0.727	0.661	0.557	0.632	0.747	0.665	9.22
96)	styrene											
	0.952	1.018	1.220	1.188	1.154	1.253	1.095	0.953	1.077	1.120	1.103	9.53
97)	bromoform											
	0.362	0.376	0.400	0.399	0.382	0.391	0.367	0.384	0.362	0.367	0.379	3.86
98)	I 1,4-dichlorobenzene-d	----------ISTD----------										
99)	isopropylbenzene											
	2.542	2.802	3.345	3.267	3.261	3.358	2.984	2.433	2.874	3.282	3.015	11.34
100)	4-bromofluorobenzene (s)											
	1.168	0.824	0.892	0.881	0.891	0.904	0.737	0.891	0.809	0.832	0.883	12.77
101)	cyclohexanone											
		0.034	0.033	0.040	0.043	0.029	0.035		0.039		0.036	12.93
102)	bromobenzene											
	0.883	0.888	1.009	0.991	0.975	1.031	0.917	0.846	0.897	1.059	0.950	7.64
103)	1,1,2,2-tetrachloroethane											
	0.936	0.776	0.855	0.858	0.842	0.841	0.855	0.991	0.771	0.855	0.858	7.64
104)	trans-1,4-dichloro-2-butene											
	0.194	0.165	0.211	0.211	0.209	0.210	0.206		0.186		0.199	8.36
105)	1,2,3-trichloropropane											
	0.225	0.194	0.220	0.218	0.226	0.216	0.222		0.210		0.216	4.72
106)	n-propylbenzene											
	0.670	0.669	0.821	0.797	0.779	0.843	0.737	0.640	0.699		0.739	9.99
107)	2-chlorotoluene											
	0.664	0.727	0.840	0.814	0.807	0.855	0.749	0.703	0.740	0.825	0.772	8.34
108)	4-chlorotoluene											
	0.666	0.718	0.833	0.821	0.822	0.862	0.781	0.582	0.755	0.929	0.777	13.02

Initial Calibration Summary

Job Number: JB77674 **Sample:** V2A6388-ICC6388
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 2A149896.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

109)	1,3,5-trimethylbenzene											
	2.324	2.426	2.889	2.820	2.745	2.932	2.519	2.424	2.467	2.937	2.648	9.03
110)	tert-butylbenzene											
	2.013	2.051	2.416	2.341	2.335	2.406	2.179	1.821	2.095	2.030	2.169	9.21
111)	pentachloroethane											
	0.630	0.572	0.671	0.647	0.617	0.663	0.605	0.587	0.549		0.616	6.75
112)	1,2,4-trimethylbenzene											
	2.325	2.348	2.779	2.728	2.680	2.811	2.523	2.316	2.434	2.741	2.568	7.82
113)	sec-butylbenzene											
	2.739	2.909	3.644	3.513	3.475	3.621	3.169	2.711	3.040	3.754	3.258	12.04
114)	1,3-dichlorobenzene											
	1.765	1.587	1.817	1.805	1.800	1.853	1.739	1.757	1.652	2.177	1.795	8.69
115)	p-isopropyltoluene											
	2.347	2.700	3.118	2.993	2.990	3.084	2.744	2.483	2.648	3.423	2.853	11.43
116)	1,4-dichlorobenzene											
	1.774	1.660	1.867	1.848	1.825	1.875	1.758	1.855	1.668	2.322	1.845	10.01
117)	1,2-dichlorobenzene											
	1.749	1.572	1.802	1.781	1.775	1.762	1.716	1.855	1.629	2.034	1.767	7.08
118)	benzyl chloride											
		1.557	1.469	1.470	1.467	1.447	1.388		1.351		1.450	4.54
119)	n-butylbenzene											
	1.107	1.228	1.518	1.470	1.445	1.534	1.289	1.053	1.294	1.208	1.314	12.98
120)	1,2-dibromo-3-chloropropane											
	0.191	0.155	0.166	0.166	0.161	0.157	0.172		0.153		0.165	7.43
121)	1,3,5-TRICHLOROBENZENE											
	1.654	1.496	1.692	1.662	1.649	1.640	1.498	1.509	1.493	1.707	1.600	5.58
122)	1,2,4-trichlorobenzene											
	1.523	1.193	1.499	1.474	1.449	1.450	1.365	1.384	1.318	1.588	1.424	7.96
123)	hexachlorobutadiene											
	0.689	0.695	0.864	0.838	0.844	0.830	0.738		0.715		0.777	9.52
124)	naphthalene											
	3.240	2.529	2.859	2.849	2.746	2.763	2.694	3.039	2.632	3.173	2.852	8.15
125)	1,2,3-trichlorobenzene											
	1.465	1.176	1.338	1.335	1.301	1.302	1.224	1.258	1.220	1.648	1.327	10.44
126)	hexachloroethane											
	0.558	0.544	0.718	0.692	0.681	0.700	0.625		0.608		0.641	10.44

(#) = Out of Range ### Number of calibration levels exceeded format ###

M2A6388.M Thu Aug 28 16:59:39 2014 MS2A

Initial Calibration Verification

Job Number: JB77674 **Sample:** V2A6388-ICV6388
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 2A149901.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\2A149901.D Vial: 14
Acq On : 27 Aug 2014 8:57 pm Operator: Dejanas
Sample : icv6388-50 Inst : Instrumen
Misc : MS72632,V2A6388,w,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M2A6388.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update : Thu Aug 28 16:51:38 2014
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.30min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	112	-0.01	7.94
2	M	tertiary butyl alcohol	1.227	1.195	2.6	108	0.00	8.07
3	m	Ethanol	0.098	0.095	3.1	108	0.00	6.56
4	M	1,4-dioxane	0.106	0.103	2.8	102	0.00	12.04
5	I	pentafluorobenzene	1.000	1.000	0.0	110	0.00	10.39
6		FREON 143A		----------NA----------				
7	M	chlorodifluoromethane	0.407	0.390	4.2	101	0.00	4.20
8	M	dichlorodifluoromethane	0.471	0.626	-32.9#	136	0.00	4.18
9		FREON 142B		----------NA----------				
10	M	chloromethane	0.472	0.547	-15.9	125	0.00	4.58
11	M	vinyl chloride	0.427	0.494	-15.7	122	-0.01	4.85
12	M	bromomethane	0.328	0.359	-9.5	118	0.00	5.52
13	M	chloroethane	0.211	0.265	-25.6#	131	0.00	5.71
14	M	trichlorofluoromethane	0.580	0.645	-11.2	111	0.00	6.26
15		PENTANE		----------NA----------				
16	M	ethyl ether	0.172	0.191	-11.0	117	0.00	6.69
17		FREON 141B		----------NA----------				
18	M	acrolein	0.066	0.068	-3.0	112	0.00	6.97
19	M	1,1-dichloroethene	0.325	0.365	-12.3	114	-0.01	7.16
20	M	acetone	0.119	0.145	-21.8#	136	0.00	7.22
21	M	allyl chloride	0.176	0.228	-29.5#	132	0.00	7.75
22	M	acetonitrile	0.031	0.033	-6.5	116	0.00	7.71
23	M	iodomethane	0.671	0.732	-9.1	111	0.00	7.47
24	M	iso-butyl alcohol	0.012	0.012	0.0	111	0.00	10.94
25	M	carbon disulfide	1.117	1.298	-16.2	116	0.00	7.60
26	M	methylene chloride	0.383	0.395	-3.1	110	0.00	7.97
		----------	True	Calc.	% Drift	----------		
27	M	methyl acetate	50.000	47.144	5.7	104	0.00	7.75
		----------	AvgRF	CCRF	% Dev	----------		
28	M	methyl tert butyl ether	1.065	1.126	-6.1	108	0.00	8.34
29	M	trans-1,2-dichloroethene	0.346	0.373	-7.8	108	0.00	8.38
30	M	di-isopropyl ether	1.193	1.209	-1.3	110	0.00	9.00
31	M	2-butanone	0.037	0.044	-18.9	121	0.00	9.79
32	M	1,1-dichloroethane	0.605	0.673	-11.2	111	0.00	9.01
33	M	chloroprene	0.494	0.541	-9.5	112	0.00	9.13
34	M	acrylonitrile	0.120	0.137	-14.2	115	0.00	8.33
35	M	vinyl acetate	0.055	0.057	-3.6	109	0.00	9.01
36	M	ethyl tert-butyl ether	1.267	1.204	5.0	108	0.00	9.51
37	M	ethyl acetate	0.048	0.049	-2.1	112	0.00	9.81

Initial Calibration Verification

Job Number: JB77674 **Sample:** V2A6388-ICV6388
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 2A149901.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

38	M	2,2-dichloropropane	0.494	0.502	-1.6	108	0.00	9.82
39	M	cis-1,2-dichloroethene	0.385	0.399	-3.6	108	0.00	9.82
		----------	True	Calc.	% Drift	----------		
40		methylacrylate	50.000	51.400	-2.8	113	0.00	9.89
		----------	AvgRF	CCRF	% Dev	----------		
41	M	propionitrile	0.048	0.053	-10.4	112	0.00	9.88
42	M	bromochloromethane	0.201	0.210	-4.5	110	0.00	10.15
43	M	tetrahydrofuran	0.126	0.127	-0.8	112	-0.01	10.19
44	M	chloroform	0.416	0.437	-5.0	106	0.00	10.22
45		t-butyl formate	0.368	0.339	7.9	101	0.00	10.25
46	S	dibromofluoromethane (s)	0.346	0.355	-2.6	109	0.00	10.43
47	S	1,2-dichloroethane-d4 (s)	0.416	0.414	0.5	105	0.00	10.87
48	M	freon 113	0.287	0.299	-4.2	108	-0.02	7.14
49	M	methacrylonitrile	0.205	0.228	-11.2	113	0.00	10.08
		----------	True	Calc.	% Drift	----------		
50	M	1,1,1-trichloroethane	50.000	48.907	2.2	109	0.00	10.48
		----------	AvgRF	CCRF	% Dev	----------		
51	M	Cyclohexane	0.485	0.538	-10.9	112	0.00	10.55
52	I	1,4-difluorobenzene	1.000	1.000	0.0	111	0.00	11.33
53	M	epichlorohydrin	0.031	0.032	-3.2	111	0.00	12.56
54	M	n-butyl alcohol	0.010	0.010	0.0	105	0.00	11.47
55	M	carbon tetrachloride	0.545	0.567	-4.0	108	0.00	10.69
56	M	1,1-dichloropropene	0.453	0.464	-2.4	105	0.00	10.67
57	M	hexane	0.359	0.358	0.3	103	0.00	8.72
58		TERT AMYL ALCOHOL		----------NA----------				
59		2,2,4-TRIMETHYLPENTANE	1.108	1.140	-2.9	108	0.00	10.95
60	M	benzene	1.341	1.385	-3.3	111	0.00	10.94
61	M	tert-amyl methyl ether	0.259	0.252	2.7	106	0.00	10.98
62	M	heptane	0.205	0.205	0.0	102	0.00	11.12
63	M	isopropyl acetate	0.627	0.675	-7.7	119	0.00	10.87
64	M	1,2-dichloroethane	0.481	0.507	-5.4	107	0.00	10.96
65	M	Ethyl Acrylate		----------NA----------				
66	M	trichloroethene	0.347	0.359	-3.5	106	0.00	11.66
67		TERT-AMYL ETHYL ETHER		----------NA----------				
68	M	methyl methacrylate	0.532	0.559	-5.1	113	0.00	11.93
69	M	2-nitropropane	0.142	0.144	-1.4	113	0.00	12.42
70	M	2-chloroethyl vinyl ether	0.200	0.213	-6.5	114	0.00	12.44
71	M	1,2-dichloropropane	0.311	0.349	-12.2	115	0.00	11.92
72	M	dibromomethane	0.218	0.228	-4.6	109	0.00	12.08
73	M	methylcyclohexane	0.497	0.520	-4.6	106	0.00	11.87
74	M	bromodichloromethane	0.480	0.512	-6.7	108	0.00	12.21
75	M	cis-1,3-dichloropropene	0.513	0.546	-6.4	107	0.00	12.65
76	S	toluene-d8 (s)	1.110	1.145	-3.2	111	0.00	12.92
77	M	4-methyl-2-pentanone	0.116	0.127	-9.5	114	0.00	12.74
78	M	toluene	0.744	0.803	-7.9	108	0.00	13.00
79	M	3-methyl-1-butanol	0.016	0.016	0.0	109	0.00	12.77
80	M	trans-1,3-dichloropropene	0.499	0.506	-1.4	104	0.00	13.18
81	M	ethyl methacrylate	0.381	0.404	-6.0	111	0.00	13.18
82	M	1,1,2-trichloroethane	0.233	0.254	-9.0	110	0.00	13.39
83	M	2-hexanone	0.109	0.119	-9.2	115	0.00	13.55
84	I	chlorobenzene-d5	1.000	1.000	0.0	113	0.00	14.36
85	M	tetrachloroethene	0.388	0.451	-16.2	119	0.00	13.55
86	M	1,3-dichloropropane	0.523	0.546	-4.4	110	0.00	13.56
87	M	butyl acetate	0.216	0.222	-2.8	113	0.00	13.62

Initial Calibration Verification

Job Number: JB77674 **Sample:** V2A6388-ICV6388
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 2A149901.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

88		3,3-dimethyl-1-butanol	0.039	0.039	0.0	111	0.00	13.72
89	M	dibromochloromethane	0.474	0.478	-0.8	106	0.00	13.81
90	M	1,2-dibromoethane	0.363	0.385	-6.1	111	0.00	13.95
91	M	chlorobenzene	1.053	1.055	-0.2	109	0.00	14.38
92	M	1,1,1,2-tetrachloroethane	0.436	0.441	-1.1	106	0.00	14.44
93	M	ethylbenzene	1.737	1.792	-3.2	109	0.00	14.43
94	M	m,p-xylene	0.649	0.676	-4.2	108	0.00	14.53
95	M	o-xylene	0.665	0.670	-0.8	108	0.00	14.93
96	M	styrene	1.103	1.160	-5.2	110	0.00	14.94
97	M	bromoform	0.379	0.376	0.8	106	0.00	15.19
98	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	112	0.00	16.52
99	M	isopropylbenzene	3.015	3.132	-3.9	107	0.00	15.24
100	S	4-bromofluorobenzene (s)	0.883	0.853	3.4	108	0.00	15.43
101		cyclohexanone	0.036	0.047	-30.6#	131	0.00	15.40
102	M	bromobenzene	0.950	0.964	-1.5	109	0.00	15.62
103	M	1,1,2,2-tetrachloroethane	0.858	0.809	5.7	106	0.00	15.53
104	M	trans-1,4-dichloro-2-bute	0.199	0.205	-3.0	109	0.00	15.56
105	M	1,2,3-trichloropropane	0.216	0.211	2.3	108	0.00	15.60
106	M	n-propylbenzene	0.739	0.813	-10.0	114	0.00	15.62
107	M	2-chlorotoluene	0.772	0.778	-0.8	107	0.00	15.76
108	M	4-chlorotoluene	0.777	0.799	-2.8	109	0.00	15.85
109	M	1,3,5-trimethylbenzene	2.648	2.657	-0.3	105	0.00	15.76
110	M	tert-butylbenzene	2.169	2.276	-4.9	109	0.00	16.09
111	M	pentachloroethane	0.616	0.528	14.3	91	0.00	16.17
112	M	1,2,4-trimethylbenzene	2.568	2.752	-7.2	113	0.00	16.13
113	M	sec-butylbenzene	3.258	3.349	-2.8	107	0.00	16.29
114	M	1,3-dichlorobenzene	1.795	1.709	4.8	106	0.00	16.46
115	M	p-isopropyltoluene	2.853	2.892	-1.4	108	0.00	16.40
116	M	1,4-dichlorobenzene	1.845	1.757	4.8	106	0.00	16.54
117	M	1,2-dichlorobenzene	1.767	1.700	3.8	107	0.00	16.91
118	M	benzyl chloride	1.450	1.570	-8.3	120	0.00	16.65
119	M	n-butylbenzene	1.314	1.463	-11.3	112	0.00	16.78
120	M	1,2-dibromo-3-chloropropa	0.165	0.158	4.2	107	0.00	17.66
121		1,3,5-TRICHLOROBENZENE	1.600	1.563	2.3	105	0.00	17.84
122	M	1,2,4-trichlorobenzene	1.424	1.384	2.8	105	0.00	18.48
123	M	hexachlorobutadiene	0.777	0.785	-1.0	105	0.00	18.60
124	M	naphthalene	2.852	2.672	6.3	105	0.00	18.77
125	M	1,2,3-trichlorobenzene	1.327	1.231	7.2	103	0.00	19.02
126	M	hexachloroethane	0.641	0.673	-5.0	109	0.00	17.16

(#) = Out of Range SPCC's out = 0 CCC's out = 0

2A149896.D M2A6388.M Thu Aug 28 16:59:39 2014 MS2A

Continuing Calibration Summary

Job Number: JB77674 **Sample:** V2A6440-CC6388
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 2A151096A.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\2A151096a.D Vial: 4
Acq On : 30 Sep 2014 1:10 pm Operator: Dejanas
Sample : cc6388-20 Inst : Instrumen
Misc : MS74586,V2A6440,w,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M2A6388.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update : Thu Aug 28 16:51:38 2014
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.30min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	96	-0.01	7.94
2	M	tertiary butyl alcohol	1.227	1.217	0.8	94	0.00	8.07
3	m	Ethanol	0.098	0.065	33.7#	62	0.13	6.70
4	M	1,4-dioxane	0.106	0.103	2.8	89	0.00	12.04
5	I	pentafluorobenzene	1.000	1.000	0.0	112	0.00	10.39
6		FREON 143A		----------NA----------				
7	M	chlorodifluoromethane	0.407	0.301	26.0#	79	0.00	4.21
8	M	dichlorodifluoromethane	0.471	0.565	-20.0	128	0.02	4.20
9		FREON 142B		----------NA----------				
10	M	chloromethane	0.472	0.487	-3.2	113	-0.03	4.55
11	M	vinyl chloride	0.427	0.493	-15.5	122	-0.03	4.83
12	M	bromomethane	0.328	0.329	-0.3	113	0.00	5.53
13	M	chloroethane	0.211	0.218	-3.3	110	0.02	5.73
14	M	trichlorofluoromethane	0.580	0.645	-11.2	115	0.00	6.27
15		PENTANE		----------NA----------				
16	M	ethyl ether	0.172	0.176	-2.3	111	0.00	6.70
17		FREON 141B		----------NA----------				
18	M	acrolein	0.066	0.052	21.2#	89	0.00	6.98
19	M	1,1-dichloroethene	0.325	0.352	-8.3	112	0.00	7.17
20	M	acetone	0.119	0.116	2.5	97	0.00	7.23
21	M	allyl chloride	0.176	0.175	0.6	108	0.00	7.75
22	M	acetonitrile	0.031	0.027	12.9	103	0.00	7.71
23	M	iodomethane	0.671	0.693	-3.3	107	0.00	7.47
24	M	iso-butyl alcohol	0.012	0.008#	33.3#	73	0.00	10.94
25	M	carbon disulfide	1.117	1.205	-7.9	109	0.00	7.60
26	M	methylene chloride	0.383	0.379	1.0	108	0.00	7.97
		----------	True	Calc.	% Drift	----------		
27	M	methyl acetate	20.000	18.233	8.8	102	0.00	7.75
		----------	AvgRF	CCRF	% Dev	----------		
28	M	methyl tert butyl ether	1.065	1.034	2.9	102	0.00	8.34
29	M	trans-1,2-dichloroethene	0.346	0.360	-4.0	108	0.00	8.39
30	M	di-isopropyl ether	1.193	1.199	-0.5	114	0.00	9.00
31	M	2-butanone	0.037	0.038	-2.7	105	0.00	9.79
32	M	1,1-dichloroethane	0.605	0.631	-4.3	107	0.00	9.01
33	M	chloroprene	0.494	0.494	0.0	103	0.00	9.13
34	M	acrylonitrile	0.120	0.108	10.0	94	0.00	8.33
35	M	vinyl acetate	0.055	0.049	10.9	110	0.00	9.01
36	M	ethyl tert-butyl ether	1.267	1.178	7.0	107	0.00	9.51
37	M	ethyl acetate	0.048	0.041	14.6	93	0.00	9.81

Continuing Calibration Summary

Job Number: JB77674 **Sample:** V2A6440-CC6388
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 2A151096A.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

38	M	2,2-dichloropropane	0.494	0.590	-19.4	127	0.00	9.82
39	M	cis-1,2-dichloroethene	0.385	0.400	-3.9	111	0.00	9.82
		----------	True	Calc.	% Drift	----------		
40		methylacrylate	20.000	17.816	10.9	99	0.00	9.90
		----------	AvgRF	CCRF	% Dev	----------		
41	M	propionitrile	0.048	0.044	8.3	96	0.00	9.88
42	M	bromochloromethane	0.201	0.202	-0.5	107	0.00	10.15
43	M	tetrahydrofuran	0.126	0.104	17.5	92	0.00	10.21
44	M	chloroform	0.416	0.431	-3.6	107	0.00	10.21
45		t-butyl formate	0.368	0.323	12.2	102	0.00	10.25
46	S	dibromofluoromethane (s)	0.346	0.330	4.6	103	0.00	10.42
47	S	1,2-dichloroethane-d4 (s)	0.416	0.362	13.0	94	0.00	10.86
48	M	freon 113	0.287	0.320	-11.5	112	-0.01	7.14
49	M	methacrylonitrile	0.205	0.182	11.2	92	0.00	10.09
		----------	True	Calc.	% Drift	----------		
50	M	1,1,1-trichloroethane	20.000	19.320	3.4	108	0.00	10.48
		----------	AvgRF	CCRF	% Dev	----------		
51	M	Cyclohexane	0.485	0.516	-6.4	109	0.00	10.55
52	I	1,4-difluorobenzene	1.000	1.000	0.0	113	0.00	11.32
53	M	epichlorohydrin	0.031	0.028	9.7	101	0.00	12.56
54	M	n-butyl alcohol	0.010	0.008#	20.0	88	0.00	11.47
55	M	carbon tetrachloride	0.545	0.558	-2.4	105	0.00	10.69
56	M	1,1-dichloropropene	0.453	0.462	-2.0	105	0.00	10.67
57	M	hexane	0.359	0.404	-12.5	115	0.00	8.72
58		TERT AMYL ALCOHOL		----------NA----------				
59		2,2,4-TRIMETHYLPENTANE	1.108	1.185	-6.9	113	0.00	10.95
60	M	benzene	1.341	1.319	1.6	107	0.00	10.94
61	M	tert-amyl methyl ether	0.259	0.259	0.0	110	0.00	10.98
62	M	heptane	0.205	0.226	-10.2	118	0.00	11.12
63	M	isopropyl acetate	0.627	0.583	7.0	102	0.00	10.88
64	M	1,2-dichloroethane	0.481	0.457	5.0	98	0.00	10.96
65	M	Ethyl Acrylate		----------NA----------				
66	M	trichloroethene	0.347	0.360	-3.7	108	0.00	11.66
67		TERT-AMYL ETHYL ETHER		----------NA----------				
68	M	methyl methacrylate	0.532	0.488	8.3	99	0.00	11.93
69	M	2-nitropropane	0.142	0.127	10.6	99	0.00	12.42
70	M	2-chloroethyl vinyl ether	0.200	0.197	1.5	108	0.00	12.44
71	M	1,2-dichloropropane	0.311	0.336	-8.0	112	0.00	11.92
72	M	dibromomethane	0.218	0.217	0.5	107	0.00	12.08
73	M	methylcyclohexane	0.497	0.544	-9.5	113	0.00	11.87
74	M	bromodichloromethane	0.480	0.496	-3.3	110	0.00	12.21
75	M	cis-1,3-dichloropropene	0.513	0.551	-7.4	111	0.00	12.65
76	S	toluene-d8 (s)	1.110	1.082	2.5	105	0.00	12.92
77	M	4-methyl-2-pentanone	0.116	0.110	5.2	101	0.00	12.75
78	M	toluene	0.744	0.820	-10.2	114	0.00	12.99
79	M	3-methyl-1-butanol	0.016	0.013	18.8	89	0.00	12.77
80	M	trans-1,3-dichloropropene	0.499	0.518	-3.8	110	0.00	13.18
81	M	ethyl methacrylate	0.381	0.373	2.1	105	0.00	13.18
82	M	1,1,2-trichloroethane	0.233	0.244	-4.7	109	0.00	13.39
83	M	2-hexanone	0.109	0.101	7.3	101	0.00	13.55
84	I	chlorobenzene-d5	1.000	1.000	0.0	114	0.00	14.35
85	M	tetrachloroethene	0.388	0.384	1.0	99	0.00	13.55
86	M	1,3-dichloropropane	0.523	0.529	-1.1	110	0.00	13.56
87	M	butyl acetate	0.216	0.209	3.2	105	0.00	13.62

Continuing Calibration Summary

Job Number: JB77674 **Sample:** V2A6440-CC6388
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 2A151096A.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

88		3,3-dimethyl-1-butanol	0.039	0.031	20.5#	88	0.00	13.72
89	M	dibromochloromethane	0.474	0.478	-0.8	112	0.00	13.81
90	M	1,2-dibromoethane	0.363	0.363	0.0	107	0.00	13.95
91	M	chlorobenzene	1.053	1.081	-2.7	114	0.00	14.38
92	M	1,1,1,2-tetrachloroethane	0.436	0.446	-2.3	110	0.00	14.44
93	M	ethylbenzene	1.737	1.838	-5.8	116	0.00	14.43
94	M	m,p-xylene	0.649	0.702	-8.2	117	0.00	14.53
95	M	o-xylene	0.665	0.708	-6.5	118	0.00	14.92
96	M	styrene	1.103	1.171	-6.2	116	0.00	14.93
97	M	bromoform	0.379	0.350	7.7	105	0.00	15.18
98	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	114	0.00	16.52
99	M	isopropylbenzene	3.015	3.226	-7.0	113	0.00	15.24
100	S	4-bromofluorobenzene (s)	0.883	0.808	8.5	104	0.00	15.43
101		cyclohexanone	0.036	0.044	-22.2#	119	0.00	15.40
102	M	bromobenzene	0.950	0.982	-3.4	115	0.00	15.61
103	M	1,1,2,2-tetrachloroethane	0.858	0.775	9.7	105	0.00	15.53
104	M	trans-1,4-dichloro-2-bute	0.199	0.134	32.7#	73	0.00	15.56
105	M	1,2,3-trichloropropane	0.216	0.201	6.9	102	0.00	15.60
106	M	n-propylbenzene	0.739	0.814	-10.1	119	0.00	15.62
107	M	2-chlorotoluene	0.772	0.820	-6.2	116	0.00	15.76
108	M	4-chlorotoluene	0.777	0.834	-7.3	116	0.00	15.85
109	M	1,3,5-trimethylbenzene	2.648	2.759	-4.2	115	0.00	15.76
110	M	tert-butylbenzene	2.169	2.305	-6.3	113	0.00	16.08
111	M	pentachloroethane	0.616	0.658	-6.8	122	0.00	16.17
112	M	1,2,4-trimethylbenzene	2.568	2.687	-4.6	115	0.00	16.12
113	M	sec-butylbenzene	3.258	3.459	-6.2	114	0.00	16.28
114	M	1,3-dichlorobenzene	1.795	1.810	-0.8	115	0.00	16.46
115	M	p-isopropyltoluene	2.853	2.973	-4.2	114	0.00	16.39
116	M	1,4-dichlorobenzene	1.845	1.840	0.3	115	0.00	16.54
117	M	1,2-dichlorobenzene	1.767	1.765	0.1	114	0.00	16.91
118	M	benzyl chloride	1.450	1.655	-14.1	129	0.00	16.65
119	M	n-butylbenzene	1.314	1.440	-9.6	114	0.00	16.78
120	M	1,2-dibromo-3-chloropropa	0.165	0.147	10.9	104	0.00	17.66
121		1,3,5-TRICHLOROBENZENE	1.600	1.623	-1.4	113	0.00	17.84
122	M	1,2,4-trichlorobenzene	1.424	1.323	7.1	104	0.00	18.48
123	M	hexachlorobutadiene	0.777	0.816	-5.0	110	0.00	18.60
124	M	naphthalene	2.852	2.326	18.4	97	0.00	18.77
125	M	1,2,3-trichlorobenzene	1.327	1.135	14.5	100	0.00	19.01
126	M	hexachloroethane	0.641	0.641	0.0	108	0.00	17.16

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2A149895.D M2A6388.M Wed Oct 01 12:18:35 2014 MS2A

Initial Calibration Summary

Job Number: JB77674 **Sample:** V3A5831-ICC5831
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 3A134846.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Response Factor Report MS3A

Method : C:\MSDCHEM\1\METHODS\M3A5831.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update : Thu Sep 25 16:01:33 2014
Response via : Initial Calibration

Calibration Files
1 =3a134840.D 2 =3a134842.D 100 =3a134847.D 50 =3a134846.D
20 =3a134845.D 200 =3a134848.D 5 =3a134843.D 0.5 =3a134839.D
10 =3a134844.D 0.2 =3a134841.D = =

Compound	1	2	100	50	20	200	5	0.5	10	0.2	Avg	%RSD
1) I Tert Butyl Alcohol-d9	----------ISTD----------											
2) tertiary butyl alcohol	0.736	1.033	1.062	1.101	0.948	0.916		1.047			0.978	12.74
3) ethanol											0.000#	-1.00
4) 1,4-dioxane			0.095	0.090	0.095	0.095	0.072		0.092		0.090	9.72
5) I pentafluorobenzene	----------ISTD----------											
6) FREON 115											0.000#	-1.00
7) FREON 152A											0.000#	-1.00
8) chlorodifluoromethane			0.678	0.636	0.638	0.633	0.444		0.570		0.600	13.96
9) dichlorodifluoromethane	0.813	0.843	0.858	0.774	0.800	0.758		0.642			0.784	9.17
10) chloromethane	0.864	0.839	0.968	0.858	0.790	0.938	0.830	0.751	0.729	0.822	0.839	8.88
11) vinyl chloride	1.054	0.956	1.094	0.994	0.925	1.035	0.939	0.748	0.854	0.906	0.951	10.72
12) bromomethane	0.464	0.501	0.484	0.482	0.459	0.375	0.465	0.582	0.435		0.472	11.66
13) FREON 123A											0.000#	-1.00
14) FREON 123											0.000#	-1.00
15) 2-CHLOROPROPANE	0.905	0.829	0.790	0.833	0.794	0.737		0.624			0.787	11.23
16) chloroethane	0.254	0.268	0.311	0.296	0.288	0.274	0.287		0.260		0.280	6.88
17) trichlorofluoromethane	0.610	0.872	0.846	0.744	0.876	0.641		0.613			0.743	16.49
----- Linear regression ----- Coefficient = 0.9998												
Response Ratio = -0.03544 + 0.88515 *A												
18) Pentane											0.000#	-1.00
19) 1-CHLOROPROPANE			0.741	0.723	0.836	0.724	1.097		0.793		0.819	17.50
----- Linear regression ----- Coefficient = 0.9997												
Response Ratio = 0.03005 + 0.71721 *A												
20) ethyl ether												

Initial Calibration Summary

Job Number: JB77674 **Sample:** V3A5831-ICC5831
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 3A134846.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	0.206	0.228	0.234	0.233	0.227	0.186	0.201	0.216	8.59
21)	acrolein									
	0.089	0.106	0.110	0.102	0.102	0.102	0.096	0.089	0.099	7.63
22)	1,1-dichloroethene									
	0.544	0.527	0.454	0.427	0.464	0.444	0.395	0.344	0.450	14.50
23)	acetone									
	0.186	0.192	0.214	0.168			0.156	0.183	12.32	
24)	allyl chloride									
	0.214	0.206	0.215	0.209	0.167		0.161	0.195	12.53	
25)	acetonitrile									
	0.052	0.052	0.053	0.050	0.052		0.035	0.049	14.22	
26)	iodomethane									
	0.782	0.806	0.883	0.840	0.864	0.837	0.726	0.660	0.800	9.38
27)	iso-butyl alcohol									
	0.012	0.014	0.014	0.015	0.014	0.012	0.012	0.013	9.79	
28)	carbon disulfide									
	1.968	1.904	1.899	1.746	1.845	1.838	1.614	1.356	1.771	11.29
29)	methylene chloride									
	0.552	0.501	0.499	0.479	0.507	0.483	0.446	0.490	0.420	0.486	7.70
30)	methyl acetate									
	0.413	0.381	0.395	0.398	0.424	0.373	0.387	0.412	0.398	4.39
31)	methyl tert butyl ether									
	1.469	1.440	1.445	1.407	1.461	1.387	1.306	1.158	1.330	1.378	7.28
32)	trans-1,2-dichloroethene									
	0.645	0.577	0.597	0.594	0.633	0.592	0.534	0.478	0.581	9.21
33)	di-isopropyl ether									
	1.473	1.321	1.464	1.405	1.480	1.408	1.295	1.295	1.399	1.393	5.30
34)	2-butanone									
	0.065	0.063	0.064	0.062			0.056	0.062	5.27	
35)	1,1-dichloroethane									
	0.774	0.768	0.768	0.752	0.801	0.755	0.671	0.627	0.739	7.96
36)	chloroprene									
	0.525	0.448	0.512	0.490	0.525	0.504	0.420	0.494	0.490	7.62
37)	acrylonitrile									
	0.177	0.209	0.205	0.217	0.196	0.179	0.200	0.197	7.64	
38)	vinyl acetate									
	0.075	0.070	0.067	0.073			0.055	0.068	11.76	
39)	ethyl tert-butyl ether									
	1.378	1.276	1.436	1.402	1.464	1.403	1.268	1.176	1.384	1.354	6.91
40)	ethyl acetate									
	0.065	0.064	0.062	0.062	0.044		0.056	0.059	13.37	
41)	2,2-dichloropropane									
	0.807	0.785	0.744	0.729	0.752	0.697	0.674	0.568	0.719	10.41
42)	cis-1,2-dichloroethene									
	0.637	0.520	0.459	0.456	0.482	0.444	0.438	0.430	0.403	0.474	14.58
43)	methylacrylate									
	0.076	0.071	0.068	0.073	0.032		0.056	0.063	25.99	
	----- Linear regression ----- Coefficient = 0.9994									
	Response Ratio = -0.00261 + 0.07423 *A									
44)	propionitrile									
	0.070	0.096	0.093	0.096	0.090	0.074	0.088	0.087	12.22	
45)	bromochloromethane									
	0.187	0.193	0.228	0.228	0.242	0.224	0.197	0.201	0.212	9.52
46)	tetrahydrofuran									
	0.203	0.202	0.207	0.192	0.181		0.189	0.196	5.13	
47)	chloroform									
	0.493	0.462	0.461	0.456	0.485	0.455	0.431	0.402	0.456	6.29
48)	t-butyl formate									
	0.401	0.410	0.505	0.475	0.489	0.483	0.426	0.462	0.456	8.55

Initial Calibration Summary

Job Number: JB77674 **Sample:** V3A5831-ICC5831
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 3A134846.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

49)	dibromofluoromethane (s)										
	0.347	0.352	0.383	0.377	0.391	0.365	0.313	0.325		0.357	7.77
50)	1,2-dichloroethane-d4 (s)										
	0.415	0.435	0.454	0.447	0.461	0.432	0.399	0.406		0.431	5.23
51)	freon 113										
			0.367	0.352	0.367	0.342	0.216	0.307		0.325	17.78
	----- Linear regression ----- Coefficient = 0.9982										
	Response Ratio = 0.00334 + 0.34590 *A										
52)	methacrylonitrile										
			0.319	0.293	0.308	0.301	0.251	0.274		0.291	8.59
53)	1,1,1-trichloroethane										
	0.622	0.662	0.742	0.712	0.730	0.724	0.577	0.531		0.662	11.87
54)	Cyclohexane										
			0.751	0.729	0.716	0.768	0.404	0.466		0.639	25.08
	----- Linear regression ----- Coefficient = 0.9999										
	Response Ratio = -0.04449 + 0.77793 *A										
55)	I 1,4-difluorobenzene	----------ISTD----------									
56)	epichlorohydrin										
			0.046	0.045	0.045	0.043	0.035	0.044		0.043	9.04
57)	n-butyl alcohol										
			0.016	0.015	0.015	0.016	0.011	0.014		0.014	11.75
58)	carbon tetrachloride										
	0.491	0.501	0.505	0.497	0.509	0.493	0.405	0.376		0.472	10.88
59)	1,1-dichloropropene										
	0.449	0.461	0.437	0.435	0.460	0.435	0.377	0.350		0.426	9.45
60)	Tert Amyl Alcohol										
										0.000#	-1.00
61)	hexane										
	0.341	0.288	0.313	0.316	0.341	0.305	0.215	0.282		0.300	13.48
62)	2,2,4-TRIMETHYLPENTANE										
	1.320	1.174	1.415	1.363	1.377	1.354	0.916	1.110		1.253	13.79
63)	benzene										
	1.419	1.377	1.326	1.336	1.401	1.288	1.208	1.001	1.092	0.994	1.244	13.01
64)	tert-amyl methyl ether										
	0.236	0.261	0.262	0.259	0.276	0.255	0.245	0.269		0.258	4.96
65)	heptane										
	0.189	0.176	0.190	0.194	0.207	0.187	0.140	0.173		0.182	10.97
66)	isopropyl acetate										
		0.900	0.952	0.919	0.965	0.906	0.800	0.896		0.905	5.90
67)	1,2-dichloroethane										
	0.407	0.400	0.435	0.443	0.468	0.426	0.387	0.406		0.422	6.25
68)	Ethyl acrylate										
										0.000#	-1.00
69)	trichloroethene										
	0.326	0.323	0.328	0.325	0.348	0.324	0.290	0.260		0.315	8.67
70)	tert-Amyl Ethyl Ether										
										0.000#	-1.00
71)	methyl methacrylate										
		0.189	0.246	0.241	0.244	0.239	0.197	0.221		0.225	10.56
72)	2-nitropropane										
	0.139	0.147	0.147	0.149	0.154	0.139	0.141	0.148		0.146	3.81
73)	2-chloroethyl vinyl ether										
	0.195	0.202	0.243	0.234	0.242	0.231	0.200	0.161	0.223	0.215	12.70
74)	1,2-dichloropropane										
	0.351	0.357	0.352	0.354	0.375	0.343	0.314	0.308		0.344	6.55
75)	dibromomethane										
	0.184	0.224	0.221	0.225	0.233	0.215	0.199	0.212		0.214	7.36

Initial Calibration Summary

Job Number: JB77674 **Sample:** V3A5831-ICC5831
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 3A134846.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

```
 76)  methylcyclohexane
                  0.575 0.551 0.579 0.570 0.349       0.490        0.519   17.26
             ----- Linear regression -----  Coefficient =  0.9998
               Response Ratio = -0.01324 + 0.57496 *A

 77)  bromodichloromethane
       0.405 0.447 0.458 0.453 0.470 0.442 0.401 0.280 0.397        0.417   13.85
 78)  cis-1,3-dichloropropene
       0.507 0.509 0.569 0.543 0.560 0.555 0.469 0.346 0.469        0.503   13.90
 79)  toluene-d8 (s)
       1.060 1.044 1.143 1.129 1.129 1.083 0.878       0.867        1.042   10.58
 80)  4-methyl-2-pentanone
              0.125 0.178 0.174 0.175 0.167 0.142       0.155        0.159   12.53
 81)  toluene
       0.779 0.748 0.814 0.787 0.807 0.793 0.666       0.627        0.753    9.20
 82)  3-methyl-1-butanol
              0.021 0.026 0.025 0.024 0.025 0.021       0.023        0.023    7.74
 83)  trans-1,3-dichloropropene
       0.443 0.467 0.502 0.493 0.516 0.486 0.424 0.313 0.435        0.453   13.57
 84)  ethyl methacrylate
       0.302 0.386 0.461 0.448 0.453 0.438 0.371       0.409        0.408   13.28
 85)  1,1,2-trichloroethane
       0.227 0.237 0.261 0.258 0.272 0.254 0.232 0.167 0.239        0.239   12.82
 86)  2-hexanone
                  0.156 0.157 0.159 0.150 0.125       0.146        0.149    8.42

 87) I   chlorobenzene-d5      ----------------ISTD---------------------
 88)  tetrachloroethene
       0.307 0.343 0.297 0.306 0.355 0.300 0.271       0.261        0.305   10.48
 89)  BUTYL ACRYLATE
                                                                    0.000#  -1.00
 90)  1,3-dichloropropane
       0.534 0.553 0.564 0.566 0.603 0.556 0.534       0.524        0.554    4.47
 91)  butyl acetate
              0.213 0.277 0.270 0.289 0.266 0.239       0.274        0.261   10.05
 92)  3,3-dimethyl-1-butanol
       0.064 0.063 0.073 0.069 0.068 0.072 0.060       0.065        0.067    7.07
 93)  dibromochloromethane
       0.342 0.374 0.405 0.402 0.425 0.398 0.355       0.360        0.383    7.58
 94)  1,2-dibromoethane
       0.319 0.328 0.353 0.361 0.385 0.342 0.332 0.247 0.340        0.334   11.40
 95)  chlorobenzene
       0.993 0.980 0.995 0.998 1.029 0.979 0.871 0.726 0.829        0.933   10.89
 96)  1,1,1,2-tetrachloroethane
       0.415 0.429 0.444 0.444 0.469 0.427 0.396       0.380        0.425    6.70
 97)  ethylbenzene
       1.782 1.727 1.741 1.767 1.849 1.705 1.561 1.212 1.369 1.537  1.625   12.54
 98)  m,p-xylene
       0.623 0.653 0.671 0.679 0.703 0.656 0.586 0.448 0.529        0.616   13.35
 99)  o-xylene
       0.691 0.688 0.738 0.749 0.769 0.715 0.629       0.602        0.698    8.35
100)  styrene
       1.067 1.026 1.108 1.120 1.145 1.087 0.980 0.719 0.908        1.018   13.24
101)  bromoform
       0.255 0.255 0.290 0.296 0.304 0.280 0.265       0.276        0.278    6.64

102) I   1,4-dichlorobenzene-d ----------------ISTD---------------------
103)  isopropylbenzene
       3.066 3.042 3.803 3.624 3.677 3.723 2.813       2.536        3.285   14.64
104)  4-bromofluorobenzene (s)
```

```
       0.885 0.763 0.865 0.853 0.861 0.828 0.709       0.711        0.809    8.81
105)  cyclohexanone
                  0.048 0.062 0.077 0.057 0.058       0.070        0.062   16.26
          ----- Quadratic regression -----                 Coefficient =  0.9935
               Response Ratio = 0.07658 + 0.04205 *A + 0.00032 *A^2

106)  bromobenzene
       0.651 0.734 0.819 0.794 0.836 0.802 0.678       0.661        0.747   10.12
107)  1,1,2,2-tetrachloroethane
       0.953 0.935 1.081 1.051 1.100 1.033 0.905       0.984        1.005    7.12
108)  trans-1,4-dichloro-2-butene
             0.190 0.242 0.239 0.241 0.237 0.192       0.216        0.222   10.43
109)  1,2,3-trichloropropane
       0.183 0.228 0.256 0.258 0.268 0.243 0.208       0.245        0.236   12.09
110)  n-propylbenzene
       0.677 0.788 0.872 0.854 0.854 0.856 0.688       0.624        0.777   12.72
111)  2-chlorotoluene
       0.667 0.747 0.846 0.814 0.838 0.822 0.675       0.610        0.752   12.15
112)  4-chlorotoluene
       0.709 0.707 0.786 0.756 0.790 0.774 0.659       0.602        0.723    9.26
113)  1,3,5-trimethylbenzene
       2.658 2.602 3.304 3.113 3.125 3.241 2.349       2.240        2.829   14.77
114)  tert-butylbenzene
             2.077 2.825 2.615 2.626 2.854 1.964       1.765        2.390   18.56
             ----- Linear regression -----  Coefficient =  0.9996
               Response Ratio = -0.13477 + 2.88192 *A

115)  pentachloroethane
                  0.675 0.599 0.529 0.658 0.440       0.403        0.551   20.53
             ----- Linear regression -----  Coefficient =  0.9992
               Response Ratio = -0.04369 + 0.67243 *A

116)  1,2,4-trimethylbenzene
       2.751 2.552 3.161 3.042 3.078 3.114 2.435       2.250        2.798   12.56
117)  sec-butylbenzene
             3.576 4.488 4.233 4.186 4.509 3.175       2.842        3.858   17.22
             ----- Linear regression -----  Coefficient =  0.9997
               Response Ratio = -0.18489 + 4.55343 *A

118)  1,3-dichlorobenzene
       1.524 1.542 1.627 1.615 1.678 1.591 1.442       1.345        1.545    7.02
119)  p-isopropyltoluene
       3.076 3.015 3.681 3.544 3.533 3.669 2.775       2.443        3.217   14.30
120)  1,4-dichlorobenzene
       1.643 1.620 1.632 1.638 1.707 1.602 1.472 1.270 1.385 1.397  1.537    9.42
121)  1,2-dichlorobenzene
       1.669 1.683 1.756 1.754 1.813 1.722 1.564 1.249 1.494        1.634   10.71
122)  benzyl chloride
       1.908 1.767 1.746 1.776 1.866 1.632 1.700 1.861 1.800 2.073  1.813    6.76
123)  n-butylbenzene
       1.660 1.572 1.749 1.740 1.745 1.735 1.419       1.268        1.611   11.19
124)  1,2-dibromo-3-chloropropane
       0.278 0.260 0.250 0.252 0.262 0.242 0.230       0.252        0.253    5.66
125)  1,3,5-TRICHLOROBENZENE
       1.685 1.647 1.756 1.749 1.811 1.765 1.566 1.247 1.405 1.314  1.594   12.76
126)  1,2,4-trichlorobenzene
       1.704 1.736 1.860 1.867 1.932 1.882 1.641 1.249 1.575 1.309  1.675   14.22
127)  hexachlorobutadiene
             0.714 0.846 0.793 0.786 0.926 0.633       0.573        0.753   16.22
             ----- Linear regression -----  Coefficient =  0.9979
```

```
               Response Ratio = -0.06645 + 0.92674 *A

128)  naphthalene
       4.173 4.402 5.137 5.151 5.375 5.230 4.329 3.609 4.642 4.086  4.614   12.79
129)  1,2,3-trichlorobenzene
       1.787 1.808 2.073 2.032 2.126 2.080 1.771 1.334 1.721        1.859   13.52
130)  hexachloroethane
             0.373 0.619 0.553 0.527 0.646 0.379       0.357        0.494   24.79
             ----- Linear regression -----  Coefficient =  0.9990
               Response Ratio = -0.04907 + 0.65300 *A

 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          M3A5831.M         Thu Sep 25 16:03:06 2014   ACCUNJ
```

Initial Calibration Verification

Job Number: JB77674 **Sample:** V3A5831-ICV5831
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 3A134851.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\3a134851.D Vial: 14
Acq On : 23 Sep 2014 9:33 pm Operator: JemimaM
Sample : icv5831-50 Inst : MS3A
Misc : MS74111,V3A5831,5.0,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M3A5831.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update : Thu Sep 25 16:01:33 2014
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.30min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	101	0.00	8.36
2	M	tertiary butyl alcohol	0.978	1.090	-11.5	104	0.00	8.49
3		ethanol		----------NA----------				
4	M	1,4-dioxane	0.090	0.096	-6.7	108	0.00	12.52
5	I	pentafluorobenzene	1.000	1.000	0.0	103	0.00	10.77
6		FREON 115		----------NA----------				
7		FREON 152A		----------NA----------				
8	M	chlorodifluoromethane	0.600	0.539	10.2	87	-0.01	4.24
9	M	dichlorodifluoromethane	0.784	0.563	28.2#	67	-0.02	4.20
10	M	chloromethane	0.839	0.660	21.3#	79	0.00	4.63
11	M	vinyl chloride	0.951	0.770	19.0	80	0.00	4.94
12	M	bromomethane	0.472	0.413	12.5	88	0.00	5.73
13		FREON 123A		----------NA----------				
14		FREON 123		----------NA----------				
15		2-CHLOROPROPANE	0.787	0.813	-3.3	106	0.00	7.21
16	M	chloroethane	0.280	0.322	-15.0	111	0.00	5.93
		----------	True	Calc.	% Drift	----------		
17	M	trichlorofluoromethane	50.000	42.606	14.8	87	0.00	6.48
		----------	AvgRF	CCRF	% Dev	----------		
18	M	Pentane		----------NA----------				
		----------	True	Calc.	% Drift	----------		
19		1-CHLOROPROPANE	50.000	52.182	-4.4	110	0.00	8.37
		----------	AvgRF	CCRF	% Dev	----------		
20	M	ethyl ether	0.216	0.237	-9.7	104	0.00	6.97
21	M	acrolein	0.099	0.125	-26.3#	126	0.00	7.35
22	M	1,1-dichloroethene	0.450	0.456	-1.3	110	0.00	7.47
23	M	acetone	0.183	0.181	1.1	97	0.00	7.63
24	M	allyl chloride	0.195	0.256	-31.3#	127	0.00	8.12
25	M	acetonitrile	0.049	0.052	-6.1	101	-0.01	8.19
26	M	iodomethane	0.800	0.852	-6.5	104	0.00	7.82
27	M	iso-butyl alcohol	0.013	0.014	-7.7	106	0.00	11.34
28	M	carbon disulfide	1.771	1.882	-6.3	111	0.00	7.94
29	M	methylene chloride	0.486	0.497	-2.3	107	0.00	8.37
30	M	methyl acetate	0.398	0.353	11.3	91	0.00	8.13
31	M	methyl tert butyl ether	1.378	1.378	0.0	100	0.00	8.68
32	M	trans-1,2-dichloroethene	0.581	0.589	-1.4	102	0.00	8.75
33	M	di-isopropyl ether	1.393	1.382	0.8	101	0.00	9.34

Initial Calibration Verification

Job Number: JB77674 **Sample:** V3A5831-ICV5831
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 3A134851.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

34	M	2-butanone	0.062	0.062	0.0	101	0.00	10.23
35	M	1,1-dichloroethane	0.739	0.780	-5.5	106	0.00	9.42
36	M	chloroprene	0.490	0.516	-5.3	108	0.00	9.51
37	M	acrylonitrile	0.197	0.201	-2.0	101	0.00	8.80
38	M	vinyl acetate	0.068	0.074	-8.8	108	0.00	9.40
39	M	ethyl tert-butyl ether	1.354	1.374	-1.5	101	0.00	9.85
40	M	ethyl acetate	0.059	0.062	-5.1	99	0.00	10.21
41	M	2,2-dichloropropane	0.719	0.748	-4.0	105	0.00	10.21
42	M	cis-1,2-dichloroethene	0.474	0.459	3.2	103	0.00	10.23
			True	Calc.	% Drift			
43		methylacrylate	50.000	50.997	-2.0	106	0.00	10.30
			AvgRF	CCRF	% Dev			
44	M	propionitrile	0.087	0.093	-6.9	102	0.00	10.38
45	M	bromochloromethane	0.212	0.231	-9.0	104	0.00	10.58
46	M	tetrahydrofuran	0.196	0.202	-3.1	103	0.00	10.60
47	M	chloroform	0.456	0.463	-1.5	104	0.00	10.64
48		t-butyl formate	0.456	0.485	-6.4	105	0.00	10.65
49	S	dibromofluoromethane (s)	0.357	0.387	-8.4	105	0.00	10.86
50	S	1,2-dichloroethane-d4 (s)	0.431	0.446	-3.5	102	0.00	11.30
			True	Calc.	% Drift			
51	M	freon 113	50.000	50.869	-1.7	103	0.00	7.41
			AvgRF	CCRF	% Dev			
52	M	methacrylonitrile	0.291	0.283	2.7	99	0.00	10.55
53	M	1,1,1-trichloroethane	0.662	0.711	-7.4	102	0.00	10.86
			True	Calc.	% Drift			
54	M	Cyclohexane	50.000	50.939	-1.9	105	0.00	10.90
			AvgRF	CCRF	% Dev			
55	I	1,4-difluorobenzene	1.000	1.000	0.0	103	0.00	11.74
56	M	epichlorohydrin	0.043	0.045	-4.7	103	0.00	13.11
57	M	n-butyl alcohol	0.014	0.016	-14.3	108	0.00	11.92
58	M	carbon tetrachloride	0.472	0.495	-4.9	102	0.00	11.06
59	M	1,1-dichloropropene	0.426	0.424	0.5	100	0.00	11.05
60		Tert Amyl Alcohol		----------NA----------				
61	M	hexane	0.300	0.249	17.0	81	0.00	9.04
62		2,2,4-TRIMETHYLPENTANE	1.253	1.281	-2.2	97	0.00	11.27
63	M	benzene	1.244	1.333	-7.2	103	0.00	11.34
64	M	tert-amyl methyl ether	0.258	0.250	3.1	99	0.00	11.34
65	M	heptane	0.182	0.177	2.7	94	0.00	11.45
66	M	isopropyl acetate	0.905	0.971	-7.3	109	0.00	11.26
67	M	1,2-dichloroethane	0.422	0.434	-2.8	101	0.00	11.40
68	m	Ethyl acrylate		----------NA----------				
69	M	trichloroethene	0.315	0.324	-2.9	103	0.00	12.08
70		tert-Amyl Ethyl Ether		----------NA----------				
71	M	methyl methacrylate	0.225	0.240	-6.7	103	0.00	12.37
72	M	2-nitropropane	0.146	0.145	0.7	100	0.00	12.96
73	M	2-chloroethyl vinyl ether	0.215	0.232	-7.9	102	0.00	12.94
74	M	1,2-dichloropropane	0.344	0.359	-4.4	104	0.00	12.39
75	M	dibromomethane	0.214	0.222	-3.7	101	0.00	12.57
			True	Calc.	% Drift			
76	M	methylcyclohexane	50.000	47.815	4.4	100	0.00	12.26
			AvgRF	CCRF	% Dev			

Initial Calibration Verification

Job Number: JB77674 **Sample:** V3A5831-ICV5831
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 3A134851.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

77	M	bromodichloromethane	0.417	0.452	-8.4	103	0.00	12.70
78	M	cis-1,3-dichloropropene	0.503	0.539	-7.2	102	0.00	13.17
79	S	toluene-d8 (s)	1.042	1.126	-8.1	103	0.00	13.45
80	M	4-methyl-2-pentanone	0.159	0.172	-8.2	102	0.00	13.27
81	M	toluene	0.753	0.784	-4.1	102	0.00	13.53
82	M	3-methyl-1-butanol	0.023	0.025	-8.7	106	0.00	13.30
83	M	trans-1,3-dichloropropene	0.453	0.472	-4.2	99	0.00	13.78
84	M	ethyl methacrylate	0.408	0.438	-7.4	101	0.00	13.72
85	M	1,1,2-trichloroethane	0.239	0.257	-7.5	102	0.00	14.01
86	M	2-hexanone	0.149	0.152	-2.0	100	0.00	14.18
87	I	chlorobenzene-d5	1.000	1.000	0.0	99	0.00	15.08
88	M	tetrachloroethene	0.305	0.303	0.7	98	0.00	14.13
89		BUTYL ACRYLATE		----------NA----------				
90	M	1,3-dichloropropane	0.554	0.574	-3.6	101	0.00	14.21
91	M	butyl acetate	0.261	0.290	-11.1	107	0.00	14.22
92		3,3-dimethyl-1-butanol	0.067	0.075	-11.9	109	0.00	14.36
93	M	dibromochloromethane	0.383	0.400	-4.4	99	0.00	14.49
94	M	1,2-dibromoethane	0.334	0.362	-8.4	99	0.00	14.65
95	M	chlorobenzene	0.933	1.009	-8.1	100	0.00	15.11
96	M	1,1,1,2-tetrachloroethane	0.425	0.443	-4.2	99	0.00	15.19
97	M	ethylbenzene	1.625	1.764	-8.6	99	0.00	15.15
98	M	m,p-xylene	0.616	0.685	-11.2	100	0.00	15.26
99	M	o-xylene	0.698	0.733	-5.0	97	0.00	15.72
100	M	styrene	1.018	1.127	-10.7	100	0.00	15.74
101	M	bromoform	0.278	0.290	-4.3	97	0.00	16.06
102	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	97	0.00	17.57
103	M	isopropylbenzene	3.285	3.644	-10.9	98	0.00	16.07
104	S	4-bromofluorobenzene (s)	0.809	0.865	-6.9	99	0.00	16.32
		----------	True	Calc.	% Drift	----------		
105		cyclohexanone	500.000	574.378	-14.9	94	0.00	16.33
		----------	AvgRF	CCRF	% Dev	----------		
106	M	bromobenzene	0.747	0.820	-9.8	100	0.00	16.53
107	M	1,1,2,2-tetrachloroethane	1.005	1.018	-1.3	94	0.00	16.46
108	M	trans-1,4-dichloro-2-bute	0.222	0.247	-11.3	101	0.00	16.49
109	M	1,2,3-trichloropropane	0.236	0.251	-6.4	94	0.00	16.54
110	M	n-propylbenzene	0.777	0.890	-14.5	101	0.00	16.51
111	M	2-chlorotoluene	0.752	0.803	-6.8	96	0.00	16.69
112	M	4-chlorotoluene	0.723	0.776	-7.3	100	0.00	16.80
113	M	1,3,5-trimethylbenzene	2.829	3.083	-9.0	96	0.00	16.66
		----------	True	Calc.	% Drift	----------		
114	M	tert-butylbenzene	50.000	49.101	1.8	100	0.00	17.04
115	M	pentachloroethane	50.000	50.224	-0.4	103	0.00	17.16
		----------	AvgRF	CCRF	% Dev	----------		
116	M	1,2,4-trimethylbenzene	2.798	3.178	-13.6	102	0.00	17.09
		----------	True	Calc.	% Drift	----------		
117	M	sec-butylbenzene	50.000	48.423	3.2	97	0.00	17.27
		----------	AvgRF	CCRF	% Dev	----------		
118	M	1,3-dichlorobenzene	1.545	1.613	-4.4	97	0.00	17.51
119	M	p-isopropyltoluene	3.217	3.523	-9.5	97	0.00	17.39
120	M	1,4-dichlorobenzene	1.537	1.641	-6.8	97	0.00	17.60
121	M	1,2-dichlorobenzene	1.634	1.756	-7.5	97	0.00	18.04
122	M	benzyl chloride	1.813	2.020	-11.4	111	0.00	17.74

Initial Calibration Verification

Job Number: JB77674 **Sample:** V3A5831-ICV5831
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 3A134851.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

123	M	n-butylbenzene	1.611	1.761	-9.3	98	0.00	17.84
124	M	1,2-dibromo-3-chloropropa	0.253	0.253	0.0	98	0.00	18.91
125		1,3,5-TRICHLOROBENZENE	1.594	1.738	-9.0	97	0.00	19.06
126	M	1,2,4-trichlorobenzene	1.675	1.901	-13.5	99	0.00	19.77
			True	Calc.	% Drift			
127	M	hexachlorobutadiene	50.000	47.816	4.4	101	0.00	19.86
			AvgRF	CCRF	% Dev			
128	M	naphthalene	4.614	5.217	-13.1	98	0.00	20.11
129	M	1,2,3-trichlorobenzene	1.859	2.095	-12.7	100	0.00	20.37
			True	Calc.	% Drift			
130	M	hexachloroethane	50.000	47.990	4.0	102	0.00	18.30

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3a134846.D M3A5831.M Thu Sep 25 16:03:32 2014 ACCUNJ

Initial Calibration Verification

Job Number: JB77674 **Sample:** V3A5831-ICV5831
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 3A134853.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\3A134853.D Vial: 2
Acq On : 24 Sep 2014 9:29 am Operator: JemimaM
Sample : icv5831-50 Inst : MS3A
Misc : MS74111,V3A5831,5.0,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M3A5831.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update : Thu Sep 25 16:01:33 2014
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.30min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	106	0.00	8.36
2	M	tertiary butyl alcohol		----------NA----------				
3		ethanol		----------NA----------				
4	M	1,4-dioxane		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	108	0.00	10.77
6		FREON 115		----------NA----------				
7		FREON 152A		----------NA----------				
8	M	chlorodifluoromethane		----------NA----------				
9	M	dichlorodifluoromethane	0.784	0.716	8.7	90	-0.02	4.20
10	M	chloromethane	0.839	0.804	4.2	101	0.00	4.64
11	M	vinyl chloride	0.951	0.910	4.3	99	0.00	4.95
12	M	bromomethane	0.472	0.485	-2.8	109	0.00	5.74
13		FREON 123A		----------NA----------				
14		FREON 123		----------NA----------				
15		2-CHLOROPROPANE		----------NA----------				
16	M	chloroethane	0.280	0.348	-24.3#	127	0.00	5.94
		----------	True	Calc.	% Drift	----------		
17	M	trichlorofluoromethane	50.000	45.774	8.5	99	0.01	6.49
		----------	AvgRF	CCRF	% Dev	----------		
18	M	Pentane		----------NA----------				
		----------	True	Calc.	% Drift	----------		
19		1-CHLOROPROPANE		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
20	M	ethyl ether		----------NA----------				
21	M	acrolein		----------NA----------				
22	M	1,1-dichloroethene		----------NA----------				
23	M	acetone		----------NA----------				
24	M	allyl chloride		----------NA----------				
25	M	acetonitrile		----------NA----------				
26	M	iodomethane		----------NA----------				
27	M	iso-butyl alcohol		----------NA----------				
28	M	carbon disulfide		----------NA----------				
29	M	methylene chloride		----------NA----------				
30	M	methyl acetate		----------NA----------				
31	M	methyl tert butyl ether		----------NA----------				
32	M	trans-1,2-dichloroethene		----------NA----------				
33	M	di-isopropyl ether		----------NA----------				

Initial Calibration Verification

Job Number: JB77674 **Sample:** V3A5831-ICV5831
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 3A134853.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

34	M	2-butanone			NA				
35	M	1,1-dichloroethane			NA				
36	M	chloroprene			NA				
37	M	acrylonitrile			NA				
38	M	vinyl acetate			NA				
39	M	ethyl tert-butyl ether			NA				
40	M	ethyl acetate			NA				
41	M	2,2-dichloropropane			NA				
42	M	cis-1,2-dichloroethene			NA				
			True	Calc.	% Drift				
43		methylacrylate			NA				
			AvgRF	CCRF	% Dev				
44	M	propionitrile			NA				
45	M	bromochloromethane			NA				
46	M	tetrahydrofuran			NA				
47	M	chloroform			NA				
48		t-butyl formate			NA				
49	S	dibromofluoromethane (s)	0.357	0.374	-4.8	107	0.00	10.86	
50	S	1,2-dichloroethane-d4 (s)	0.431	0.427	0.9	103	0.00	11.30	
			True	Calc.	% Drift				
51	M	freon 113			NA				
			AvgRF	CCRF	% Dev				
52	M	methacrylonitrile			NA				
53	M	1,1,1-trichloroethane			NA				
			True	Calc.	% Drift				
54	M	Cyclohexane			NA				
			AvgRF	CCRF	% Dev				
55	I	1,4-difluorobenzene	1.000	1.000	0.0	105	0.00	11.74	
56	M	epichlorohydrin			NA				
57	M	n-butyl alcohol			NA				
58	M	carbon tetrachloride			NA				
59	M	1,1-dichloropropene			NA				
60		Tert Amyl Alcohol			NA				
61	M	hexane			NA				
62		2,2,4-TRIMETHYLPENTANE			NA				
63	M	benzene			NA				
64	M	tert-amyl methyl ether			NA				
65	M	heptane			NA				
66	M	isopropyl acetate			NA				
67	M	1,2-dichloroethane			NA				
68	m	Ethyl acrylate			NA				
69	M	trichloroethene			NA				
70		tert-Amyl Ethyl Ether			NA				
71	M	methyl methacrylate			NA				
72	M	2-nitropropane			NA				
73	M	2-chloroethyl vinyl ether			NA				
74	M	1,2-dichloropropane			NA				
75	M	dibromomethane			NA				
			True	Calc.	% Drift				
76	M	methylcyclohexane			NA				
			AvgRF	CCRF	% Dev				

Initial Calibration Verification

Job Number: JB77674 **Sample:** V3A5831-ICV5831
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 3A134853.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

77	M	bromodichloromethane		----------NA----------					
78	M	cis-1,3-dichloropropene		----------NA----------					
79	S	toluene-d8 (s)	1.042	1.067	-2.4	99	0.00	13.45	
80	M	4-methyl-2-pentanone		----------NA----------					
81	M	toluene		----------NA----------					
82	M	3-methyl-1-butanol		----------NA----------					
83	M	trans-1,3-dichloropropene		----------NA----------					
84	M	ethyl methacrylate		----------NA----------					
85	M	1,1,2-trichloroethane		----------NA----------					
86	M	2-hexanone		----------NA----------					
87	I	chlorobenzene-d5	1.000	1.000	0.0	100	0.00	15.08	
88	M	tetrachloroethene		----------NA----------					
89		BUTYL ACRYLATE		----------NA----------					
90	M	1,3-dichloropropane		----------NA----------					
91	M	butyl acetate		----------NA----------					
92		3,3-dimethyl-1-butanol		----------NA----------					
93	M	dibromochloromethane		----------NA----------					
94	M	1,2-dibromoethane		----------NA----------					
95	M	chlorobenzene		----------NA----------					
96	M	1,1,1,2-tetrachloroethane		----------NA----------					
97	M	ethylbenzene		----------NA----------					
98	M	m,p-xylene		----------NA----------					
99	M	o-xylene		----------NA----------					
100	M	styrene		----------NA----------					
101	M	bromoform		----------NA----------					
102	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	112	0.00	17.57	
103	M	isopropylbenzene		----------NA----------					
104	S	4-bromofluorobenzene (s)	0.809	0.790	2.3	103	0.00	16.32	
		----------	True	Calc.	% Drift	----------			
105		cyclohexanone		----------NA----------					
		----------	AvgRF	CCRF	% Dev	----------			
106	M	bromobenzene		----------NA----------					
107	M	1,1,2,2-tetrachloroethane		----------NA----------					
108	M	trans-1,4-dichloro-2-bute		----------NA----------					
109	M	1,2,3-trichloropropane		----------NA----------					
110	M	n-propylbenzene		----------NA----------					
111	M	2-chlorotoluene		----------NA----------					
112	M	4-chlorotoluene		----------NA----------					
113	M	1,3,5-trimethylbenzene		----------NA----------					
		----------	True	Calc.	% Drift	----------			
114	M	tert-butylbenzene		----------NA----------					
115	M	pentachloroethane		----------NA----------					
		----------	AvgRF	CCRF	% Dev	----------			
116	M	1,2,4-trimethylbenzene		----------NA----------					
		----------	True	Calc.	% Drift	----------			
117	M	sec-butylbenzene		----------NA----------					
		----------	AvgRF	CCRF	% Dev	----------			
118	M	1,3-dichlorobenzene		----------NA----------					
119	M	p-isopropyltoluene		----------NA----------					
120	M	1,4-dichlorobenzene		----------NA----------					
121	M	1,2-dichlorobenzene		----------NA----------					
122	M	benzyl chloride		----------NA----------					

Initial Calibration Verification

Job Number: JB77674 **Sample:** V3A5831-ICV5831
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 3A134853.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

```
123 M   n-butylbenzene                      ----------NA----------
124 M   1,2-dibromo-3-chloropropa           ----------NA----------
125     1,3,5-TRICHLOROBENZENE              ----------NA----------
126 M   1,2,4-trichlorobenzene              ----------NA----------

            ----------------------- True    Calc.   % Drift  ------------
127 M   hexachlorobutadiene                ----------NA----------

            ----------------------- AvgRF   CCRF     % Dev   -------------
128 M   naphthalene                        ----------NA----------
129 M   1,2,3-trichlorobenzene              ----------NA----------

            ----------------------- True    Calc.   % Drift  ------------
130 M   hexachloroethane                   ----------NA----------
 ------------------------------------------------------------------------------
 ------------------------------------------------------------------------------

    (#) = Out of Range              SPCC's out = 0  CCC's out = 0
     3a134846.D M3A5831.M        Thu Sep 25 16:02:35 2014   ACCUNJ
```

Continuing Calibration Summary

Job Number: JB77674 **Sample:** V3A5854-CC5831
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 3A135316.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\3A\v3a5850-5854\3a135316.D Vial: 3
Acq On : 5 Oct 2014 10:39 am Operator: JemimaM
Sample : cc5831-20 Inst : MS3A
Misc : MS74913,V3A5854,5.0,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M3A5831.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update : Thu Sep 25 16:01:33 2014
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.30min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	93	-0.01	8.35
2	M	tertiary butyl alcohol	0.978	1.077	-10.1	91	0.00	8.49
3		ethanol		----------NA----------				
4	M	1,4-dioxane	0.090	0.109	-21.1#	107	-0.01	12.51
5	I	pentafluorobenzene	1.000	1.000	0.0	100	0.00	10.77
6		FREON 115		----------NA----------				
7		FREON 152A		----------NA----------				
8	M	chlorodifluoromethane	0.600	0.687	-14.5	108	0.00	4.25
9	M	dichlorodifluoromethane	0.784	0.949	-21.0#	123	-0.01	4.21
10	M	chloromethane	0.839	0.774	7.7	98	0.00	4.63
11	M	vinyl chloride	0.951	0.927	2.5	100	0.00	4.94
12	M	bromomethane	0.472	0.470	0.4	102	0.00	5.73
13		FREON 123A		----------NA----------				
14		FREON 123		----------NA----------				
15		2-CHLOROPROPANE	0.787	0.797	-1.3	96	0.00	7.22
16	M	chloroethane	0.280	0.297	-6.1	103	0.00	5.93
		----------	True	Calc.	% Drift	----------		
17	M	trichlorofluoromethane	20.000	22.400	-12.0	121	0.00	6.48
		----------	AvgRF	CCRF	% Dev	----------		
18	M	Pentane		----------NA----------				
		----------	True	Calc.	% Drift	----------		
19		1-CHLOROPROPANE	20.000	20.565	-2.8	97	0.00	8.37
		----------	AvgRF	CCRF	% Dev	----------		
20	M	ethyl ether	0.216	0.224	-3.7	96	0.00	6.97
21	M	acrolein	0.099	0.104	-5.1	102	0.00	7.35
22	M	1,1-dichloroethene	0.450	0.429	4.7	92	0.00	7.47
23	M	acetone	0.183	0.190	-3.8	89	0.00	7.63
24	M	allyl chloride	0.195	0.207	-6.2	96	0.00	8.12
25	M	acetonitrile	0.049	0.048	2.0	91	0.00	8.20
26	M	iodomethane	0.800	0.814	-1.7	94	0.00	7.82
27	M	iso-butyl alcohol	0.013	0.014	-7.7	91	0.00	11.34
28	M	carbon disulfide	1.771	1.634	7.7	89	0.00	7.94
29	M	methylene chloride	0.486	0.471	3.1	93	0.00	8.36
30	M	methyl acetate	0.398	0.375	5.8	88	0.00	8.14
31	M	methyl tert butyl ether	1.378	1.322	4.1	91	0.00	8.68
32	M	trans-1,2-dichloroethene	0.581	0.602	-3.6	95	0.00	8.76
33	M	di-isopropyl ether	1.393	1.398	-0.4	94	0.00	9.34

Continuing Calibration Summary

Job Number: JB77674 **Sample:** V3A5854-CC5831
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 3A135316.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

34	M	2-butanone	0.062	0.056	9.7	89	0.00	10.23
35	M	1,1-dichloroethane	0.739	0.759	-2.7	95	0.00	9.42
36	M	chloroprene	0.490	0.507	-3.5	97	0.00	9.51
37	M	acrylonitrile	0.197	0.185	6.1	85	0.00	8.81
38	M	vinyl acetate	0.068	0.062	8.8	92	0.00	9.41
39	M	ethyl tert-butyl ether	1.354	1.380	-1.9	94	0.00	9.85
40	M	ethyl acetate	0.059	0.054	8.5	88	0.00	10.22
41	M	2,2-dichloropropane	0.719	0.811	-12.8	108	0.00	10.21
42	M	cis-1,2-dichloroethene	0.474	0.460	3.0	95	0.00	10.24
			True	Calc.	% Drift			
43		methylacrylate	20.000	17.296	13.5	85	0.00	10.31
			AvgRF	CCRF	% Dev			
44	M	propionitrile	0.087	0.082	5.7	86	0.00	10.39
45	M	bromochloromethane	0.212	0.224	-5.7	93	0.00	10.58
46	M	tetrahydrofuran	0.196	0.167	14.8	81	0.00	10.61
47	M	chloroform	0.456	0.457	-0.2	94	0.00	10.64
48		t-butyl formate	0.456	0.423	7.2	87	0.00	10.64
49	S	dibromofluoromethane (s)	0.357	0.392	-9.8	100	0.00	10.86
50	S	1,2-dichloroethane-d4 (s)	0.431	0.440	-2.1	95	0.00	11.30
			True	Calc.	% Drift			
51	M	freon 113	20.000	23.472	-17.4	113	0.00	7.41
			AvgRF	CCRF	% Dev			
52	M	methacrylonitrile	0.291	0.240	17.5	78	0.00	10.55
53	M	1,1,1-trichloroethane	0.662	0.686	-3.6	94	0.00	10.87
			True	Calc.	% Drift			
54	M	Cyclohexane	20.000	22.396	-12.0	106	0.00	10.90
			AvgRF	CCRF	% Dev			
55	I	1,4-difluorobenzene	1.000	1.000	0.0	101	0.00	11.74
56	M	epichlorohydrin	0.043	0.041	4.7	92	0.00	13.11
57	M	n-butyl alcohol	0.014	0.013	7.1	89	0.00	11.92
58	M	carbon tetrachloride	0.472	0.491	-4.0	98	0.00	11.06
59	M	1,1-dichloropropene	0.426	0.440	-3.3	97	0.00	11.05
60		Tert Amyl Alcohol		----------NA----------				
61	M	hexane	0.300	0.418	-39.3#	124	0.00	9.04
62		2,2,4-TRIMETHYLPENTANE	1.253	1.510	-20.5#	111	0.00	11.27
63	M	benzene	1.244	1.305	-4.9	94	0.00	11.34
64	M	tert-amyl methyl ether	0.258	0.257	0.4	94	0.00	11.34
65	M	heptane	0.182	0.248	-36.3#	121	0.00	11.45
66	M	isopropyl acetate	0.905	0.915	-1.1	96	0.00	11.27
67	M	1,2-dichloroethane	0.422	0.420	0.5	91	0.00	11.40
68	m	Ethyl acrylate		----------NA----------				
69	M	trichloroethene	0.315	0.318	-1.0	93	0.00	12.08
70		tert-Amyl Ethyl Ether		----------NA----------				
71	M	methyl methacrylate	0.225	0.215	4.4	89	0.00	12.37
72	M	2-nitropropane	0.146	0.124	15.1	81	0.00	12.97
73	M	2-chloroethyl vinyl ether	0.215	0.226	-5.1	94	0.00	12.94
74	M	1,2-dichloropropane	0.344	0.351	-2.0	94	0.00	12.39
75	M	dibromomethane	0.214	0.222	-3.7	96	0.00	12.57
			True	Calc.	% Drift			
76	M	methylcyclohexane	20.000	22.737	-13.7	108	0.00	12.27
			AvgRF	CCRF	% Dev			

Continuing Calibration Summary

Job Number: JB77674 **Sample:** V3A5854-CC5831
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 3A135316.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

77	M	bromodichloromethane	0.417	0.440	-5.5	95	0.00	12.70
78	M	cis-1,3-dichloropropene	0.503	0.538	-7.0	97	0.00	13.17
79	S	toluene-d8 (s)	1.042	1.181	-13.3	106	0.00	13.45
80	M	4-methyl-2-pentanone	0.159	0.154	3.1	89	0.00	13.27
81	M	toluene	0.753	0.772	-2.5	97	0.00	13.53
82	M	3-methyl-1-butanol	0.023	0.021	8.7	87	0.00	13.31
83	M	trans-1,3-dichloropropene	0.453	0.478	-5.5	94	0.00	13.78
84	M	ethyl methacrylate	0.408	0.392	3.9	87	0.00	13.73
85	M	1,1,2-trichloroethane	0.239	0.253	-5.9	94	0.00	14.01
86	M	2-hexanone	0.149	0.141	5.4	90	0.00	14.18
87	I	chlorobenzene-d5	1.000	1.000	0.0	102	0.00	15.08
88	M	tetrachloroethene	0.305	0.297	2.6	85	0.00	14.13
89		BUTYL ACRYLATE		----------NA----------				
90	M	1,3-dichloropropane	0.554	0.547	1.3	92	0.00	14.20
91	M	butyl acetate	0.261	0.256	1.9	90	0.00	14.23
92		3,3-dimethyl-1-butanol	0.067	0.058	13.4	86	0.00	14.37
93	M	dibromochloromethane	0.383	0.386	-0.8	93	0.00	14.49
94	M	1,2-dibromoethane	0.334	0.345	-3.3	91	0.00	14.65
95	M	chlorobenzene	0.933	0.979	-4.9	97	0.00	15.11
96	M	1,1,1,2-tetrachloroethane	0.425	0.426	-0.2	93	0.00	15.18
97	M	ethylbenzene	1.625	1.737	-6.9	96	0.00	15.15
98	M	m,p-xylene	0.616	0.669	-8.6	97	0.00	15.26
99	M	o-xylene	0.698	0.701	-0.4	93	0.00	15.72
100	M	styrene	1.018	1.046	-2.8	93	0.00	15.74
101	M	bromoform	0.278	0.271	2.5	91	0.00	16.06
102	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	102	0.00	17.57
103	M	isopropylbenzene	3.285	3.431	-4.4	95	0.00	16.07
104	S	4-bromofluorobenzene (s)	0.809	0.847	-4.7	101	0.00	16.32
		----------	True	Calc.	% Drift	----------		
105		cyclohexanone	200.000	227.539	-13.8	91	0.00	16.32
		----------	AvgRF	CCRF	% Dev	----------		
106	M	bromobenzene	0.747	0.758	-1.5	93	0.00	16.53
107	M	1,1,2,2-tetrachloroethane	1.005	0.963	4.2	90	0.00	16.45
108	M	trans-1,4-dichloro-2-bute	0.222	0.179	19.4	76	0.00	16.50
109	M	1,2,3-trichloropropane	0.236	0.235	0.4	90	0.00	16.53
110	M	n-propylbenzene	0.777	0.791	-1.8	95	0.00	16.51
111	M	2-chlorotoluene	0.752	0.773	-2.8	94	0.00	16.69
112	M	4-chlorotoluene	0.723	0.738	-2.1	96	0.00	16.80
113	M	1,3,5-trimethylbenzene	2.829	2.866	-1.3	94	0.00	16.66
		----------	True	Calc.	% Drift	----------		
114	M	tert-butylbenzene	20.000	19.059	4.7	94	0.00	17.04
115	M	pentachloroethane	20.000	20.685	-3.4	113	0.00	17.16
		----------	AvgRF	CCRF	% Dev	----------		
116	M	1,2,4-trimethylbenzene	2.798	2.827	-1.0	94	0.00	17.09
		----------	True	Calc.	% Drift	----------		
117	M	sec-butylbenzene	20.000	19.203	4.0	95	0.00	17.27
		----------	AvgRF	CCRF	% Dev	----------		
118	M	1,3-dichlorobenzene	1.545	1.577	-2.1	96	0.00	17.51
119	M	p-isopropyltoluene	3.217	3.214	0.1	93	0.00	17.39
120	M	1,4-dichlorobenzene	1.537	1.609	-4.7	96	0.00	17.60
121	M	1,2-dichlorobenzene	1.634	1.673	-2.4	94	0.00	18.04
122	M	benzyl chloride	1.813	1.993	-9.9	109	0.00	17.74

Continuing Calibration Summary

Job Number: JB77674 **Sample:** V3A5854-CC5831
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 3A135316.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

123	M	n-butylbenzene	1.611	1.670	-3.7	98	0.00	17.85
124	M	1,2-dibromo-3-chloropropa	0.253	0.221	12.6	86	0.00	18.91
125		1,3,5-TRICHLOROBENZENE	1.594	1.624	-1.9	92	0.00	19.06
126	M	1,2,4-trichlorobenzene	1.675	1.757	-4.9	93	0.00	19.77
		----------	True	Calc.	% Drift	----------		
127	M	hexachlorobutadiene	20.000	19.097	4.5	94	0.00	19.86
		----------	AvgRF	CCRF	% Dev	----------		
128	M	naphthalene	4.614	4.677	-1.4	89	0.00	20.11
129	M	1,2,3-trichlorobenzene	1.859	1.908	-2.6	92	0.00	20.37
		----------	True	Calc.	% Drift	----------		
130	M	hexachloroethane	20.000	18.635	6.8	94	0.00	18.30

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3a134845.D M3A5831.M Mon Oct 06 14:26:41 2014 T

New Jersey ACCUTEST LABORATORIES

GC/MS Volatiles

Raw Data

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143594.d
Acq On : 30 Sep 2014 10:57 am
Operator : DejanaS
Sample : jb77674-1
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 01 10:58:15 2014
Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 27 17:10:31 2014
Response via : Initial Calibration

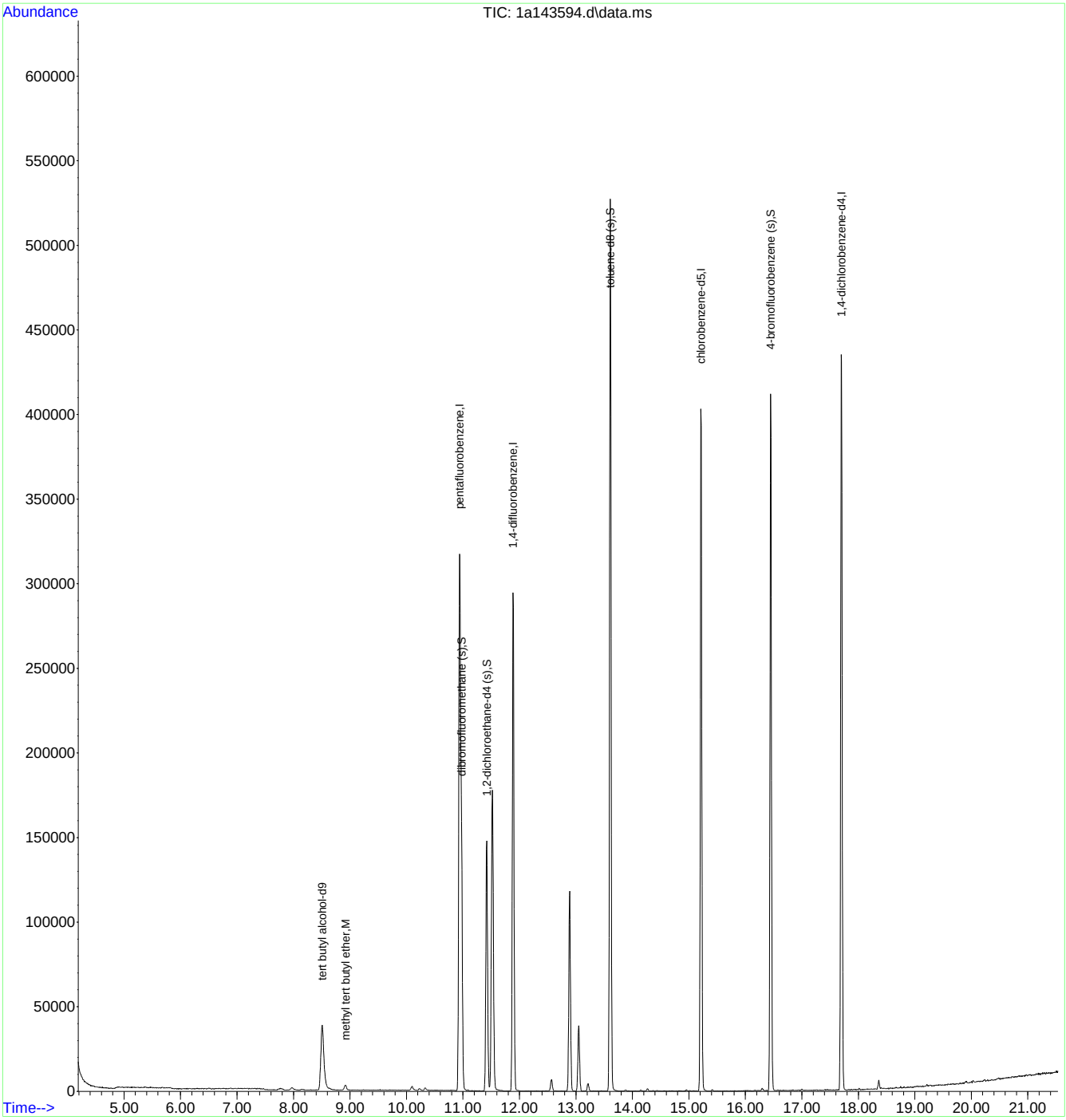
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	8.507	65	84174	500.00	ug/L	0.00
5) pentafluorobenzene	10.939	168	257031	50.00	ug/L	0.00
49) 1,4-difluorobenzene	11.886	114	276067	50.00	ug/L	0.00
78) chlorobenzene-d5	15.212	117	261222	50.00	ug/L	0.00
92) 1,4-dichlorobenzene-d4	17.702	152	139124	50.00	ug/L	0.00
System Monitoring Compounds						
42) dibromofluoromethane (s)	10.976	113	102565	46.85	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 93.70%			
43) 1,2-dichloroethane-d4 (s)	11.420	65	111685	43.45	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 86.90%			
70) toluene-d8 (s)	13.607	98	386795	49.98	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 99.96%			
94) 4-bromofluorobenzene (s)	16.447	95	147617	49.21	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 98.42%			
Target Compounds						Qvalue
24) methyl tert butyl ether	8.920	73	4902	0.65	ug/L	90

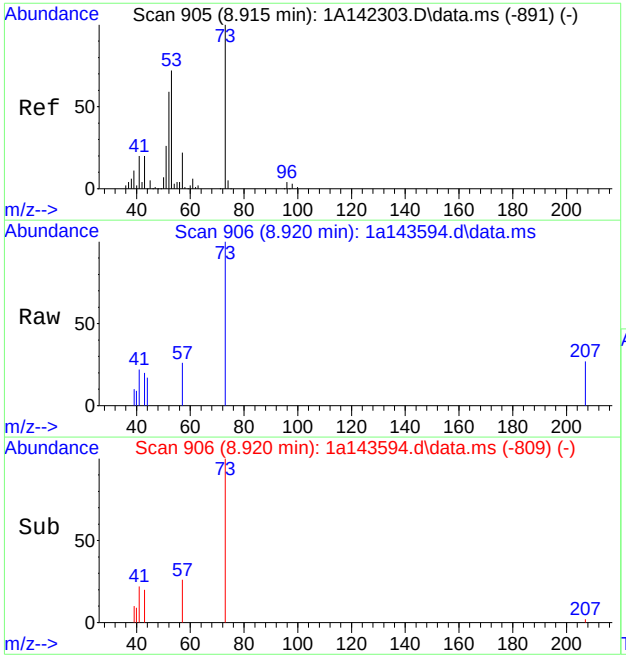
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143594.d
Acq On : 30 Sep 2014 10:57 am
Operator : DejanaS
Sample : jb77674-1
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 01 10:58:15 2014
Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 27 17:10:31 2014
Response via : Initial Calibration

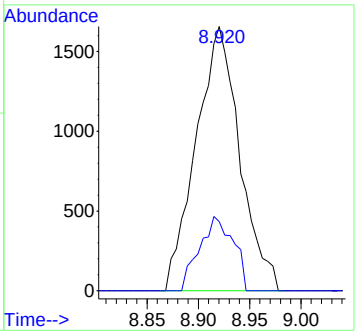




#24
methyl tert butyl ether
Concen: 0.65 ug/L
RT: 8.920 min Scan# 906
Delta R.T. 0.005 min
Lab File: 1a143594.d
Acq: 30 Sep 2014 10:57 am

Tgt Ion: 73 Resp: 4902

Ion	Ratio	Lower	Upper
73	100		
57	26.2	0.0	64.8



7.11

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143594.d
Acq On : 30 Sep 2014 10:57 am
Operator : DejanaS
Sample : jb77674-1
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 6 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 300 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.4 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

Signal : TIC: 1a143594.d\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.768	110	112	119	rVB2	491	682	0.07%	0.011%
2	4.846	125	127	128	rBV	746	555	0.06%	0.009%
3	5.071	168	170	175	rBV3	571	785	0.08%	0.013%
4	5.155	184	186	190	rBV3	691	931	0.10%	0.015%
5	5.552	260	262	266	rVB3	565	714	0.07%	0.012%
6	5.678	281	286	291	rBV4	639	1197	0.12%	0.020%
7	5.814	310	312	320	rVB2	889	1599	0.16%	0.026%
8	6.154	375	377	385	rBV4	408	765	0.08%	0.013%
9	6.290	400	403	409	rVB3	558	829	0.09%	0.014%
10	6.431	426	430	435	rVB3	506	851	0.09%	0.014%
11	6.509	440	445	453	rVB3	684	1655	0.17%	0.027%
12	6.624	462	467	468	rBV2	549	641	0.07%	0.011%
13	6.813	501	503	506	rBV3	489	503	0.05%	0.008%
14	6.886	514	517	522	rVB3	466	767	0.08%	0.013%
15	7.215	578	580	587	rBV3	631	775	0.08%	0.013%
16	7.362	606	608	612	rBV2	685	776	0.08%	0.013%
17	7.398	614	615	619	rVB2	634	505	0.05%	0.008%
18	7.461	624	627	634	rVB2	777	1352	0.14%	0.022%
19	7.765	674	685	687	rBV2	1175	2821	0.29%	0.046%
20	7.974	714	725	733	rBV2	1523	4429	0.46%	0.073%
21	8.146	749	758	769	rBV3	588	1927	0.20%	0.032%
22	8.507	814	827	864	rBV2	38319	150104	15.43%	2.461%
23	8.920	895	906	917	rBV	3157	8746	0.90%	0.143%
24	9.925	1092	1098	1105	rBV2	369	846	0.09%	0.014%
25	10.102	1122	1132	1146	rVB	2450	6644	0.68%	0.109%
26	10.228	1149	1156	1169	rVB4	1172	2818	0.29%	0.046%
27	10.327	1169	1175	1184	rBV5	1563	3673	0.38%	0.060%
28	10.939	1280	1292	1318	rBV2	317473	972998	100.00%	15.955%
29	11.091	1318	1321	1323	rVB3	762	637	0.07%	0.010%
30	11.420	1374	1384	1393	rBV	147918	311407	32.00%	5.106%
31	11.520	1393	1403	1419	rVB	177224	434705	44.68%	7.128%
32	11.687	1431	1435	1443	rVB2	419	726	0.07%	0.012%
33	11.886	1460	1473	1499	rBV	294611	583667	59.99%	9.571%
34	12.571	1591	1604	1613	rBV3	6894	14512	1.49%	0.238%
35	12.890	1655	1665	1679	rBV	118160	243185	24.99%	3.988%
36	13.047	1686	1695	1708	rBV	38640	81746	8.40%	1.340%
37	13.214	1718	1727	1735	rVB3	4378	9151	0.94%	0.150%
38	13.607	1788	1802	1825	rVB	527291	970719	99.77%	15.918%
39	13.884	1847	1855	1861	rBV2	684	1315	0.14%	0.022%
40	14.145	1900	1905	1916	rVB2	718	1083	0.11%	0.018%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143594.d
Acq On : 30 Sep 2014 10:57 am
Operator : DejanaS
Sample : jb77674-1
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 6 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 300 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.4 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

41	14.261	1922	1927	1936	rVB	1362	2359	0.24%	0.039%
42	14.428	1956	1959	1968	rVB	343	587	0.06%	0.010%
43	14.956	2050	2060	2066	rBV2	816	1137	0.12%	0.019%
44	15.212	2098	2109	2131	rVB	403273	733768	75.41%	12.032%
45	15.411	2139	2147	2153	rBV3	808	1430	0.15%	0.023%
46	16.295	2311	2316	2325	rVB2	1590	2480	0.25%	0.041%
47	16.447	2336	2345	2359	rBV	411835	715499	73.54%	11.733%
48	16.572	2365	2369	2374	rBV	464	575	0.06%	0.009%
49	16.844	2418	2421	2425	rBV	528	521	0.05%	0.009%
50	17.001	2447	2451	2458	rVB3	874	1138	0.12%	0.019%
51	17.451	2533	2537	2540	rBV3	597	665	0.07%	0.011%
52	17.697	2574	2584	2601	rVV	434834	785324	80.71%	12.878%
53	17.833	2604	2610	2614	rVB2	481	950	0.10%	0.016%
54	18.011	2642	2644	2649	rVB	985	1136	0.12%	0.019%
55	18.230	2682	2686	2690	rVB3	413	505	0.05%	0.008%
56	18.361	2704	2711	2717	rBV2	5521	9147	0.94%	0.150%
57	18.398	2717	2718	2726	rVV3	1009	1374	0.14%	0.023%
58	18.450	2726	2728	2735	rVB4	445	751	0.08%	0.012%
59	18.528	2741	2743	2745	rVB	805	504	0.05%	0.008%
60	18.549	2745	2747	2748	rBV	711	528	0.05%	0.009%
61	18.748	2780	2785	2789	rVB4	1242	1292	0.13%	0.021%
62	18.811	2794	2797	2801	rBV4	942	1003	0.10%	0.016%
63	18.879	2805	2810	2812	rBV3	693	740	0.08%	0.012%
64	18.983	2826	2830	2832	rBV5	737	948	0.10%	0.016%
65	19.140	2857	2860	2862	rVB3	854	657	0.07%	0.011%
66	19.214	2870	2874	2878	rBV4	1164	1222	0.13%	0.020%
67	19.355	2898	2901	2903	rBV3	540	565	0.06%	0.009%
68	19.585	2943	2945	2950	rBV6	724	963	0.10%	0.016%
69	19.805	2982	2987	2990	rBV4	893	1069	0.11%	0.018%
70	19.836	2991	2993	2997	rBV5	599	699	0.07%	0.011%
71	19.899	3000	3005	3007	rBV4	1304	1751	0.18%	0.029%
72	20.029	3027	3030	3039	rBV7	1579	3297	0.34%	0.054%

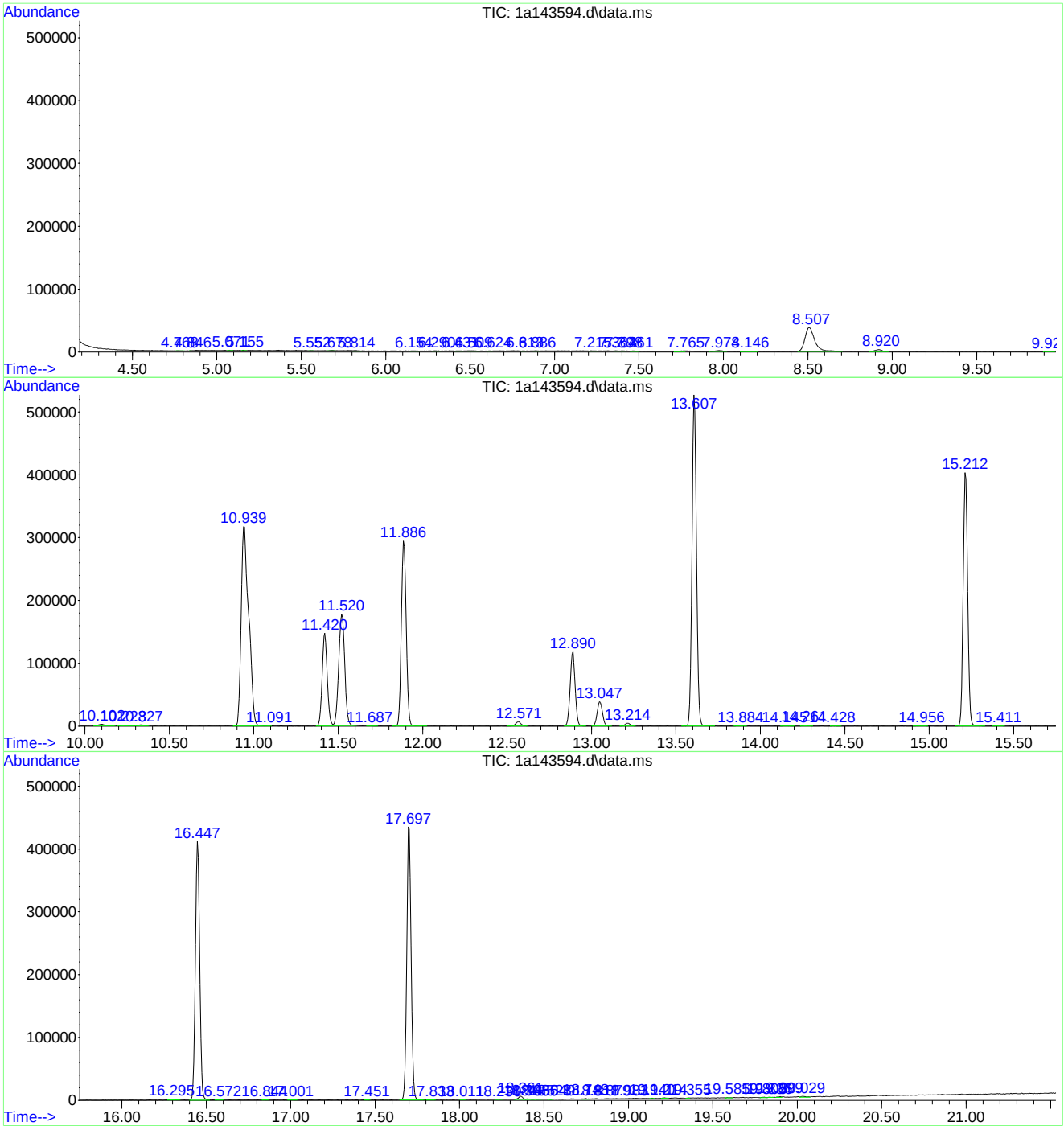
Sum of corrected areas: 6098325

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143594.d
Acq On : 30 Sep 2014 10:57 am
Operator : DejanaS
Sample : jb77674-1
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143594.d
Acq On : 30 Sep 2014 10:57 am
Operator : DejanaS
Sample : jb77674-1
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

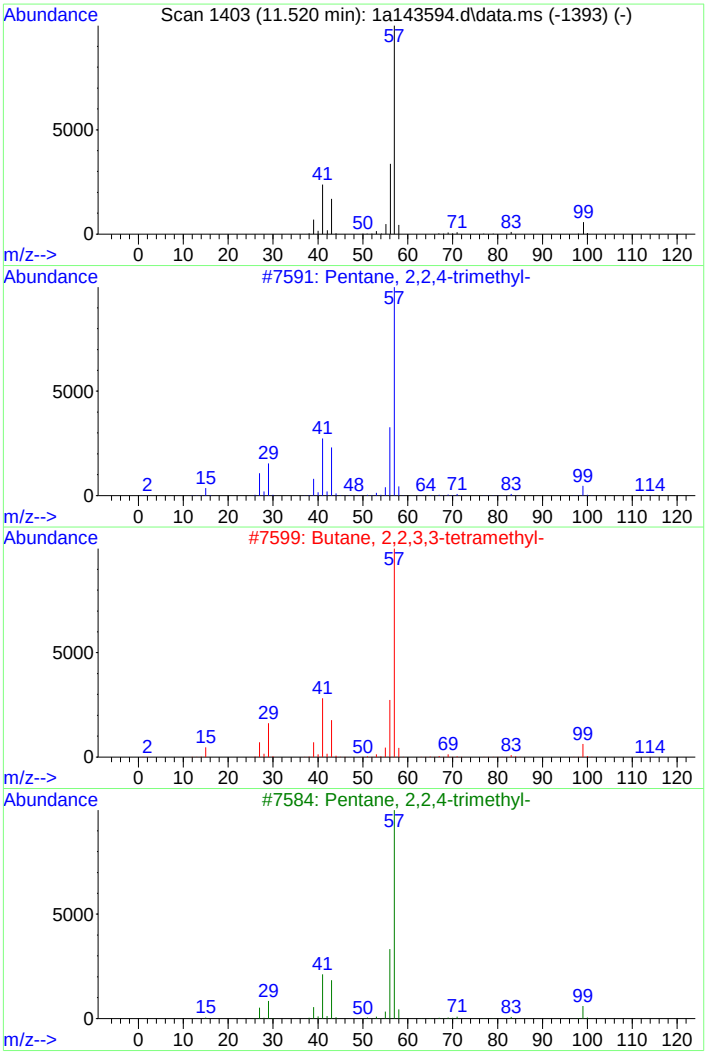
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

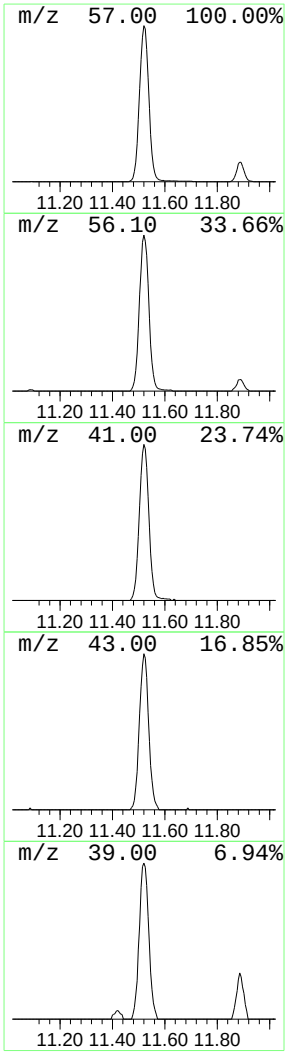
****

Peak Number 1 alkane Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.520	37.24 ug/L	434705	1,4-difluorobenzene	11.886

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,2,4-trimethyl-	114	C8H18	000540-84-1	83
2	Butane, 2,2,3,3-tetramethyl-	114	C8H18	000594-82-1	83
3	Pentane, 2,2,4-trimethyl-	114	C8H18	000540-84-1	83
4	Hexane, 2,2-dimethyl-	114	C8H18	000590-73-8	83
5	Heptane, 2,2,4,6,6-pentamethyl-	170	C12H26	013475-82-6	83





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143594.d
Acq On : 30 Sep 2014 10:57 am
Operator : DejanaS
Sample : jb77674-1
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

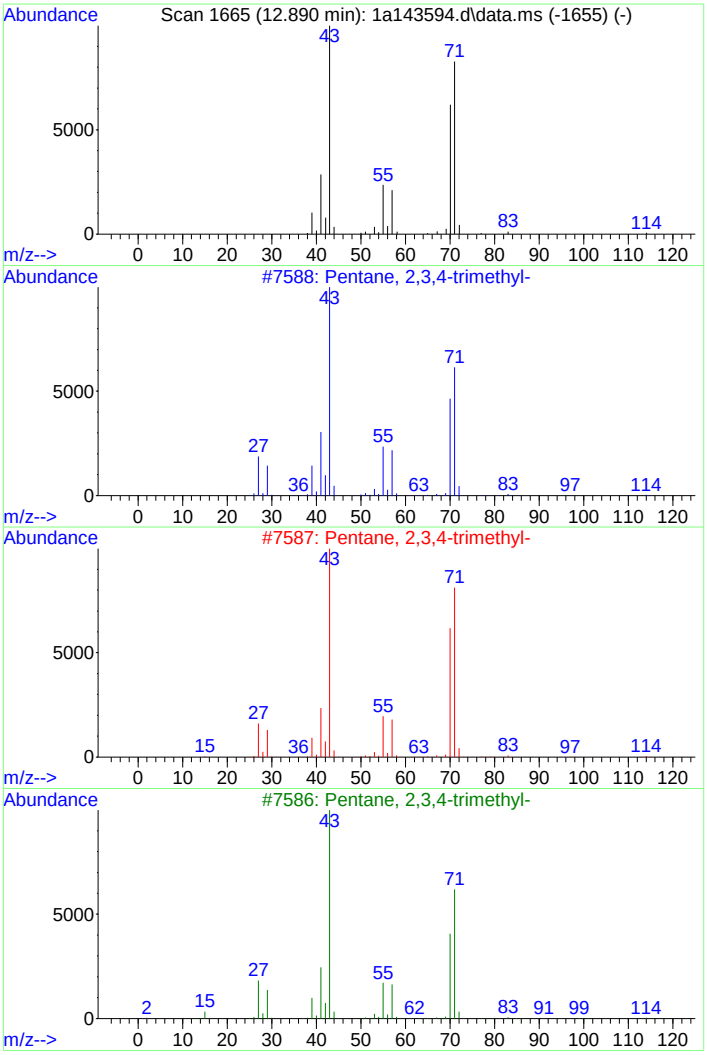
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

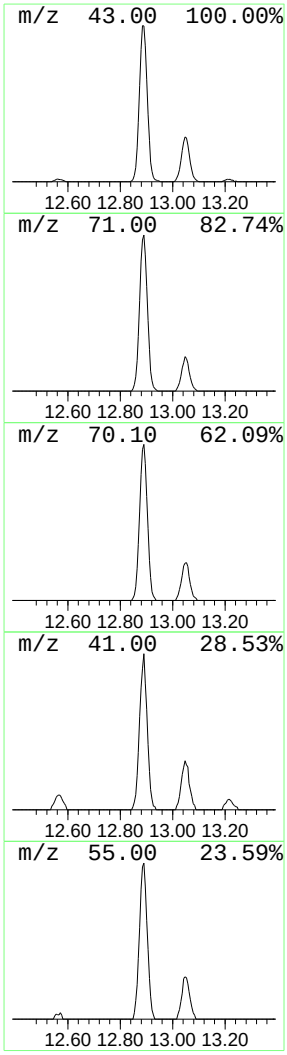
****

Peak Number 2 alkane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.890	20.83 ug/L	243185	1,4-difluorobenzene	11.886

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	91
2	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	91
3	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	91
4	Pentane, 3-ethyl-	100	C7H16	000617-78-7	83
5	Heptane, 4-methyl-	114	C8H18	000589-53-7	83





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143594.d
Acq On : 30 Sep 2014 10:57 am
Operator : DejanaS
Sample : jb77674-1
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

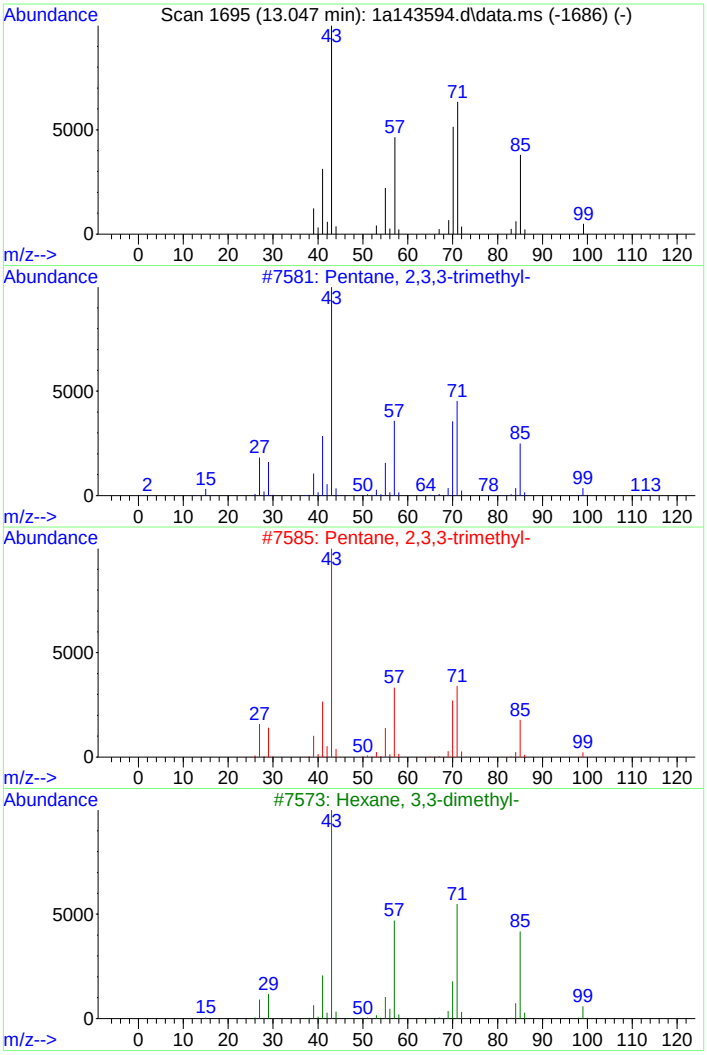
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

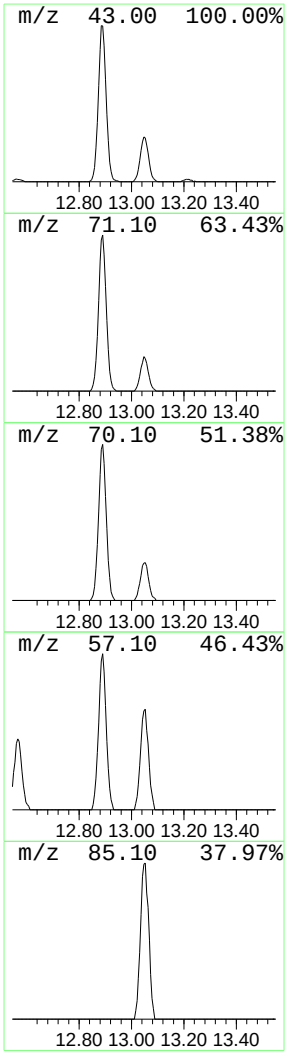
****

Peak Number 3 alkane Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.047	7.00 ug/L	81746	1,4-difluorobenzene	11.886

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	90
2	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	83
3	Hexane, 3,3-dimethyl-	114	C8H18	000563-16-6	64
4	Hexane, 3,3-dimethyl-	114	C8H18	000563-16-6	64
5	Hexane, 2,3,4-trimethyl-	128	C9H20	000921-47-1	64





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143594.d
Acq On : 30 Sep 2014 10:57 am
Operator : DejanaS
Sample : jb77674-1
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
alkane	11.520	37.2	ug/L	434705	3	11.886	583667	50.0
alkane	12.890	20.8	ug/L	243185	3	11.886	583667	50.0
alkane	13.047	7.0	ug/L	81746	3	11.886	583667	50.0

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143595.d
Acq On : 30 Sep 2014 11:24 am
Operator : DejanaS
Sample : jb77674-2
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 01 10:59:37 2014
Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 27 17:10:31 2014
Response via : Initial Calibration

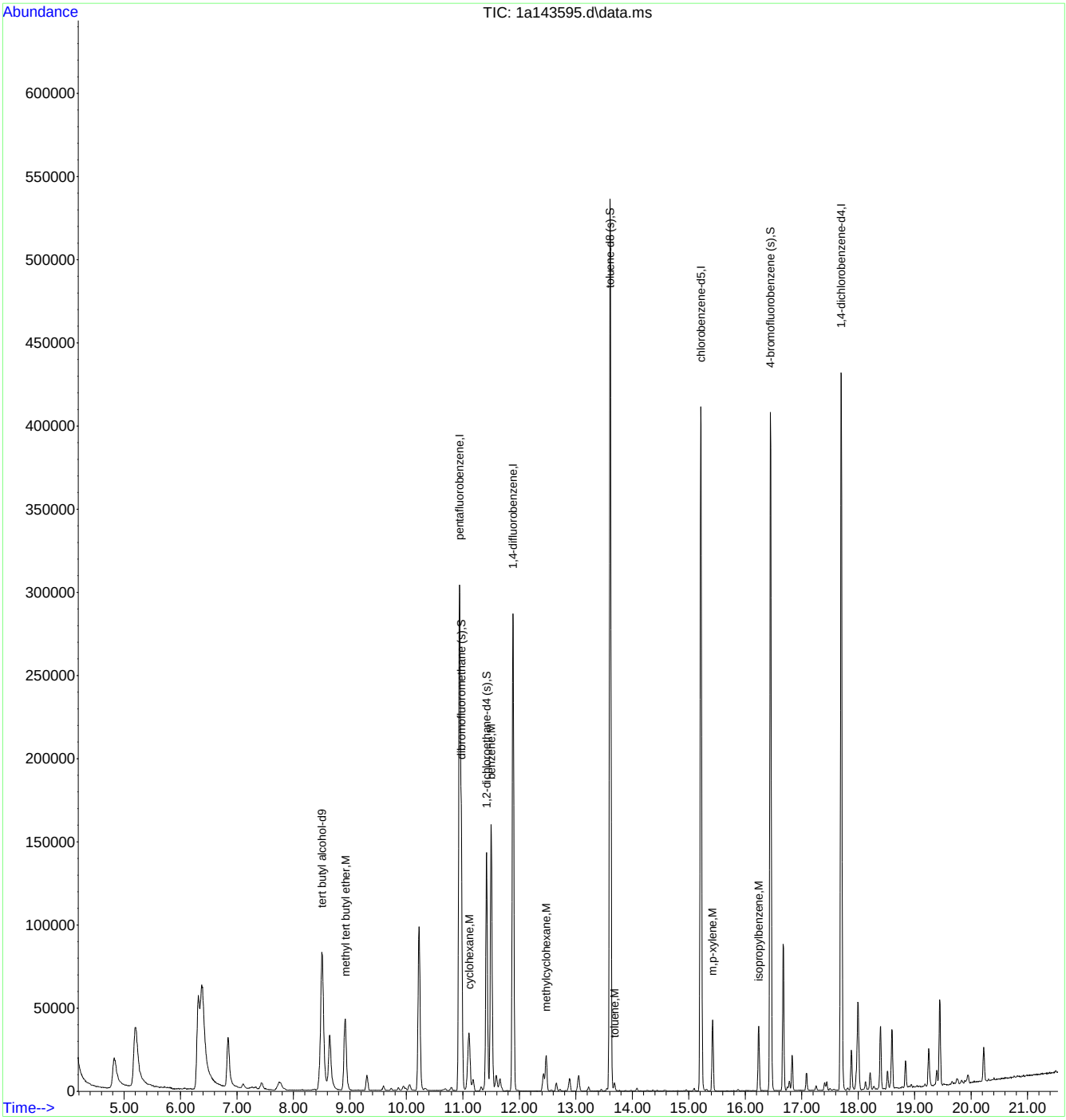
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	8.502	65	81499	500.00	ug/L	0.00
5) pentafluorobenzene	10.939	168	242313	50.00	ug/L	0.00
49) 1,4-difluorobenzene	11.886	114	270249	50.00	ug/L	0.00
78) chlorobenzene-d5	15.212	117	264327	50.00	ug/L	0.00
92) 1,4-dichlorobenzene-d4	17.697	152	138927	50.00	ug/L	0.00
System Monitoring Compounds						
42) dibromofluoromethane (s)	10.971	113	98232	47.60	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 95.20%			
43) 1,2-dichloroethane-d4 (s)	11.420	65	107611	44.40	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 88.80%			
70) toluene-d8 (s)	13.607	98	387542	51.15	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 102.30%			
94) 4-bromofluorobenzene (s)	16.447	95	146618	48.94	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 97.88%			
Target Compounds						Qvalue
24) methyl tert butyl ether	8.920	73	15658	2.21	ug/L #	1
47) cyclohexane	11.112	84	16081	5.25	ug/L #	76
56) benzene	11.499	78	151576	18.31	ug/L	100
67) methylcyclohexane	12.472	83	11230	3.30	ug/L	96
72) toluene	13.685	92	2267	0.43	ug/L	85
88) m,p-xylene	15.421	106	14623	3.55	ug/L	98
93) isopropylbenzene	16.237	105	29237	2.75	ug/L	99

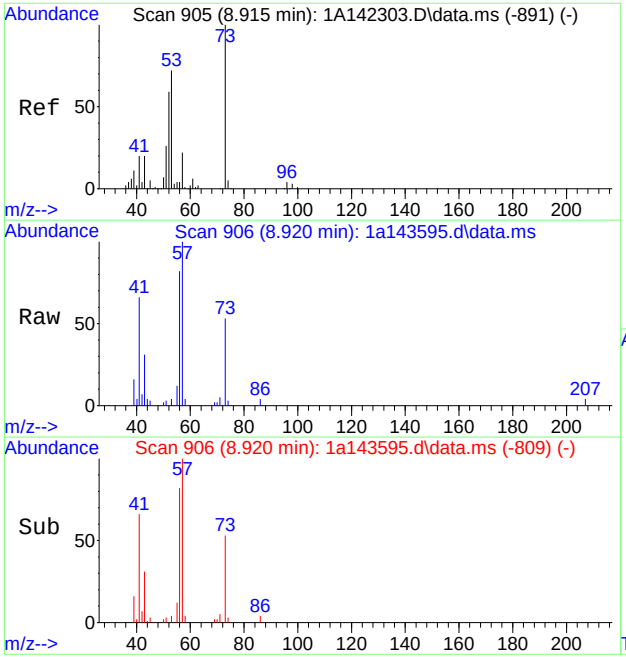
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143595.d
Acq On : 30 Sep 2014 11:24 am
Operator : DejanaS
Sample : jb77674-2
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 01 10:59:37 2014
Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 27 17:10:31 2014
Response via : Initial Calibration

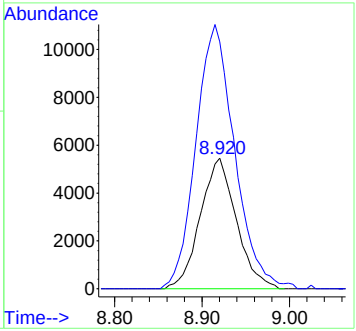


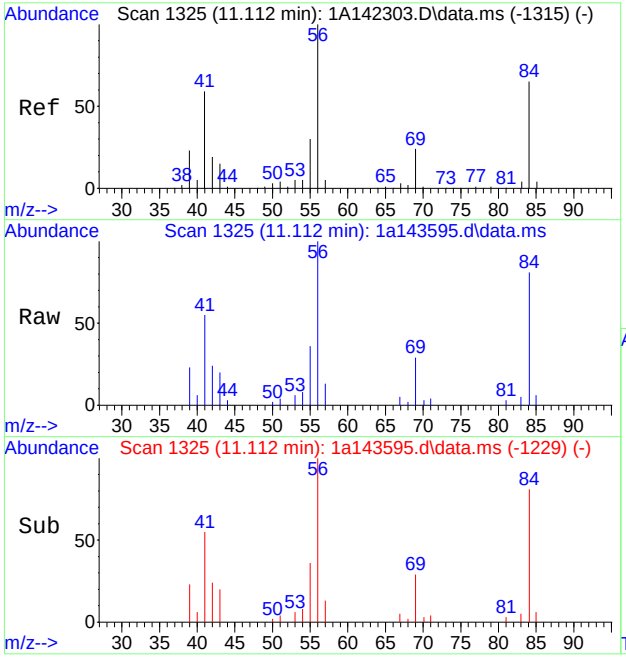


#24
methyl tert butyl ether
Concen: 2.21 ug/L
RT: 8.920 min Scan# 906
Delta R.T. 0.005 min
Lab File: 1a143595.d
Acq: 30 Sep 2014 11:24 am

Tgt Ion: 73 Resp: 15658

Ion	Ratio	Lower	Upper
73	100		
57	189.0	0.0	64.8#

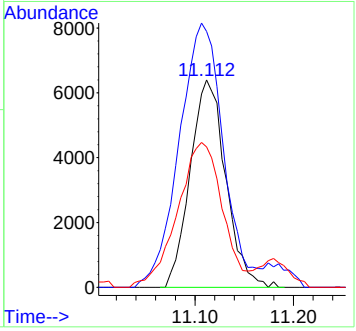


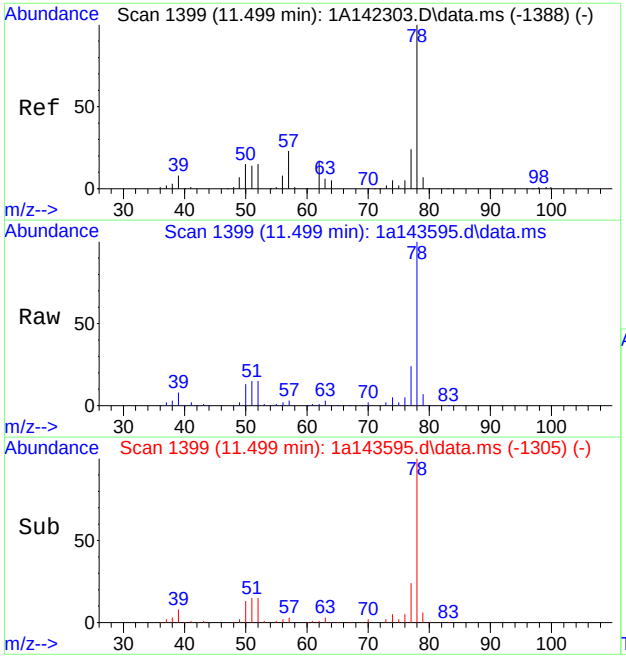


#47
cyclohexane
Concen: 5.25 ug/L
RT: 11.112 min Scan# 1325
Delta R.T. -0.000 min
Lab File: 1a143595.d
Acq: 30 Sep 2014 11:24 am

Tgt Ion: 84 Resp: 16081

Ion	Ratio	Lower	Upper
84	100		
56	123.4	124.1	184.1#
41	67.7	61.0	121.0

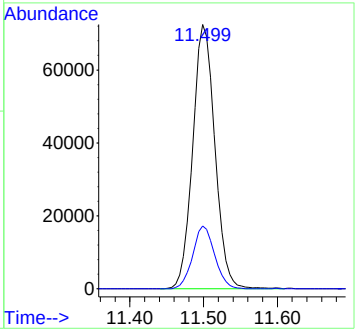


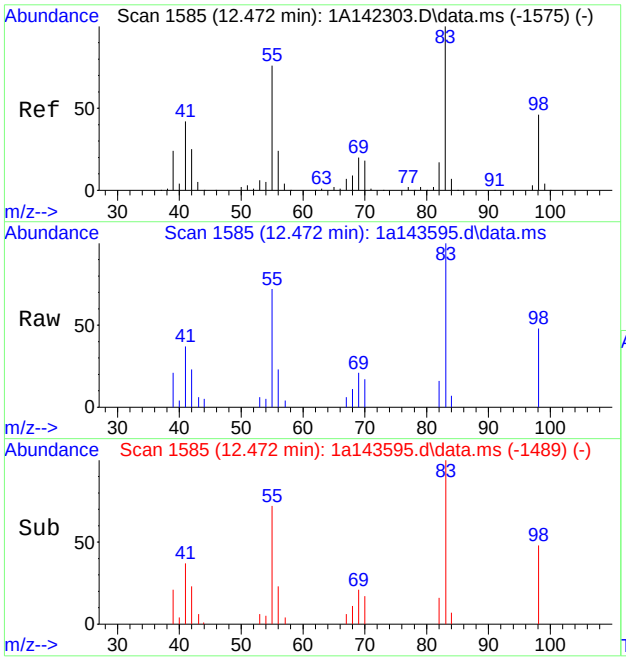


#56
benzene
Concen: 18.31 ug/L
RT: 11.499 min Scan# 1399
Delta R.T. -0.000 min
Lab File: 1a143595.d
Acq: 30 Sep 2014 11:24 am

Tgt Ion: 78 Resp: 151576

Ion	Ratio	Lower	Upper
78	100		
77	23.8	0.0	53.9

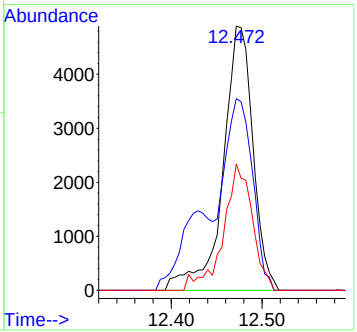


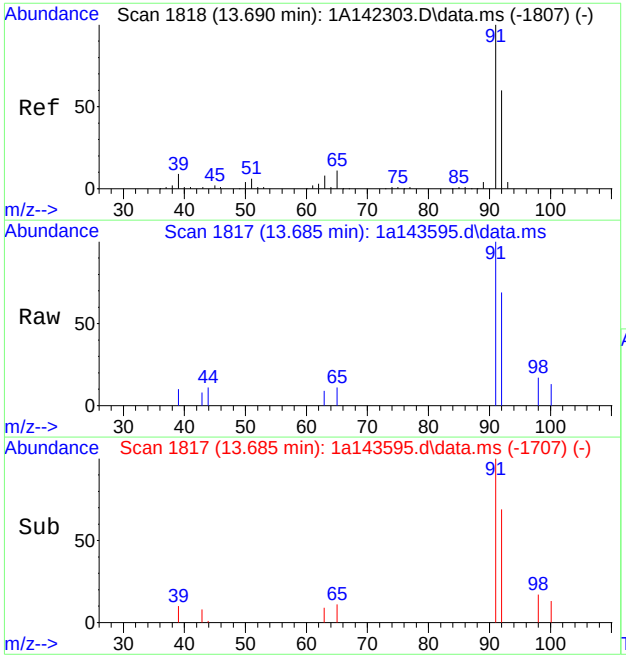


#67
methylcyclohexane
Concen: 3.30 ug/L
RT: 12.472 min Scan# 1585
Delta R.T. -0.000 min
Lab File: 1a143595.d
Acq: 30 Sep 2014 11:24 am

Tgt Ion: 83 Resp: 11230

Ion	Ratio	Lower	Upper
83	100		
55	72.5	46.1	106.1
98	47.8	15.7	75.7

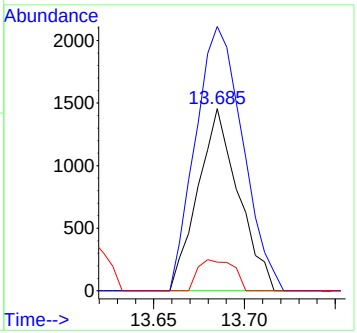


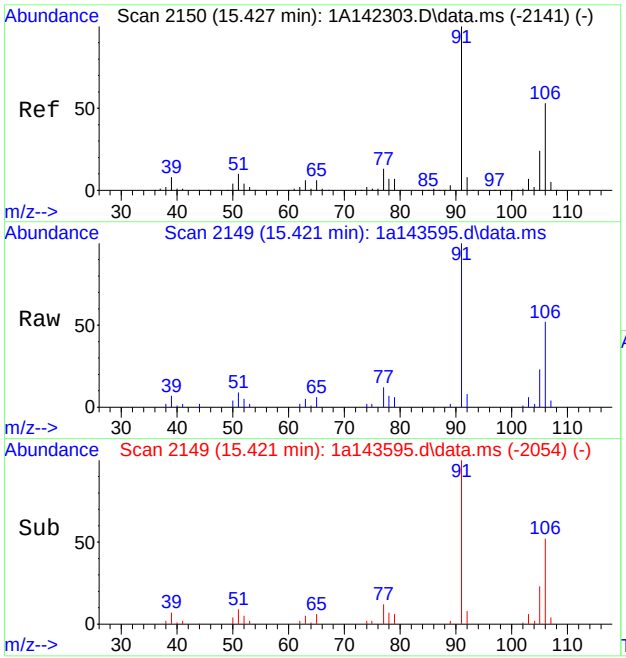


#72
toluene
Concen: 0.43 ug/L
RT: 13.685 min Scan# 1817
Delta R.T. -0.005 min
Lab File: 1a143595.d
Acq: 30 Sep 2014 11:24 am

Tgt Ion: 92 Resp: 2267

Ion	Ratio	Lower	Upper
92	100		
91	145.1	136.8	196.8
65	15.8	0.0	47.8

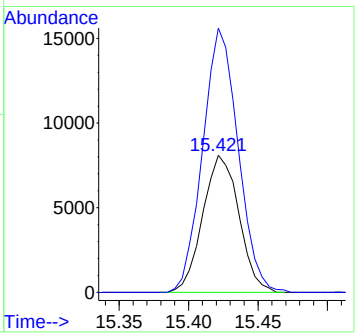


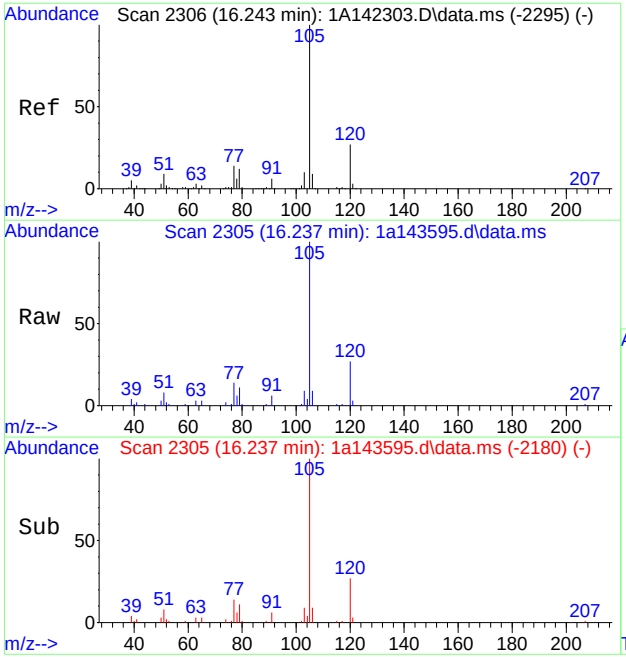


#88
m,p-xylene
Concen: 3.55 ug/L
RT: 15.421 min Scan# 2149
Delta R.T. -0.005 min
Lab File: 1a143595.d
Acq: 30 Sep 2014 11:24 am

Tgt Ion:106 Resp: 14623

Ion	Ratio	Lower	Upper
106	100		
91	193.0	160.3	220.3

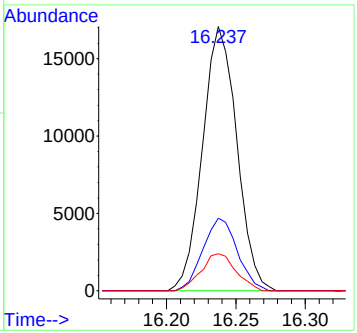




#93
isopropylbenzene
Concen: 2.75 ug/L
RT: 16.237 min Scan# 2305
Delta R.T. -0.005 min
Lab File: 1a143595.d
Acq: 30 Sep 2014 11:24 am

Tgt Ion:105 Resp: 29237

Ion	Ratio	Lower	Upper
105	100		
120	27.4	0.0	57.1
77	14.0	0.0	44.2



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143595.d
Acq On : 30 Sep 2014 11:24 am
Operator : DejanaS
Sample : jb77674-2
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 7 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 300 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.4 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

Signal : TIC: 1a143595.d\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.825	108	123	160	rBV	18070	106697	10.85%	1.248%
2	5.207	179	196	238	rBV3	35063	206369	20.99%	2.414%
3	5.515	252	255	258	rVB4	1018	977	0.10%	0.011%
4	5.562	261	264	278	rVB7	945	2506	0.25%	0.029%
5	5.714	292	293	300	rVV3	964	1032	0.10%	0.012%
6	6.070	360	361	369	rVB3	1003	1826	0.19%	0.021%
7	6.316	392	408	413	rBV2	56456	185137	18.83%	2.165%
8	6.373	414	419	480	rVB2	61503	361281	36.75%	4.226%
9	6.844	497	509	536	rVB2	29547	96391	9.81%	1.127%
10	7.105	553	559	574	rVB4	2819	8691	0.88%	0.102%
11	7.325	596	601	608	rVB5	1434	3001	0.31%	0.035%
12	7.430	611	621	634	rVV4	3918	12669	1.29%	0.148%
13	7.743	664	681	714	rVB7	4994	28258	2.87%	0.331%
14	8.382	798	803	807	rVB2	665	1131	0.12%	0.013%
15	8.502	807	826	843	rBV3	83019	320603	32.62%	3.750%
16	8.643	843	853	879	rVB3	32921	115900	11.79%	1.356%
17	8.915	892	905	925	rVB2	42933	132571	13.49%	1.551%
18	9.302	970	979	991	rBV2	9198	21376	2.17%	0.250%
19	9.595	1028	1035	1043	rBV4	2793	5522	0.56%	0.065%
20	9.726	1052	1060	1071	rBV4	1234	2362	0.24%	0.028%
21	9.856	1077	1085	1093	rVB	1709	3022	0.31%	0.035%
22	9.951	1093	1103	1108	rBV6	2609	6327	0.64%	0.074%
23	9.987	1109	1110	1116	rVB3	1331	1507	0.15%	0.018%
24	10.055	1116	1123	1133	rBV3	3387	8885	0.90%	0.104%
25	10.223	1142	1155	1171	rBV	98485	245615	24.99%	2.873%
26	10.322	1171	1174	1176	rBV3	993	1188	0.12%	0.014%
27	10.688	1233	1244	1256	rVB3	1146	3908	0.40%	0.046%
28	10.793	1256	1264	1273	rBV4	2022	4424	0.45%	0.052%
29	10.939	1279	1292	1311	rBV2	304131	928311	94.44%	10.857%
30	11.107	1311	1324	1333	rVV5	34926	107215	10.91%	1.254%
31	11.180	1334	1338	1350	rVB4	6936	13992	1.42%	0.164%
32	11.321	1356	1365	1371	rBV3	2615	4864	0.49%	0.057%
33	11.420	1371	1384	1392	rVV	143358	307567	31.29%	3.597%
34	11.499	1392	1399	1410	rVV	160150	351595	35.77%	4.112%
35	11.593	1410	1417	1423	rVV6	9297	23388	2.38%	0.274%
36	11.661	1423	1430	1442	rVB5	7381	18686	1.90%	0.219%
37	11.886	1459	1473	1486	rVV	287088	572098	58.20%	6.691%
38	11.964	1486	1488	1498	rVB2	644	1219	0.12%	0.014%
39	12.430	1567	1577	1580	rBV2	10455	22649	2.30%	0.265%
40	12.477	1580	1586	1598	rVV	21381	45206	4.60%	0.529%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143595.d
Acq On : 30 Sep 2014 11:24 am
Operator : DejanaS
Sample : jb77674-2
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 7 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 300 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.4 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

41	12.566	1598	1603	1609	rVV3	694	1180	0.12%	0.014%
42	12.655	1613	1620	1627	rBV2	4903	9207	0.94%	0.108%
43	12.723	1627	1633	1638	rVB3	1053	1597	0.16%	0.019%
44	12.885	1653	1664	1673	rVB3	7589	16593	1.69%	0.194%
45	13.052	1684	1696	1707	rVB2	9418	20401	2.08%	0.239%
46	13.225	1720	1729	1738	rVB2	2612	4777	0.49%	0.056%
47	13.450	1767	1772	1780	rVB2	1071	1528	0.16%	0.018%
48	13.549	1787	1791	1793	rBV4	1628	2145	0.22%	0.025%
49	13.607	1793	1802	1812	rVV	536302	982966	100.00%	11.497%
50	13.685	1813	1817	1824	rVB2	4863	8071	0.82%	0.094%
51	14.083	1887	1893	1902	rVB3	1704	2806	0.29%	0.033%
52	14.951	2056	2059	2065	rBV3	794	1097	0.11%	0.013%
53	15.097	2074	2087	2097	rBV3	1723	2649	0.27%	0.031%
54	15.212	2100	2109	2124	rVV	411458	739153	75.20%	8.645%
55	15.306	2124	2127	2137	rVB3	1043	2001	0.20%	0.023%
56	15.421	2140	2149	2159	rVB	42746	73794	7.51%	0.863%
57	15.871	2227	2235	2242	rBV2	923	1846	0.19%	0.022%
58	16.237	2298	2305	2313	rVB	38961	64990	6.61%	0.760%
59	16.447	2336	2345	2360	rBV	407880	705936	71.82%	8.257%
60	16.671	2377	2388	2398	rBV	88063	147728	15.03%	1.728%
61	16.750	2398	2403	2404	rVV2	2276	2876	0.29%	0.034%
62	16.781	2404	2409	2413	rVV	5861	9473	0.96%	0.111%
63	16.828	2413	2418	2428	rVB	21209	34240	3.48%	0.400%
64	17.085	2459	2467	2476	rVB	10373	17979	1.83%	0.210%
65	17.257	2492	2500	2506	rBV2	2892	4996	0.51%	0.058%
66	17.409	2522	2529	2532	rBV2	4659	7613	0.77%	0.089%
67	17.446	2532	2536	2543	rVB	5191	7881	0.80%	0.092%
68	17.503	2543	2547	2555	rBV2	1195	1953	0.20%	0.023%
69	17.561	2555	2558	2566	rVV3	582	1010	0.10%	0.012%
70	17.697	2574	2584	2601	rVB	431407	782479	79.60%	9.152%
71	17.817	2601	2607	2613	rBV3	1442	2290	0.23%	0.027%
72	17.880	2613	2619	2628	rBV	24051	40657	4.14%	0.476%
73	17.995	2628	2641	2653	rVB4	52990	121779	12.39%	1.424%
74	18.131	2657	2667	2673	rVV3	4780	7545	0.77%	0.088%
75	18.209	2676	2682	2690	rVB	10060	16600	1.69%	0.194%
76	18.282	2690	2696	2701	rBV4	1881	3497	0.36%	0.041%
77	18.397	2707	2718	2726	rBV	37896	65140	6.63%	0.762%
78	18.518	2734	2741	2748	rBV2	11052	19891	2.02%	0.233%
79	18.596	2748	2756	2765	rVV	35636	65434	6.66%	0.765%
80	18.680	2765	2772	2775	rVV4	525	1069	0.11%	0.013%
81	18.779	2787	2791	2795	rBV3	1037	1740	0.18%	0.020%
82	18.842	2795	2803	2810	rVV	16413	28438	2.89%	0.333%
83	18.900	2812	2814	2818	rVV3	1176	1545	0.16%	0.018%
84	18.941	2818	2822	2826	rVB4	1906	3046	0.31%	0.036%
85	19.041	2835	2841	2848	rBV5	1025	2144	0.22%	0.025%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143595.d
Acq On : 30 Sep 2014 11:24 am
Operator : DejanaS
Sample : jb77674-2
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 7 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 300 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.4 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

86	19.093	2848	2851	2854	rVB3	851	1058	0.11%	0.012%
87	19.182	2860	2868	2874	rBV5	1848	3445	0.35%	0.040%
88	19.250	2874	2881	2891	rVV	22787	41936	4.27%	0.490%
89	19.391	2898	2908	2912	rBV	9260	16610	1.69%	0.194%
90	19.444	2912	2918	2928	rVB	51552	90251	9.18%	1.056%
91	19.517	2928	2932	2938	rBV3	1049	1865	0.19%	0.022%
92	19.663	2956	2960	2965	rBV5	1896	3325	0.34%	0.039%
93	19.747	2971	2976	2984	rVB5	3166	7114	0.72%	0.083%
94	19.831	2987	2992	2999	rVV4	2141	3815	0.39%	0.045%
95	19.888	2999	3003	3005	rVV3	1858	2147	0.22%	0.025%
96	19.940	3008	3013	3020	rVB4	5041	10607	1.08%	0.124%
97	20.055	3033	3035	3042	rVB6	1091	1139	0.12%	0.013%
98	20.223	3060	3067	3079	rBV	20595	36240	3.69%	0.424%
99	20.307	3081	3083	3088	rVB5	1230	1515	0.15%	0.018%
100	20.406	3100	3102	3105	rVB4	1452	1202	0.12%	0.014%

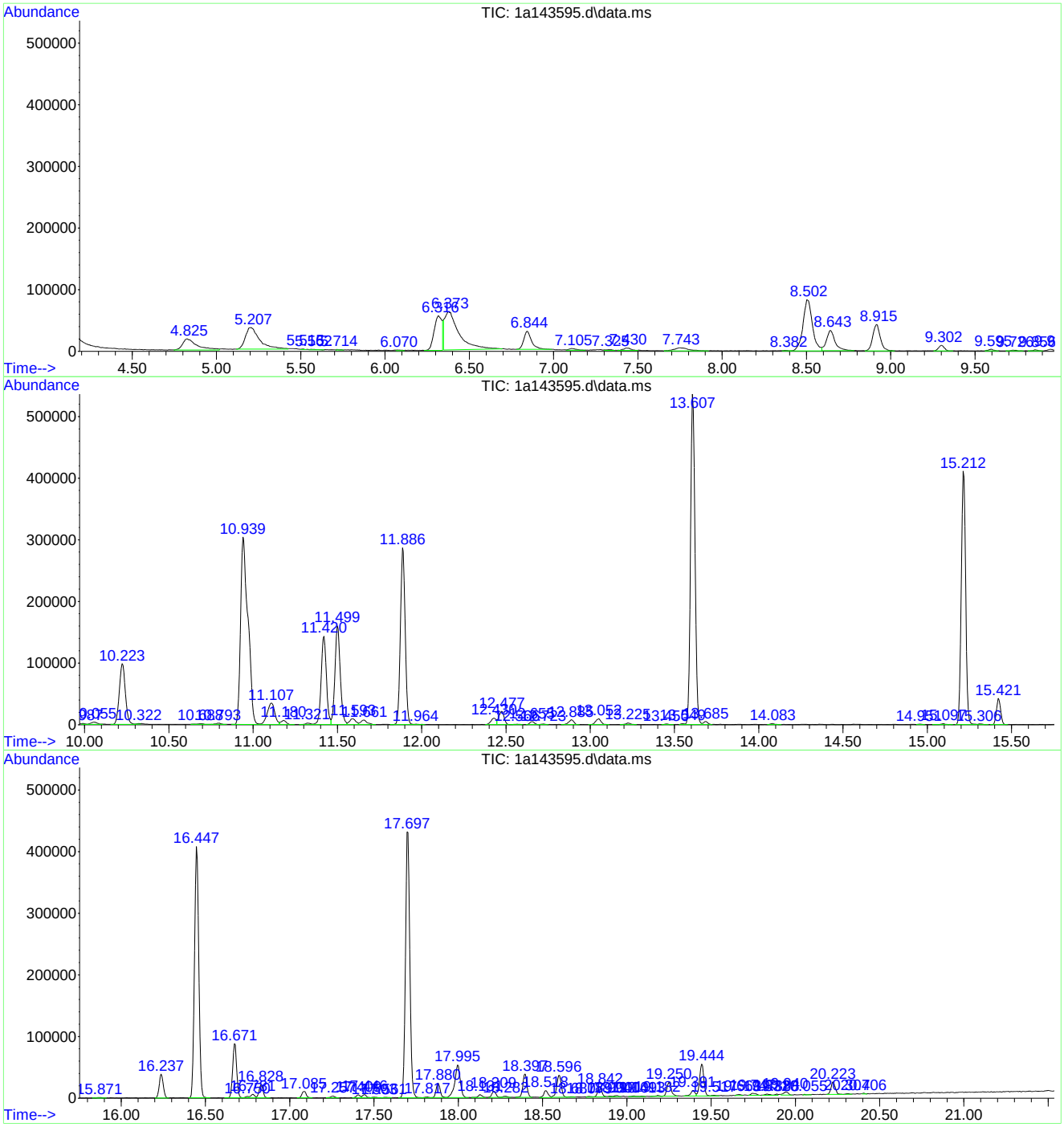
Sum of corrected areas: 8550015

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143595.d
Acq On : 30 Sep 2014 11:24 am
Operator : DejanaS
Sample : jb77674-2
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p



Library Search Compound Report

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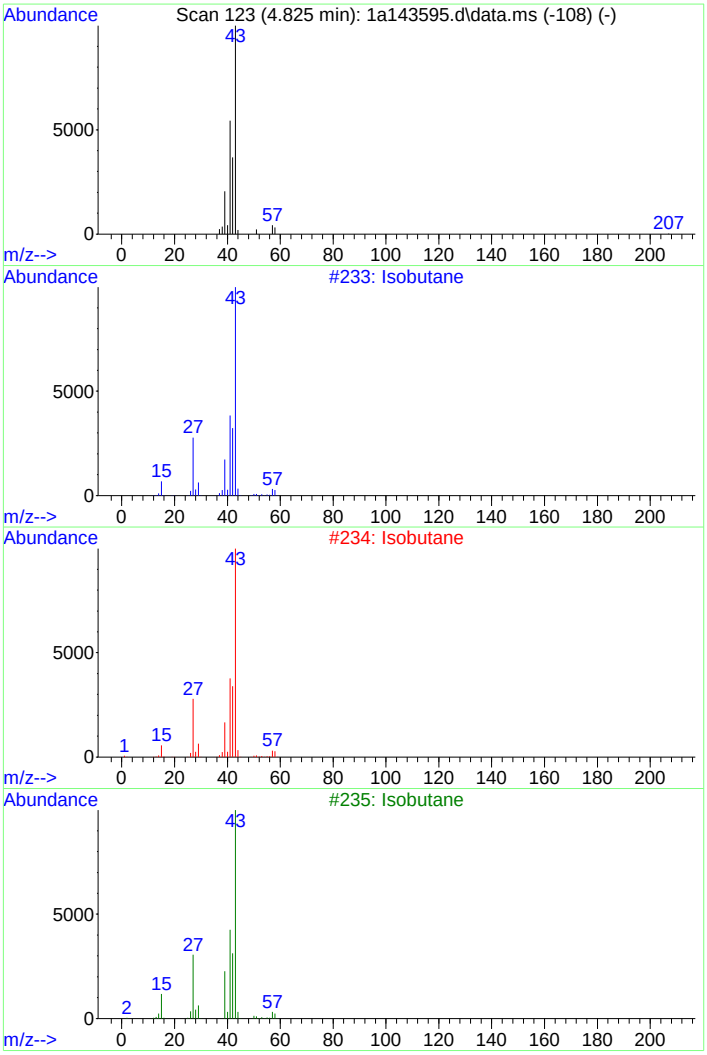
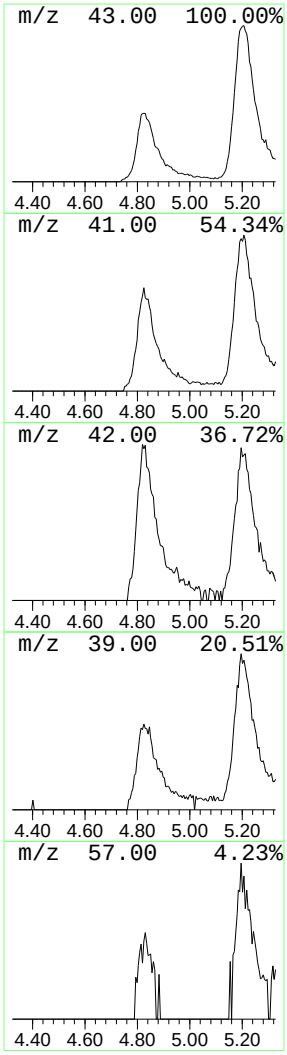
Peak Number 1 alkane Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.825	5.75 ug/L	106697	pentafluorobenzene	10.939

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Isobutane	58	C4H10	000075-28-5	72
2	Isobutane	58	C4H10	000075-28-5	56
3	Isobutane	58	C4H10	000075-28-5	56
4	Propene	42	C3H6	000115-07-1	4
5	Propane, 2-nitro-	89	C3H7NO2	000079-46-9	4





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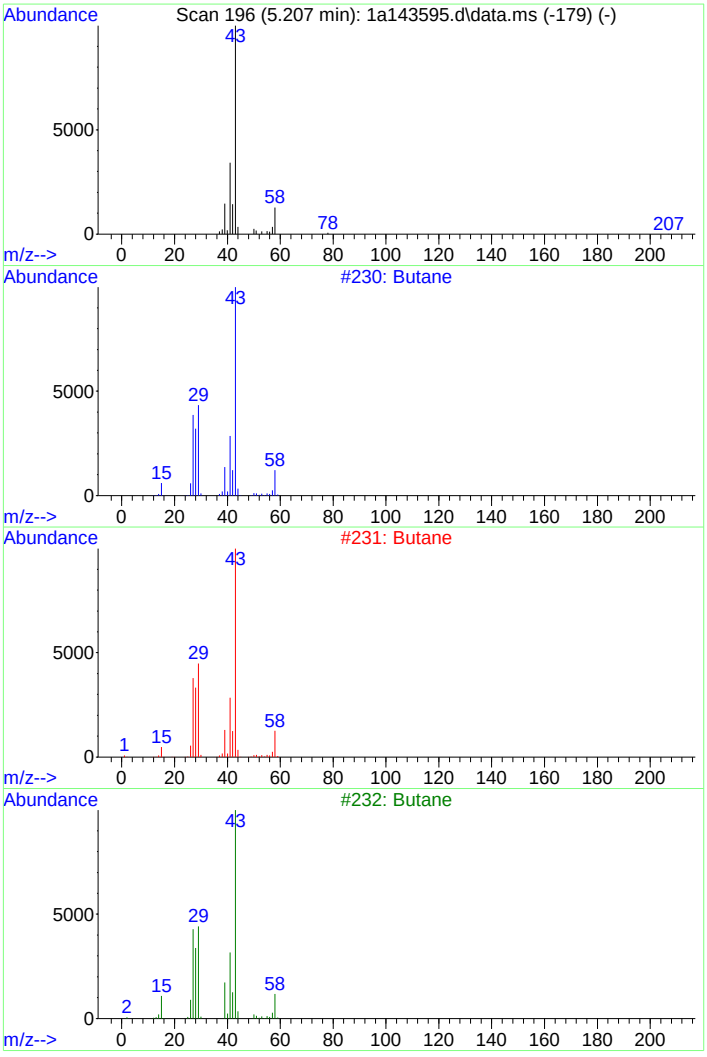
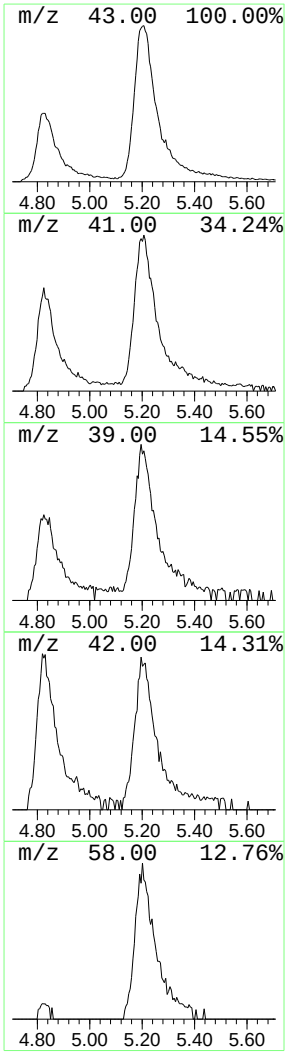
Peak Number 2 alkane Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.207	11.12 ug/L	206369	pentafluorobenzene	10.939

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	64
2	Butane	58	C4H10	000106-97-8	64
3	Butane	58	C4H10	000106-97-8	64
4	Isobutane	58	C4H10	000075-28-5	9
5	Isopropylsulfonyl chloride	142	C3H7ClO2S	010147-37-2	9





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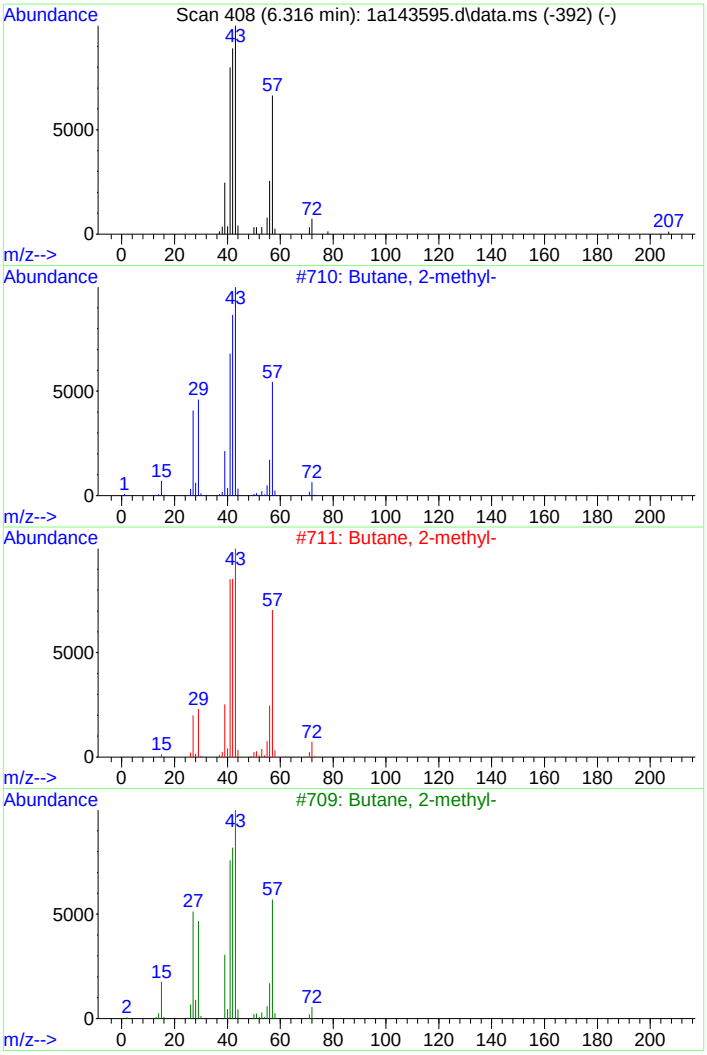
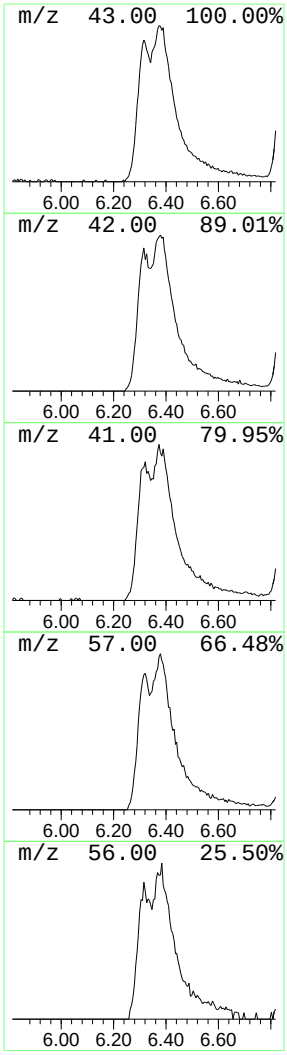
Peak Number 3 alkane Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.316	9.97 ug/L	185137	pentafluorobenzene	10.939

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	91
2	Butane, 2-methyl-	72	C5H12	000078-78-4	91
3	Butane, 2-methyl-	72	C5H12	000078-78-4	86
4	Pentane	72	C5H12	000109-66-0	56
5	3-Buten-1-ol	72	C4H8O	000627-27-0	47





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Operator : DejanaS
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Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
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TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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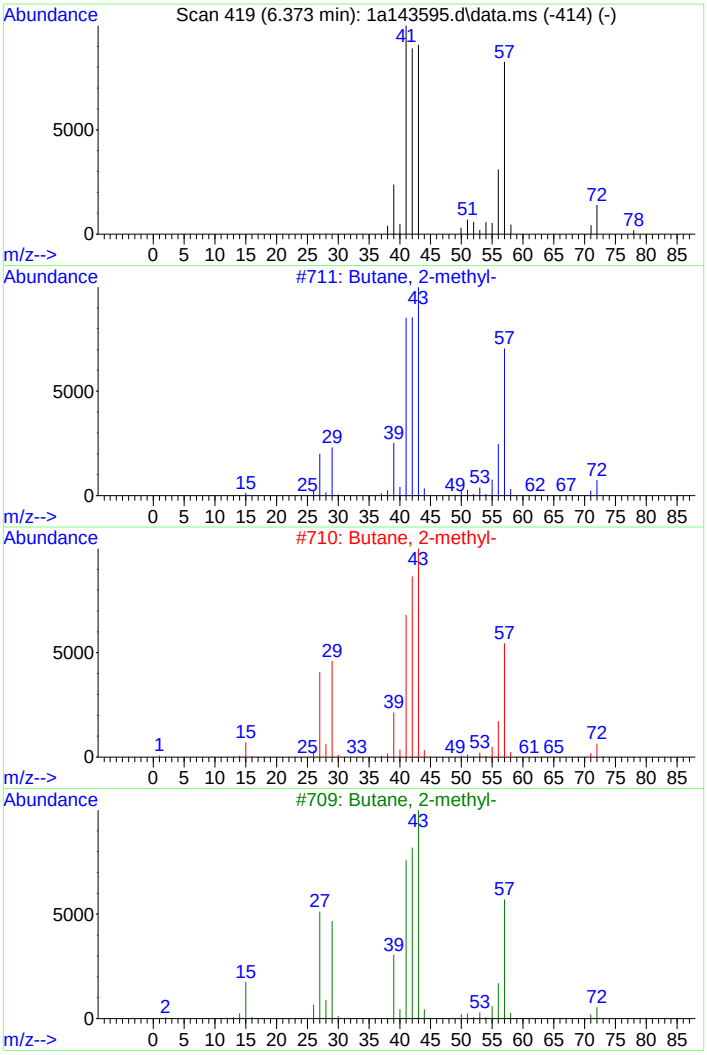
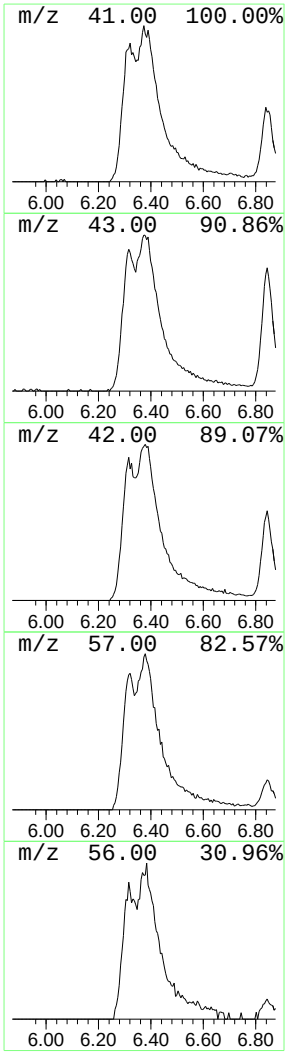
Peak Number 4 alkane Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.373	19.46 ug/L	361281	pentafluorobenzene	10.939

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	91
2	Butane, 2-methyl-	72	C5H12	000078-78-4	78
3	Butane, 2-methyl-	72	C5H12	000078-78-4	78
4	Pentane	72	C5H12	000109-66-0	32
5	2-Buten-1-ol, (Z)-	72	C4H8O	004088-60-2	9





Library Search Compound Report

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Acq On : 30 Sep 2014 11:24 am
Operator : DejanaS
Sample : jb77674-2
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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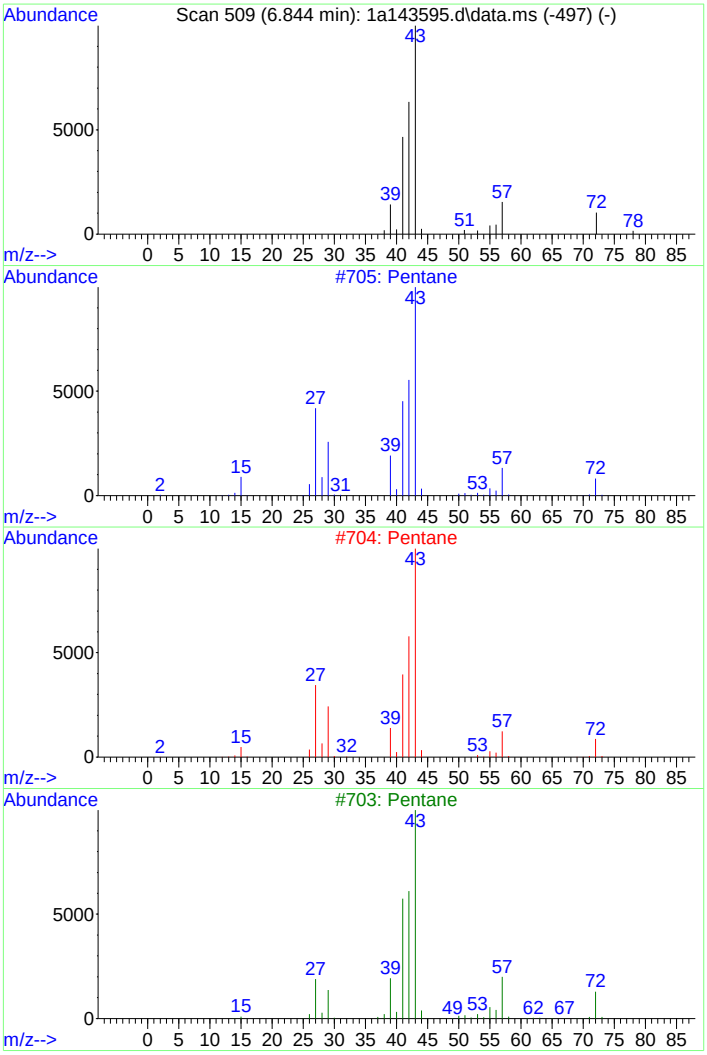
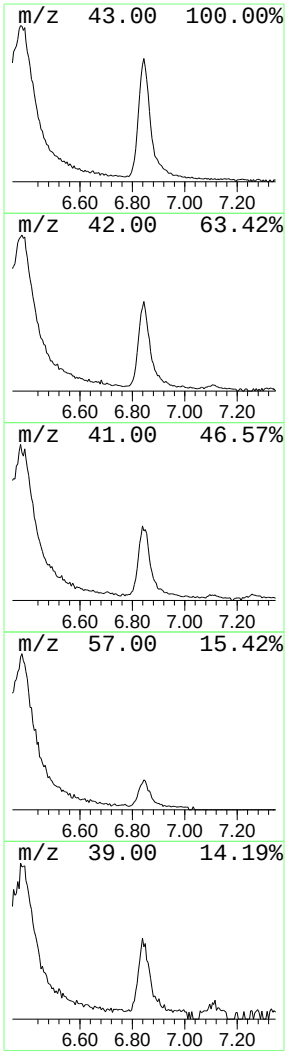
Peak Number 5 alkane-Pentane Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.844	5.19 ug/L	96391	pentafluorobenzene	10.939

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	90
2	Pentane	72	C5H12	000109-66-0	90
3	Pentane	72	C5H12	000109-66-0	80
4	Pentane	72	C5H12	000109-66-0	56
5	1-Propanol, 2-methyl-	74	C4H10O	000078-83-1	38





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Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
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TIC Library : C:\DATABASE\NIST08.L
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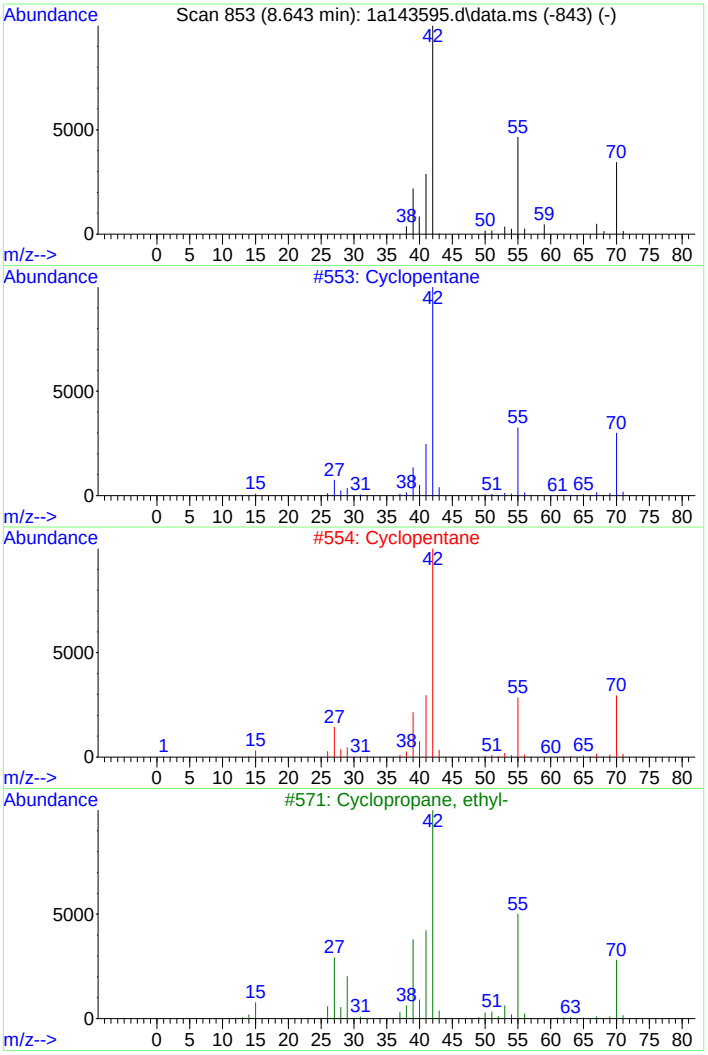
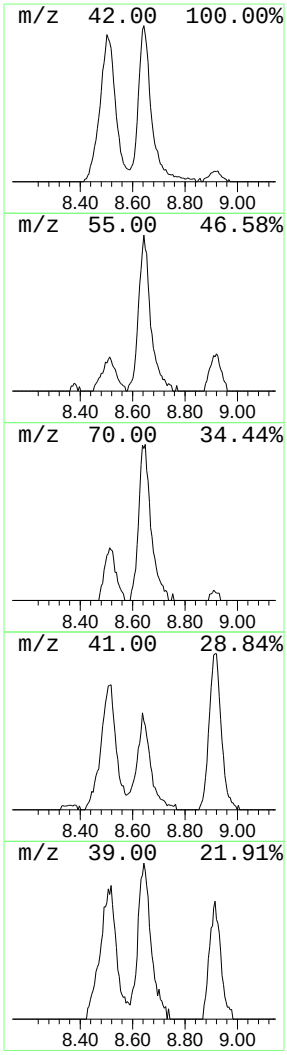
Peak Number 6 alkene Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.643	6.24 ug/L	115900	pentafluorobenzene	10.939

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane	70	C5H10	000287-92-3	86
2	Cyclopentane	70	C5H10	000287-92-3	78
3	Cyclopropane, ethyl-	70	C5H10	001191-96-4	56
4	1-Pentene	70	C5H10	000109-67-1	49
5	Cyclobutane, methyl-	70	C5H10	000598-61-8	43





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Operator : DejanaS
Sample : jb77674-2
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
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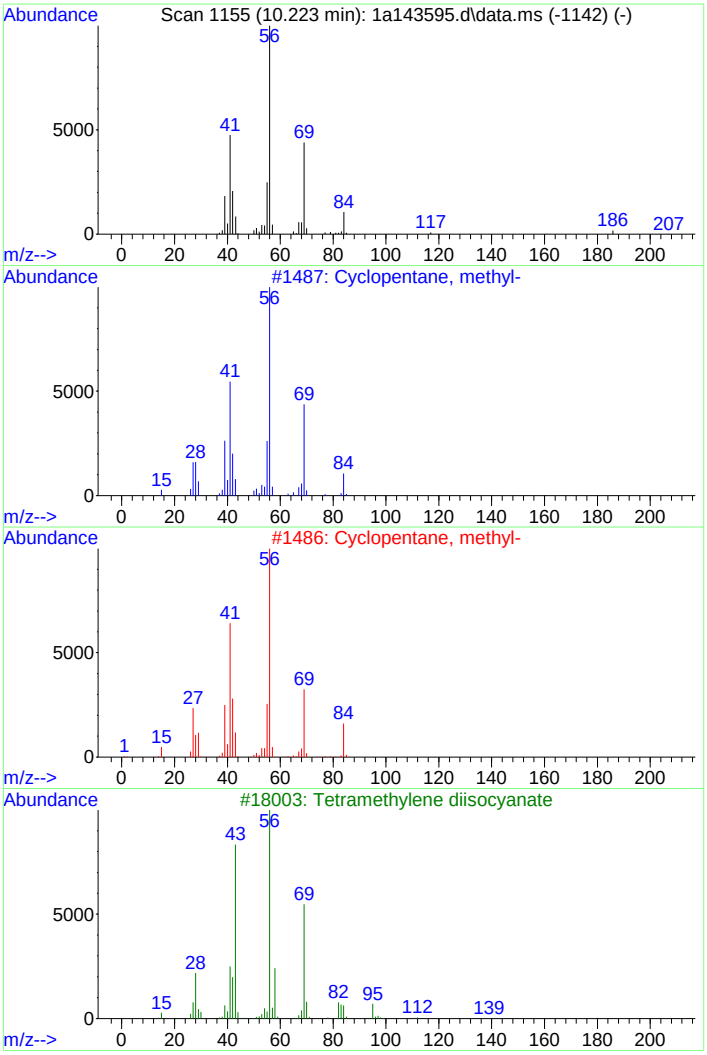
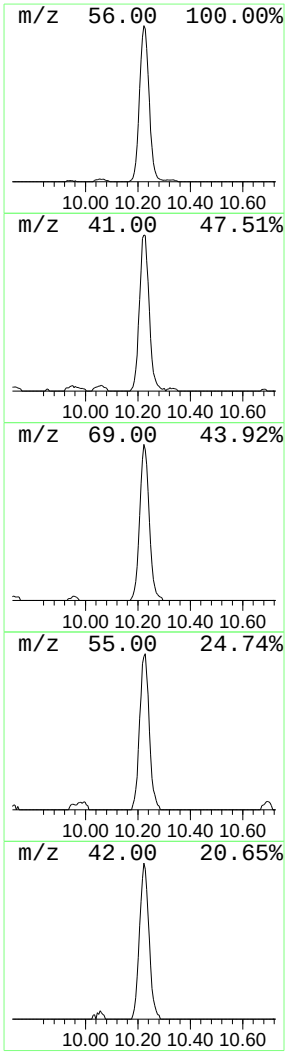
Peak Number 7 alkene Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.223	13.23 ug/L	245615	pentafluorobenzene	10.939

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	94
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	86
3	Tetramethylene diisocyanate	140	C6H8N2O2	004538-37-8	78
4	Cyclopentane, methyl-	84	C6H12	000096-37-7	78
5	1H-Tetrazole, 5-methyl-	84	C2H4N4	004076-36-2	72





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Operator : DejanaS
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Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
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TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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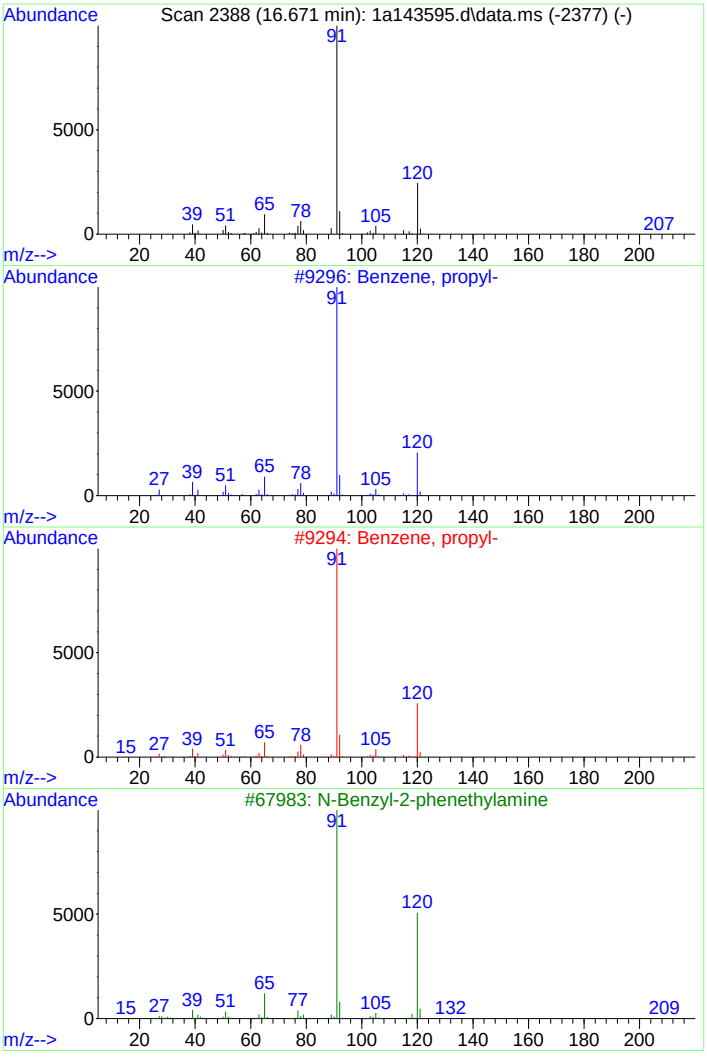
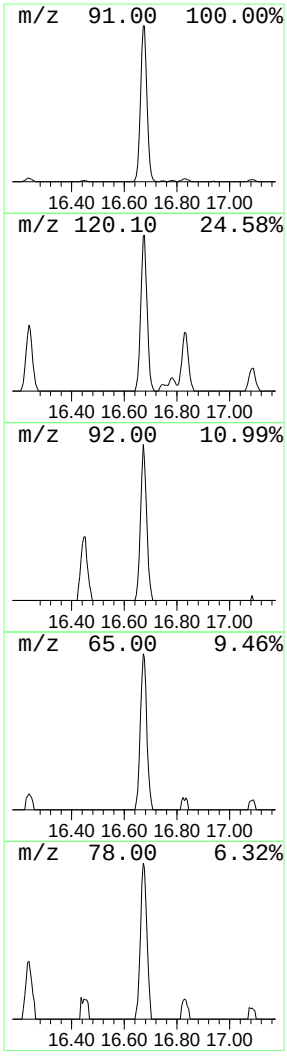
Peak Number 8 C3 alkyl benzene Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.672	9.44 ug/L	147728	1,4-dichlorobenzene-d4	17.697

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, propyl-	120	C9H12	000103-65-1	90
2	Benzene, propyl-	120	C9H12	000103-65-1	90
3	N-Benzyl-2-phenethylamine	211	C15H17N	003647-71-0	72
4	N-Benzyl-2-phenethylamine	211	C15H17N	003647-71-0	64
5	Ethanol, 2-[(phenylmethyl)amino]-	151	C9H13NO	000104-63-2	64





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Operator : DejanaS
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Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 7 Sample Multiplier: 1

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TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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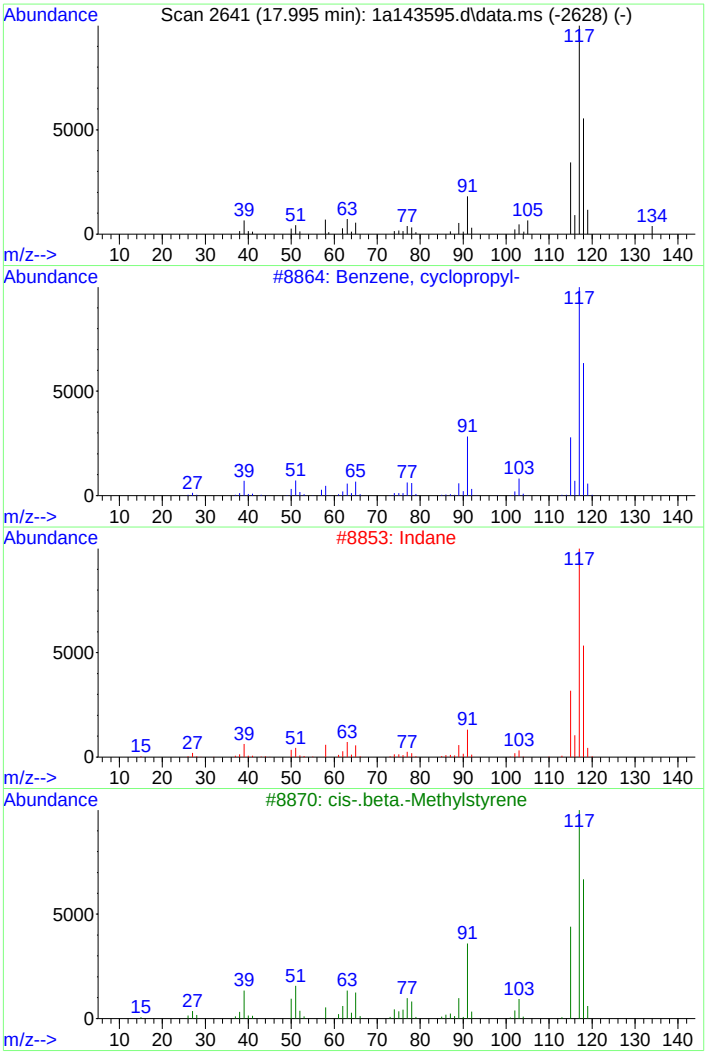
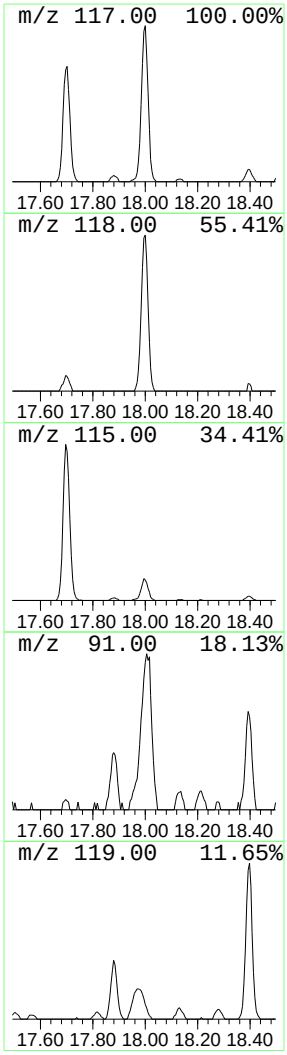
Peak Number 9 Indane Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.995	7.78 ug/L	121779	1,4-dichlorobenzene-d4	17.697

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, cyclopropyl-	118	C9H10	000873-49-4	81
2	Indane	118	C9H10	000496-11-7	81
3	cis-.beta.-Methylstyrene	118	C9H10	000766-90-5	76
4	Benzene, cyclopropyl-	118	C9H10	000873-49-4	74
5	Indane	118	C9H10	000496-11-7	72





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TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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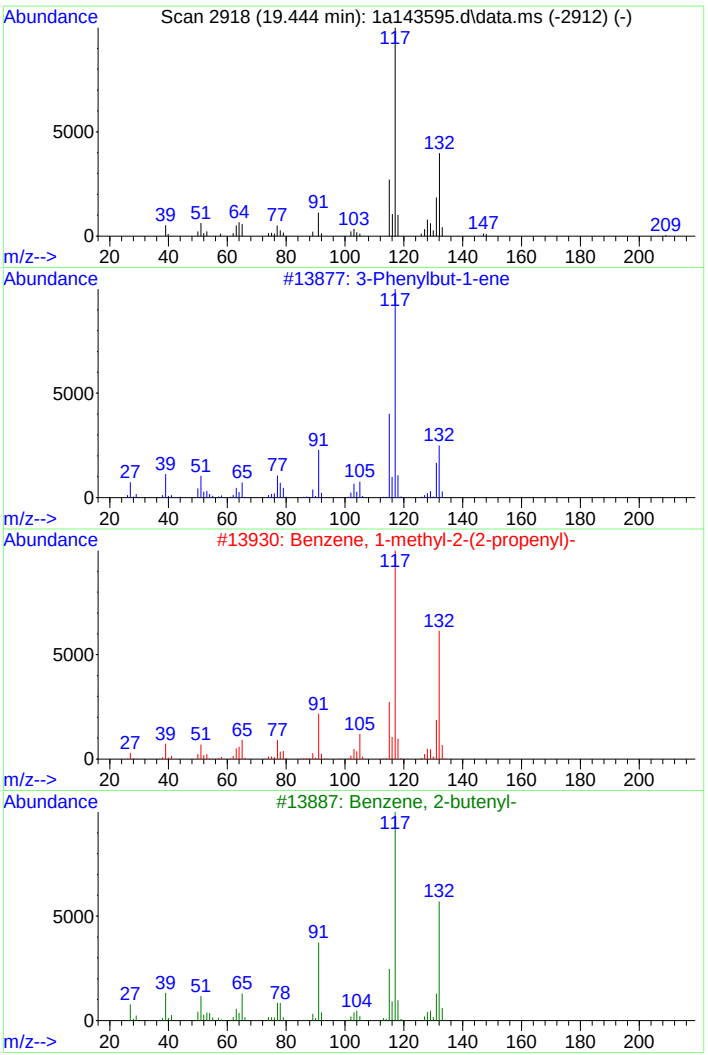
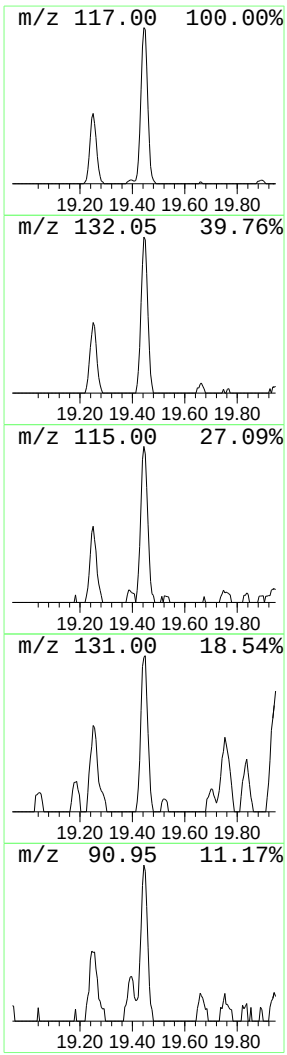
Peak Number 10 1H-Indene-dihydro-methyl- i... Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.444	5.77 ug/L	90251	1,4-dichlorobenzene-d4	17.697

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	3-Phenylbut-1-ene	132	C10H12	000934-10-1	91
2	Benzene, 1-methyl-2-(2-propenyl)-	132	C10H12	001587-04-8	91
3	Benzene, 2-butenyl-	132	C10H12	001560-06-1	91
4	1H-Indene, 2,3-dihydro-2-methyl-	132	C10H12	000824-63-5	91
5	Benzene, (1-methyl-1-propenyl)-,...	132	C10H12	000768-00-3	91





Tentatively Identified Compound (LSC) summary

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TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
alkane	4.825	5.8	ug/L	106697	2	10.939	928311	50.0
alkane	5.207	11.1	ug/L	206369	2	10.939	928311	50.0
alkane	6.316	10.0	ug/L	185137	2	10.939	928311	50.0
alkane	6.373	19.5	ug/L	361281	2	10.939	928311	50.0
alkane-Pentane	6.844	5.2	ug/L	96391	2	10.939	928311	50.0
alkene	8.643	6.2	ug/L	115900	2	10.939	928311	50.0
alkene	10.223	13.2	ug/L	245615	2	10.939	928311	50.0
C3 alkyl benzene	16.672	9.4	ug/L	147728	5	17.697	782479	50.0
Indane	17.995	7.8	ug/L	121779	5	17.697	782479	50.0
1H-Indene-dihyd...	19.444	5.8	ug/L	90251	5	17.697	782479	50.0

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135325.D
Acq On : 5 Oct 2014 3:28 pm
Operator : JemimaM
Sample : jb77674-3
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 06 16:53:55 2014
Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Sep 25 16:01:33 2014
Response via : Initial Calibration

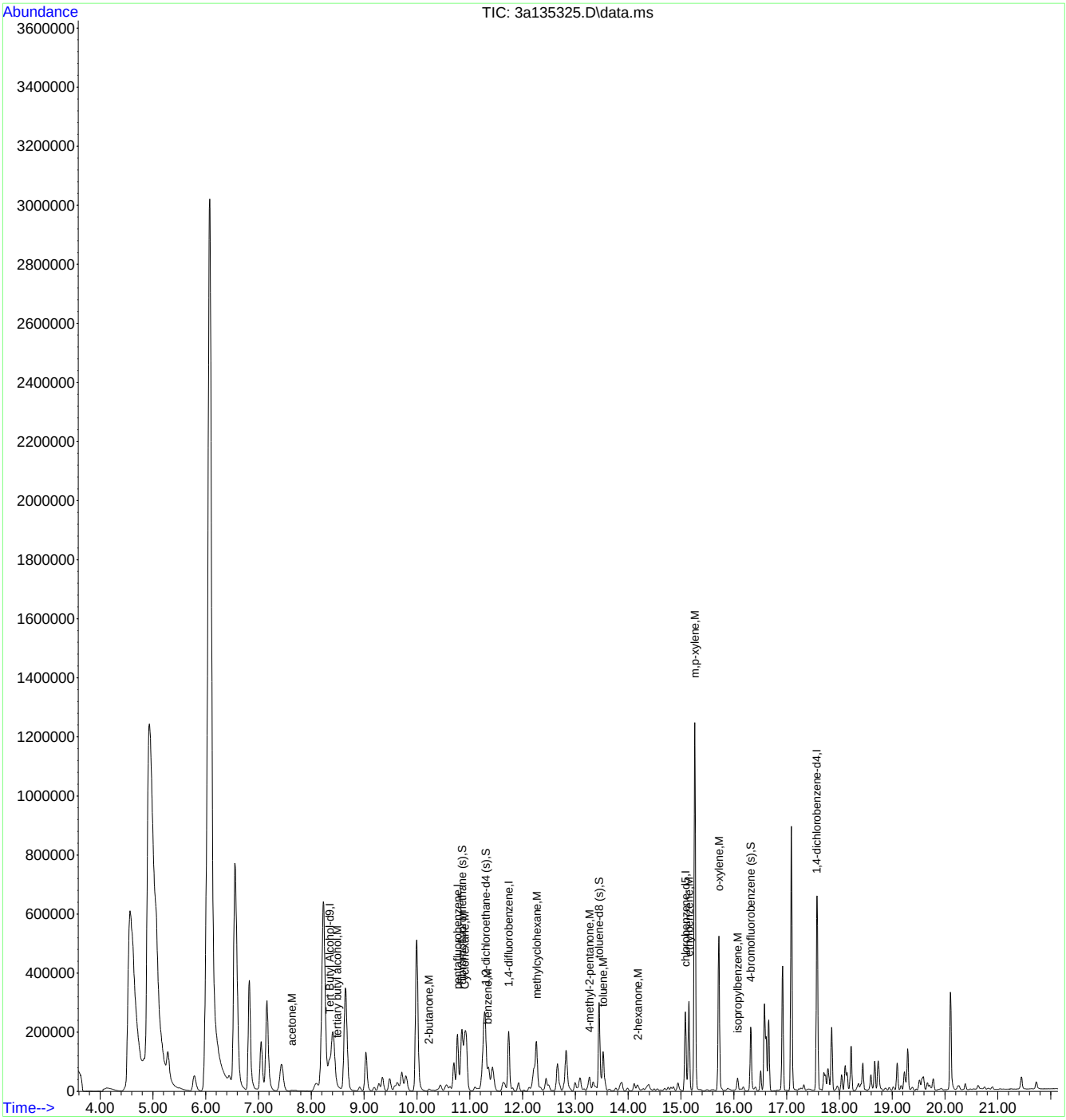
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.345	65	118248	500.00	ug/L	-0.01
5) pentafluorobenzene	10.767	168	167249	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.737	114	203523	50.00	ug/L	0.00
87) chlorobenzene-d5	15.082	117	173632	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.568	152	99983	50.00	ug/L	0.00
System Monitoring Compounds						
49) dibromofluoromethane (s)	10.851	113	64571	54.14	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 108.28%			
50) 1,2-dichloroethane-d4 (s)	11.302	65	73795	51.17	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 102.34%			
79) toluene-d8 (s)	13.447	98	241272	56.90	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 113.80%			
104) 4-bromofluorobenzene (s)	16.320	95	86144	53.24	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 106.48%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	8.487	59	45301	195.93	ug/L	100
23) acetone	7.632	43	12676	20.68	ug/L	95
34) 2-butanone	10.227	72	4194	20.26	ug/L #	1
54) Cyclohexane	10.904	84	95056	39.39	ug/L	84
63) benzene	11.339	78	21119	4.17	ug/L	99
76) methylcyclohexane	12.267	83	83403	36.79	ug/L	98
80) 4-methyl-2-pentanone	13.268	58	11488	17.70	ug/L	92
81) toluene	13.525	92	57652	18.82	ug/L	97
86) 2-hexanone	14.181	58	8625	14.23	ug/L	82
97) ethylbenzene	15.151	91	250467	44.39	ug/L	99
98) m,p-xylene	15.261	106	432147	201.89	ug/L	97
99) o-xylene	15.717	106	174157	71.89	ug/L	99
103) isopropylbenzene	16.068	105	31618	4.81	ug/L	99

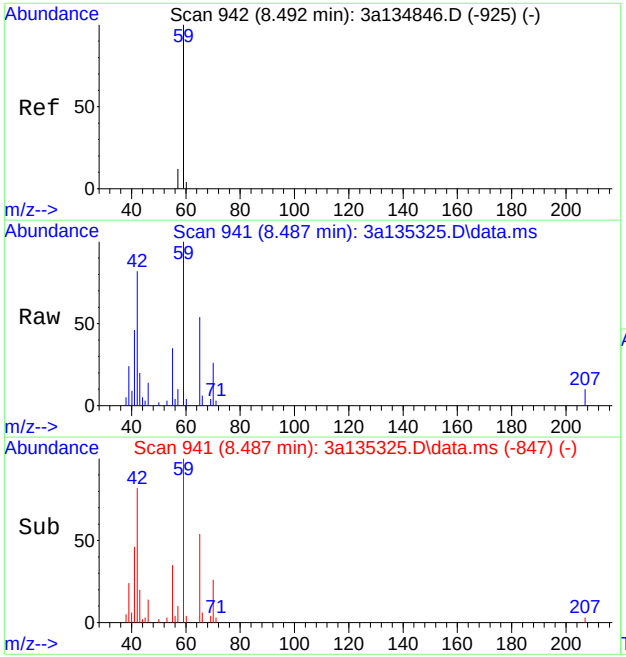
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135325.D
Acq On : 5 Oct 2014 3:28 pm
Operator : JemimaM
Sample : jb77674-3
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 06 16:53:55 2014
Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Sep 25 16:01:33 2014
Response via : Initial Calibration

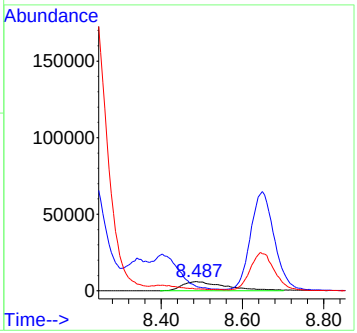


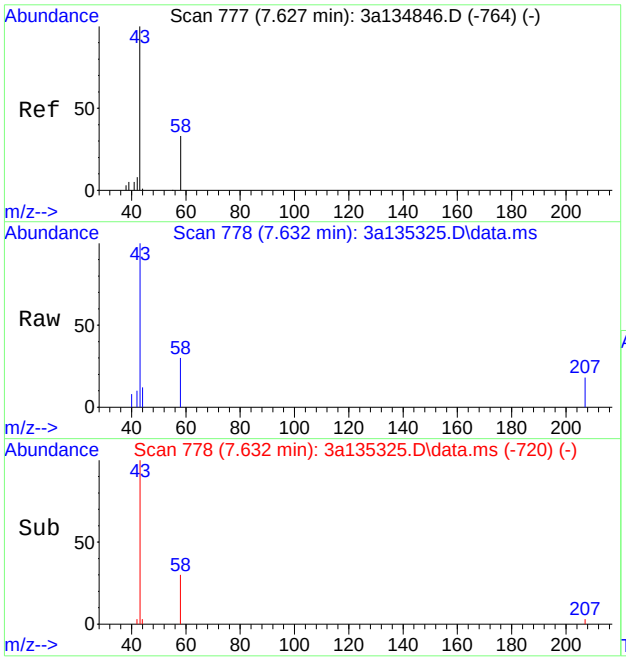


#2
tertiary butyl alcohol
Concen: 195.93 ug/L
RT: 8.487 min Scan# 941
Delta R.T. -0.005 min
Lab File: 3a135325.D
Acq: 5 Oct 2014 3:28 pm

Tgt Ion: 59 Resp: 45301

Ion	Ratio	Lower	Upper
59	100		
41	0.0	0.0	30.0
43	0.0	0.0	30.0

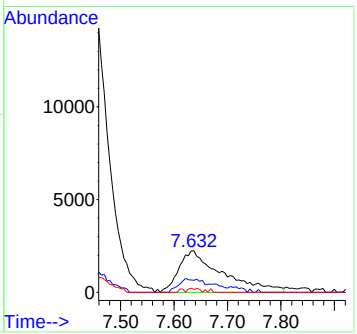


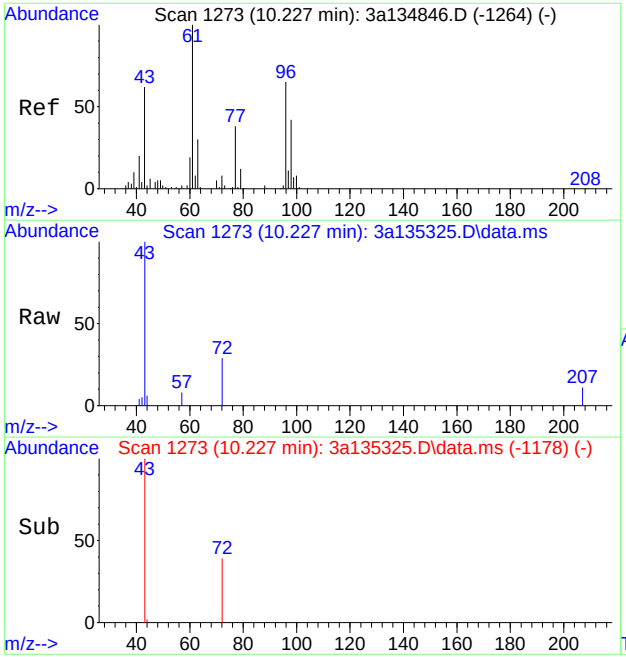


#23
acetone
Concen: 20.68 ug/L
RT: 7.632 min Scan# 778
Delta R.T. 0.005 min
Lab File: 3a135325.D
Acq: 5 Oct 2014 3:28 pm

Tgt Ion: 43 Resp: 12676

Ion	Ratio	Lower	Upper
43	100		
58	29.9	2.5	62.5
42	10.3	0.0	37.9

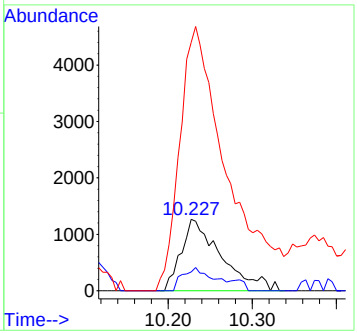


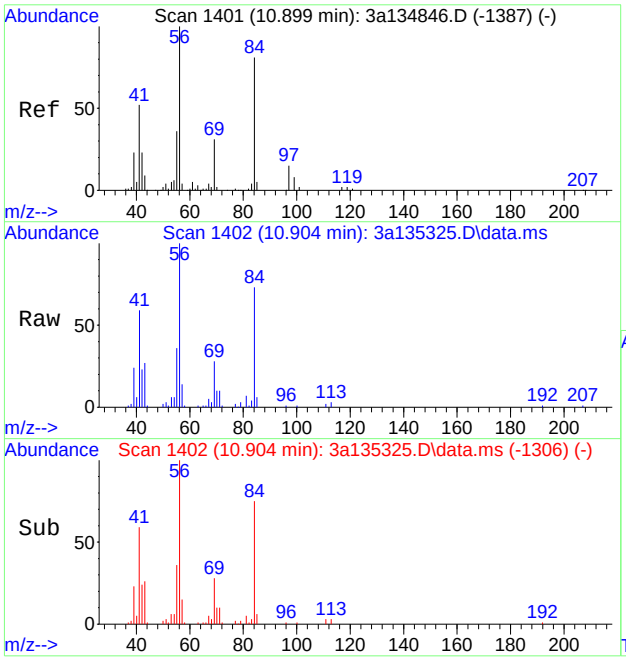


#34
2-butanone
Concen: 20.26 ug/L
RT: 10.227 min Scan# 1273
Delta R.T. 0.000 min
Lab File: 3a135325.D
Acq: 5 Oct 2014 3:28 pm

Tgt Ion: 72 Resp: 4194

Ion	Ratio	Lower	Upper
72	100		
57	26.4	0.0	59.7
43	330.1	821.4	881.4#

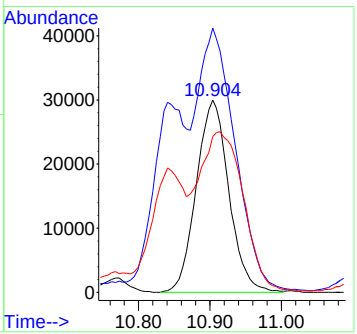


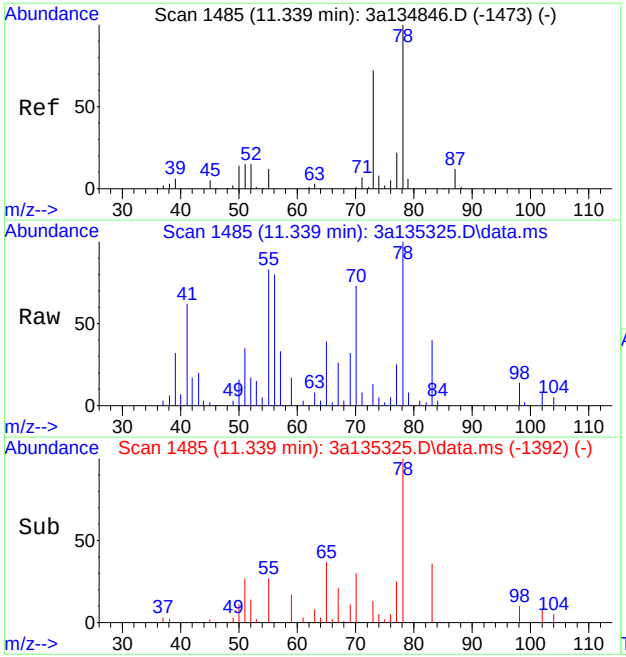


#54
Cyclohexane
Concen: 39.39 ug/L
RT: 10.904 min Scan# 1402
Delta R.T. 0.005 min
Lab File: 3a135325.D
Acq: 5 Oct 2014 3:28 pm

Tgt Ion: 84 Resp: 95056

Ion	Ratio	Lower	Upper
84	100		
56	137.5	92.7	152.7
41	81.1	34.9	94.9

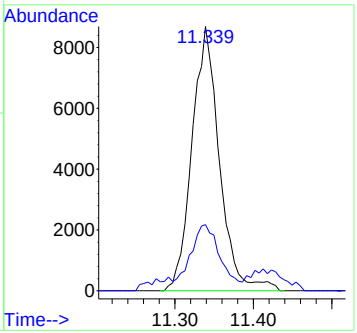


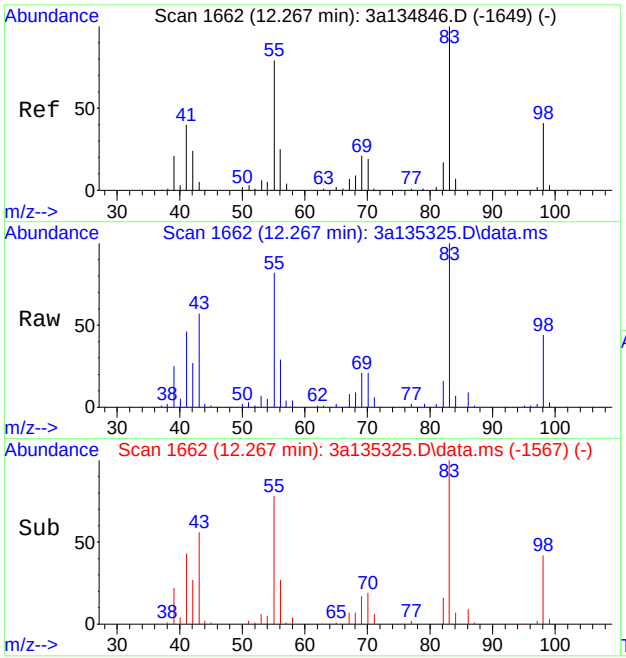


#63
benzene
Concen: 4.17 ug/L
RT: 11.339 min Scan# 1485
Delta R.T. -0.000 min
Lab File: 3a135325.D
Acq: 5 Oct 2014 3:28 pm

Tgt Ion: 78 Resp: 21119

Ion	Ratio	Lower	Upper
78	100		
77	21.6	0.0	52.2

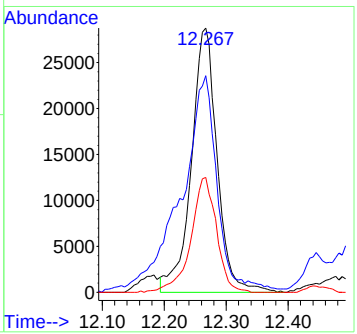


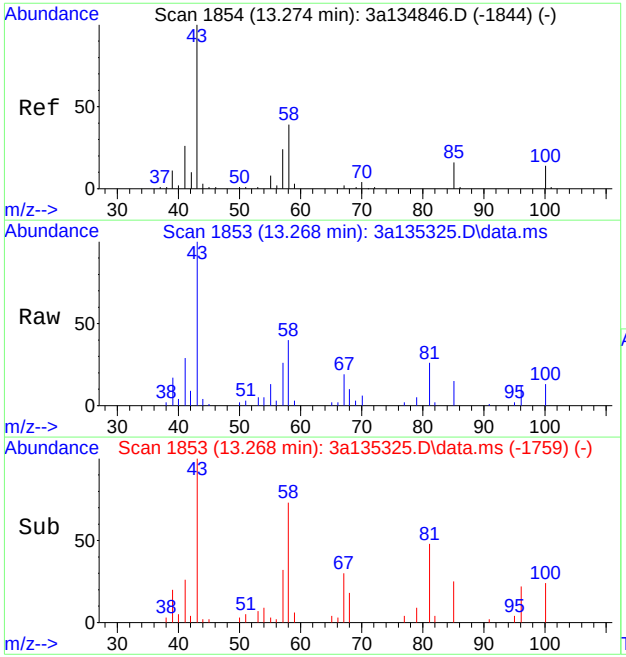


#76
methylcyclohexane
Concen: 36.79 ug/L
RT: 12.267 min Scan# 1662
Delta R.T. -0.000 min
Lab File: 3a135325.D
Acq: 5 Oct 2014 3:28 pm

Tgt Ion: 83 Resp: 83403

Ion	Ratio	Lower	Upper
83	100		
55	80.6	49.2	109.2
98	43.5	11.5	71.5

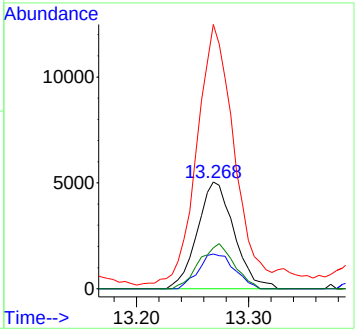


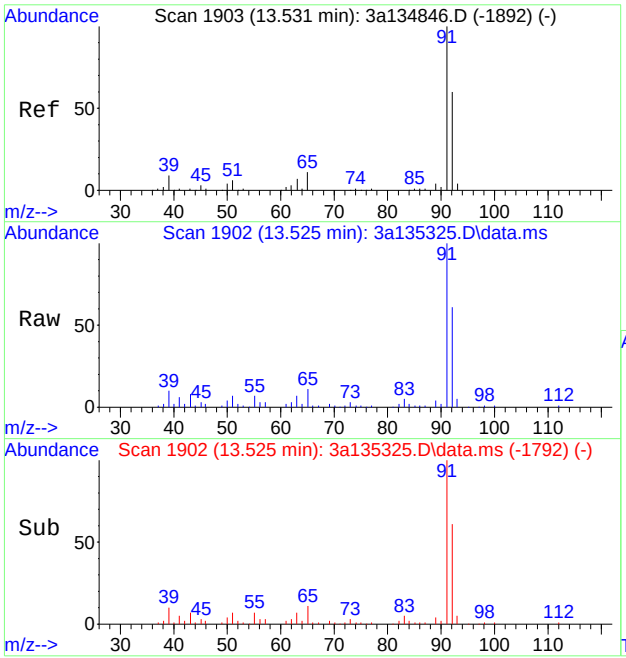


#80
4-methyl-2-pentanone
Concen: 17.70 ug/L
RT: 13.268 min Scan# 1853
Delta R.T. -0.005 min
Lab File: 3a135325.D
Acq: 5 Oct 2014 3:28 pm

Tgt Ion: 58 Resp: 11488

Ion	Ratio	Lower	Upper
58	100		
100	32.4	5.6	65.6
43	238.6	225.1	285.1
85	38.3	11.0	71.0

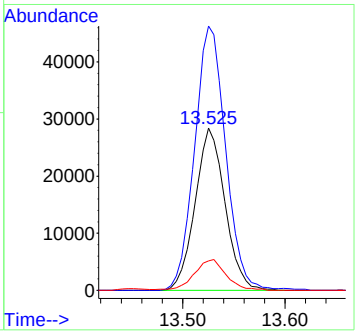


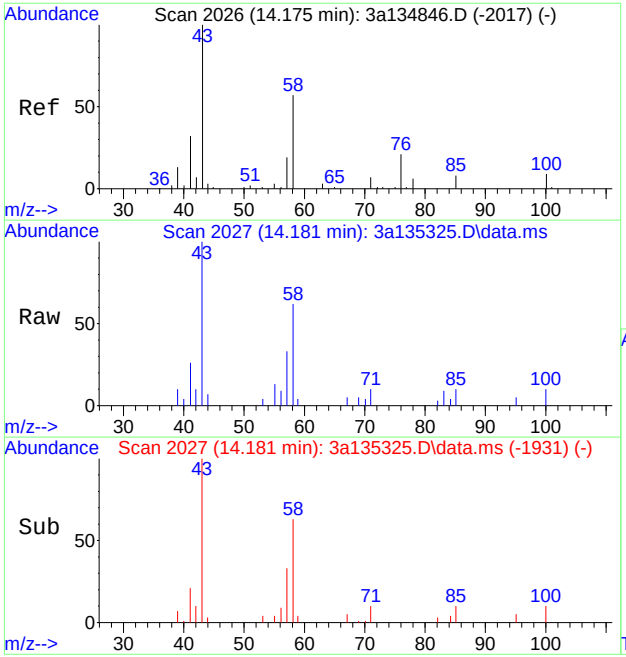


#81
toluene
Concen: 18.82 ug/L
RT: 13.525 min Scan# 1902
Delta R.T. -0.005 min
Lab File: 3a135325.D
Acq: 5 Oct 2014 3:28 pm

Tgt Ion: 92 Resp: 57652

Ion	Ratio	Lower	Upper
92	100		
91	163.0	136.8	196.8
65	18.1	0.0	48.9

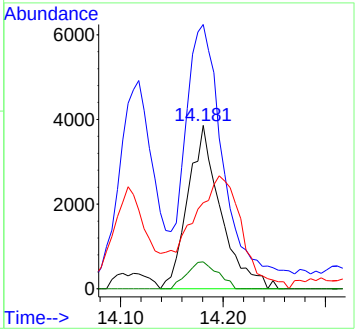


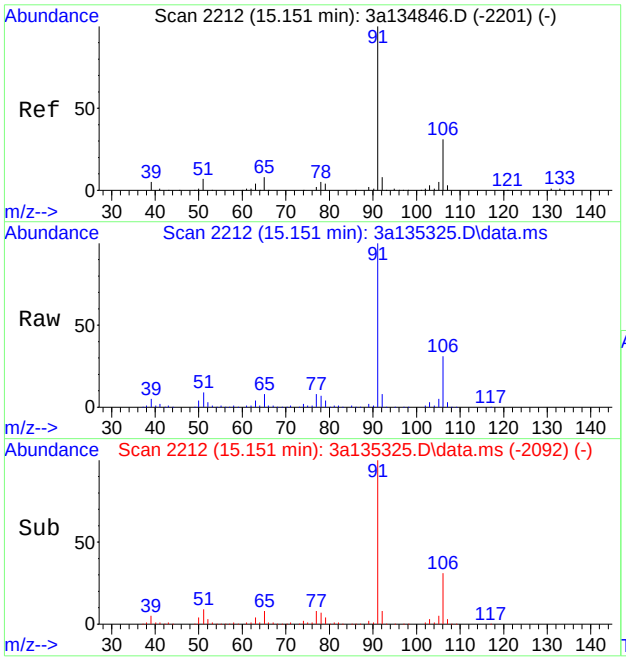


#86
2-hexanone
Concen: 14.23 ug/L
RT: 14.181 min Scan# 2027
Delta R.T. 0.005 min
Lab File: 3a135325.D
Acq: 5 Oct 2014 3:28 pm

Tgt Ion: 58 Resp: 8625

Ion	Ratio	Lower	Upper
58	100		
43	150.5	145.5	205.5
57	48.4	3.8	63.8
100	16.5	0.0	46.0

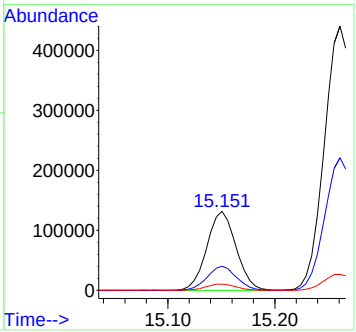


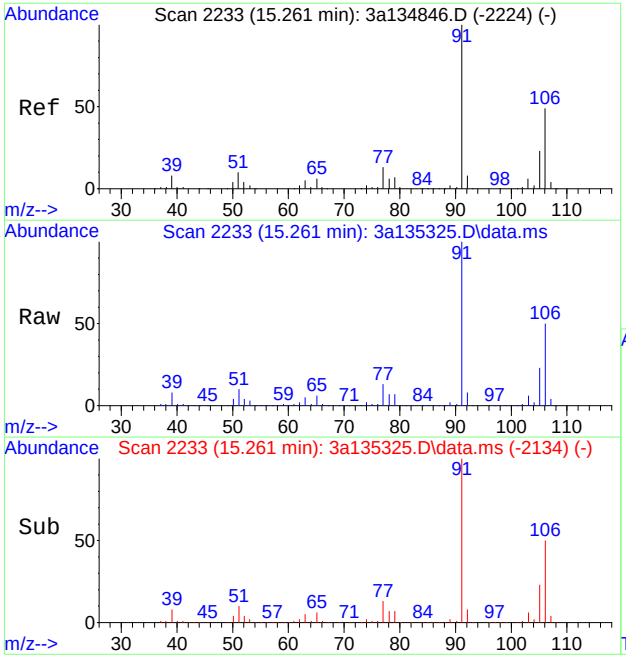


#97
ethylbenzene
Concen: 44.39 ug/L
RT: 15.151 min Scan# 2212
Delta R.T. 0.000 min
Lab File: 3a135325.D
Acq: 5 Oct 2014 3:28 pm

Tgt Ion: 91 Resp: 250467

Ion	Ratio	Lower	Upper
91	100		
106	30.7	1.1	61.1
65	7.9	0.0	38.2

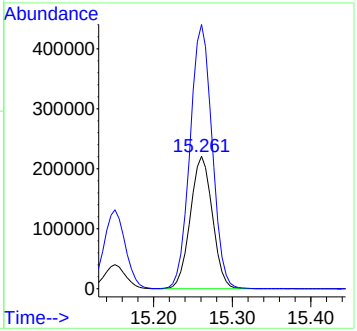


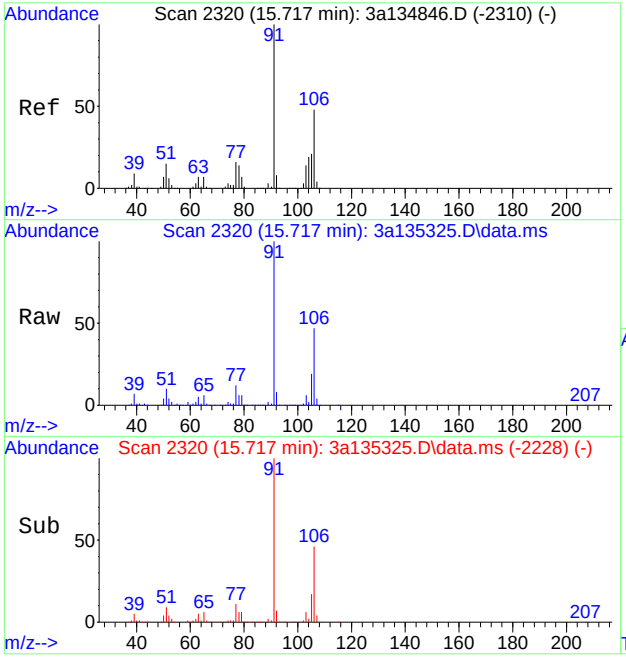


#98
m,p-xylene
Concen: 201.89 ug/L
RT: 15.261 min Scan# 2233
Delta R.T. 0.000 min
Lab File: 3a135325.D
Acq: 5 Oct 2014 3:28 pm

Tgt Ion:106 Resp: 432147

Ion	Ratio	Lower	Upper
106	100		
91	199.4	173.5	233.5

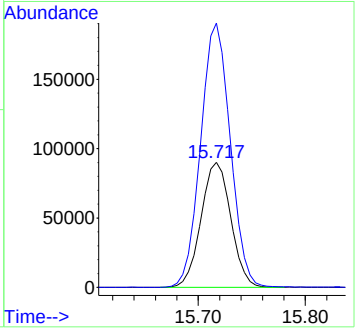


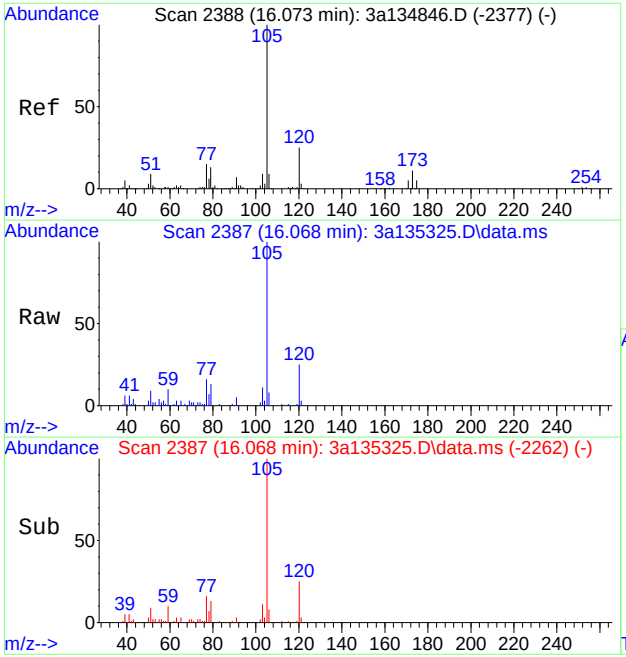


#99
o-xylene
Concen: 71.89 ug/L
RT: 15.717 min Scan# 2320
Delta R.T. -0.000 min
Lab File: 3a135325.D
Acq: 5 Oct 2014 3:28 pm

Tgt Ion:106 Resp: 174157

Ion	Ratio	Lower	Upper
106	100		
91	211.3	180.2	240.2

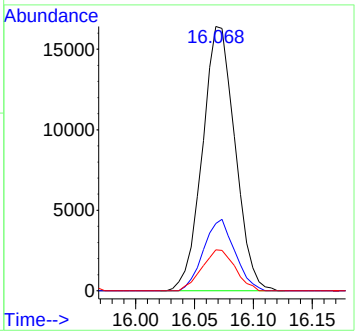




#103
isopropylbenzene
Concen: 4.81 ug/L
RT: 16.068 min Scan# 2387
Delta R.T. -0.005 min
Lab File: 3a135325.D
Acq: 5 Oct 2014 3:28 pm

Tgt Ion:105 Resp: 31618

Ion	Ratio	Lower	Upper
105	100		
120	25.4	0.0	55.3
77	15.5	0.0	44.7



7.1.5

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135325.D
Acq On : 5 Oct 2014 3:28 pm
Operator : JemimaM
Sample : jb77674-3
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

Signal : TIC: 3a135325.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.125	100	109	163	rVV6	11567	123855	0.68%	0.159%
2	4.565	163	193	246	rVV2	611396	6254829	34.56%	8.007%
3	4.932	246	263	323	rVV2	1244183	13264498	73.30%	16.979%
4	5.283	323	330	411	rVV	133757	802100	4.43%	1.027%
5	5.787	411	426	449	rVV2	52507	231290	1.28%	0.296%
6	6.075	449	481	548	rVV	3020994	18096784	100.00%	23.165%
7	6.437	548	550	559	rVV5	53031	161594	0.89%	0.207%
8	6.552	559	572	611	rVV	771952	3699168	20.44%	4.735%
9	6.825	611	624	655	rVV	375276	1236213	6.83%	1.582%
10	7.050	655	667	677	rVV2	167992	557174	3.08%	0.713%
11	7.160	677	688	721	rVV	306052	1111130	6.14%	1.422%
12	7.433	721	740	769	rVB2	90841	435004	2.40%	0.557%
13	8.094	846	866	873	rBV5	26654	125613	0.69%	0.161%
14	8.230	873	892	908	rVV2	641442	2996279	16.56%	3.835%
15	8.408	908	926	956	rVV4	200779	1326861	7.33%	1.698%
16	8.644	956	971	1011	rVV2	348630	1454281	8.04%	1.862%
17	8.917	1011	1023	1033	rVV4	13146	38585	0.21%	0.049%
18	9.032	1033	1045	1065	rVV	131526	399796	2.21%	0.512%
19	9.189	1065	1075	1083	rVV2	11904	35133	0.19%	0.045%
20	9.278	1083	1092	1098	rVV3	25116	71945	0.40%	0.092%
21	9.347	1098	1105	1119	rVV	46157	136011	0.75%	0.174%
22	9.483	1119	1131	1142	rVV3	41129	127793	0.71%	0.164%
23	9.630	1142	1159	1167	rVV4	28154	143065	0.79%	0.183%
24	9.714	1167	1175	1183	rVV3	63555	207335	1.15%	0.265%
25	9.787	1183	1189	1213	rVB	51263	179936	0.99%	0.230%
26	9.997	1213	1229	1262	rVB	512071	1720095	9.50%	2.202%
27	10.442	1294	1314	1325	rBV5	19739	73018	0.40%	0.093%
28	10.558	1325	1336	1344	rVV6	19868	73902	0.41%	0.095%
29	10.626	1344	1349	1354	rVV2	14112	35033	0.19%	0.045%
30	10.699	1354	1363	1369	rVV	95041	257188	1.42%	0.329%
31	10.767	1369	1376	1383	rVV	190982	493000	2.72%	0.631%
32	10.851	1383	1392	1398	rVV3	207159	709444	3.92%	0.908%
33	10.914	1398	1404	1429	rVB4	204714	815386	4.51%	1.044%
34	11.098	1429	1439	1447	rBV3	13195	43733	0.24%	0.056%
35	11.281	1454	1474	1495	rVV6	266868	1406949	7.77%	1.801%
36	11.428	1495	1502	1527	rVB6	81682	306585	1.69%	0.392%
37	11.638	1530	1542	1553	rBV2	30598	131101	0.72%	0.168%
38	11.737	1553	1561	1572	rVV	200285	478009	2.64%	0.612%
39	11.926	1585	1597	1609	rVB	28374	73852	0.41%	0.095%
40	12.125	1624	1635	1640	rBV3	13350	36889	0.20%	0.047%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135325.D
Acq On : 5 Oct 2014 3:28 pm
Operator : JemimaM
Sample : jb77674-3
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

41	12.262	1640	1661	1685	rVV5	165466	709063	3.92%	0.908%
42	12.445	1685	1696	1722	rVB4	41880	156346	0.86%	0.200%
43	12.660	1724	1737	1753	rBV3	91141	277433	1.53%	0.355%
44	12.823	1753	1768	1791	rVB2	138324	468026	2.59%	0.599%
45	12.991	1791	1800	1809	rBV2	29082	82101	0.45%	0.105%
46	13.085	1809	1818	1829	rVV2	42098	126718	0.70%	0.162%
47	13.268	1839	1853	1860	rBV5	45130	128862	0.71%	0.165%
48	13.337	1860	1866	1879	rVV3	27732	92456	0.51%	0.118%
49	13.447	1879	1887	1896	rVV	296944	674102	3.72%	0.863%
50	13.525	1896	1902	1917	rVB	131441	344436	1.90%	0.441%
51	13.877	1954	1969	1980	rVB4	29583	111305	0.62%	0.142%
52	14.113	2004	2014	2021	rBV2	25577	65951	0.36%	0.084%
53	14.175	2021	2026	2037	rVB5	17068	44651	0.25%	0.057%
54	14.390	2052	2067	2081	rVB10	20100	84274	0.47%	0.108%
55	14.857	2151	2156	2164	rVB3	12593	27167	0.15%	0.035%
56	14.941	2164	2172	2189	rVB3	26896	71474	0.39%	0.091%
57	15.082	2189	2199	2205	rBV	268089	551983	3.05%	0.707%
58	15.151	2205	2212	2222	rVB	301477	598990	3.31%	0.767%
59	15.261	2222	2233	2251	rBV	1245144	2466641	13.63%	3.157%
60	15.717	2308	2320	2341	rBV	523405	1043938	5.77%	1.336%
61	15.885	2341	2352	2369	rBV8	7425	27200	0.15%	0.035%
62	16.068	2376	2387	2395	rBV	41470	85340	0.47%	0.109%
63	16.178	2404	2408	2421	rVB2	14509	31247	0.17%	0.040%
64	16.320	2421	2435	2446	rBV	217259	430319	2.38%	0.551%
65	16.409	2446	2452	2462	rVB6	12790	30387	0.17%	0.039%
66	16.509	2462	2471	2477	rBV	68052	124635	0.69%	0.160%
67	16.582	2477	2485	2495	rBV	291578	850816	4.70%	1.089%
68	16.661	2495	2500	2511	rVB	240396	439817	2.43%	0.563%
69	16.923	2536	2550	2571	rVB	422346	792908	4.38%	1.015%
70	17.091	2571	2582	2604	rBV	895787	1674609	9.25%	2.144%
71	17.326	2621	2627	2634	rVB	19174	37873	0.21%	0.048%
72	17.578	2665	2675	2685	rBV2	658731	1353734	7.48%	1.733%
73	17.704	2693	2699	2709	rBV2	59653	195884	1.08%	0.251%
74	17.783	2709	2714	2721	rVV2	70110	164629	0.91%	0.211%
75	17.851	2721	2727	2737	rVB2	214221	414558	2.29%	0.531%
76	17.961	2737	2748	2755	rVB4	17135	40961	0.23%	0.052%
77	18.040	2755	2763	2770	rBV	54568	105081	0.58%	0.135%
78	18.108	2770	2776	2780	rBV3	80493	157427	0.87%	0.202%
79	18.144	2780	2783	2789	rVV	57180	91643	0.51%	0.117%
80	18.223	2789	2798	2807	rVB	150241	300500	1.66%	0.385%
81	18.359	2812	2824	2828	rBV4	24552	63104	0.35%	0.081%
82	18.443	2828	2840	2856	rVB2	93180	225404	1.25%	0.289%
83	18.595	2856	2869	2876	rBV	53482	118969	0.66%	0.152%
84	18.669	2876	2883	2889	rVV	95079	174376	0.96%	0.223%
85	18.732	2889	2895	2913	rVB2	100596	252514	1.40%	0.323%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135325.D
Acq On : 5 Oct 2014 3:28 pm
Operator : JemimaM
Sample : jb77674-3
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

86	19.093	2956	2964	2972	rVB3	90534	167739	0.93%	0.215%
87	19.172	2972	2979	2984	rBV4	13988	28536	0.16%	0.037%
88	19.230	2984	2990	2996	rBV	58584	128257	0.71%	0.164%
89	19.293	2996	3002	3011	rVB	138344	262670	1.45%	0.336%
90	19.377	3011	3018	3027	rVB5	10951	27761	0.15%	0.036%
91	19.513	3036	3044	3049	rBV4	32681	75392	0.42%	0.097%
92	19.592	3049	3059	3067	rVB4	43050	141893	0.78%	0.182%
93	19.665	3067	3073	3078	rBV2	22206	46887	0.26%	0.060%
94	19.775	3088	3094	3106	rVB	38403	80197	0.44%	0.103%
95	20.100	3142	3156	3175	rBV	330308	697880	3.86%	0.893%
96	20.252	3175	3185	3198	rVB5	14034	45849	0.25%	0.059%
97	20.383	3200	3210	3224	rBV	20218	40045	0.22%	0.051%
98	20.619	3249	3255	3273	rBV3	12683	33340	0.18%	0.043%
99	21.442	3402	3412	3458	rBV	41196	103485	0.57%	0.132%
100	21.725	3458	3466	3540	rBV	23959	60941	0.34%	0.078%

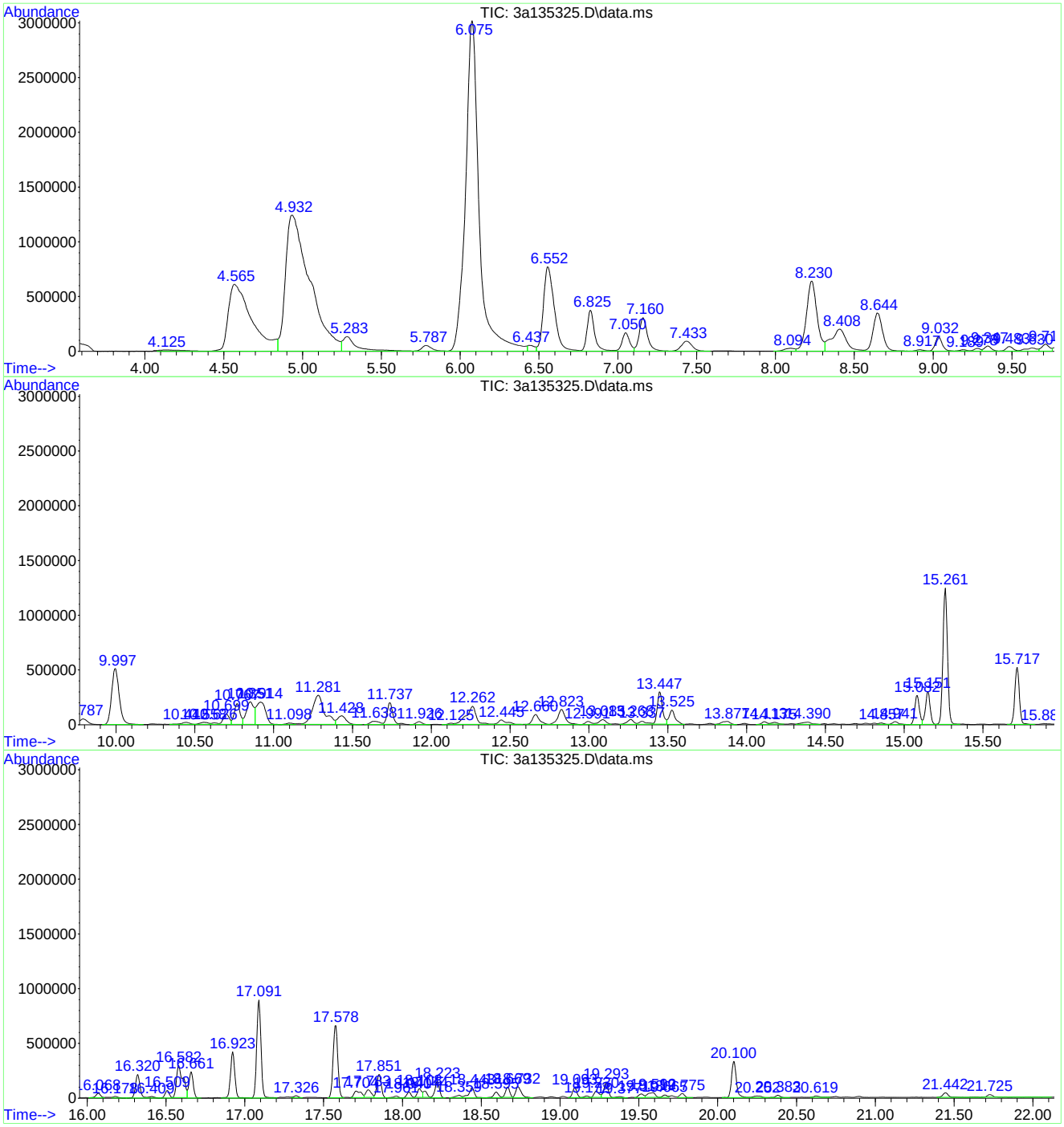
Sum of corrected areas: 78121180

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135325.D
Acq On : 5 Oct 2014 3:28 pm
Operator : JemimaM
Sample : jb77674-3
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135325.D
Acq On : 5 Oct 2014 3:28 pm
Operator : JemimaM
Sample : jb77674-3
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

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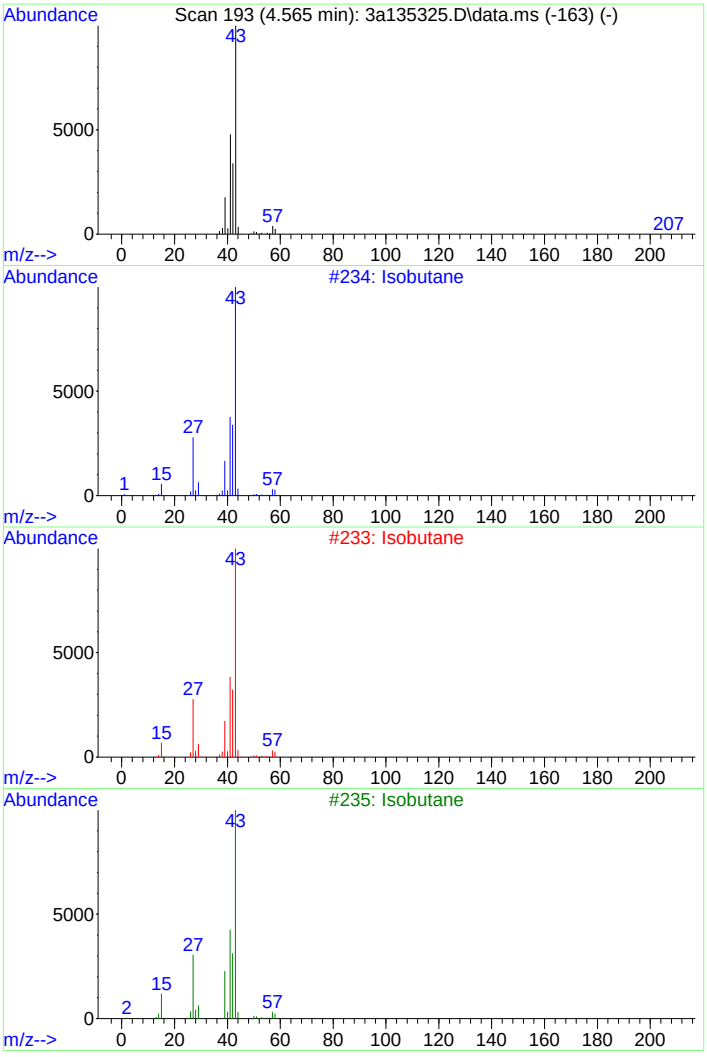
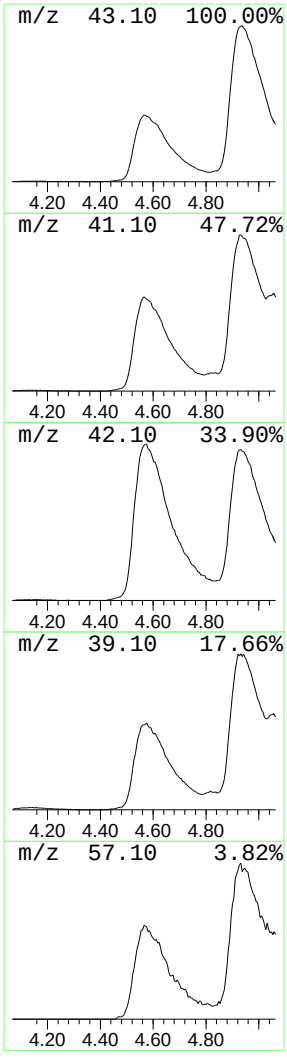
Peak Number 1 alkane Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.565	634.36 ug/L	6254830	pentafluorobenzene	10.768

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Isobutane	58	C4H10	000075-28-5	86
2	Isobutane	58	C4H10	000075-28-5	80
3	Isobutane	58	C4H10	000075-28-5	72
4	Isobutane	58	C4H10	000075-28-5	40
5	Isopropylsulfonyl chloride	142	C3H7ClO2S	010147-37-2	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135325.D
Acq On : 5 Oct 2014 3:28 pm
Operator : JemimaM
Sample : jb77674-3
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

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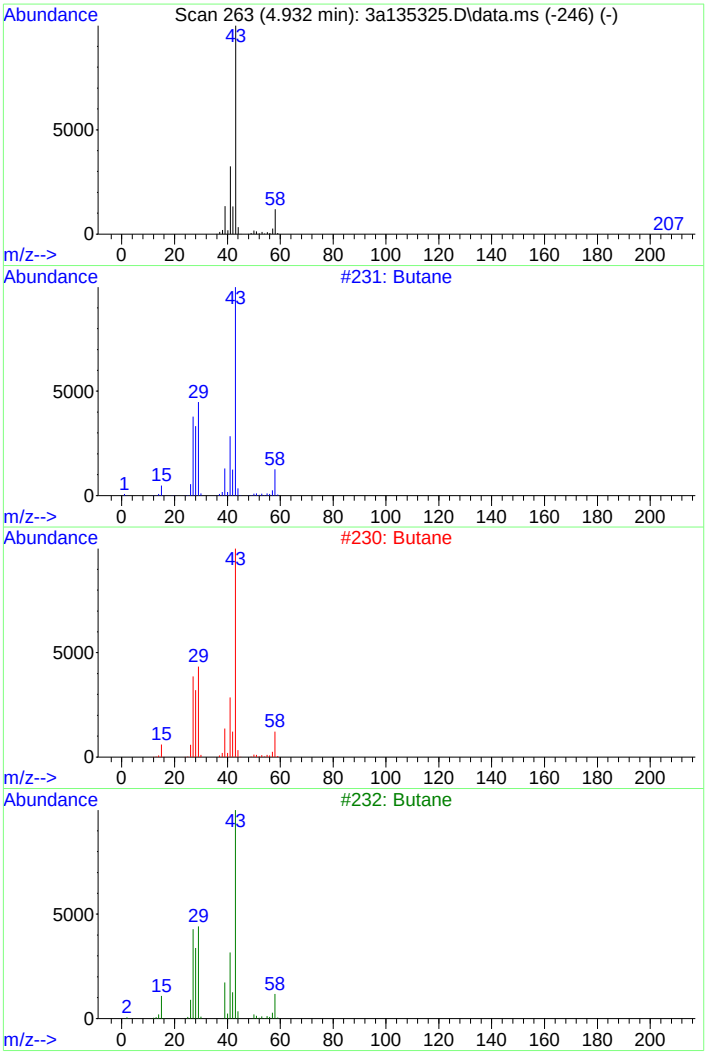
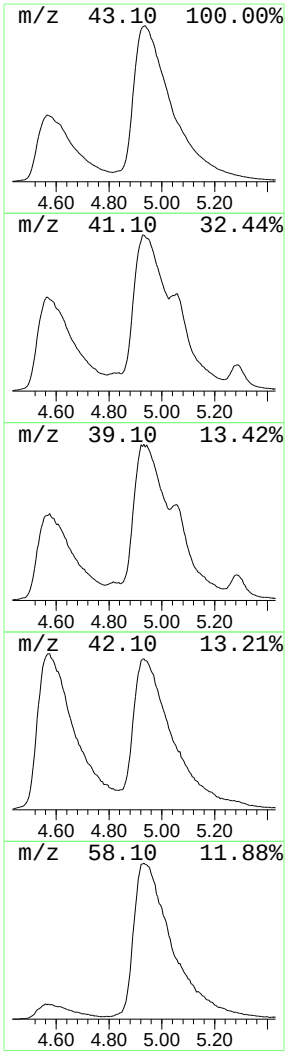
Peak Number 2 alkane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.932	1345.28 ug/L	13264500	pentafluorobenzene	10.768

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	80
2	Butane	58	C4H10	000106-97-8	80
3	Butane	58	C4H10	000106-97-8	52
4	Isobutane	58	C4H10	000075-28-5	47
5	Isobutane	58	C4H10	000075-28-5	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135325.D
Acq On : 5 Oct 2014 3:28 pm
Operator : JemimaM
Sample : jb77674-3
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

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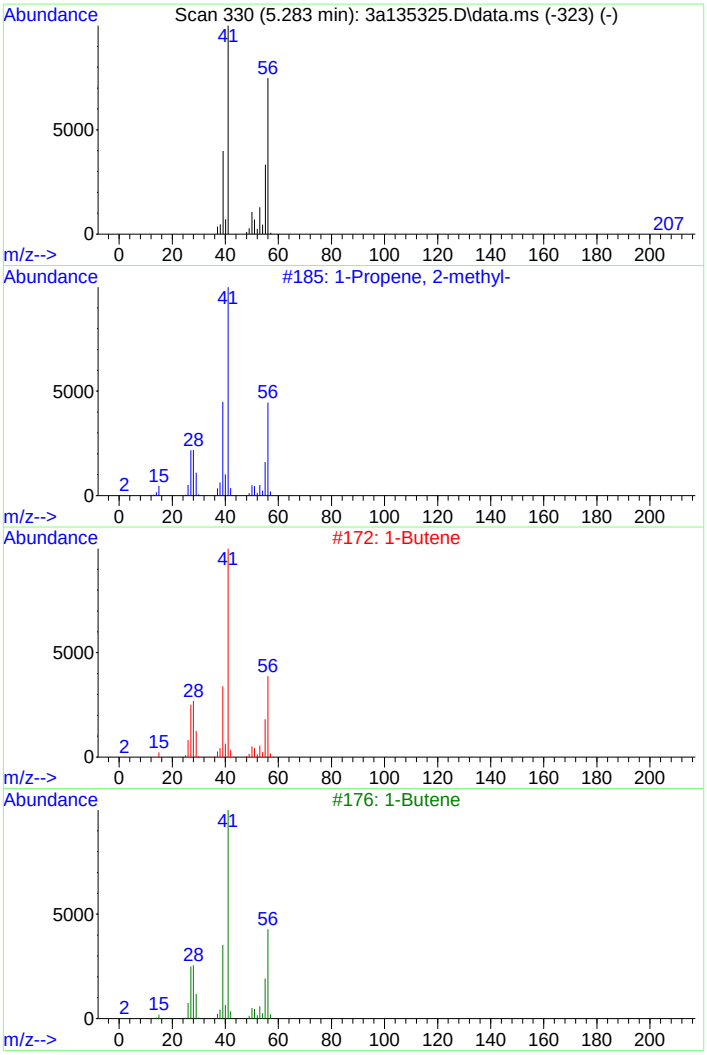
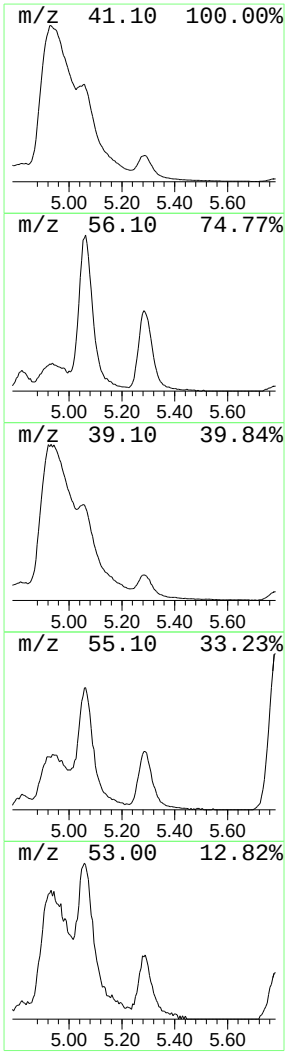
Peak Number 3 alkene Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.283	81.35 ug/L	802100	pentafluorobenzene	10.768

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Propene, 2-methyl-	56	C4H8	000115-11-7	86
2	1-Butene	56	C4H8	000106-98-9	86
3	1-Butene	56	C4H8	000106-98-9	86
4	2-Butene, (E)-	56	C4H8	000624-64-6	80
5	2-Butene	56	C4H8	000107-01-7	80





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135325.D
Acq On : 5 Oct 2014 3:28 pm
Operator : JemimaM
Sample : jb77674-3
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

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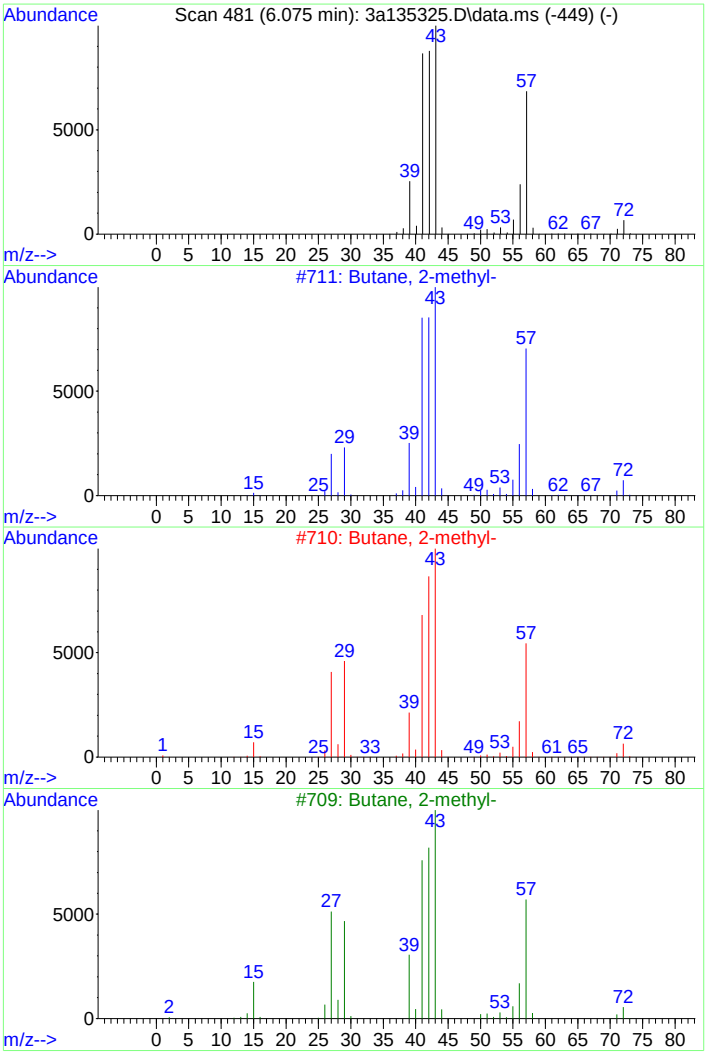
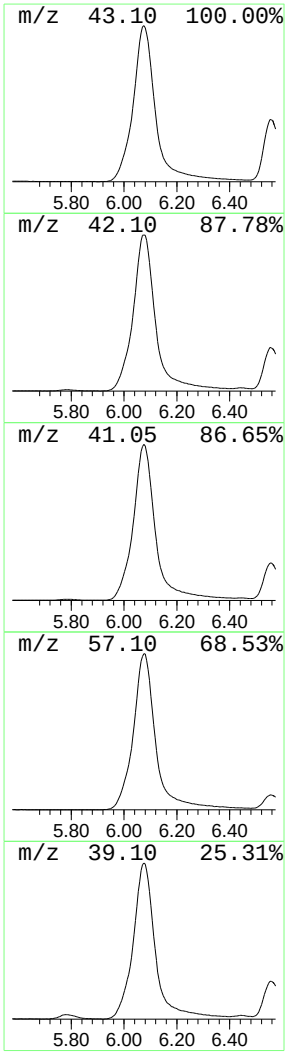
Peak Number 4 alkane Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.075	1835.37 ug/L	18096800	pentafluorobenzene	10.768

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	94
2	Butane, 2-methyl-	72	C5H12	000078-78-4	91
3	Butane, 2-methyl-	72	C5H12	000078-78-4	90
4	3-Buten-1-ol	72	C4H8O	000627-27-0	47
5	Pentane	72	C5H12	000109-66-0	38





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135325.D
Acq On : 5 Oct 2014 3:28 pm
Operator : JemimaM
Sample : jb77674-3
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

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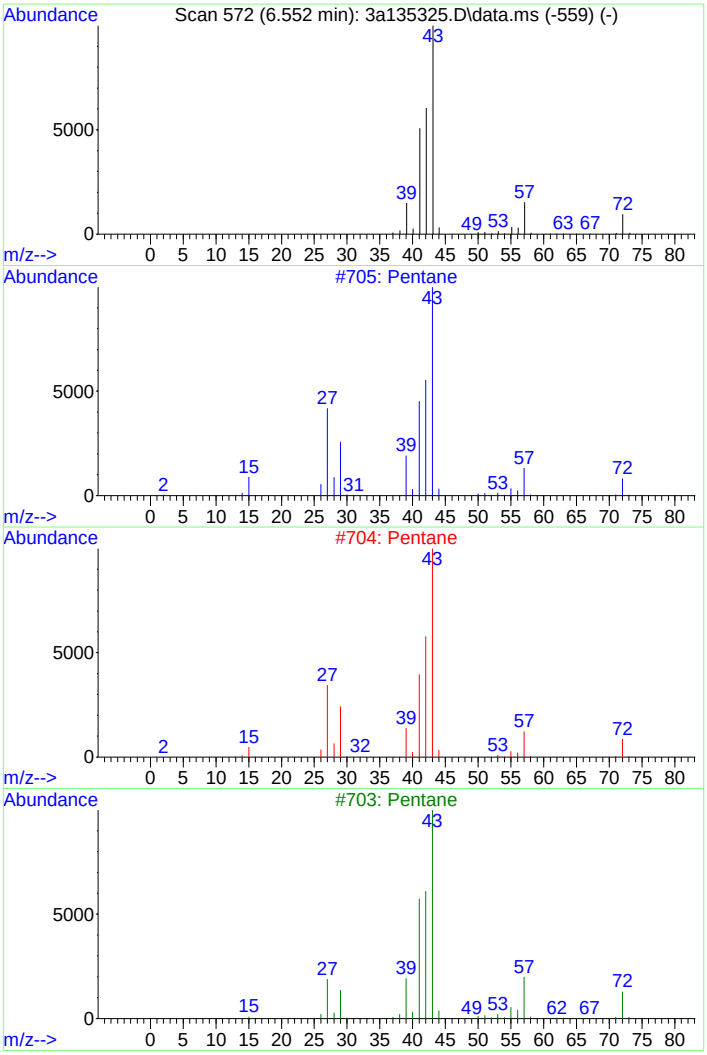
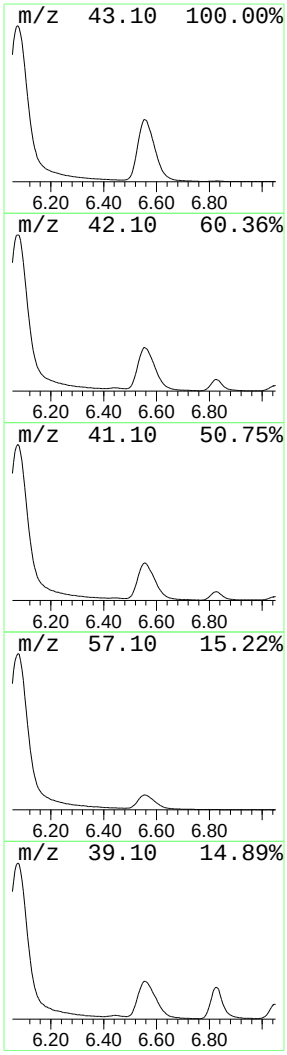
Peak Number 5 alkane-Pentane Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.552	375.17 ug/L	3699170	pentafluorobenzene	10.768

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	90
2	Pentane	72	C5H12	000109-66-0	86
3	Pentane	72	C5H12	000109-66-0	80
4	Pentane	72	C5H12	000109-66-0	64
5	Butane, 2-methyl-	72	C5H12	000078-78-4	64





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135325.D
Acq On : 5 Oct 2014 3:28 pm
Operator : JemimaM
Sample : jb77674-3
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

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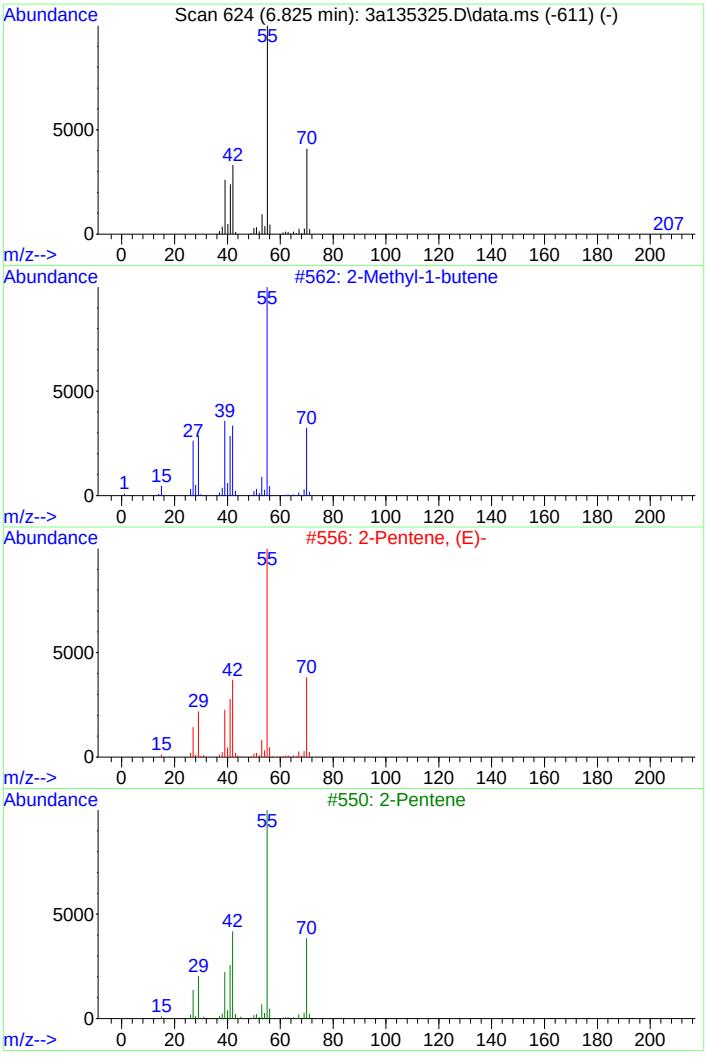
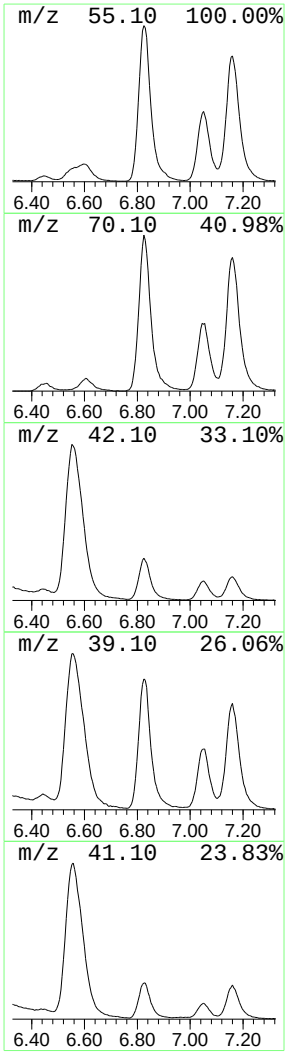
Peak Number 6 alkene Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.825	125.38 ug/L	1236210	pentafluorobenzene	10.768

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Methyl-1-butene	70	C5H10	000563-46-2	91
2	2-Pentene, (E)-	70	C5H10	000646-04-8	91
3	2-Pentene	70	C5H10	000109-68-2	91
4	2-Methyl-1-butene	70	C5H10	000563-46-2	91
5	2-Pentene, (Z)-	70	C5H10	000627-20-3	91





M3A5831.M Mon Oct 06 15:10:44 2014 T

Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135325.D
Acq On : 5 Oct 2014 3:28 pm
Operator : JemimaM
Sample : jb77674-3
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

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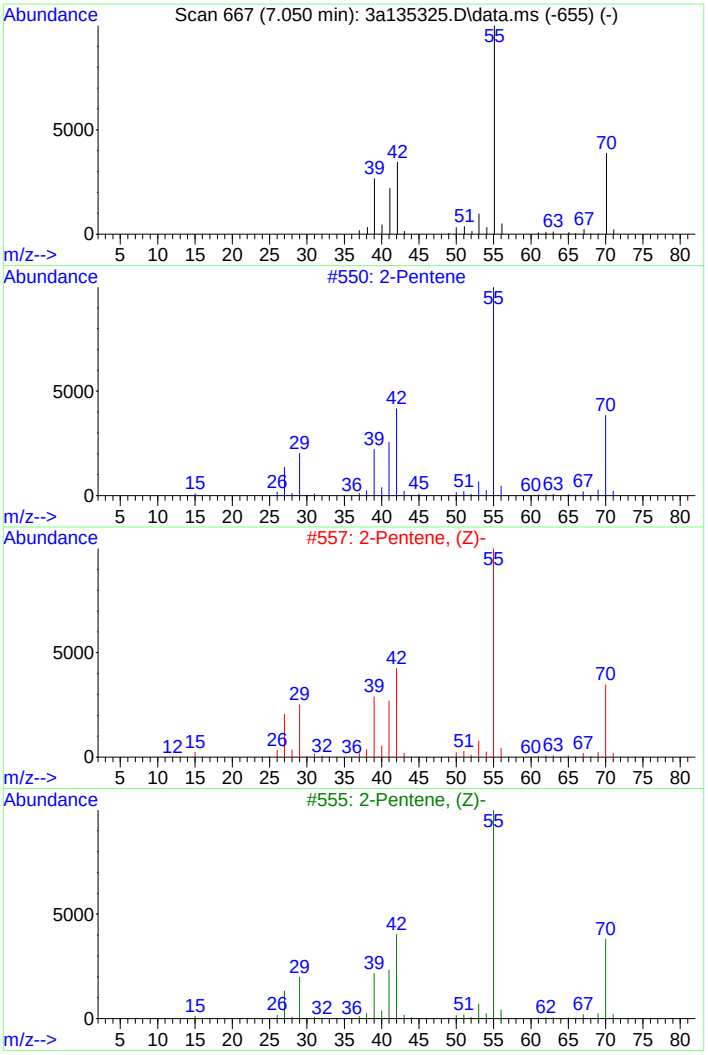
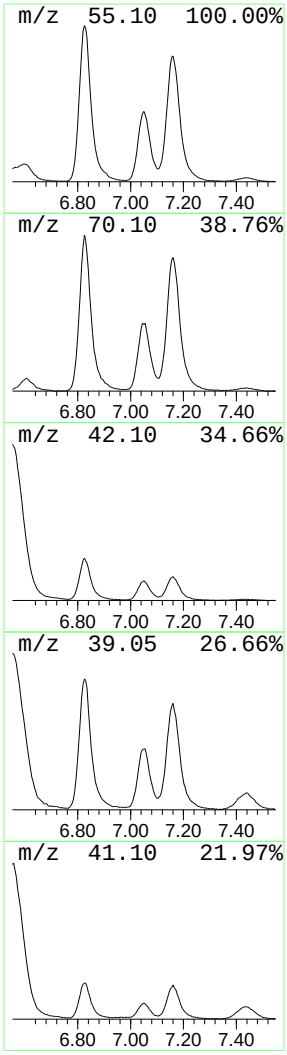
Peak Number 7 alkene Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.050	56.51 ug/L	557174	pentafluorobenzene	10.768

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentene	70	C5H10	000109-68-2	91
2	2-Pentene, (Z)-	70	C5H10	000627-20-3	91
3	2-Pentene, (Z)-	70	C5H10	000627-20-3	91
4	2-Pentene, (E)-	70	C5H10	000646-04-8	91
5	2-Methyl-1-butene	70	C5H10	000563-46-2	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135325.D
Acq On : 5 Oct 2014 3:28 pm
Operator : JemimaM
Sample : jb77674-3
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

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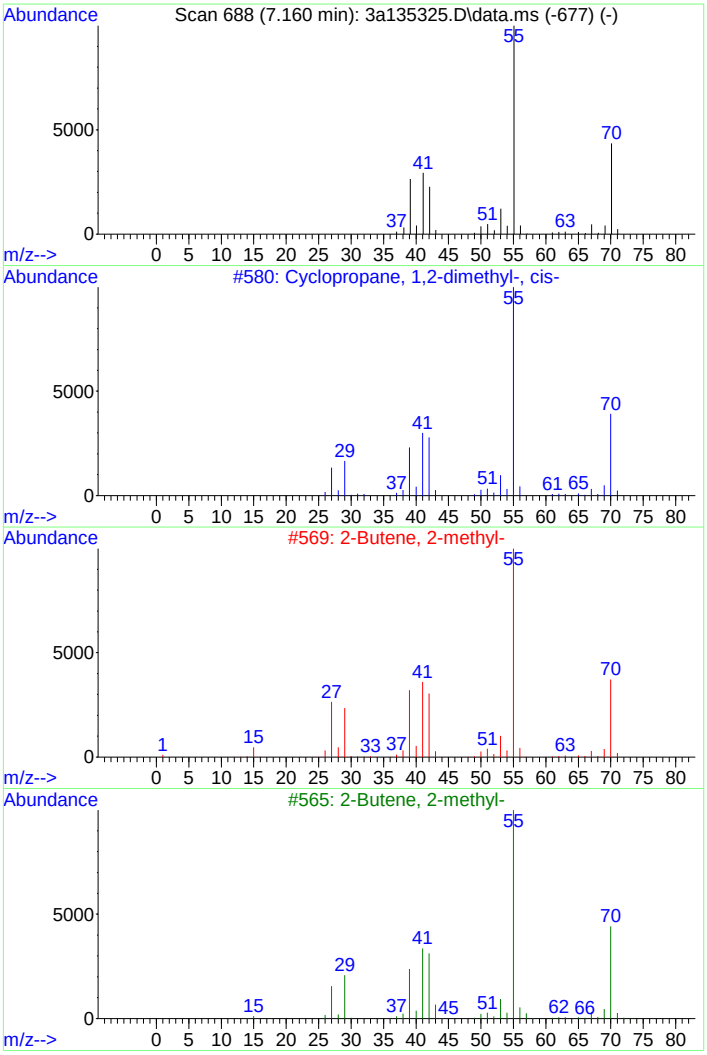
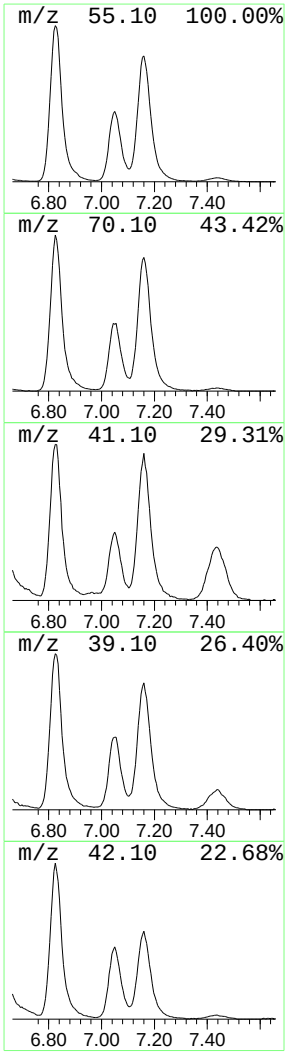
Peak Number 8 alkene Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.160	112.69 ug/L	1111130	pentafluorobenzene	10.768

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopropane, 1,2-dimethyl-, cis-	70	C5H10	000930-18-7	91
2	2-Butene, 2-methyl-	70	C5H10	000513-35-9	91
3	2-Butene, 2-methyl-	70	C5H10	000513-35-9	87
4	Cyclopropane, 1,1-dimethyl-	70	C5H10	001630-94-0	80
5	2-Methyl-1-butene	70	C5H10	000563-46-2	78





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Data File : 3a135325.D
Acq On : 5 Oct 2014 3:28 pm
Operator : JemimaM
Sample : jb77674-3
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

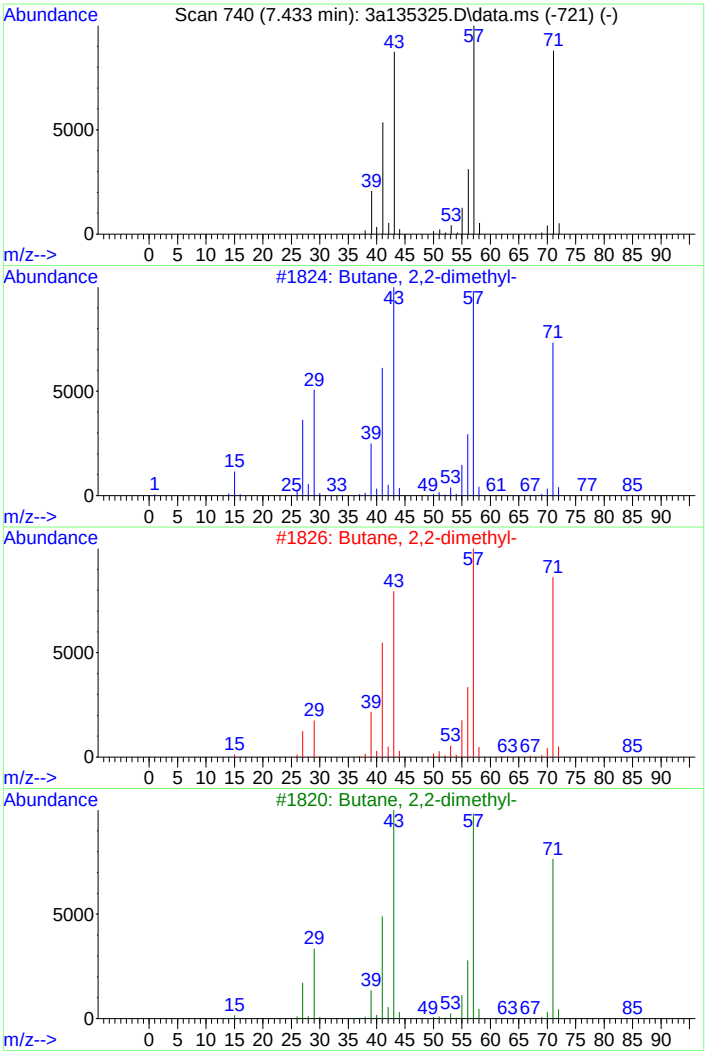
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

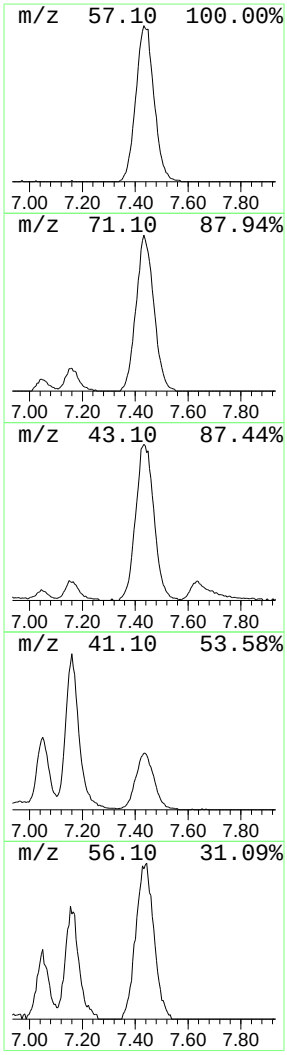
****

Peak Number 9 alkane Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.433	44.12 ug/L	435004	pentafluorobenzene	10.768

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2,2-dimethyl-	86	C6H14	000075-83-2	90
2	Butane, 2,2-dimethyl-	86	C6H14	000075-83-2	83
3	Butane, 2,2-dimethyl-	86	C6H14	000075-83-2	83
4	Butane, 2,2-dimethyl-	86	C6H14	000075-83-2	59
5	Sulfurous acid, isobutyl pentyl ...	208	C9H20O3S	1000309-13-8	42





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135325.D
Acq On : 5 Oct 2014 3:28 pm
Operator : JemimaM
Sample : jb77674-3
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

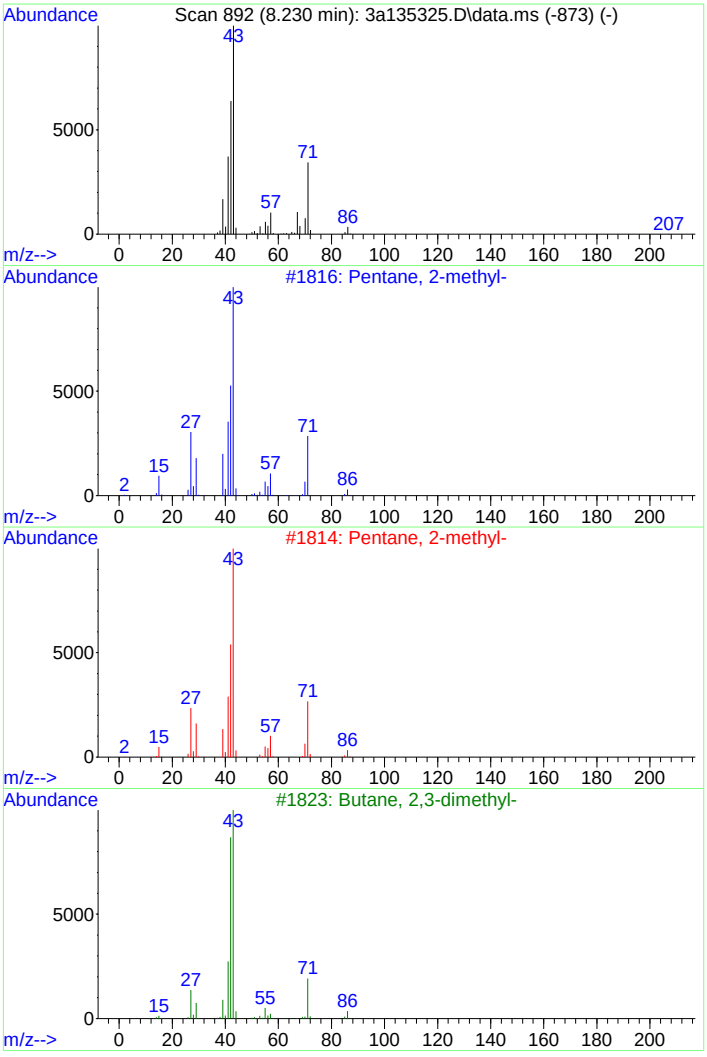
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

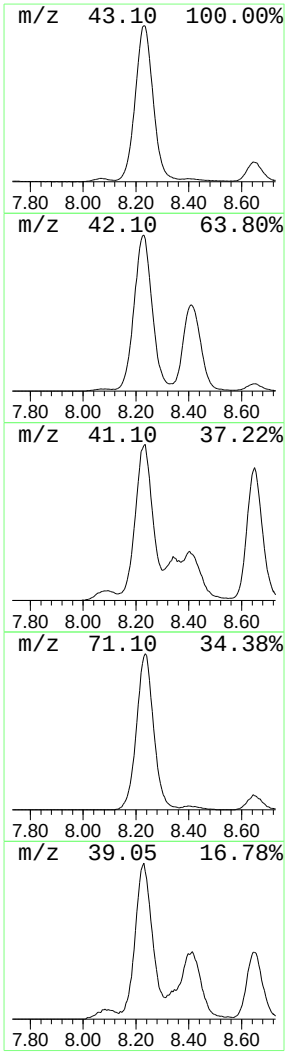
****

Peak Number 10 alkane Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.230	303.88 ug/L	2996280	pentafluorobenzene	10.768

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2-methyl-	86	C6H14	000107-83-5	83
2	Pentane, 2-methyl-	86	C6H14	000107-83-5	83
3	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	50
4	Pentane	72	C5H12	000109-66-0	47
5	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	47





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135325.D
Acq On : 5 Oct 2014 3:28 pm
Operator : JemimaM
Sample : jb77674-3
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

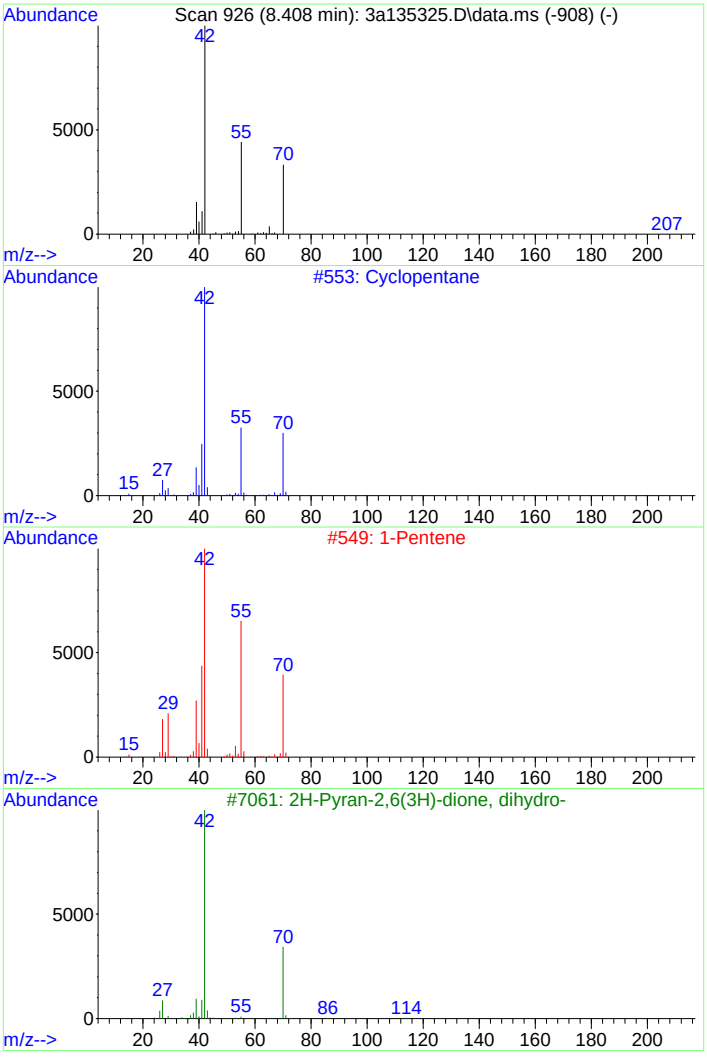
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

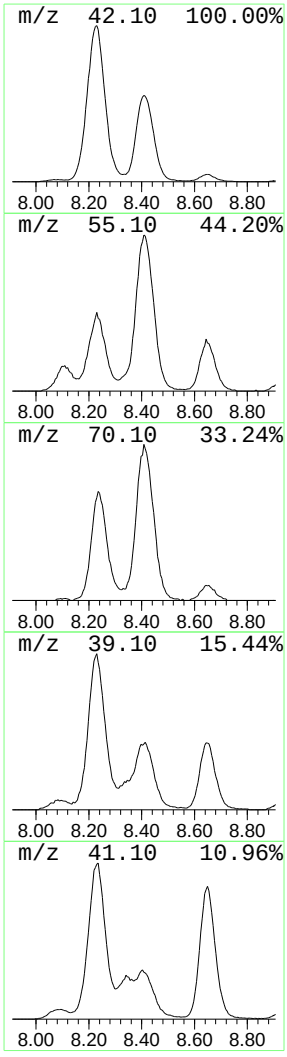
****

Peak Number 11 alkene Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.408	134.57 ug/L	1326860	pentafluorobenzene	10.768

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane	70	C5H10	000287-92-3	9
2	1-Pentene	70	C5H10	000109-67-1	9
3	2H-Pyran-2,6(3H)-dione, dihydro-	114	C5H6O3	000108-55-4	9
4	2H-Pyran-2,6(3H)-dione, dihydro-	114	C5H6O3	000108-55-4	9
5	Cyclopropane, ethyl-	70	C5H10	001191-96-4	7





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135325.D
Acq On : 5 Oct 2014 3:28 pm
Operator : JemimaM
Sample : jb77674-3
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

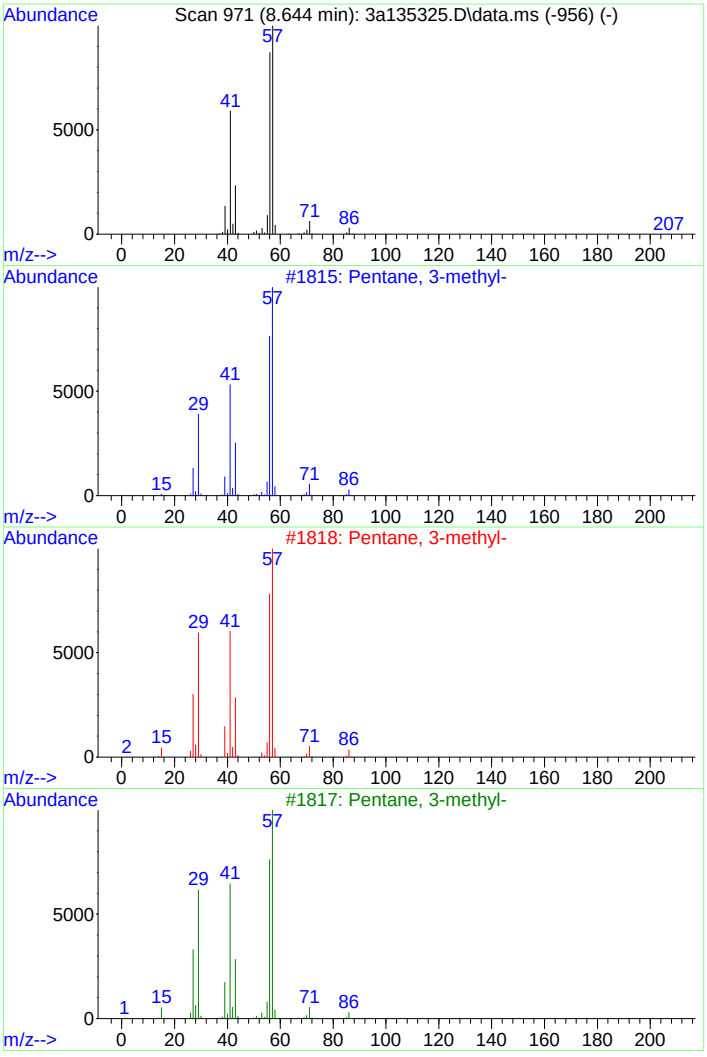
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

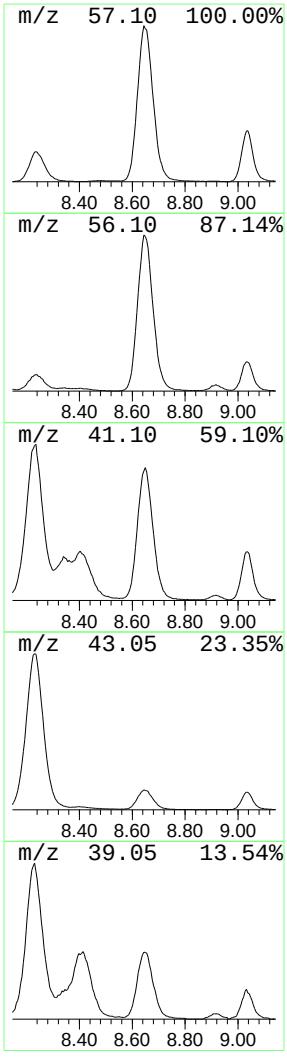
****

Peak Number 12 alkane Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.644	147.49 ug/L	1454280	pentafluorobenzene	10.768

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
2	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
3	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
4	Pentane, 3-ethyl-2,2-dimethyl-	128	C9H20	016747-32-3	56
5	Oxirane, (1-methylethyl)-	86	C5H10O	001438-14-8	50





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135325.D
Acq On : 5 Oct 2014 3:28 pm
Operator : JemimaM
Sample : jb77674-3
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

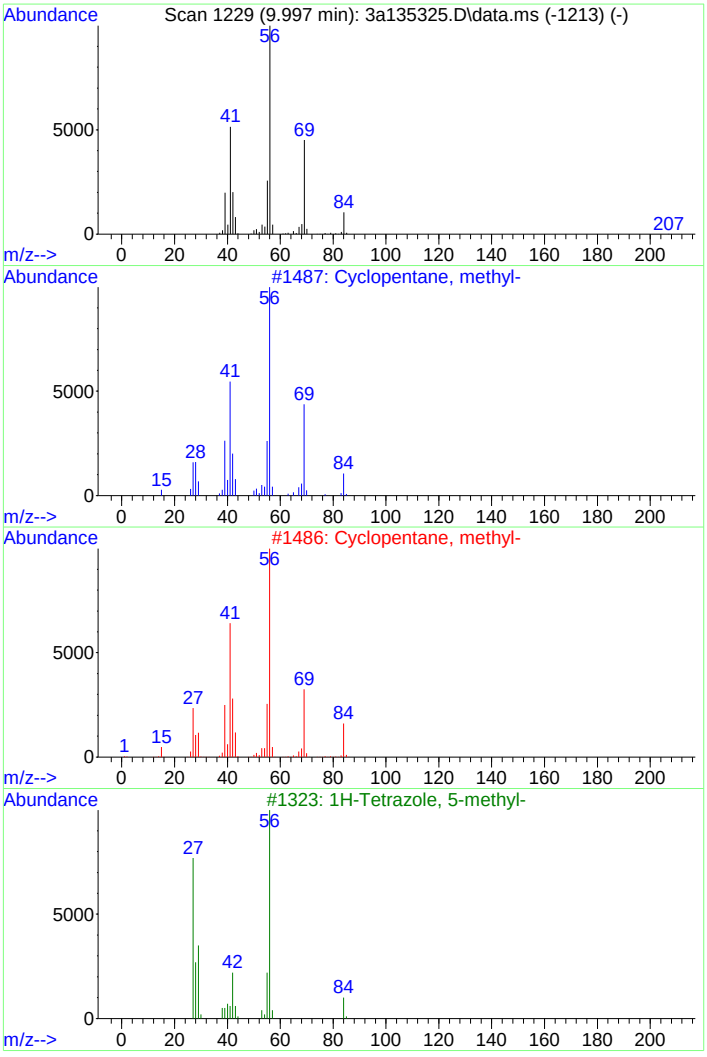
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

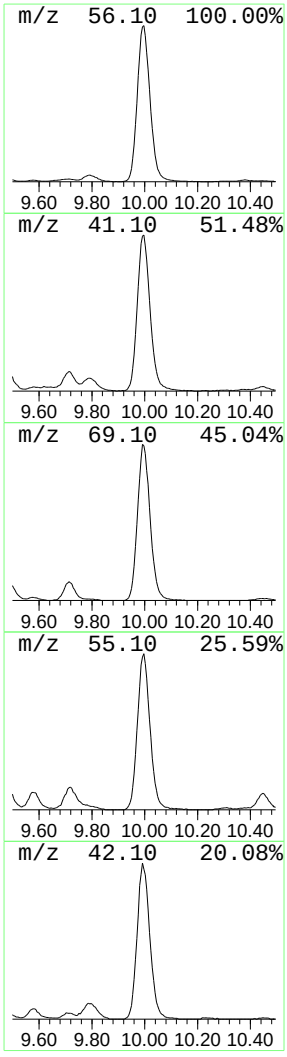
****

Peak Number 13 alkene Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.997	174.45 ug/L	1720100	pentafluorobenzene	10.768

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	94
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	90
3	1H-Tetrazole, 5-methyl-	84	C2H4N4	004076-36-2	80
4	Cyclopentane, methyl-	84	C6H12	000096-37-7	78
5	Cyclohexane	84	C6H12	000110-82-7	78





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135325.D
Acq On : 5 Oct 2014 3:28 pm
Operator : JemimaM
Sample : jb77674-3
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

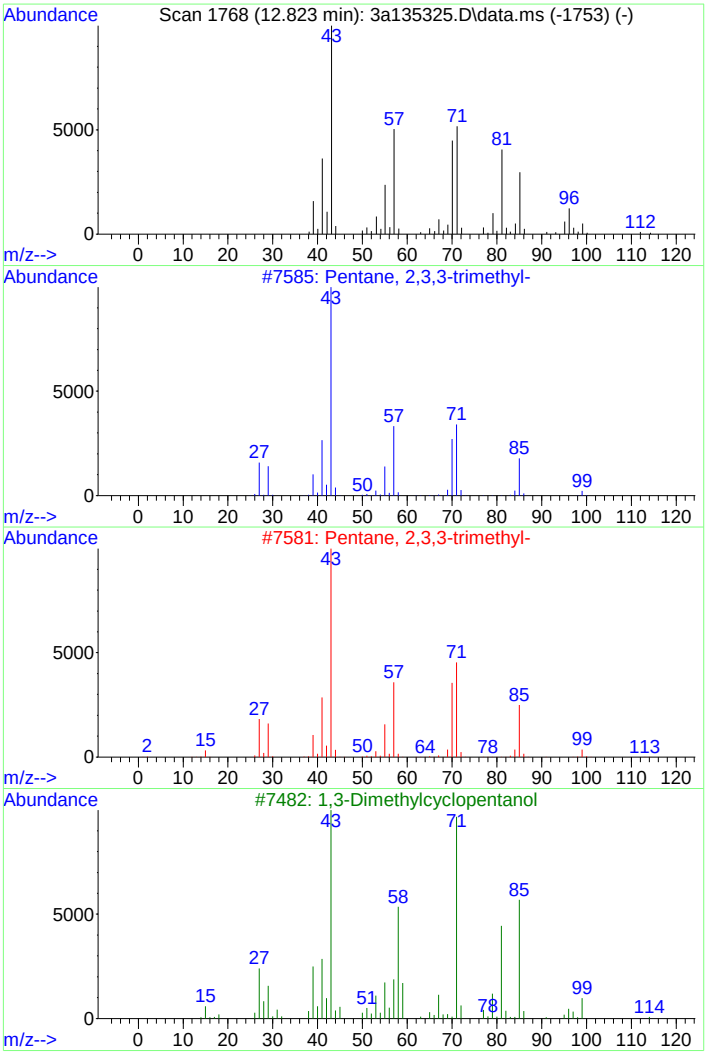
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

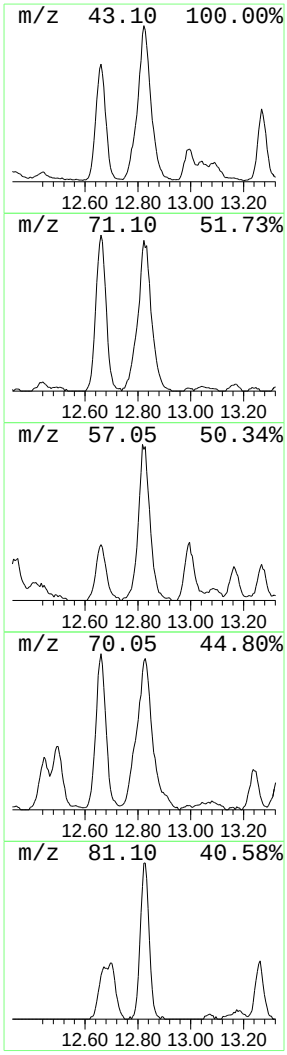
****

Peak Number 14 alkane Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.823	48.96 ug/L	468026	1,4-difluorobenzene	11.737

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	59
2	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	59
3	1,3-Dimethylcyclopentanol	114	C7H14O	019550-46-0	49
4	Hexane, 3,3,4-trimethyl-	128	C9H20	016747-31-2	47
5	Heptane, 4-methyl-	114	C8H18	000589-53-7	47





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135325.D
Acq On : 5 Oct 2014 3:28 pm
Operator : JemimaM
Sample : jb77674-3
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

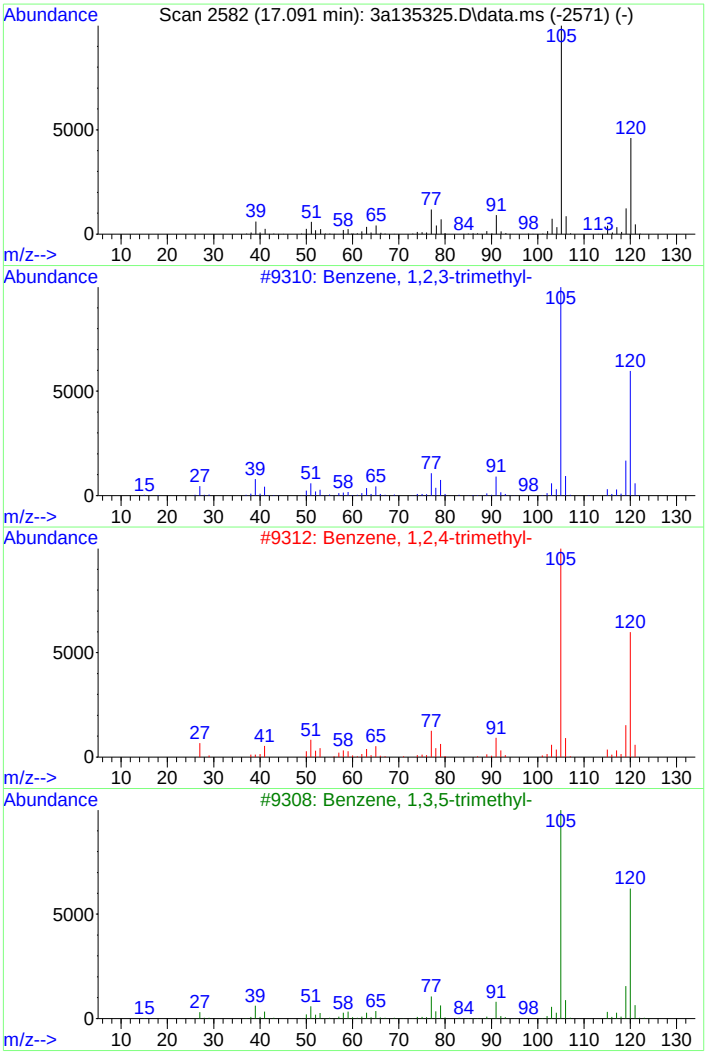
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

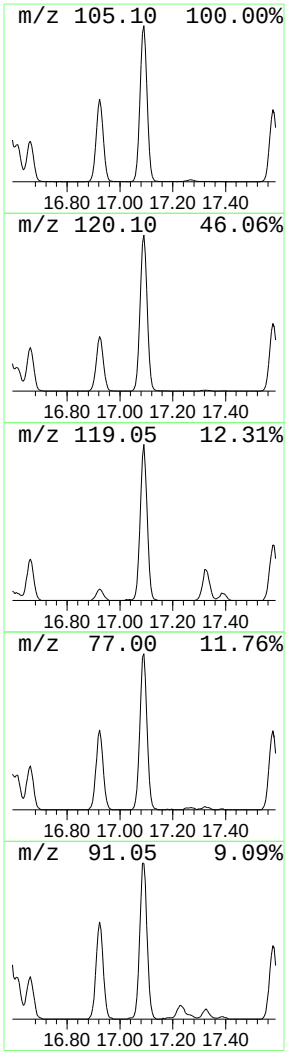
****

Peak Number 15 C3 alkyl benzene Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.091	61.85 ug/L	1674610	1,4-dichlorobenzene-d4	17.568

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
5	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	94





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135325.D
Acq On : 5 Oct 2014 3:28 pm
Operator : JemimaM
Sample : jb77674-3
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
alkane	4.565	634.4	ug/L	6254830	2	10.768	493000	50.0
alkane	4.932	1345.3	ug/L	13264500	2	10.768	493000	50.0
alkene	5.283	81.3	ug/L	802100	2	10.768	493000	50.0
alkane	6.075	1835.4	ug/L	18096800	2	10.768	493000	50.0
alkane-Pentane	6.552	375.2	ug/L	3699170	2	10.768	493000	50.0
alkene	6.825	125.4	ug/L	1236210	2	10.768	493000	50.0
alkene	7.050	56.5	ug/L	557174	2	10.768	493000	50.0
alkene	7.160	112.7	ug/L	1111130	2	10.768	493000	50.0
alkane	7.433	44.1	ug/L	435004	2	10.768	493000	50.0
alkane	8.230	303.9	ug/L	2996280	2	10.768	493000	50.0
alkene	8.408	134.6	ug/L	1326860	2	10.768	493000	50.0
alkane	8.644	147.5	ug/L	1454280	2	10.768	493000	50.0
alkene	9.997	174.4	ug/L	1720100	2	10.768	493000	50.0
alkane	12.823	49.0	ug/L	468026	3	11.737	478009	50.0
C3 alkyl benzene	17.091	61.9	ug/L	1674610	5	17.568	1353730	50.0

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135321.D
Acq On : 5 Oct 2014 1:28 pm
Operator : JemimaM
Sample : jb77674-4
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Oct 06 14:29:15 2014
Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Sep 25 16:01:33 2014
Response via : Initial Calibration

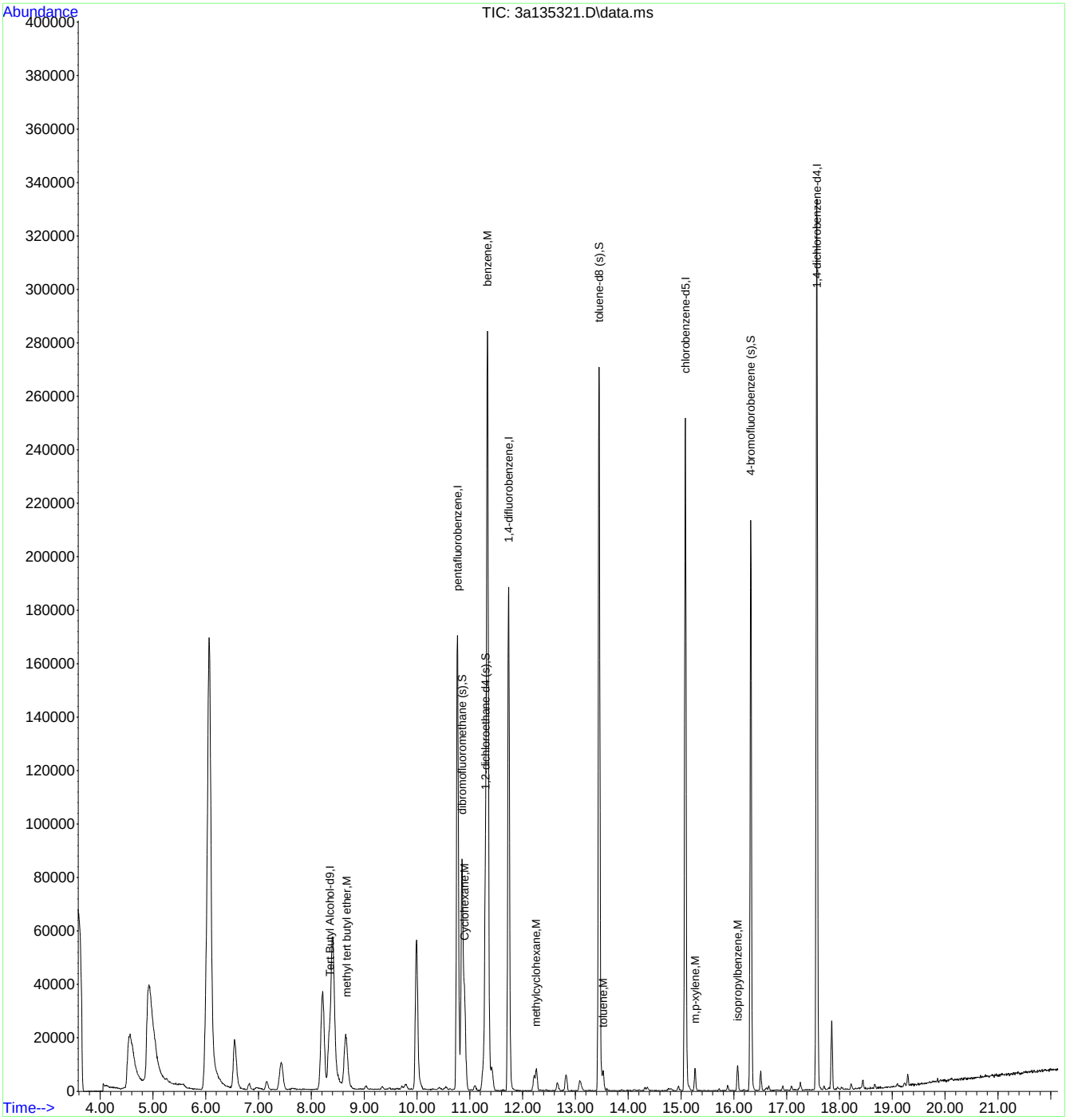
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.350	65	105562	500.00	ug/L	0.00
5) pentafluorobenzene	10.767	168	163941	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.737	114	196075	50.00	ug/L	0.00
87) chlorobenzene-d5	15.082	117	171161	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.573	152	106443	50.00	ug/L	0.00
System Monitoring Compounds						
49) dibromofluoromethane (s)	10.851	113	63871	54.64	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 109.28%			
50) 1,2-dichloroethane-d4 (s)	11.297	65	70623	49.96	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 99.92%			
79) toluene-d8 (s)	13.446	98	224826	55.04	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 110.08%			
104) 4-bromofluorobenzene (s)	16.320	95	86093	49.98	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 99.96%			
Target Compounds						Qvalue
31) methyl tert butyl ether	8.670	73	16019	3.55	ug/L	# 1
54) Cyclohexane	10.898	84	20352	10.84	ug/L	98
63) benzene	11.334	78	315573	64.68	ug/L	99
76) methylcyclohexane	12.256	83	4738	3.25	ug/L	98
81) toluene	13.525	92	3171	1.07	ug/L	93
98) m,p-xylene	15.266	106	3308	1.57	ug/L	98
103) isopropylbenzene	16.073	105	8970	1.28	ug/L	96

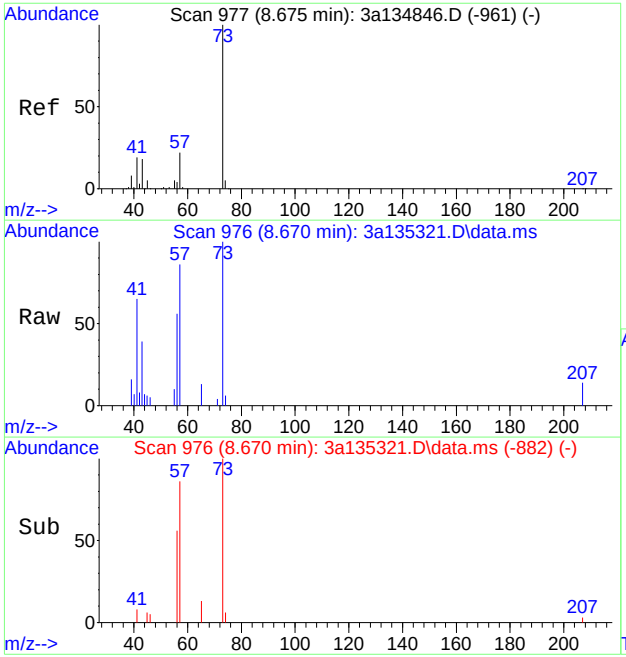
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135321.D
Acq On : 5 Oct 2014 1:28 pm
Operator : JemimaM
Sample : jb77674-4
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Oct 06 14:29:15 2014
Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Sep 25 16:01:33 2014
Response via : Initial Calibration

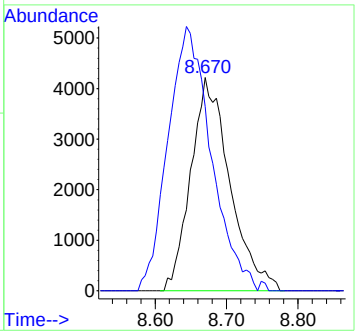


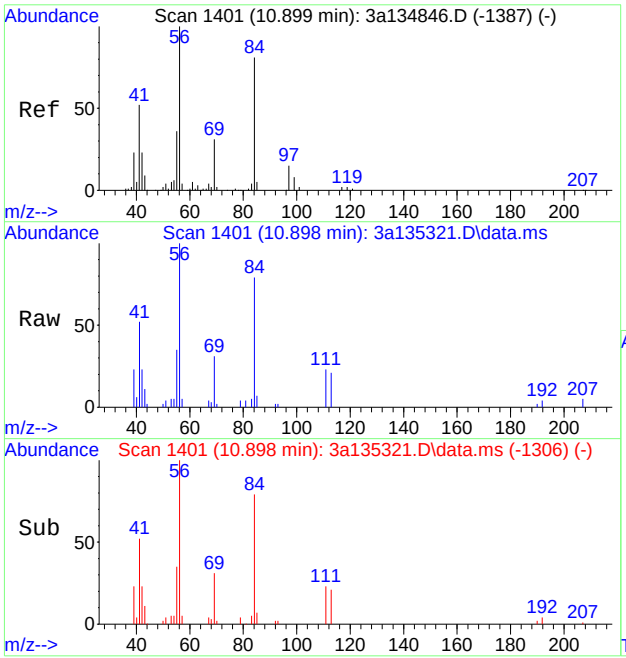


#31
methyl tert butyl ether
Concen: 3.55 ug/L
RT: 8.670 min Scan# 976
Delta R.T. -0.005 min
Lab File: 3a135321.D
Acq: 5 Oct 2014 1:28 pm

Tgt Ion: 73 Resp: 16019

Ion	Ratio	Lower	Upper
73	100		
57	86.3	0.0	52.6#

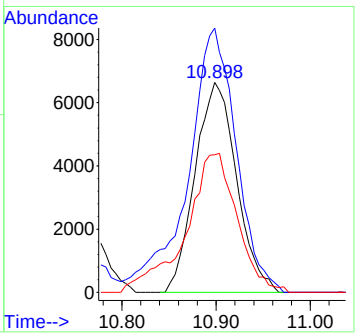


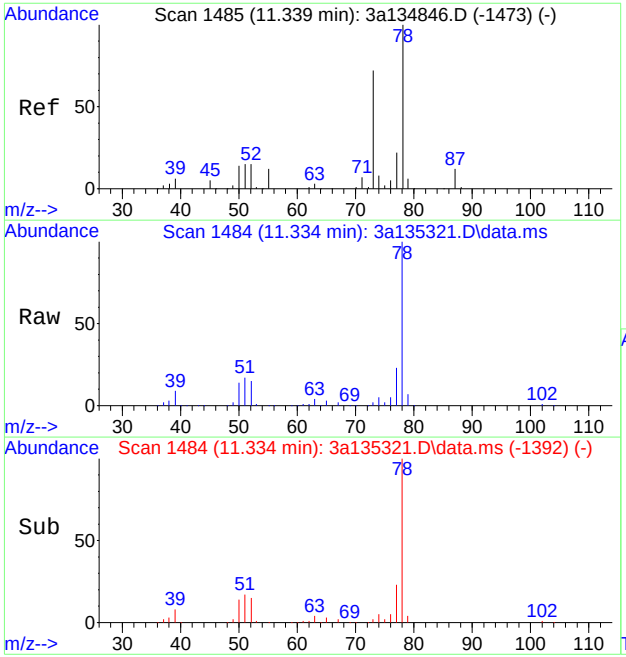


#54
Cyclohexane
Concen: 10.84 ug/L
RT: 10.898 min Scan# 1401
Delta R.T. -0.000 min
Lab File: 3a135321.D
Acq: 5 Oct 2014 1:28 pm

Tgt Ion: 84 Resp: 20352

Ion	Ratio	Lower	Upper
84	100		
56	125.9	92.7	152.7
41	65.5	34.9	94.9

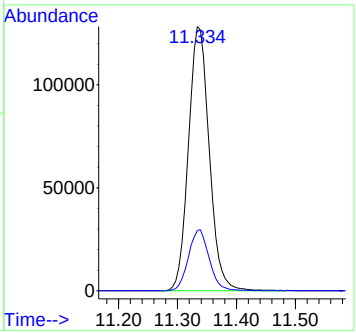


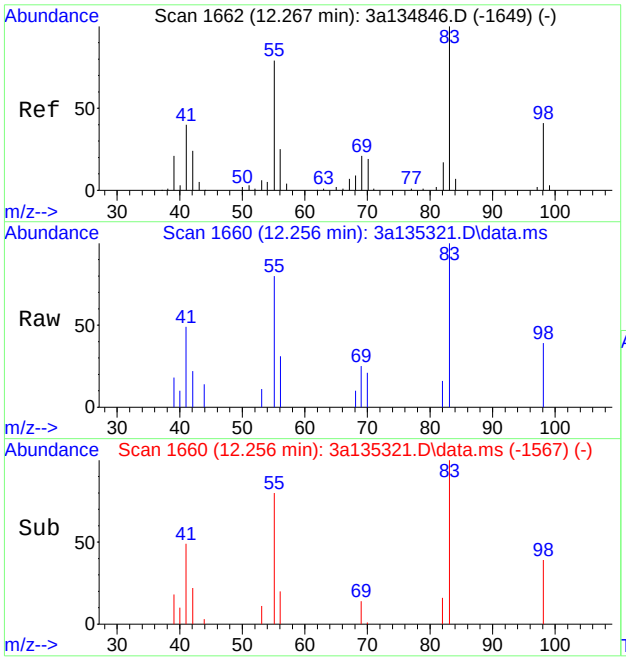


#63
benzene
Concen: 64.68 ug/L
RT: 11.334 min Scan# 1484
Delta R.T. -0.005 min
Lab File: 3a135321.D
Acq: 5 Oct 2014 1:28 pm

Tgt Ion: 78 Resp: 315573

Ion	Ratio	Lower	Upper
78	100		
77	22.8	0.0	52.2

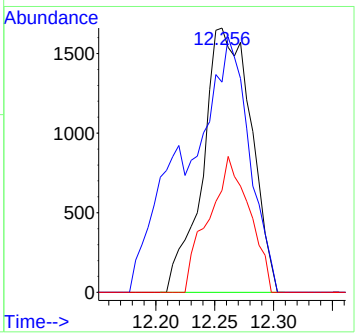


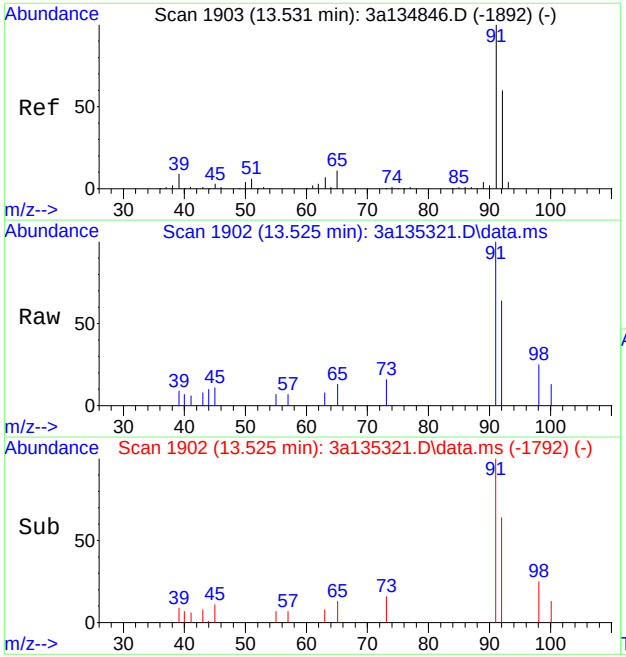


#76
methylcyclohexane
Concen: 3.25 ug/L
RT: 12.256 min Scan# 1660
Delta R.T. -0.011 min
Lab File: 3a135321.D
Acq: 5 Oct 2014 1:28 pm

Tgt Ion: 83 Resp: 4738

Ion	Ratio	Lower	Upper
83	100		
55	79.5	49.2	109.2
98	38.6	11.5	71.5

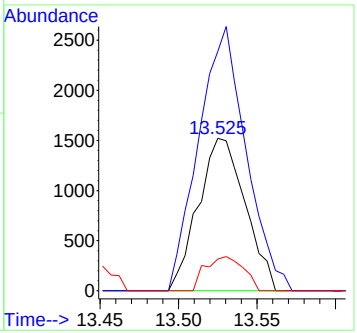


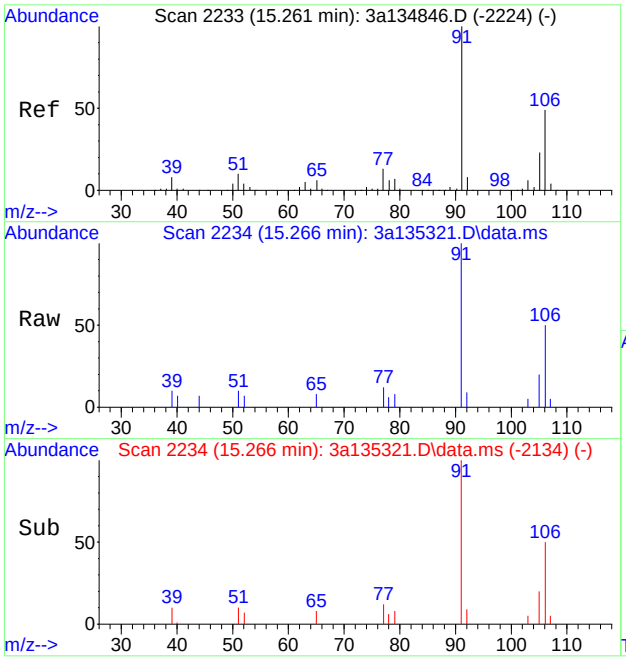


#81
toluene
Concen: 1.07 ug/L
RT: 13.525 min Scan# 1902
Delta R.T. -0.005 min
Lab File: 3a135321.D
Acq: 5 Oct 2014 1:28 pm

Tgt Ion: 92 Resp: 3171

Ion	Ratio	Lower	Upper
92	100		
91	156.9	136.8	196.8
65	20.8	0.0	48.9

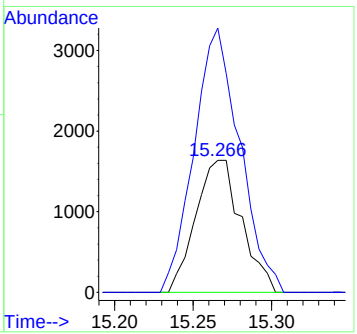


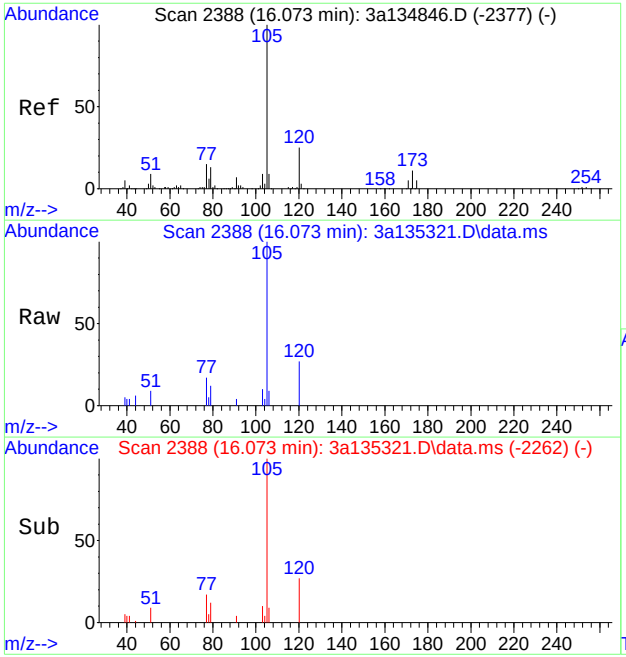


#98
m,p-xylene
Concen: 1.57 ug/L
RT: 15.266 min Scan# 2234
Delta R.T. 0.005 min
Lab File: 3a135321.D
Acq: 5 Oct 2014 1:28 pm

Tgt Ion:106 Resp: 3308

Ion	Ratio	Lower	Upper
106	100		
91	200.3	173.5	233.5

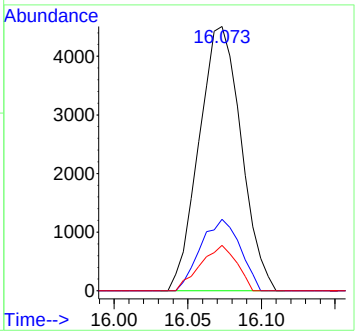




#103
isopropylbenzene
Concen: 1.28 ug/L
RT: 16.073 min Scan# 2388
Delta R.T. -0.000 min
Lab File: 3a135321.D
Acq: 5 Oct 2014 1:28 pm

Tgt Ion:105 Resp: 8970

Ion	Ratio	Lower	Upper
105	100		
120	27.0	0.0	55.3
77	17.2	0.0	44.7



7.1.7

7

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135321.D
Acq On : 5 Oct 2014 1:28 pm
Operator : JemimaM
Sample : jb77674-4
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

Signal : TIC: 3a135321.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.061	93	97	163	rBV	2951	33629	3.51%	0.465%
2	4.465	163	174	175	rVV2	1295	4123	0.43%	0.057%
3	4.570	175	194	245	rVV3	21355	215967	22.57%	2.986%
4	4.927	246	262	424	rVB3	39337	478706	50.03%	6.618%
5	5.844	435	437	443	rBV2	348	553	0.06%	0.008%
6	6.064	452	479	555	rBV2	169195	956864	100.00%	13.229%
7	6.547	558	571	615	rVB3	18890	85097	8.89%	1.176%
8	6.830	615	625	640	rVB4	2675	8119	0.85%	0.112%
9	6.977	642	653	657	rVV4	972	3186	0.33%	0.044%
10	7.008	657	659	662	rVV3	843	930	0.10%	0.013%
11	7.034	662	664	676	rVV3	718	1489	0.16%	0.021%
12	7.160	676	688	703	rVV3	3223	10782	1.13%	0.149%
13	7.286	706	712	716	rVB2	380	642	0.07%	0.009%
14	7.433	724	740	764	rVB3	10295	48753	5.10%	0.674%
15	7.627	772	777	786	rBV4	720	2365	0.25%	0.033%
16	7.732	794	797	815	rBV2	397	1024	0.11%	0.014%
17	7.873	823	824	854	rVB2	313	849	0.09%	0.012%
18	8.214	870	889	903	rBV3	36751	168923	17.65%	2.335%
19	8.397	903	924	958	rVV4	57186	359873	37.61%	4.975%
20	8.649	958	972	1012	rVB6	20726	102515	10.71%	1.417%
21	9.042	1039	1047	1059	rVV6	1399	3544	0.37%	0.049%
22	9.121	1059	1062	1072	rVB2	479	849	0.09%	0.012%
23	9.346	1099	1105	1114	rVB4	1234	2887	0.30%	0.040%
24	9.477	1125	1130	1140	rVB3	790	1796	0.19%	0.025%
25	9.540	1140	1142	1148	rVB2	583	683	0.07%	0.009%
26	9.588	1148	1151	1154	rBV2	448	523	0.05%	0.007%
27	9.619	1154	1157	1164	rVV2	552	1006	0.11%	0.014%
28	9.713	1168	1175	1180	rVV5	1530	3124	0.33%	0.043%
29	9.787	1183	1189	1206	rVV5	2082	6476	0.68%	0.090%
30	9.991	1214	1228	1254	rBV2	55996	187291	19.57%	2.589%
31	10.133	1254	1255	1275	rVB2	419	953	0.10%	0.013%
32	10.416	1301	1309	1322	rVB2	932	2847	0.30%	0.039%
33	10.547	1322	1334	1345	rVV4	1353	4142	0.43%	0.057%
34	10.626	1345	1349	1357	rVV2	548	1252	0.13%	0.017%
35	10.704	1357	1364	1365	rVV	464	843	0.09%	0.012%
36	10.767	1365	1376	1385	rVV2	170176	433319	45.29%	5.991%
37	10.851	1385	1392	1417	rVV2	86674	327144	34.19%	4.523%
38	11.029	1417	1426	1431	rVV2	414	1170	0.12%	0.016%
39	11.098	1431	1439	1448	rVV4	1984	5465	0.57%	0.076%
40	11.334	1457	1484	1512	rBV2	284200	933876	97.60%	12.911%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135321.D
Acq On : 5 Oct 2014 1:28 pm
Operator : JemimaM
Sample : jb77674-4
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

41	11.627	1536	1540	1543	rBV	549	599	0.06%	0.008%
42	11.737	1550	1561	1586	rVB	188510	429602	44.90%	5.939%
43	12.220	1643	1653	1656	rBV4	5899	13266	1.39%	0.183%
44	12.262	1656	1661	1670	rVB3	8390	19660	2.05%	0.272%
45	12.340	1670	1676	1680	rBV2	450	731	0.08%	0.010%
46	12.450	1692	1697	1705	rVB	720	1609	0.17%	0.022%
47	12.518	1705	1710	1718	rBV	403	1090	0.11%	0.015%
48	12.660	1729	1737	1752	rVB4	3136	8062	0.84%	0.111%
49	12.823	1755	1768	1782	rBV4	6070	16045	1.68%	0.222%
50	12.922	1782	1787	1790	rVB	443	629	0.07%	0.009%
51	12.954	1790	1793	1799	rBV	359	684	0.07%	0.009%
52	13.079	1808	1817	1834	rVB5	3904	12933	1.35%	0.179%
53	13.446	1876	1887	1899	rBV	270726	576115	60.21%	7.965%
54	13.530	1899	1903	1914	rVV	7563	14384	1.50%	0.199%
55	13.593	1914	1915	1923	rVB	878	1048	0.11%	0.014%
56	13.876	1966	1969	1975	rVV	501	753	0.08%	0.010%
57	14.044	1993	2001	2004	rBV	287	545	0.06%	0.008%
58	14.107	2004	2013	2025	rBV2	493	1465	0.15%	0.020%
59	14.212	2025	2033	2038	rVB	410	770	0.08%	0.011%
60	14.317	2047	2053	2057	rBV2	1368	2595	0.27%	0.036%
61	14.364	2057	2062	2070	rVV3	1434	2743	0.29%	0.038%
62	14.762	2130	2138	2142	rVV2	1046	1962	0.21%	0.027%
63	14.804	2143	2146	2164	rVV2	828	2265	0.24%	0.031%
64	14.956	2164	2175	2189	rVV3	1778	4049	0.42%	0.056%
65	15.082	2189	2199	2226	rVV	251748	506588	52.94%	7.004%
66	15.266	2226	2234	2244	rVV3	8496	16188	1.69%	0.224%
67	15.659	2305	2309	2315	rVB	466	849	0.09%	0.012%
68	15.722	2315	2321	2329	rBV3	1080	2157	0.23%	0.030%
69	15.879	2345	2351	2360	rBV2	2105	3725	0.39%	0.051%
70	16.073	2381	2388	2399	rBV2	9466	18098	1.89%	0.250%
71	16.194	2403	2411	2421	rVB	551	1180	0.12%	0.016%
72	16.320	2426	2435	2452	rBV	213456	399103	41.71%	5.518%
73	16.508	2464	2471	2481	rVV	7416	13199	1.38%	0.182%
74	16.619	2483	2492	2496	rVV2	1145	2465	0.26%	0.034%
75	16.660	2496	2500	2506	rVB4	1932	2822	0.29%	0.039%
76	16.928	2545	2551	2559	rVB3	1899	2959	0.31%	0.041%
77	17.090	2576	2582	2591	rBV	1779	3621	0.38%	0.050%
78	17.258	2606	2614	2622	rVB5	3240	6292	0.66%	0.087%
79	17.326	2622	2627	2629	rBV2	395	555	0.06%	0.008%
80	17.573	2664	2674	2694	rBV	333350	638808	66.76%	8.831%
81	17.704	2694	2699	2708	rVV2	1486	2629	0.27%	0.036%
82	17.809	2712	2719	2721	rVV4	958	1395	0.15%	0.019%
83	17.851	2721	2727	2739	rVB	25856	47186	4.93%	0.652%
84	17.966	2743	2749	2759	rBV4	1132	2656	0.28%	0.037%
85	18.034	2759	2762	2775	rVB2	1067	2080	0.22%	0.029%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135321.D
Acq On : 5 Oct 2014 1:28 pm
Operator : JemimaM
Sample : jb77674-4
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

86	18.144	2775	2783	2793	rBV	456	1168	0.12%	0.016%
87	18.223	2793	2798	2806	rVB3	2192	4252	0.44%	0.059%
88	18.307	2811	2814	2821	rBV2	494	600	0.06%	0.008%
89	18.370	2821	2826	2828	rVB	533	730	0.08%	0.010%
90	18.438	2828	2839	2848	rBV3	3456	7469	0.78%	0.103%
91	18.490	2848	2849	2856	rVB2	852	864	0.09%	0.012%
92	18.537	2856	2858	2865	rBV3	627	1082	0.11%	0.015%
93	18.585	2865	2867	2879	rBV3	808	1634	0.17%	0.023%
94	18.663	2879	2882	2890	rVB3	1808	3235	0.34%	0.045%
95	18.726	2890	2894	2899	rBV2	779	1147	0.12%	0.016%
96	18.978	2939	2942	2946	rBV	541	720	0.08%	0.010%
97	19.098	2961	2965	2985	rVB6	1221	2346	0.25%	0.032%
98	19.235	2985	2991	2996	rBV5	1399	3050	0.32%	0.042%
99	19.292	2996	3002	3024	rVB2	4578	11185	1.17%	0.155%
100	19.859	3106	3110	3115	rVB5	1731	2097	0.22%	0.029%

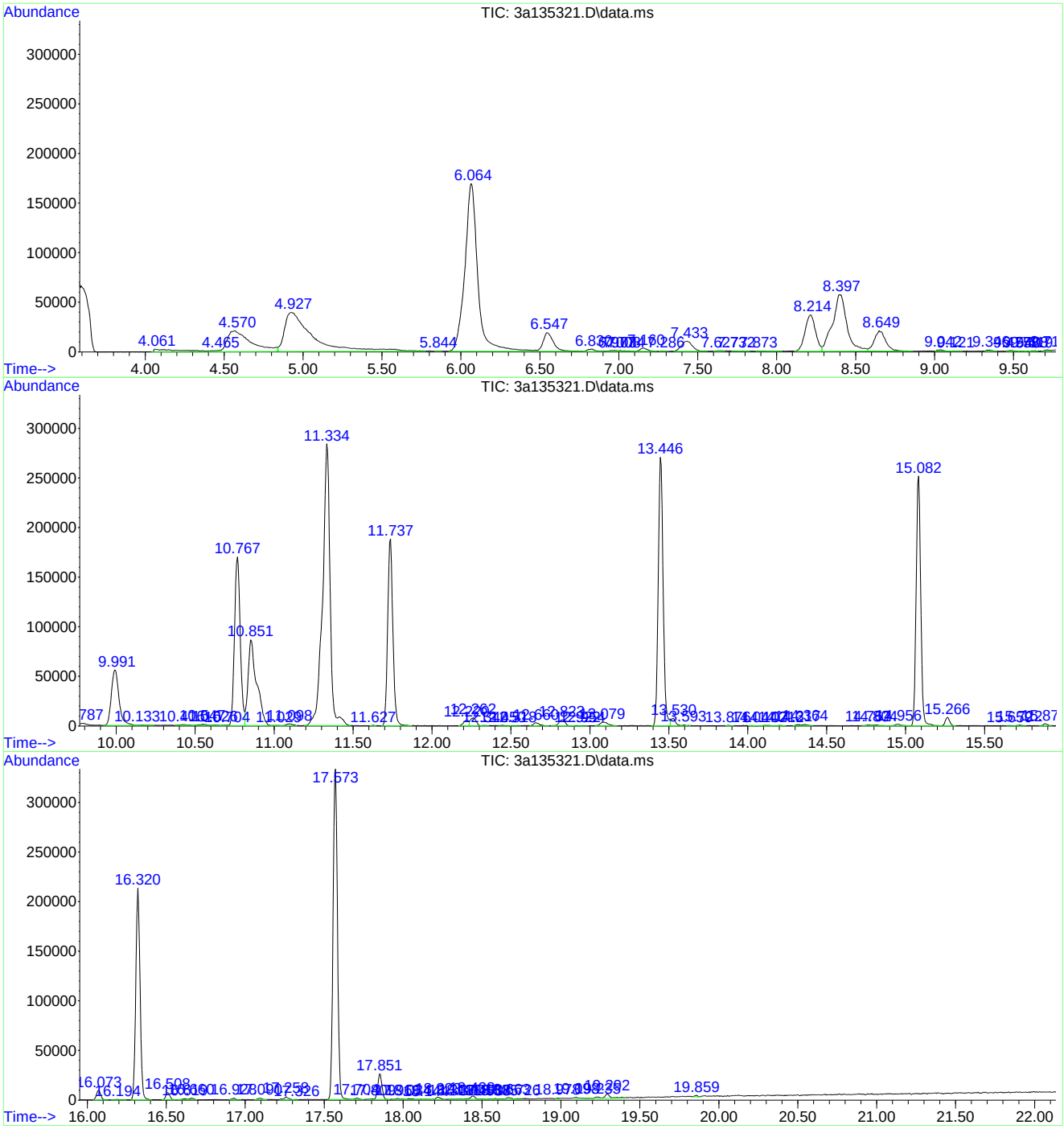
Sum of corrected areas: 7233317

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135321.D
Acq On : 5 Oct 2014 1:28 pm
Operator : JemimaM
Sample : jb77674-4
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135321.D
Acq On : 5 Oct 2014 1:28 pm
Operator : JemimaM
Sample : jb77674-4
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

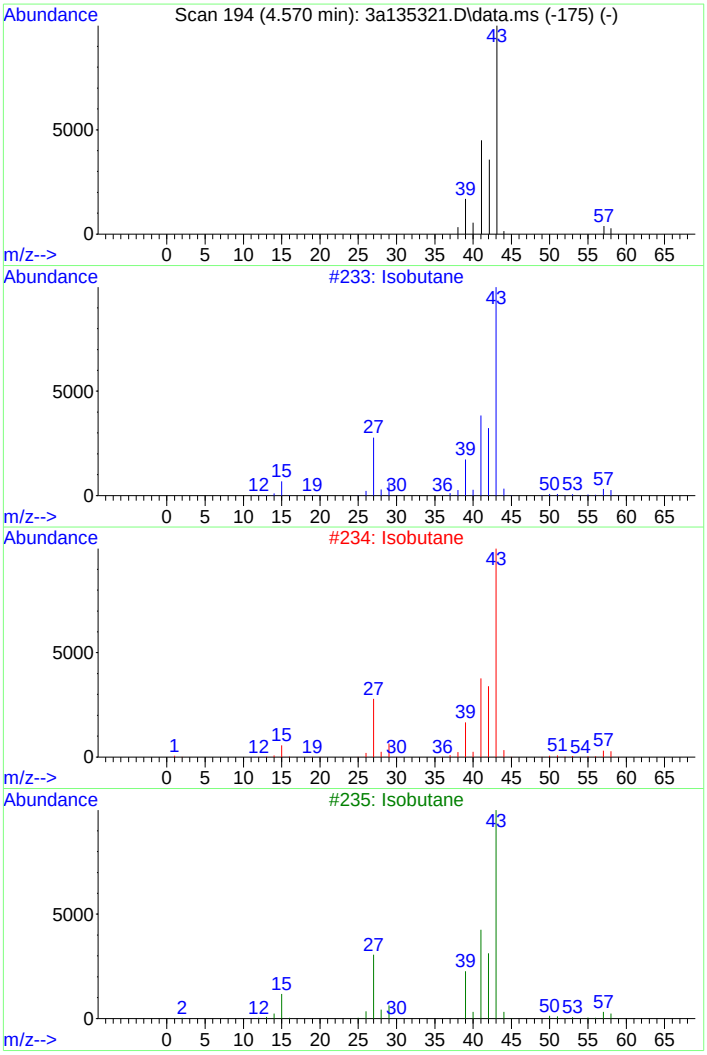
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

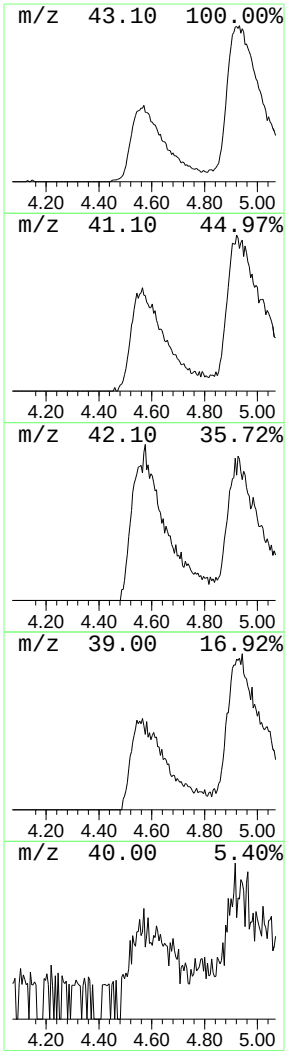
****

Peak Number 1 alkane Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.570	24.92 ug/L	215967	pentafluorobenzene	10.767

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Isobutane	58	C4H10	000075-28-5	83
2	Isobutane	58	C4H10	000075-28-5	74
3	Isobutane	58	C4H10	000075-28-5	74
4	Isobutane	58	C4H10	000075-28-5	9
5	Propane, 1-chloro-2-methyl-	92	C4H9Cl	000513-36-0	4





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135321.D
Acq On : 5 Oct 2014 1:28 pm
Operator : JemimaM
Sample : jb77674-4
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

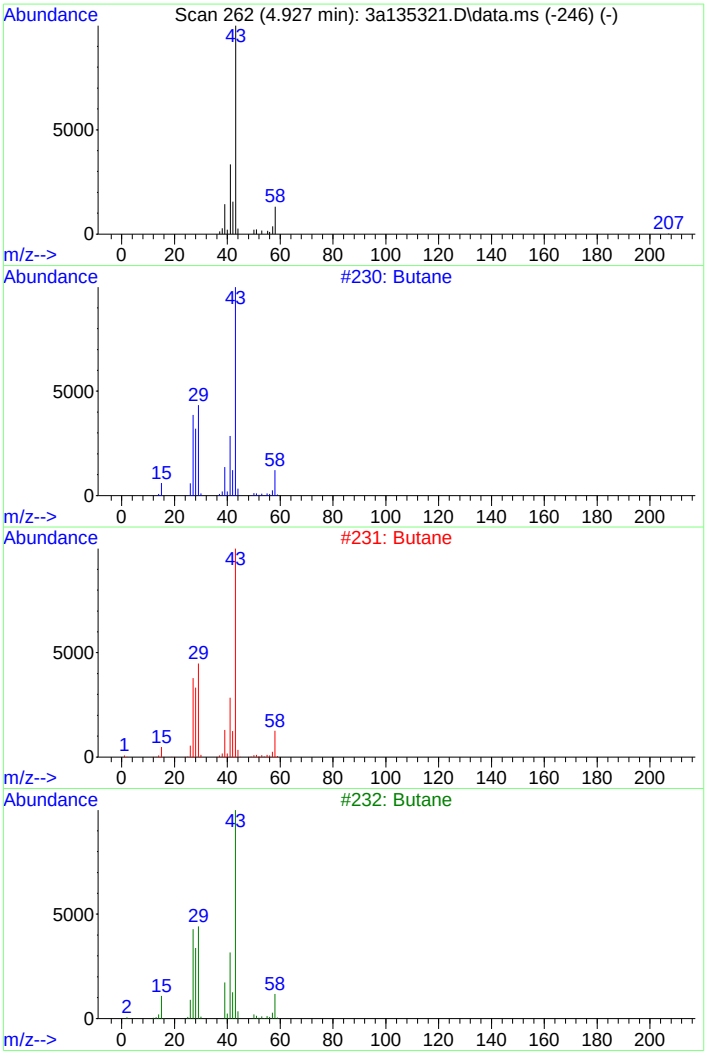
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

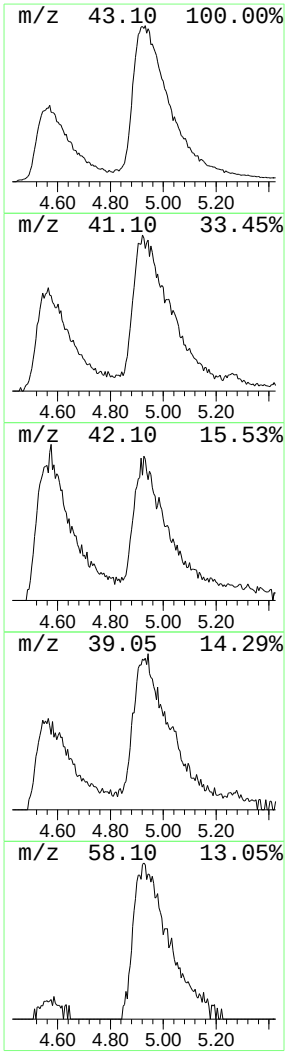
****

Peak Number 2 alkane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.927	55.24 ug/L	478706	pentafluorobenzene	10.767

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	64
2	Butane	58	C4H10	000106-97-8	64
3	Butane	58	C4H10	000106-97-8	40
4	Isobutane	58	C4H10	000075-28-5	9
5	Isopropylsulfonyl chloride	142	C3H7ClO2S	010147-37-2	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135321.D
Acq On : 5 Oct 2014 1:28 pm
Operator : JemimaM
Sample : jb77674-4
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

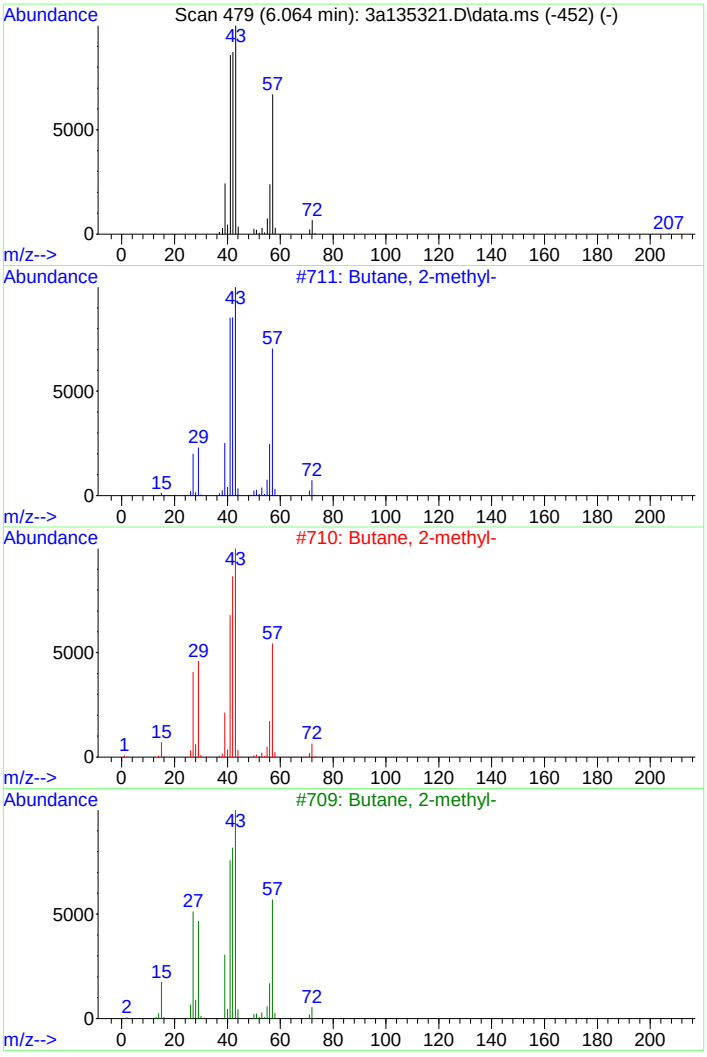
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

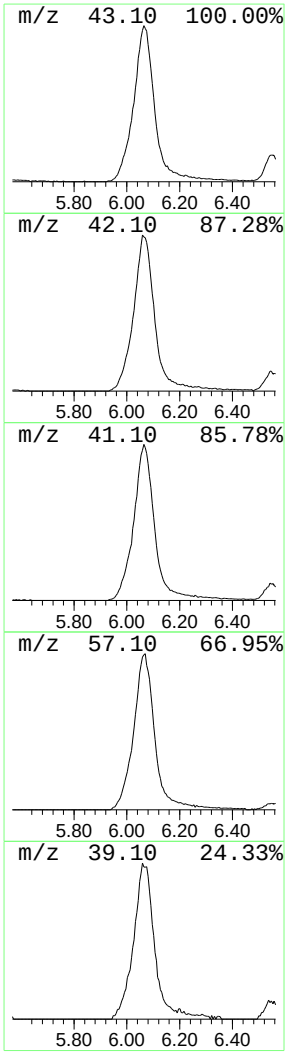
****

Peak Number 3 alkane Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.064	110.41 ug/L	956864	pentafluorobenzene	10.767

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	91
2	Butane, 2-methyl-	72	C5H12	000078-78-4	91
3	Butane, 2-methyl-	72	C5H12	000078-78-4	90
4	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	36
5	Pentane	72	C5H12	000109-66-0	33





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135321.D
Acq On : 5 Oct 2014 1:28 pm
Operator : JemimaM
Sample : jb77674-4
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

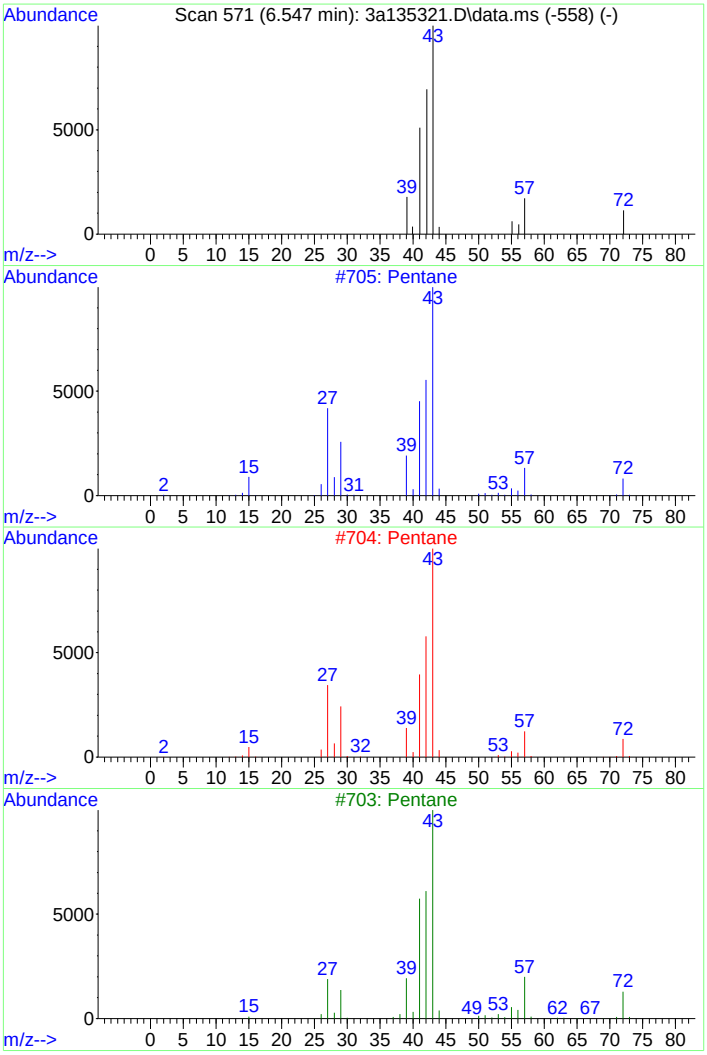
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

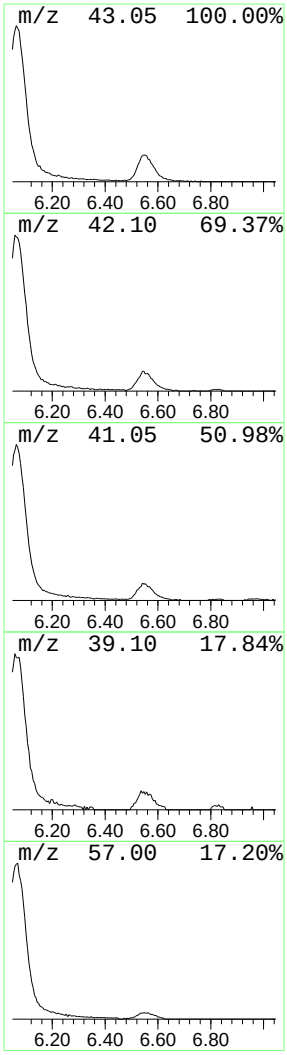
****

Peak Number 4 alkane-Pentane Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.547	9.82 ug/L	85097	pentafluorobenzene	10.767

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	90
2	Pentane	72	C5H12	000109-66-0	90
3	Pentane	72	C5H12	000109-66-0	90
4	Pentane	72	C5H12	000109-66-0	83
5	Butane, 2-methyl-	72	C5H12	000078-78-4	38





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135321.D
Acq On : 5 Oct 2014 1:28 pm
Operator : JemimaM
Sample : jb77674-4
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

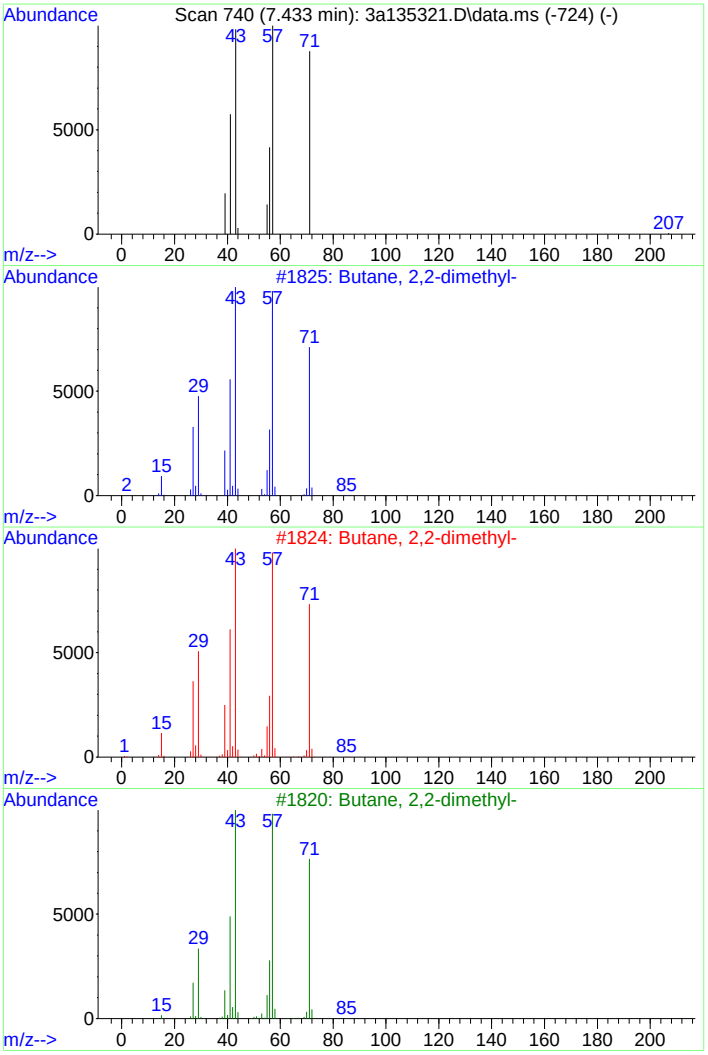
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

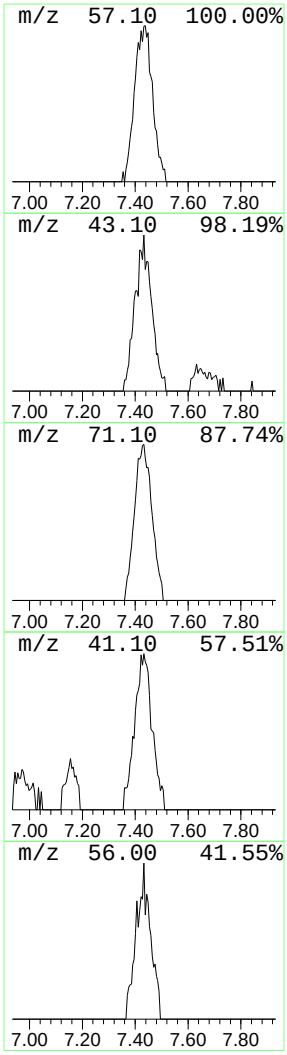
****

Peak Number 5 alkane Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.433	5.63 ug/L	48753	pentafluorobenzene	10.767

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2,2-dimethyl-	86	C6H14	000075-83-2	83
2	Butane, 2,2-dimethyl-	86	C6H14	000075-83-2	83
3	Butane, 2,2-dimethyl-	86	C6H14	000075-83-2	74
4	Butane, 2,2-dimethyl-	86	C6H14	000075-83-2	74
5	4-Heptanone, 3-methyl-	128	C8H16O	015726-15-5	38





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135321.D
Acq On : 5 Oct 2014 1:28 pm
Operator : JemimaM
Sample : jb77674-4
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

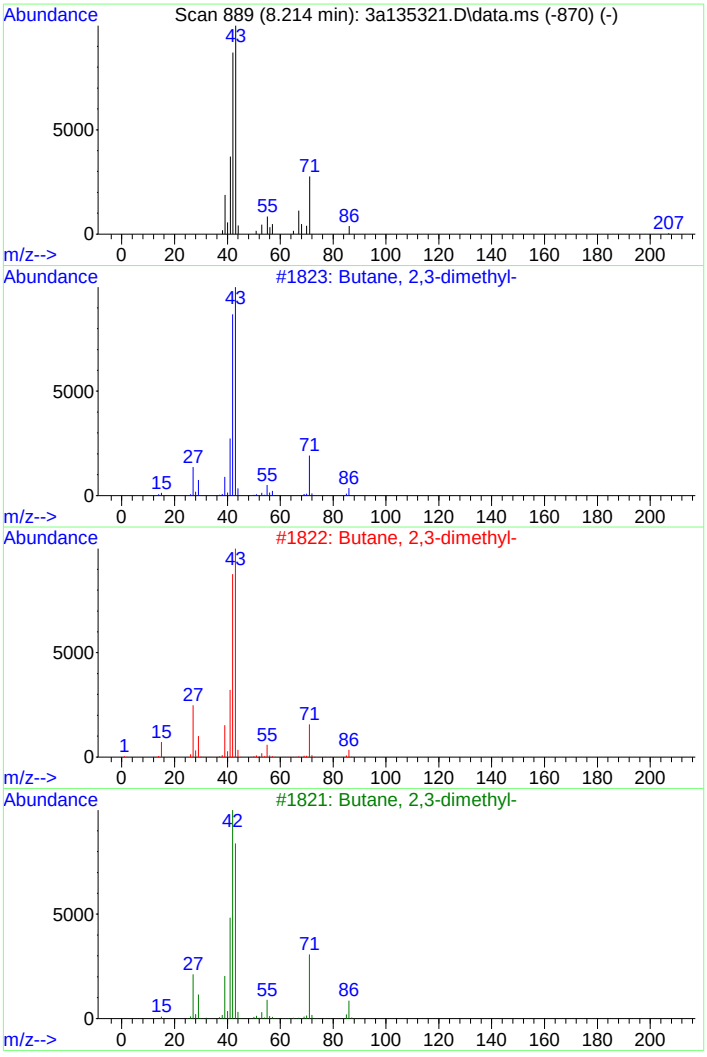
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

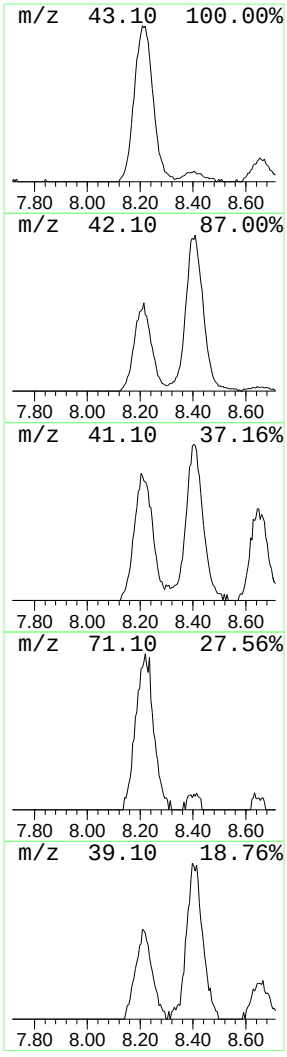
****

Peak Number 6 alkane Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.214	19.49 ug/L	168923	pentafluorobenzene	10.767

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	80
2	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	64
3	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	45
4	Pentane, 2-methyl-	86	C6H14	000107-83-5	43
5	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	39





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135321.D
Acq On : 5 Oct 2014 1:28 pm
Operator : JemimaM
Sample : jb77674-4
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

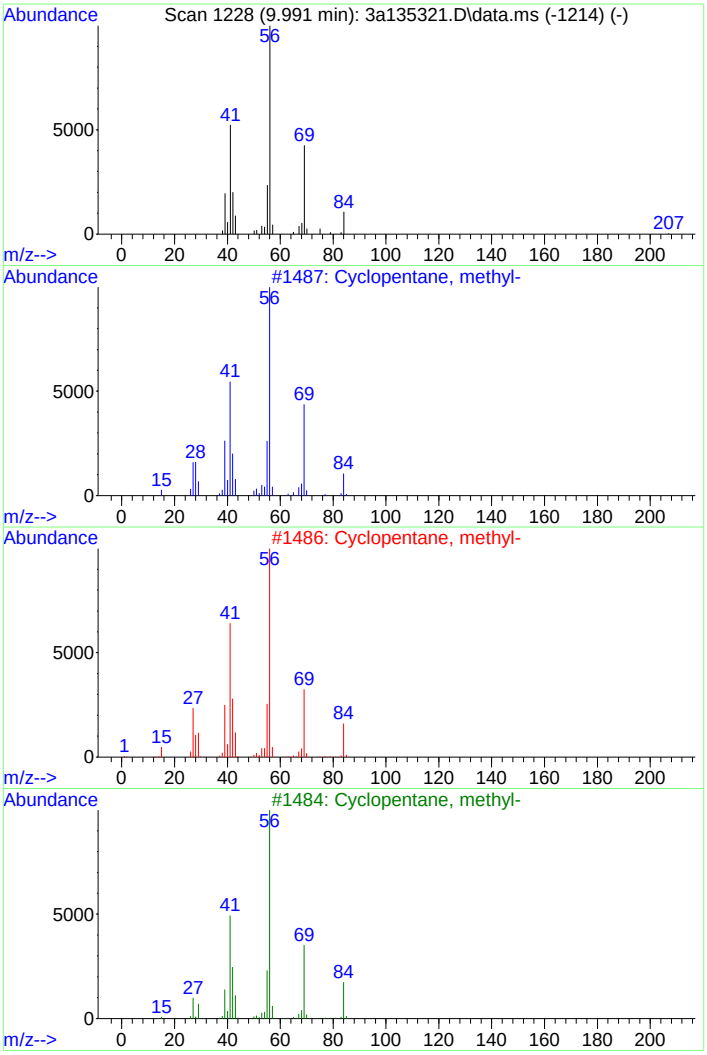
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

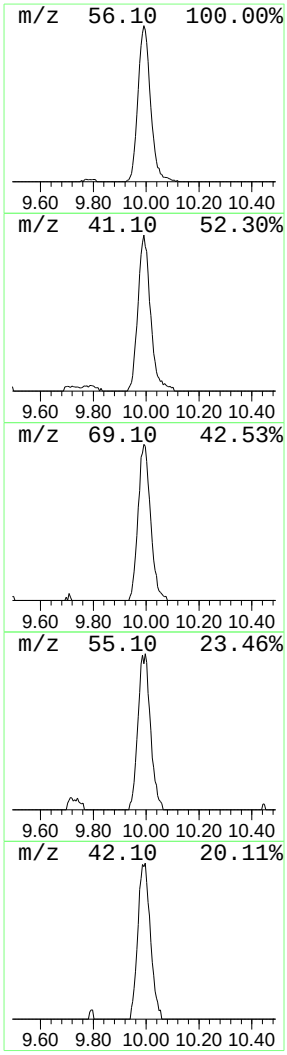
****

Peak Number 7 alkene Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.991	21.61 ug/L	187291	pentafluorobenzene	10.767

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	91
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	91
3	Cyclopentane, methyl-	84	C6H12	000096-37-7	83
4	Cyclobutane, ethyl-	84	C6H12	004806-61-5	80
5	1H-Tetrazole, 5-methyl-	84	C2H4N4	004076-36-2	80





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135321.D
Acq On : 5 Oct 2014 1:28 pm
Operator : JemimaM
Sample : jb77674-4
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
alkane	4.570	24.9	ug/L	215967	2	10.767	433319	50.0
alkane	4.927	55.2	ug/L	478706	2	10.767	433319	50.0
alkane	6.064	110.4	ug/L	956864	2	10.767	433319	50.0
alkane-Pentane	6.547	9.8	ug/L	85097	2	10.767	433319	50.0
alkane	7.433	5.6	ug/L	48753	2	10.767	433319	50.0
alkane	8.214	19.5	ug/L	168923	2	10.767	433319	50.0
alkene	9.991	21.6	ug/L	187291	2	10.767	433319	50.0

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135324.D
Acq On : 5 Oct 2014 2:58 pm
Operator : JemimaM
Sample : jb77674-5
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 06 14:35:31 2014
Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Sep 25 16:01:33 2014
Response via : Initial Calibration

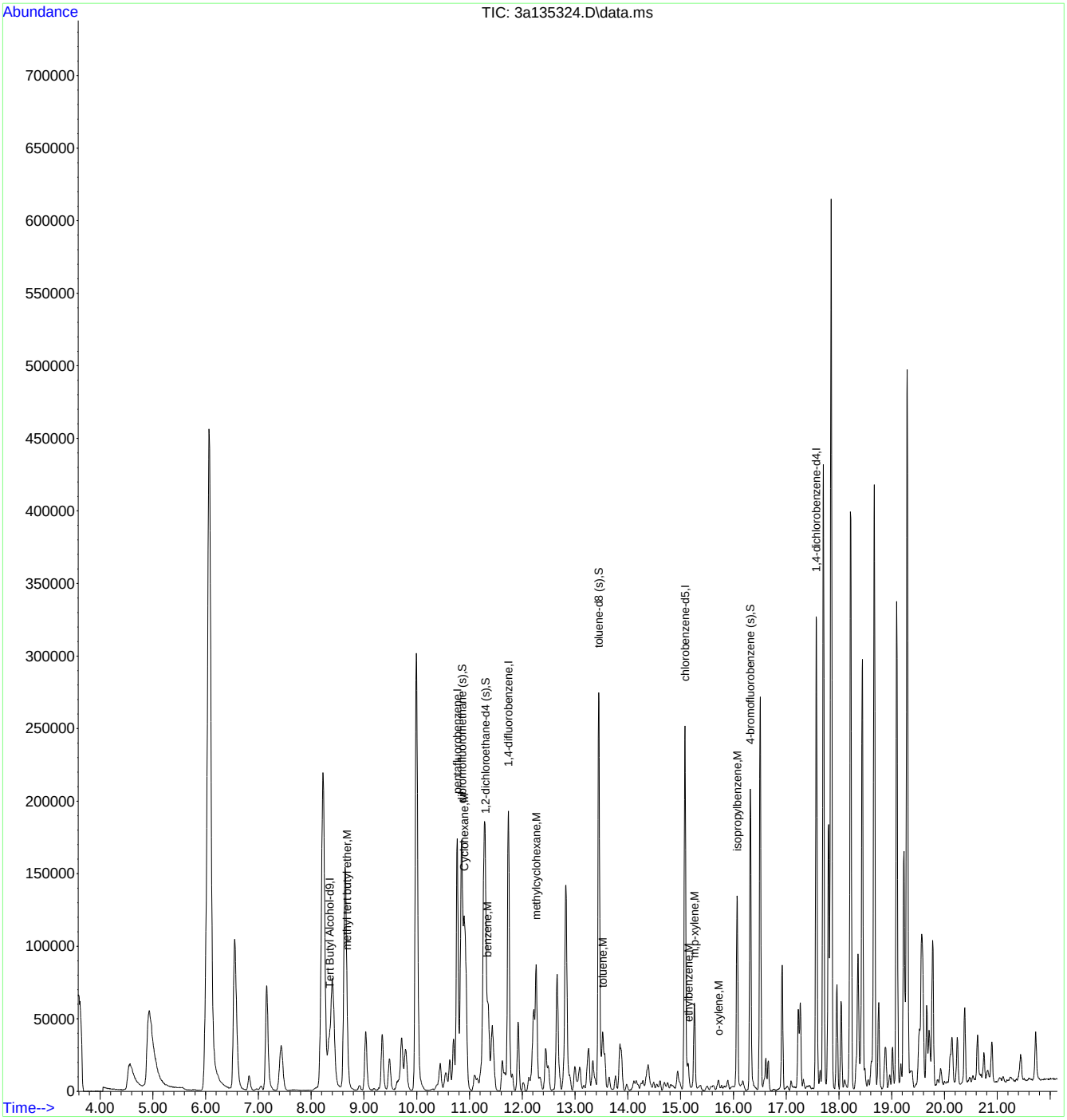
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.350	65	106132	500.00	ug/L	0.00
5) pentafluorobenzene	10.767	168	160233	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.737	114	194287	50.00	ug/L	0.00
87) chlorobenzene-d5	15.083	117	166631	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.568	152	98619	50.00	ug/L	0.00
System Monitoring Compounds						
49) dibromofluoromethane (s)	10.857	113	61844	54.13	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 108.26%			
50) 1,2-dichloroethane-d4 (s)	11.302	65	70973	51.37	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 102.74%			
79) toluene-d8 (s)	13.447	98	225426	55.69	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 111.38%			
104) 4-bromofluorobenzene (s)	16.320	95	83116	52.08	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 104.16%			
Target Compounds						Qvalue
31) methyl tert butyl ether	8.681	73	2056	0.47	ug/L #	1
54) Cyclohexane	10.899	84	61306	27.45	ug/L	90
63) benzene	11.339	78	21001	4.34	ug/L	97
76) methylcyclohexane	12.262	83	52565	24.68	ug/L	95
81) toluene	13.525	92	15907	5.44	ug/L	94
97) ethylbenzene	15.151	91	4571	0.84	ug/L	85
98) m,p-xylene	15.261	106	21173	10.31	ug/L	95
99) o-xylene	15.717	106	558	0.24	ug/L	89
103) isopropylbenzene	16.068	105	109422	16.89	ug/L	98

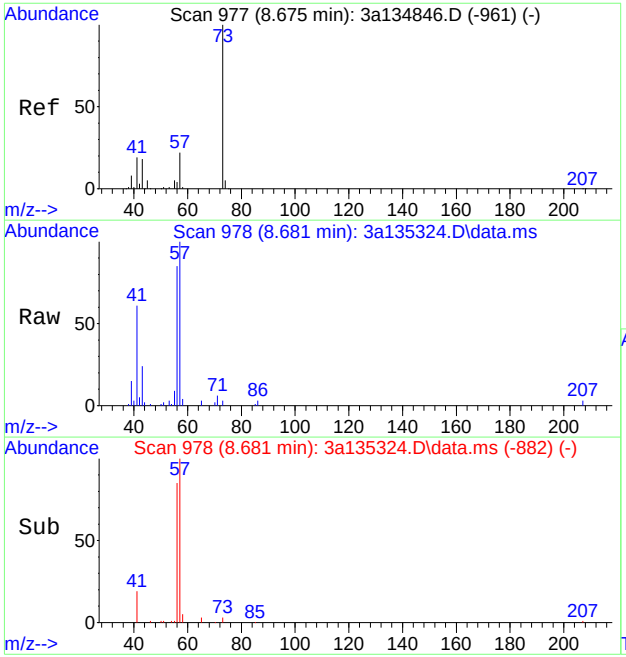
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135324.D
Acq On : 5 Oct 2014 2:58 pm
Operator : JemimaM
Sample : jb77674-5
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 06 14:35:31 2014
Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Sep 25 16:01:33 2014
Response via : Initial Calibration

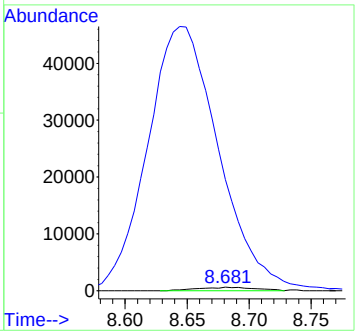


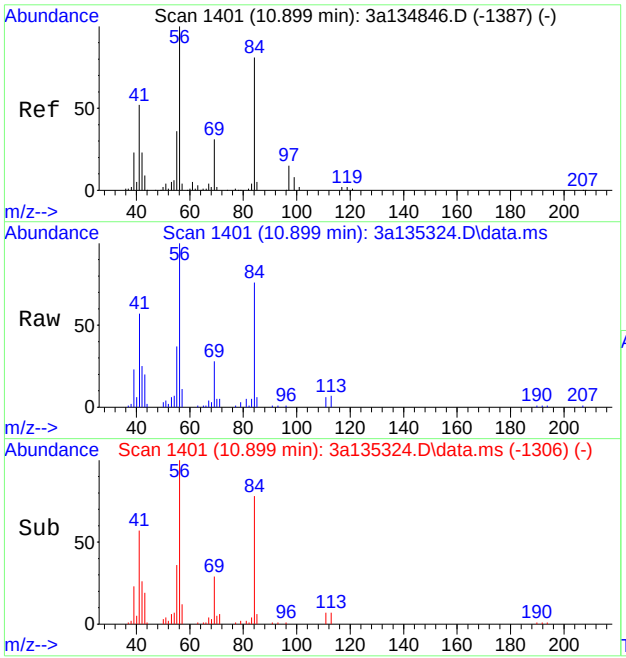


#31
methyl tert butyl ether
Concen: 0.47 ug/L
RT: 8.681 min Scan# 978
Delta R.T. 0.005 min
Lab File: 3a135324.D
Acq: 5 Oct 2014 2:58 pm

Tgt Ion: 73 Resp: 2056

Ion	Ratio	Lower	Upper
73	100		
57	2678.4	0.0	52.6#

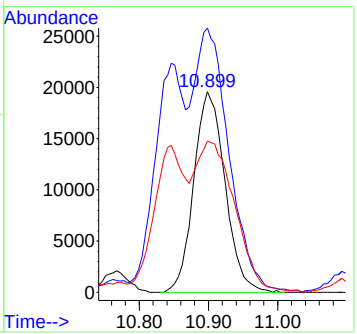


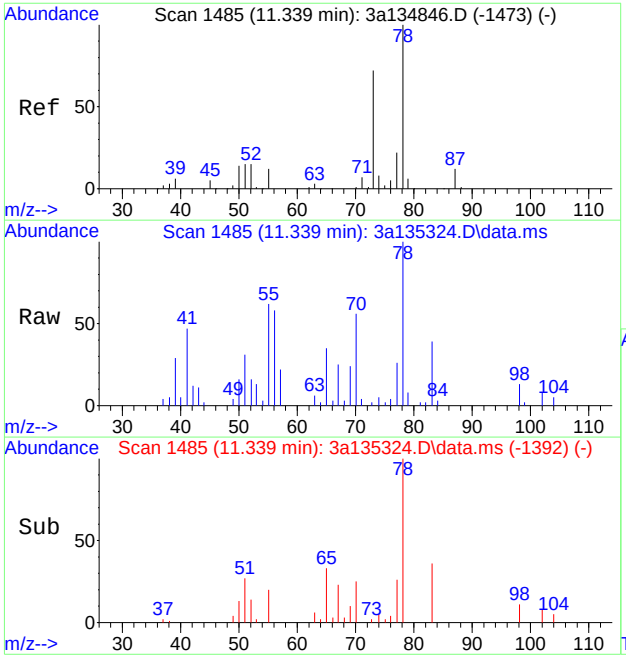


#54
Cyclohexane
Concen: 27.45 ug/L
RT: 10.899 min Scan# 1401
Delta R.T. 0.000 min
Lab File: 3a135324.D
Acq: 5 Oct 2014 2:58 pm

Tgt Ion: 84 Resp: 61306

Ion	Ratio	Lower	Upper
84	100		
56	131.7	92.7	152.7
41	75.5	34.9	94.9

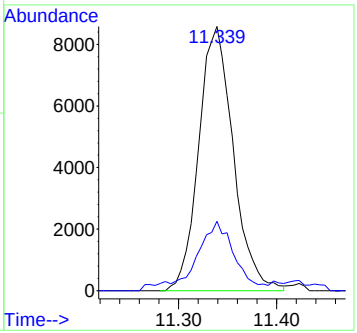


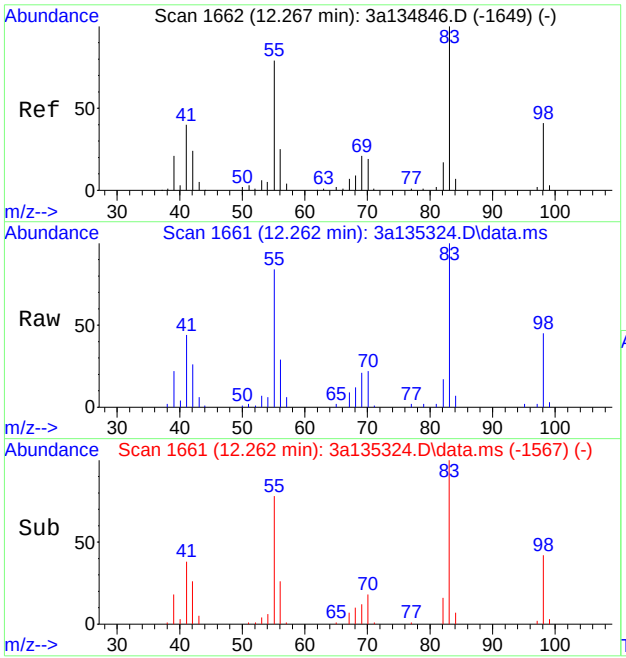


#63
benzene
Concen: 4.34 ug/L
RT: 11.339 min Scan# 1485
Delta R.T. 0.000 min
Lab File: 3a135324.D
Acq: 5 Oct 2014 2:58 pm

Tgt Ion: 78 Resp: 21001

Ion	Ratio	Lower	Upper
78	100		
77	23.5	0.0	52.2

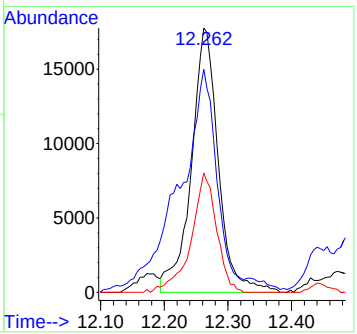


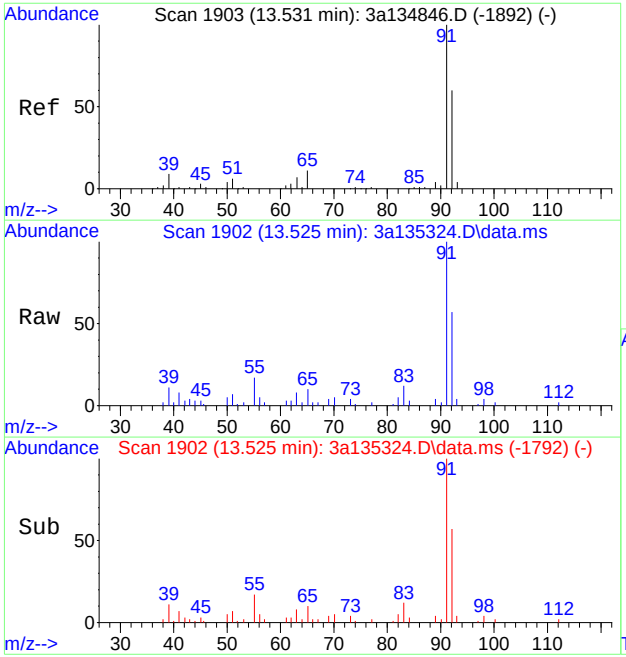


#76
methylcyclohexane
Concen: 24.68 ug/L
RT: 12.262 min Scan# 1661
Delta R.T. -0.005 min
Lab File: 3a135324.D
Acq: 5 Oct 2014 2:58 pm

Tgt Ion: 83 Resp: 52565

Ion	Ratio	Lower	Upper
83	100		
55	82.9	49.2	109.2
98	45.1	11.5	71.5

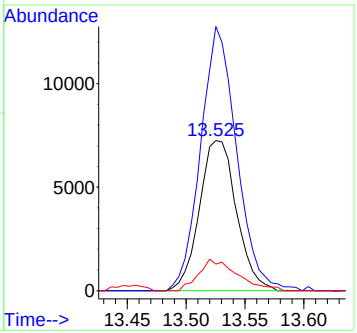


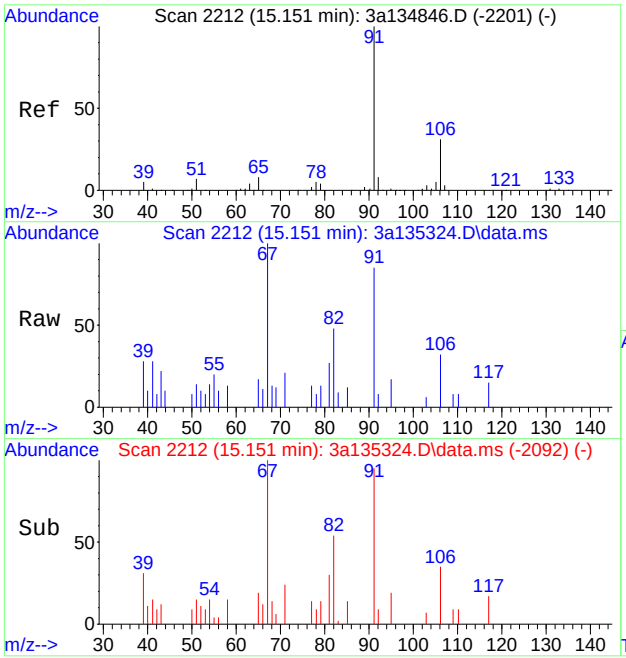


#81
toluene
Concen: 5.44 ug/L
RT: 13.525 min Scan# 1902
Delta R.T. -0.005 min
Lab File: 3a135324.D
Acq: 5 Oct 2014 2:58 pm

Tgt Ion: 92 Resp: 15907

Ion	Ratio	Lower	Upper
92	100		
91	176.1	136.8	196.8
65	17.8	0.0	48.9

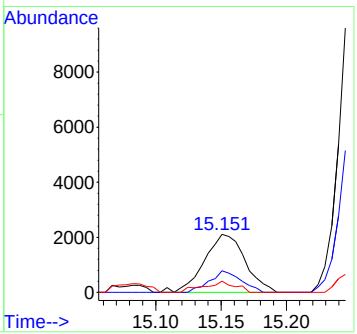


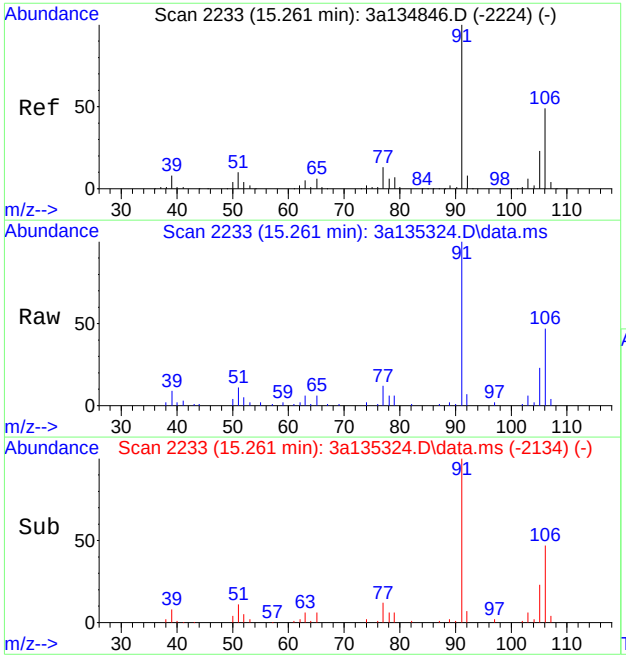


#97
ethylbenzene
Concen: 0.84 ug/L
RT: 15.151 min Scan# 2212
Delta R.T. 0.000 min
Lab File: 3a135324.D
Acq: 5 Oct 2014 2:58 pm

Tgt Ion: 91 Resp: 4571

Ion	Ratio	Lower	Upper
91	100		
106	37.2	1.1	61.1
65	19.5	0.0	38.2

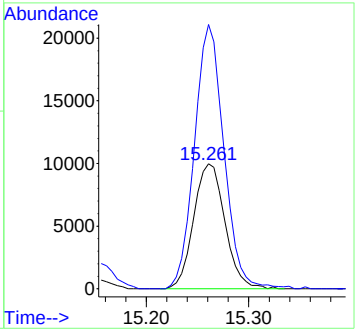


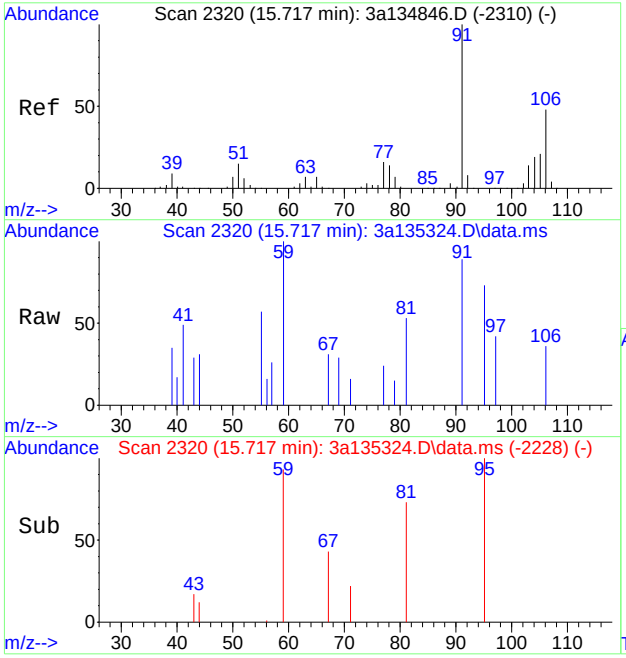


#98
m,p-xylene
Concen: 10.31 ug/L
RT: 15.261 min Scan# 2233
Delta R.T. 0.000 min
Lab File: 3a135324.D
Acq: 5 Oct 2014 2:58 pm

Tgt Ion:106 Resp: 21173

Ion	Ratio	Lower	Upper
106	100		
91	211.6	173.5	233.5

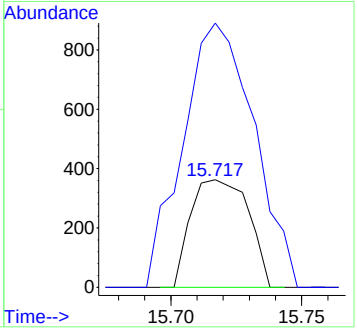


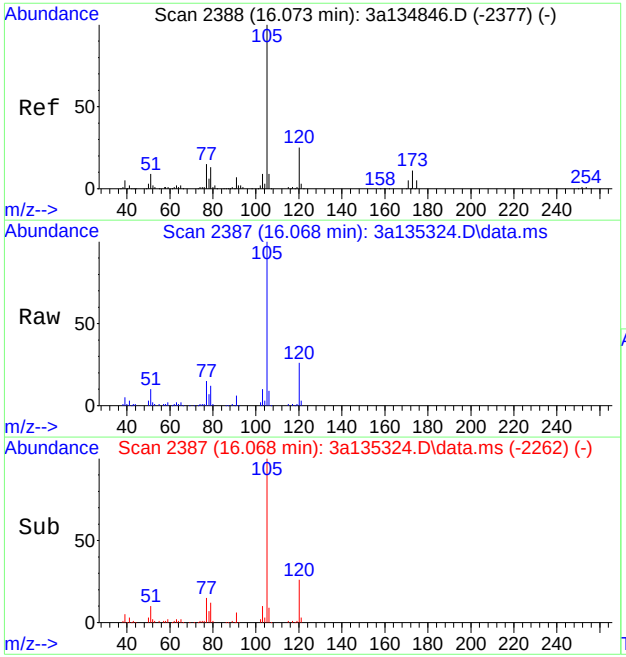


#99
o-xylene
Concen: 0.24 ug/L
RT: 15.717 min Scan# 2320
Delta R.T. 0.000 min
Lab File: 3a135324.D
Acq: 5 Oct 2014 2:58 pm

Tgt Ion:106 Resp: 558

Ion	Ratio	Lower	Upper
106	100		
91	193.1	180.2	240.2

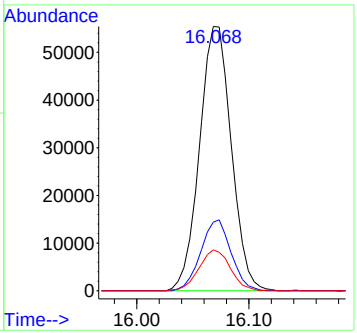




#103
isopropylbenzene
Concen: 16.89 ug/L
RT: 16.068 min Scan# 2387
Delta R.T. -0.005 min
Lab File: 3a135324.D
Acq: 5 Oct 2014 2:58 pm

Tgt Ion:105 Resp: 109422

Ion	Ratio	Lower	Upper
105	100		
120	26.0	0.0	55.3
77	15.5	0.0	44.7



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135324.D
Acq On : 5 Oct 2014 2:58 pm
Operator : JemimaM
Sample : jb77674-5
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

Signal : TIC: 3a135324.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.570	176	194	240	rBV2	17952	162042	6.61%	0.638%
2	4.932	240	263	339	rVV3	53297	508223	20.73%	2.002%
3	6.064	449	479	552	rBV	455944	2451110	100.00%	9.654%
4	6.552	557	572	610	rVV2	104074	456345	18.62%	1.797%
5	6.825	614	624	642	rVB	10158	31446	1.28%	0.124%
6	7.155	674	687	719	rVB2	72138	246673	10.06%	0.972%
7	7.433	719	740	767	rVB2	31096	141730	5.78%	0.558%
8	8.225	866	891	907	rVV2	218887	1020909	41.65%	4.021%
9	8.403	907	925	955	rVV5	77169	471631	19.24%	1.858%
10	8.644	955	971	1007	rVB	153642	625992	25.54%	2.466%
11	9.032	1034	1045	1066	rVB	40359	124858	5.09%	0.492%
12	9.347	1094	1105	1121	rVV2	38280	113598	4.63%	0.447%
13	9.483	1121	1131	1148	rVB3	21442	66339	2.71%	0.261%
14	9.640	1148	1161	1163	rBV2	6294	16160	0.66%	0.064%
15	9.714	1163	1175	1183	rVV4	35798	126916	5.18%	0.500%
16	9.787	1183	1189	1210	rVB3	28366	98287	4.01%	0.387%
17	9.992	1213	1228	1264	rVB	301440	983350	40.12%	3.873%
18	10.448	1292	1315	1324	rBV5	18481	66168	2.70%	0.261%
19	10.547	1324	1334	1342	rVV6	11350	39911	1.63%	0.157%
20	10.626	1342	1349	1355	rVV3	20173	51238	2.09%	0.202%
21	10.694	1355	1362	1368	rVV2	34356	90709	3.70%	0.357%
22	10.767	1368	1376	1383	rVV	172534	438611	17.89%	1.728%
23	10.851	1383	1392	1427	rVB4	173104	989229	40.36%	3.896%
24	11.093	1427	1438	1446	rBV4	10737	37665	1.54%	0.148%
25	11.145	1446	1448	1454	rVV5	7262	14514	0.59%	0.057%
26	11.287	1454	1475	1495	rVV6	184163	922334	37.63%	3.633%
27	11.433	1495	1503	1524	rVB8	45329	167993	6.85%	0.662%
28	11.622	1528	1539	1551	rBV2	20968	80191	3.27%	0.316%
29	11.737	1551	1561	1572	rVV	190895	478044	19.50%	1.883%
30	11.811	1572	1575	1586	rVB3	11540	22321	0.91%	0.088%
31	11.921	1586	1596	1608	rVB2	47467	116611	4.76%	0.459%
32	12.021	1608	1615	1625	rVB2	5896	14462	0.59%	0.057%
33	12.125	1625	1635	1639	rBV4	9565	22986	0.94%	0.091%
34	12.220	1639	1653	1656	rVV3	54015	165149	6.74%	0.650%
35	12.262	1656	1661	1685	rVB3	85868	241379	9.85%	0.951%
36	12.440	1685	1695	1718	rVB5	28915	121936	4.97%	0.480%
37	12.660	1718	1737	1752	rBV3	80195	237798	9.70%	0.937%
38	12.828	1752	1769	1792	rVB	141486	451841	18.43%	1.780%
39	12.996	1792	1801	1810	rBV6	16545	49754	2.03%	0.196%
40	13.085	1810	1818	1828	rVB6	14754	44380	1.81%	0.175%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135324.D
Acq On : 5 Oct 2014 2:58 pm
Operator : JemimaM
Sample : jb77674-5
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

41	13.258	1839	1851	1858	rBV5	27341	82465	3.36%	0.325%
42	13.337	1858	1866	1879	rVV3	18236	54457	2.22%	0.214%
43	13.447	1879	1887	1897	rVV	271723	605062	24.69%	2.383%
44	13.525	1897	1902	1918	rVB2	38432	130062	5.31%	0.512%
45	13.646	1918	1925	1936	rVB3	8758	20744	0.85%	0.082%
46	13.767	1939	1948	1955	rBV4	9386	20228	0.83%	0.080%
47	13.850	1955	1964	1981	rVB5	32051	121956	4.98%	0.480%
48	14.113	2003	2014	2019	rBV5	6605	18585	0.76%	0.073%
49	14.160	2019	2023	2034	rVB6	5510	14787	0.60%	0.058%
50	14.385	2053	2066	2081	rVB6	15643	59581	2.43%	0.235%
51	14.611	2103	2109	2116	rVB5	6650	14903	0.61%	0.059%
52	14.695	2116	2125	2131	rBV4	5629	15768	0.64%	0.062%
53	14.941	2163	2172	2188	rVB8	12481	40741	1.66%	0.160%
54	15.083	2188	2199	2208	rBV	250460	519305	21.19%	2.045%
55	15.140	2208	2210	2221	rVV2	17615	33084	1.35%	0.130%
56	15.261	2221	2233	2244	rVV	59064	127185	5.19%	0.501%
57	15.712	2309	2319	2326	rBV7	6701	17615	0.72%	0.069%
58	16.068	2377	2387	2399	rVV	132215	259837	10.60%	1.023%
59	16.173	2399	2407	2421	rVB7	6983	22986	0.94%	0.091%
60	16.320	2421	2435	2461	rBV	207957	415582	16.95%	1.637%
61	16.509	2461	2471	2480	rBV	270635	506498	20.66%	1.995%
62	16.613	2480	2491	2495	rBV	20119	42362	1.73%	0.167%
63	16.661	2495	2500	2512	rVB	20720	41131	1.68%	0.162%
64	16.923	2536	2550	2559	rBV	85879	164102	6.70%	0.646%
65	17.091	2577	2582	2594	rBV5	6805	17695	0.72%	0.070%
66	17.227	2599	2608	2612	rBV	54228	106337	4.34%	0.419%
67	17.269	2612	2616	2623	rVB	57518	99838	4.07%	0.393%
68	17.568	2664	2673	2683	rBV	325599	624528	25.48%	2.460%
69	17.646	2683	2688	2691	rVV	10455	15760	0.64%	0.062%
70	17.704	2691	2699	2709	rVV	427852	779747	31.81%	3.071%
71	17.804	2709	2718	2721	rVV	179693	327044	13.34%	1.288%
72	17.851	2721	2727	2740	rVB2	613439	1143992	46.67%	4.506%
73	17.961	2740	2748	2756	rVB2	72250	138214	5.64%	0.544%
74	18.040	2756	2763	2771	rBV	60718	114860	4.69%	0.452%
75	18.218	2786	2797	2810	rVB	397872	788235	32.16%	3.105%
76	18.359	2810	2824	2831	rBV2	92992	228261	9.31%	0.899%
77	18.443	2831	2840	2856	rVB	294249	603303	24.61%	2.376%
78	18.669	2865	2883	2892	rBV	413754	807498	32.94%	3.181%
79	18.753	2892	2899	2912	rVB	59302	117858	4.81%	0.464%
80	18.878	2912	2923	2931	rBV4	28559	78068	3.19%	0.307%
81	18.962	2931	2939	2943	rBV2	8989	17070	0.70%	0.067%
82	19.015	2943	2949	2955	rBV2	25761	45403	1.85%	0.179%
83	19.093	2955	2964	2973	rBV	332332	617881	25.21%	2.434%
84	19.172	2974	2979	2983	rVV2	13353	21457	0.88%	0.085%
85	19.230	2983	2990	2995	rVV	159679	323515	13.20%	1.274%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135324.D
Acq On : 5 Oct 2014 2:58 pm
Operator : JemimaM
Sample : jb77674-5
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

86	19.293	2995	3002	3027	rVB	494889	1003450	40.94%	3.952%
87	19.565	3027	3054	3066	rBV3	105848	451724	18.43%	1.779%
88	19.660	3066	3072	3077	rVV2	53084	105625	4.31%	0.416%
89	19.707	3077	3081	3087	rVV3	35964	81443	3.32%	0.321%
90	19.775	3087	3094	3106	rVB	99964	215791	8.80%	0.850%
91	19.922	3117	3122	3133	rVB6	11338	26820	1.09%	0.106%
92	20.142	3149	3164	3173	rBV7	31335	106991	4.37%	0.421%
93	20.242	3173	3183	3195	rVB3	32479	71711	2.93%	0.282%
94	20.383	3195	3210	3220	rBV2	52834	112727	4.60%	0.444%
95	20.624	3248	3256	3272	rVV	31732	82384	3.36%	0.324%
96	20.745	3272	3279	3287	rVV	19550	42115	1.72%	0.166%
97	20.818	3287	3293	3300	rVV6	7234	20087	0.82%	0.079%
98	20.897	3300	3308	3328	rVB5	27696	62160	2.54%	0.245%
99	21.437	3400	3411	3435	rVB2	18325	53482	2.18%	0.211%
100	21.725	3456	3466	3539	rVV3	32767	75956	3.10%	0.299%

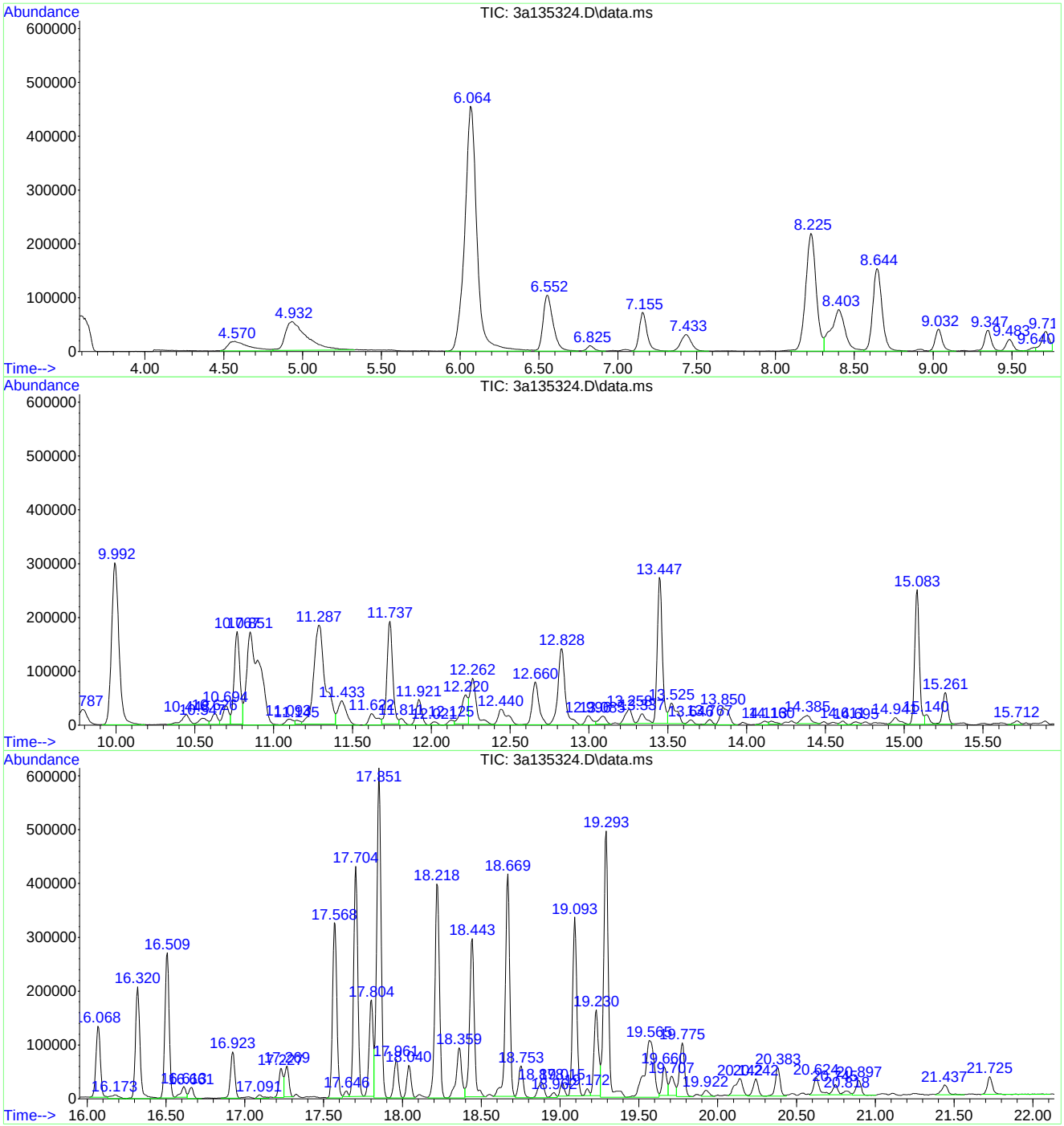
Sum of corrected areas: 25388889

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135324.D
Acq On : 5 Oct 2014 2:58 pm
Operator : JemimaM
Sample : jb77674-5
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135324.D
Acq On : 5 Oct 2014 2:58 pm
Operator : JemimaM
Sample : jb77674-5
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

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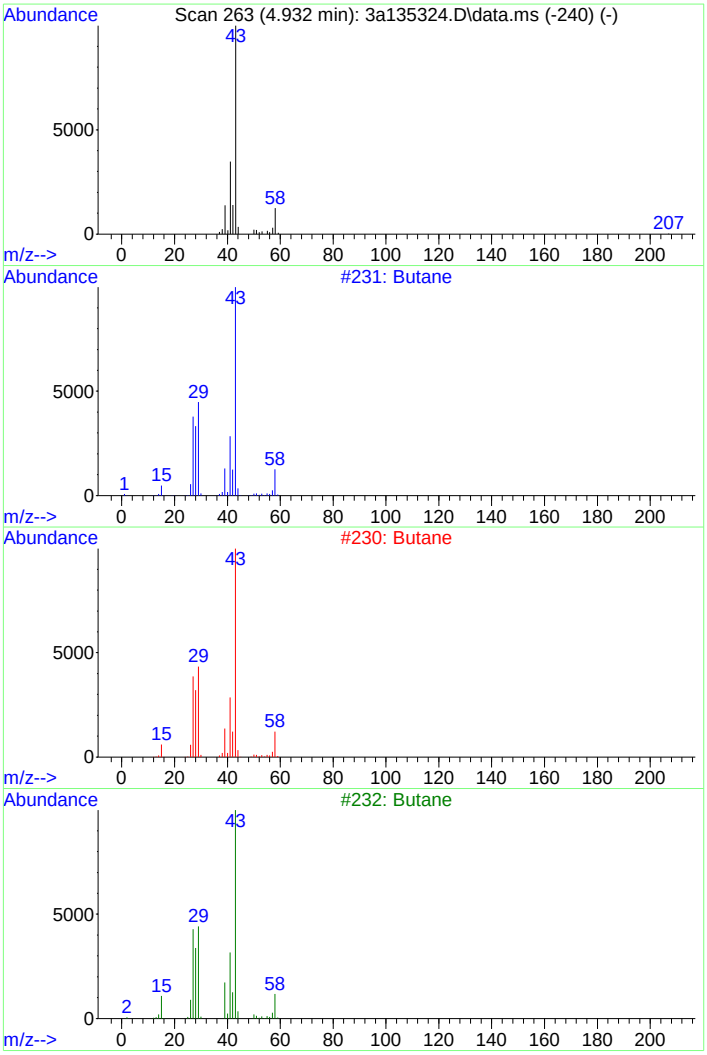
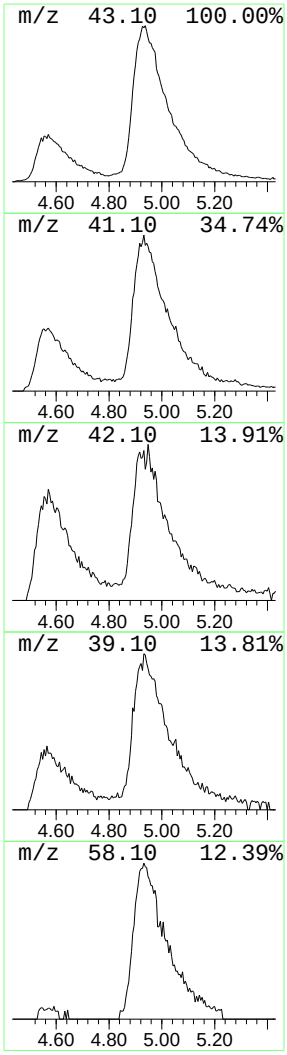
Peak Number 1 alkane Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.932	57.94 ug/L	508223	pentafluorobenzene	10.768

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	80
2	Butane	58	C4H10	000106-97-8	80
3	Butane	58	C4H10	000106-97-8	58
4	Isobutane	58	C4H10	000075-28-5	9
5	Propane, 1-nitro-	89	C3H7NO2	000108-03-2	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135324.D
Acq On : 5 Oct 2014 2:58 pm
Operator : JemimaM
Sample : jb77674-5
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

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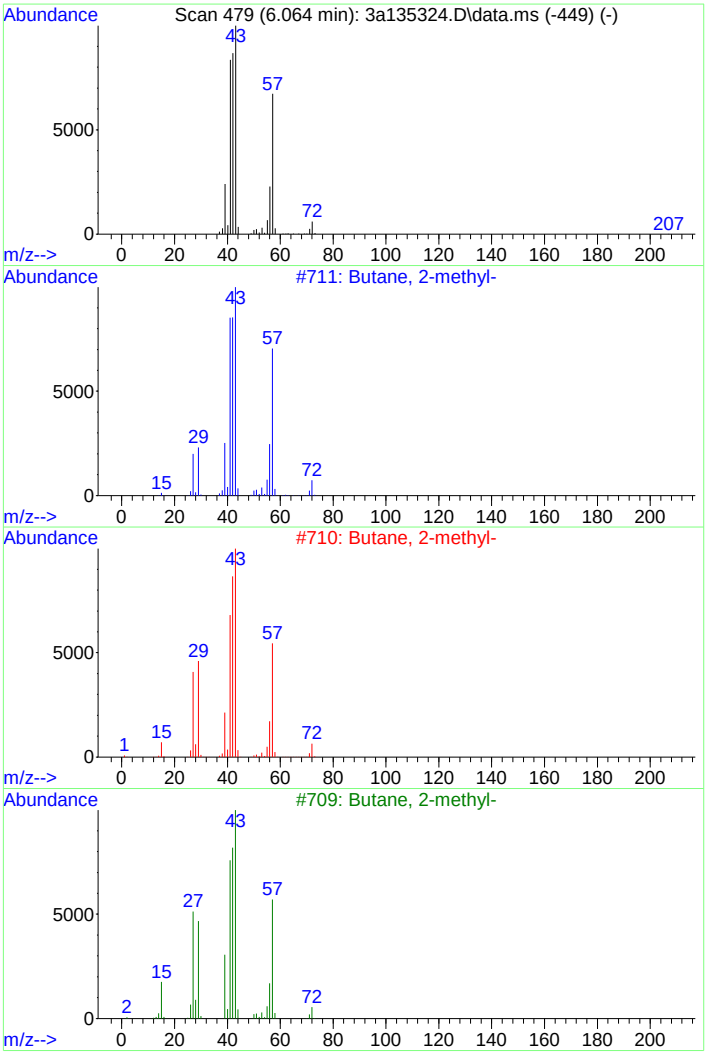
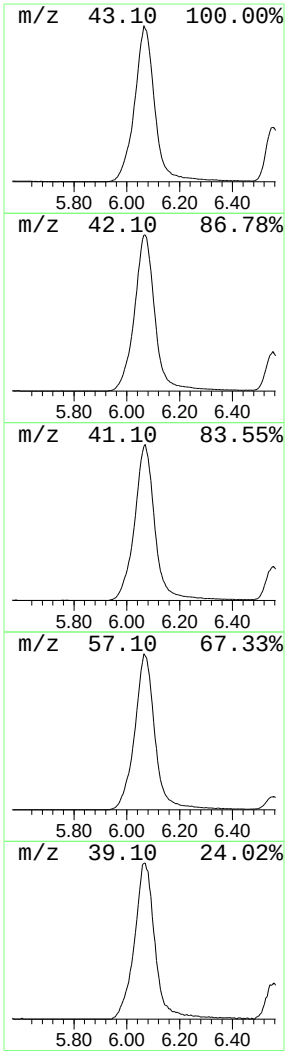
Peak Number 2 alkane Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.064	279.42 ug/L	2451110	pentafluorobenzene	10.768

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	94
2	Butane, 2-methyl-	72	C5H12	000078-78-4	91
3	Butane, 2-methyl-	72	C5H12	000078-78-4	90
4	Pentane	72	C5H12	000109-66-0	33
5	3-Buten-1-ol	72	C4H8O	000627-27-0	25





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135324.D
Acq On : 5 Oct 2014 2:58 pm
Operator : JemimaM
Sample : jb77674-5
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

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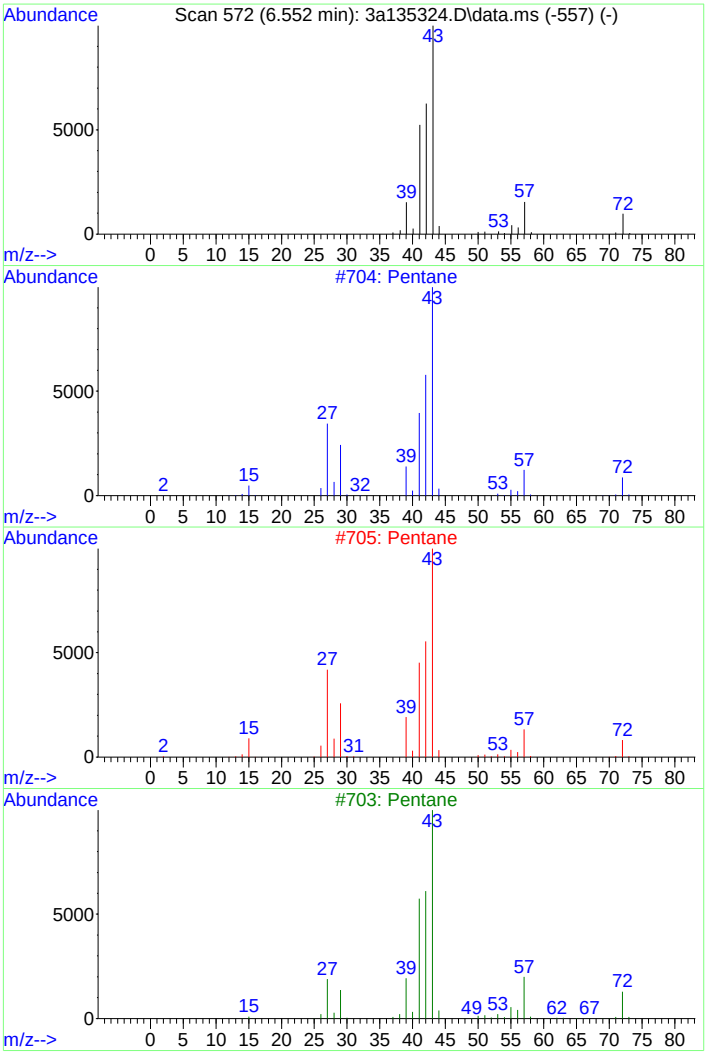
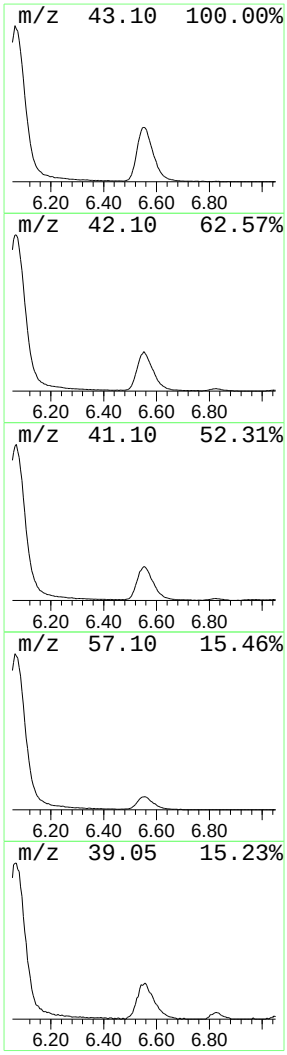
Peak Number 3 alkane-Pentane Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.552	52.02 ug/L	456345	pentafluorobenzene	10.768

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	90
2	Pentane	72	C5H12	000109-66-0	90
3	Pentane	72	C5H12	000109-66-0	86
4	Pentane	72	C5H12	000109-66-0	78
5	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	36





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135324.D
Acq On : 5 Oct 2014 2:58 pm
Operator : JemimaM
Sample : jb77674-5
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

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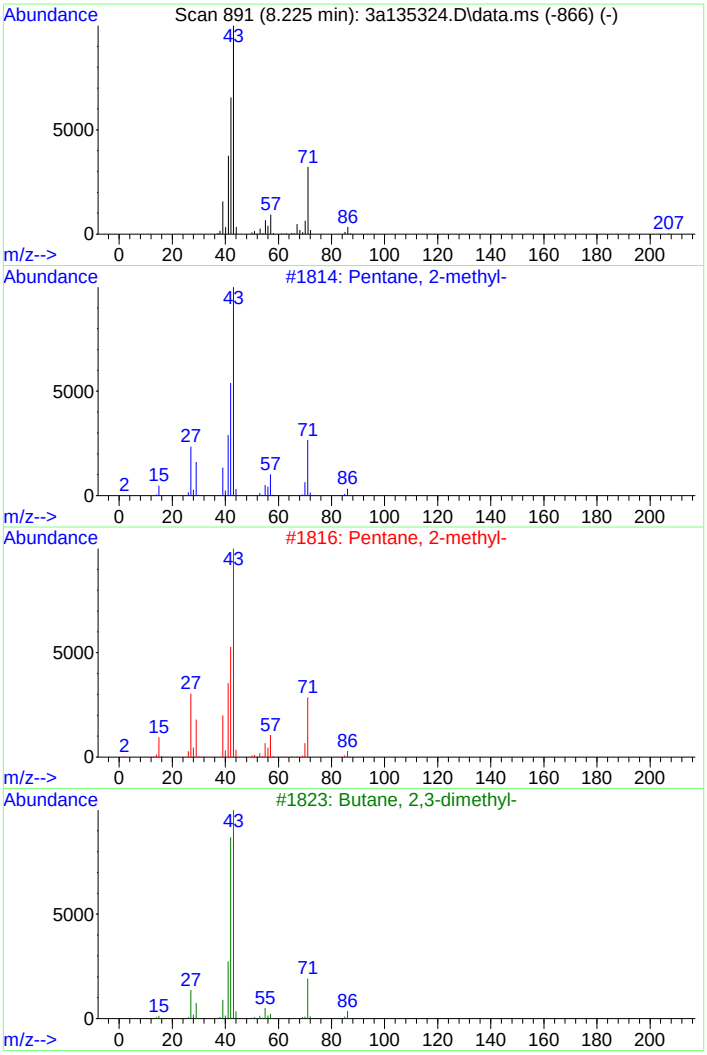
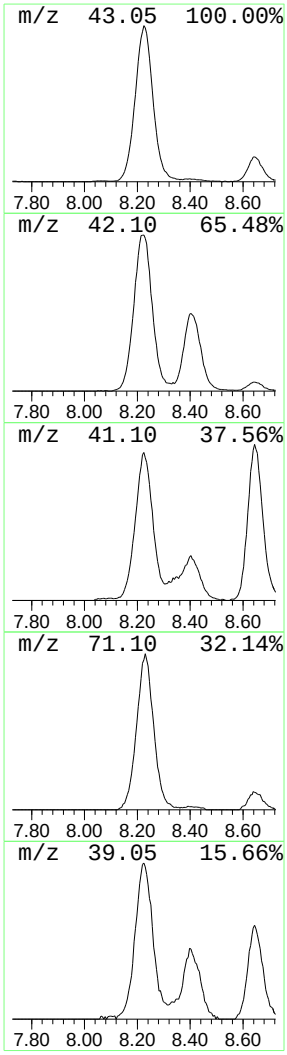
Peak Number 4 alkane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.225	116.38 ug/L	1020910	pentafluorobenzene	10.768

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2-methyl-	86	C6H14	000107-83-5	87
2	Pentane, 2-methyl-	86	C6H14	000107-83-5	86
3	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	53
4	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	52
5	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	50





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135324.D
Acq On : 5 Oct 2014 2:58 pm
Operator : JemimaM
Sample : jb77674-5
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

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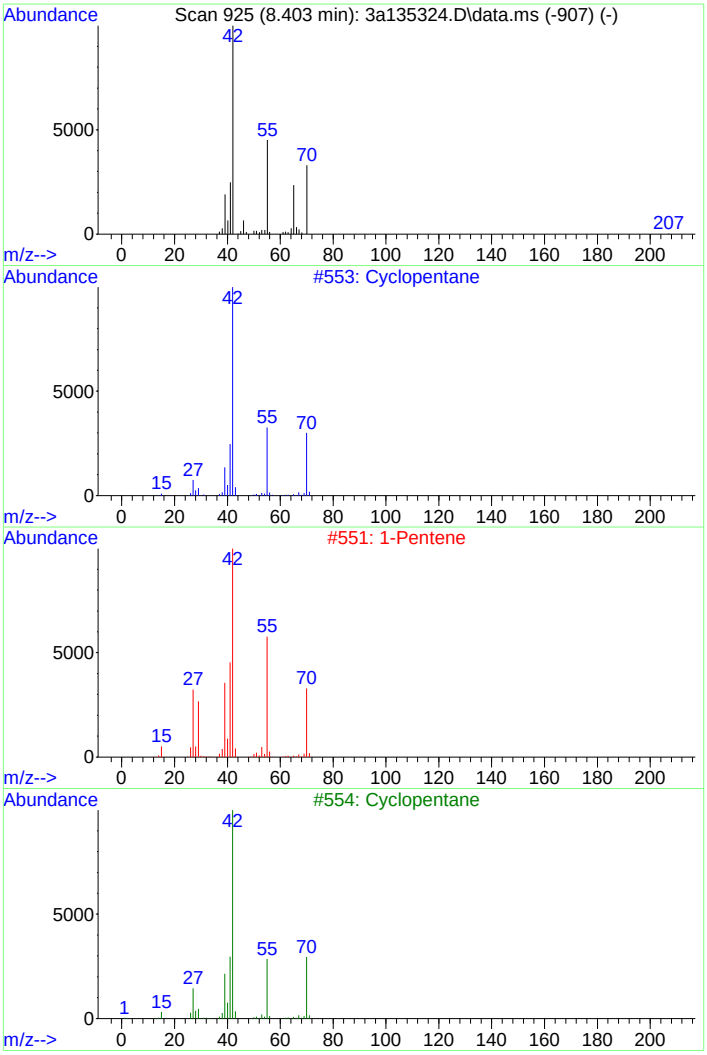
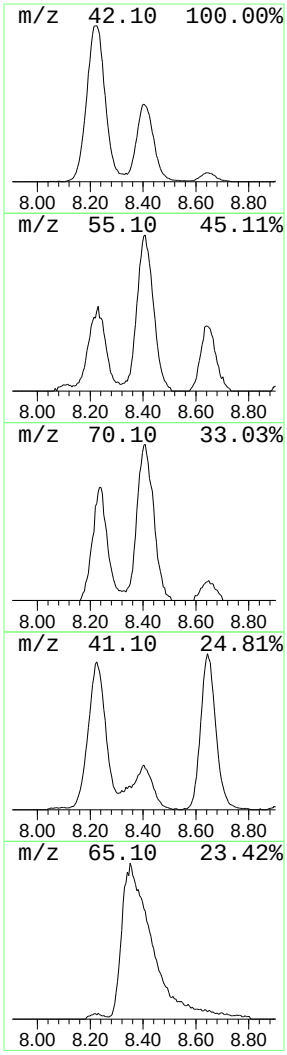
Peak Number 5 alkene Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.403	53.76 ug/L	471631	pentafluorobenzene	10.768

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane	70	C5H10	000287-92-3	64
2	1-Pentene	70	C5H10	000109-67-1	59
3	Cyclopentane	70	C5H10	000287-92-3	59
4	Cyclobutane, methyl-	70	C5H10	000598-61-8	59
5	Cyclobutane, methyl-	70	C5H10	000598-61-8	35





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135324.D
Acq On : 5 Oct 2014 2:58 pm
Operator : JemimaM
Sample : jb77674-5
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

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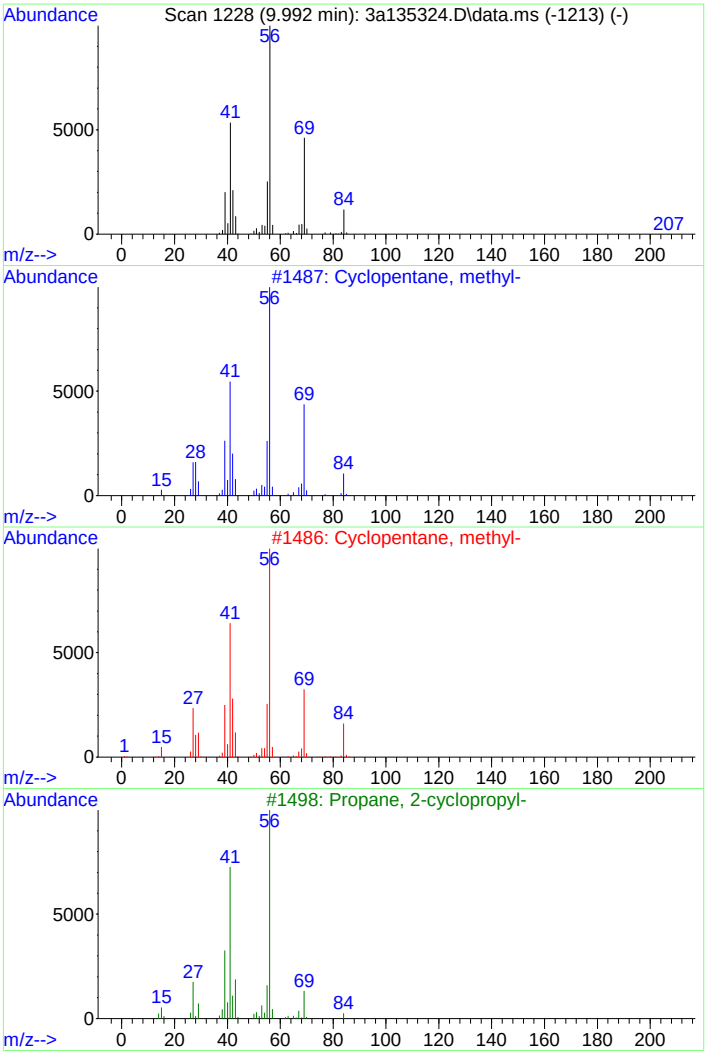
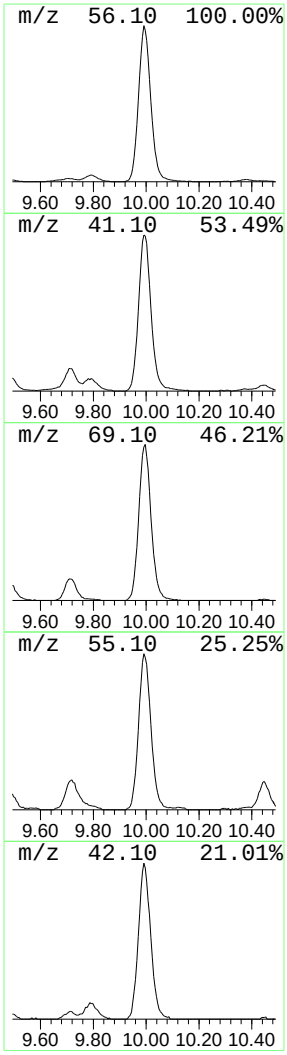
Peak Number 6 alkene Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.992	112.10 ug/L	983350	pentafluorobenzene	10.768

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	94
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	91
3	Propane, 2-cyclopropyl-	84	C6H12	003638-35-5	80
4	1H-Tetrazole, 5-methyl-	84	C2H4N4	004076-36-2	80
5	Cyclopentane, methyl-	84	C6H12	000096-37-7	78





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135324.D
Acq On : 5 Oct 2014 2:58 pm
Operator : JemimaM
Sample : jb77674-5
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

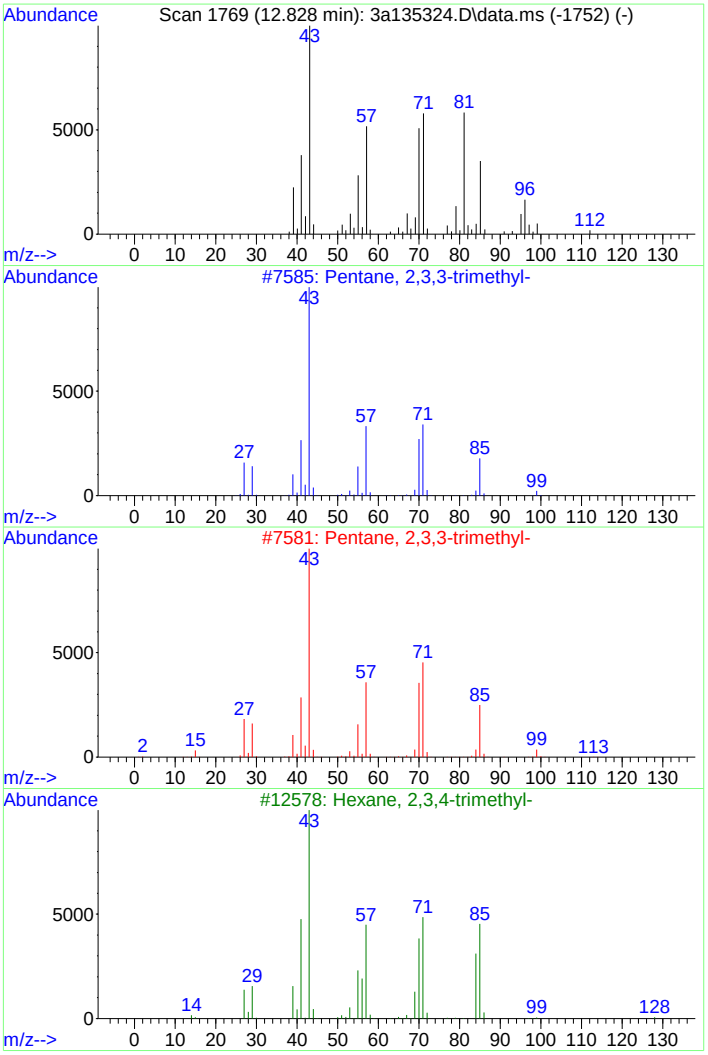
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

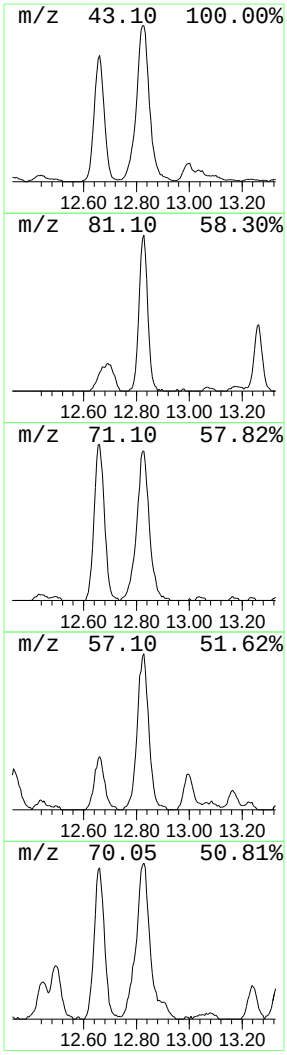
****

Peak Number 7 alkane Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.828	47.26 ug/L	451841	1,4-difluorobenzene	11.738

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	53
2	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	53
3	Hexane, 2,3,4-trimethyl-	128	C9H20	000921-47-1	50
4	Heptane, 4-methyl-	114	C8H18	000589-53-7	43
5	Hexane, 3-methyl-	100	C7H16	000589-34-4	38





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135324.D
Acq On : 5 Oct 2014 2:58 pm
Operator : JemimaM
Sample : jb77674-5
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

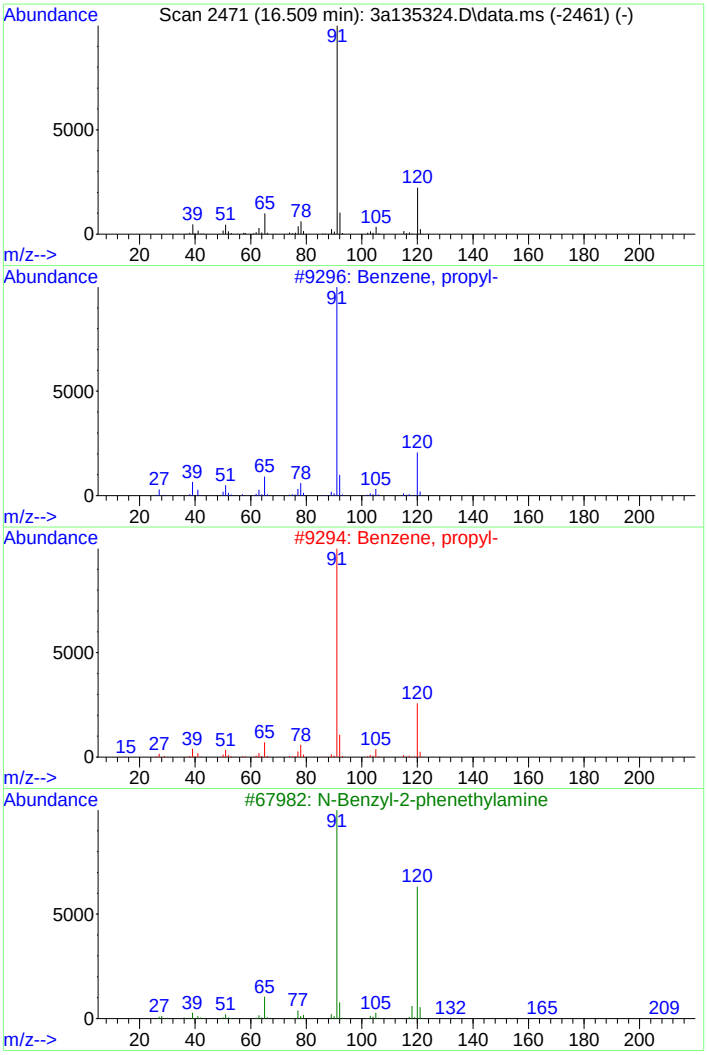
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

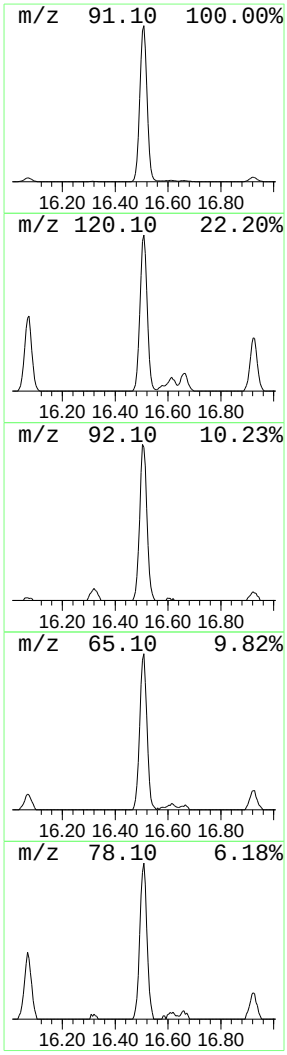
****

Peak Number 8 C3 alkyl benzene Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.509	40.55 ug/L	506498	1,4-dichlorobenzene-d4	17.568

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, propyl-	120	C9H12	000103-65-1	90
2	Benzene, propyl-	120	C9H12	000103-65-1	90
3	N-Benzyl-2-phenethylamine	211	C15H17N	003647-71-0	78
4	1,2-Ethanediamine, N,N'-bis(phen...	240	C16H20N2	000140-28-3	72
5	Propanenitrile, 3-[(phenylmethyl...	160	C10H12N2	000706-03-6	64





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135324.D
Acq On : 5 Oct 2014 2:58 pm
Operator : JemimaM
Sample : jb77674-5
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

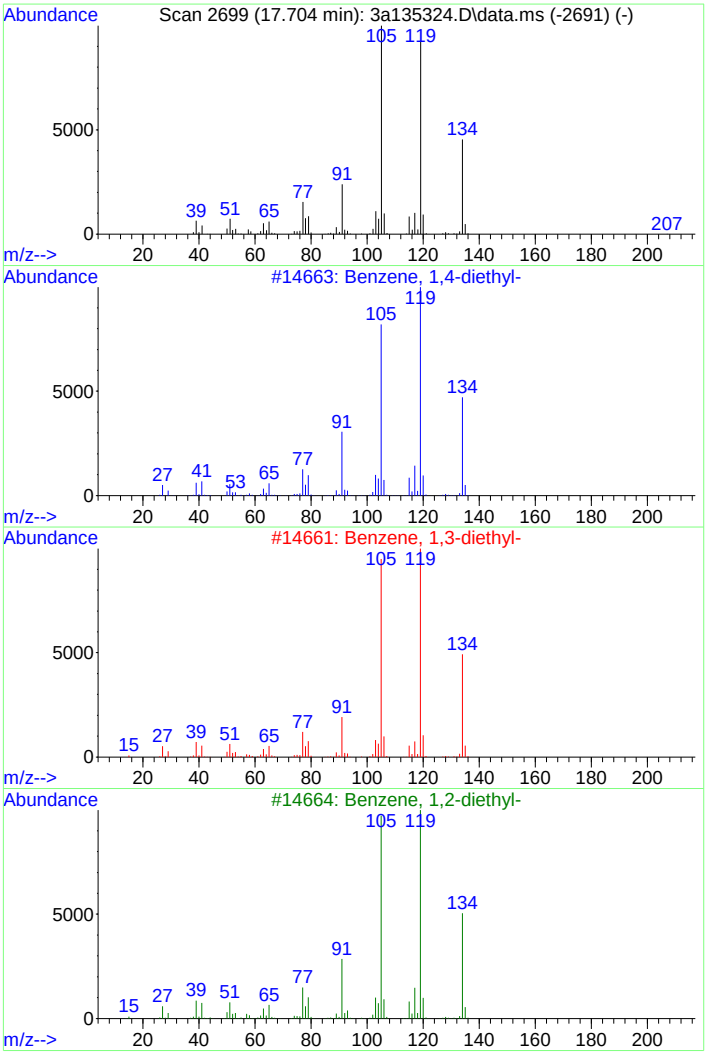
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

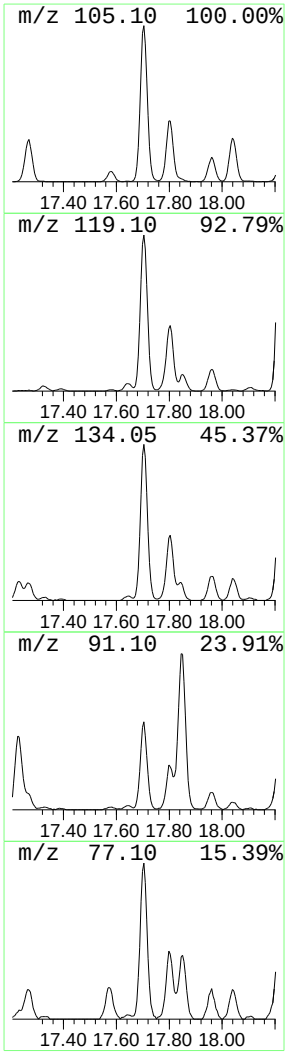
****

Peak Number 9 C4 alkyl benzene Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.704	62.43 ug/L	779747	1,4-dichlorobenzene-d4	17.568

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	97
2	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	97
3	Benzene, 1,2-diethyl-	134	C10H14	000135-01-3	96
4	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	96
5	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135324.D
Acq On : 5 Oct 2014 2:58 pm
Operator : JemimaM
Sample : jb77674-5
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

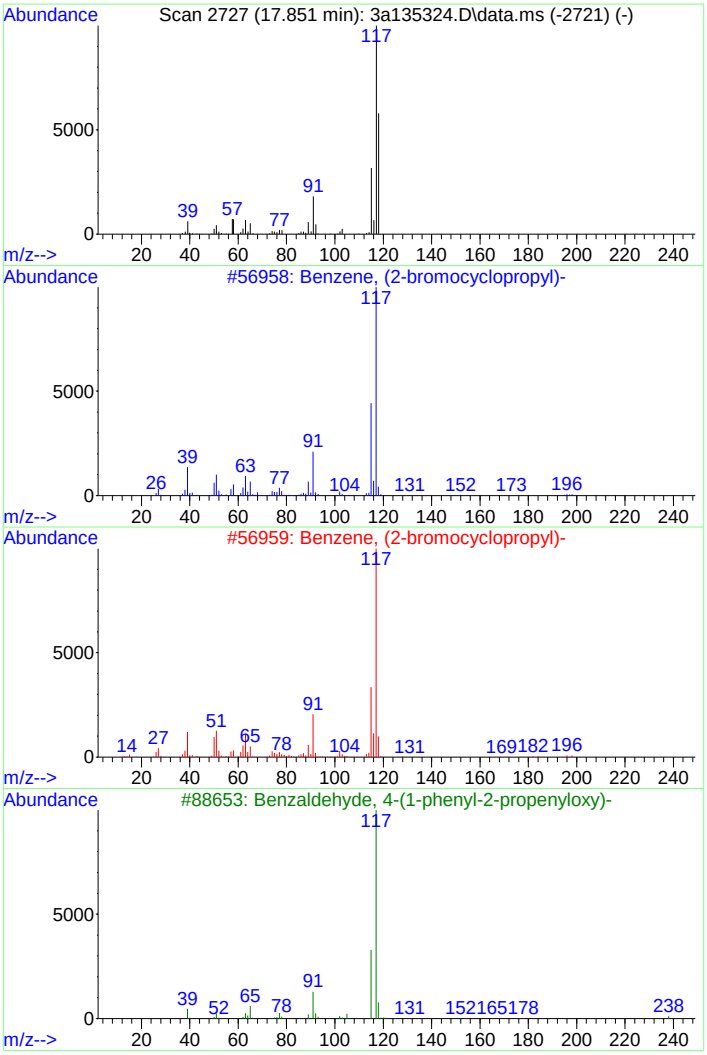
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

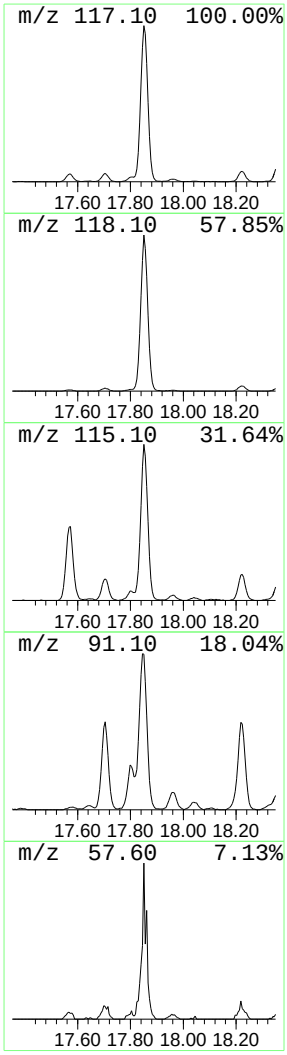
****

Peak Number 10 unknown Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.851	91.59 ug/L	1143990	1,4-dichlorobenzene-d4	17.568

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, (2-bromocyclopropyl)-	196	C9H9Br	036617-02-4	45
2	Benzene, (2-bromocyclopropyl)-	196	C9H9Br	036617-02-4	42
3	Benzaldehyde, 4-(1-phenyl-2-prop...	238	C16H14O2	1000277-56-1	42
4	trans-Cinnamyl bromide	196	C9H9Br	026146-77-0	42
5	Indole	117	C8H7N	000120-72-9	38





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135324.D
Acq On : 5 Oct 2014 2:58 pm
Operator : JemimaM
Sample : jb77674-5
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

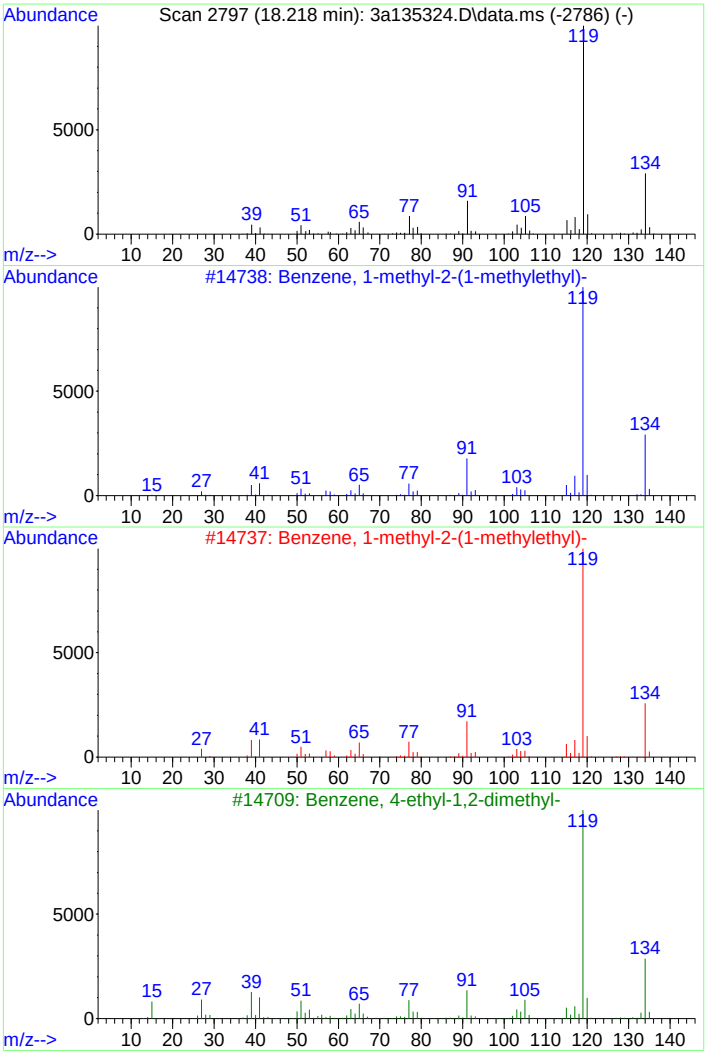
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

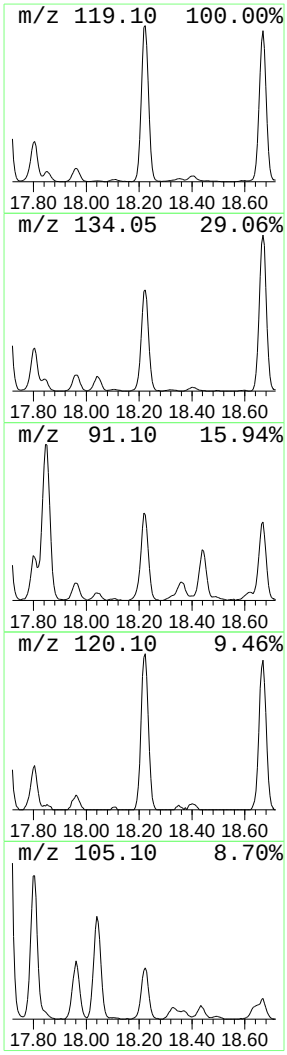
****

Peak Number 11 C4 alkyl benzene Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.218	63.11 ug/L	788235	1,4-dichlorobenzene-d4	17.568

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	97
2	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	97
3	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	95
4	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	95
5	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	95





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135324.D
Acq On : 5 Oct 2014 2:58 pm
Operator : JemimaM
Sample : jb77674-5
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

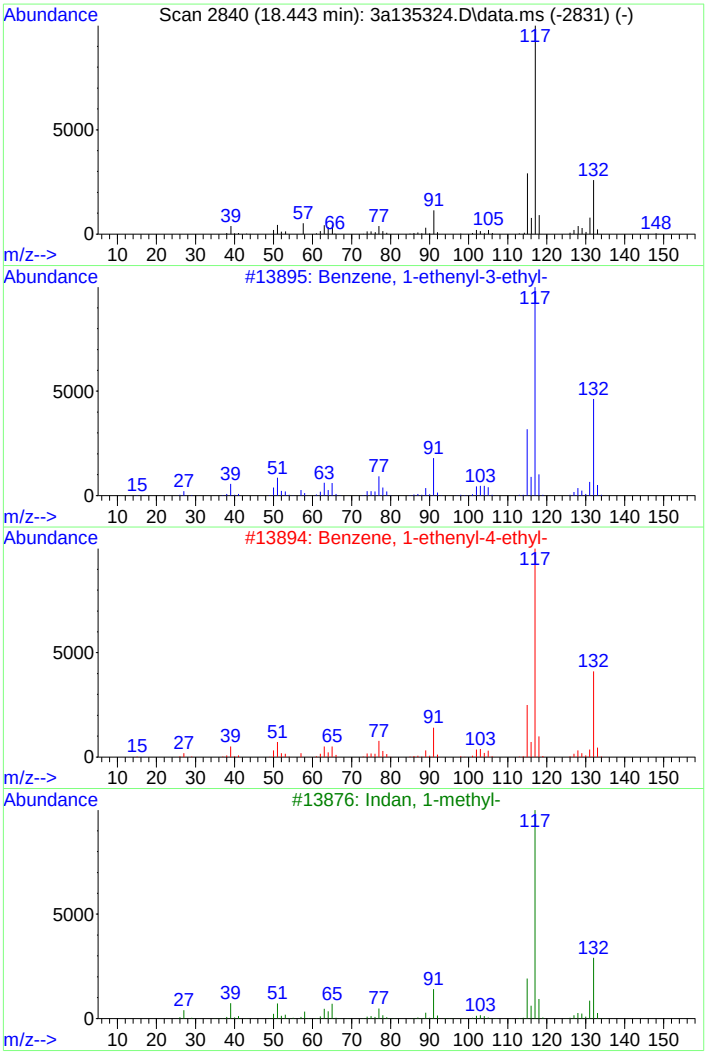
Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

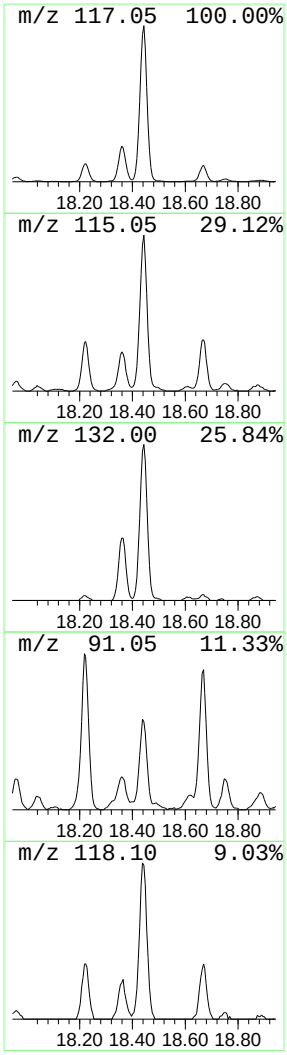
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

****
Peak Number 12 1H-Indene-dihydro-methyl- i... Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.443	48.30 ug/L	603303	1,4-dichlorobenzene-d4	17.568

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethenyl-3-ethyl-	132	C10H12	007525-62-4	91
2	Benzene, 1-ethenyl-4-ethyl-	132	C10H12	003454-07-7	91
3	Indan, 1-methyl-	132	C10H12	000767-58-8	90
4	1H-Indene, 2,3-dihydro-2-methyl-	132	C10H12	000824-63-5	87
5	Benzene, (1-methyl-1-propenyl)-,...	132	C10H12	000768-00-3	87





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135324.D
Acq On : 5 Oct 2014 2:58 pm
Operator : JemimaM
Sample : jb77674-5
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

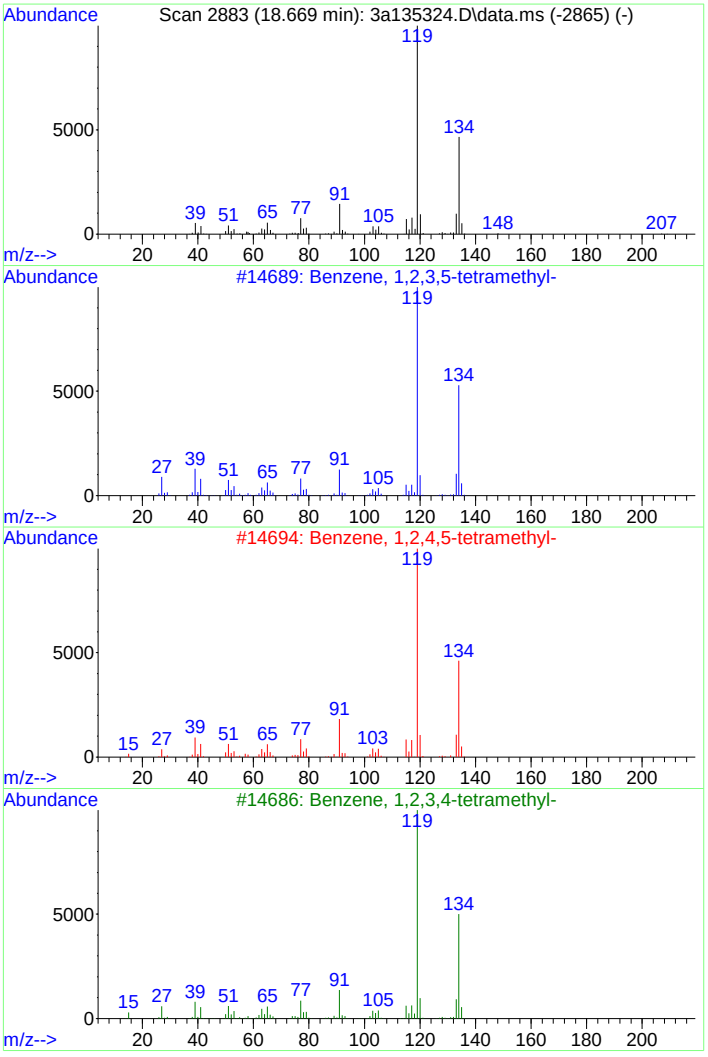
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

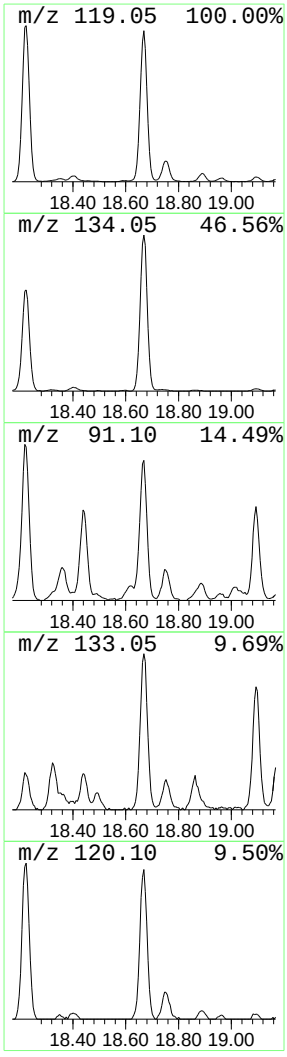
****

Peak Number 13 C4 alkyl benzene Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.669	64.65 ug/L	807498	1,4-dichlorobenzene-d4	17.568

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	97
2	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	97
3	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	97
4	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	97
5	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	97





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135324.D
Acq On : 5 Oct 2014 2:58 pm
Operator : JemimaM
Sample : jb77674-5
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

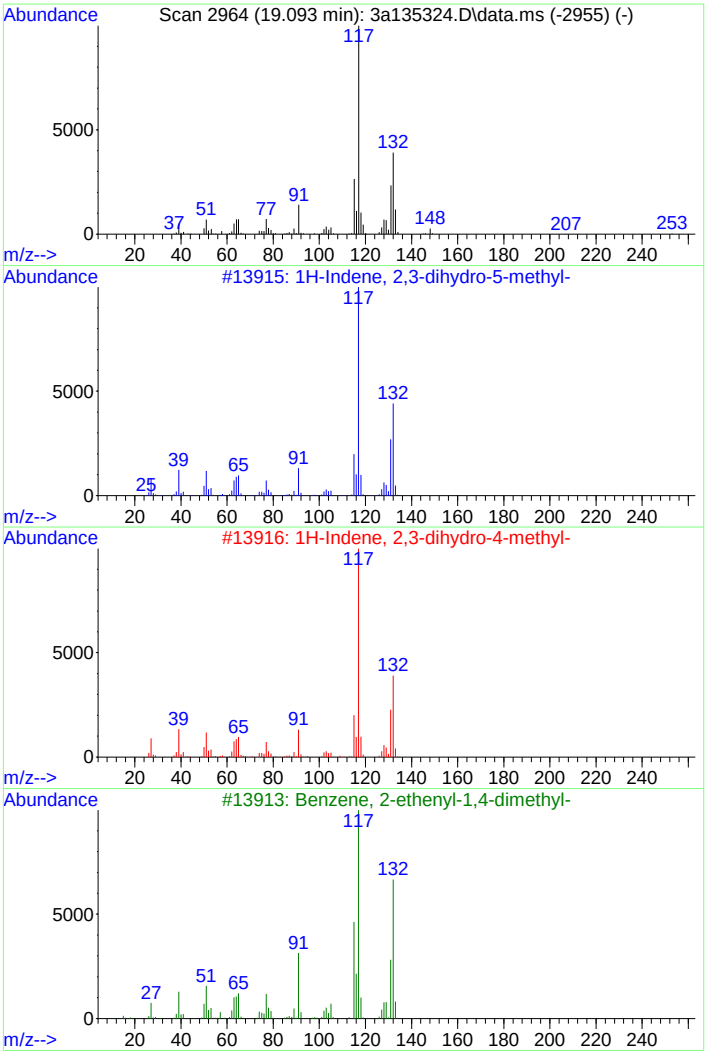
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

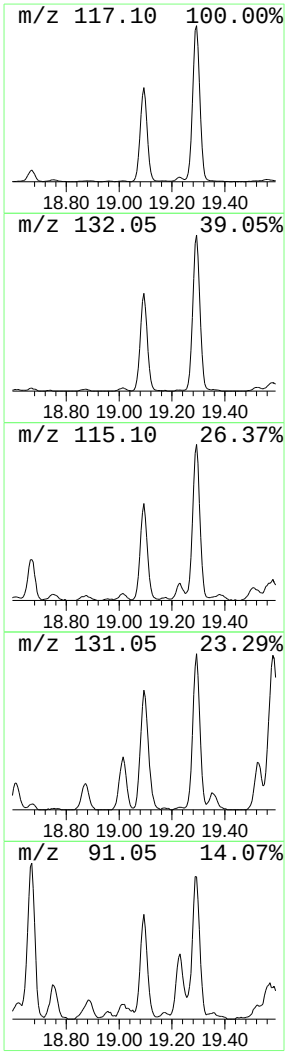
****

Peak Number 14 1H-Indene-dihydro-methyl- i... Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.093	49.47 ug/L	617881	1,4-dichlorobenzene-d4	17.568

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Indene, 2,3-dihydro-5-methyl-	132	C10H12	000874-35-1	93
2	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	93
3	Benzene, 2-ethenyl-1,4-dimethyl-	132	C10H12	002039-89-6	91
4	Benzene, 1-ethenyl-3-ethyl-	132	C10H12	007525-62-4	87
5	Indan, 1-methyl-	132	C10H12	000767-58-8	81





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135324.D
Acq On : 5 Oct 2014 2:58 pm
Operator : JemimaM
Sample : jb77674-5
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

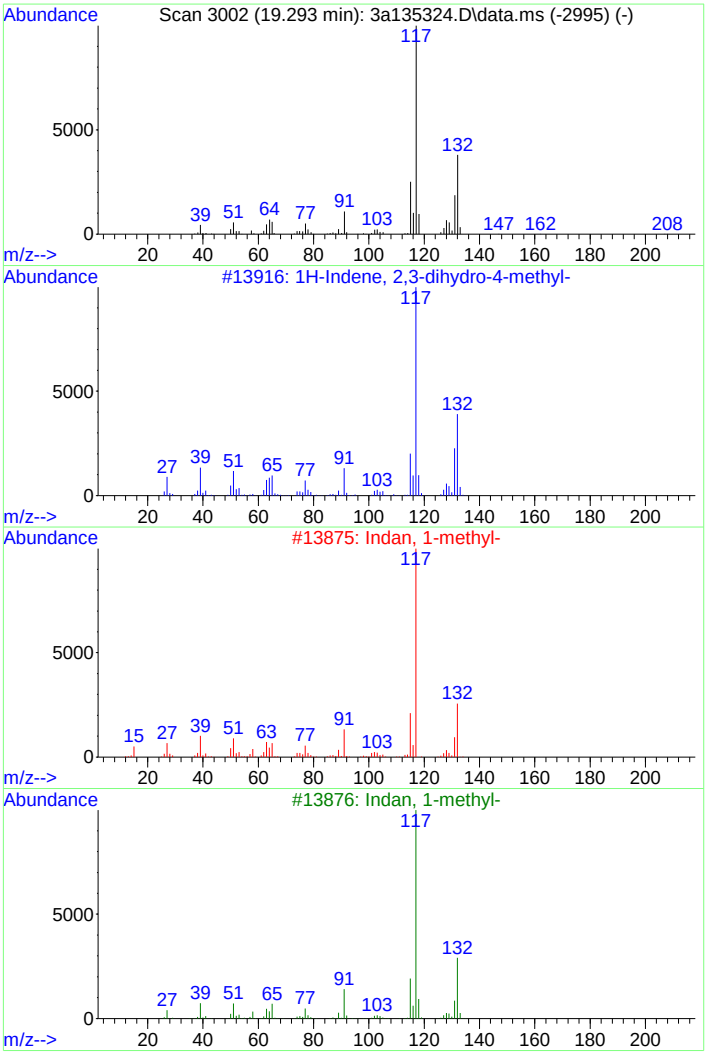
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

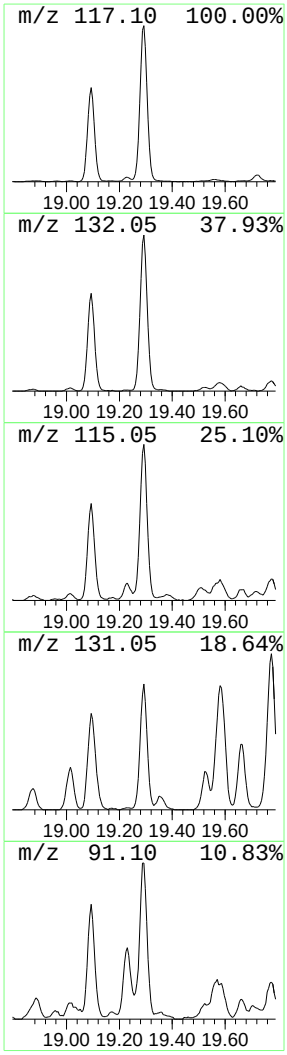
****

Peak Number 15 1H-Indene-dihydro-methyl- i... Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.293	80.34 ug/L	1003450	1,4-dichlorobenzene-d4	17.568

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	95
2	Indan, 1-methyl-	132	C10H12	000767-58-8	93
3	Indan, 1-methyl-	132	C10H12	000767-58-8	91
4	1H-Indene, 2,3-dihydro-5-methyl-	132	C10H12	000874-35-1	90
5	Benzene, 1-ethenyl-4-ethyl-	132	C10H12	003454-07-7	81





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135324.D
Acq On : 5 Oct 2014 2:58 pm
Operator : JemimaM
Sample : jb77674-5
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
alkane	4.932	57.9	ug/L	508223	2	10.768	438611	50.0
alkane	6.064	279.4	ug/L	2451110	2	10.768	438611	50.0
alkane-Pentane	6.552	52.0	ug/L	456345	2	10.768	438611	50.0
alkane	8.225	116.4	ug/L	1020910	2	10.768	438611	50.0
alkene	8.403	53.8	ug/L	471631	2	10.768	438611	50.0
alkene	9.992	112.1	ug/L	983350	2	10.768	438611	50.0
alkane	12.828	47.3	ug/L	451841	3	11.738	478044	50.0
C3 alkyl benzene	16.509	40.5	ug/L	506498	5	17.568	624528	50.0
C4 alkyl benzene	17.704	62.4	ug/L	779747	5	17.568	624528	50.0
unknown	17.851	91.6	ug/L	1143990	5	17.568	624528	50.0
C4 alkyl benzene	18.218	63.1	ug/L	788235	5	17.568	624528	50.0
1H-Indene-dihyd...	18.443	48.3	ug/L	603303	5	17.568	624528	50.0
C4 alkyl benzene	18.669	64.7	ug/L	807498	5	17.568	624528	50.0
1H-Indene-dihyd...	19.093	49.5	ug/L	617881	5	17.568	624528	50.0
1H-Indene-dihyd...	19.293	80.3	ug/L	1003450	5	17.568	624528	50.0

Manual Integrations APPROVED (compounds with "m" flag)
Mei Chen
10/06/14 16:47

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135326.D
Acq On : 5 Oct 2014 3:58 pm
Operator : JemimaM
Sample : jb77674-6
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 06 15:11:58 2014
Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Sep 25 16:01:33 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.356	65	119153	500.00	ug/L	0.00
5) pentafluorobenzene	10.767	168	174034	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.737	114	211636	50.00	ug/L	0.00
87) chlorobenzene-d5	15.082	117	186641	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.568	152	104290	50.00	ug/L	0.00
System Monitoring Compounds						
49) dibromofluoromethane (s)	10.857	113	66927	53.93	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 107.86%			
50) 1,2-dichloroethane-d4 (s)	11.302	65	80240	53.47	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 106.94%			
79) toluene-d8 (s)	13.452	98	255282	57.90	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 115.80%			
104) 4-bromofluorobenzene (s)	16.320	95	93381	55.33	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 110.66%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	8.502	59	4138m	17.76	ug/L	
23) acetone	7.627	43	5655	8.87	ug/L	85
31) methyl tert butyl ether	8.675	73	14225	2.97	ug/L #	1
54) Cyclohexane	10.898	84	58790	24.57	ug/L #	36
63) benzene	11.334	78	433493	82.32	ug/L	98
76) methylcyclohexane	12.267	83	94111	39.82	ug/L	98
80) 4-methyl-2-pentanone	13.263	58	3587	5.32	ug/L #	72
81) toluene	13.525	92	230170	72.26	ug/L	99
97) ethylbenzene	15.151	91	603354	99.47	ug/L	100
98) m,p-xylene	15.261	106	635669	276.27	ug/L	98
99) o-xylene	15.717	106	195762	75.17	ug/L	96
103) isopropylbenzene	16.068	105	68731	10.03	ug/L	98

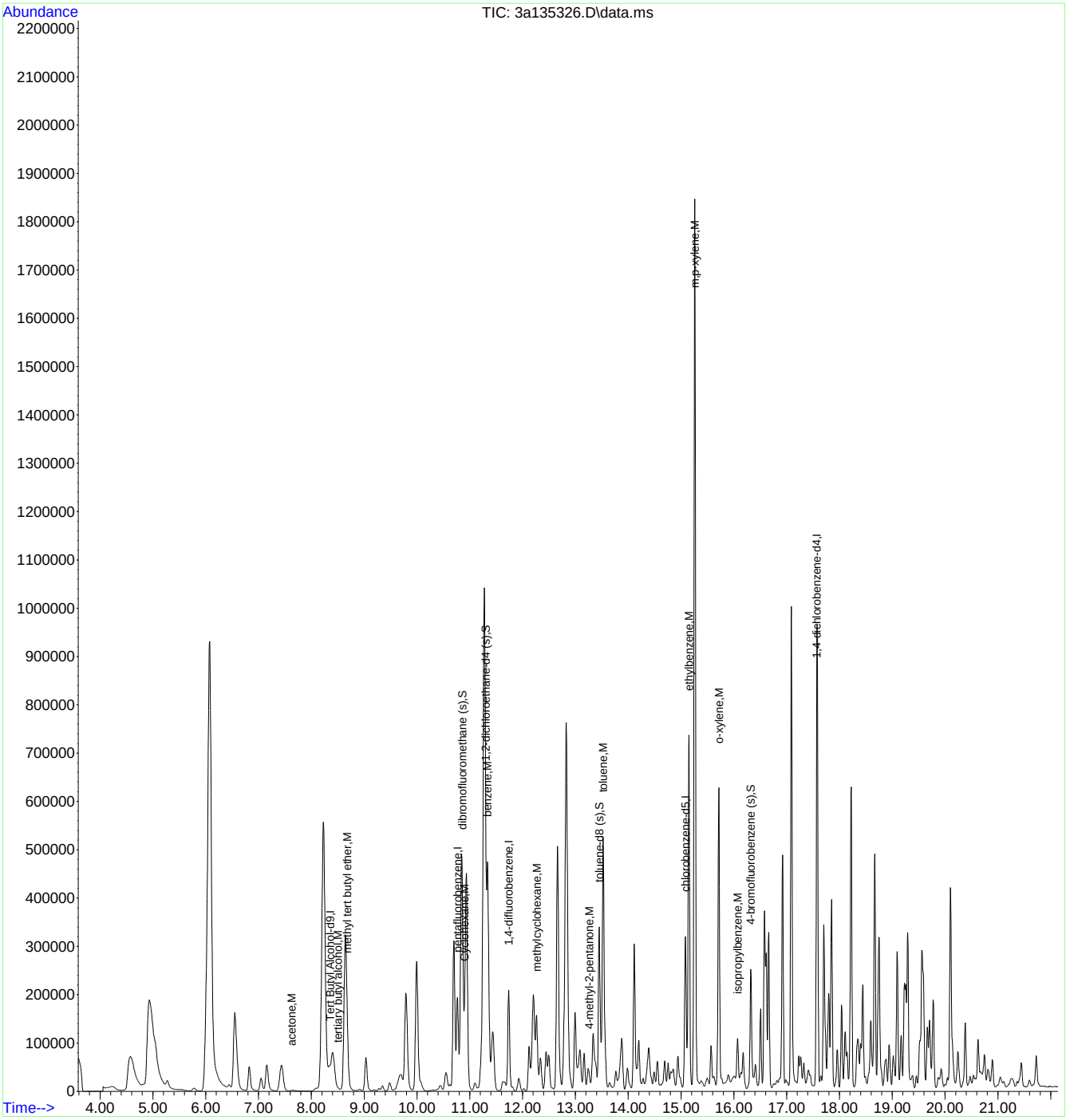
(#) = qualifier out of range (m) = manual integration (+) = signals summed

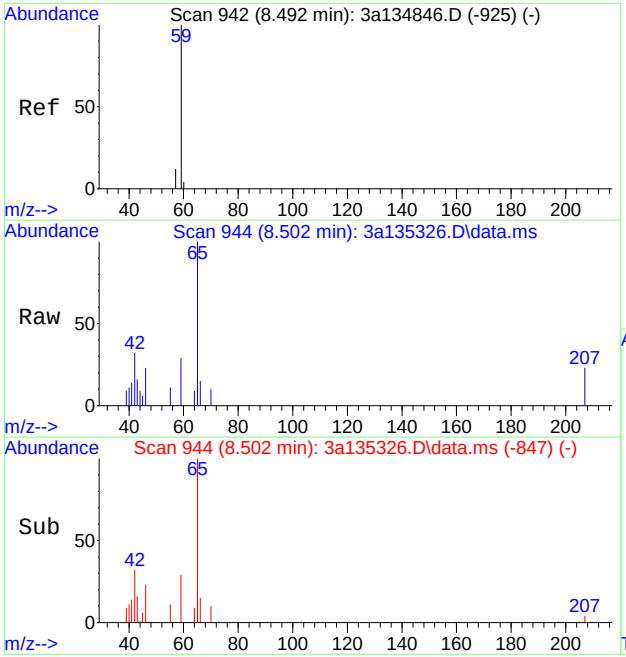
7.11.11
7

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135326.D
Acq On : 5 Oct 2014 3:58 pm
Operator : JemimaM
Sample : jb77674-6
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 06 15:11:58 2014
Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Sep 25 16:01:33 2014
Response via : Initial Calibration

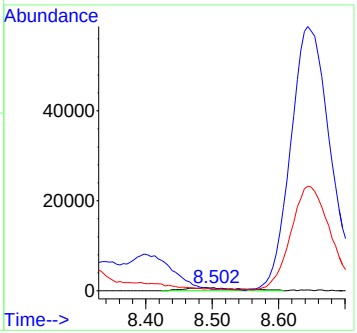


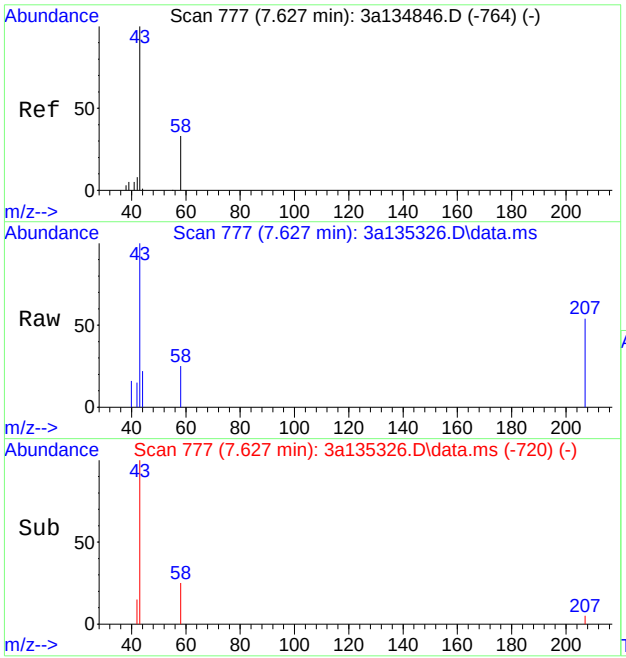


#2
tertiary butyl alcohol
Concen: 17.76 ug/L m
RT: 8.502 min Scan# 944
Delta R.T. 0.010 min
Lab File: 3a135326.D
Acq: 5 Oct 2014 3:58 pm

Tgt Ion: 59 Resp: 4138

Ion	Ratio	Lower	Upper
59	100		
41	47.8	0.0	30.0#
43	55.3	0.0	30.0#

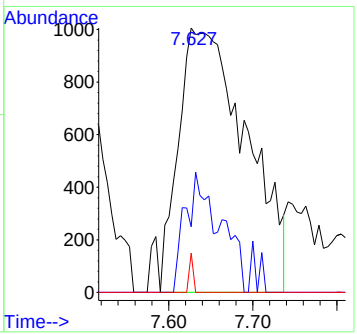


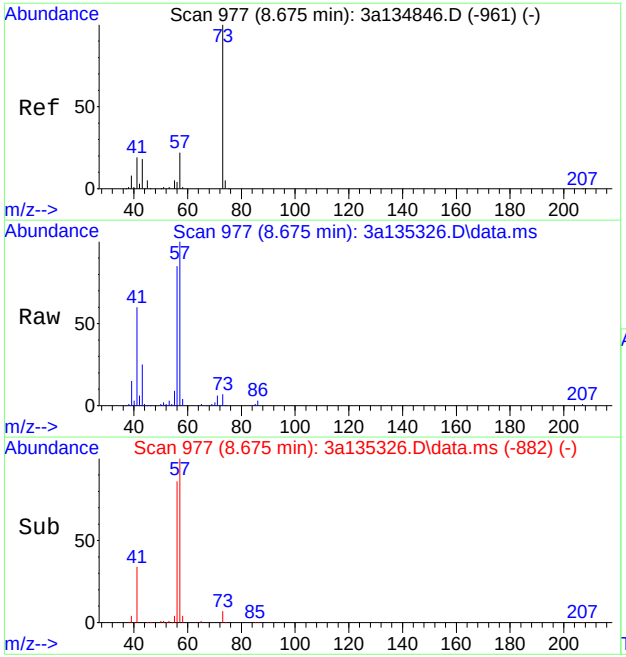


#23
acetone
Concen: 8.87 ug/L
RT: 7.627 min Scan# 777
Delta R.T. -0.000 min
Lab File: 3a135326.D
Acq: 5 Oct 2014 3:58 pm

Tgt Ion: 43 Resp: 5655

Ion	Ratio	Lower	Upper
43	100		
58	24.9	2.5	62.5
42	14.9	0.0	37.9

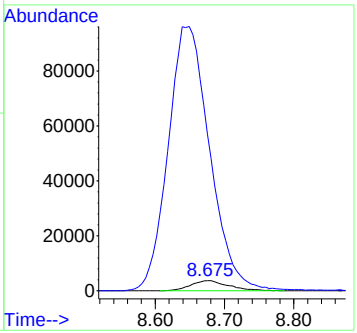


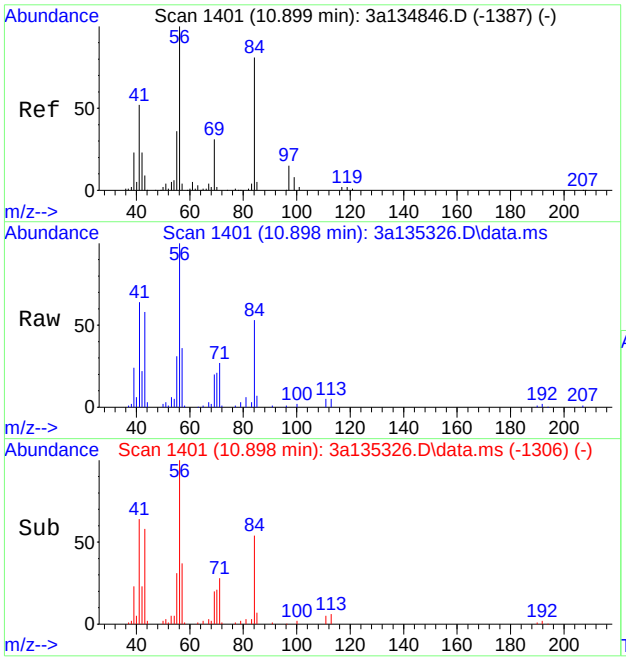


#31
methyl tert butyl ether
Concen: 2.97 ug/L
RT: 8.675 min Scan# 977
Delta R.T. -0.000 min
Lab File: 3a135326.D
Acq: 5 Oct 2014 3:58 pm

Tgt Ion: 73 Resp: 14225

Ion	Ratio	Lower	Upper
73	100		
57	1521.2	0.0	52.6#

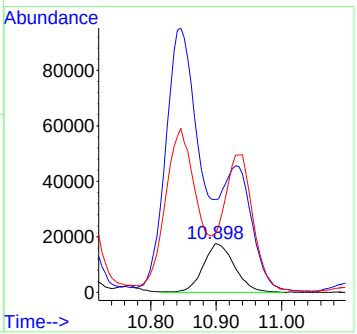


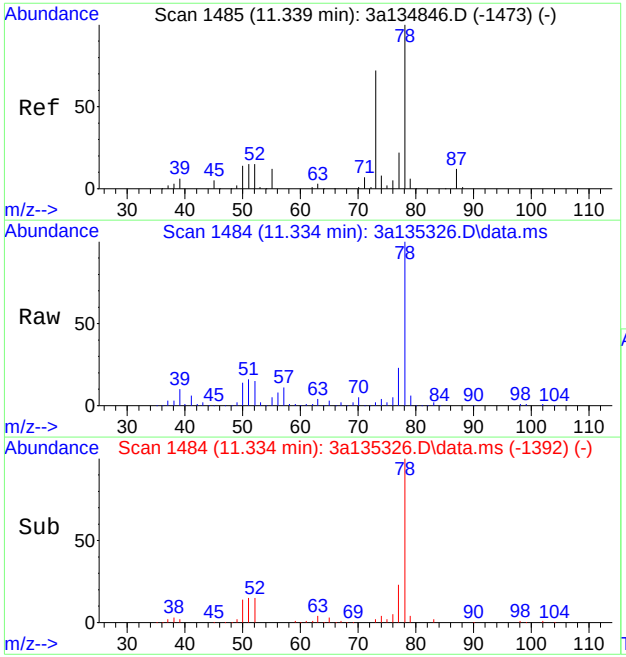


#54
Cyclohexane
Concen: 24.57 ug/L
RT: 10.898 min Scan# 1401
Delta R.T. -0.000 min
Lab File: 3a135326.D
Acq: 5 Oct 2014 3:58 pm

Tgt Ion: 84 Resp: 58790

Ion	Ratio	Lower	Upper
84	100		
56	190.5	92.7	152.7#
41	121.2	34.9	94.9#

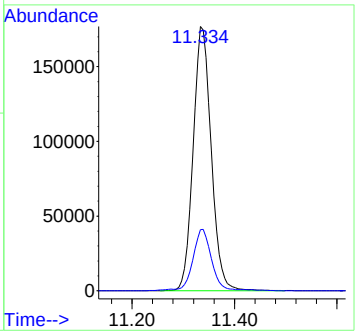


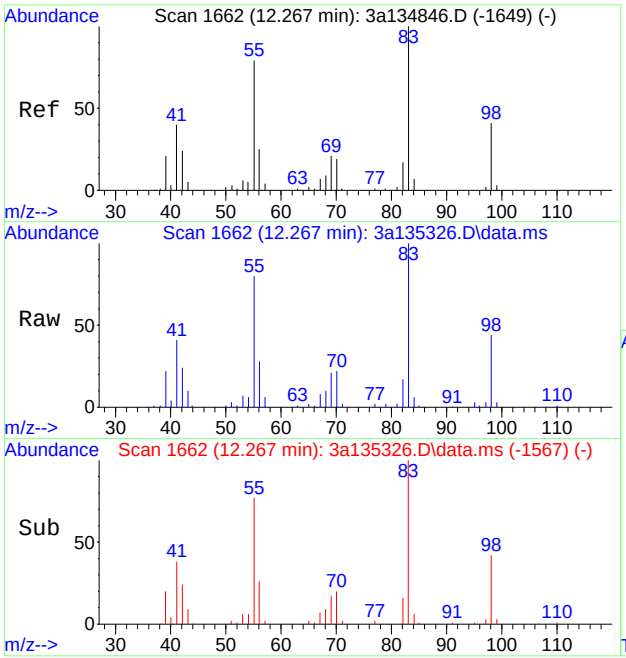


#63
benzene
Concen: 82.32 ug/L
RT: 11.334 min Scan# 1484
Delta R.T. -0.005 min
Lab File: 3a135326.D
Acq: 5 Oct 2014 3:58 pm

Tgt Ion: 78 Resp: 433493

Ion	Ratio	Lower	Upper
78	100		
77	23.1	0.0	52.2

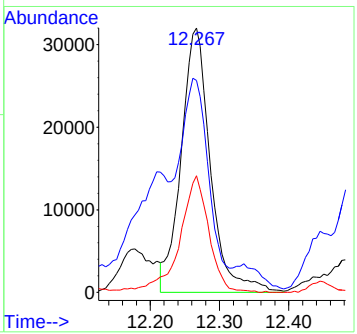




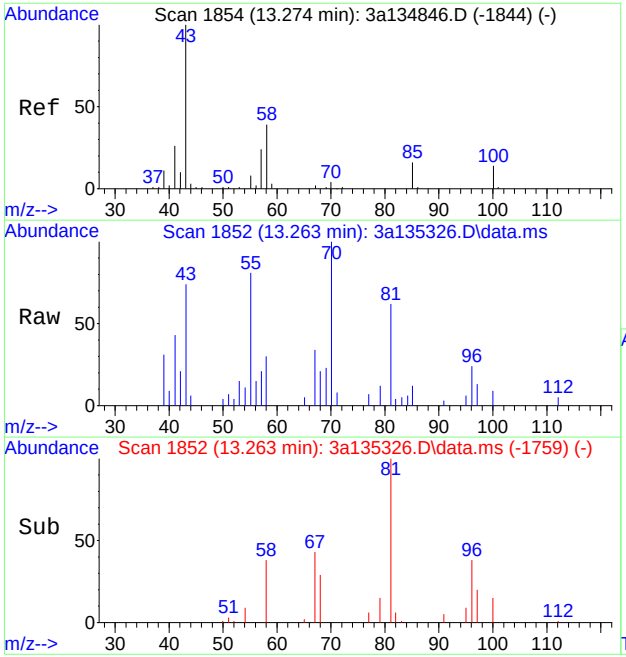
#76
methylcyclohexane
Concen: 39.82 ug/L
RT: 12.267 min Scan# 1662
Delta R.T. -0.000 min
Lab File: 3a135326.D
Acq: 5 Oct 2014 3:58 pm

Tgt Ion: 83 Resp: 94111

Ion	Ratio	Lower	Upper
83	100		
55	79.2	49.2	109.2
98	44.3	11.5	71.5



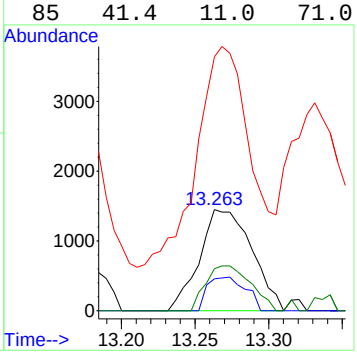
7.11.11

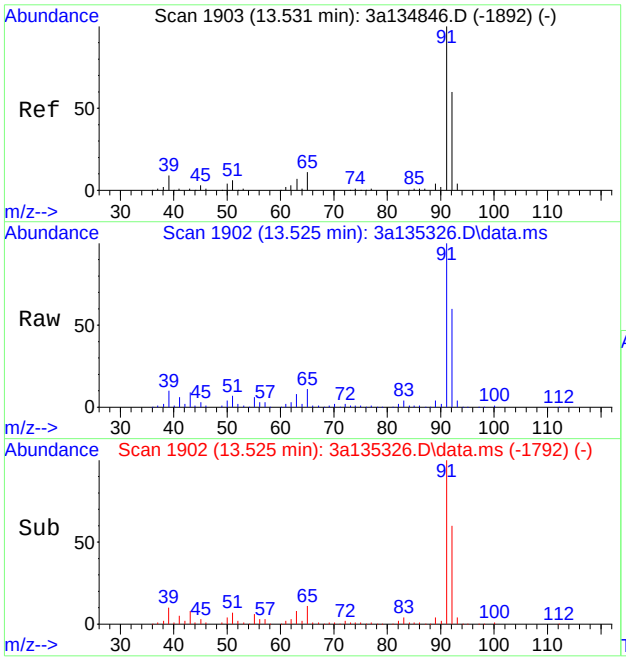


#80
4-methyl-2-pentanone
Concen: 5.32 ug/L
RT: 13.263 min Scan# 1852
Delta R.T. -0.011 min
Lab File: 3a135326.D
Acq: 5 Oct 2014 3:58 pm

Tgt Ion: 58 Resp: 3587

Ion	Ratio	Lower	Upper
58	100		
100	31.6	5.6	65.6
43	192.0	225.1	285.1#
85	41.4	11.0	71.0

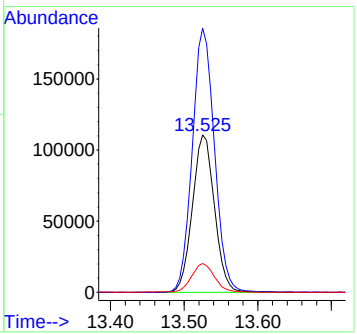


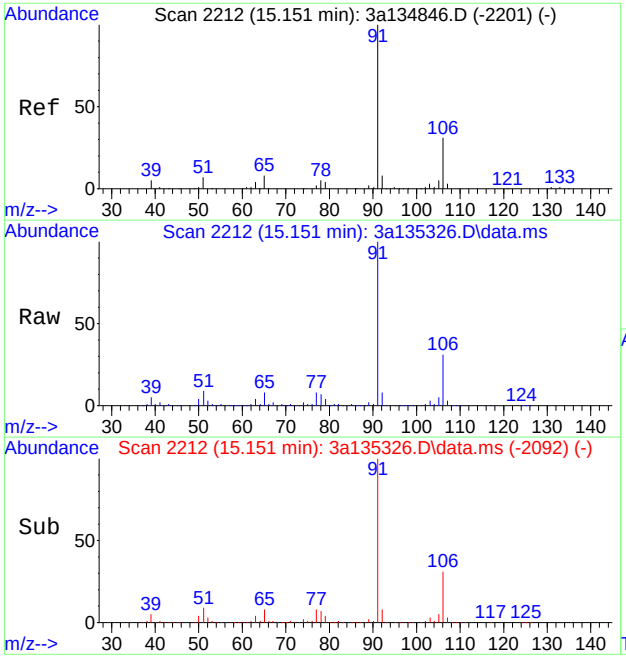


#81
toluene
Concen: 72.26 ug/L
RT: 13.525 min Scan# 1902
Delta R.T. -0.005 min
Lab File: 3a135326.D
Acq: 5 Oct 2014 3:58 pm

Tgt Ion: 92 Resp: 230170

Ion	Ratio	Lower	Upper
92	100		
91	168.0	136.8	196.8
65	18.2	0.0	48.9

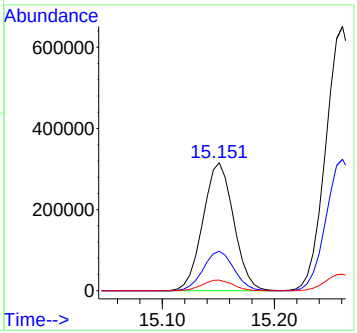


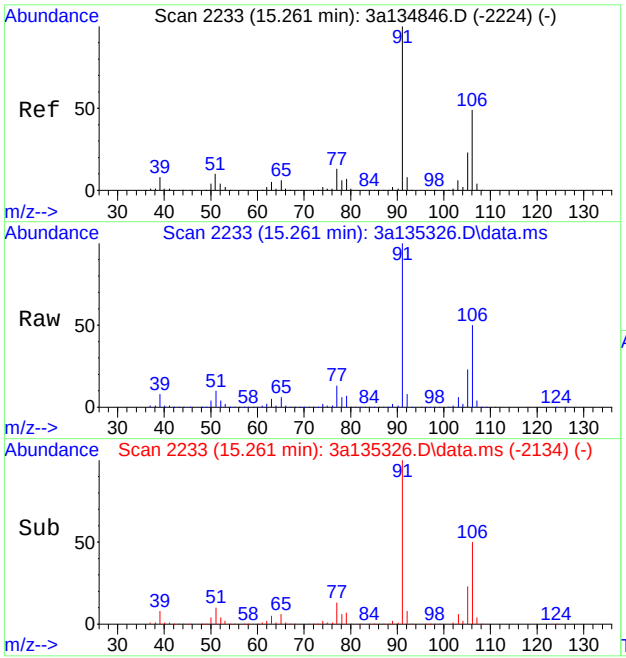


#97
ethylbenzene
Concen: 99.47 ug/L
RT: 15.151 min Scan# 2212
Delta R.T. -0.000 min
Lab File: 3a135326.D
Acq: 5 Oct 2014 3:58 pm

Tgt Ion: 91 Resp: 603354

Ion	Ratio	Lower	Upper
91	100		
106	31.0	1.1	61.1
65	8.4	0.0	38.2

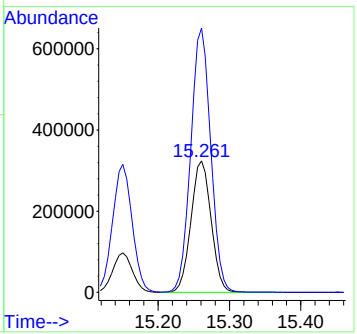


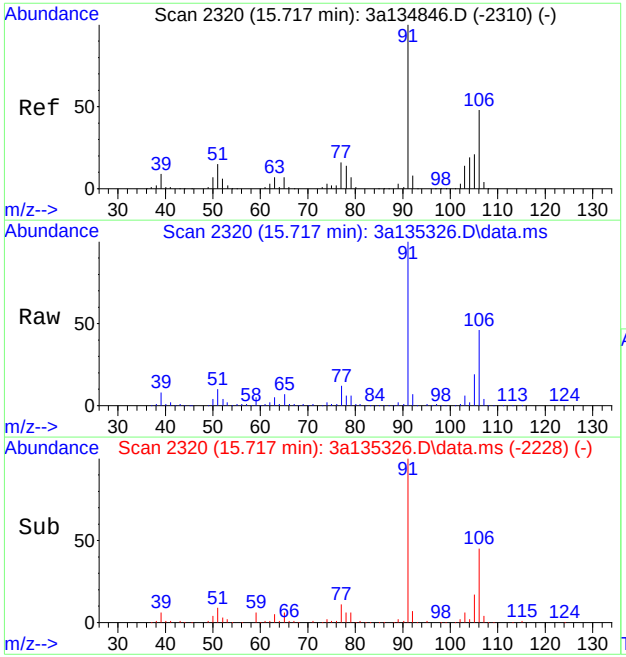


#98
m,p-xylene
Concen: 276.27 ug/L
RT: 15.261 min Scan# 2233
Delta R.T. -0.000 min
Lab File: 3a135326.D
Acq: 5 Oct 2014 3:58 pm

Tgt Ion:106 Resp: 635669

Ion	Ratio	Lower	Upper
106	100		
91	201.2	173.5	233.5

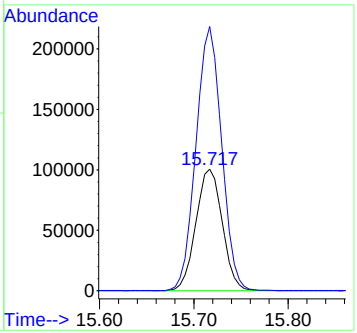


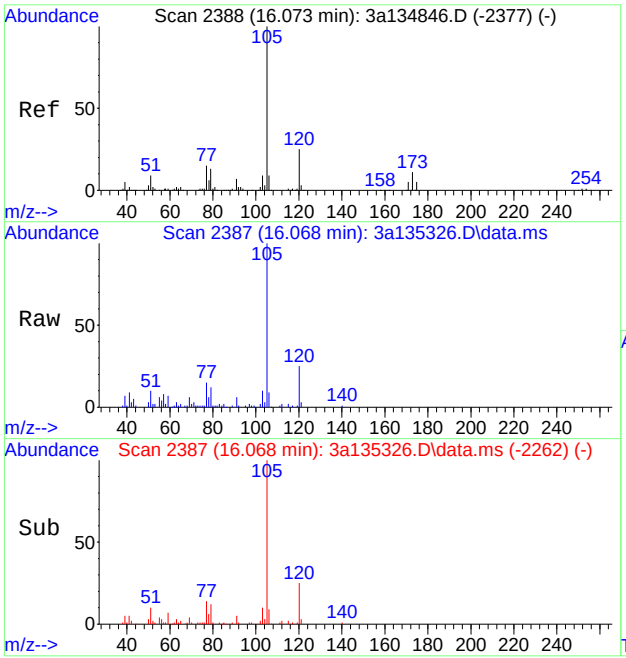


#99
o-xylene
Concen: 75.17 ug/L
RT: 15.717 min Scan# 2320
Delta R.T. -0.000 min
Lab File: 3a135326.D
Acq: 5 Oct 2014 3:58 pm

Tgt Ion:106 Resp: 195762

Ion	Ratio	Lower	Upper
106	100		
91	217.2	180.2	240.2

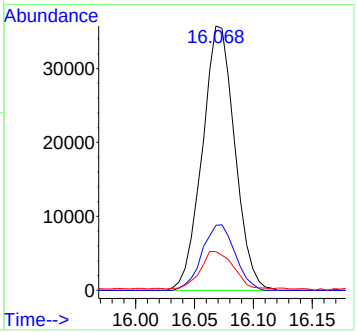




#103
isopropylbenzene
Concen: 10.03 ug/L
RT: 16.068 min Scan# 2387
Delta R.T. -0.005 min
Lab File: 3a135326.D
Acq: 5 Oct 2014 3:58 pm

Tgt Ion:105 Resp: 68731

Ion	Ratio	Lower	Upper
105	100		
120	24.6	0.0	55.3
77	13.9	0.0	44.7



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135326.D
Acq On : 5 Oct 2014 3:58 pm
Operator : JemimaM
Sample : jb77674-6
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

Signal : TIC: 3a135326.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.575	167	195	246	rBV	70722	711618	13.61%	1.023%
2	4.932	246	263	321	rVV2	188061	1953352	37.36%	2.808%
3	5.267	321	327	369	rVV3	21346	116037	2.22%	0.167%
4	6.075	450	481	544	rBV	930293	5228879	100.00%	7.516%
5	6.552	558	572	611	rVV3	162065	741676	14.18%	1.066%
6	6.825	611	624	646	rVV2	49766	157198	3.01%	0.226%
7	7.160	676	688	718	rVB2	54278	197616	3.78%	0.284%
8	7.438	721	741	765	rBV2	53932	256454	4.90%	0.369%
9	8.230	870	892	918	rVV2	555327	2727864	52.17%	3.921%
10	8.398	918	924	953	rVV2	78725	374197	7.16%	0.538%
11	8.644	953	971	1015	rVB	321316	1352929	25.87%	1.945%
12	9.032	1033	1045	1067	rBV2	69183	215151	4.11%	0.309%
13	9.698	1143	1172	1179	rBV6	32741	192712	3.69%	0.277%
14	9.792	1179	1190	1215	rVB2	200849	730953	13.98%	1.051%
15	9.991	1215	1228	1262	rVB	268552	943425	18.04%	1.356%
16	10.547	1324	1334	1345	rVV5	35820	130336	2.49%	0.187%
17	10.699	1352	1363	1370	rVV	309139	864108	16.53%	1.242%
18	10.767	1370	1376	1382	rVV2	191527	497061	9.51%	0.715%
19	10.846	1382	1391	1400	rVV2	488706	1645778	31.47%	2.366%
20	10.935	1400	1408	1429	rVB2	448819	1391987	26.62%	2.001%
21	11.276	1452	1473	1482	rVV	1039040	3913045	74.84%	5.625%
22	11.334	1482	1484	1496	rVV	471577	1086885	20.79%	1.562%
23	11.433	1496	1503	1523	rVB6	122569	438739	8.39%	0.631%
24	11.737	1552	1561	1585	rVB	208467	531238	10.16%	0.764%
25	12.125	1624	1635	1640	rBV2	92502	236853	4.53%	0.340%
26	12.204	1640	1650	1657	rVV5	196197	676848	12.94%	0.973%
27	12.262	1657	1661	1670	rVV2	153396	392039	7.50%	0.564%
28	12.335	1670	1675	1686	rVV	65355	174285	3.33%	0.251%
29	12.445	1686	1696	1701	rVV3	78040	212977	4.07%	0.306%
30	12.492	1701	1705	1724	rVV3	70900	183149	3.50%	0.263%
31	12.660	1724	1737	1753	rVV	503137	1416374	27.09%	2.036%
32	12.828	1753	1769	1791	rVV	759213	2585020	49.44%	3.716%
33	12.996	1791	1801	1811	rVV2	159129	456011	8.72%	0.655%
34	13.085	1811	1818	1826	rVV3	82141	254670	4.87%	0.366%
35	13.163	1826	1833	1841	rVV	74174	184149	3.52%	0.265%
36	13.242	1841	1848	1857	rVV5	43122	135555	2.59%	0.195%
37	13.336	1857	1866	1880	rVV2	115416	440200	8.42%	0.633%
38	13.452	1880	1888	1895	rVV	335764	828118	15.84%	1.190%
39	13.525	1895	1902	1920	rVV	521131	1345969	25.74%	1.935%
40	13.876	1954	1969	1980	rVB2	105455	376084	7.19%	0.541%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135326.D
Acq On : 5 Oct 2014 3:58 pm
Operator : JemimaM
Sample : jb77674-6
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

41	13.981	1980	1989	2003	rBV3	43769	131362	2.51%	0.189%
42	14.112	2003	2014	2024	rVV2	300446	716859	13.71%	1.030%
43	14.202	2024	2031	2041	rVV	100624	262214	5.01%	0.377%
44	14.390	2053	2067	2080	rVV10	85124	351546	6.72%	0.505%
45	14.553	2091	2098	2106	rVV2	57086	141778	2.71%	0.204%
46	14.689	2112	2124	2131	rVV3	57762	163160	3.12%	0.235%
47	14.757	2131	2137	2142	rVV	53507	116704	2.23%	0.168%
48	14.941	2163	2172	2188	rVV2	67450	215559	4.12%	0.310%
49	15.082	2188	2199	2205	rVV2	315142	708203	13.54%	1.018%
50	15.151	2205	2212	2222	rVV	731708	1491329	28.52%	2.144%
51	15.261	2222	2233	2251	rVV	1841587	3734447	71.42%	5.368%
52	15.570	2285	2292	2299	rVV	89172	204669	3.91%	0.294%
53	15.717	2310	2320	2343	rVV	622598	1334307	25.52%	1.918%
54	15.895	2343	2354	2363	rVV10	28780	117407	2.25%	0.169%
55	16.068	2380	2387	2395	rVV2	103559	257285	4.92%	0.370%
56	16.173	2403	2407	2421	rVB2	74682	165284	3.16%	0.238%
57	16.320	2421	2435	2446	rBV2	247315	571939	10.94%	0.822%
58	16.409	2446	2452	2461	rVV4	49534	128207	2.45%	0.184%
59	16.508	2461	2471	2477	rVV	164918	325318	6.22%	0.468%
60	16.582	2477	2485	2495	rVV	367663	1179245	22.55%	1.695%
61	16.661	2495	2500	2511	rVV	322994	608298	11.63%	0.874%
62	16.923	2534	2550	2558	rVV	482867	997537	19.08%	1.434%
63	17.090	2572	2582	2602	rVV	997253	1956000	37.41%	2.812%
64	17.232	2602	2609	2612	rVV	66689	135508	2.59%	0.195%
65	17.269	2612	2616	2621	rVV	65035	131072	2.51%	0.188%
66	17.326	2621	2627	2634	rVV	52215	122659	2.35%	0.176%
67	17.410	2634	2643	2664	rVV6	37719	172037	3.29%	0.247%
68	17.578	2664	2675	2684	rVV2	961298	1960845	37.50%	2.819%
69	17.704	2692	2699	2709	rVV	338119	808531	15.46%	1.162%
70	17.798	2709	2717	2721	rVV2	196065	478293	9.15%	0.688%
71	17.851	2721	2727	2737	rVV2	390101	785850	15.03%	1.130%
72	17.961	2737	2748	2755	rVV	79394	175004	3.35%	0.252%
73	18.039	2755	2763	2770	rVV	171925	344284	6.58%	0.495%
74	18.108	2770	2776	2788	rVV2	116319	377637	7.22%	0.543%
75	18.223	2788	2798	2809	rVV	622793	1241482	23.74%	1.785%
76	18.349	2809	2822	2828	rVV7	101569	343725	6.57%	0.494%
77	18.401	2828	2832	2834	rVV	91998	151439	2.90%	0.218%
78	18.443	2834	2840	2855	rVV	213259	503895	9.64%	0.724%
79	18.595	2855	2869	2875	rVV2	138859	381963	7.30%	0.549%
80	18.669	2875	2883	2890	rVV	484357	978759	18.72%	1.407%
81	18.747	2890	2898	2912	rVV3	311855	842903	16.12%	1.212%
82	18.884	2912	2924	2929	rVV5	59292	193675	3.70%	0.278%
83	18.941	2929	2935	2943	rVV2	89053	202112	3.87%	0.291%
84	19.020	2943	2950	2957	rVV4	66518	173516	3.32%	0.249%
85	19.093	2957	2964	2972	rVV2	281950	593174	11.34%	0.853%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135326.D
Acq On : 5 Oct 2014 3:58 pm
Operator : JemimaM
Sample : jb77674-6
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

86	19.167	2972	2978	2984	rVV3	108409	236092	4.52%	0.339%
87	19.230	2984	2990	2998	rVV2	216296	756591	14.47%	1.088%
88	19.293	2998	3002	3014	rVV	321088	634849	12.14%	0.913%
89	19.560	3037	3053	3067	rVV4	284275	1194457	22.84%	1.717%
90	19.665	3067	3073	3077	rVV	125274	269808	5.16%	0.388%
91	19.707	3077	3081	3087	rVV2	139727	294144	5.63%	0.423%
92	19.775	3087	3094	3104	rVB2	182551	403333	7.71%	0.580%
93	20.100	3149	3156	3174	rVV	413926	1039023	19.87%	1.494%
94	20.242	3174	3183	3195	rVB3	74492	202707	3.88%	0.291%
95	20.383	3195	3210	3218	rBV	133733	297989	5.70%	0.428%
96	20.624	3248	3256	3271	rVV	99043	325965	6.23%	0.469%
97	20.745	3272	3279	3286	rVV	67606	181349	3.47%	0.261%
98	20.892	3300	3307	3318	rVB2	57396	139353	2.67%	0.200%
99	21.442	3401	3412	3431	rVV3	50432	144571	2.76%	0.208%
100	21.725	3453	3466	3484	rVV2	64673	172788	3.30%	0.248%

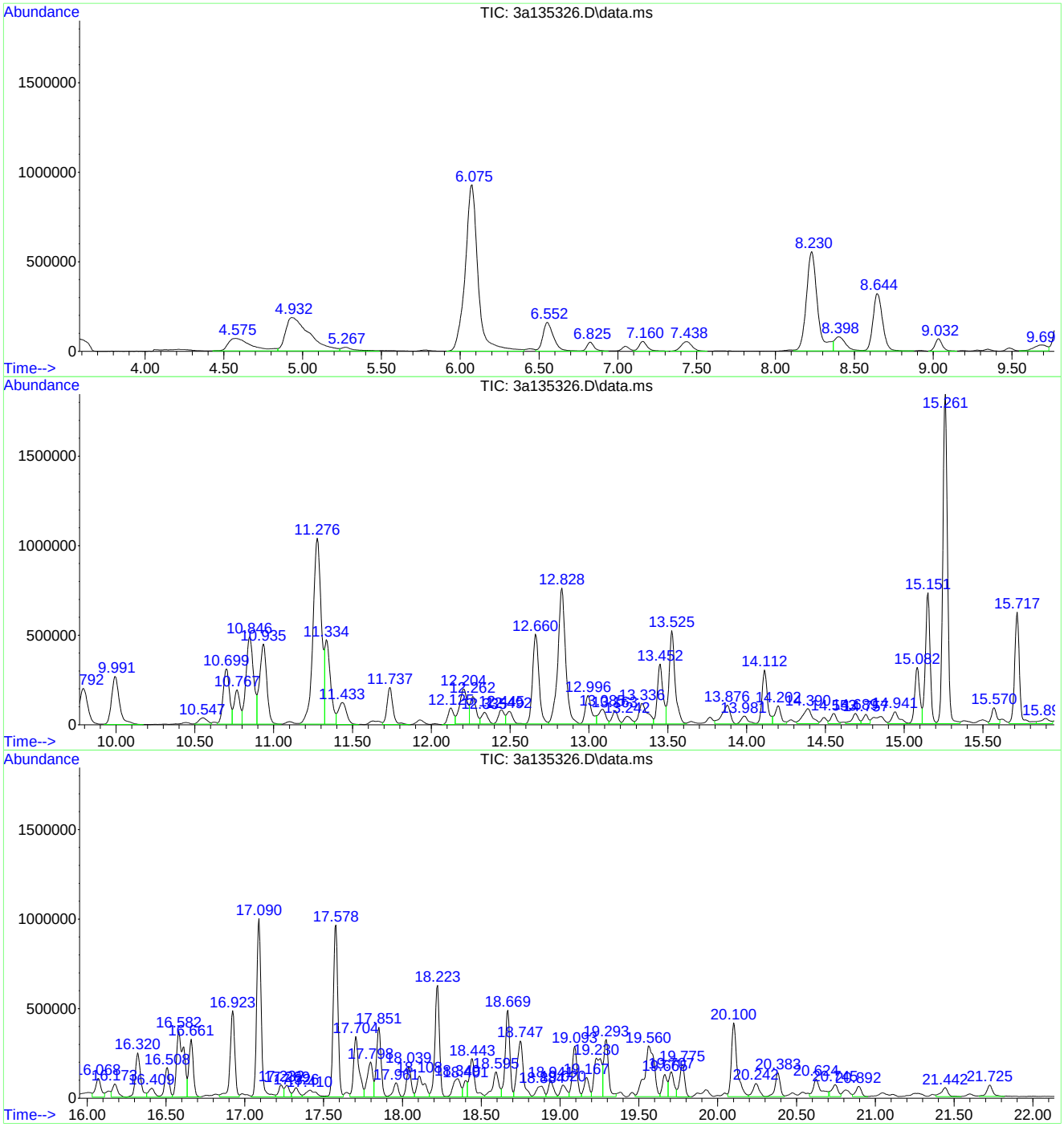
Sum of corrected areas: 69567578

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135326.D
Acq On : 5 Oct 2014 3:58 pm
Operator : JemimaM
Sample : jb77674-6
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135326.D
Acq On : 5 Oct 2014 3:58 pm
Operator : JemimaM
Sample : jb77674-6
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

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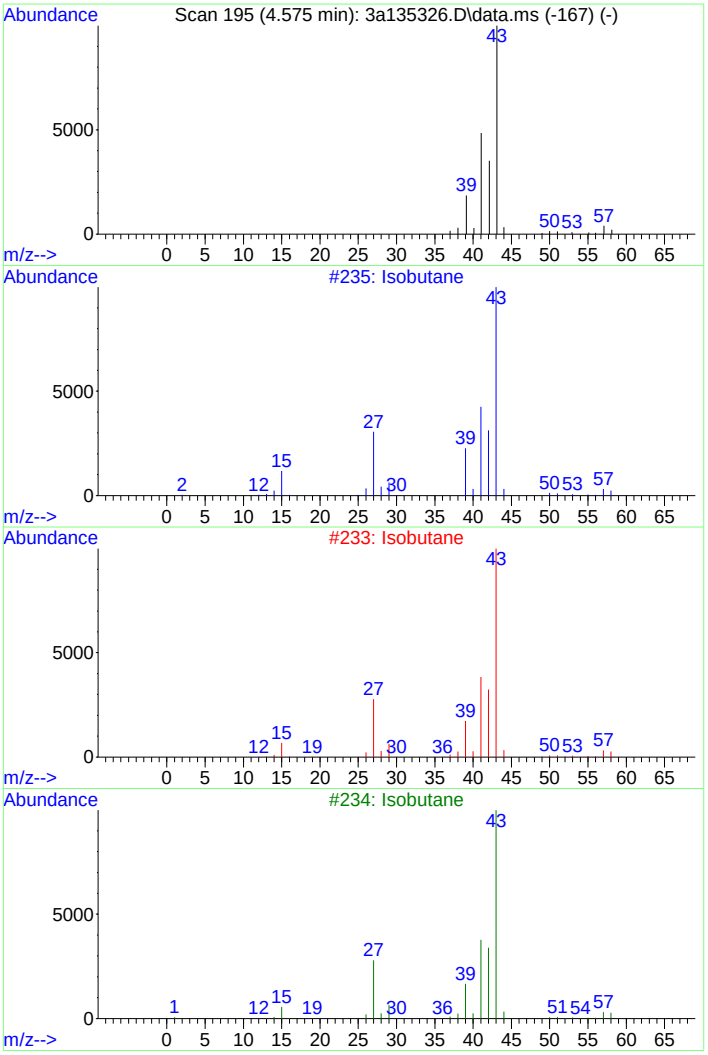
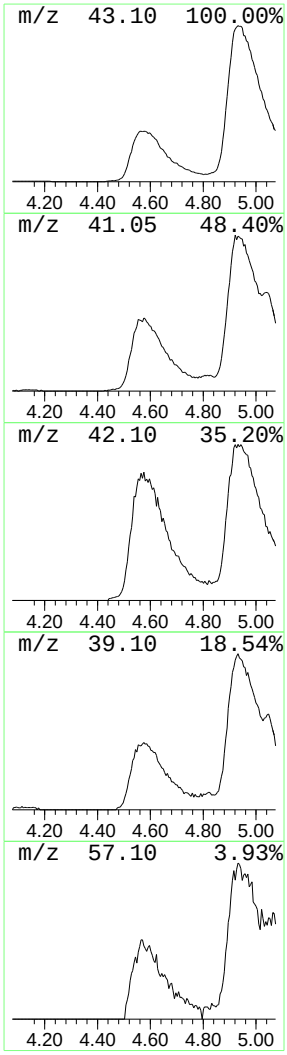
Peak Number 1 alkane Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.575	71.58 ug/L	711618	pentafluorobenzene	10.767

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Isobutane	58	C4H10	000075-28-5	72
2	Isobutane	58	C4H10	000075-28-5	59
3	Isobutane	58	C4H10	000075-28-5	59
4	Isobutane	58	C4H10	000075-28-5	56
5	Isopropylsulfonyl chloride	142	C3H7ClO2S	010147-37-2	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135326.D
Acq On : 5 Oct 2014 3:58 pm
Operator : JemimaM
Sample : jb77674-6
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

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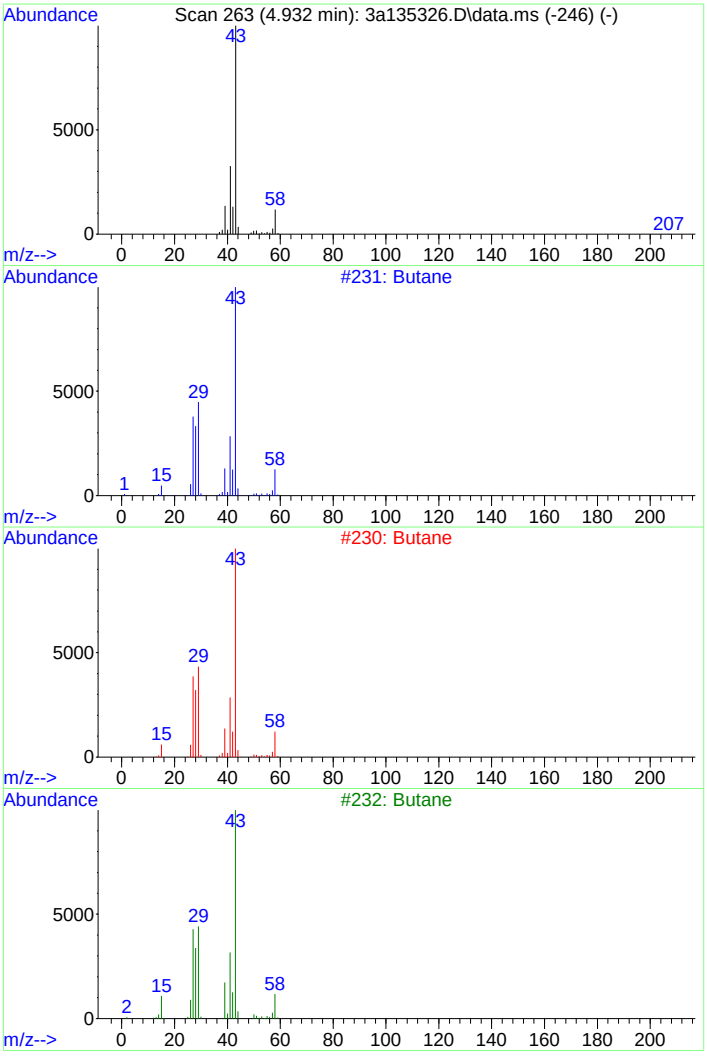
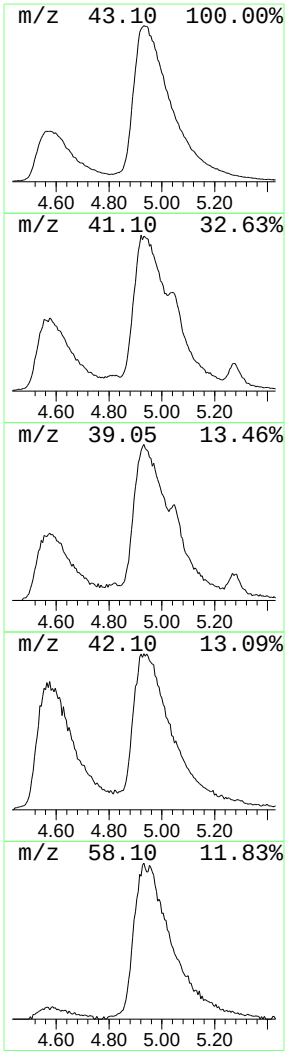
Peak Number 2 alkane Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.932	196.49 ug/L	1953350	pentafluorobenzene	10.767

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	72
2	Butane	58	C4H10	000106-97-8	72
3	Butane	58	C4H10	000106-97-8	58
4	Isopropylsulfonyl chloride	142	C3H7ClO2S	010147-37-2	9
5	Isobutane	58	C4H10	000075-28-5	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135326.D
Acq On : 5 Oct 2014 3:58 pm
Operator : JemimaM
Sample : jb77674-6
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

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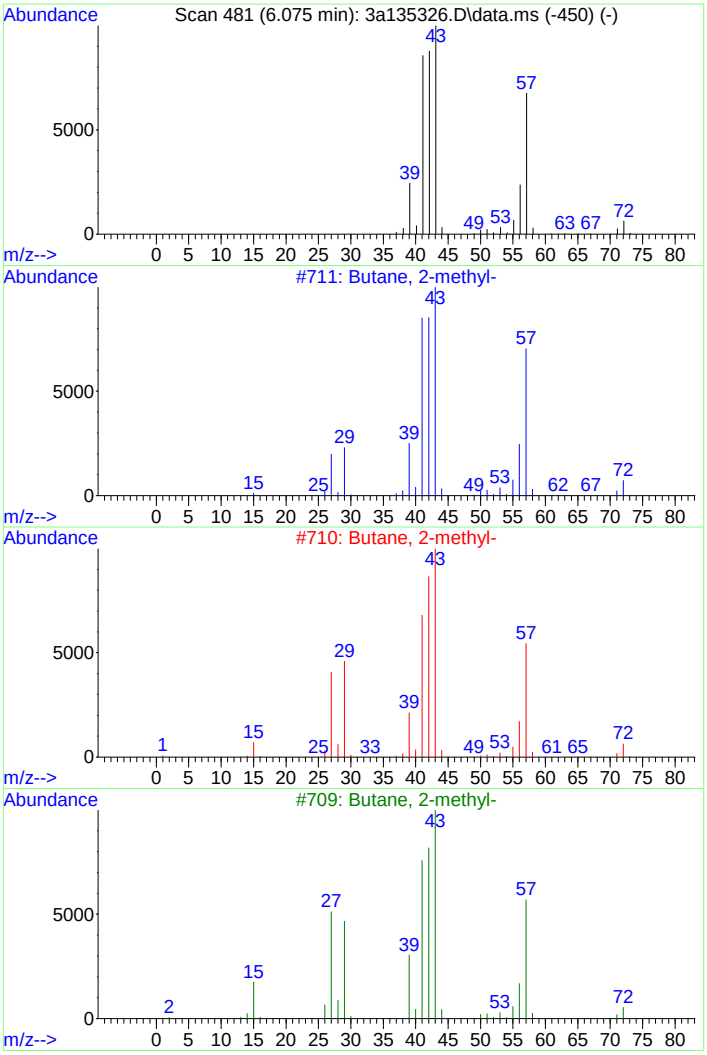
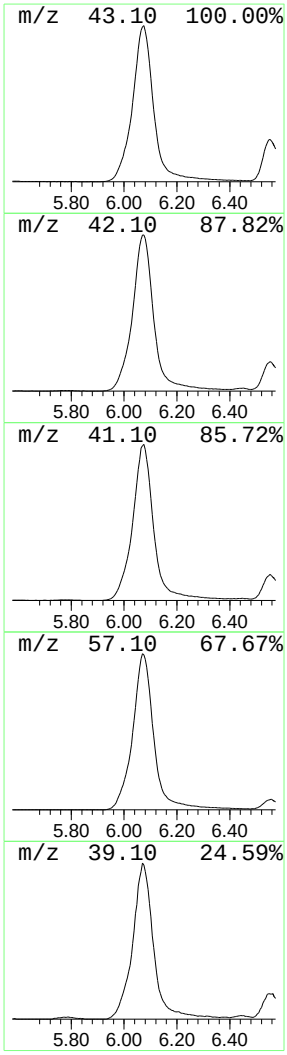
Peak Number 3 alkane Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.075	525.98 ug/L	5228880	pentafluorobenzene	10.767

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	94
2	Butane, 2-methyl-	72	C5H12	000078-78-4	91
3	Butane, 2-methyl-	72	C5H12	000078-78-4	90
4	Pentane	72	C5H12	000109-66-0	33
5	3-Buten-1-ol	72	C4H8O	000627-27-0	28





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135326.D
Acq On : 5 Oct 2014 3:58 pm
Operator : JemimaM
Sample : jb77674-6
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

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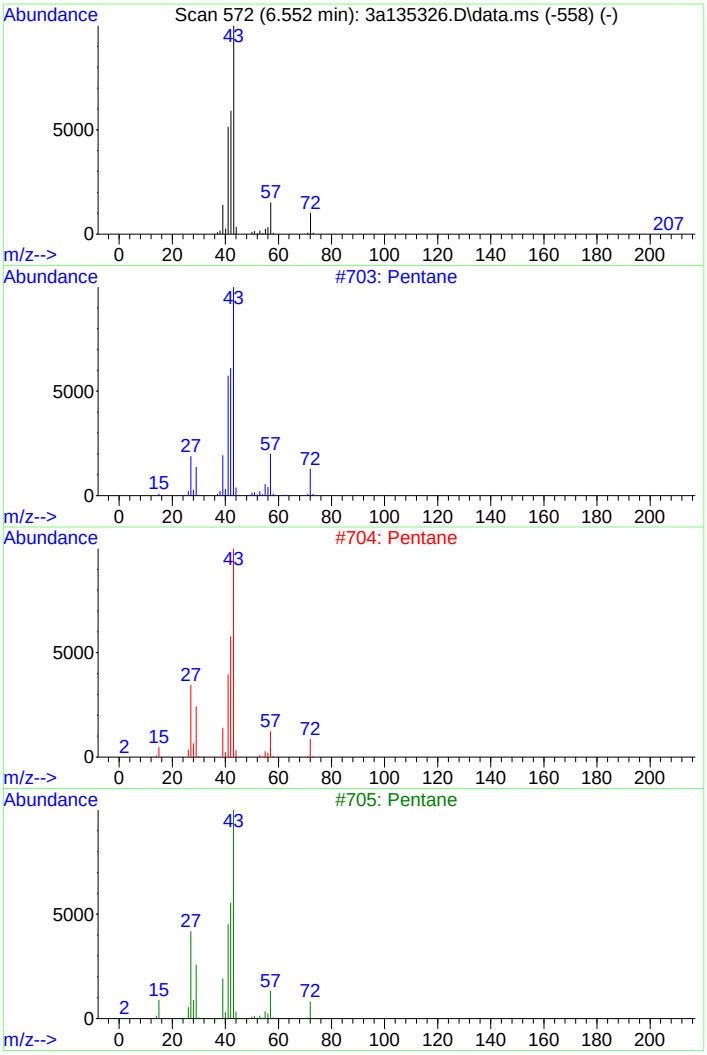
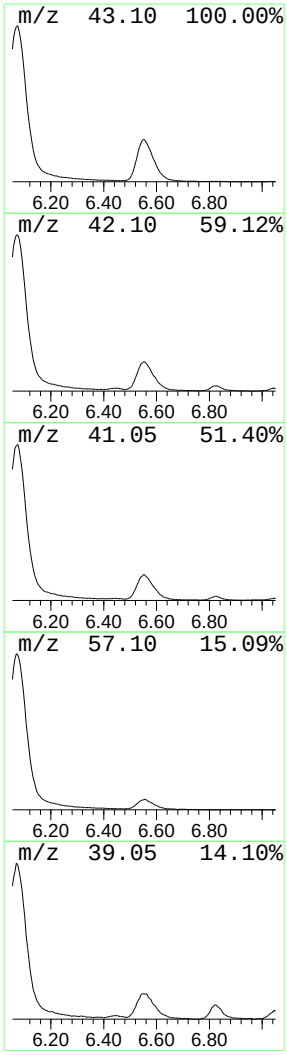
Peak Number 4 alkane-Pentane Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.552	74.61 ug/L	741676	pentafluorobenzene	10.767

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	91
2	Pentane	72	C5H12	000109-66-0	90
3	Pentane	72	C5H12	000109-66-0	90
4	Pentane	72	C5H12	000109-66-0	64
5	Oxirane, ethyl-	72	C4H8O	000106-88-7	50





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135326.D
Acq On : 5 Oct 2014 3:58 pm
Operator : JemimaM
Sample : jb77674-6
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

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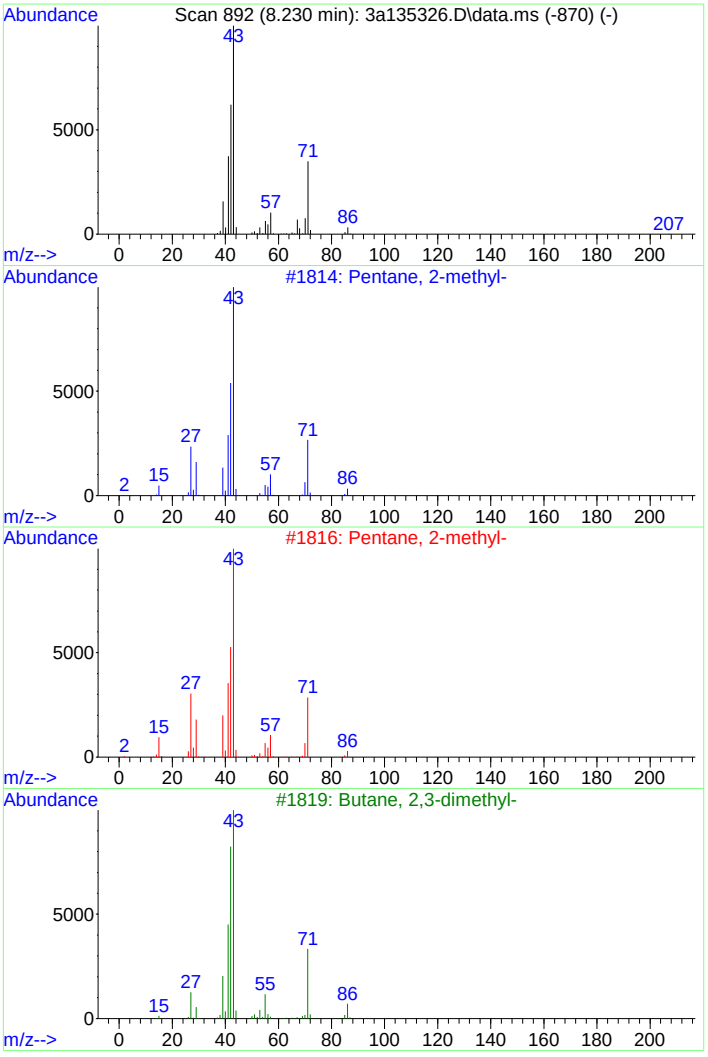
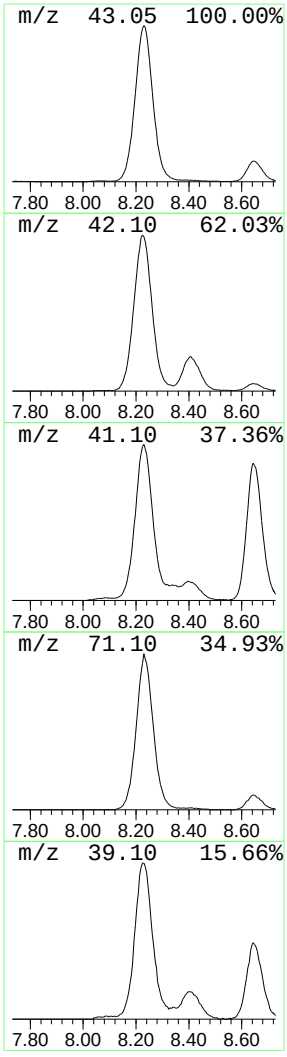
Peak Number 5 alkane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.230	274.40 ug/L	2727860	pentafluorobenzene	10.767

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2-methyl-	86	C6H14	000107-83-5	91
2	Pentane, 2-methyl-	86	C6H14	000107-83-5	87
3	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	64
4	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	53
5	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	53





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135326.D
Acq On : 5 Oct 2014 3:58 pm
Operator : JemimaM
Sample : jb77674-6
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

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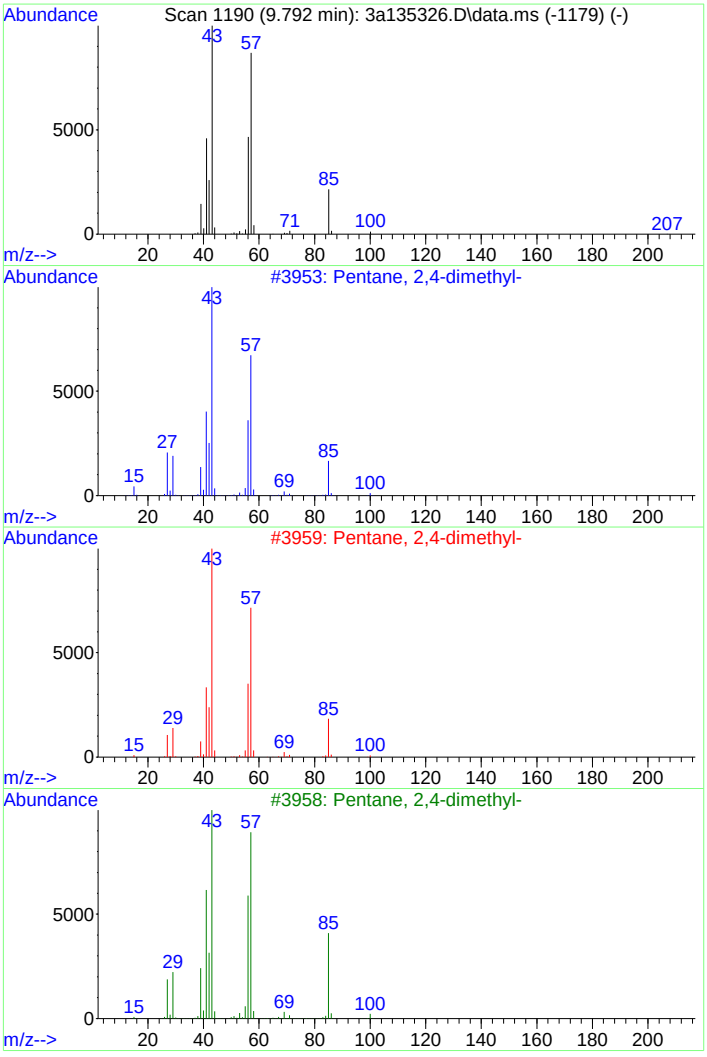
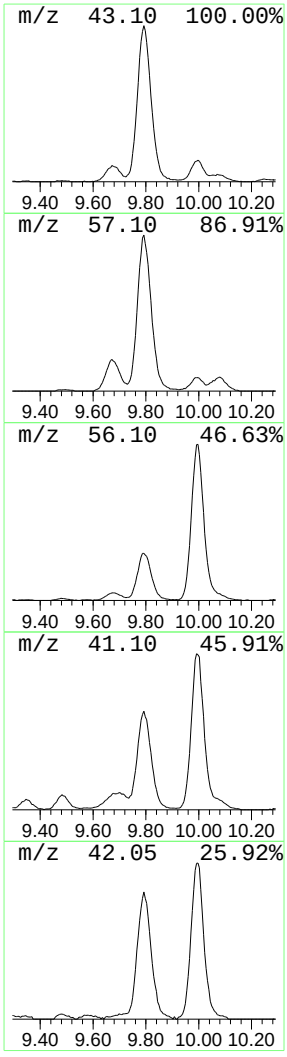
Peak Number 6 alkane Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.792	73.53 ug/L	730953	pentafluorobenzene	10.767

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,4-dimethyl-	100	C7H16	000108-08-7	91
2	Pentane, 2,4-dimethyl-	100	C7H16	000108-08-7	91
3	Pentane, 2,4-dimethyl-	100	C7H16	000108-08-7	74
4	Butane, 2,2,3-trimethyl-	100	C7H16	000464-06-2	59
5	Oxalic acid, butyl isohexyl ester	230	C12H22O4	1000309-32-7	56





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135326.D
Acq On : 5 Oct 2014 3:58 pm
Operator : JemimaM
Sample : jb77674-6
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

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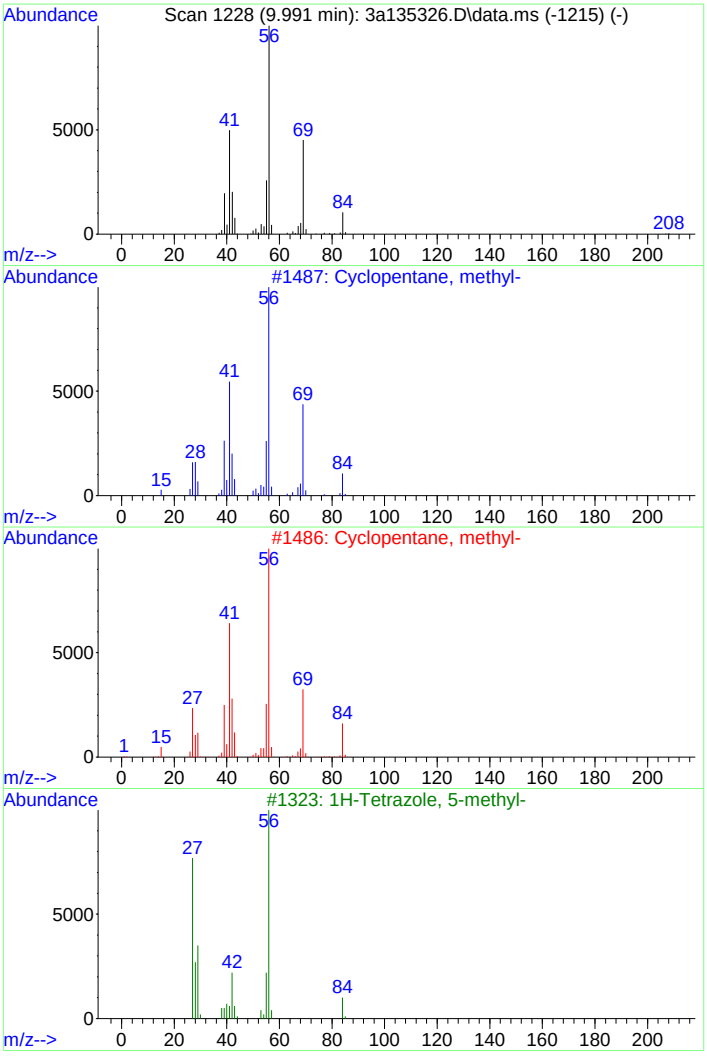
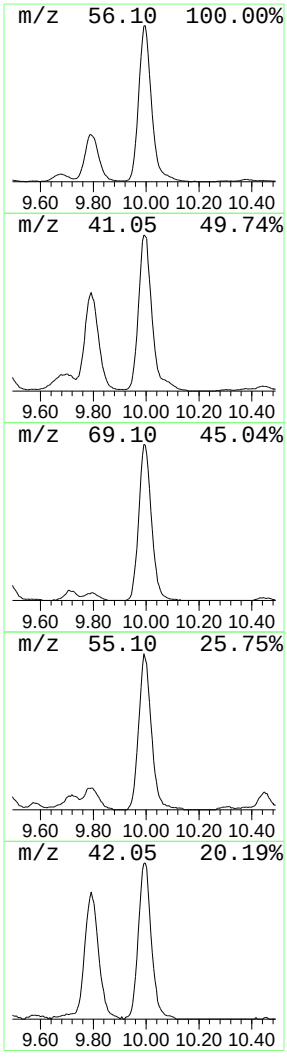
Peak Number 7 alkene Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.991	94.90 ug/L	943425	pentafluorobenzene	10.767

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	94
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	90
3	1H-Tetrazole, 5-methyl-	84	C2H4N4	004076-36-2	80
4	Cyclopentane, methyl-	84	C6H12	000096-37-7	78
5	Cyclohexane	84	C6H12	000110-82-7	78





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135326.D
Acq On : 5 Oct 2014 3:58 pm
Operator : JemimaM
Sample : jb77674-6
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

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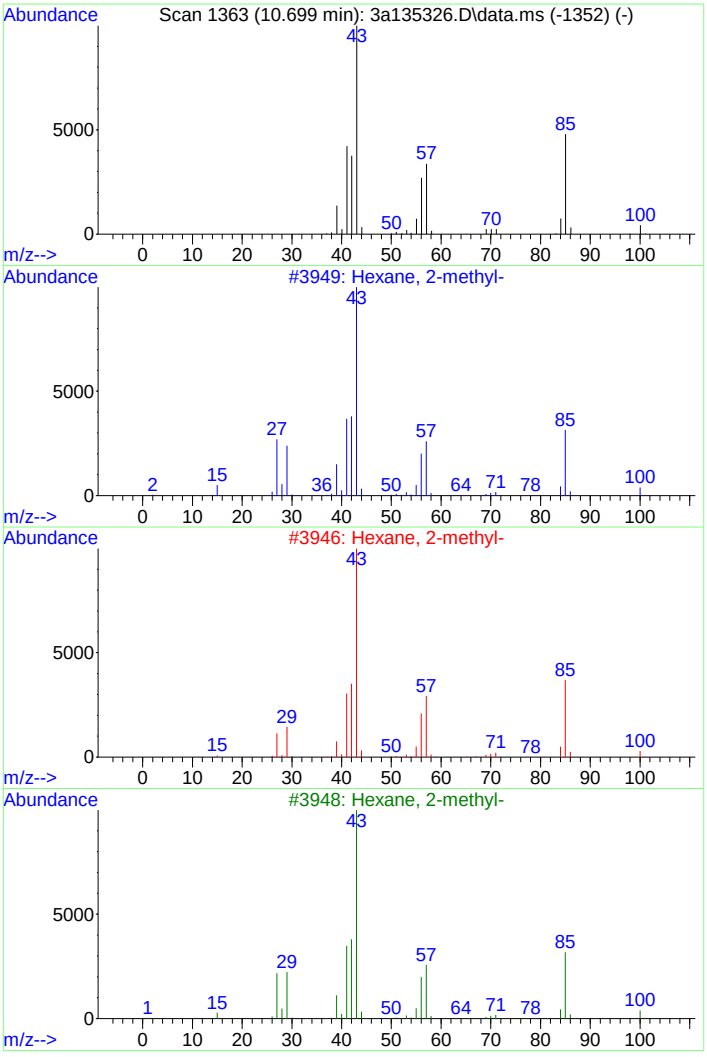
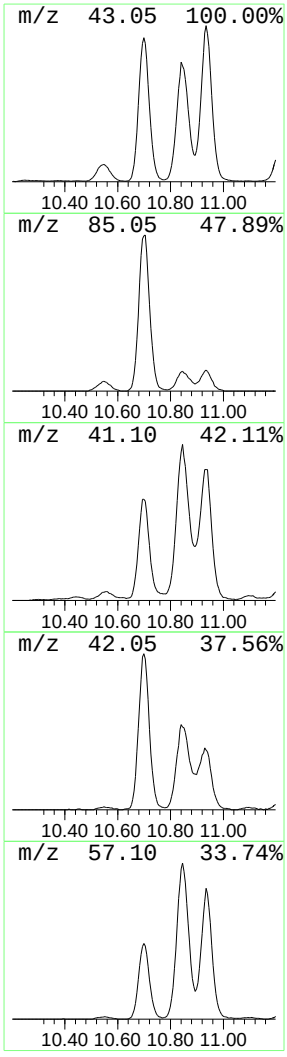
Peak Number 8 alkane Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.699	86.92 ug/L	864108	pentafluorobenzene	10.767

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexane, 2-methyl-	100	C7H16	000591-76-4	90
2	Hexane, 2-methyl-	100	C7H16	000591-76-4	90
3	Hexane, 2-methyl-	100	C7H16	000591-76-4	76
4	Octane	114	C8H18	000111-65-9	59
5	Hexane, 2,4-dimethyl-	114	C8H18	000589-43-5	50





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135326.D
Acq On : 5 Oct 2014 3:58 pm
Operator : JemimaM
Sample : jb77674-6
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

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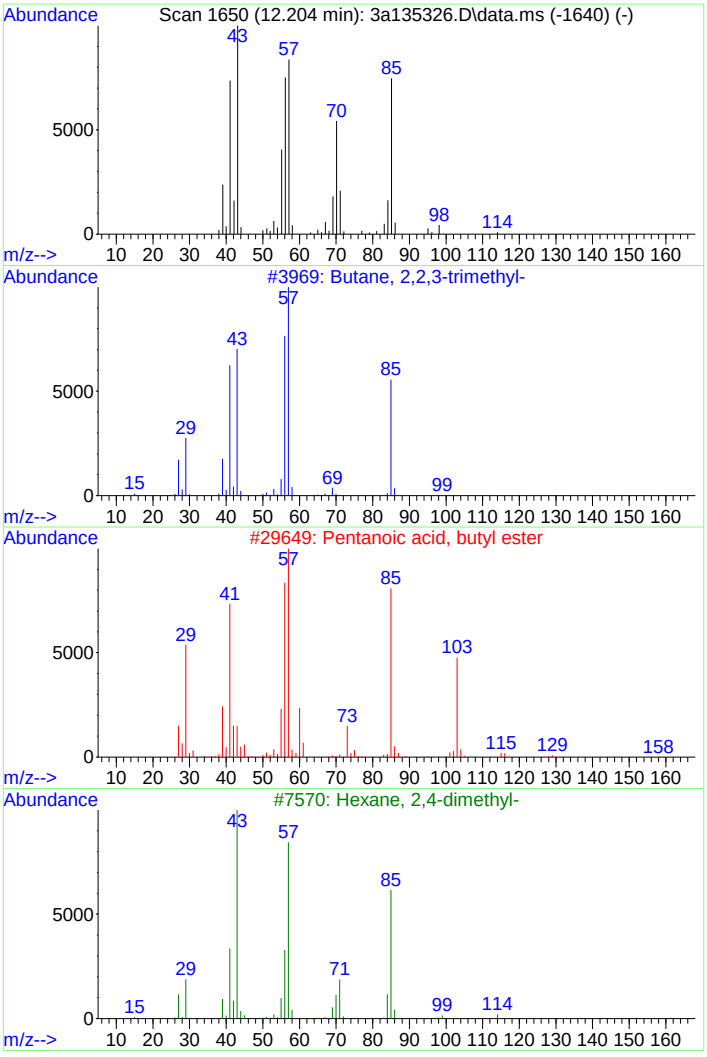
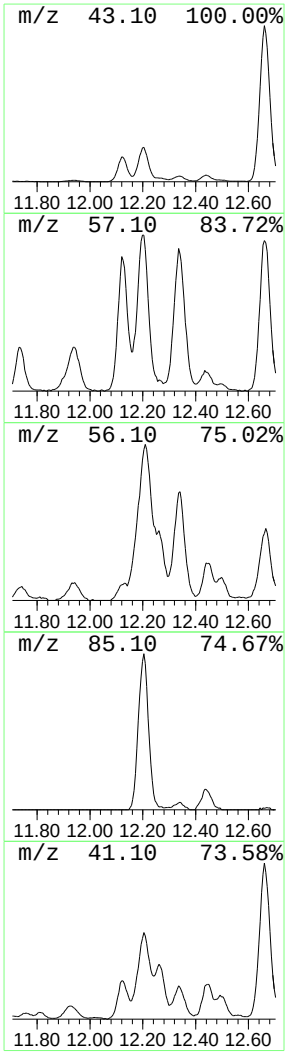
Peak Number 9 alkane Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.204	63.70 ug/L	676848	1,4-difluorobenzene	11.737

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2,2,3-trimethyl-	100	C7H16	000464-06-2	53
2	Pentanoic acid, butyl ester	158	C9H18O2	000591-68-4	50
3	Hexane, 2,4-dimethyl-	114	C8H18	000589-43-5	49
4	Pentane, 2,2-dimethyl-	100	C7H16	000590-35-2	47
5	Octane	114	C8H18	000111-65-9	46





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135326.D
Acq On : 5 Oct 2014 3:58 pm
Operator : JemimaM
Sample : jb77674-6
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

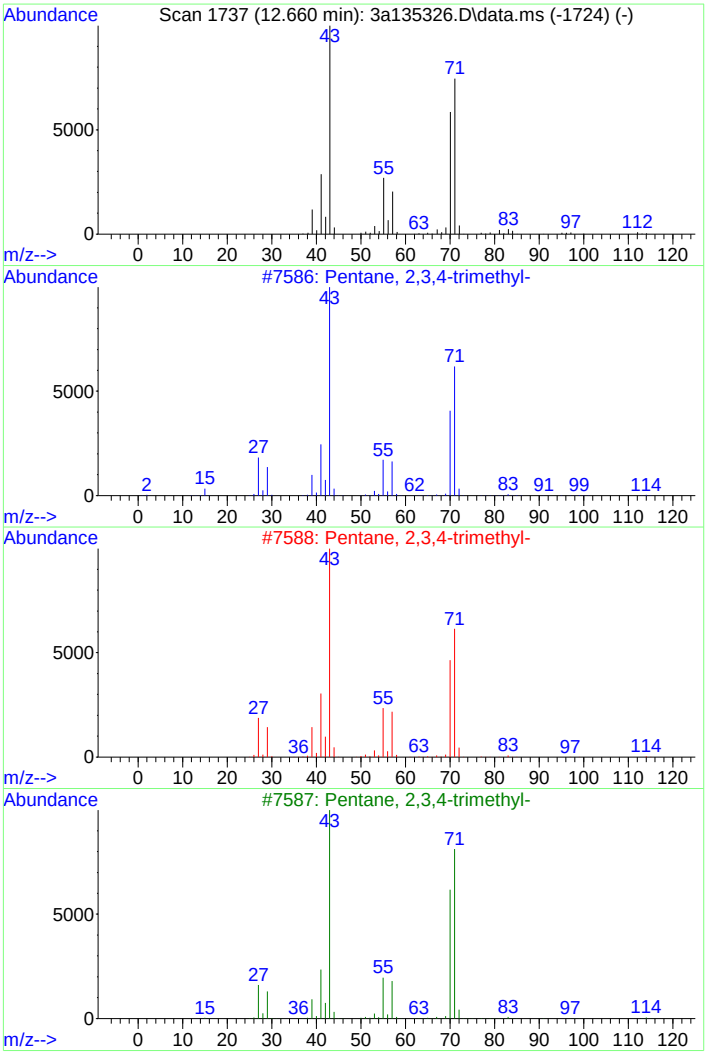
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

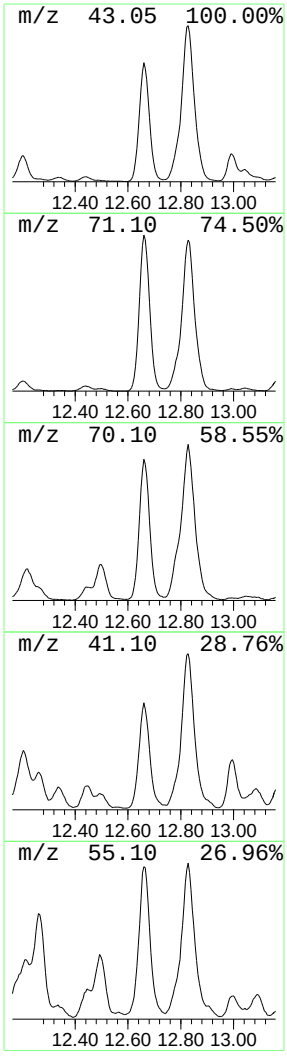
****

Peak Number 10 alkane Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.660	133.31 ug/L	1416370	1,4-difluorobenzene	11.737

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	91
2	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	91
3	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	90
4	Pentane, 3-ethyl-	100	C7H16	000617-78-7	83
5	Heptane, 4-methyl-	114	C8H18	000589-53-7	78





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135326.D
Acq On : 5 Oct 2014 3:58 pm
Operator : JemimaM
Sample : jb77674-6
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

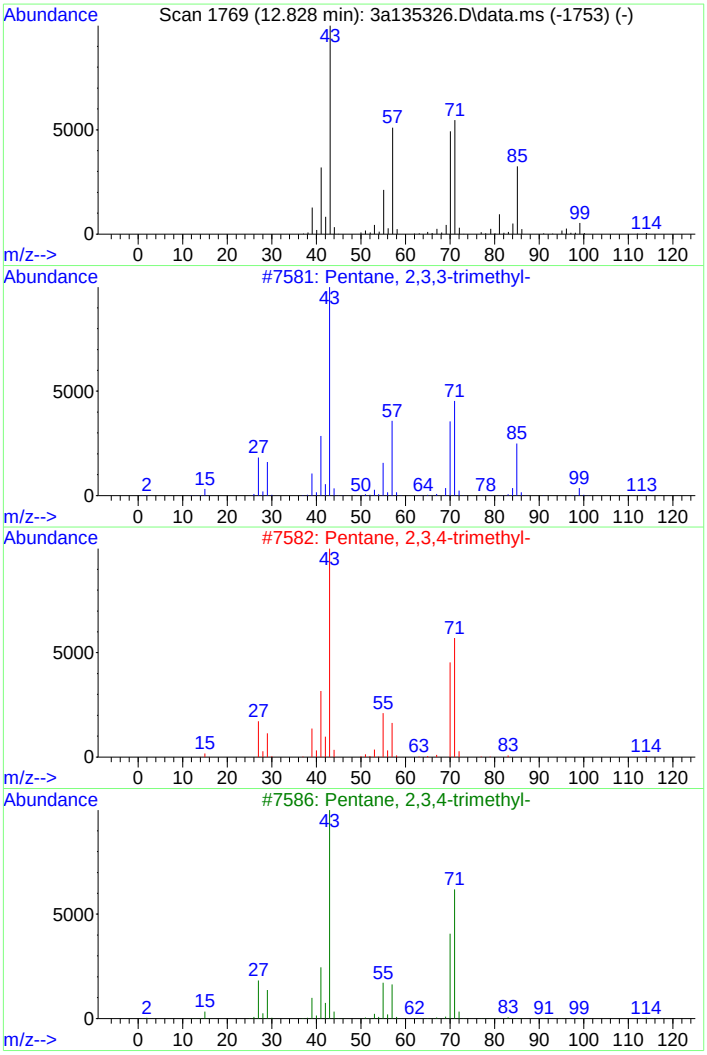
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

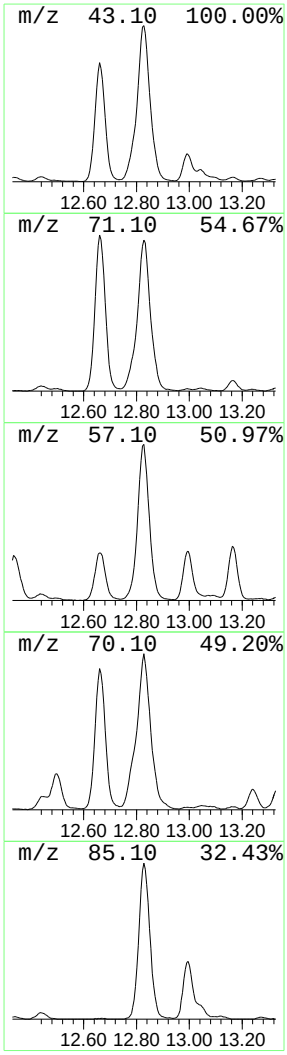
****

Peak Number 11 alkane Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.828	243.30 ug/L	2585020	1,4-difluorobenzene	11.737

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	86
2	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	70
3	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	62
4	Hexane, 3-methyl-	100	C7H16	000589-34-4	59
5	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	59





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135326.D
Acq On : 5 Oct 2014 3:58 pm
Operator : JemimaM
Sample : jb77674-6
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

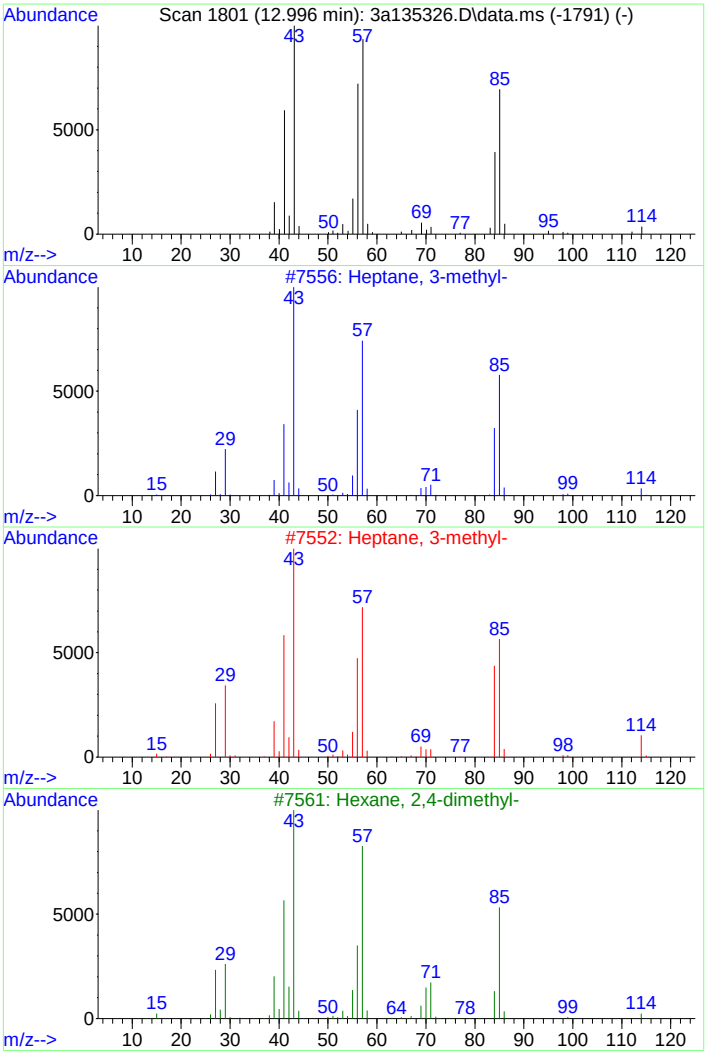
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

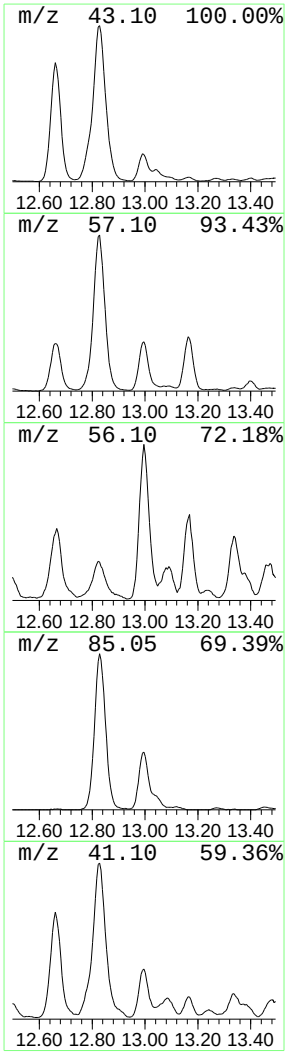
****

Peak Number 12 alkane Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.996	42.92 ug/L	456011	1,4-difluorobenzene	11.737

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptane, 3-methyl-	114	C8H18	000589-81-1	90
2	Heptane, 3-methyl-	114	C8H18	000589-81-1	83
3	Hexane, 2,4-dimethyl-	114	C8H18	000589-43-5	52
4	Hexane, 2,4-dimethyl-	114	C8H18	000589-43-5	52
5	Butane, 2,2,3-trimethyl-	100	C7H16	000464-06-2	50





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135326.D
Acq On : 5 Oct 2014 3:58 pm
Operator : JemimaM
Sample : jb77674-6
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

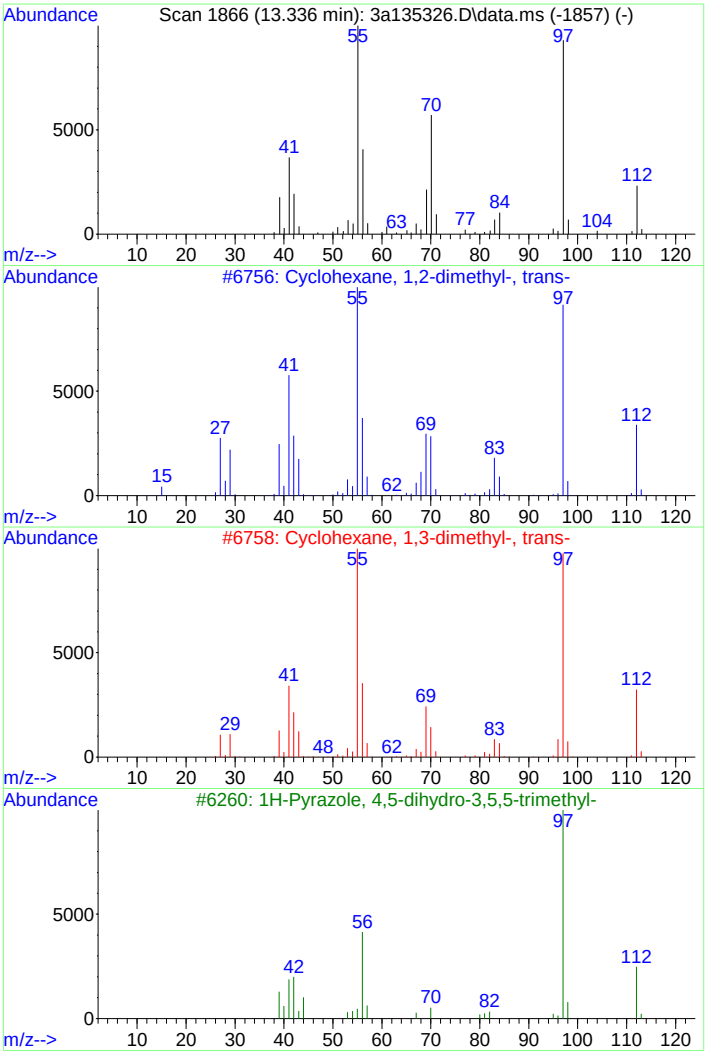
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

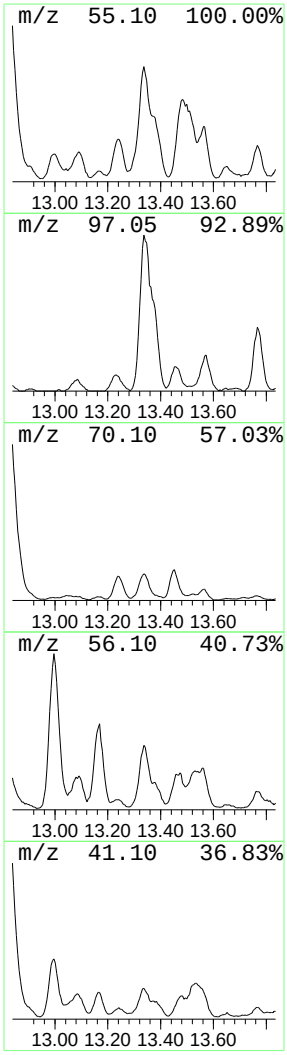
****

Peak Number 13 alkene Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.336	41.43 ug/L	440200	1,4-difluorobenzene	11.737

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, 1,2-dimethyl-, trans-	112	C8H16	006876-23-9	83
2	Cyclohexane, 1,3-dimethyl-, trans-	112	C8H16	002207-03-6	70
3	1H-Pyrazole, 4,5-dihydro-3,5,5-t...	112	C6H12N2	003975-85-7	70
4	Cyclohexane, 1,3-dimethyl-, trans-	112	C8H16	002207-03-6	70
5	Cyclohexane, 1,2-dimethyl-	112	C8H16	000583-57-3	68





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135326.D
Acq On : 5 Oct 2014 3:58 pm
Operator : JemimaM
Sample : jb77674-6
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

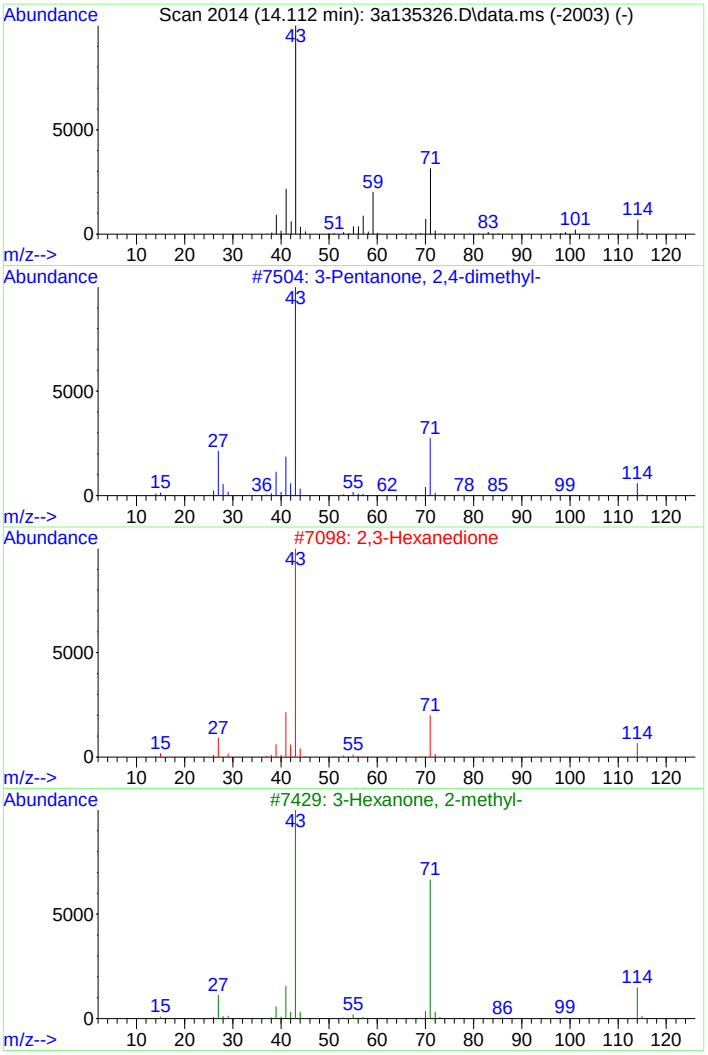
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

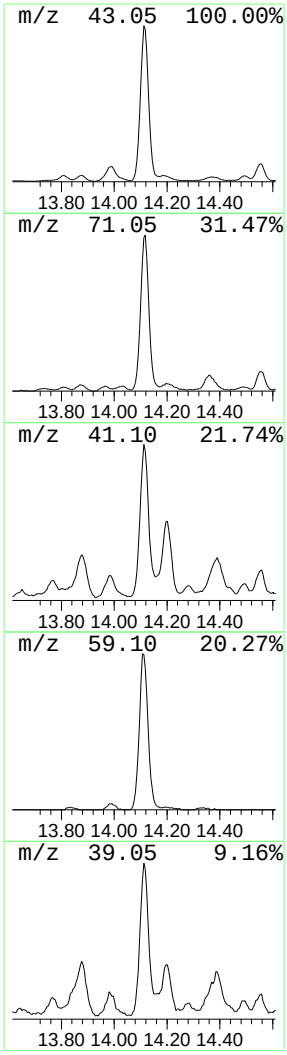
****

Peak Number 14 ketones Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.112	50.61 ug/L	716859	chlorobenzene-d5	15.082

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	3-Pentanone, 2,4-dimethyl-	114	C7H14O	000565-80-0	49
2	2,3-Hexanedione	114	C6H10O2	003848-24-6	43
3	3-Hexanone, 2-methyl-	114	C7H14O	007379-12-6	43
4	2-Heptanone	114	C7H14O	000110-43-0	43
5	Pentane, 2-methyl-	86	C6H14	000107-83-5	42





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135326.D
Acq On : 5 Oct 2014 3:58 pm
Operator : JemimaM
Sample : jb77674-6
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

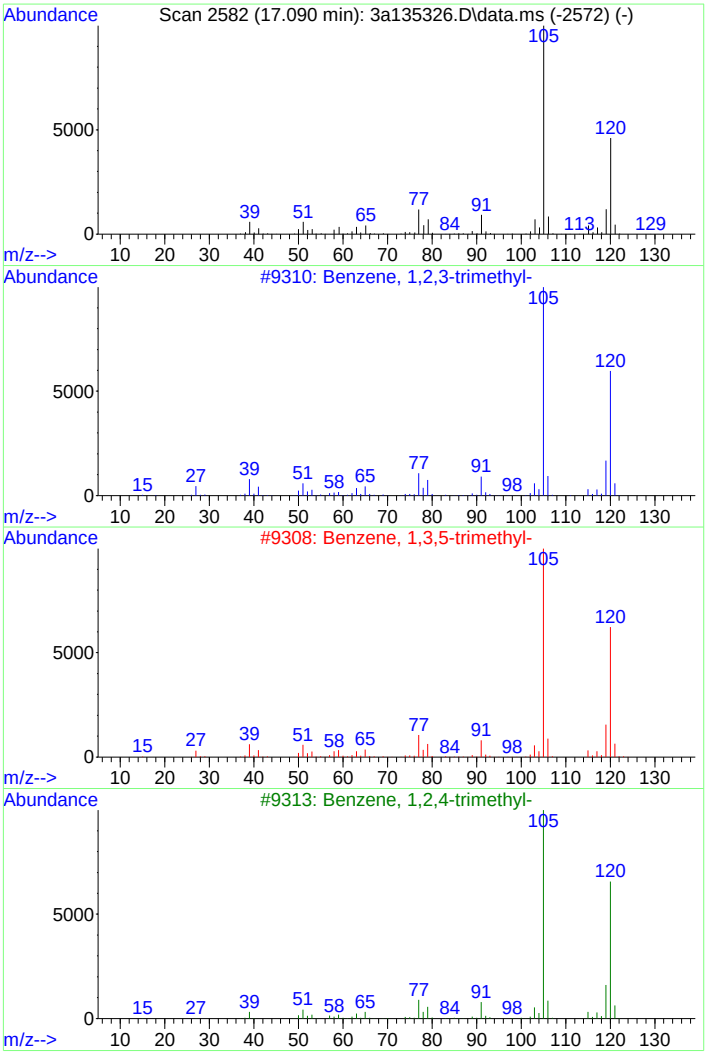
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

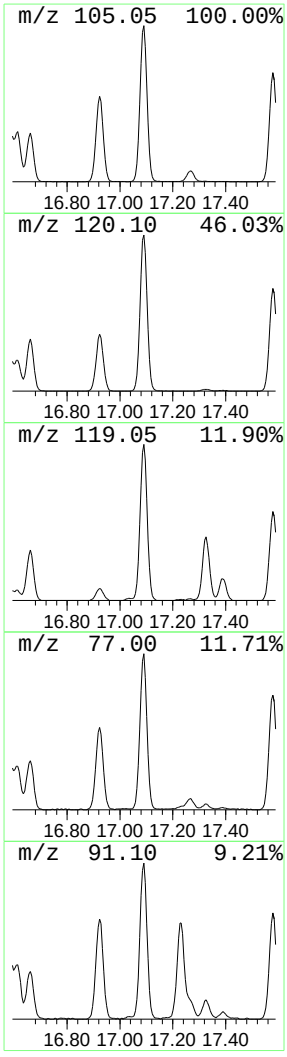
****

Peak Number 15 C3 alkyl benzene Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.090	49.88 ug/L	1956000	1,4-dichlorobenzene-d4	17.568

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
4	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	94
5	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	91





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135326.D
Acq On : 5 Oct 2014 3:58 pm
Operator : JemimaM
Sample : jb77674-6
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
alkane	4.575	71.6	ug/L	711618	2	10.767	497061	50.0
alkane	4.932	196.5	ug/L	1953350	2	10.767	497061	50.0
alkane	6.075	526.0	ug/L	5228880	2	10.767	497061	50.0
alkane-Pentane	6.552	74.6	ug/L	741676	2	10.767	497061	50.0
alkane	8.230	274.4	ug/L	2727860	2	10.767	497061	50.0
alkane	9.792	73.5	ug/L	730953	2	10.767	497061	50.0
alkene	9.991	94.9	ug/L	943425	2	10.767	497061	50.0
alkane	10.699	86.9	ug/L	864108	2	10.767	497061	50.0
alkane	12.204	63.7	ug/L	676848	3	11.737	531238	50.0
alkane	12.660	133.3	ug/L	1416370	3	11.737	531238	50.0
alkane	12.828	243.3	ug/L	2585020	3	11.737	531238	50.0
alkane	12.996	42.9	ug/L	456011	3	11.737	531238	50.0
alkene	13.336	41.4	ug/L	440200	3	11.737	531238	50.0
ketones	14.112	50.6	ug/L	716859	4	15.082	708203	50.0
C3 alkyl benzene	17.090	49.9	ug/L	1956000	5	17.568	1960850	50.0

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\1A\v1a6201-6203\
Data File : 1A143746.D
Acq On : 3 Oct 2014 5:38 pm
Operator : DejanaS
Sample : jb77674-7
Misc : MS74584,V1A6201,W,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Oct 06 11:24:04 2014
Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 27 17:10:31 2014
Response via : Initial Calibration

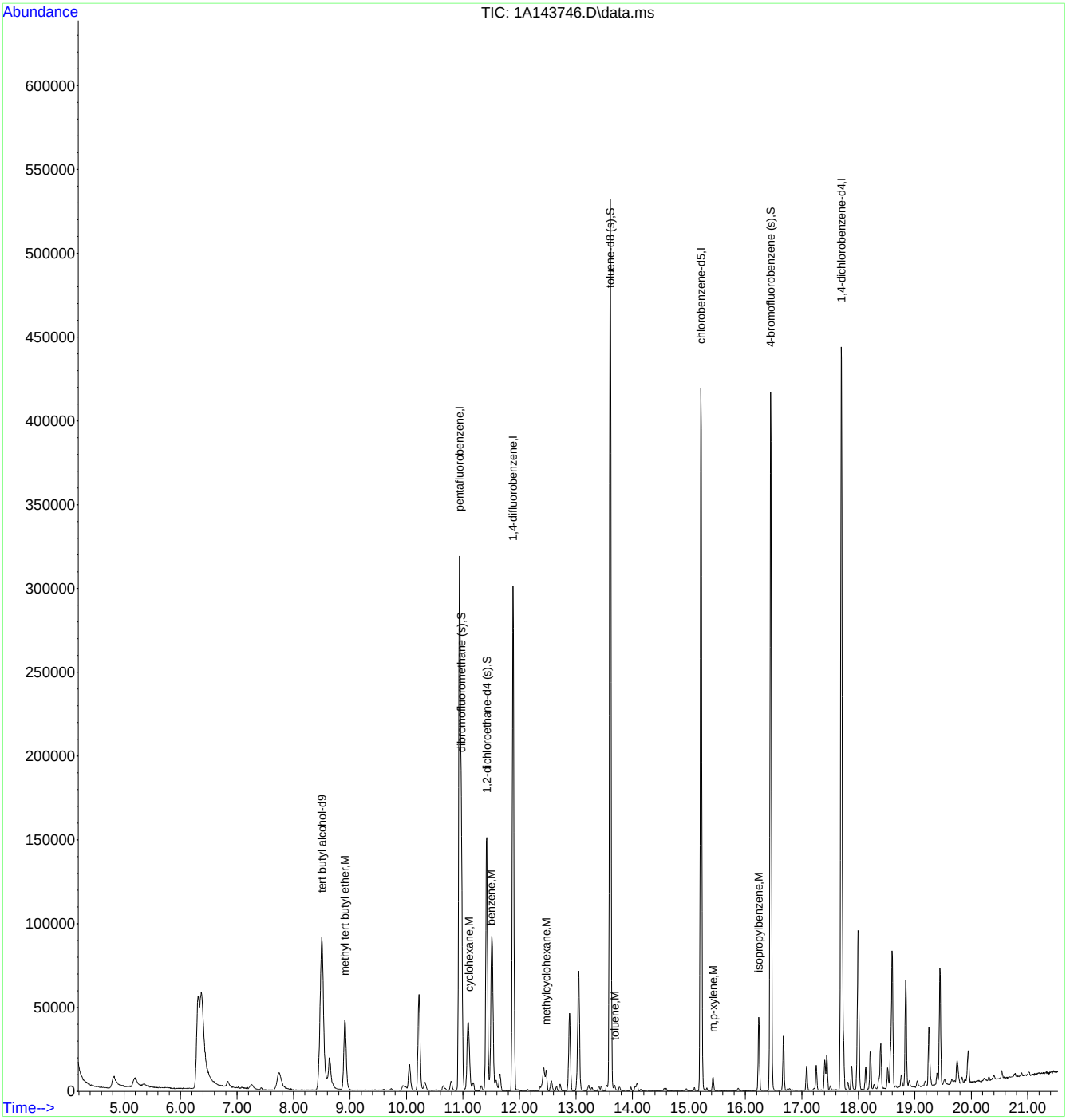
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	8.502	65	88795	500.00	ug/L	0.00
5) pentafluorobenzene	10.939	168	255682	50.00	ug/L	0.00
49) 1,4-difluorobenzene	11.886	114	282713	50.00	ug/L	0.00
78) chlorobenzene-d5	15.212	117	266982	50.00	ug/L	0.00
92) 1,4-dichlorobenzene-d4	17.697	152	141175	50.00	ug/L	0.00
System Monitoring Compounds						
42) dibromofluoromethane (s)	10.971	113	104792	48.12	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 96.24%			
43) 1,2-dichloroethane-d4 (s)	11.420	65	115167	45.04	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 90.08%			
70) toluene-d8 (s)	13.607	98	391759	49.43	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 98.86%			
94) 4-bromofluorobenzene (s)	16.447	95	150546	49.45	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 98.90%			
Target Compounds						Qvalue
24) methyl tert butyl ether	8.910	73	4285	0.57	ug/L #	1
47) cyclohexane	11.107	84	9336	2.89	ug/L #	73
56) benzene	11.499	78	34201	3.95	ug/L	99
67) methylcyclohexane	12.472	83	5601	1.57	ug/L	97
72) toluene	13.685	92	1371	0.25	ug/L #	73
88) m,p-xylene	15.427	106	2866	0.69	ug/L	91
93) isopropylbenzene	16.237	105	32525	3.01	ug/L	99

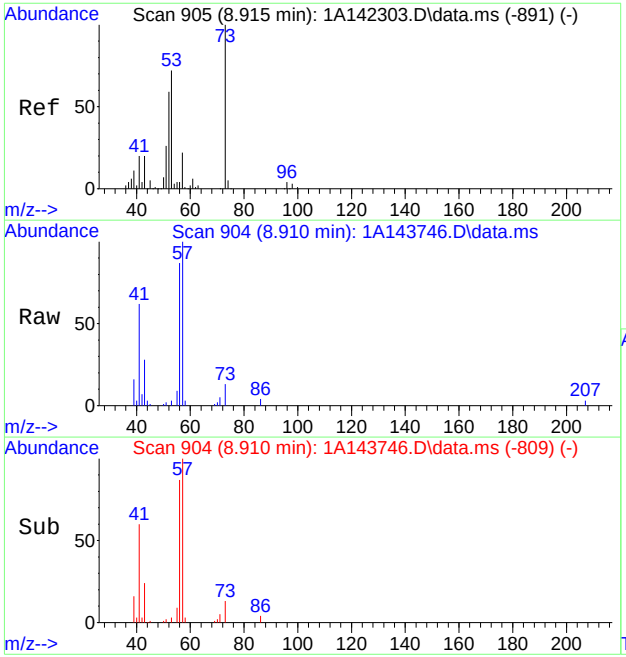
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\1A\v1a6201-6203\
Data File : 1A143746.D
Acq On : 3 Oct 2014 5:38 pm
Operator : DejanaS
Sample : jb77674-7
Misc : MS74584,V1A6201,W,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Oct 06 11:24:04 2014
Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 27 17:10:31 2014
Response via : Initial Calibration

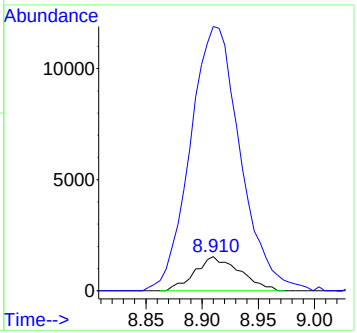


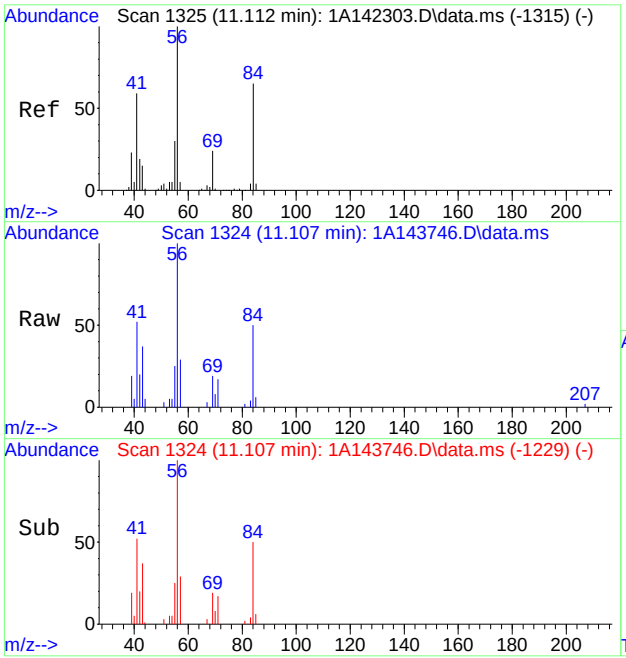


#24
methyl tert butyl ether
Concen: 0.57 ug/L
RT: 8.910 min Scan# 904
Delta R.T. -0.005 min
Lab File: 1A143746.D
Acq: 3 Oct 2014 5:38 pm

Tgt Ion: 73 Resp: 4285

Ion	Ratio	Lower	Upper
73	100		
57	740.2	0.0	64.8#

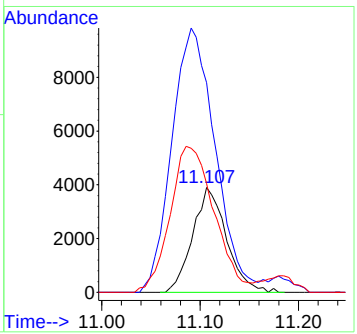


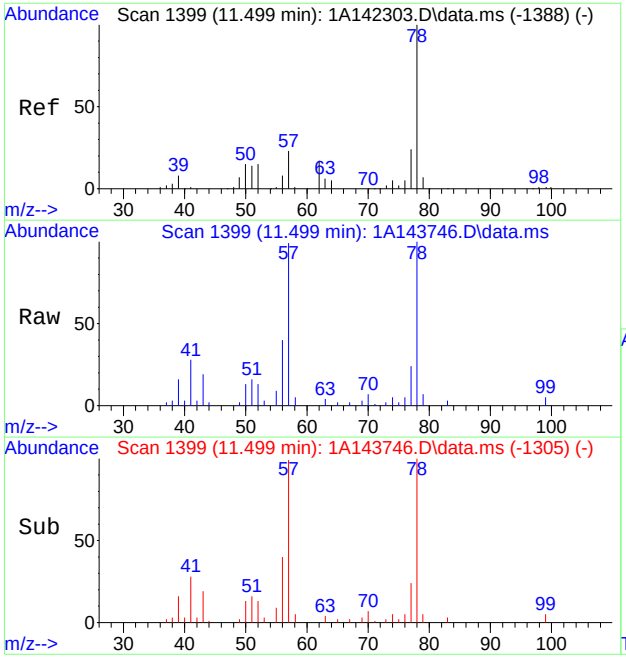


#47
cyclohexane
Concen: 2.89 ug/L
RT: 11.107 min Scan# 1324
Delta R.T. -0.005 min
Lab File: 1A143746.D
Acq: 3 Oct 2014 5:38 pm

Tgt Ion: 84 Resp: 9336

Ion	Ratio	Lower	Upper
84	100		
56	199.9	124.1	184.1#
41	103.7	61.0	121.0

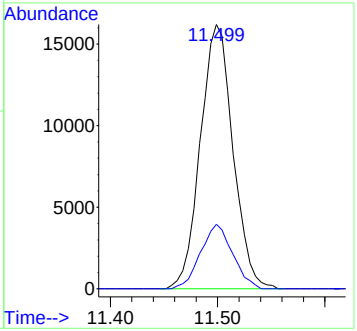


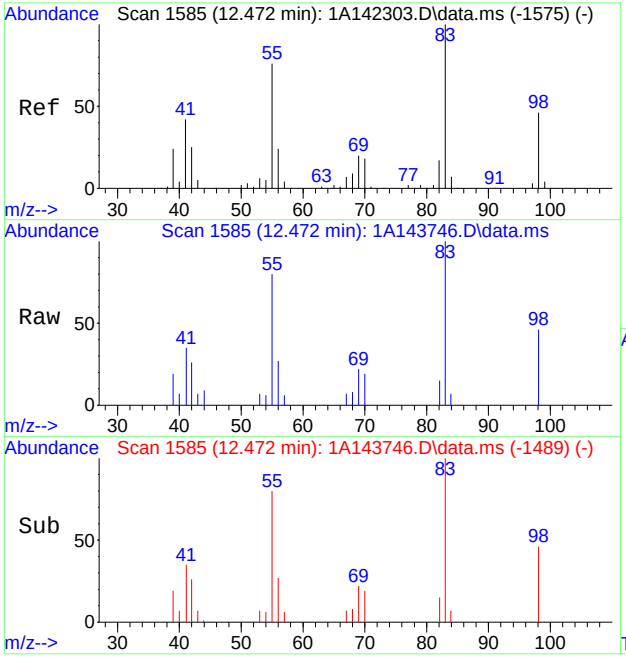


#56
benzene
Concen: 3.95 ug/L
RT: 11.499 min Scan# 1399
Delta R.T. 0.000 min
Lab File: 1A143746.D
Acq: 3 Oct 2014 5:38 pm

Tgt Ion: 78 Resp: 34201

Ion	Ratio	Lower	Upper
78	100		
77	24.4	0.0	53.9

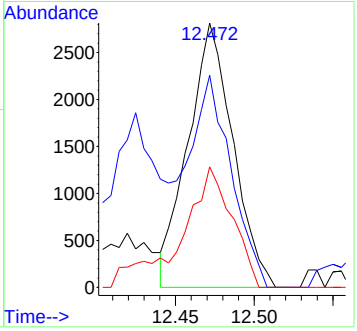


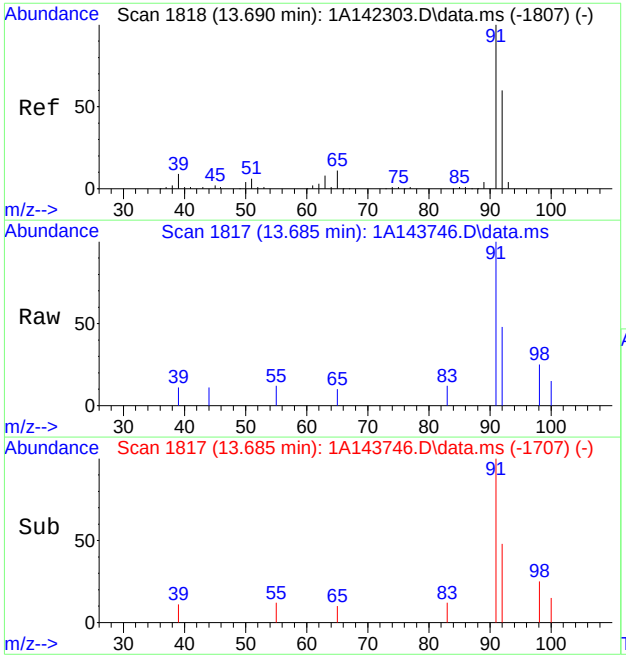


#67
methylcyclohexane
Concen: 1.57 ug/L
RT: 12.472 min Scan# 1585
Delta R.T. 0.000 min
Lab File: 1A143746.D
Acq: 3 Oct 2014 5:38 pm

Tgt Ion: 83 Resp: 5601

Ion	Ratio	Lower	Upper
83	100		
55	80.2	46.1	106.1
98	45.6	15.7	75.7

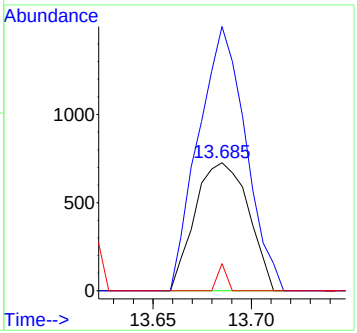


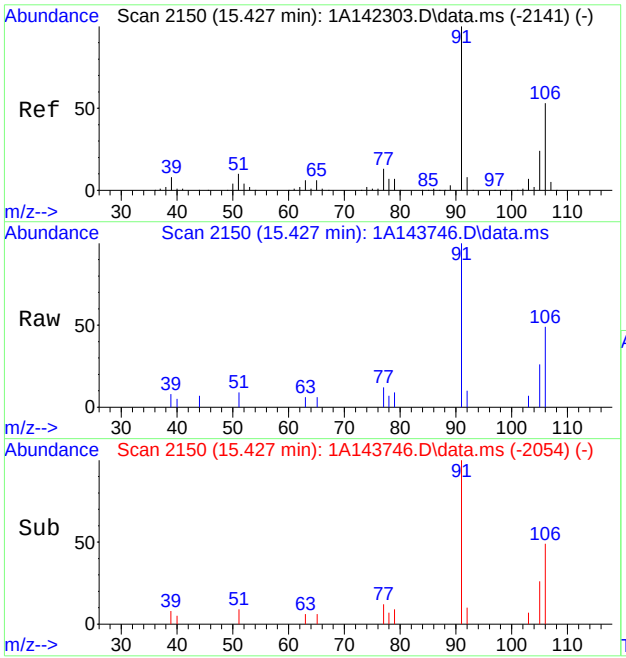


#72
toluene
Concen: 0.25 ug/L
RT: 13.685 min Scan# 1817
Delta R.T. -0.005 min
Lab File: 1A143746.D
Acq: 3 Oct 2014 5:38 pm

Tgt Ion: 92 Resp: 1371

Ion	Ratio	Lower	Upper
92	100		
91	206.6	136.8	196.8#
65	21.2	0.0	47.8

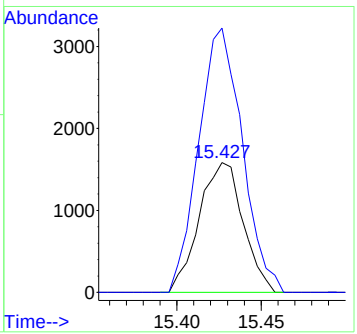


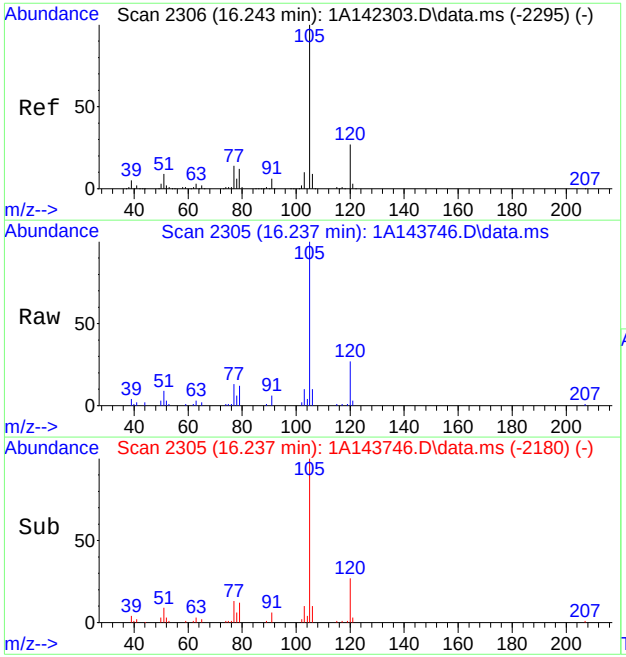


#88
m,p-xylene
Concen: 0.69 ug/L
RT: 15.427 min Scan# 2150
Delta R.T. 0.000 min
Lab File: 1A143746.D
Acq: 3 Oct 2014 5:38 pm

Tgt Ion:106 Resp: 2866

Ion	Ratio	Lower	Upper
106	100		
91	203.8	160.3	220.3

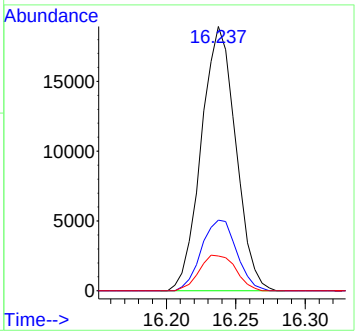




#93
isopropylbenzene
Concen: 3.01 ug/L
RT: 16.237 min Scan# 2305
Delta R.T. -0.005 min
Lab File: 1A143746.D
Acq: 3 Oct 2014 5:38 pm

Tgt Ion:105 Resp: 32525

Ion	Ratio	Lower	Upper
105	100		
120	26.8	0.0	57.1
77	13.2	0.0	44.2



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\1A\v1a6201-6203\
Data File : 1A143746.D
Acq On : 3 Oct 2014 5:38 pm
Operator : DejanaS
Sample : jb77674-7
Misc : MS74584,V1A6201,W,,,,1
ALS Vial : 20 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 300 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.4 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

Signal : TIC: 1A143746.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.825	107	123	142	rBV3	7209	37863	3.82%	0.427%
2	5.196	179	194	213	rBV3	5297	25856	2.61%	0.292%
3	6.310	390	407	412	rBV	55296	189591	19.12%	2.139%
4	6.368	413	418	475	rVB3	56464	308881	31.15%	3.484%
5	6.839	498	508	523	rVV4	3892	13188	1.33%	0.149%
6	7.257	576	588	605	rVB4	2947	12000	1.21%	0.135%
7	7.424	614	620	627	rVB4	1354	2315	0.23%	0.026%
8	7.749	660	682	704	rBV5	10501	60856	6.14%	0.686%
9	7.869	704	705	717	rVV6	1363	3513	0.35%	0.040%
10	8.502	807	826	843	rBV2	91149	396033	39.94%	4.467%
11	8.633	844	851	892	rVV	19339	75244	7.59%	0.849%
12	8.910	892	904	924	rVB	41548	128850	12.99%	1.453%
13	9.731	1055	1061	1069	rVB5	1025	1912	0.19%	0.022%
14	9.935	1093	1100	1107	rBV3	2837	8643	0.87%	0.097%
15	10.055	1114	1123	1137	rVB2	15382	40122	4.05%	0.453%
16	10.223	1143	1155	1167	rBV	57275	145972	14.72%	1.647%
17	10.327	1167	1175	1185	rVB2	4930	14135	1.43%	0.159%
18	10.657	1230	1238	1253	rBV5	2942	8879	0.90%	0.100%
19	10.788	1255	1263	1280	rVV3	5672	14302	1.44%	0.161%
20	10.939	1280	1292	1309	rVV2	319011	978369	98.66%	11.036%
21	11.091	1309	1321	1333	rVV4	41243	129362	13.04%	1.459%
22	11.180	1333	1338	1347	rVB2	5129	11022	1.11%	0.124%
23	11.321	1356	1365	1372	rBV2	3283	7099	0.72%	0.080%
24	11.420	1372	1384	1393	rVV	151283	331662	33.44%	3.741%
25	11.509	1393	1401	1412	rVV2	92392	256535	25.87%	2.894%
26	11.588	1412	1416	1422	rVV4	6515	13910	1.40%	0.157%
27	11.656	1422	1429	1438	rVB3	10256	22806	2.30%	0.257%
28	11.886	1462	1473	1485	rBV	301476	595423	60.04%	6.717%
29	12.137	1514	1521	1534	rVB4	1145	2347	0.24%	0.026%
30	12.367	1557	1565	1567	rBV4	2647	4123	0.42%	0.047%
31	12.430	1567	1577	1582	rVV5	13824	39465	3.98%	0.445%
32	12.472	1582	1585	1594	rVV2	12591	20528	2.07%	0.232%
33	12.566	1594	1603	1612	rVV3	6114	13565	1.37%	0.153%
34	12.660	1612	1621	1626	rVV4	2482	4538	0.46%	0.051%
35	12.717	1626	1632	1640	rVB2	4145	7477	0.75%	0.084%
36	12.885	1652	1664	1675	rVB	46504	100458	10.13%	1.133%
37	13.047	1675	1695	1707	rBV	71686	165951	16.73%	1.872%
38	13.225	1721	1729	1735	rBV5	3419	6586	0.66%	0.074%
39	13.288	1735	1741	1752	rVB3	1928	3755	0.38%	0.042%
40	13.408	1757	1764	1768	rBV	2959	5471	0.55%	0.062%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\1A\v1a6201-6203\
Data File : 1A143746.D
Acq On : 3 Oct 2014 5:38 pm
Operator : DejanaS
Sample : jb77674-7
Misc : MS74584,V1A6201,W,,,,1
ALS Vial : 20 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 300 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.4 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

41	13.450	1768	1772	1781	rVB3	2950	4834	0.49%	0.055%
42	13.544	1783	1790	1793	rBV4	3476	5848	0.59%	0.066%
43	13.607	1793	1802	1813	rVV	532046	991689	100.00%	11.187%
44	13.685	1813	1817	1829	rVB2	3467	7184	0.72%	0.081%
45	13.769	1829	1833	1839	rBV3	2440	4586	0.46%	0.052%
46	13.973	1863	1872	1879	rBV3	2425	3692	0.37%	0.042%
47	14.083	1879	1893	1901	rVV5	4879	13517	1.36%	0.152%
48	14.145	1901	1905	1910	rVB2	1089	1502	0.15%	0.017%
49	14.564	1979	1985	1989	rBV	1451	2352	0.24%	0.027%
50	14.595	1989	1991	1997	rVB2	1699	1844	0.19%	0.021%
51	14.956	2053	2060	2066	rVB3	1341	2372	0.24%	0.027%
52	15.097	2079	2087	2091	rBV2	2081	2872	0.29%	0.032%
53	15.212	2099	2109	2124	rBV	419064	750202	75.65%	8.463%
54	15.317	2124	2129	2136	rVB	1808	2630	0.27%	0.030%
55	15.427	2141	2150	2159	rBV2	8245	13977	1.41%	0.158%
56	15.871	2227	2235	2240	rBV	1761	2996	0.30%	0.034%
57	16.237	2296	2305	2316	rVB2	43831	73543	7.42%	0.830%
58	16.447	2335	2345	2360	rBV	416956	728192	73.43%	8.214%
59	16.672	2379	2388	2396	rBV	32607	53092	5.35%	0.599%
60	16.750	2398	2403	2405	rVV2	936	1492	0.15%	0.017%
61	16.781	2405	2409	2414	rVV	1265	1921	0.19%	0.022%
62	17.085	2460	2467	2474	rVB2	14582	23849	2.40%	0.269%
63	17.215	2485	2492	2493	rBV	1231	1604	0.16%	0.018%
64	17.252	2493	2499	2510	rVB	15006	23889	2.41%	0.269%
65	17.404	2519	2528	2532	rBV	18144	31979	3.22%	0.361%
66	17.440	2532	2535	2542	rVV	20653	30689	3.09%	0.346%
67	17.503	2542	2547	2553	rVB	2606	3925	0.40%	0.044%
68	17.697	2575	2584	2600	rBV	443384	842171	84.92%	9.500%
69	17.812	2600	2606	2612	rVB2	4791	7338	0.74%	0.083%
70	17.880	2612	2619	2630	rVB	14365	23320	2.35%	0.263%
71	17.995	2630	2641	2652	rBV2	95206	193071	19.47%	2.178%
72	18.131	2659	2667	2674	rBV3	13444	21959	2.21%	0.248%
73	18.214	2674	2683	2690	rBV	22815	39043	3.94%	0.440%
74	18.277	2690	2695	2704	rVB4	2778	4770	0.48%	0.054%
75	18.398	2704	2718	2727	rBV2	27081	55218	5.57%	0.623%
76	18.518	2733	2741	2746	rBV2	12681	21600	2.18%	0.244%
77	18.596	2746	2756	2765	rVV2	82206	177814	17.93%	2.006%
78	18.664	2765	2769	2775	rVV3	1410	2486	0.25%	0.028%
79	18.764	2781	2788	2794	rVV3	7715	13903	1.40%	0.157%
80	18.837	2794	2802	2810	rVV	64162	113238	11.42%	1.277%
81	18.905	2810	2815	2823	rVB4	3973	6871	0.69%	0.078%
82	19.041	2835	2841	2853	rBV5	4264	10136	1.02%	0.114%
83	19.187	2862	2869	2873	rBV2	3254	5690	0.57%	0.064%
84	19.250	2873	2881	2893	rVV2	35278	67138	6.77%	0.757%
85	19.391	2899	2908	2912	rBV	7405	12874	1.30%	0.145%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\1A\v1a6201-6203\
Data File : 1A143746.D
Acq On : 3 Oct 2014 5:38 pm
Operator : DejanaS
Sample : jb77674-7
Misc : MS74584,V1A6201,W,,,,1
ALS Vial : 20 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 300 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.4 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

86	19.444	2912	2918	2926	rVV	69817	120834	12.18%	1.363%
87	19.527	2928	2934	2947	rVB7	3084	7507	0.76%	0.085%
88	19.653	2953	2958	2964	rBV8	2760	5778	0.58%	0.065%
89	19.700	2965	2967	2970	rVV4	2070	2509	0.25%	0.028%
90	19.747	2970	2976	2986	rVB4	13836	32094	3.24%	0.362%
91	19.836	2987	2993	2999	rBV3	3964	6551	0.66%	0.074%
92	19.888	2999	3003	3006	rVV5	2422	3909	0.39%	0.044%
93	19.946	3006	3014	3024	rVB3	19056	39736	4.01%	0.448%
94	20.228	3060	3068	3078	rBV4	1914	5028	0.51%	0.057%
95	20.312	3080	3084	3089	rBV6	2097	3298	0.33%	0.037%
96	20.401	3095	3101	3112	rBV5	2478	4544	0.46%	0.051%
97	20.537	3122	3127	3134	rBV2	4782	7605	0.77%	0.086%
98	20.777	3167	3173	3179	rVB8	2430	4631	0.47%	0.052%
99	20.892	3191	3195	3201	rVB7	2028	2775	0.28%	0.031%
100	21.018	3215	3219	3225	rVB7	2263	4600	0.46%	0.052%

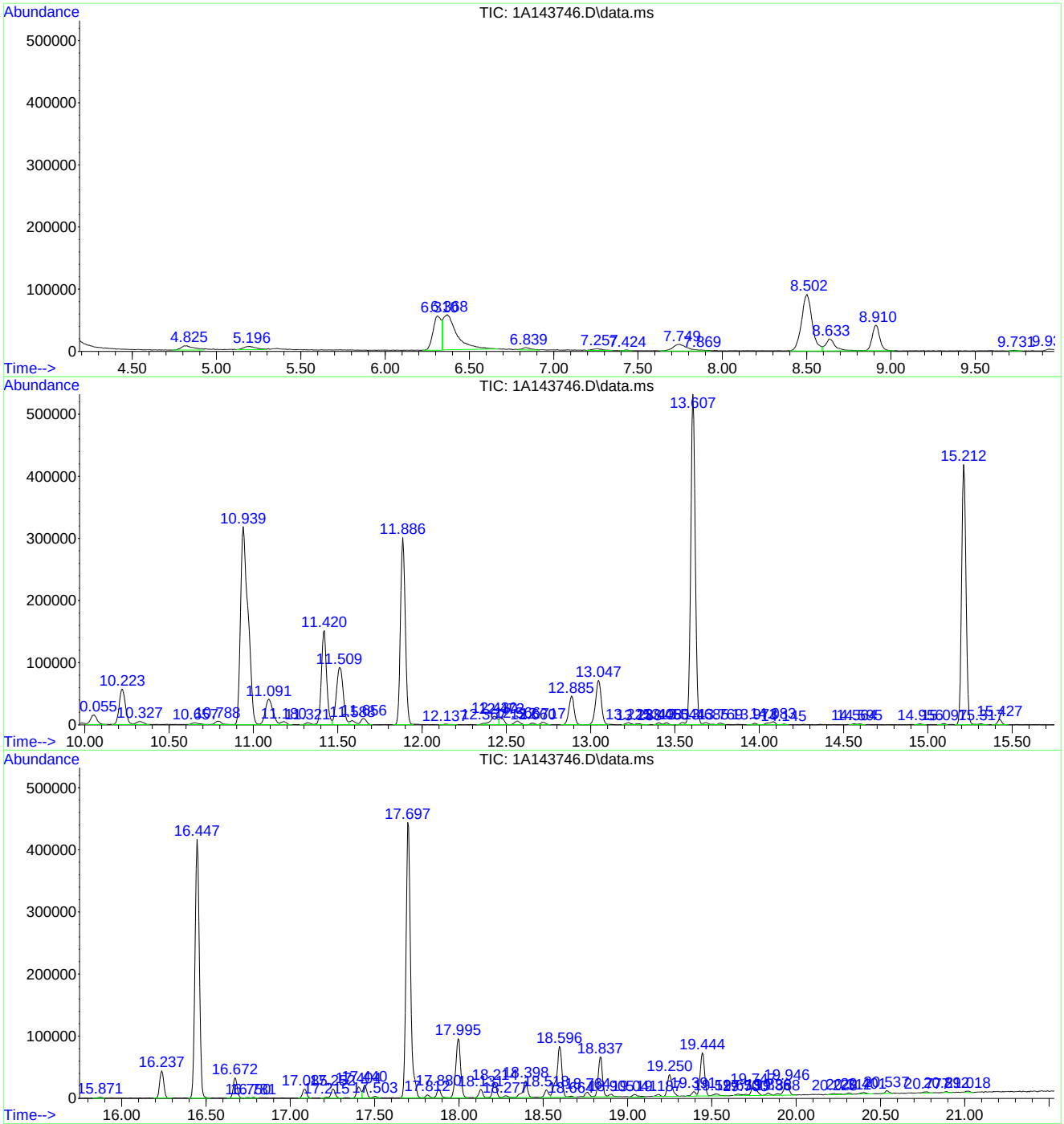
Sum of corrected areas: 8864918

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\1A\v1a6201-6203\
Data File : 1A143746.D
Acq On : 3 Oct 2014 5:38 pm
Operator : DejanaS
Sample : jb77674-7
Misc : MS74584,V1A6201,W,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\1A\v1a6201-6203\
Data File : 1A143746.D
Acq On : 3 Oct 2014 5:38 pm
Operator : DejanaS
Sample : jb77674-7
Misc : MS74584,V1A6201,W,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

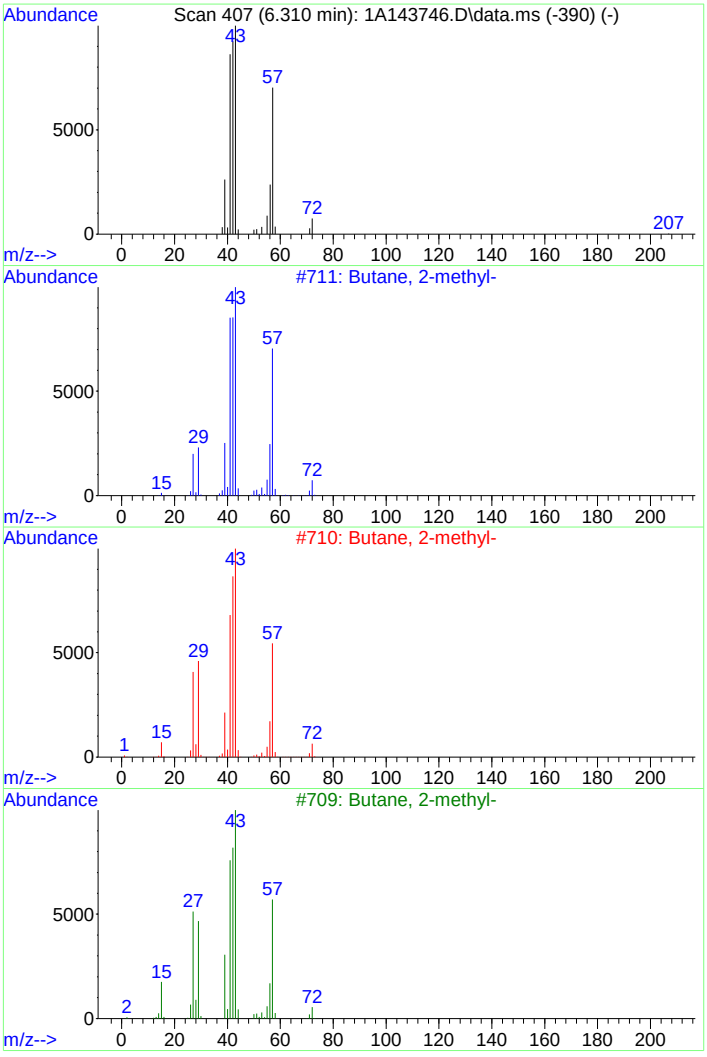
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

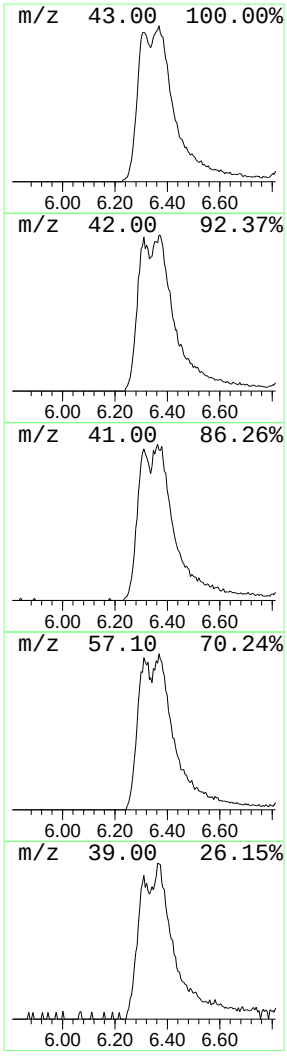
****

Peak Number 1 alkane Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.310	9.69 ug/L	189591	pentafluorobenzene	10.939

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	91
2	Butane, 2-methyl-	72	C5H12	000078-78-4	91
3	Butane, 2-methyl-	72	C5H12	000078-78-4	90
4	3-Buten-1-ol	72	C4H8O	000627-27-0	38
5	1-Propene, 2-methyl-	56	C4H8	000115-11-7	14





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\1A\v1a6201-6203\
Data File : 1A143746.D
Acq On : 3 Oct 2014 5:38 pm
Operator : DejanaS
Sample : jb77674-7
Misc : MS74584,V1A6201,W,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

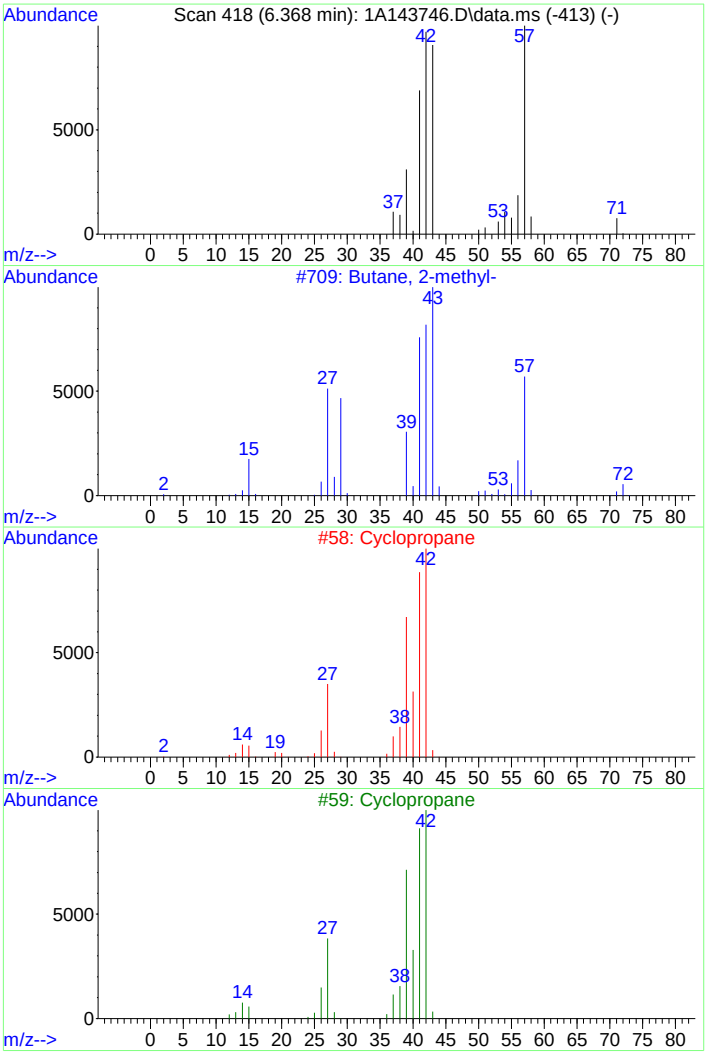
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

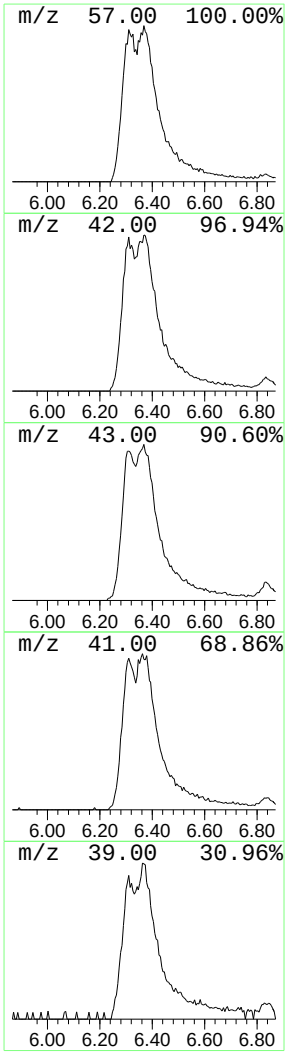
****

Peak Number 2 alkene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.368	15.79 ug/L	308881	pentafluorobenzene	10.939

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	40
2	Cyclopropane	42	C3H6	000075-19-4	9
3	Cyclopropane	42	C3H6	000075-19-4	9
4	2-Propen-1-ol, 2-methyl-	72	C4H8O	000513-42-8	9
5	Butane, 2-nitro-	103	C4H9NO2	000600-24-8	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\1A\v1a6201-6203\
Data File : 1A143746.D
Acq On : 3 Oct 2014 5:38 pm
Operator : DejanaS
Sample : jb77674-7
Misc : MS74584,V1A6201,W,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

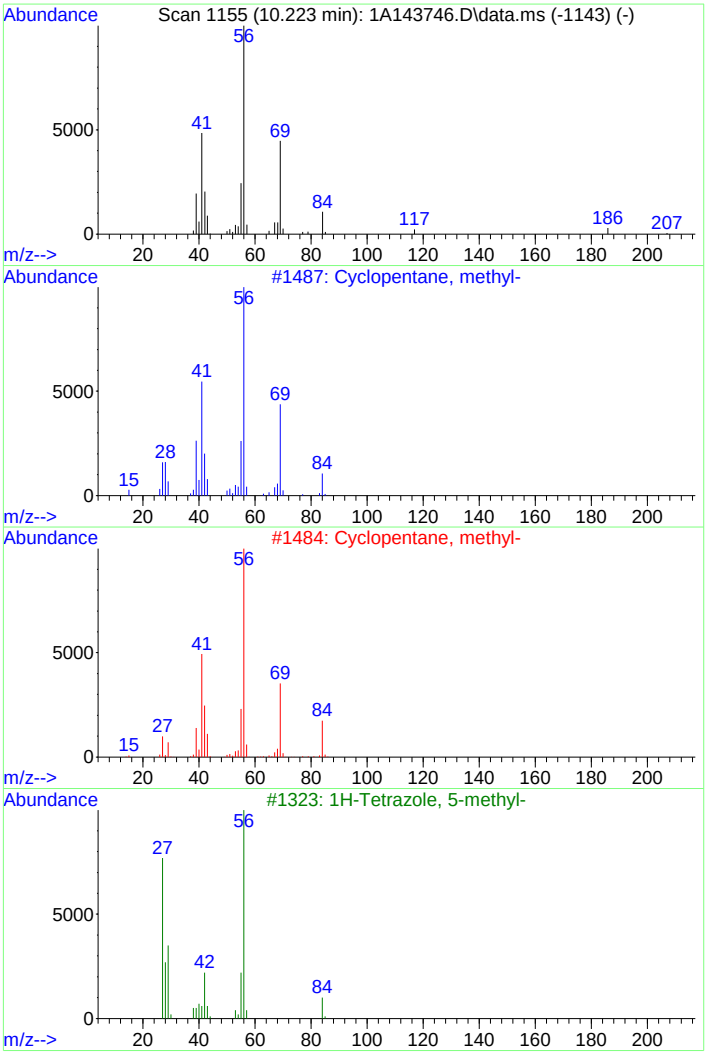
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

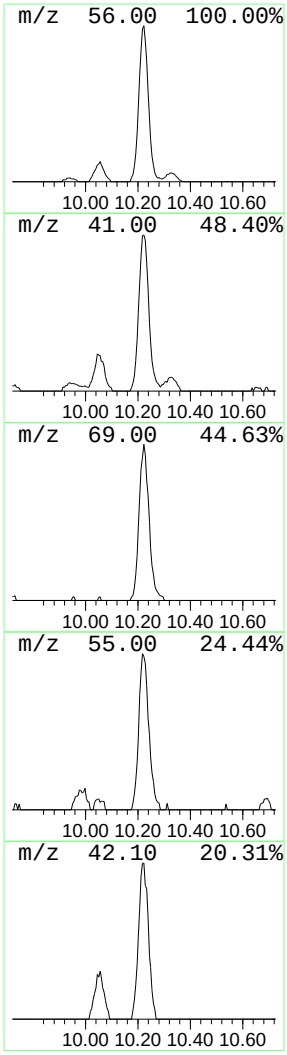
****

Peak Number 3 alkene Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.223	7.46 ug/L	145972	pentafluorobenzene	10.939

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	91
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	78
3	1H-Tetrazole, 5-methyl-	84	C2H4N4	004076-36-2	72
4	Cyclohexane	84	C6H12	000110-82-7	64
5	1-Heptene, 6-methyl-	112	C8H16	005026-76-6	64





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\1A\v1a6201-6203\
Data File : 1A143746.D
Acq On : 3 Oct 2014 5:38 pm
Operator : DejanaS
Sample : jb77674-7
Misc : MS74584,V1A6201,W,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

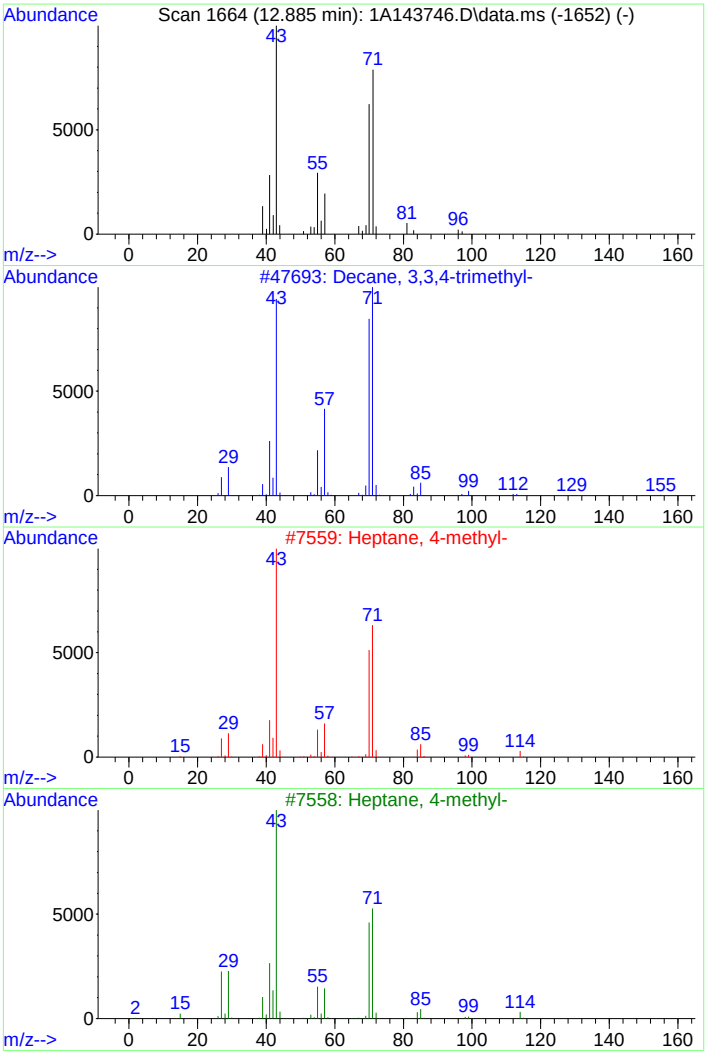
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

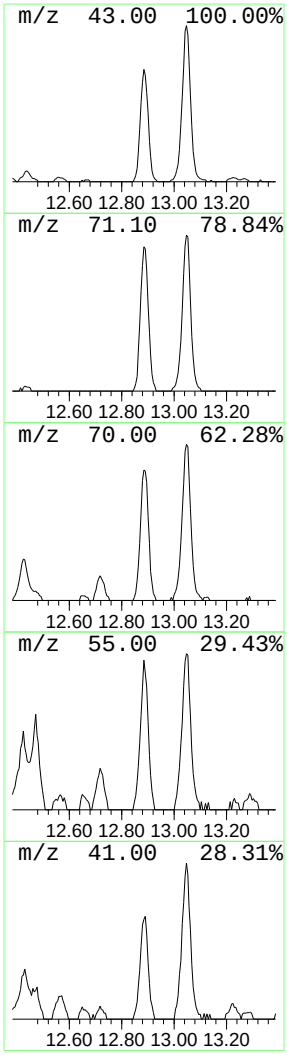
****

Peak Number 4 alkane Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.885	8.44 ug/L	100458	1,4-difluorobenzene	11.886

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Decane, 3,3,4-trimethyl-	184	C13H28	049622-18-6	78
2	Heptane, 4-methyl-	114	C8H18	000589-53-7	78
3	Heptane, 4-methyl-	114	C8H18	000589-53-7	78
4	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	72
5	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	72





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\1A\v1a6201-6203\
Data File : 1A143746.D
Acq On : 3 Oct 2014 5:38 pm
Operator : DejanaS
Sample : jb77674-7
Misc : MS74584,V1A6201,W,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

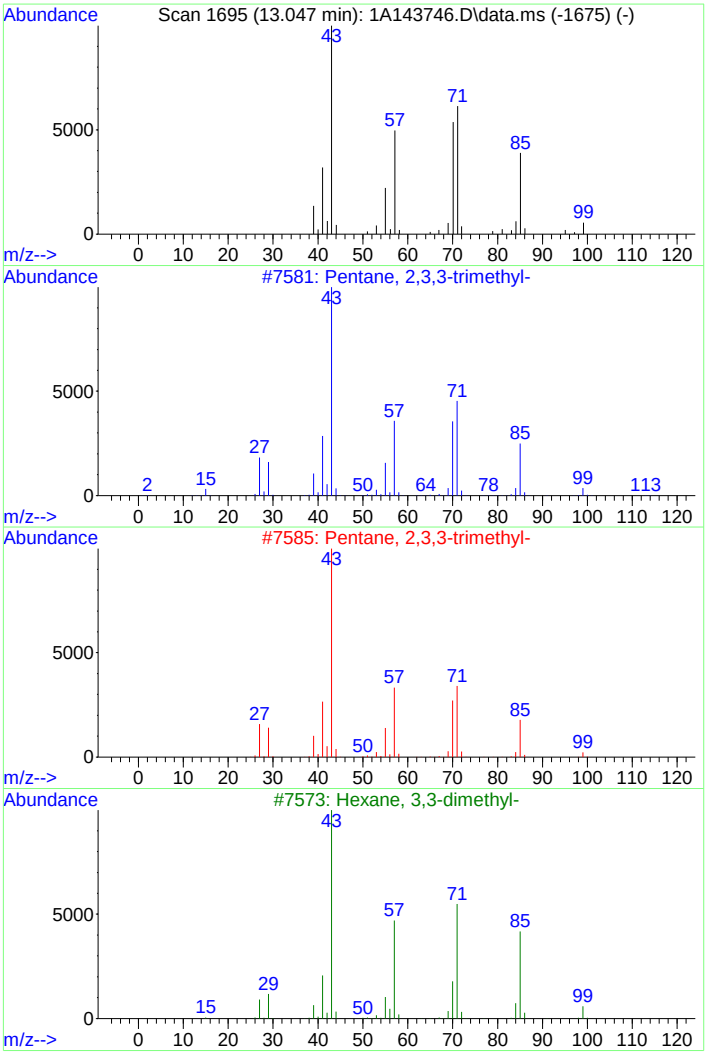
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

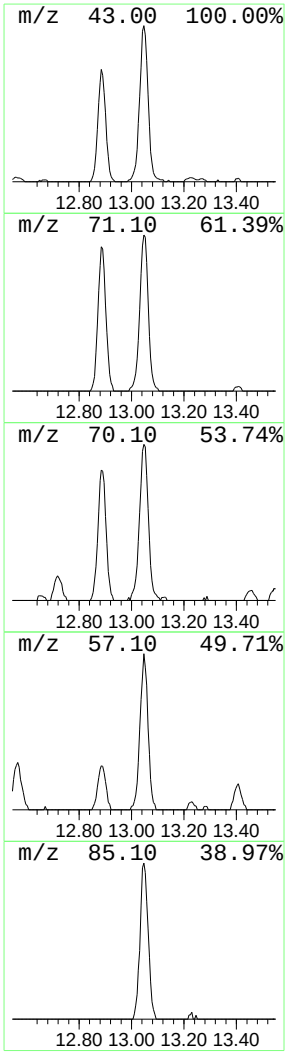
****

Peak Number 5 alkane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.047	13.94 ug/L	165951	1,4-difluorobenzene	11.886

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	90
2	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	83
3	Hexane, 3,3-dimethyl-	114	C8H18	000563-16-6	64
4	Hexane, 3,3-dimethyl-	114	C8H18	000563-16-6	64
5	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	50





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\1A\v1a6201-6203\
Data File : 1A143746.D
Acq On : 3 Oct 2014 5:38 pm
Operator : DejanaS
Sample : jb77674-7
Misc : MS74584,V1A6201,W,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

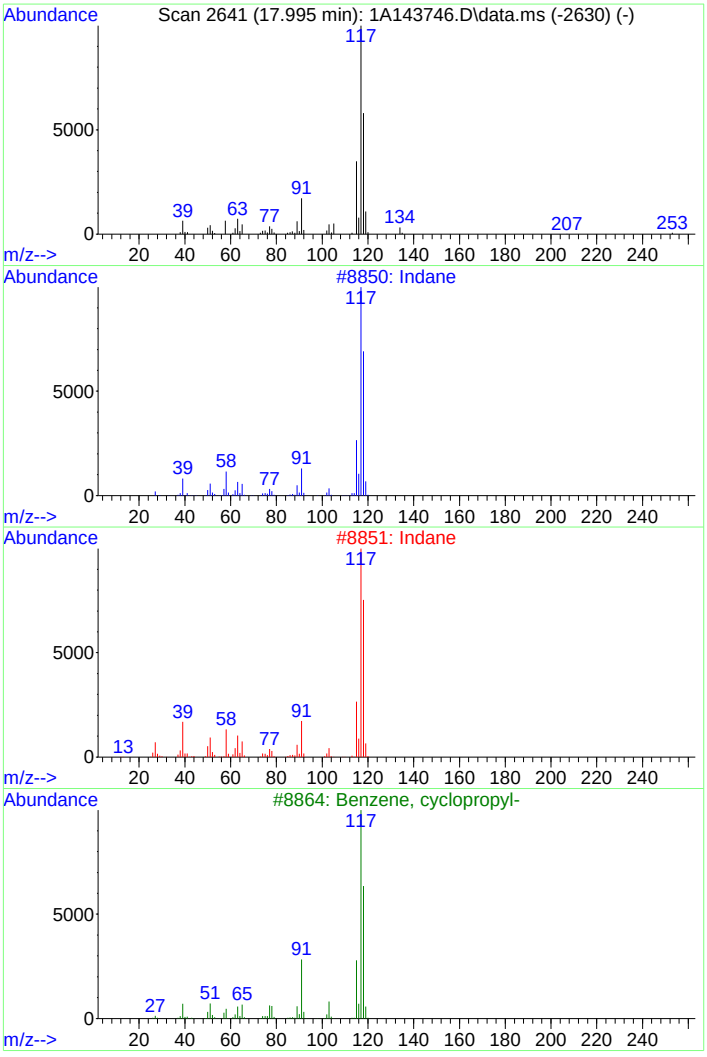
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

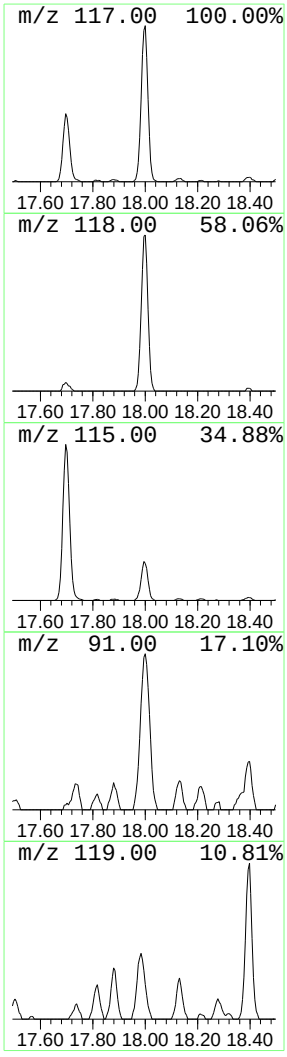
****

Peak Number 6 Indane Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.995	11.46 ug/L	193071	1,4-dichlorobenzene-d4	17.697

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indane	118	C9H10	000496-11-7	81
2	Indane	118	C9H10	000496-11-7	81
3	Benzene, cyclopropyl-	118	C9H10	000873-49-4	81
4	Indane	118	C9H10	000496-11-7	81
5	Benzene, 1-ethenyl-2-methyl-	118	C9H10	000611-15-4	74





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\1A\v1a6201-6203\
Data File : 1A143746.D
Acq On : 3 Oct 2014 5:38 pm
Operator : DejanaS
Sample : jb77674-7
Misc : MS74584,V1A6201,W,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

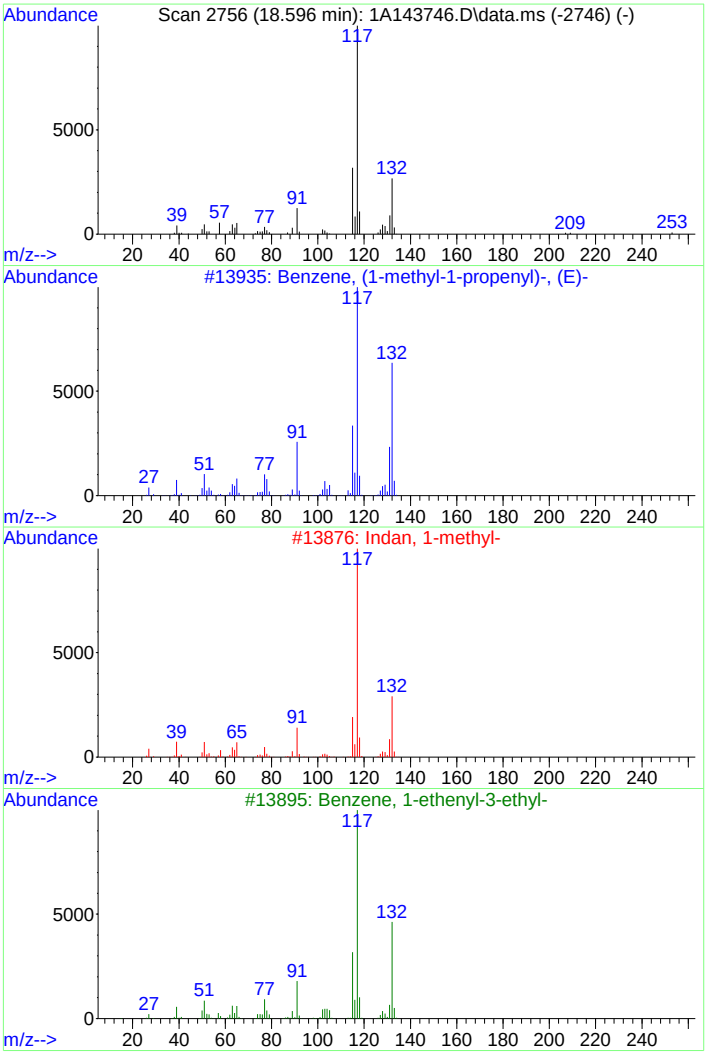
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

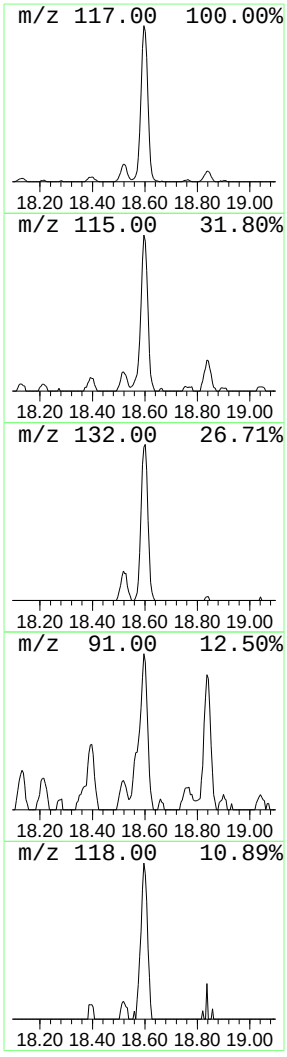
****

Peak Number 7 1H-Indene-dihydro-methyl- i... Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.596	10.56 ug/L	177814	1,4-dichlorobenzene-d4	17.697

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, (1-methyl-1-propenyl)-,...	132	C10H12	000768-00-3	90
2	Indan, 1-methyl-	132	C10H12	000767-58-8	90
3	Benzene, 1-ethenyl-3-ethyl-	132	C10H12	007525-62-4	90
4	Benzene, 1-ethenyl-4-ethyl-	132	C10H12	003454-07-7	87
5	1H-Indene, 2,3-dihydro-2-methyl-	132	C10H12	000824-63-5	87





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\1A\v1a6201-6203\
Data File : 1A143746.D
Acq On : 3 Oct 2014 5:38 pm
Operator : DejanaS
Sample : jb77674-7
Misc : MS74584,V1A6201,W,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

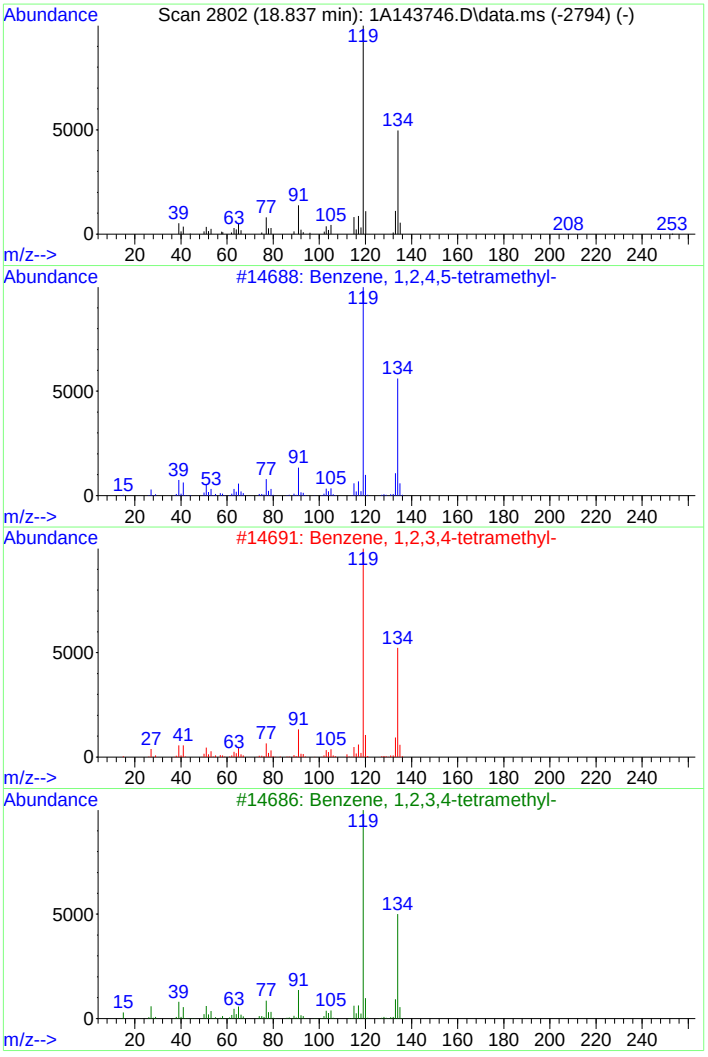
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

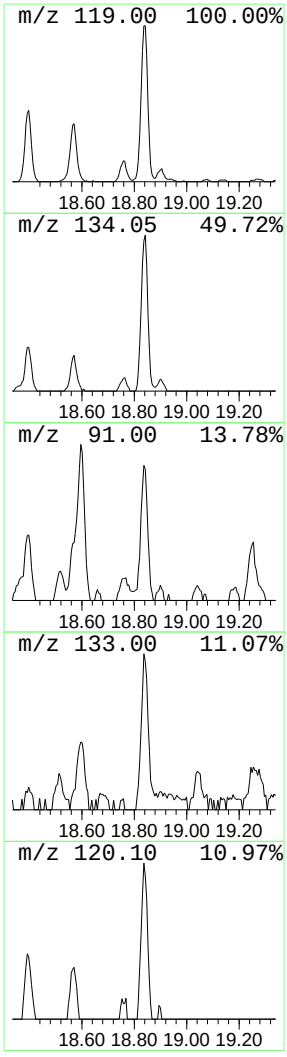
****

Peak Number 8 C4 alkyl benzene Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.837	6.72 ug/L	113238	1,4-dichlorobenzene-d4	17.697

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	97
2	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	97
3	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	97
4	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	97
5	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	96





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\1A\v1a6201-6203\
Data File : 1A143746.D
Acq On : 3 Oct 2014 5:38 pm
Operator : DejanaS
Sample : jb77674-7
Misc : MS74584,V1A6201,W,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

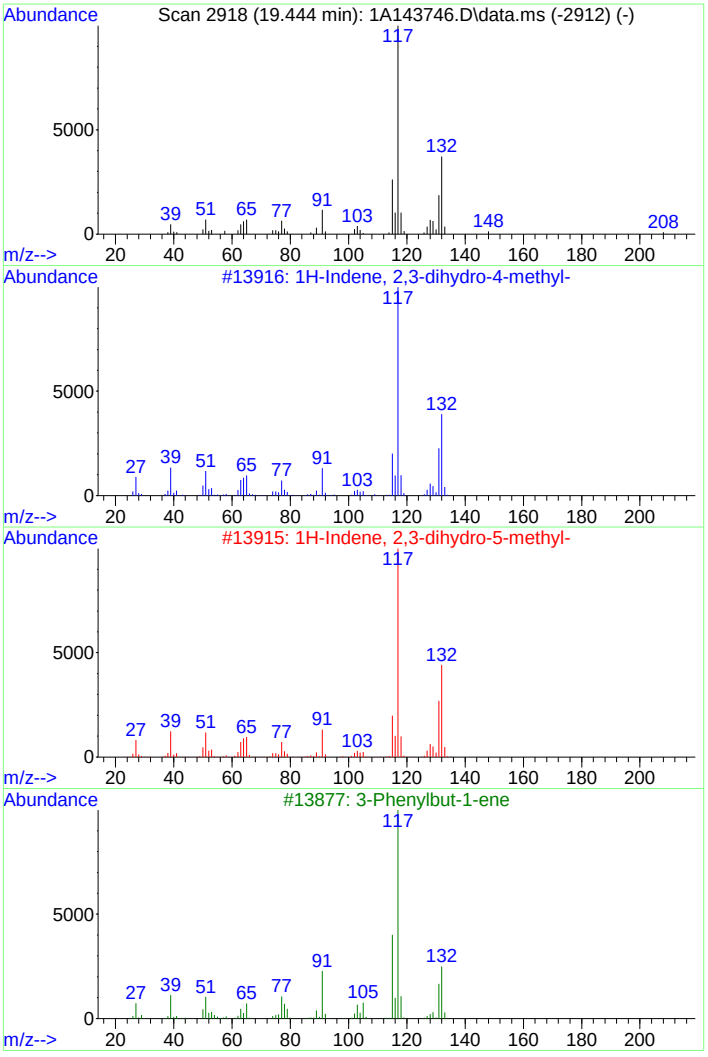
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

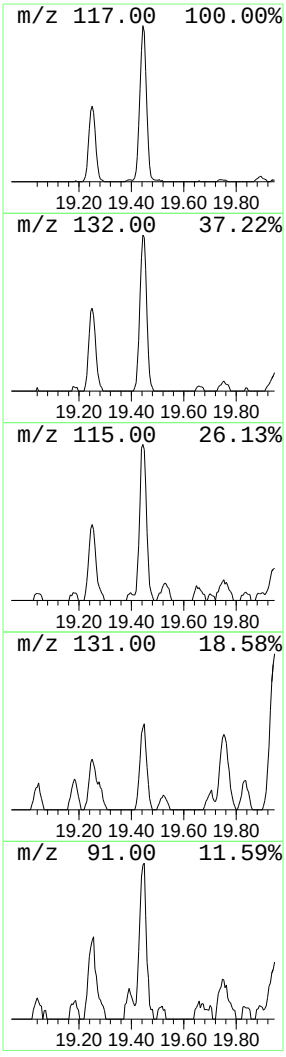
****

Peak Number 9 1H-Indene-dihydro-methyl- i... Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.444	7.17 ug/L	120834	1,4-dichlorobenzene-d4	17.697

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	95
2	1H-Indene, 2,3-dihydro-5-methyl-	132	C10H12	000874-35-1	91
3	3-Phenylbut-1-ene	132	C10H12	000934-10-1	91
4	Benzene, 1-ethenyl-3-ethyl-	132	C10H12	007525-62-4	87
5	Benzene, 2-butenyl-	132	C10H12	001560-06-1	87





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\1A\v1a6201-6203\
Data File : 1A143746.D
Acq On : 3 Oct 2014 5:38 pm
Operator : DejanaS
Sample : jb77674-7
Misc : MS74584,V1A6201,W,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
alkane	6.310	9.7	ug/L	189591	2	10.939	978369	50.0
alkene	6.368	15.8	ug/L	308881	2	10.939	978369	50.0
alkene	10.223	7.5	ug/L	145972	2	10.939	978369	50.0
alkane	12.885	8.4	ug/L	100458	3	11.886	595423	50.0
alkane	13.047	13.9	ug/L	165951	3	11.886	595423	50.0
Indane	17.995	11.5	ug/L	193071	5	17.697	842171	50.0
1H-Indene-dihyd...	18.596	10.6	ug/L	177814	5	17.697	842171	50.0
C4 alkyl benzene	18.837	6.7	ug/L	113238	5	17.697	842171	50.0
1H-Indene-dihyd...	19.444	7.2	ug/L	120834	5	17.697	842171	50.0

Manual Integrations APPROVED (compounds with "m" flag)
Mei Chen
10/02/14 12:38

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143607.d
Acq On : 30 Sep 2014 4:58 pm
Operator : DejanaS
Sample : jb77674-8
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Oct 01 11:16:49 2014
Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 27 17:10:31 2014
Response via : Initial Calibration

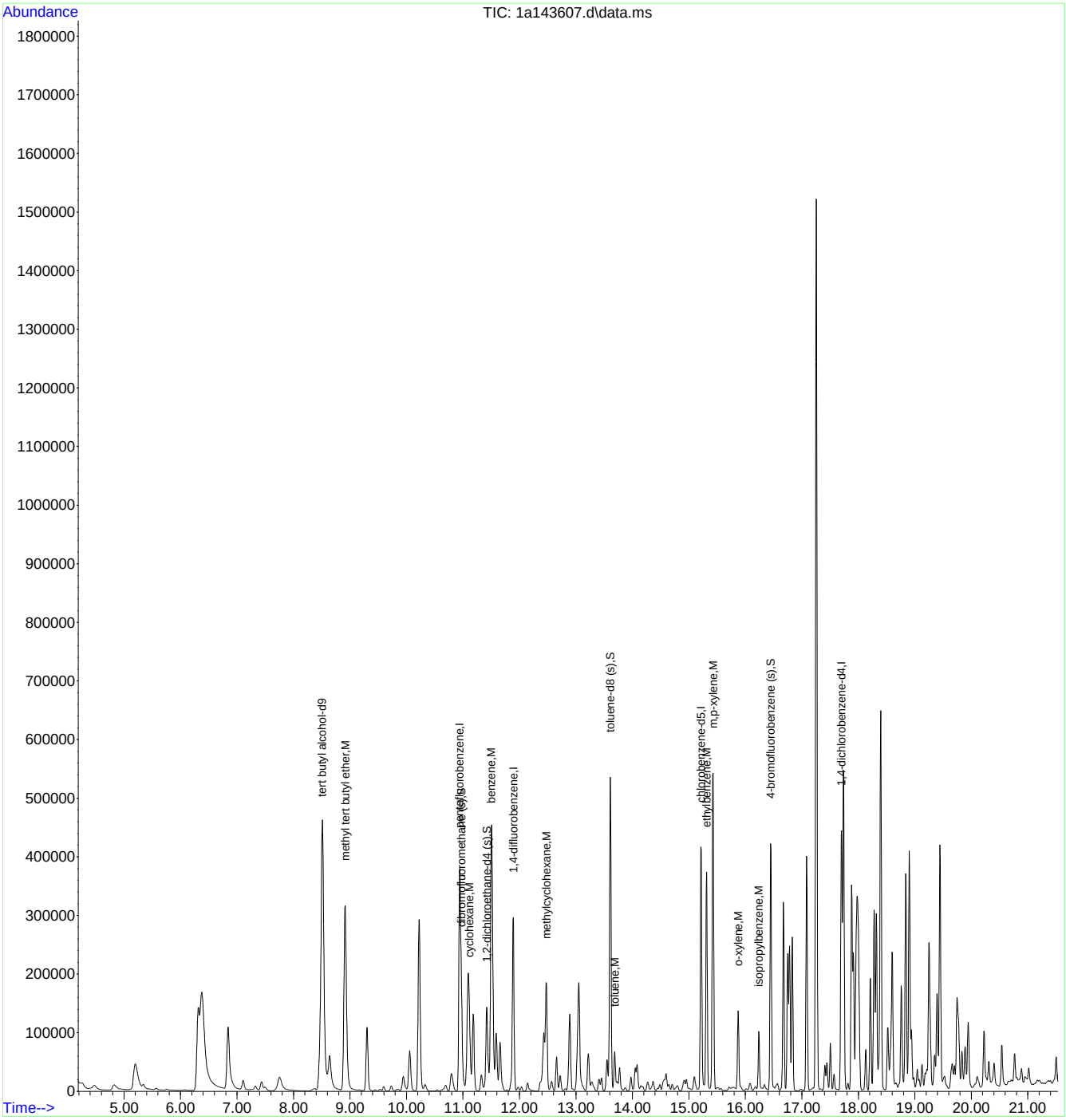
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	8.502	65	85958	500.00	ug/L	0.00
5) pentafluorobenzene	10.939	168	251031	50.00	ug/L	0.00
49) 1,4-difluorobenzene	11.891	114	273408	50.00	ug/L	0.00
78) chlorobenzene-d5	15.212	117	273416	50.00	ug/L	0.00
92) 1,4-dichlorobenzene-d4	17.702	152	141451	50.00	ug/L	0.00
System Monitoring Compounds						
42) dibromofluoromethane (s)	10.971	113	98023	45.85	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 91.70%			
43) 1,2-dichloroethane-d4 (s)	11.420	65	103674	41.29	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 82.58%			
70) toluene-d8 (s)	13.607	98	389686	50.84	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 101.68%			
94) 4-bromofluorobenzene (s)	16.447	95	152804	50.10	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 100.20%			
Target Compounds						Qvalue
24) methyl tert butyl ether	8.915	73	10056	1.37	ug/L	# 1
47) cyclohexane	11.112	84	51745m	16.32	ug/L	
56) benzene	11.499	78	307702	36.74	ug/L	100
67) methylcyclohexane	12.477	83	101233	29.42	ug/L	99
72) toluene	13.685	92	20974	3.89	ug/L	99
87) ethylbenzene	15.312	91	279956	26.02	ug/L	99
88) m,p-xylene	15.427	106	184869	43.41	ug/L	98
89) o-xylene	15.871	106	41544	9.01	ug/L	97
93) isopropylbenzene	16.237	105	72028	6.65	ug/L	99

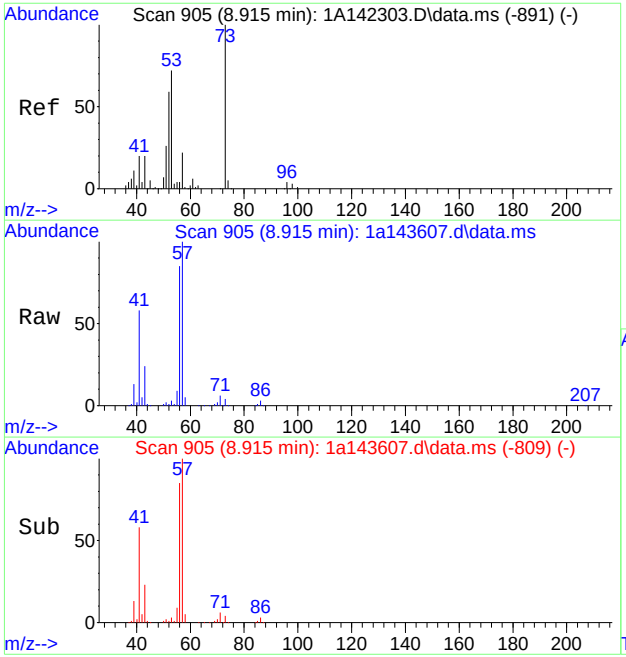
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143607.d
Acq On : 30 Sep 2014 4:58 pm
Operator : DejanaS
Sample : jb77674-8
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Oct 01 11:16:49 2014
Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 27 17:10:31 2014
Response via : Initial Calibration

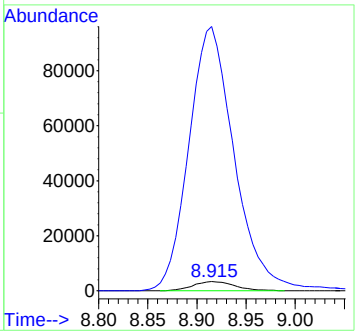


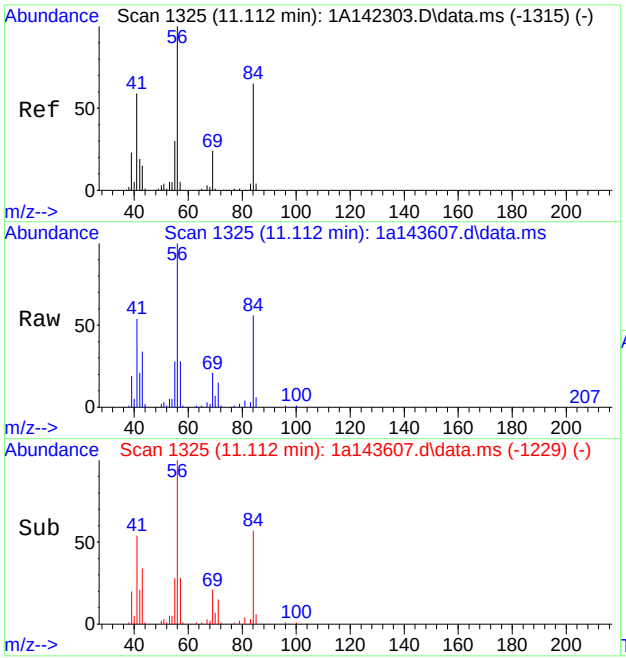


#24
methyl tert butyl ether
Concen: 1.37 ug/L
RT: 8.915 min Scan# 905
Delta R.T. -0.000 min
Lab File: 1a143607.d
Acq: 30 Sep 2014 4:58 pm

Tgt Ion: 73 Resp: 10056

Ion	Ratio	Lower	Upper
73	100		
57	2716.8	0.0	64.8#

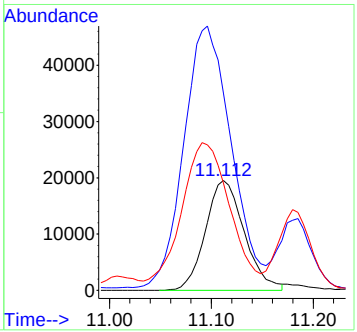


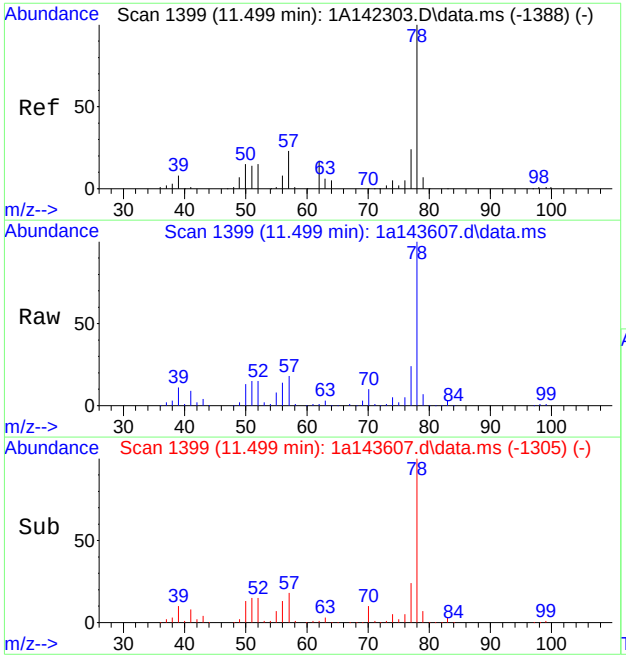


#47
cyclohexane
Concen: 16.32 ug/L m
RT: 11.112 min Scan# 1325
Delta R.T. -0.000 min
Lab File: 1a143607.d
Acq: 30 Sep 2014 4:58 pm

Tgt Ion: 84 Resp: 51745

Ion	Ratio	Lower	Upper
84	100		
56	179.4	124.1	184.1
41	97.5	61.0	121.0

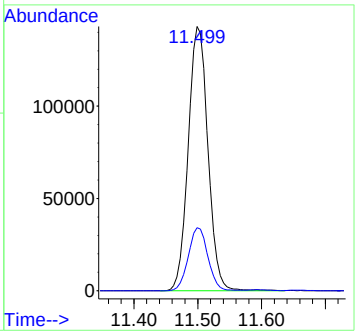


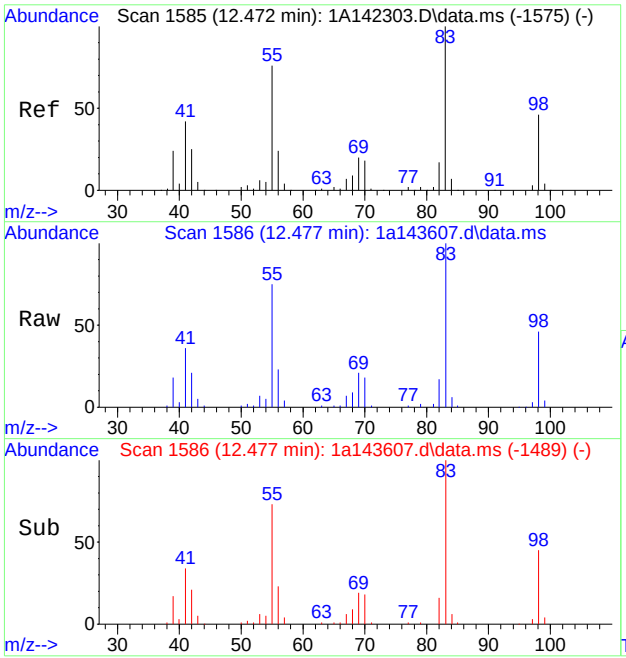


#56
benzene
Concen: 36.74 ug/L
RT: 11.499 min Scan# 1399
Delta R.T. -0.000 min
Lab File: 1a143607.d
Acq: 30 Sep 2014 4:58 pm

Tgt Ion: 78 Resp: 307702

Ion	Ratio	Lower	Upper
78	100		
77	23.9	0.0	53.9

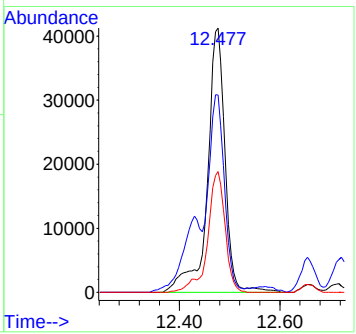


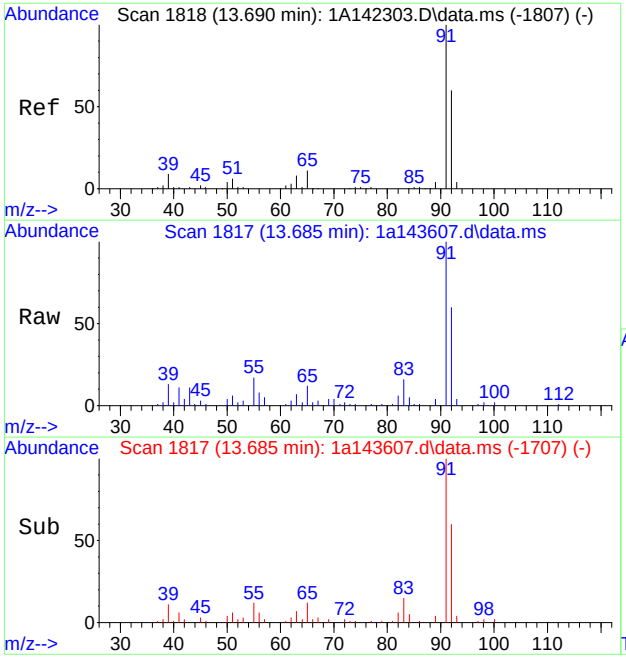


#67
methylcyclohexane
Concen: 29.42 ug/L
RT: 12.477 min Scan# 1586
Delta R.T. 0.005 min
Lab File: 1a143607.d
Acq: 30 Sep 2014 4:58 pm

Tgt Ion: 83 Resp: 101233

Ion	Ratio	Lower	Upper
83	100		
55	74.2	46.1	106.1
98	45.7	15.7	75.7

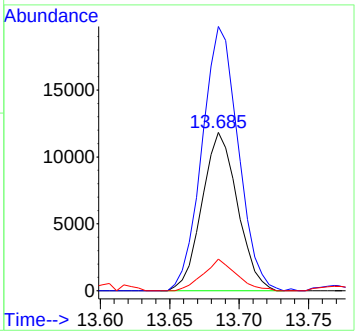


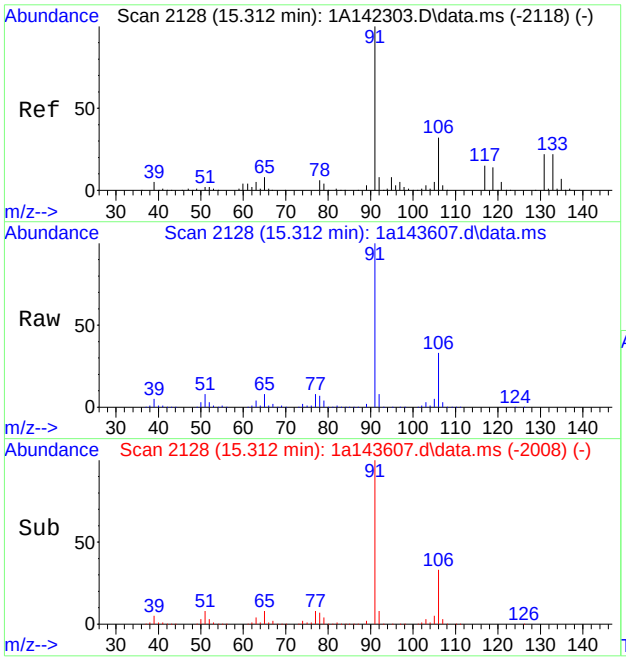


#72
toluene
Concen: 3.89 ug/L
RT: 13.685 min Scan# 1817
Delta R.T. -0.005 min
Lab File: 1a143607.d
Acq: 30 Sep 2014 4:58 pm

Tgt Ion: 92 Resp: 20974

Ion	Ratio	Lower	Upper
92	100		
91	167.1	136.8	196.8
65	20.1	0.0	47.8

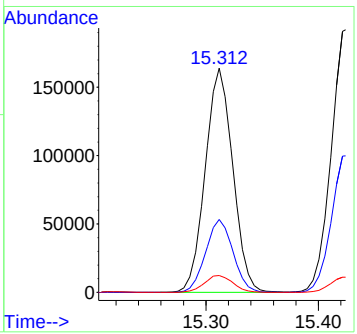


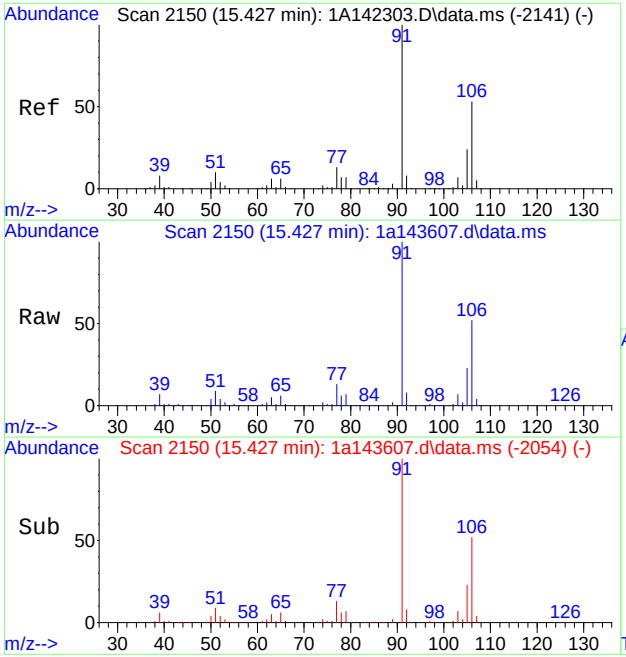


#87
ethylbenzene
Concen: 26.02 ug/L
RT: 15.312 min Scan# 2128
Delta R.T. -0.000 min
Lab File: 1a143607.d
Acq: 30 Sep 2014 4:58 pm

Tgt Ion: 91 Resp: 279956

Ion	Ratio	Lower	Upper
91	100		
106	32.5	2.2	62.2
65	7.6	0.0	38.3

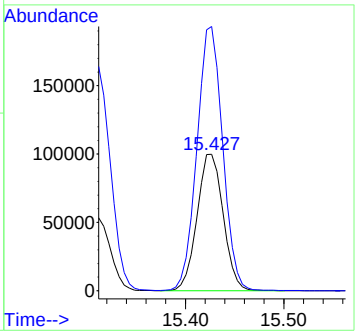


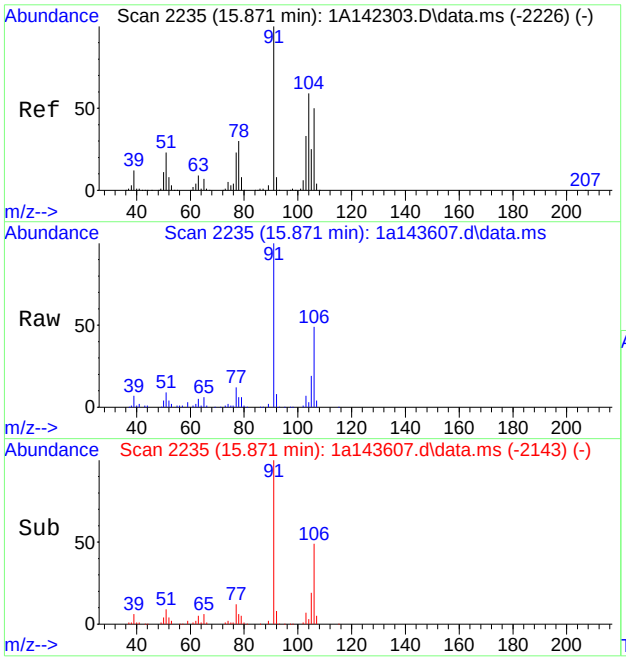


#88
m,p-xylene
Concen: 43.41 ug/L
RT: 15.427 min Scan# 2150
Delta R.T. -0.000 min
Lab File: 1a143607.d
Acq: 30 Sep 2014 4:58 pm

Tgt Ion:106 Resp: 184869

Ion	Ratio	Lower	Upper
106	100		
91	193.2	160.3	220.3

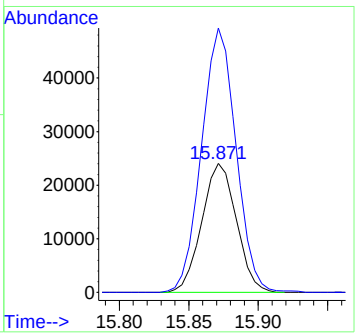


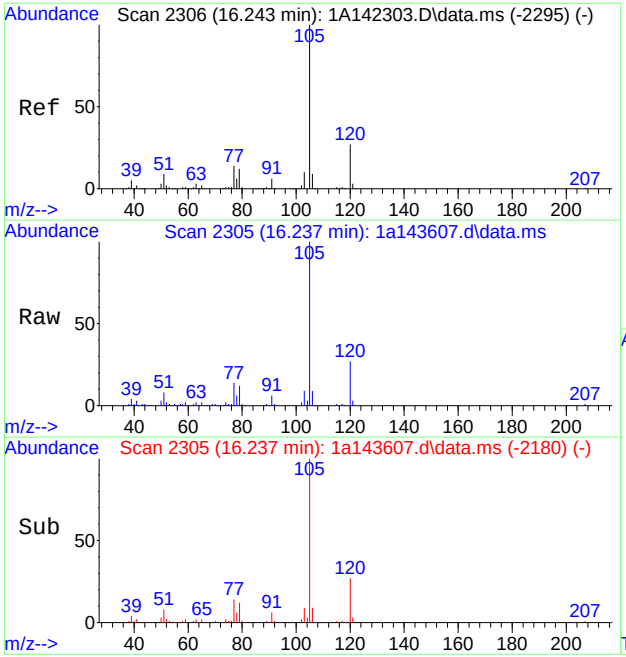


#89
o-xylene
Concen: 9.01 ug/L
RT: 15.871 min Scan# 2235
Delta R.T. -0.000 min
Lab File: 1a143607.d
Acq: 30 Sep 2014 4:58 pm

Tgt Ion:106 Resp: 41544

Ion	Ratio	Lower	Upper
106	100		
91	205.1	171.1	231.1

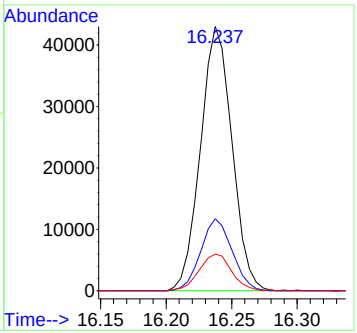




#93
isopropylbenzene
Concen: 6.65 ug/L
RT: 16.237 min Scan# 2305
Delta R.T. -0.005 min
Lab File: 1a143607.d
Acq: 30 Sep 2014 4:58 pm

Tgt Ion:105 Resp: 72028

Ion	Ratio	Lower	Upper
105	100		
120	27.3	0.0	57.1
77	13.9	0.0	44.2



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143607.d
Acq On : 30 Sep 2014 4:58 pm
Operator : DejanaS
Sample : jb77674-8
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 19 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 300 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.4 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

Signal : TIC: 1a143607.d\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.469	45	55	77	rVB2	7822	39035	1.47%	0.106%
2	4.830	108	124	155	rBV3	9443	56944	2.15%	0.155%
3	5.202	177	195	216	rVV2	43997	244238	9.20%	0.665%
4	6.316	392	408	412	rBV2	141562	449952	16.95%	1.225%
5	6.378	413	420	496	rVV2	167367	1033324	38.93%	2.814%
6	6.844	496	509	540	rVB2	105303	381046	14.36%	1.038%
7	7.105	549	559	573	rVB3	16113	42437	1.60%	0.116%
8	7.435	611	622	630	rVV2	14902	43103	1.62%	0.117%
9	7.749	659	682	709	rBV2	23330	132751	5.00%	0.362%
10	8.512	807	828	844	rVV2	461678	1748073	65.87%	4.761%
11	8.638	844	852	889	rVV	59572	247447	9.32%	0.674%
12	8.915	891	905	945	rVB	314878	1026857	38.69%	2.796%
13	9.302	966	979	999	rVB	108778	265256	9.99%	0.722%
14	9.945	1091	1102	1114	rVV3	25060	77674	2.93%	0.212%
15	10.055	1114	1123	1142	rVV2	68892	187134	7.05%	0.510%
16	10.223	1142	1155	1169	rVV	292460	754399	28.42%	2.054%
17	10.793	1254	1264	1281	rVV6	29755	97029	3.66%	0.264%
18	10.944	1281	1293	1310	rVV3	379878	1149302	43.30%	3.130%
19	11.096	1310	1322	1332	rVV5	201551	679075	25.59%	1.849%
20	11.180	1332	1338	1356	rVV	131726	305248	11.50%	0.831%
21	11.326	1356	1366	1373	rVV2	27604	70192	2.64%	0.191%
22	11.420	1373	1384	1392	rVV	143458	366028	13.79%	0.997%
23	11.509	1392	1401	1411	rVV3	454442	1255919	47.32%	3.420%
24	11.588	1411	1416	1423	rVV3	99198	227775	8.58%	0.620%
25	11.656	1423	1429	1447	rVV	83642	213362	8.04%	0.581%
26	11.891	1459	1474	1484	rVV	296610	626274	23.60%	1.706%
27	12.430	1554	1577	1580	rBV4	99991	270134	10.18%	0.736%
28	12.472	1580	1585	1596	rVV	183063	407105	15.34%	1.109%
29	12.655	1612	1620	1627	rBV2	57974	117505	4.43%	0.320%
30	12.723	1627	1633	1643	rVB3	25750	54073	2.04%	0.147%
31	12.890	1654	1665	1681	rVB	130127	291118	10.97%	0.793%
32	13.047	1681	1695	1718	rVB2	184457	539049	20.31%	1.468%
33	13.220	1718	1728	1736	rBV4	63212	151940	5.72%	0.414%
34	13.277	1736	1739	1756	rVB7	15558	44947	1.69%	0.122%
35	13.408	1756	1764	1768	rBV2	20137	42652	1.61%	0.116%
36	13.455	1768	1773	1781	rVB2	22168	44038	1.66%	0.120%
37	13.549	1781	1791	1795	rBV2	53487	109860	4.14%	0.299%
38	13.607	1795	1802	1811	rVV	532335	1009591	38.04%	2.749%
39	13.685	1811	1817	1823	rVV	64216	118478	4.46%	0.323%
40	13.774	1829	1834	1845	rVB	39101	76633	2.89%	0.209%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143607.d
Acq On : 30 Sep 2014 4:58 pm
Operator : DejanaS
Sample : jb77674-8
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 19 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 300 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.4 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

41	13.973	1861	1872	1879	rBV2	23634	47087	1.77%	0.128%
42	14.051	1879	1887	1889	rBV2	37102	64902	2.45%	0.177%
43	14.083	1889	1893	1901	rVV3	42003	81685	3.08%	0.222%
44	14.365	1936	1947	1956	rVB5	16092	44583	1.68%	0.121%
45	14.595	1975	1991	1997	rBV5	27046	97932	3.69%	0.267%
46	14.914	2040	2052	2056	rBV5	18634	46894	1.77%	0.128%
47	14.956	2056	2060	2078	rVB3	17771	39642	1.49%	0.108%
48	15.097	2078	2087	2097	rBV7	22654	54380	2.05%	0.148%
49	15.212	2098	2109	2120	rBV	413278	767267	28.91%	2.090%
50	15.312	2121	2128	2139	rVB	369369	633923	23.89%	1.726%
51	15.427	2139	2150	2159	rVB	538924	987739	37.22%	2.690%
52	15.871	2228	2235	2255	rVB	136628	258112	9.73%	0.703%
53	16.237	2298	2305	2315	rBV	98252	162379	6.12%	0.442%
54	16.447	2336	2345	2359	rVV	421326	750836	28.29%	2.045%
55	16.672	2375	2388	2396	rBV	321557	553771	20.87%	1.508%
56	16.750	2396	2403	2406	rVV	233924	412041	15.53%	1.122%
57	16.781	2406	2409	2414	rVV	246356	382082	14.40%	1.041%
58	16.828	2414	2418	2431	rVB	262664	426855	16.08%	1.162%
59	17.085	2458	2467	2476	rBV	400105	677622	25.53%	1.845%
60	17.252	2491	2499	2511	rVB	1518989	2654020	100.00%	7.228%
61	17.409	2520	2529	2532	rBV	43159	78012	2.94%	0.212%
62	17.440	2532	2535	2541	rVB	42956	66778	2.52%	0.182%
63	17.503	2541	2547	2554	rVB	78209	126462	4.76%	0.344%
64	17.571	2554	2560	2569	rVB	25982	43122	1.62%	0.117%
65	17.702	2576	2585	2588	rBV	443046	822205	30.98%	2.239%
66	17.733	2588	2591	2602	rVB	544819	919375	34.64%	2.504%
67	17.880	2612	2619	2623	rBV	349367	647428	24.39%	1.763%
68	17.979	2630	2638	2655	rVB5	331060	1216323	45.83%	3.312%
69	18.131	2655	2667	2675	rVB2	69825	123532	4.65%	0.336%
70	18.214	2675	2683	2689	rBV	190882	331914	12.51%	0.904%
71	18.277	2689	2695	2699	rBV	296619	516529	19.46%	1.407%
72	18.319	2699	2703	2709	rVB	267190	398769	15.03%	1.086%
73	18.397	2709	2718	2733	rVB	647360	1188351	44.78%	3.236%
74	18.523	2733	2742	2747	rBV2	106470	220712	8.32%	0.601%
75	18.596	2747	2756	2765	rVB2	225880	487408	18.36%	1.327%
76	18.758	2775	2787	2794	rBV	173797	315146	11.87%	0.858%
77	18.837	2794	2802	2808	rBV	355987	609503	22.97%	1.660%
78	18.900	2808	2814	2820	rBV	380237	652330	24.58%	1.777%
79	19.041	2835	2841	2846	rBV	30433	53484	2.02%	0.146%
80	19.130	2852	2858	2863	rBV2	38094	68283	2.57%	0.186%
81	19.250	2863	2881	2892	rVV3	245204	620745	23.39%	1.690%
82	19.349	2892	2900	2903	rVV3	52162	97341	3.67%	0.265%
83	19.391	2903	2908	2913	rVV2	156767	296553	11.17%	0.808%
84	19.444	2913	2918	2926	rVV	409576	713512	26.88%	1.943%
85	19.522	2927	2933	2947	rVB6	21261	64784	2.44%	0.176%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143607.d
Acq On : 30 Sep 2014 4:58 pm
Operator : DejanaS
Sample : jb77674-8
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 19 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 300 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.4 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

86	19.658	2948	2959	2964	rBV3	43015	117773	4.44%	0.321%
87	19.700	2964	2967	2970	rVV	31103	45138	1.70%	0.123%
88	19.747	2970	2976	2988	rVV5	146952	443622	16.72%	1.208%
89	19.836	2988	2993	2998	rVV	54215	92653	3.49%	0.252%
90	19.888	2998	3003	3008	rVV2	61972	110146	4.15%	0.300%
91	19.946	3008	3014	3027	rVB	111935	235327	8.87%	0.641%
92	20.103	3030	3044	3056	rVB3	18369	60409	2.28%	0.165%
93	20.223	3056	3067	3078	rBV	95846	216147	8.14%	0.589%
94	20.307	3078	3083	3090	rVB2	35901	62350	2.35%	0.170%
95	20.401	3091	3101	3118	rVB2	39537	101338	3.82%	0.276%
96	20.537	3118	3127	3144	rBV	70313	149139	5.62%	0.406%
97	20.767	3164	3171	3177	rBV2	46763	84682	3.19%	0.231%
98	20.887	3188	3194	3201	rVB2	23978	44770	1.69%	0.122%
99	21.013	3214	3218	3233	rVB3	28293	58572	2.21%	0.160%
100	21.499	3299	3311	3313	rBV2	44978	78465	2.96%	0.214%

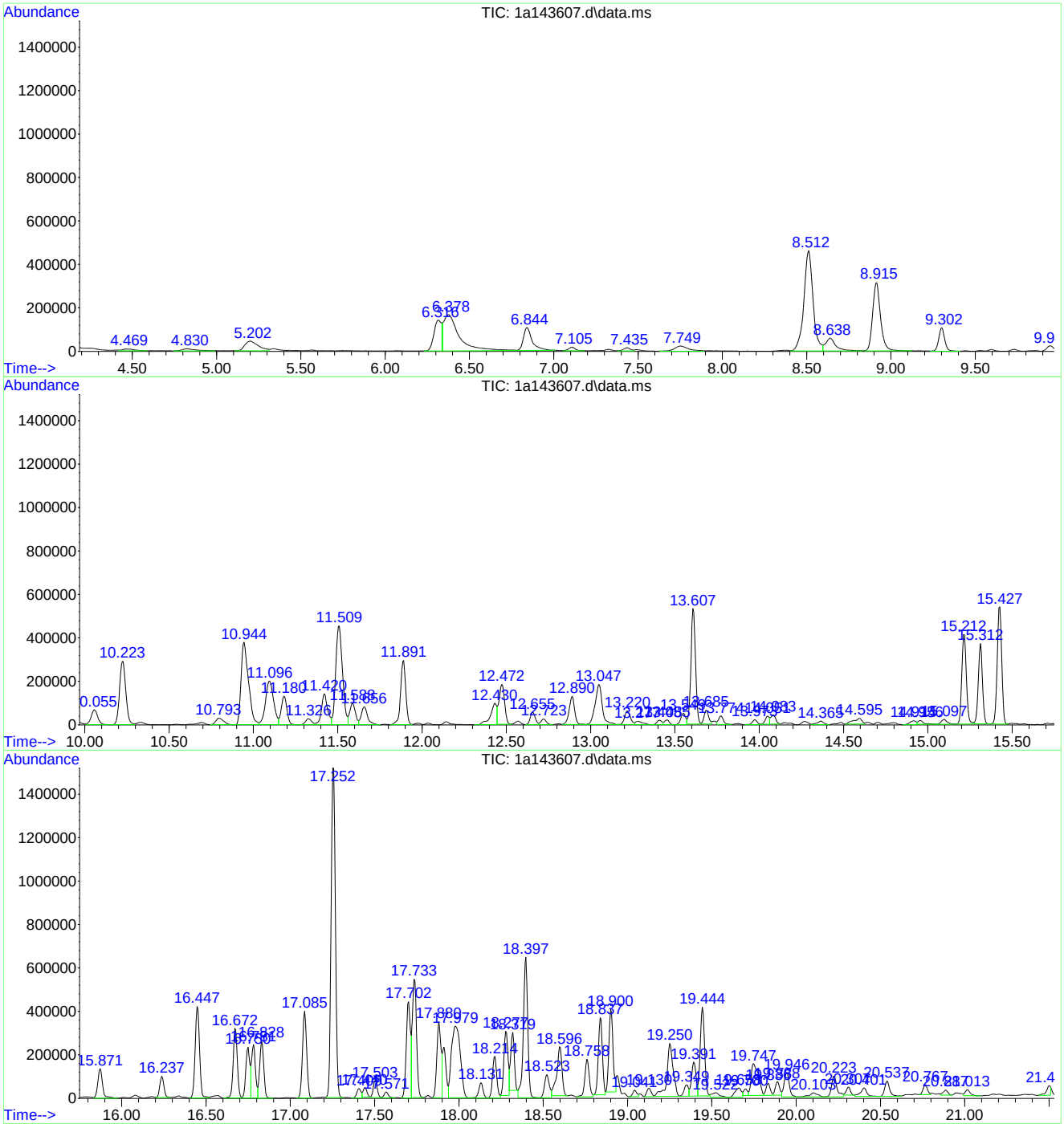
Sum of corrected areas: 36719881

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143607.d
Acq On : 30 Sep 2014 4:58 pm
Operator : DejanaS
Sample : jb77674-8
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143607.d
Acq On : 30 Sep 2014 4:58 pm
Operator : DejanaS
Sample : jb77674-8
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

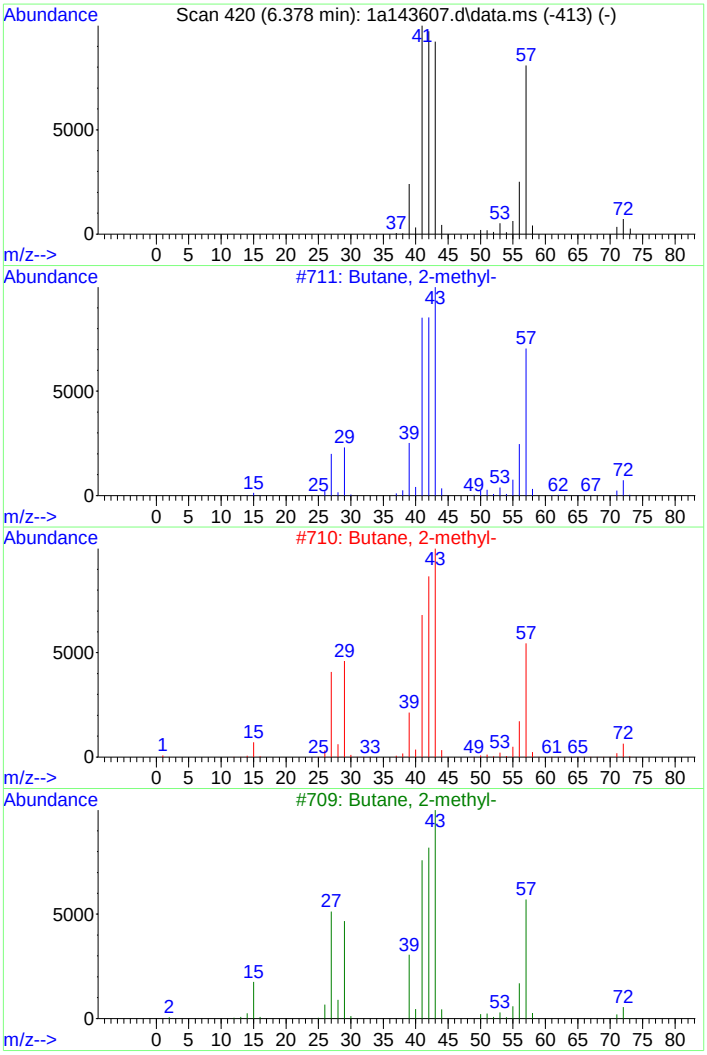
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

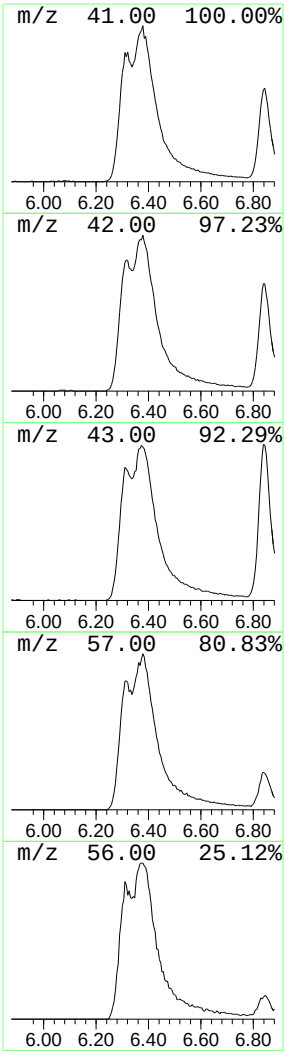
****

Peak Number 1 alkane Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.378	44.95 ug/L	1033320	pentafluorobenzene	10.939

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	91
2	Butane, 2-methyl-	72	C5H12	000078-78-4	87
3	Butane, 2-methyl-	72	C5H12	000078-78-4	80
4	Butane, 2,2-dimethyl-	86	C6H14	000075-83-2	35
5	Butane, 2,2-dimethyl-	86	C6H14	000075-83-2	17





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143607.d
Acq On : 30 Sep 2014 4:58 pm
Operator : DejanaS
Sample : jb77674-8
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

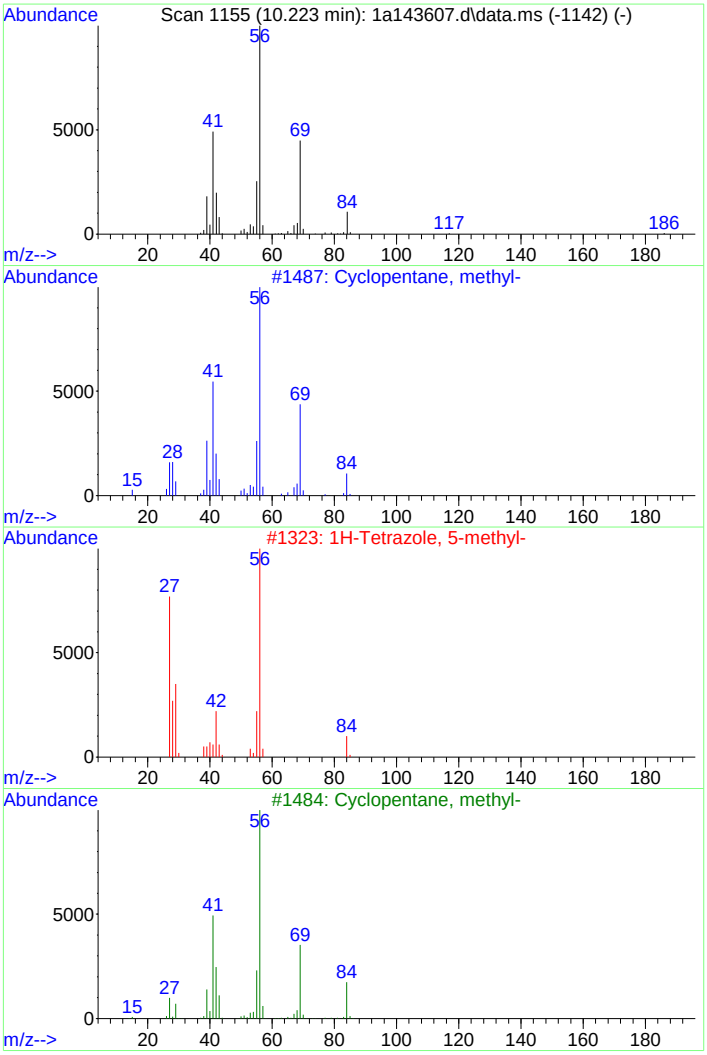
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

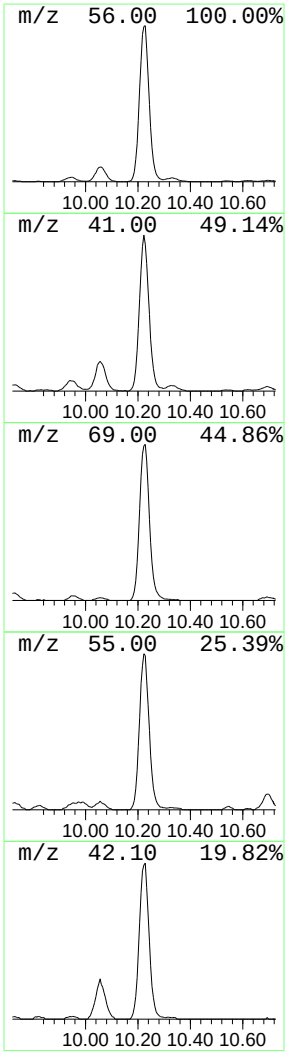
****

Peak Number 2 alkene Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.223	32.82 ug/L	754399	pentafluorobenzene	10.939

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	94
2	1H-Tetrazole, 5-methyl-	84	C2H4N4	004076-36-2	80
3	Cyclopentane, methyl-	84	C6H12	000096-37-7	78
4	Cyclohexane	84	C6H12	000110-82-7	78
5	Propane, 2-cyclopropyl-	84	C6H12	003638-35-5	72





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143607.d
Acq On : 30 Sep 2014 4:58 pm
Operator : DejanaS
Sample : jb77674-8
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

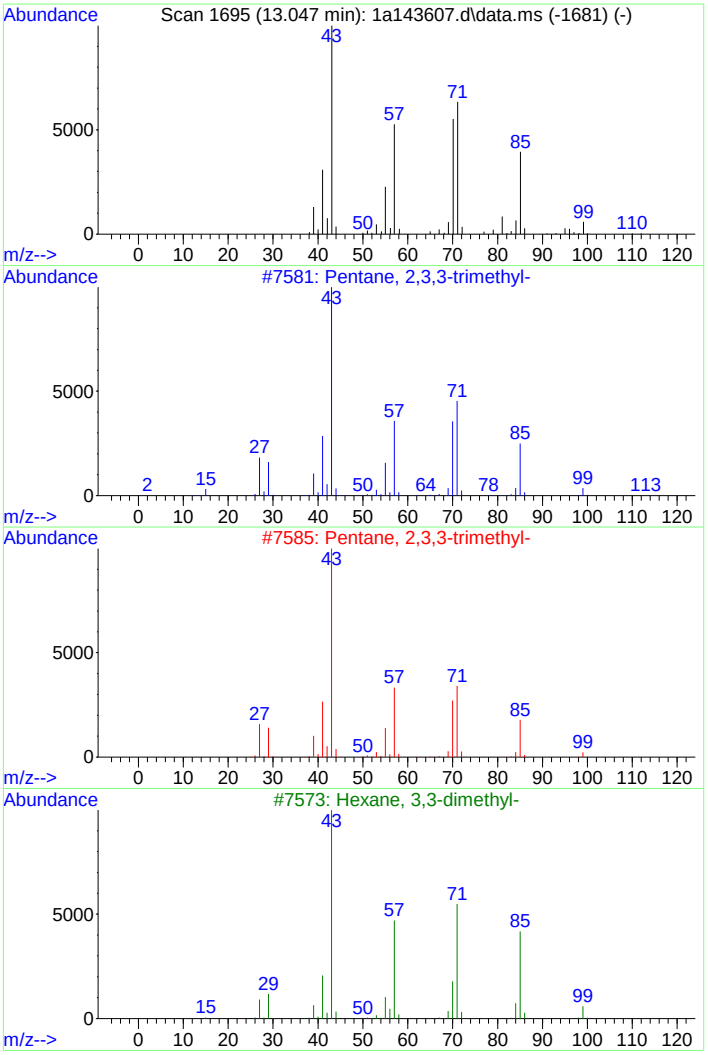
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

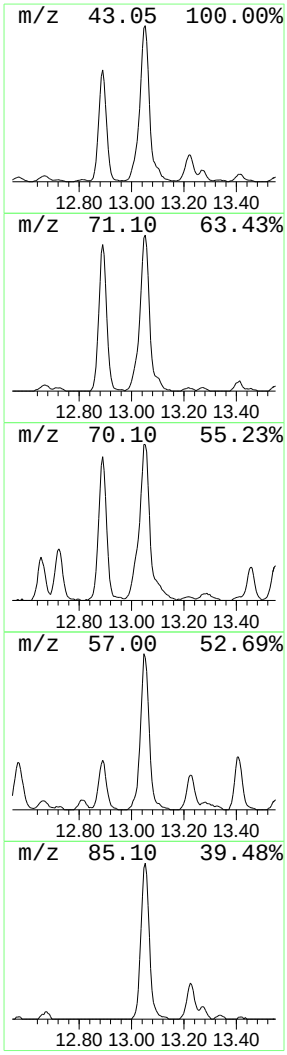
****

Peak Number 3 alkane Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.047	43.04 ug/L	539049	1,4-difluorobenzene	11.891

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	90
2	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	83
3	Hexane, 3,3-dimethyl-	114	C8H18	000563-16-6	64
4	Hexane, 2,3,4-trimethyl-	128	C9H20	000921-47-1	64
5	Hexane, 3,3-dimethyl-	114	C8H18	000563-16-6	59





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143607.d
Acq On : 30 Sep 2014 4:58 pm
Operator : DejanaS
Sample : jb77674-8
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

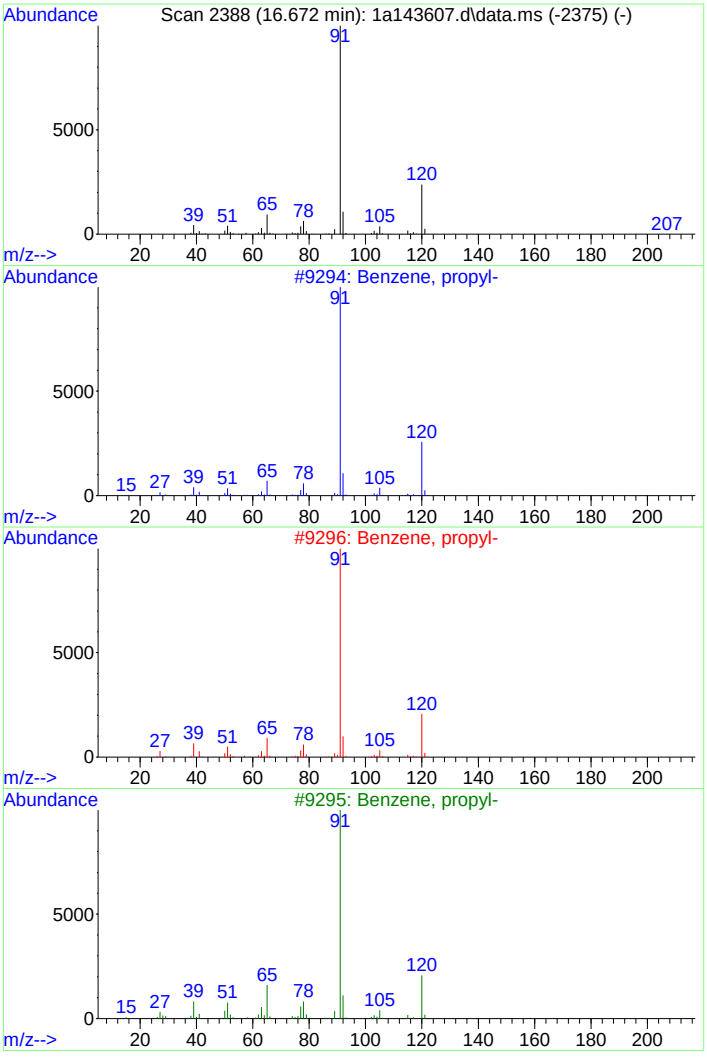
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

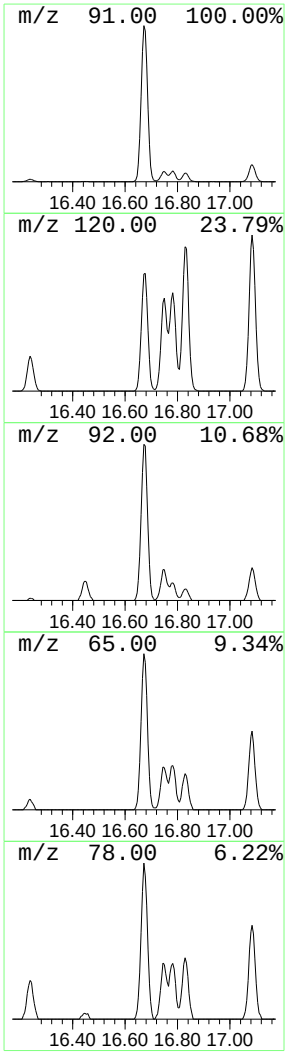
****

Peak Number 4 C3 alkyl benzene Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.672	33.68 ug/L	553771	1,4-dichlorobenzene-d4	17.702

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, propyl-	120	C9H12	000103-65-1	91
2	Benzene, propyl-	120	C9H12	000103-65-1	91
3	Benzene, propyl-	120	C9H12	000103-65-1	87
4	N-Benzyl-2-phenethylamine	211	C15H17N	003647-71-0	78
5	N-Benzyl-2-phenethylamine	211	C15H17N	003647-71-0	72





Library Search Compound Report

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Acq On : 30 Sep 2014 4:58 pm
Operator : DejanaS
Sample : jb77674-8
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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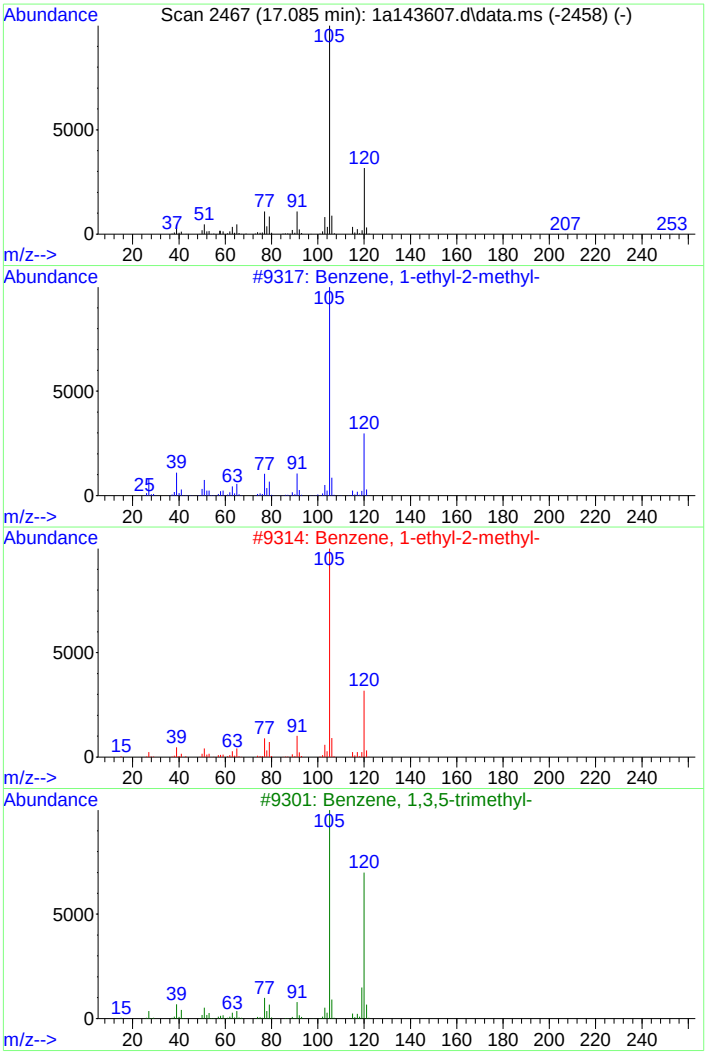
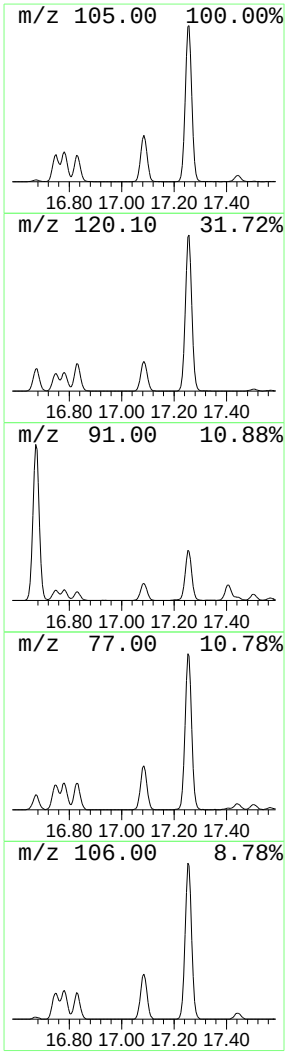
Peak Number 5 C3 alkyl benzene Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.085	41.21 ug/L	677622	1,4-dichlorobenzene-d4	17.702

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
4	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91
5	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	91





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ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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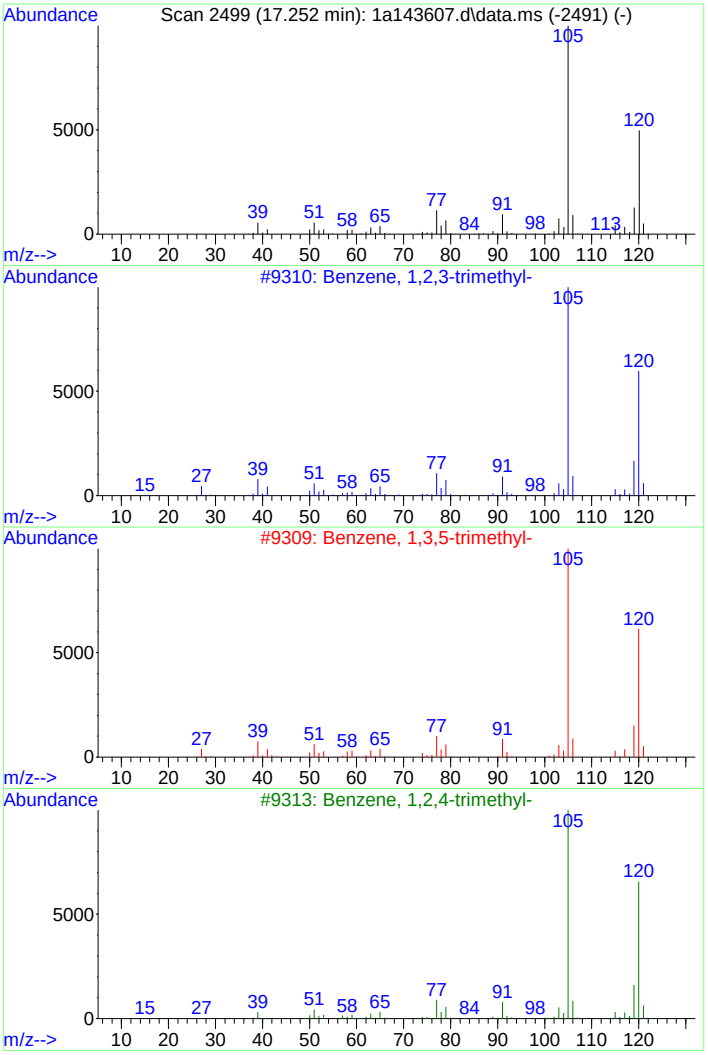
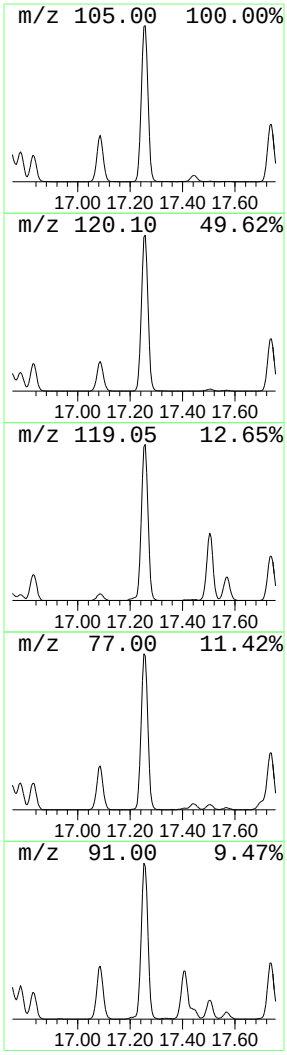
Peak Number 6 Benzene, 1,3,5-trimethyl- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.252	161.40 ug/L	2654020	1,4-dichlorobenzene-d4	17.702

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
5	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95





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ALS Vial : 19 Sample Multiplier: 1

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Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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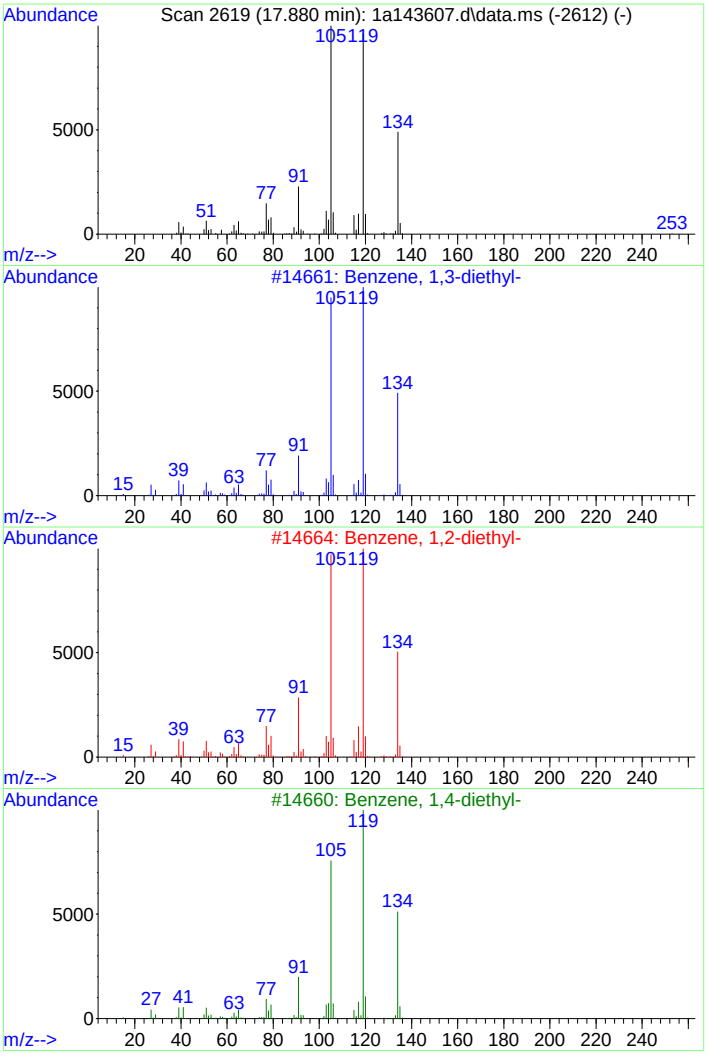
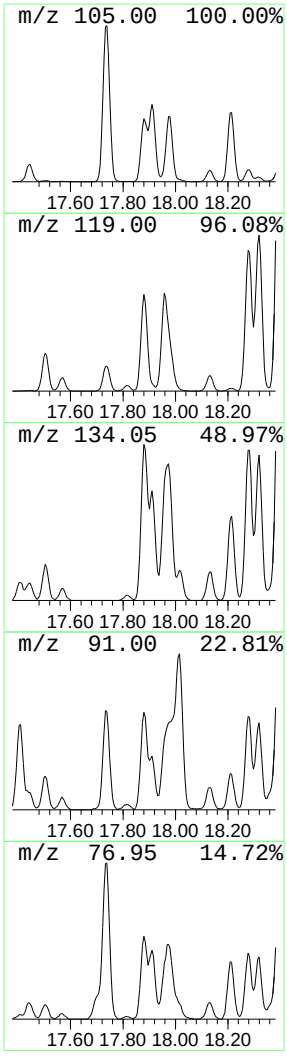
Peak Number 7 C4 alkyl benzene Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.880	39.37 ug/L	647428	1,4-dichlorobenzene-d4	17.702

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	96
2	Benzene, 1,2-diethyl-	134	C10H14	000135-01-3	95
3	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	94
4	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	94
5	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	94





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ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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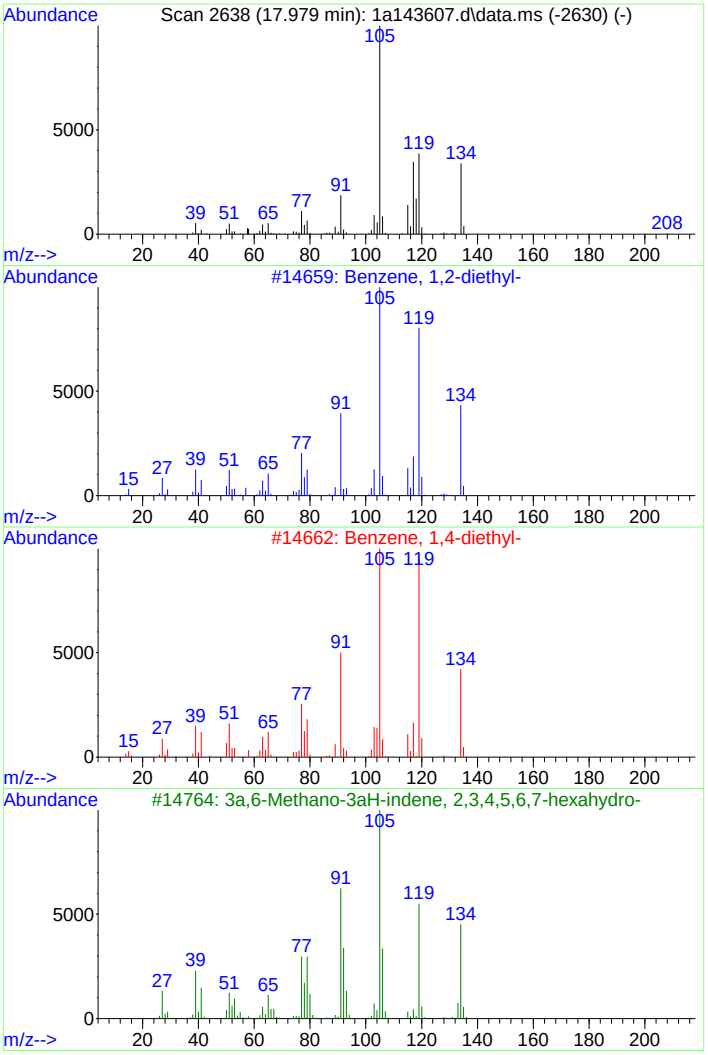
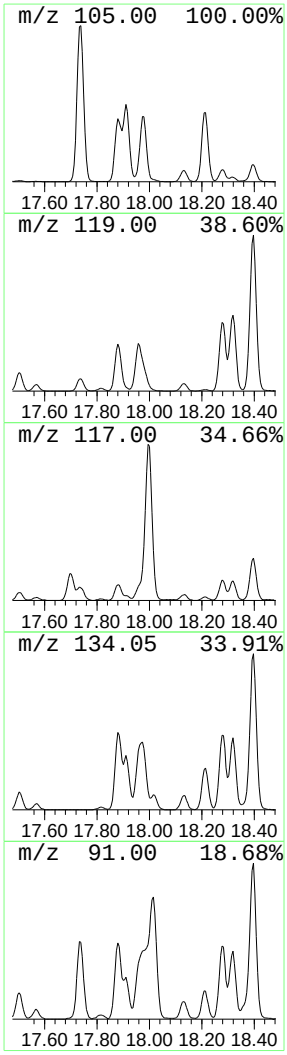
Peak Number 8 C4 alkyl benzene Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.979	73.97 ug/L	1216320	1,4-dichlorobenzene-d4	17.702

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2-diethyl-	134	C10H14	000135-01-3	53
2	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	50
3	3a,6-Methano-3aH-indene, 2,3,4,5...	134	C10H14	098640-10-9	47
4	2-Indanol	134	C9H10O	004254-29-9	41
5	Benzene, 1-methyl-4-propyl-	134	C10H14	001074-55-1	38





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ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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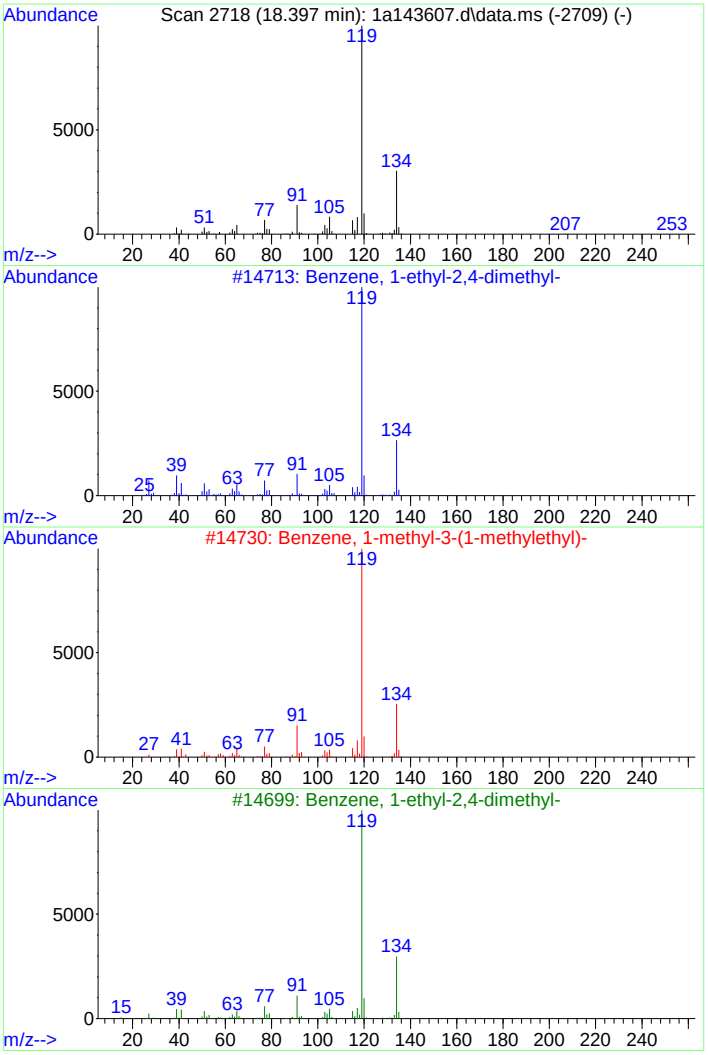
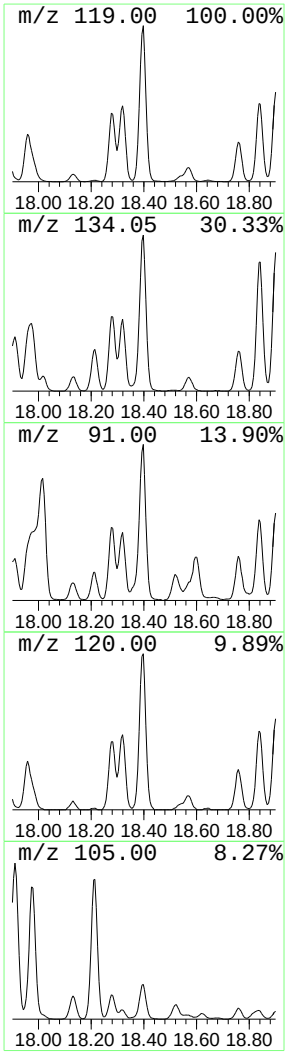
Peak Number 10 C4 alkyl benzene Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.398	72.27 ug/L	1188350	1,4-dichlorobenzene-d4	17.702

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	94
2	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	94
3	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	94
4	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	94
5	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	94





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ALS Vial : 19 Sample Multiplier: 1

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Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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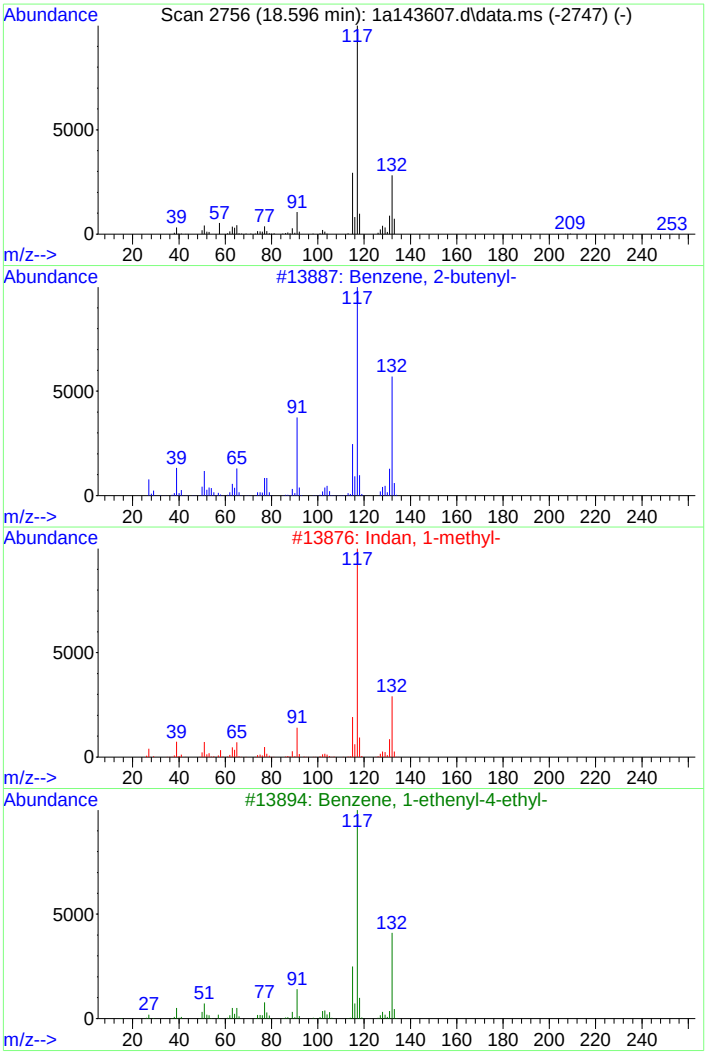
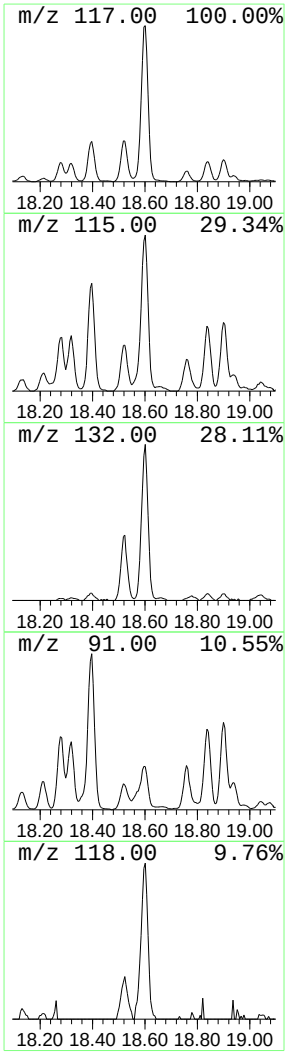
Peak Number 11 1H-Indene-dihydro-methyl- i... Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.596	29.64 ug/L	487408	1,4-dichlorobenzene-d4	17.702

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 2-butenyl-	132	C10H12	001560-06-1	87
2	Indan, 1-methyl-	132	C10H12	000767-58-8	87
3	Benzene, 1-ethenyl-4-ethyl-	132	C10H12	003454-07-7	86
4	Benzene, (2-methyl-1-propenyl)-	132	C10H12	000768-49-0	86
5	Benzene, (1-methyl-1-propenyl)-,...	132	C10H12	000768-00-3	86





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Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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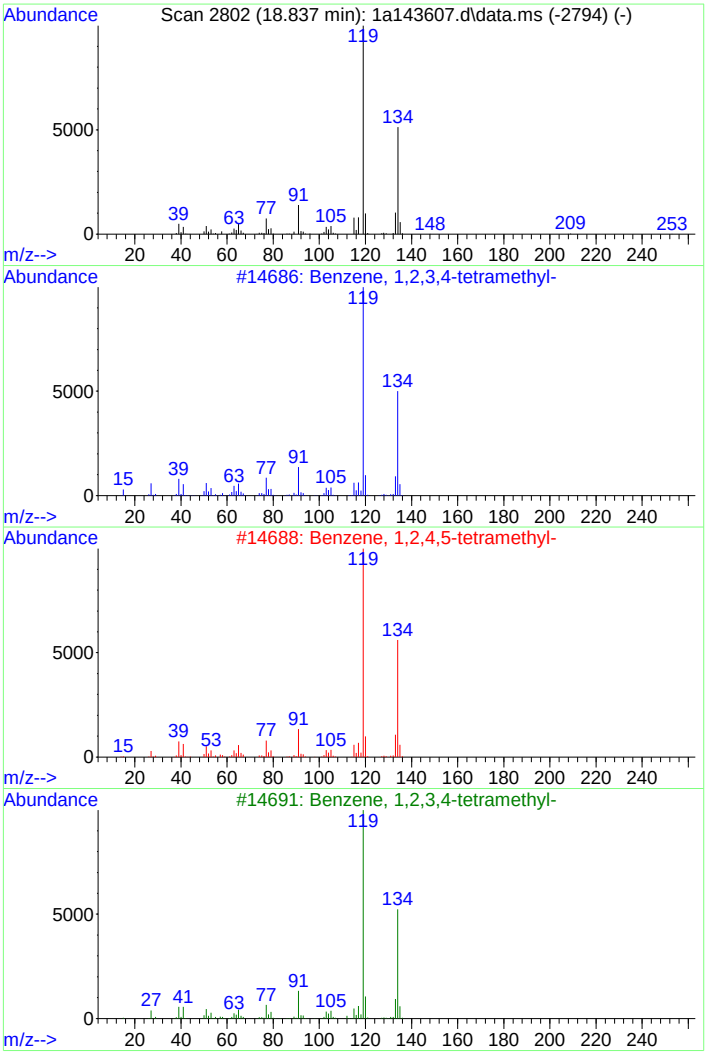
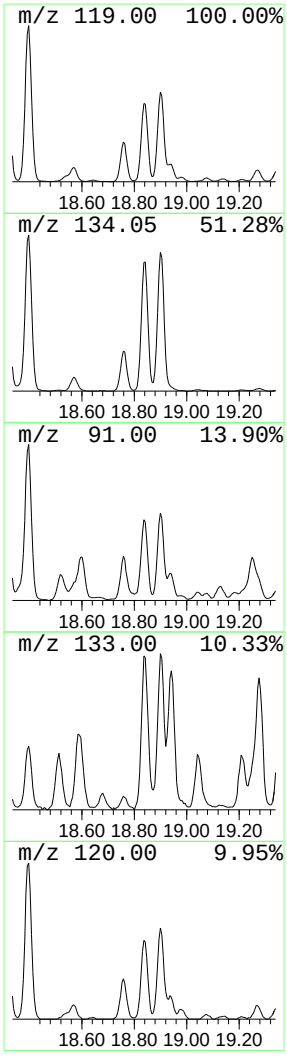
Peak Number 12 C4 alkyl benzene Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.837	37.07 ug/L	609503	1,4-dichlorobenzene-d4	17.702

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	95
2	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	95
3	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	95
4	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	95
5	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	95





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Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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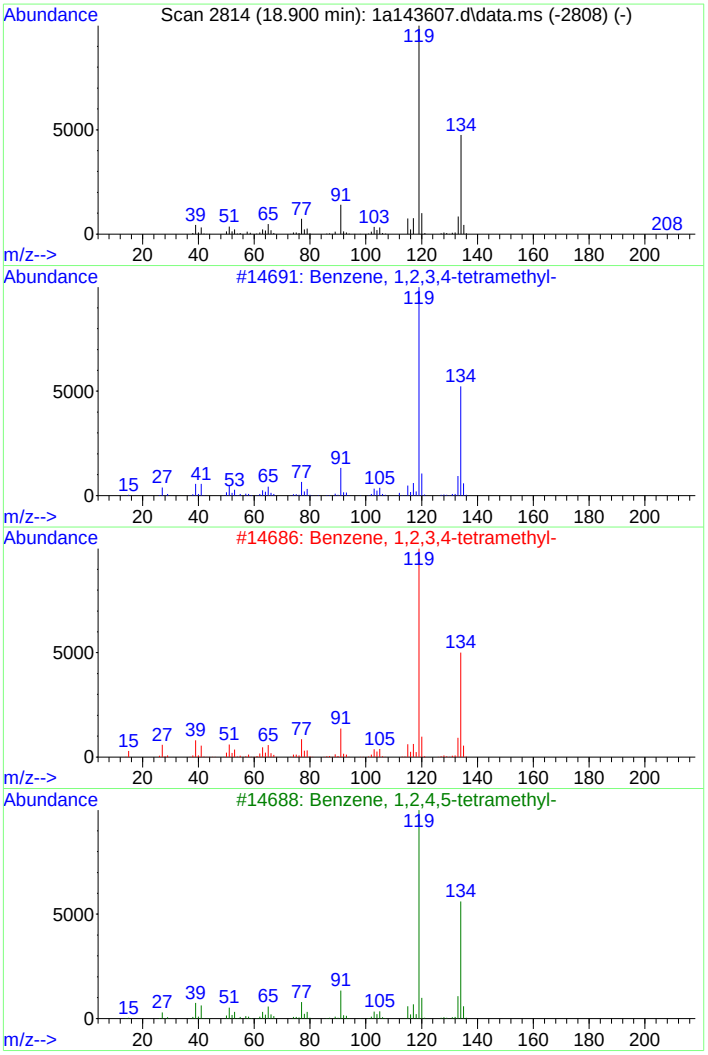
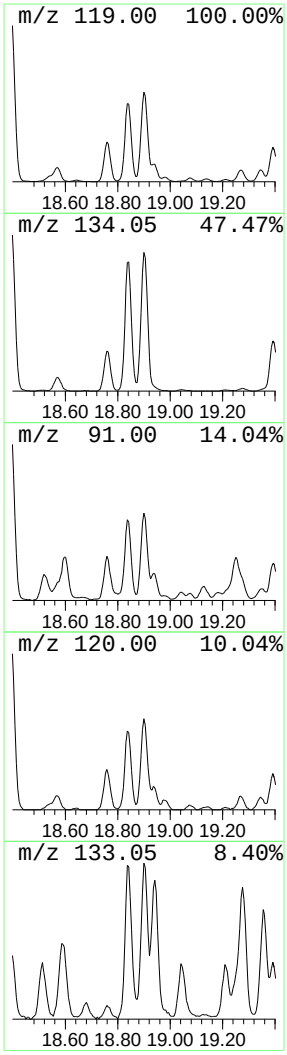
Peak Number 13 C4 alkyl benzene Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.900	39.67 ug/L	652330	1,4-dichlorobenzene-d4	17.702

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	95
2	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	95
3	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	95
4	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	95
5	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	95





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Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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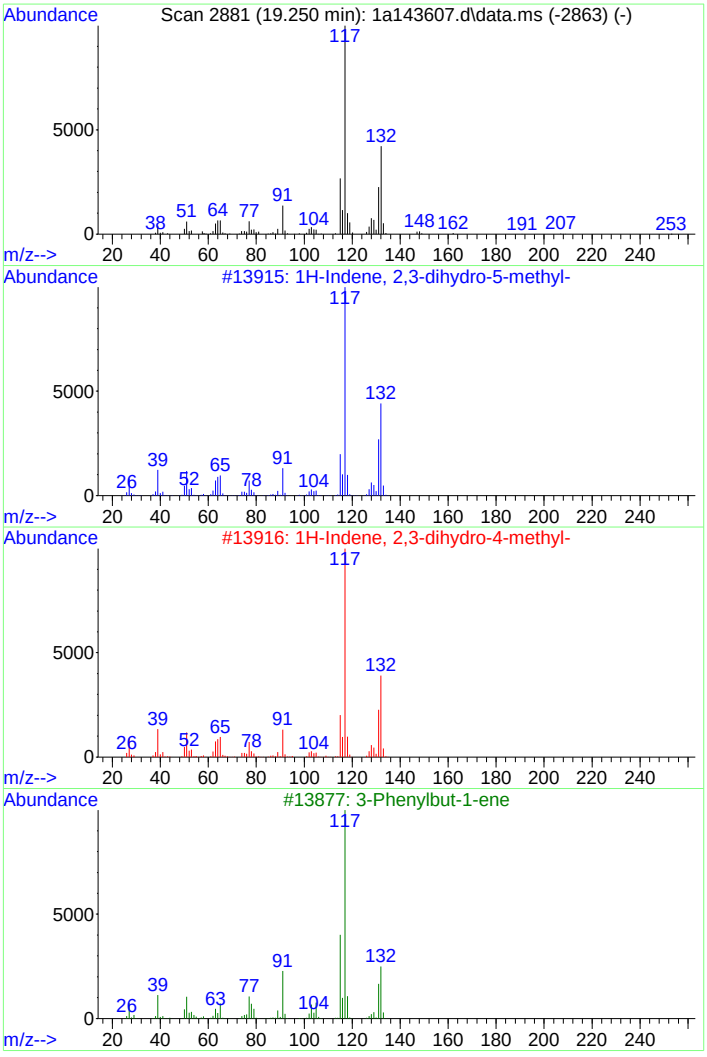
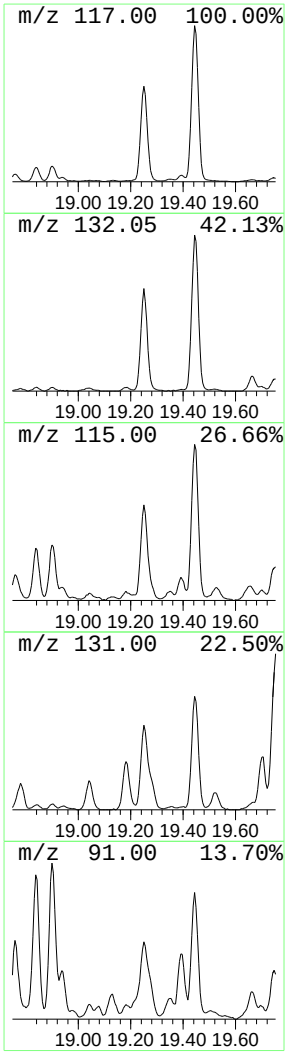
Peak Number 14 1H-Indene-dihydro-methyl- i... Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.250	37.75 ug/L	620745	1,4-dichlorobenzene-d4	17.702

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Indene, 2,3-dihydro-5-methyl-	132	C10H12	000874-35-1	95
2	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	91
3	3-Phenylbut-1-ene	132	C10H12	000934-10-1	91
4	Benzene, 2-butenyl-	132	C10H12	001560-06-1	87
5	Benzene, 1-ethenyl-4-ethyl-	132	C10H12	003454-07-7	87





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Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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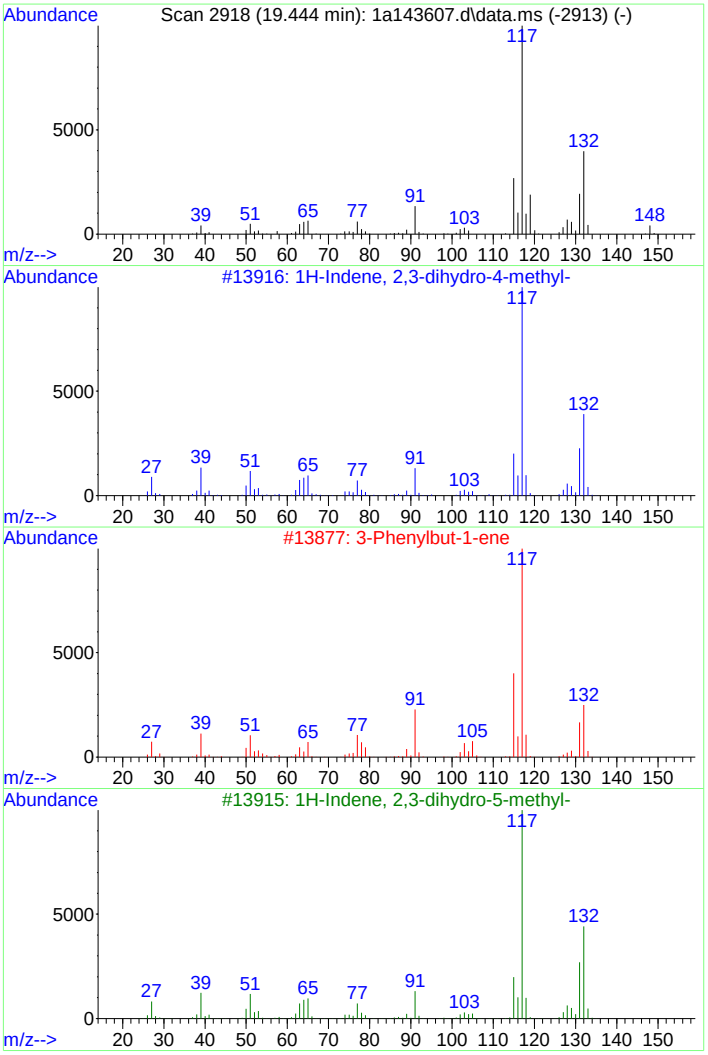
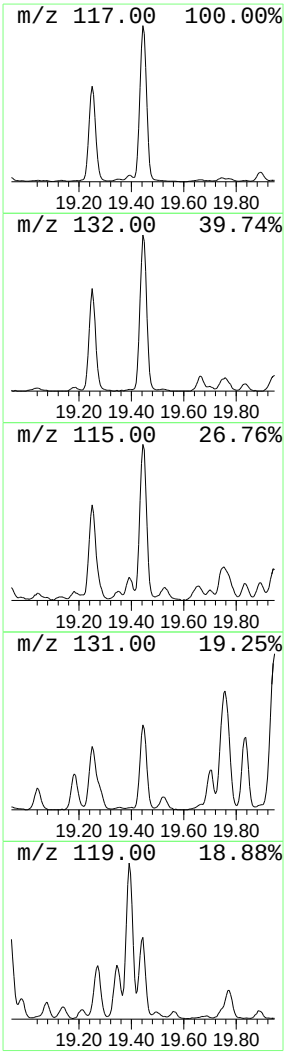
Peak Number 15 1H-Indene-dihydro-methyl- i... Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.444	43.39 ug/L	713512	1,4-dichlorobenzene-d4	17.702

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	93
2	3-Phenylbut-1-ene	132	C10H12	000934-10-1	90
3	1H-Indene, 2,3-dihydro-5-methyl-	132	C10H12	000874-35-1	87
4	Indan, 1-methyl-	132	C10H12	000767-58-8	87
5	Benzene, 2-butenyl-	132	C10H12	001560-06-1	83





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Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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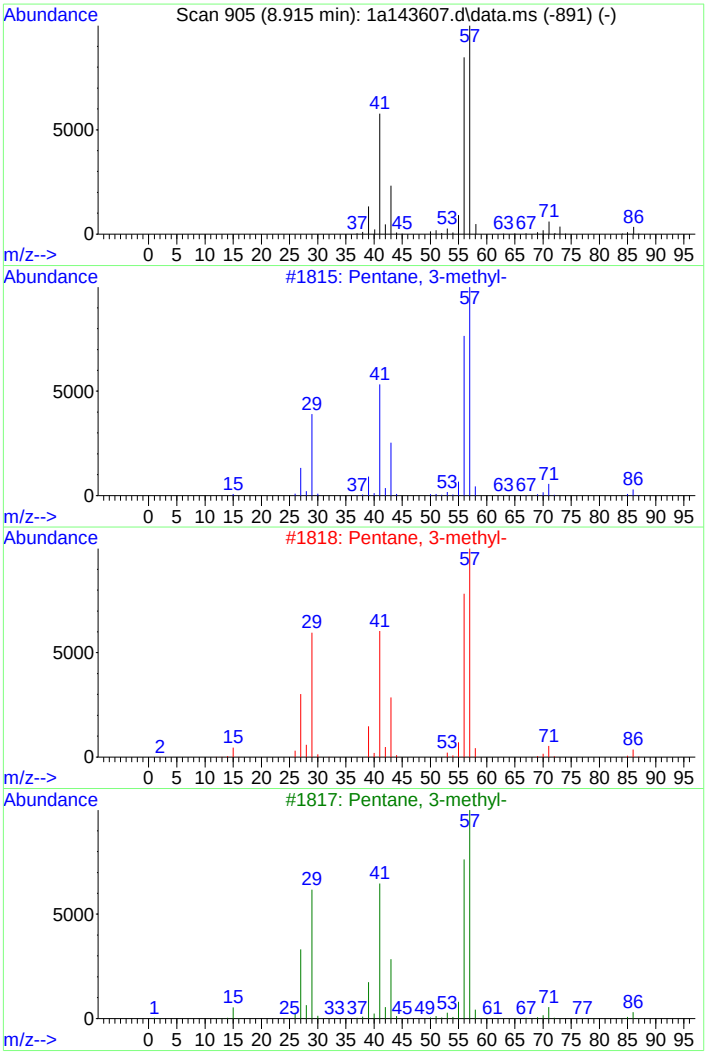
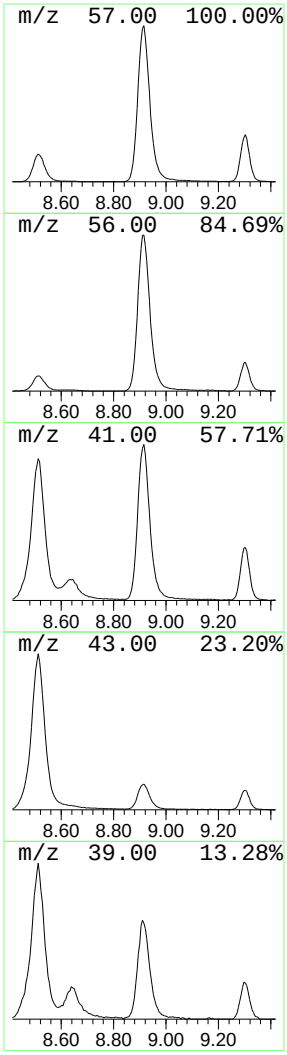
Peak Number 16 alkane Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.915	44.67 ug/L	1026860	pentafluorobenzene	10.939

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
2	Pentane, 3-methyl-	86	C6H14	000096-14-0	87
3	Pentane, 3-methyl-	86	C6H14	000096-14-0	87
4	Pentane, 3-ethyl-2,2-dimethyl-	128	C9H20	016747-32-3	72
5	Hexane, 2,2,3-trimethyl-	128	C9H20	016747-25-4	64





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143607.d
Acq On : 30 Sep 2014 4:58 pm
Operator : DejanaS
Sample : jb77674-8
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
alkane	6.378	45.0	ug/L	1033320	2	10.939	1149300	50.0
alkene	10.223	32.8	ug/L	754399	2	10.939	1149300	50.0
alkane	13.047	43.0	ug/L	539049	3	11.891	626274	50.0
C3 alkyl benzene	16.672	33.7	ug/L	553771	5	17.702	822205	50.0
C3 alkyl benzene	17.085	41.2	ug/L	677622	5	17.702	822205	50.0
Benzene, 1,3,5-...	17.252	161.4	ug/L	2654020	5	17.702	822205	50.0
C4 alkyl benzene	17.880	39.4	ug/L	647428	5	17.702	822205	50.0
C4 alkyl benzene	17.979	74.0	ug/L	1216320	5	17.702	822205	50.0
C4 alkyl benzene	18.398	72.3	ug/L	1188350	5	17.702	822205	50.0
1H-Indene-dihyd...	18.596	29.6	ug/L	487408	5	17.702	822205	50.0
C4 alkyl benzene	18.837	37.1	ug/L	609503	5	17.702	822205	50.0
C4 alkyl benzene	18.900	39.7	ug/L	652330	5	17.702	822205	50.0
1H-Indene-dihyd...	19.250	37.8	ug/L	620745	5	17.702	822205	50.0
1H-Indene-dihyd...	19.444	43.4	ug/L	713512	5	17.702	822205	50.0
alkane	8.915	44.7	ug/L	1026860	2	10.939	1149300	50.0

Manual Integrations APPROVED (compounds with "m" flag)
Mei Chen
10/06/14 16:42

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135323.D
Acq On : 5 Oct 2014 2:28 pm
Operator : JemimaM
Sample : jb77674-9
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 06 14:33:23 2014
Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Sep 25 16:01:33 2014
Response via : Initial Calibration

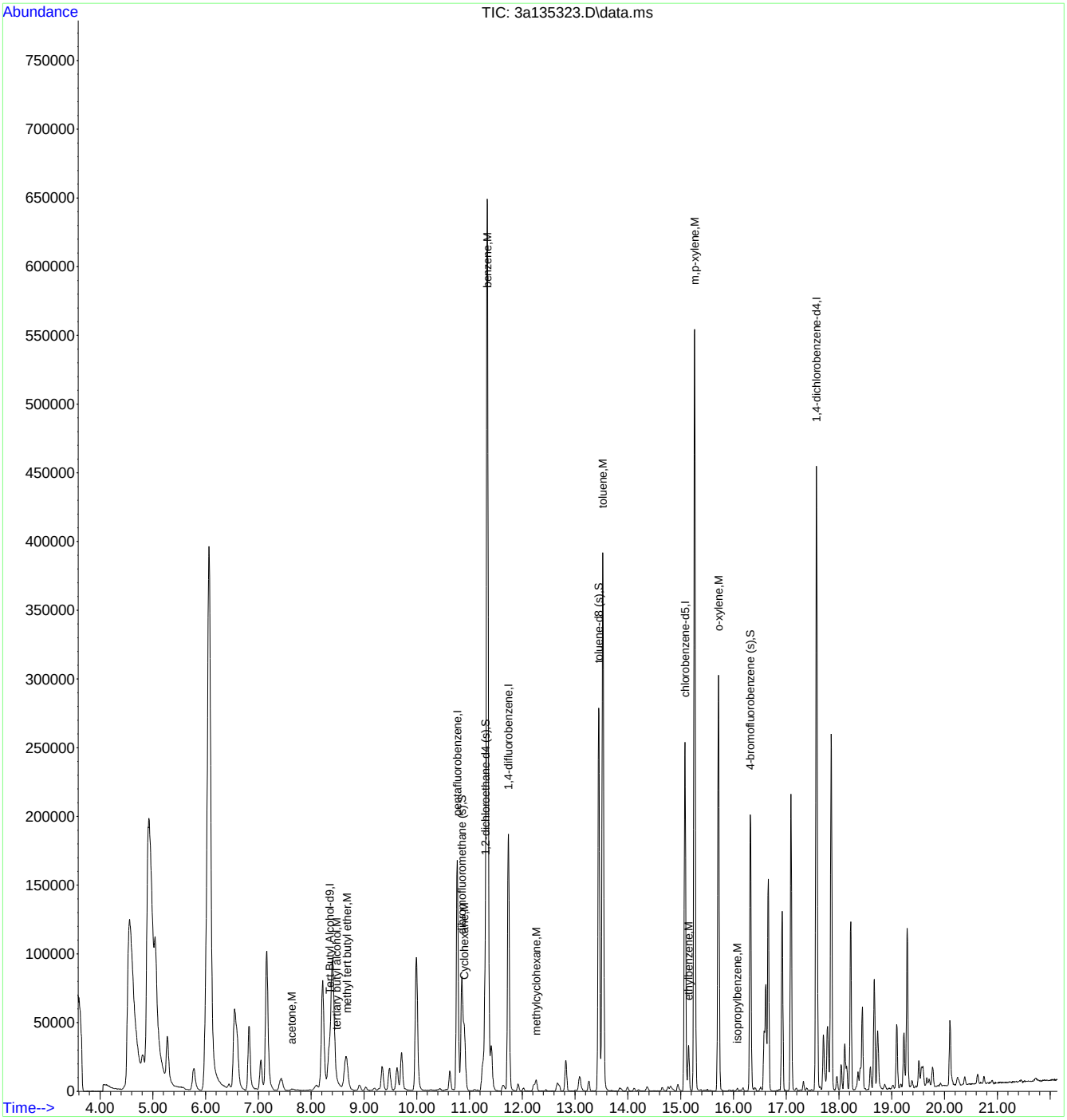
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.350	65	109586	500.00	ug/L	0.00
5) pentafluorobenzene	10.767	168	158855	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.737	114	195770	50.00	ug/L	0.00
87) chlorobenzene-d5	15.082	117	168018	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.573	152	100406	50.00	ug/L	0.00
System Monitoring Compounds						
49) dibromofluoromethane (s)	10.851	113	62159	54.87	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 109.74%			
50) 1,2-dichloroethane-d4 (s)	11.302	65	70769	51.66	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 103.32%			
79) toluene-d8 (s)	13.447	98	228048	55.92	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 111.84%			
104) 4-bromofluorobenzene (s)	16.320	95	82821	50.97	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 101.94%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	8.481	59	5929m	27.67	ug/L	
23) acetone	7.632	43	3274	5.62	ug/L	90
31) methyl tert butyl ether	8.675	73	30363	6.94	ug/L	47
54) Cyclohexane	10.898	84	25503	13.18	ug/L	91
63) benzene	11.339	78	743608	152.65	ug/L	98
76) methylcyclohexane	12.262	83	4806	3.29	ug/L	96
81) toluene	13.525	92	206292	70.01	ug/L	97
97) ethylbenzene	15.150	91	27820	5.09	ug/L	95
98) m,p-xylene	15.266	106	190166	91.81	ug/L	96
99) o-xylene	15.717	106	98547	42.04	ug/L	99
103) isopropylbenzene	16.073	105	1966	0.30	ug/L	94

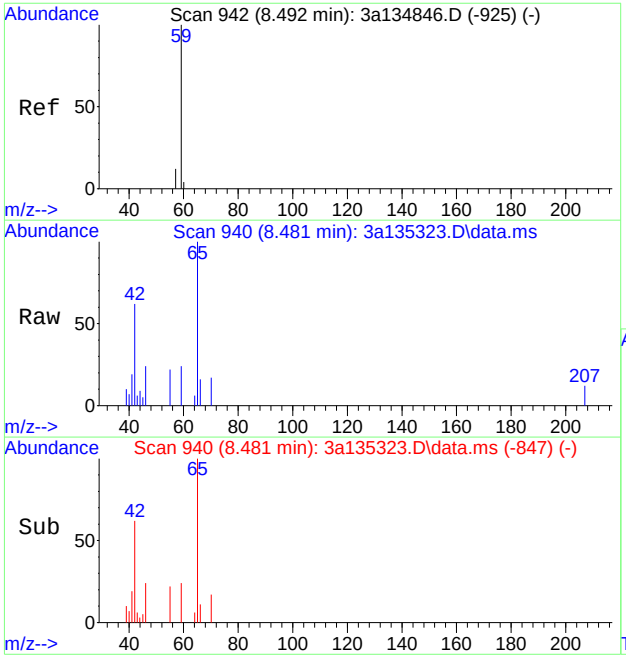
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135323.D
Acq On : 5 Oct 2014 2:28 pm
Operator : JemimaM
Sample : jb77674-9
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 06 14:33:23 2014
Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Sep 25 16:01:33 2014
Response via : Initial Calibration

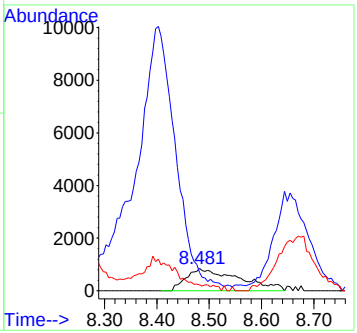


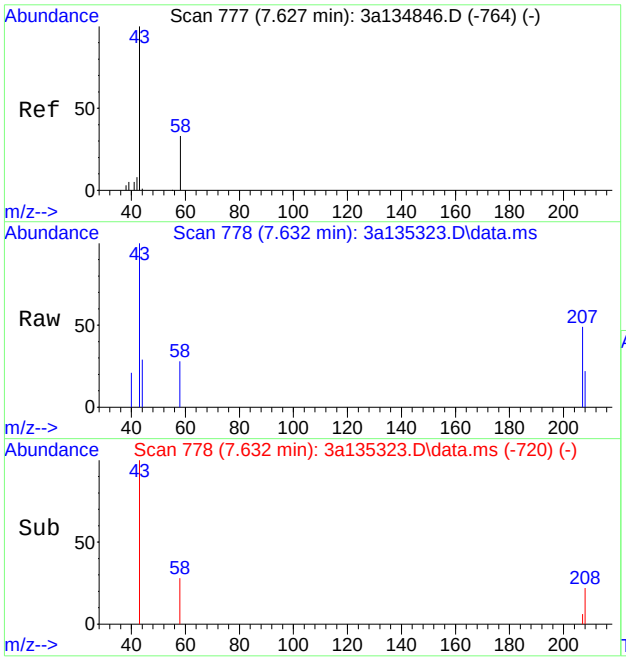


#2
tertiary butyl alcohol
Concen: 27.67 ug/L m
RT: 8.481 min Scan# 940
Delta R.T. -0.011 min
Lab File: 3a135323.D
Acq: 5 Oct 2014 2:28 pm

Tgt Ion: 59 Resp: 5929

Ion	Ratio	Lower	Upper
59	100		
41	81.1	0.0	30.0#
43	26.2	0.0	30.0

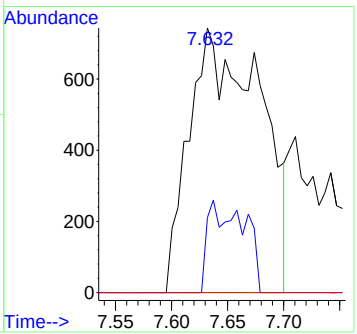


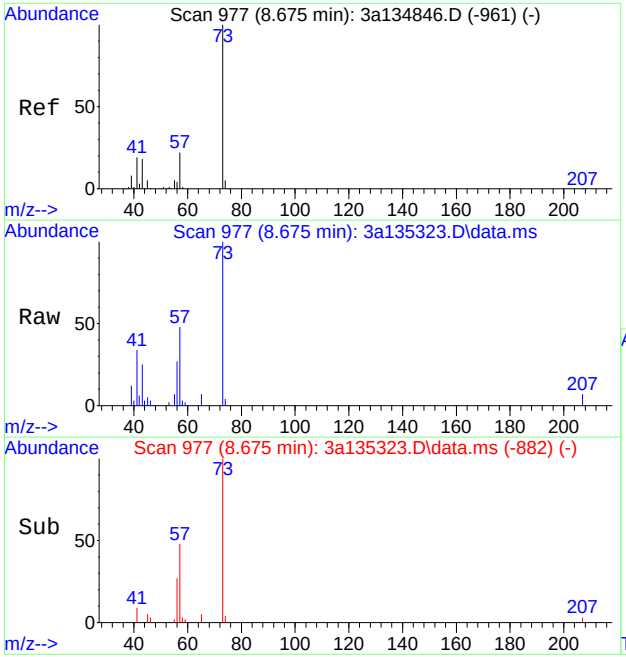


#23
acetone
Concen: 5.62 ug/L
RT: 7.632 min Scan# 778
Delta R.T. 0.005 min
Lab File: 3a135323.D
Acq: 5 Oct 2014 2:28 pm

Tgt Ion: 43 Resp: 3274

Ion	Ratio	Lower	Upper
43	100		
58	28.4	2.5	62.5
42	0.0	0.0	37.9

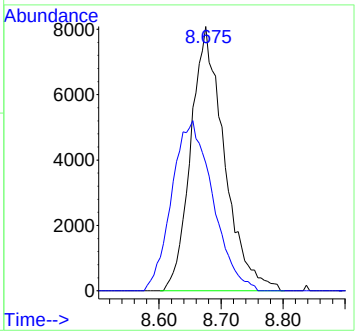


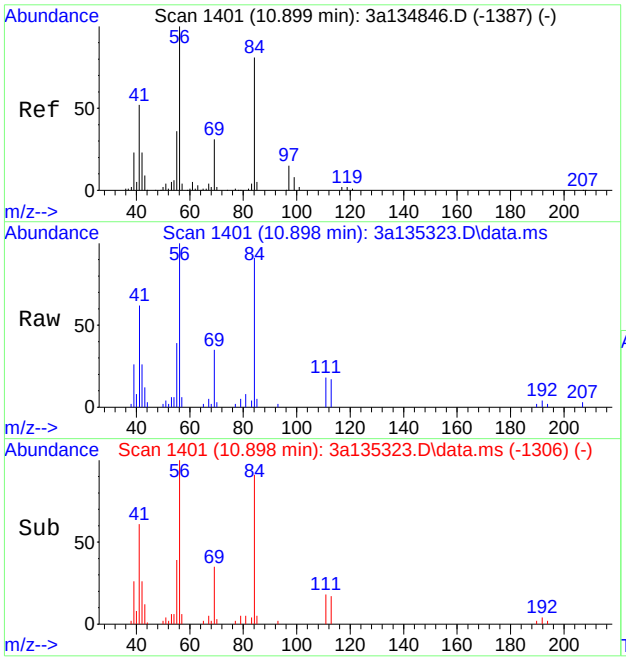


#31
methyl tert butyl ether
Concen: 6.94 ug/L
RT: 8.675 min Scan# 977
Delta R.T. -0.000 min
Lab File: 3a135323.D
Acq: 5 Oct 2014 2:28 pm

Tgt Ion: 73 Resp: 30363

Ion	Ratio	Lower	Upper
73	100		
57	48.3	0.0	52.6

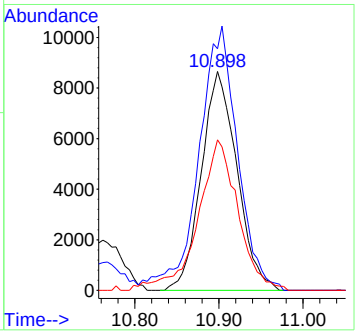


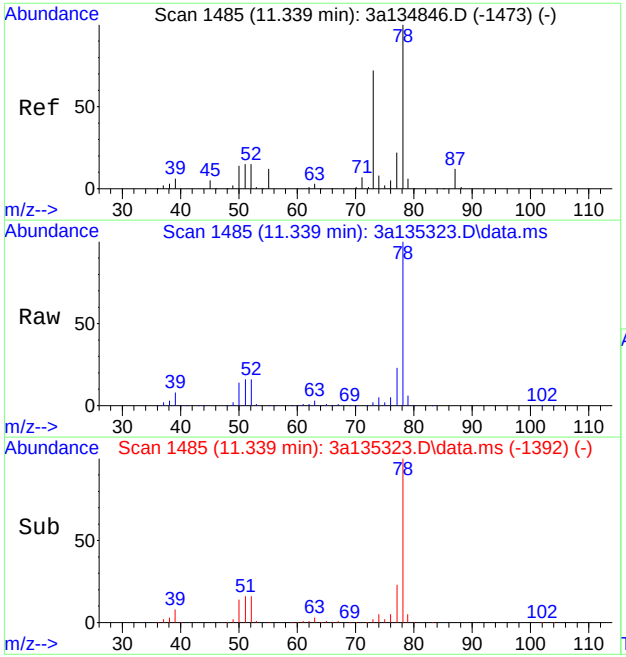


#54
Cyclohexane
Concen: 13.18 ug/L
RT: 10.898 min Scan# 1401
Delta R.T. -0.000 min
Lab File: 3a135323.D
Acq: 5 Oct 2014 2:28 pm

Tgt Ion: 84 Resp: 25503

Ion	Ratio	Lower	Upper
84	100		
56	110.4	92.7	152.7
41	68.8	34.9	94.9

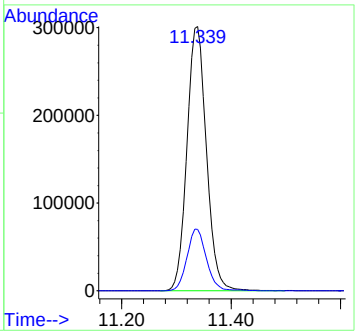


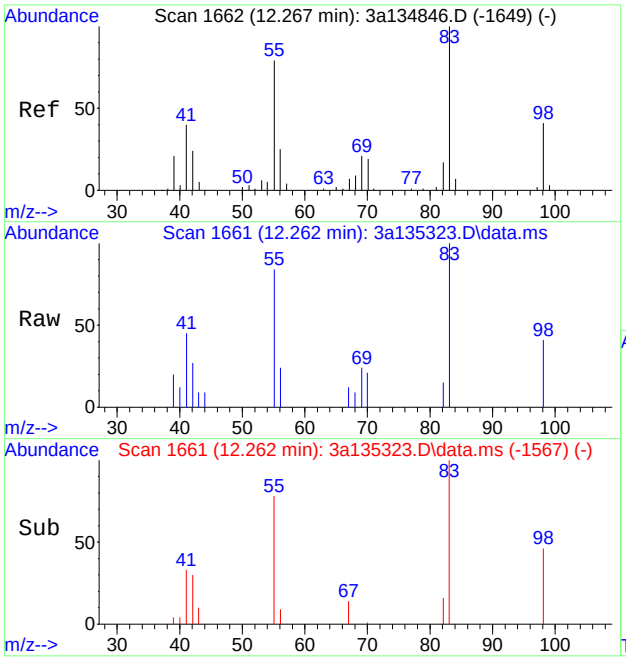


#63
benzene
Concen: 152.65 ug/L
RT: 11.339 min Scan# 1485
Delta R.T. -0.000 min
Lab File: 3a135323.D
Acq: 5 Oct 2014 2:28 pm

Tgt Ion: 78 Resp: 743608

Ion	Ratio	Lower	Upper
78	100		
77	23.2	0.0	52.2

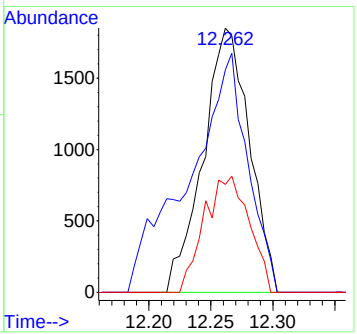


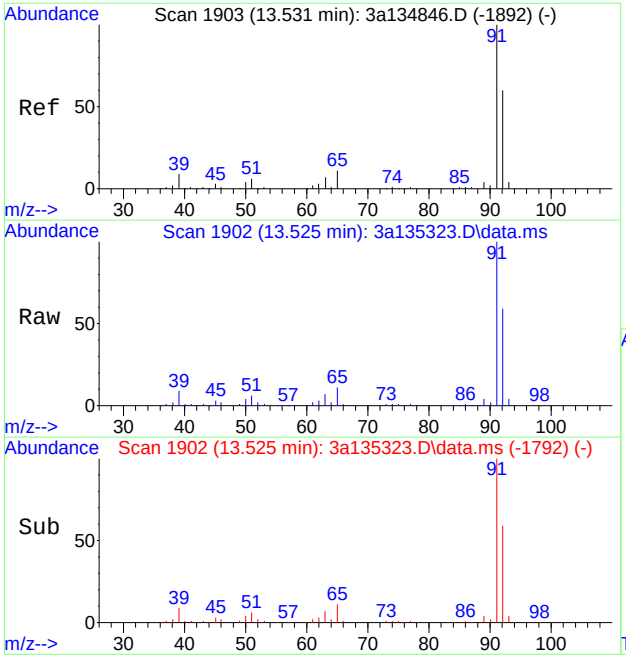


#76
methylcyclohexane
Concen: 3.29 ug/L
RT: 12.262 min Scan# 1661
Delta R.T. -0.005 min
Lab File: 3a135323.D
Acq: 5 Oct 2014 2:28 pm

Tgt Ion: 83 Resp: 4806

Ion	Ratio	Lower	Upper
83	100		
55	84.1	49.2	109.2
98	40.8	11.5	71.5

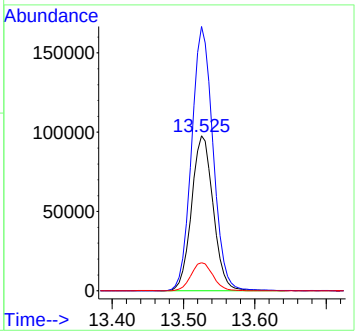


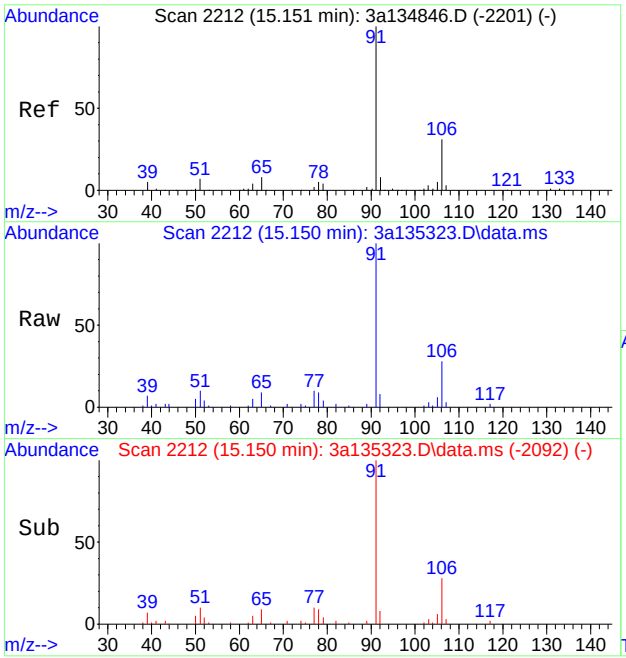


#81
toluene
Concen: 70.01 ug/L
RT: 13.525 min Scan# 1902
Delta R.T. -0.005 min
Lab File: 3a135323.D
Acq: 5 Oct 2014 2:28 pm

Tgt Ion: 92 Resp: 206292

Ion	Ratio	Lower	Upper
92	100		
91	170.4	136.8	196.8
65	18.2	0.0	48.9

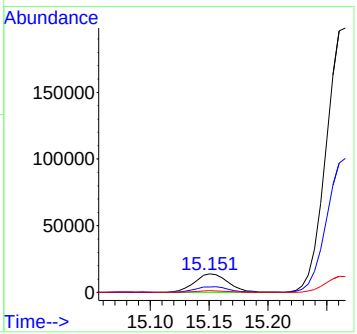


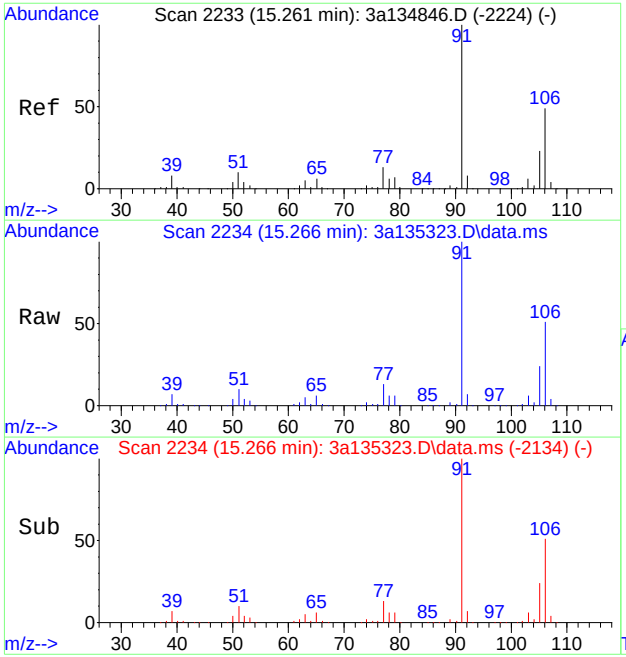


#97
ethylbenzene
Concen: 5.09 ug/L
RT: 15.150 min Scan# 2212
Delta R.T. -0.000 min
Lab File: 3a135323.D
Acq: 5 Oct 2014 2:28 pm

Tgt Ion: 91 Resp: 27820

Ion	Ratio	Lower	Upper
91	100		
106	28.4	1.1	61.1
65	9.3	0.0	38.2

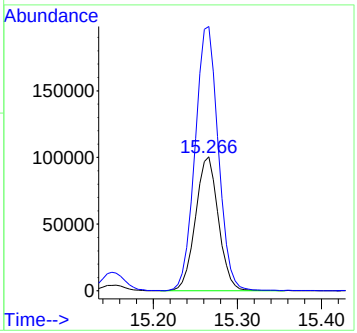


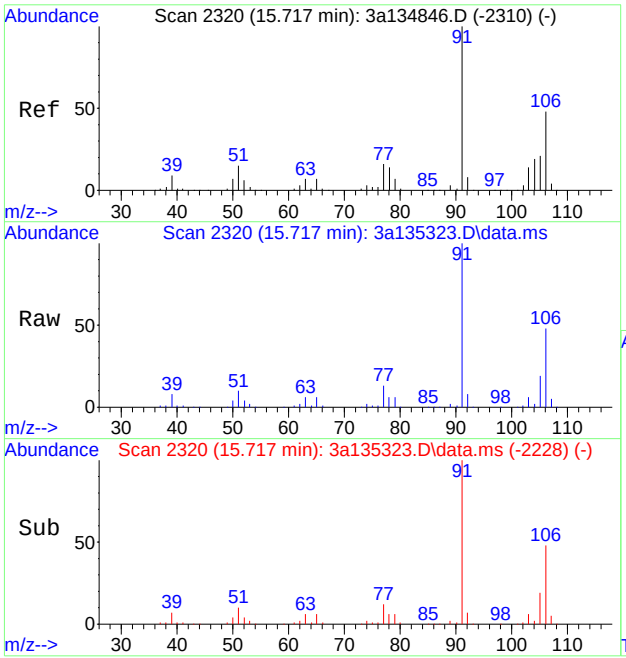


#98
m,p-xylene
Concen: 91.81 ug/L
RT: 15.266 min Scan# 2234
Delta R.T. 0.005 min
Lab File: 3a135323.D
Acq: 5 Oct 2014 2:28 pm

Tgt Ion:106 Resp: 190166

Ion	Ratio	Lower	Upper
106	100		
91	197.3	173.5	233.5

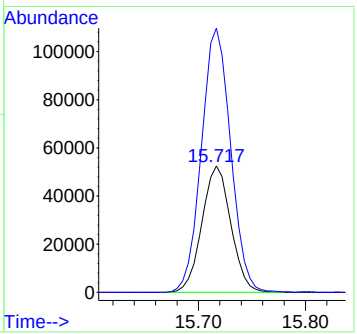


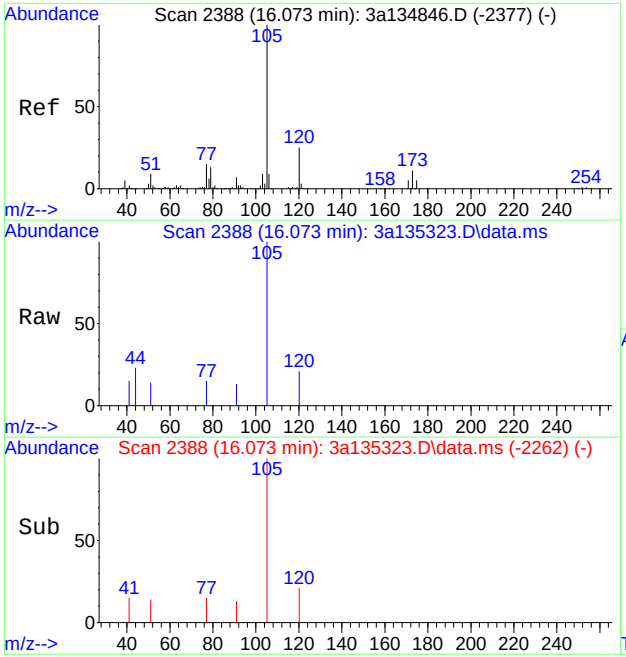


#99
o-xylene
Concen: 42.04 ug/L
RT: 15.717 min Scan# 2320
Delta R.T. -0.000 min
Lab File: 3a135323.D
Acq: 5 Oct 2014 2:28 pm

Tgt Ion:106 Resp: 98547

Ion	Ratio	Lower	Upper
106	100		
91	209.2	180.2	240.2

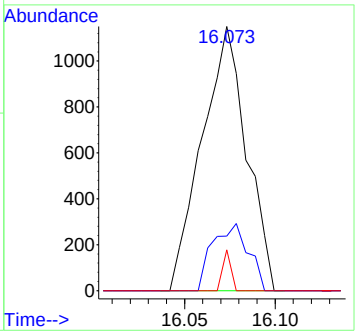




#103
isopropylbenzene
Concen: 0.30 ug/L
RT: 16.073 min Scan# 2388
Delta R.T. -0.000 min
Lab File: 3a135323.D
Acq: 5 Oct 2014 2:28 pm

Tgt Ion:105 Resp: 1966

Ion	Ratio	Lower	Upper
105	100		
120	20.7	0.0	55.3
77	15.5	0.0	44.7



7.1.17

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135323.D
Acq On : 5 Oct 2014 2:28 pm
Operator : JemimaM
Sample : jb77674-9
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

Signal : TIC: 3a135323.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.061	94	97	138	rBV2	5038	48900	2.33%	0.246%
2	4.560	163	192	233	rBV	123987	1094489	52.11%	5.506%
3	4.801	233	238	246	rVV3	25464	94227	4.49%	0.474%
4	4.927	246	262	319	rVV2	197530	1991917	94.84%	10.021%
5	5.273	319	328	398	rVV3	39047	191847	9.13%	0.965%
6	5.781	411	425	451	rVB2	15943	63502	3.02%	0.319%
7	6.064	451	479	543	rBV2	395675	2100279	100.00%	10.566%
8	6.447	543	552	558	rVV3	4419	14611	0.70%	0.074%
9	6.547	558	571	612	rVB5	59442	337363	16.06%	1.697%
10	6.825	612	624	645	rBV2	46733	150158	7.15%	0.755%
11	7.050	655	667	676	rVV2	21930	68193	3.25%	0.343%
12	7.160	676	688	718	rVB2	101369	353842	16.85%	1.780%
13	7.438	725	741	758	rVB3	8910	40209	1.91%	0.202%
14	8.104	851	868	874	rBV6	3950	16626	0.79%	0.084%
15	8.219	874	890	903	rVV2	79995	295256	14.06%	1.485%
16	8.403	903	925	958	rVV4	94858	554124	26.38%	2.788%
17	8.654	958	973	1003	rVB5	25031	131630	6.27%	0.662%
18	8.917	1013	1023	1035	rVB4	3999	13241	0.63%	0.067%
19	9.032	1035	1045	1056	rBV3	2717	7670	0.37%	0.039%
20	9.200	1070	1077	1085	rVV4	1824	4909	0.23%	0.025%
21	9.341	1085	1104	1119	rVV2	17518	56880	2.71%	0.286%
22	9.488	1119	1132	1145	rVV3	16295	50463	2.40%	0.254%
23	9.630	1145	1159	1167	rVV	16749	51603	2.46%	0.260%
24	9.713	1167	1175	1199	rVV2	27659	85049	4.05%	0.428%
25	9.991	1214	1228	1258	rVV2	97044	314533	14.98%	1.582%
26	10.437	1307	1313	1326	rVV4	1749	4646	0.22%	0.023%
27	10.626	1339	1349	1365	rVV	14397	37687	1.79%	0.190%
28	10.767	1365	1376	1385	rVV	167688	421346	20.06%	2.120%
29	10.856	1385	1393	1418	rVV3	83201	344176	16.39%	1.731%
30	11.334	1454	1484	1495	rBV	649135	1853379	88.24%	9.324%
31	11.412	1496	1499	1518	rVV4	33042	77986	3.71%	0.392%
32	11.643	1531	1543	1550	rBV5	4344	14480	0.69%	0.073%
33	11.737	1550	1561	1588	rVB	187018	439487	20.93%	2.211%
34	11.916	1588	1595	1606	rBV4	5236	11991	0.57%	0.060%
35	12.026	1606	1616	1623	rVB	2434	4853	0.23%	0.024%
36	12.262	1645	1661	1672	rVB7	8211	32159	1.53%	0.162%
37	12.665	1727	1738	1756	rVB8	5993	22515	1.07%	0.113%
38	12.828	1756	1769	1786	rBV2	22367	52984	2.52%	0.267%
39	13.085	1806	1818	1831	rVB4	10378	31734	1.51%	0.160%
40	13.263	1840	1852	1862	rBV3	7336	15821	0.75%	0.080%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135323.D
Acq On : 5 Oct 2014 2:28 pm
Operator : JemimaM
Sample : jb77674-9
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

41	13.447	1871	1887	1895	rVV	278773	590049	28.09%	2.968%
42	13.525	1895	1902	1930	rVV	391698	833888	39.70%	4.195%
43	13.845	1954	1963	1977	rBV4	2340	7455	0.35%	0.038%
44	13.992	1981	1991	2001	rBB3	3091	7784	0.37%	0.039%
45	14.118	2008	2015	2024	rVV2	2204	4652	0.22%	0.023%
46	14.364	2051	2062	2077	rVB6	3234	8932	0.43%	0.045%
47	14.652	2109	2117	2129	rBV2	2706	6690	0.32%	0.034%
48	14.763	2129	2138	2142	rVV3	3361	6883	0.33%	0.035%
49	14.810	2142	2147	2166	rVV5	3671	11812	0.56%	0.059%
50	14.946	2166	2173	2189	rVB5	4867	11556	0.55%	0.058%
51	15.082	2189	2199	2207	rBV	253893	500373	23.82%	2.517%
52	15.151	2207	2212	2224	rVV2	33224	65423	3.11%	0.329%
53	15.266	2224	2234	2250	rVV	554312	1066287	50.77%	5.364%
54	15.717	2309	2320	2341	rVB	302574	575004	27.38%	2.893%
55	16.079	2377	2389	2394	rBV2	2164	4127	0.20%	0.021%
56	16.183	2403	2409	2417	rVB3	2423	4273	0.20%	0.021%
57	16.320	2420	2435	2447	rBV	201167	387102	18.43%	1.947%
58	16.398	2447	2450	2460	rVB6	2464	5423	0.26%	0.027%
59	16.514	2462	2472	2477	rBV3	3017	6345	0.30%	0.032%
60	16.613	2477	2491	2495	rBV	76946	214526	10.21%	1.079%
61	16.660	2495	2500	2518	rVB	154175	280329	13.35%	1.410%
62	16.923	2542	2550	2559	rVB	130578	241597	11.50%	1.215%
63	17.090	2573	2582	2595	rBV	215880	393243	18.72%	1.978%
64	17.326	2621	2627	2634	rBV2	6745	11098	0.53%	0.056%
65	17.573	2662	2674	2685	rBV2	454360	894487	42.59%	4.500%
66	17.704	2691	2699	2708	rBV	40057	88424	4.21%	0.445%
67	17.783	2708	2714	2720	rVV2	43758	96981	4.62%	0.488%
68	17.851	2720	2727	2740	rVB	259222	488223	23.25%	2.456%
69	17.961	2740	2748	2756	rVB2	10167	19617	0.93%	0.099%
70	18.039	2756	2763	2770	rBV	18811	34349	1.64%	0.173%
71	18.108	2770	2776	2789	rVB3	32886	89429	4.26%	0.450%
72	18.223	2789	2798	2809	rVB	122448	226589	10.79%	1.140%
73	18.359	2813	2824	2828	rBV2	13077	26785	1.28%	0.135%
74	18.443	2828	2840	2854	rVB2	60570	146005	6.95%	0.735%
75	18.595	2860	2869	2876	rBV	16931	32346	1.54%	0.163%
76	18.669	2876	2883	2889	rBV	79022	145527	6.93%	0.732%
77	18.731	2889	2895	2912	rVB2	42373	94733	4.51%	0.477%
78	18.868	2912	2921	2930	rVB8	4038	9539	0.45%	0.048%
79	19.025	2943	2951	2956	rBV5	3024	6284	0.30%	0.032%
80	19.093	2956	2964	2973	rVB	46341	86947	4.14%	0.437%
81	19.177	2973	2980	2983	rBV4	2965	5586	0.27%	0.028%
82	19.230	2983	2990	2995	rBV	39307	73232	3.49%	0.368%
83	19.293	2995	3002	3012	rVB	115429	220049	10.48%	1.107%
84	19.382	3012	3019	3028	rVB5	5383	11794	0.56%	0.059%
85	19.513	3036	3044	3049	rBV4	19477	40172	1.91%	0.202%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135323.D
Acq On : 5 Oct 2014 2:28 pm
Operator : JemimaM
Sample : jb77674-9
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

86	19.591	3049	3059	3067	rVB4	13765	46559	2.22%	0.234%
87	19.665	3067	3073	3077	rBV2	5571	8296	0.39%	0.042%
88	19.707	3077	3081	3087	rVB3	4442	6639	0.32%	0.033%
89	19.770	3087	3093	3102	rVB2	14411	30254	1.44%	0.152%
90	19.922	3117	3122	3145	rBV7	2532	8560	0.41%	0.043%
91	20.100	3148	3156	3177	rBV	47272	100886	4.80%	0.508%
92	20.247	3177	3184	3203	rBV5	5661	15554	0.74%	0.078%
93	20.383	3203	3210	3229	rVB4	5929	12860	0.61%	0.065%
94	20.582	3229	3248	3249	rBV8	1117	4143	0.20%	0.021%
95	20.629	3250	3257	3266	rVB3	6905	13739	0.65%	0.069%
96	20.745	3273	3279	3287	rVB4	5770	10992	0.52%	0.055%
97	20.907	3302	3310	3315	rVB8	3049	7400	0.35%	0.037%
98	21.426	3381	3409	3411	rBV10	1784	6965	0.33%	0.035%
99	21.516	3424	3426	3458	rVV9	1177	5301	0.25%	0.027%
100	21.725	3458	3466	3529	rVV9	2563	21034	1.00%	0.106%

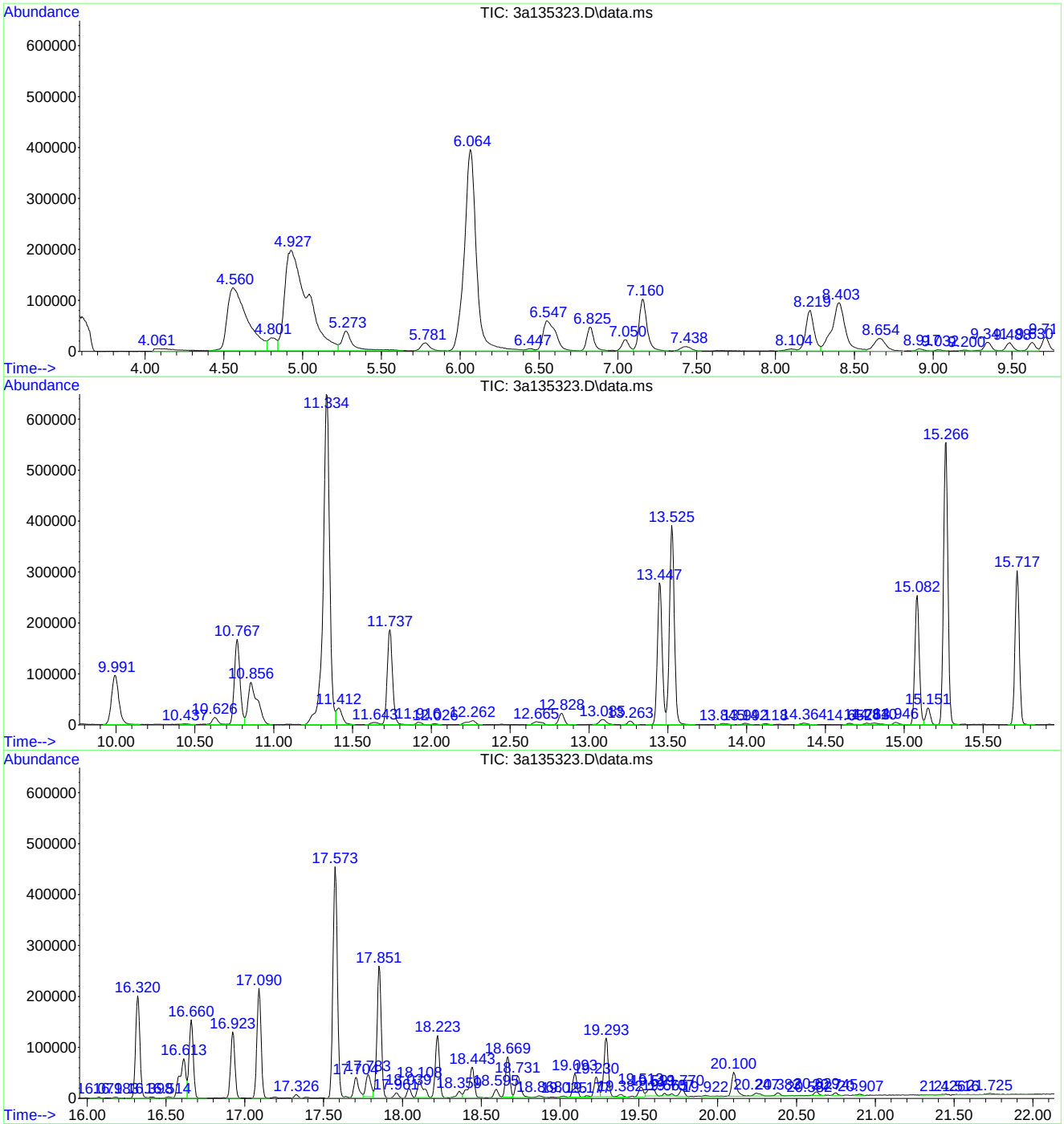
Sum of corrected areas: 19877896

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135323.D
Acq On : 5 Oct 2014 2:28 pm
Operator : JemimaM
Sample : jb77674-9
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135323.D
Acq On : 5 Oct 2014 2:28 pm
Operator : JemimaM
Sample : jb77674-9
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

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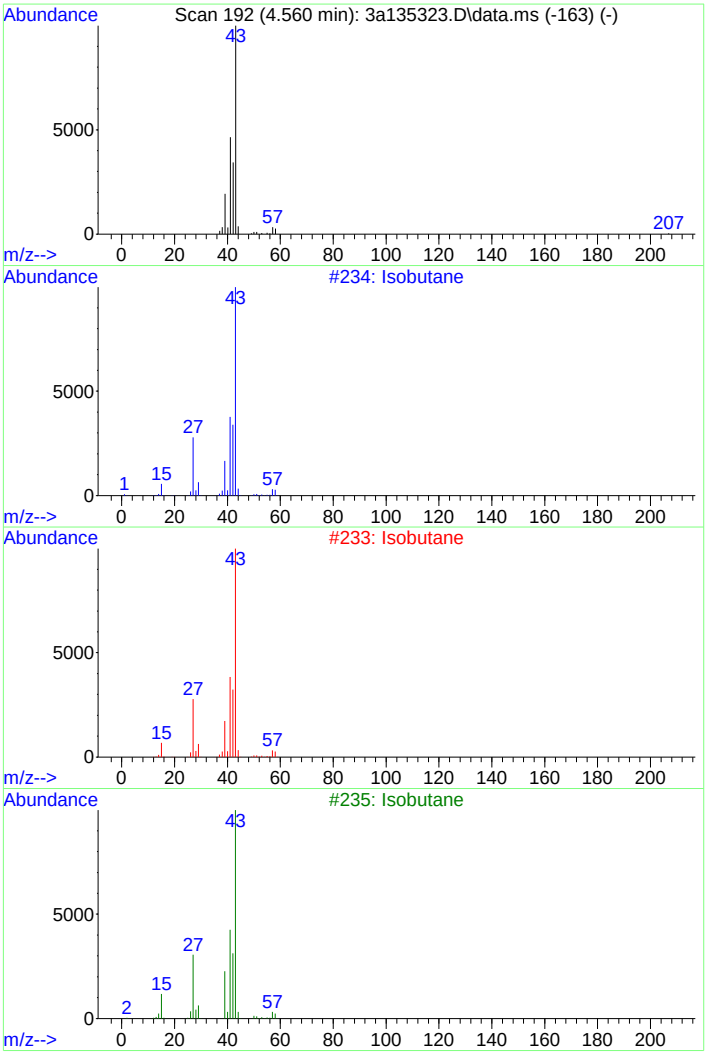
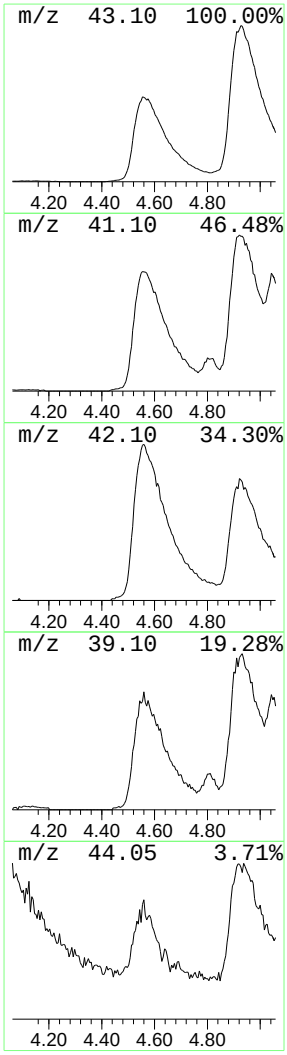
Peak Number 1 alkane Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.560	129.88 ug/L	1094490	pentafluorobenzene	10.767

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Isobutane	58	C4H10	000075-28-5	78
2	Isobutane	58	C4H10	000075-28-5	72
3	Isobutane	58	C4H10	000075-28-5	72
4	Isobutane	58	C4H10	000075-28-5	59
5	Cyclobutylamine	71	C4H9N	002516-34-9	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135323.D
Acq On : 5 Oct 2014 2:28 pm
Operator : JemimaM
Sample : jb77674-9
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

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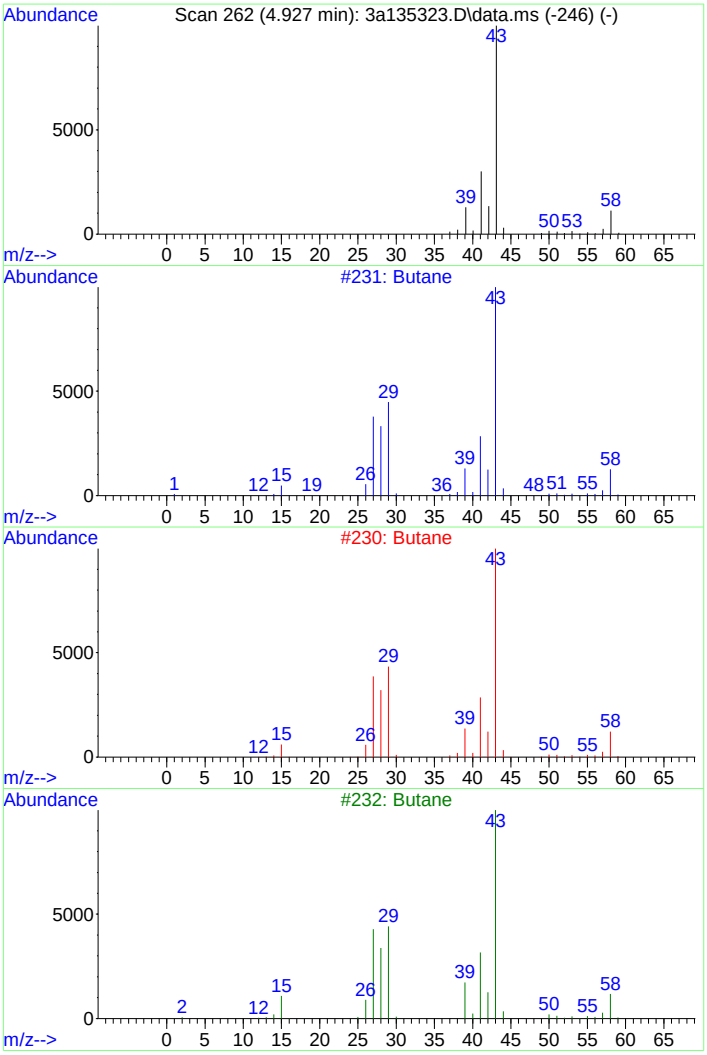
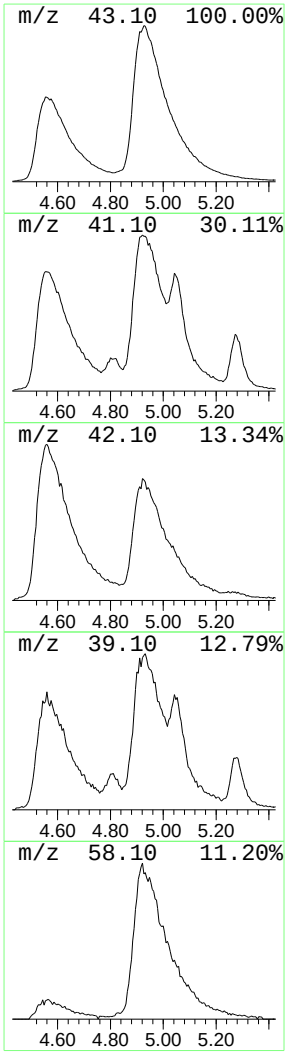
Peak Number 2 alkane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.927	236.38 ug/L	1991920	pentafluorobenzene	10.767

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	72
2	Butane	58	C4H10	000106-97-8	72
3	Butane	58	C4H10	000106-97-8	49
4	Isobutane	58	C4H10	000075-28-5	9
5	Isopropylsulfonyl chloride	142	C3H7ClO2S	010147-37-2	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135323.D
Acq On : 5 Oct 2014 2:28 pm
Operator : JemimaM
Sample : jb77674-9
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

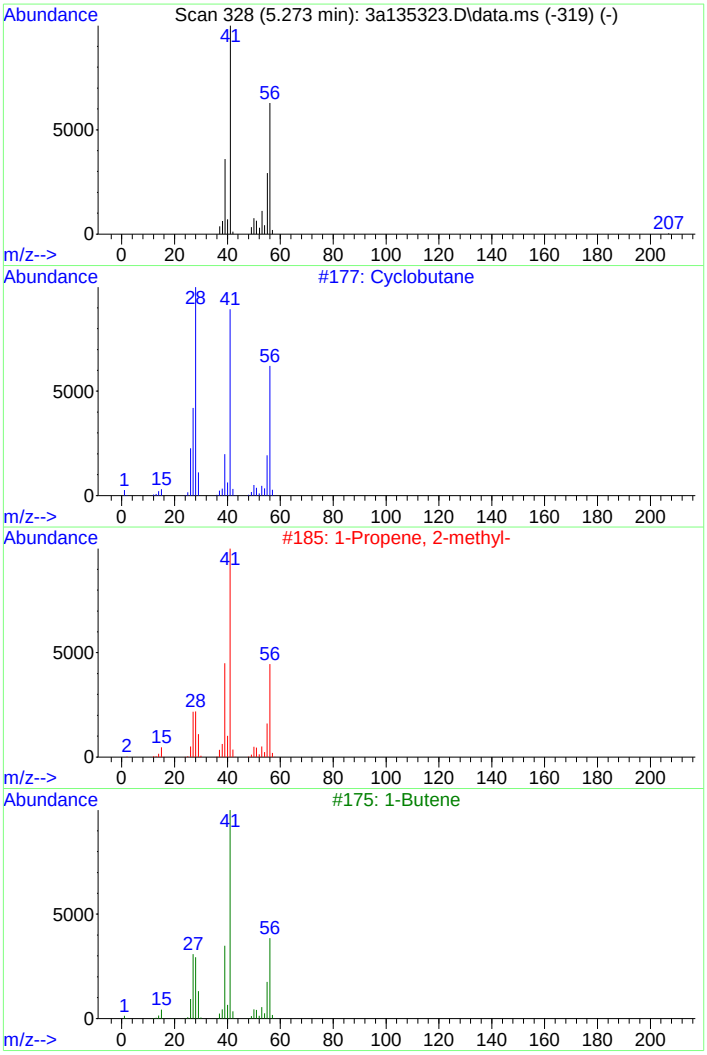
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

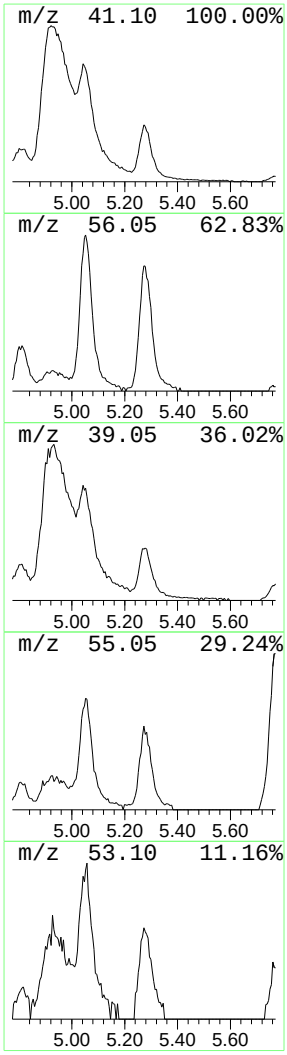
****

Peak Number 3 alkene Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.273	22.77 ug/L	191847	pentafluorobenzene	10.767

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclobutane	56	C4H8	000287-23-0	86
2	1-Propene, 2-methyl-	56	C4H8	000115-11-7	86
3	1-Butene	56	C4H8	000106-98-9	86
4	1-Butene	56	C4H8	000106-98-9	86
5	1-Butene	56	C4H8	000106-98-9	86





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135323.D
Acq On : 5 Oct 2014 2:28 pm
Operator : JemimaM
Sample : jb77674-9
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

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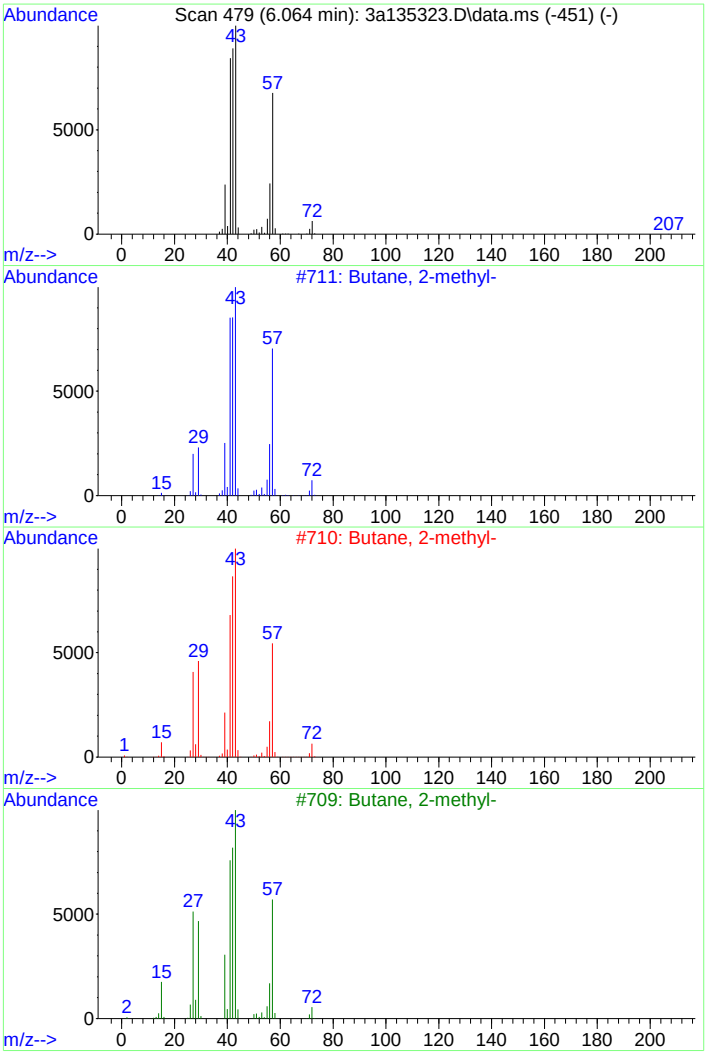
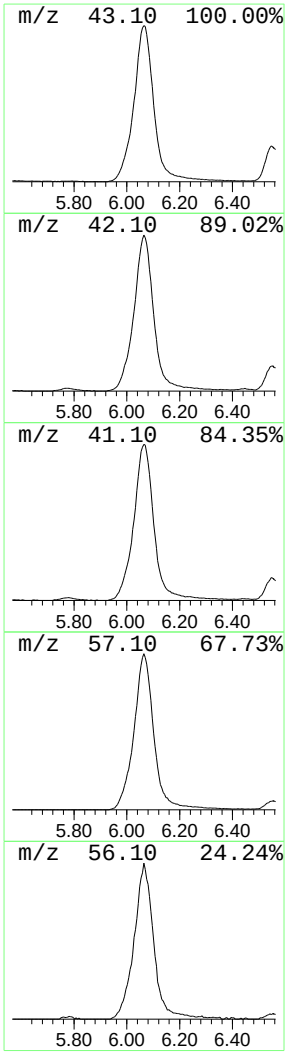
Peak Number 4 alkane Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.064	249.23 ug/L	2100280	pentafluorobenzene	10.767

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	94
2	Butane, 2-methyl-	72	C5H12	000078-78-4	91
3	Butane, 2-methyl-	72	C5H12	000078-78-4	90
4	Pentane	72	C5H12	000109-66-0	50
5	3-Buten-1-ol	72	C4H8O	000627-27-0	47





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135323.D
Acq On : 5 Oct 2014 2:28 pm
Operator : JemimaM
Sample : jb77674-9
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

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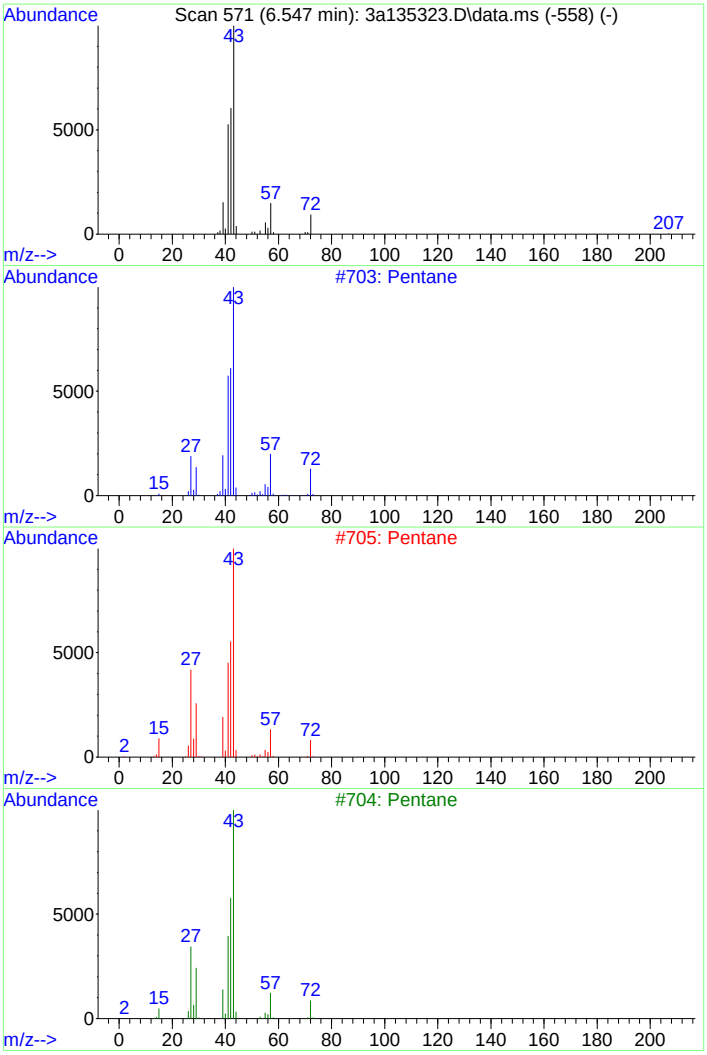
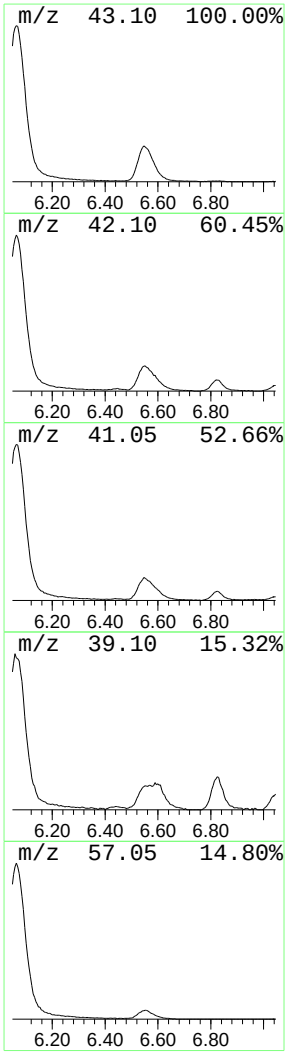
Peak Number 5 alkane-Pentane Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.547	40.03 ug/L	337363	pentafluorobenzene	10.767

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	91
2	Pentane	72	C5H12	000109-66-0	90
3	Pentane	72	C5H12	000109-66-0	86
4	Pentane	72	C5H12	000109-66-0	64
5	Butane, 2-methyl-	72	C5H12	000078-78-4	45





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135323.D
Acq On : 5 Oct 2014 2:28 pm
Operator : JemimaM
Sample : jb77674-9
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

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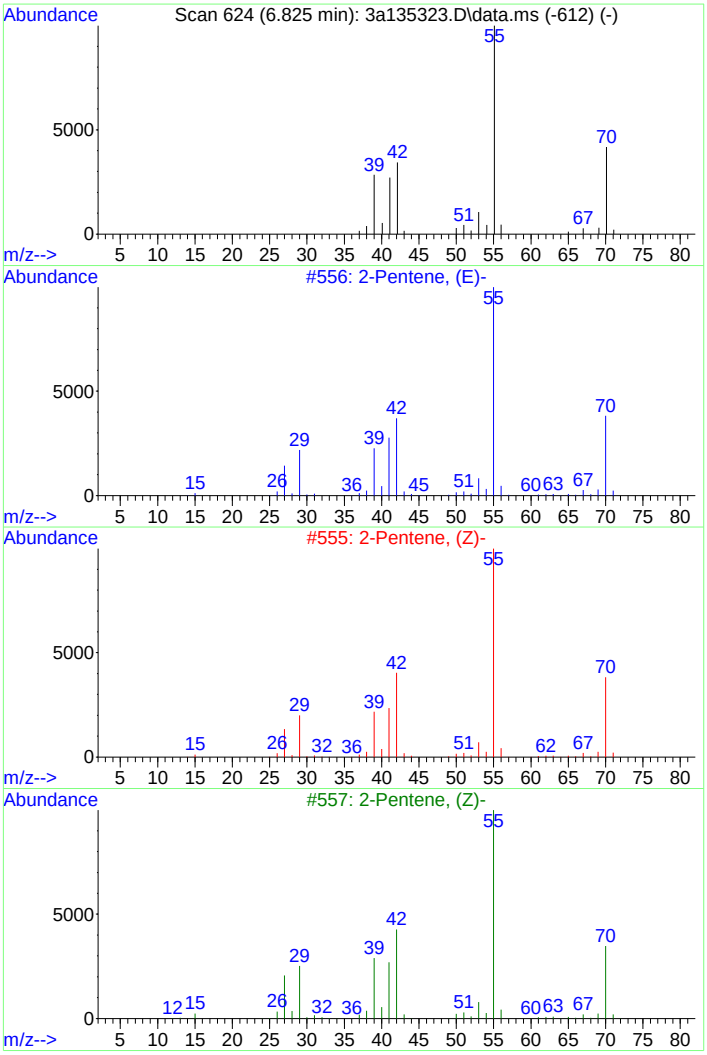
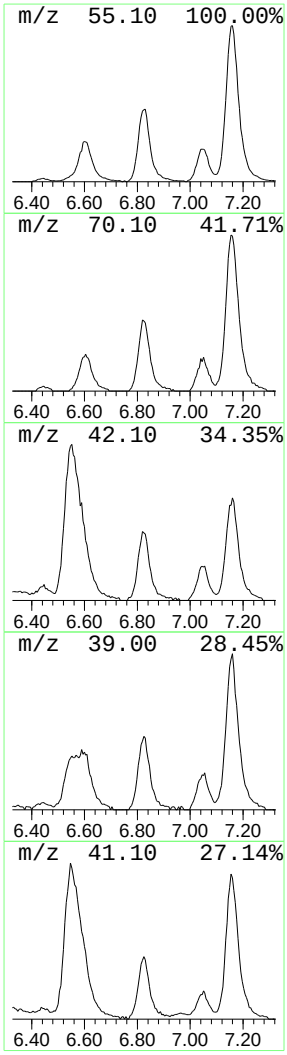
Peak Number 6 alkene Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.825	17.82 ug/L	150158	pentafluorobenzene	10.767

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentene, (E)-	70	C5H10	000646-04-8	91
2	2-Pentene, (Z)-	70	C5H10	000627-20-3	91
3	2-Pentene, (Z)-	70	C5H10	000627-20-3	91
4	2-Pentene	70	C5H10	000109-68-2	91
5	2-Butene, 2-methyl-	70	C5H10	000513-35-9	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135323.D
Acq On : 5 Oct 2014 2:28 pm
Operator : JemimaM
Sample : jb77674-9
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

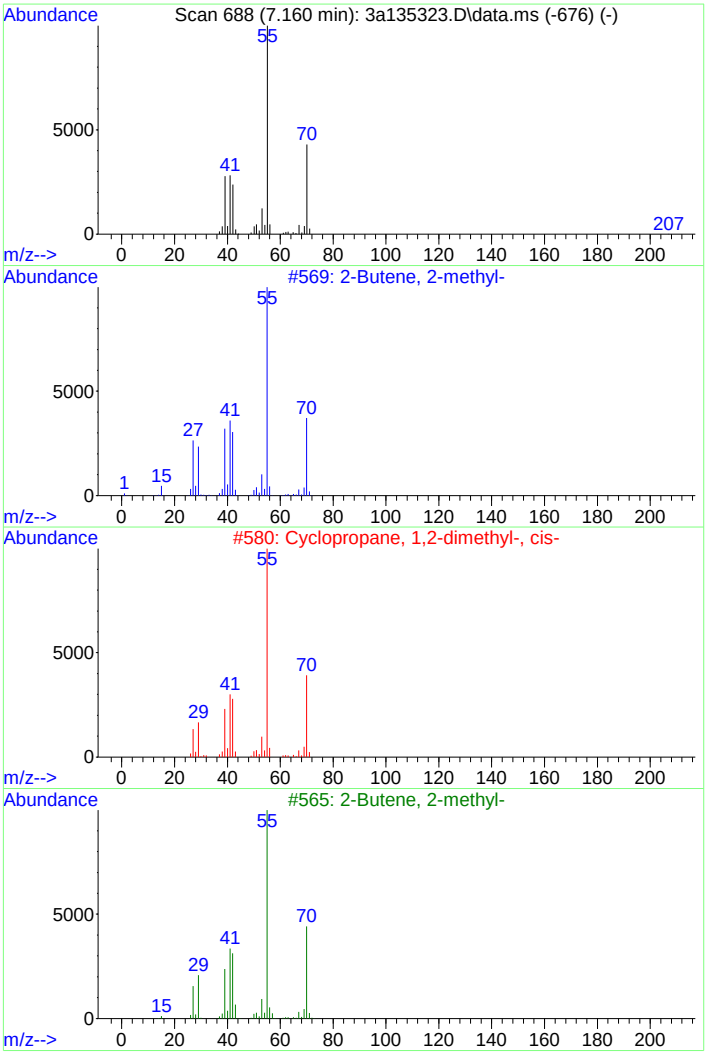
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

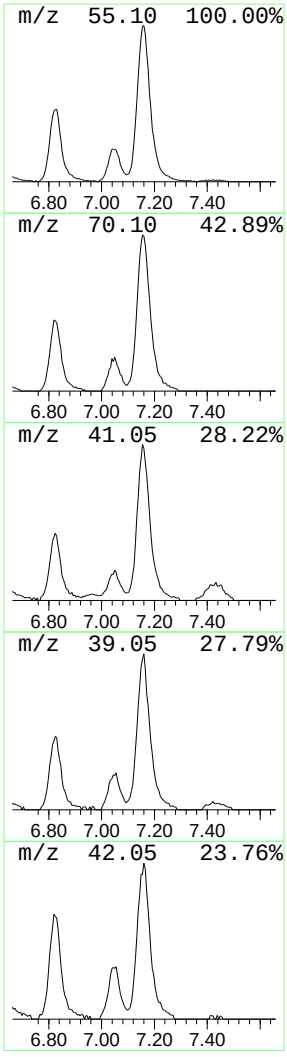
****

Peak Number 7 alkene Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.160	41.99 ug/L	353842	pentafluorobenzene	10.767

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Butene, 2-methyl-	70	C5H10	000513-35-9	91
2	Cyclopropane, 1,2-dimethyl-, cis-	70	C5H10	000930-18-7	91
3	2-Butene, 2-methyl-	70	C5H10	000513-35-9	86
4	Cyclopropane, 1,1-dimethyl-	70	C5H10	001630-94-0	80
5	Cyclopropane, 1,2-dimethyl-, trans-	70	C5H10	002402-06-4	80





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135323.D
Acq On : 5 Oct 2014 2:28 pm
Operator : JemimaM
Sample : jb77674-9
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

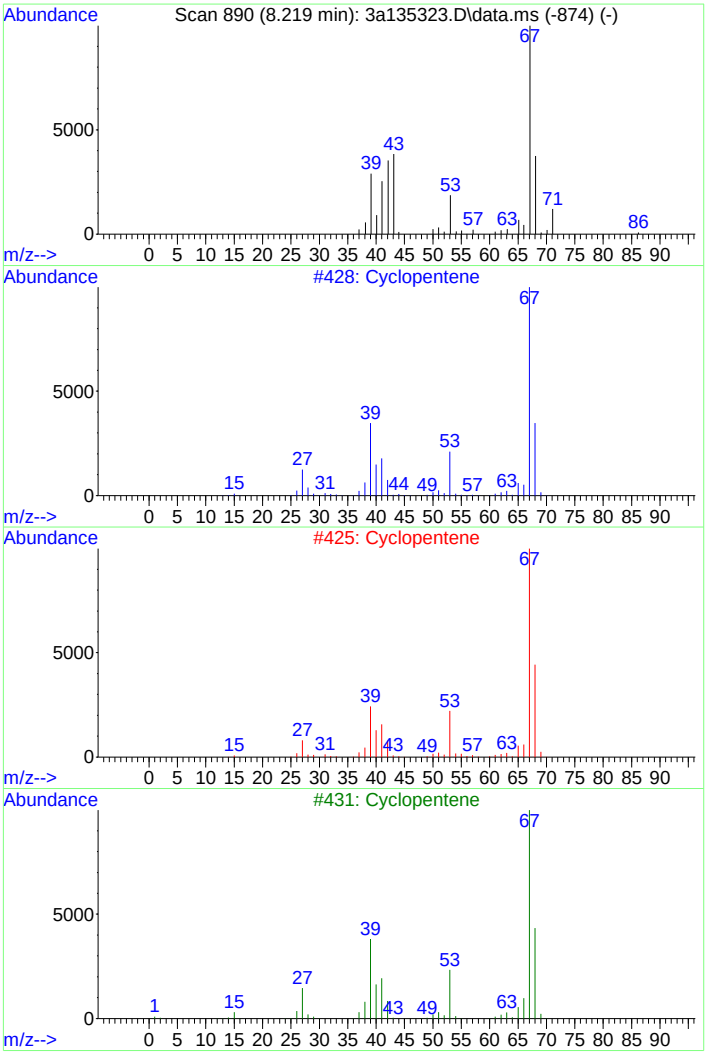
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

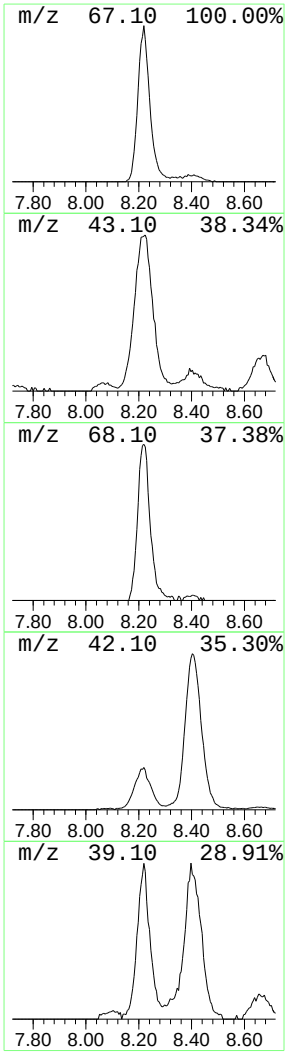
****

Peak Number 8 alkene Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.219	35.04 ug/L	295256	pentafluorobenzene	10.767

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentene	68	C5H8	000142-29-0	68
2	Cyclopentene	68	C5H8	000142-29-0	68
3	Cyclopentene	68	C5H8	000142-29-0	68
4	1,3-Pentadiene	68	C5H8	000504-60-9	46
5	Cyclopentene	68	C5H8	000142-29-0	46





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135323.D
Acq On : 5 Oct 2014 2:28 pm
Operator : JemimaM
Sample : jb77674-9
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

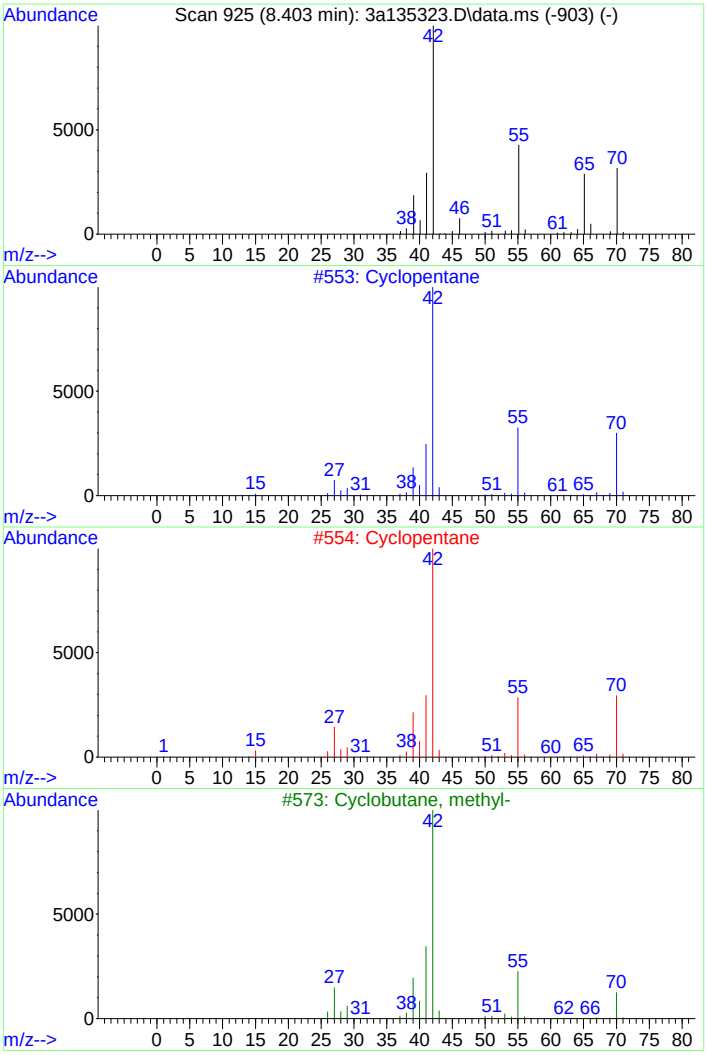
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

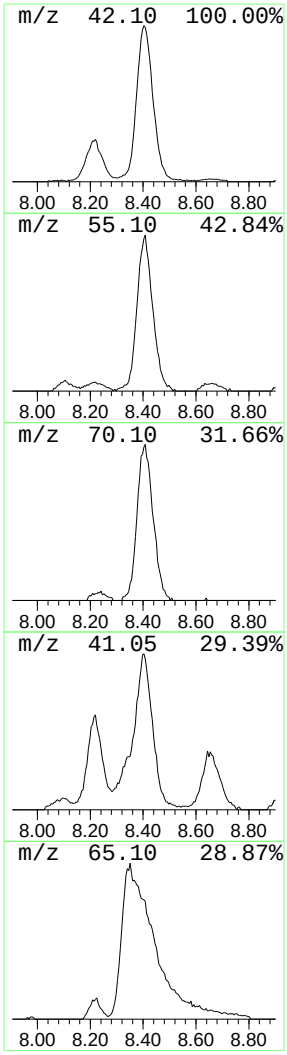
****

Peak Number 9 alkene Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.403	65.76 ug/L	554124	pentafluorobenzene	10.767

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane	70	C5H10	000287-92-3	64
2	Cyclopentane	70	C5H10	000287-92-3	59
3	Cyclobutane, methyl-	70	C5H10	000598-61-8	59
4	1-Pentene	70	C5H10	000109-67-1	35
5	1-Pentene	70	C5H10	000109-67-1	16





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135323.D
Acq On : 5 Oct 2014 2:28 pm
Operator : JemimaM
Sample : jb77674-9
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

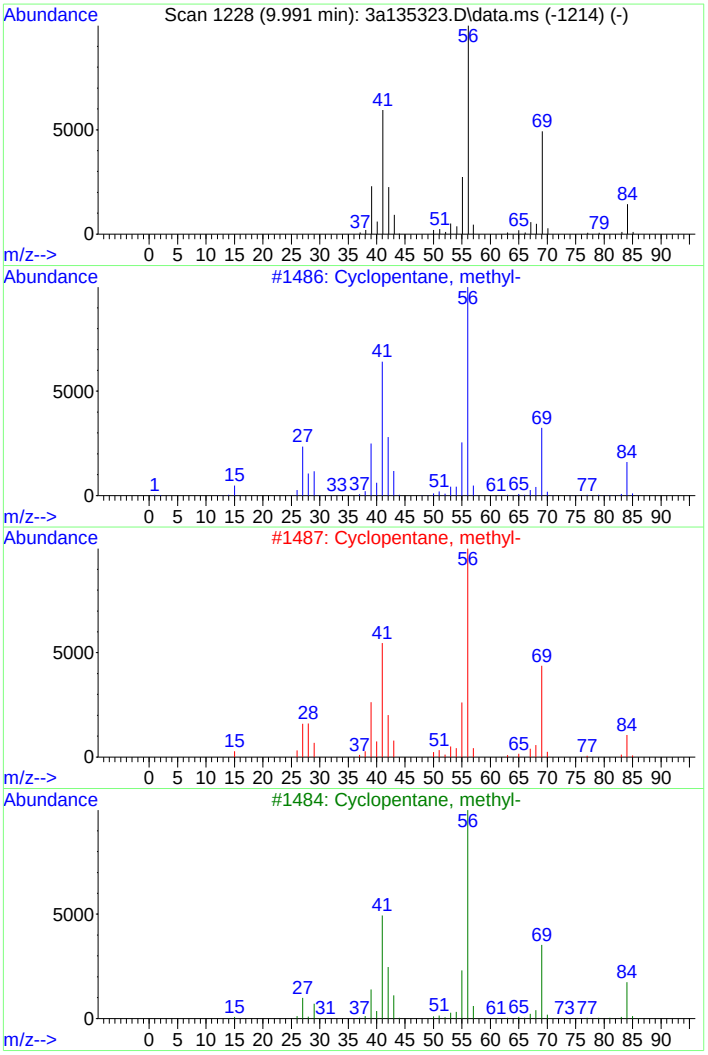
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

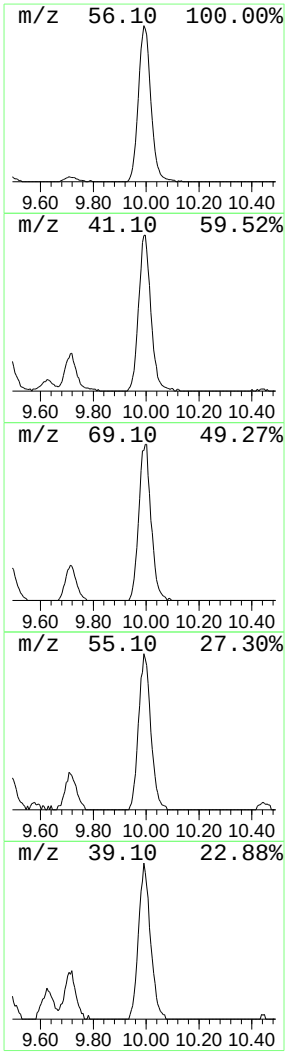
****

Peak Number 10 alkene Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.991	37.32 ug/L	314533	pentafluorobenzene	10.767

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	91
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	91
3	Cyclopentane, methyl-	84	C6H12	000096-37-7	86
4	1H-Tetrazole, 5-methyl-	84	C2H4N4	004076-36-2	80
5	Propane, 2-cyclopropyl-	84	C6H12	003638-35-5	72





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135323.D
Acq On : 5 Oct 2014 2:28 pm
Operator : JemimaM
Sample : jb77674-9
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

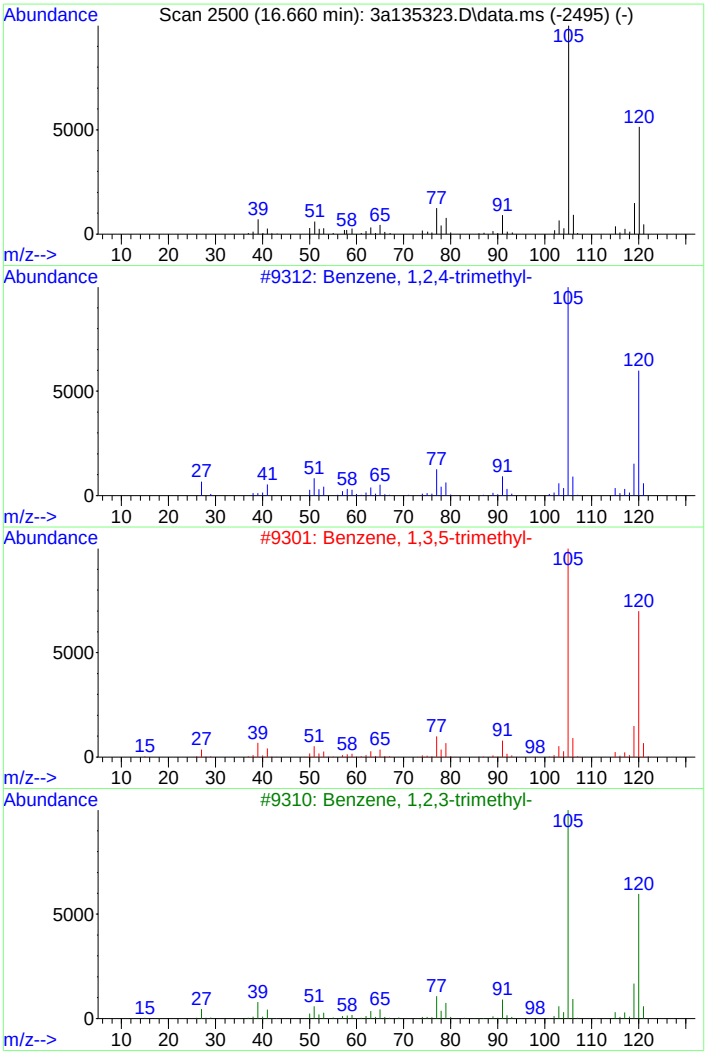
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

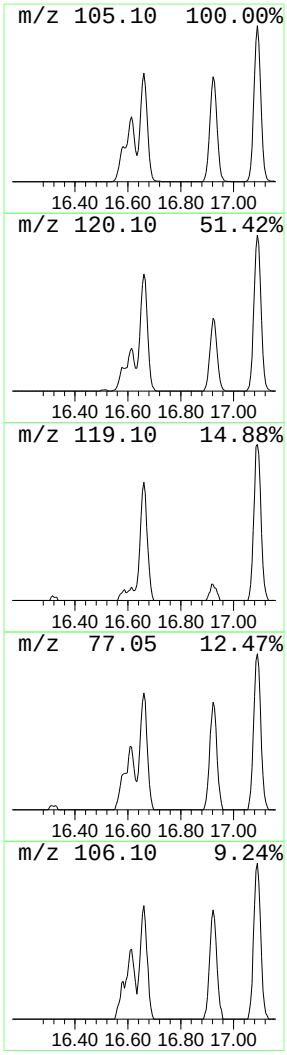
****

Peak Number 11 Benzene, 1,3,5-trimethyl- Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.660	15.67 ug/L	280329	1,4-dichlorobenzene-d4	17.573

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
3	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135323.D
Acq On : 5 Oct 2014 2:28 pm
Operator : JemimaM
Sample : jb77674-9
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

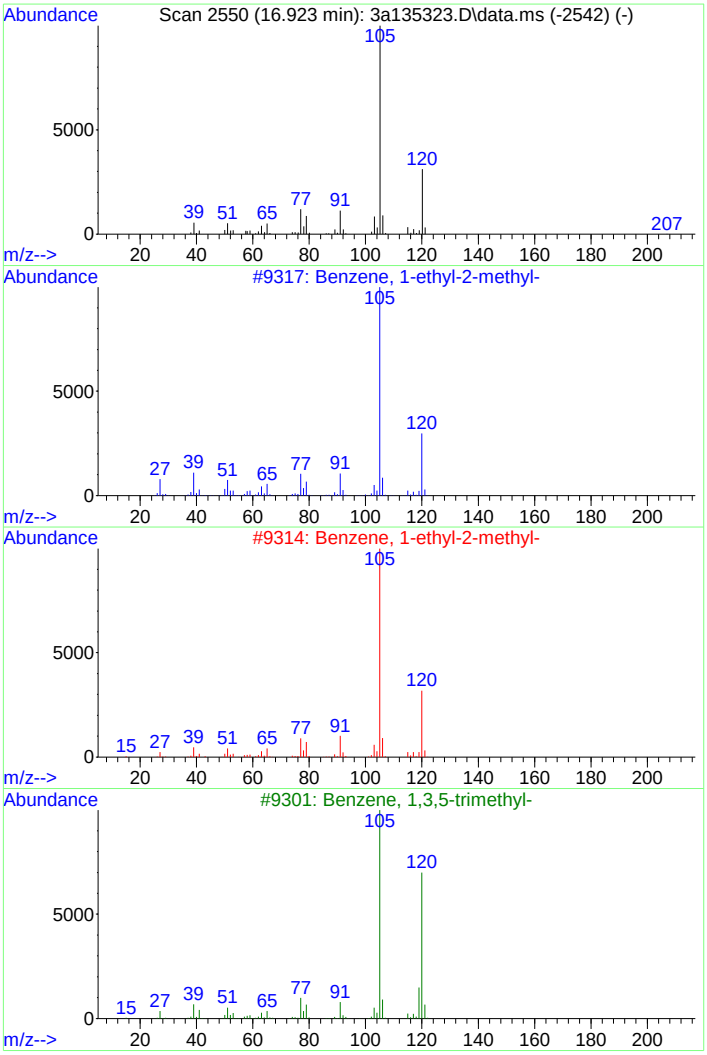
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

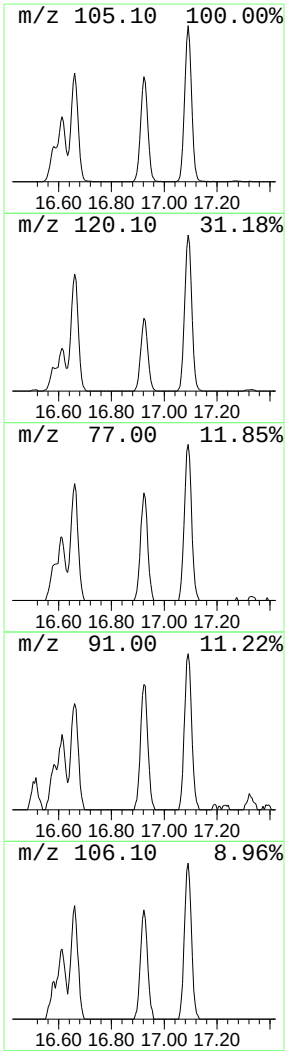
****

Peak Number 12 C3 alkyl benzene Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.923	13.50 ug/L	241597	1,4-dichlorobenzene-d4	17.573

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
4	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91
5	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135323.D
Acq On : 5 Oct 2014 2:28 pm
Operator : JemimaM
Sample : jb77674-9
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

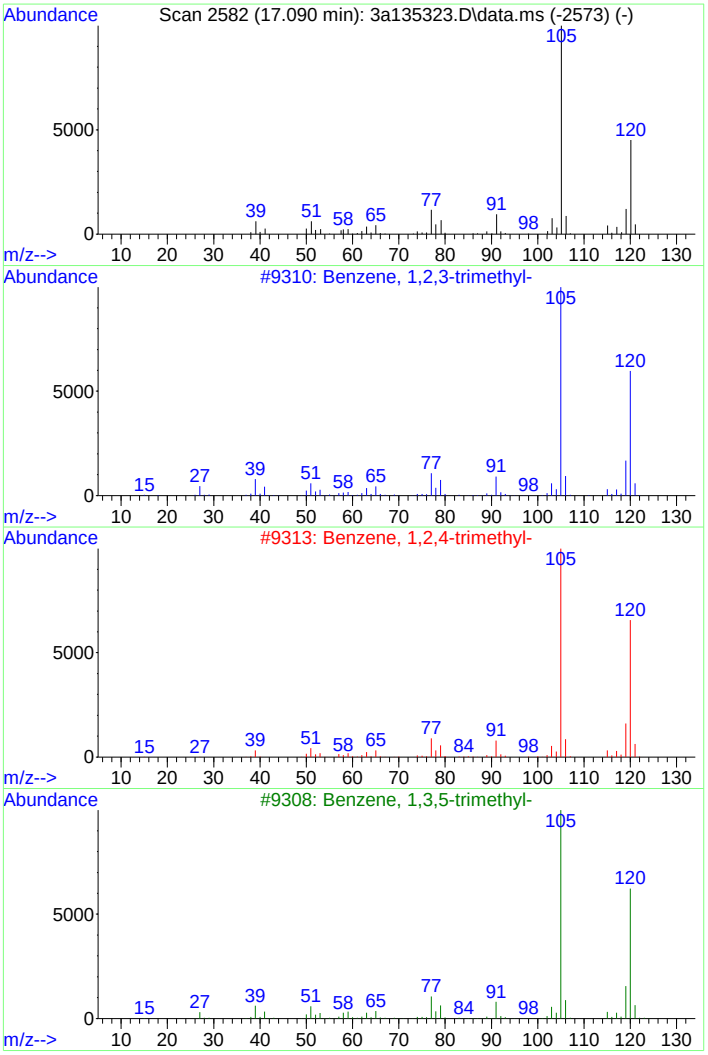
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

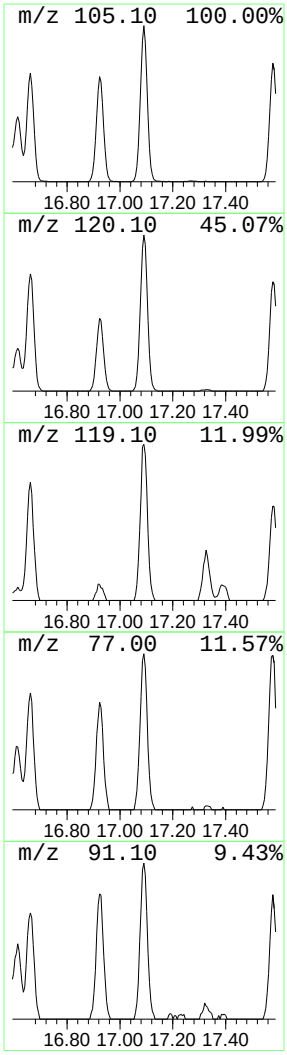
****

Peak Number 13 Benzene, 1,2,4-trimethyl- Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.090	21.98 ug/L	393243	1,4-dichlorobenzene-d4	17.573

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
4	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	94
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135323.D
Acq On : 5 Oct 2014 2:28 pm
Operator : JemimaM
Sample : jb77674-9
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

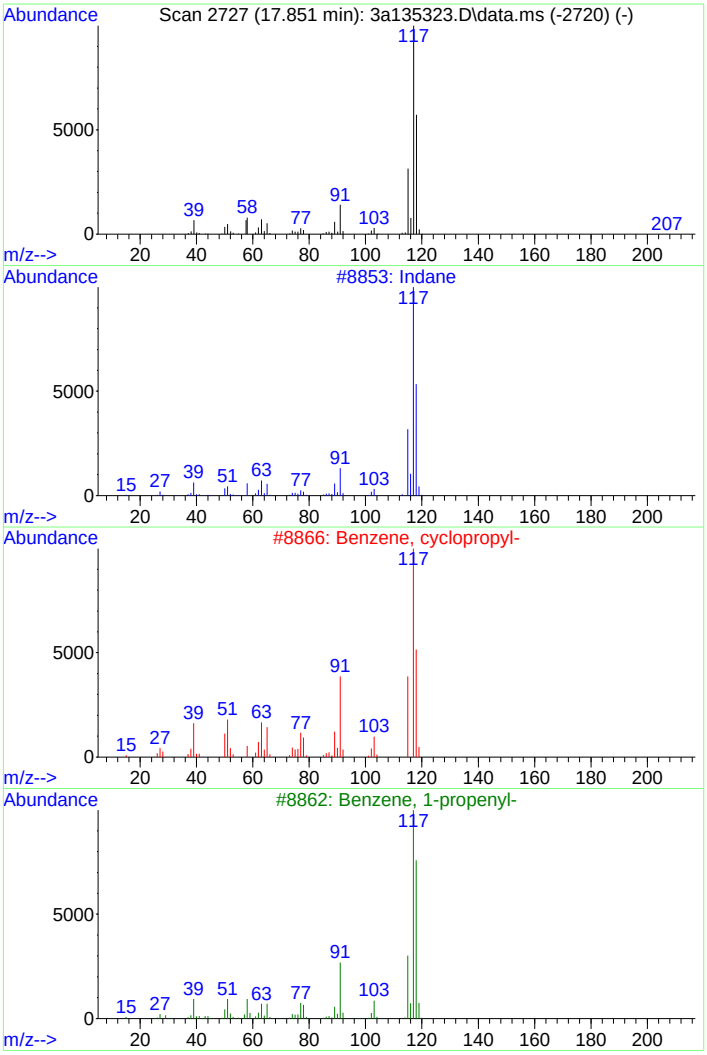
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

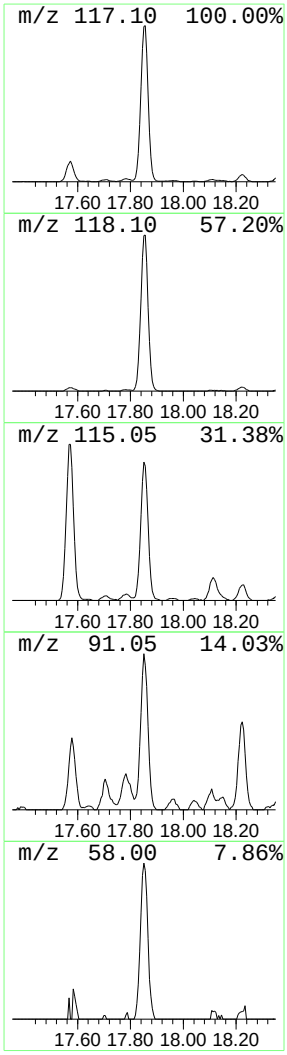
****

Peak Number 14 Indane Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.851	27.29 ug/L	488223	1,4-dichlorobenzene-d4	17.573

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indane	118	C9H10	000496-11-7	87
2	Benzene, cyclopropyl-	118	C9H10	000873-49-4	74
3	Benzene, 1-propenyl-	118	C9H10	000637-50-3	74
4	Benzene, cyclopropyl-	118	C9H10	000873-49-4	64
5	Tetracyclo[3.3.1.0(2,8).0(4,6)]-...	118	C9H10	1000191-13-7	64





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135323.D
Acq On : 5 Oct 2014 2:28 pm
Operator : JemimaM
Sample : jb77674-9
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

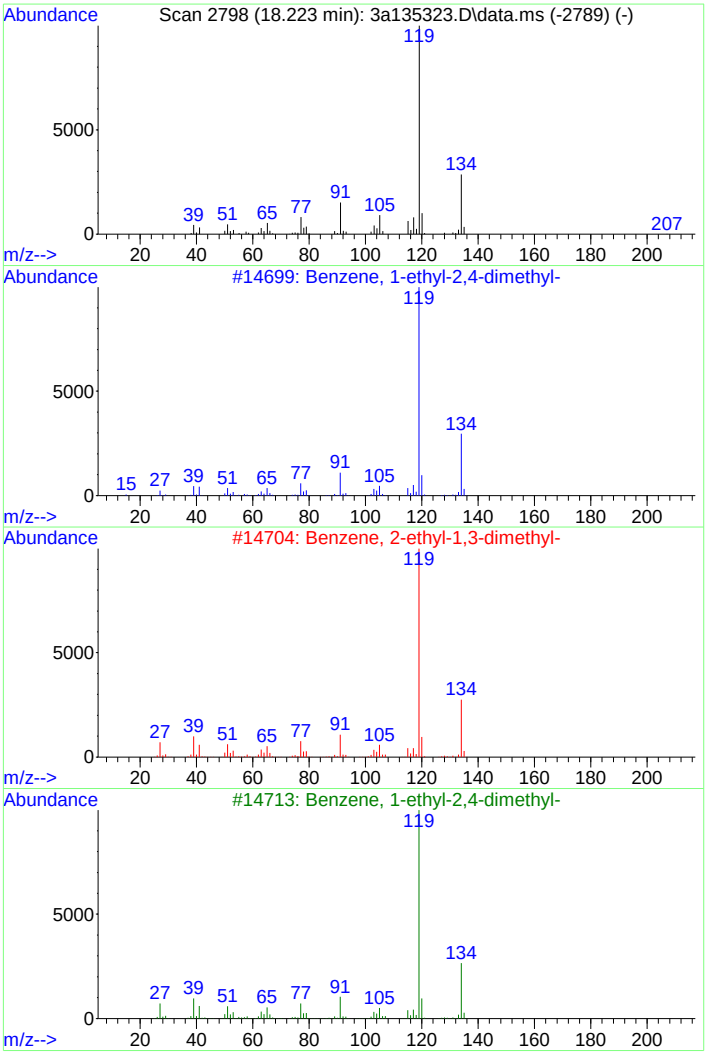
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

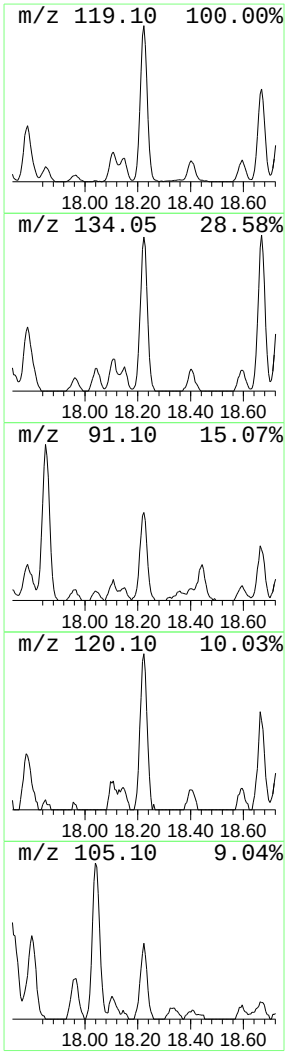
****

Peak Number 15 C4 alkyl benzene Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.223	12.67 ug/L	226589	1,4-dichlorobenzene-d4	17.573

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	97
2	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14	002870-04-4	95
3	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	95
4	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14	002870-04-4	95
5	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	95





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135323.D
Acq On : 5 Oct 2014 2:28 pm
Operator : JemimaM
Sample : jb77674-9
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
alkane	4.560	129.9	ug/L	1094490	2	10.767	421346	50.0
alkane	4.927	236.4	ug/L	1991920	2	10.767	421346	50.0
alkene	5.273	22.8	ug/L	191847	2	10.767	421346	50.0
alkane	6.064	249.2	ug/L	2100280	2	10.767	421346	50.0
alkane-Pentane	6.547	40.0	ug/L	337363	2	10.767	421346	50.0
alkene	6.825	17.8	ug/L	150158	2	10.767	421346	50.0
alkene	7.160	42.0	ug/L	353842	2	10.767	421346	50.0
alkene	8.219	35.0	ug/L	295256	2	10.767	421346	50.0
alkene	8.403	65.8	ug/L	554124	2	10.767	421346	50.0
alkene	9.991	37.3	ug/L	314533	2	10.767	421346	50.0
Benzene, 1,3,5-...	16.660	15.7	ug/L	280329	5	17.573	894487	50.0
C3 alkyl benzene	16.923	13.5	ug/L	241597	5	17.573	894487	50.0
Benzene, 1,2,4-...	17.090	22.0	ug/L	393243	5	17.573	894487	50.0
Indane	17.851	27.3	ug/L	488223	5	17.573	894487	50.0
C4 alkyl benzene	18.223	12.7	ug/L	226589	5	17.573	894487	50.0

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143609.d
Acq On : 30 Sep 2014 5:55 pm
Operator : DejanaS
Sample : jb77674-10
Misc : MS74584,V1A6195,W,,,,5
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Oct 01 11:20:51 2014
Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 27 17:10:31 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	8.507	65	93683	500.00	ug/L	# 0.00
5) pentafluorobenzene	10.939	168	258387	50.00	ug/L	0.00
49) 1,4-difluorobenzene	11.891	114	282379	50.00	ug/L	0.00
78) chlorobenzene-d5	15.218	117	295062	50.00	ug/L	0.00
92) 1,4-dichlorobenzene-d4	17.702	152	148037	50.00	ug/L	0.00
System Monitoring Compounds						
42) dibromofluoromethane (s)	10.971	113	99849	45.37	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 90.74%			
43) 1,2-dichloroethane-d4 (s)	11.421	65	107264	41.51	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 83.02%			
70) toluene-d8 (s)	13.612	98	423166	53.45	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 106.90%			
94) 4-bromofluorobenzene (s)	16.447	95	152532	47.78	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 95.56%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	8.633	59	2406	8.33	ug/L #	1
24) methyl tert butyl ether	8.921	73	10101	1.34	ug/L #	1
47) cyclohexane	11.112	84	94603	28.98	ug/L #	71
56) benzene	11.499	78	963870	111.43	ug/L	99
67) methylcyclohexane	12.472	83	72792	20.48	ug/L	98
72) toluene	13.685	92	2408919	432.77	ug/L	94
87) ethylbenzene	15.312	91	3285432	282.92	ug/L	96
88) m,p-xylene	15.427	106	3975448	865.06	ug/L	93
89) o-xylene	15.871	106	1729072	347.31	ug/L	92
93) isopropylbenzene	16.238	105	268787	23.71	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

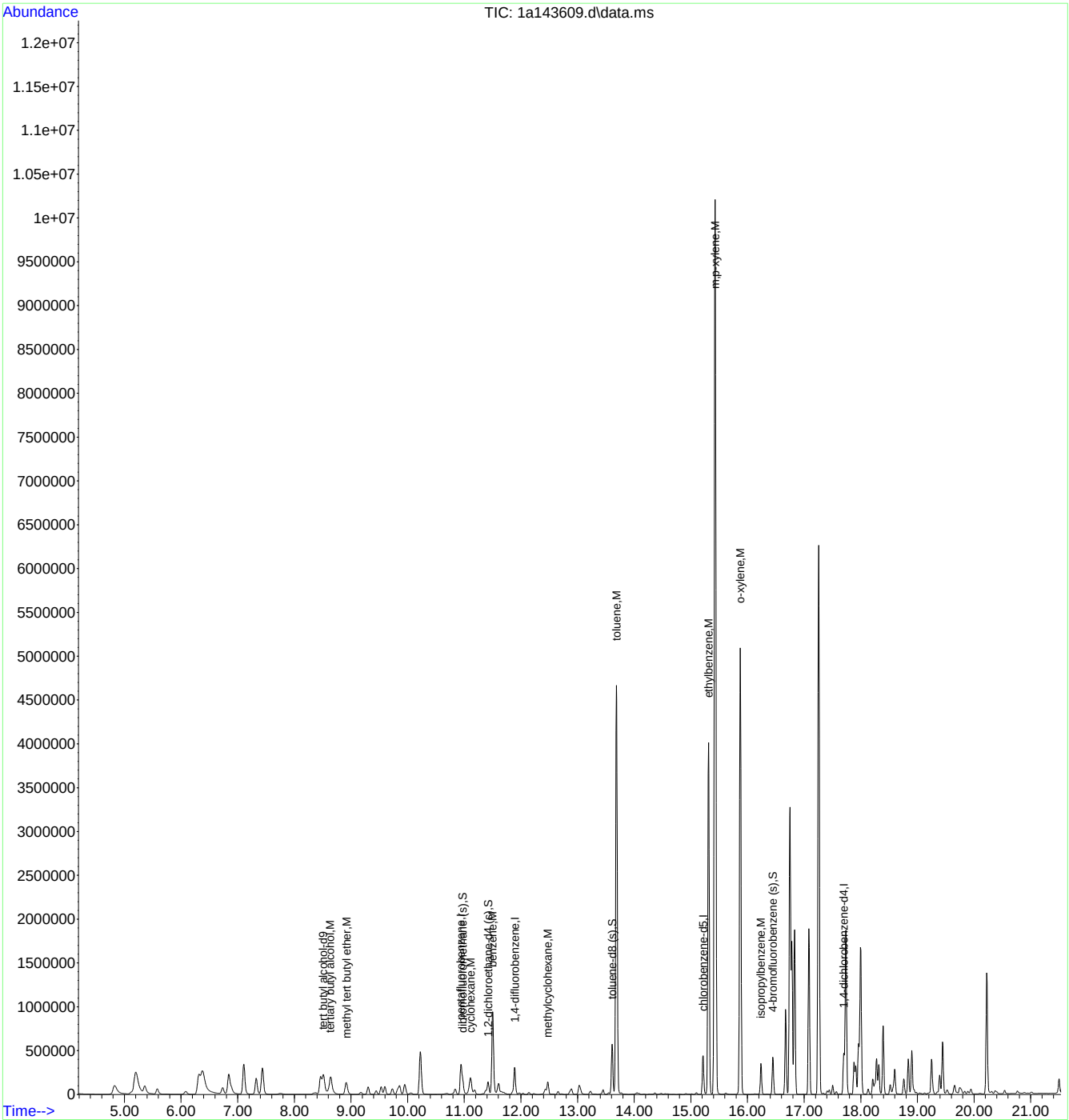
7.1.19

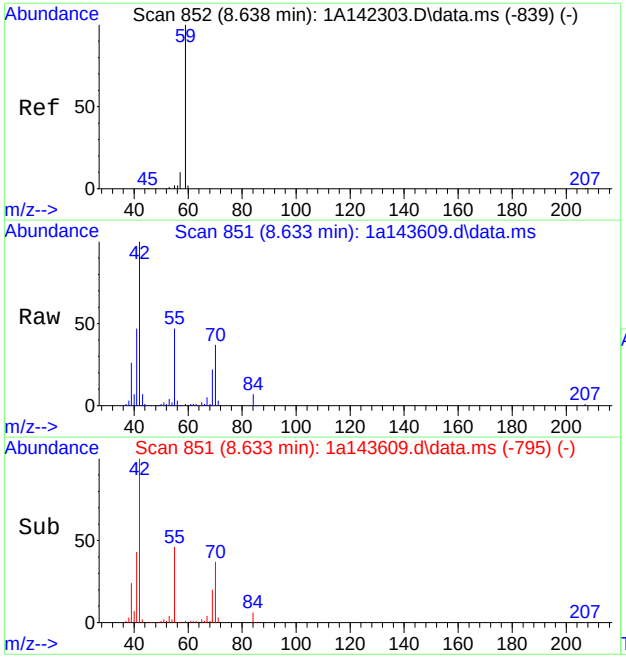
7

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143609.d
Acq On : 30 Sep 2014 5:55 pm
Operator : DejanaS
Sample : jb77674-10
Misc : MS74584,V1A6195,W,,,,5
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Oct 01 11:20:51 2014
Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 27 17:10:31 2014
Response via : Initial Calibration

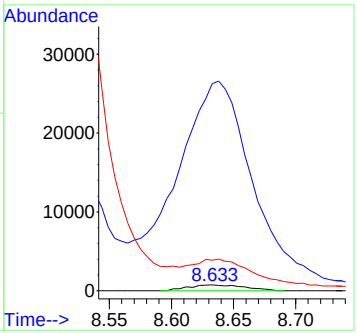


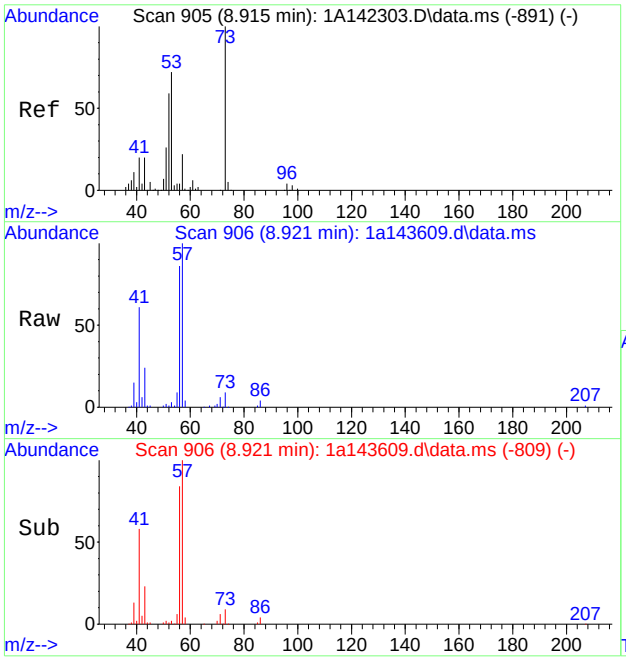


#2
tertiary butyl alcohol
Concen: 8.33 ug/L
RT: 8.633 min Scan# 851
Delta R.T. -0.005 min
Lab File: 1a143609.d
Acq: 30 Sep 2014 5:55 pm

Tgt Ion: 59 Resp: 2406

Ion	Ratio	Lower	Upper
59	100		
41	2765.3	0.0	54.0#
43	350.5	0.0	45.2#

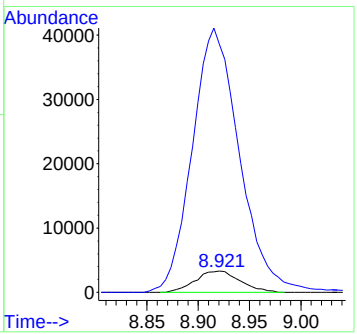


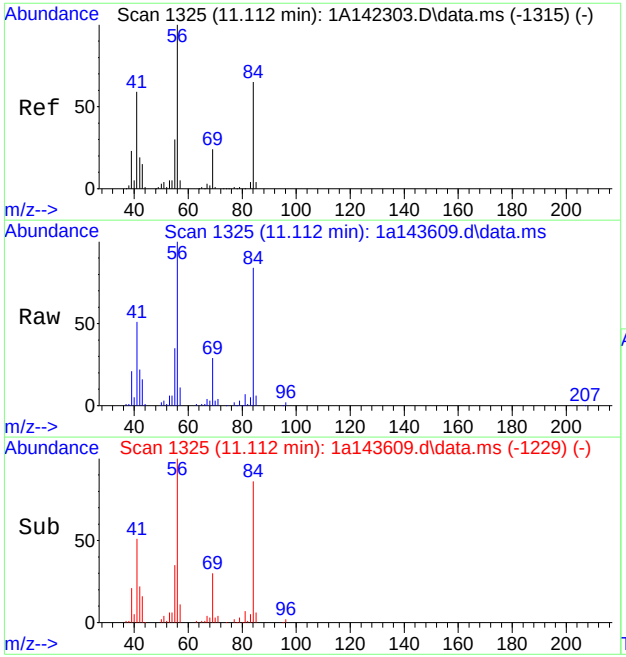


#24
methyl tert butyl ether
Concen: 1.34 ug/L
RT: 8.921 min Scan# 906
Delta R.T. 0.005 min
Lab File: 1a143609.d
Acq: 30 Sep 2014 5:55 pm

Tgt Ion: 73 Resp: 10101

Ion	Ratio	Lower	Upper
73	100		
57	1129.1	0.0	64.8#

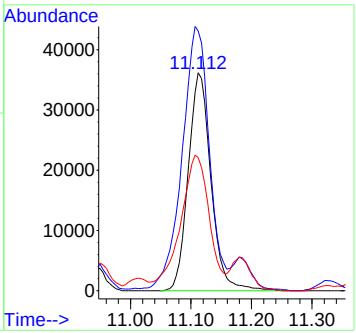


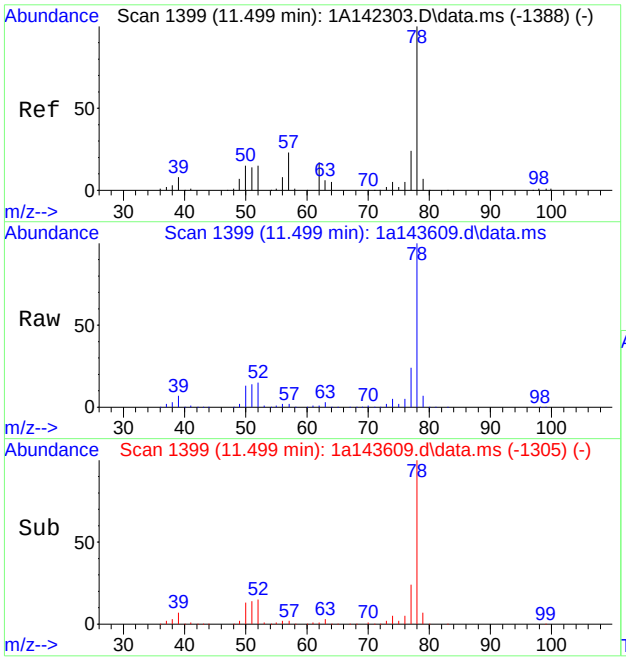


#47
cyclohexane
Concen: 28.98 ug/L
RT: 11.112 min Scan# 1325
Delta R.T. 0.000 min
Lab File: 1a143609.d
Acq: 30 Sep 2014 5:55 pm

Tgt Ion: 84 Resp: 94603

Ion	Ratio	Lower	Upper
84	100		
56	119.3	124.1	184.1#
41	61.1	61.0	121.0

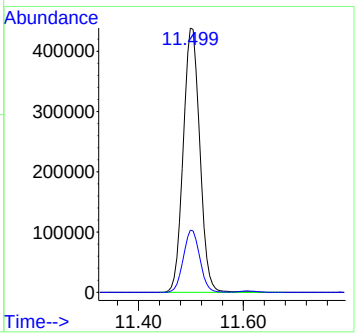


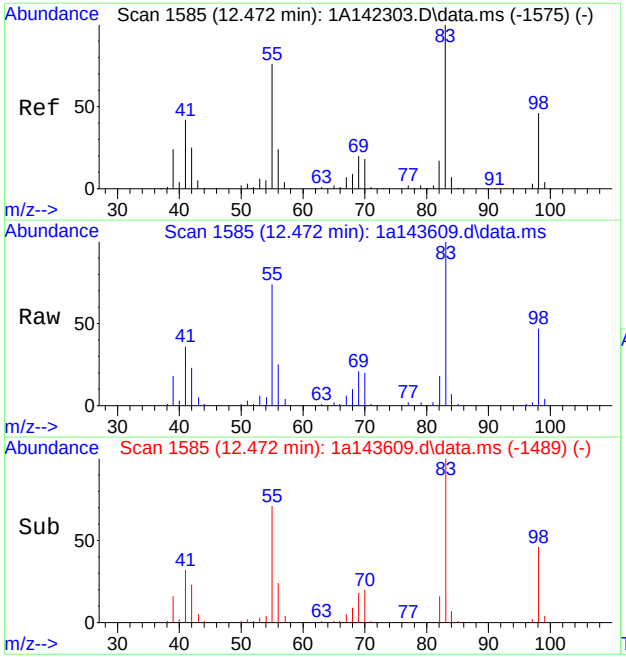


#56
benzene
Concen: 111.43 ug/L
RT: 11.499 min Scan# 1399
Delta R.T. 0.000 min
Lab File: 1a143609.d
Acq: 30 Sep 2014 5:55 pm

Tgt Ion: 78 Resp: 963870

Ion	Ratio	Lower	Upper
78	100		
77	23.6	0.0	53.9

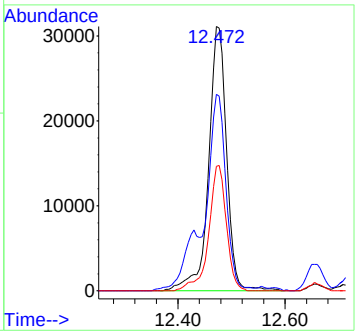


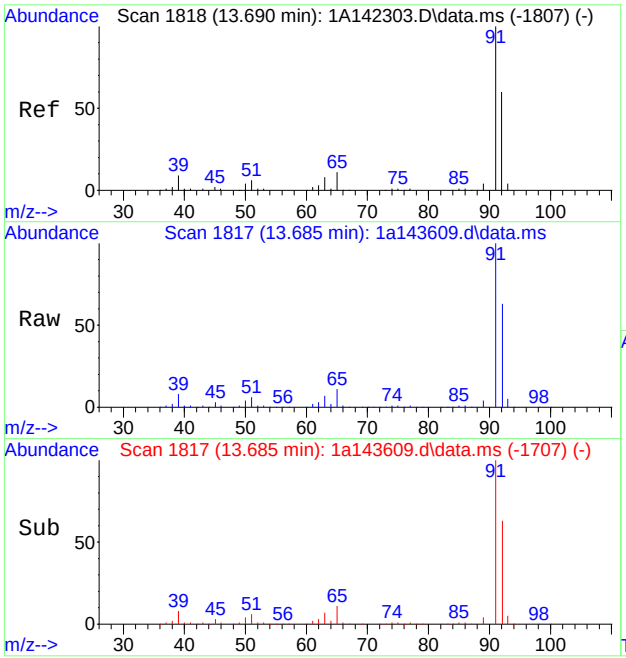


#67
methylcyclohexane
Concen: 20.48 ug/L
RT: 12.472 min Scan# 1585
Delta R.T. 0.000 min
Lab File: 1a143609.d
Acq: 30 Sep 2014 5:55 pm

Tgt Ion: 83 Resp: 72792

Ion	Ratio	Lower	Upper
83	100		
55	74.3	46.1	106.1
98	47.1	15.7	75.7

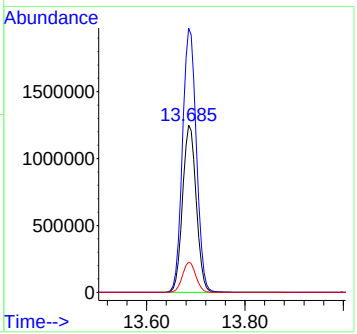


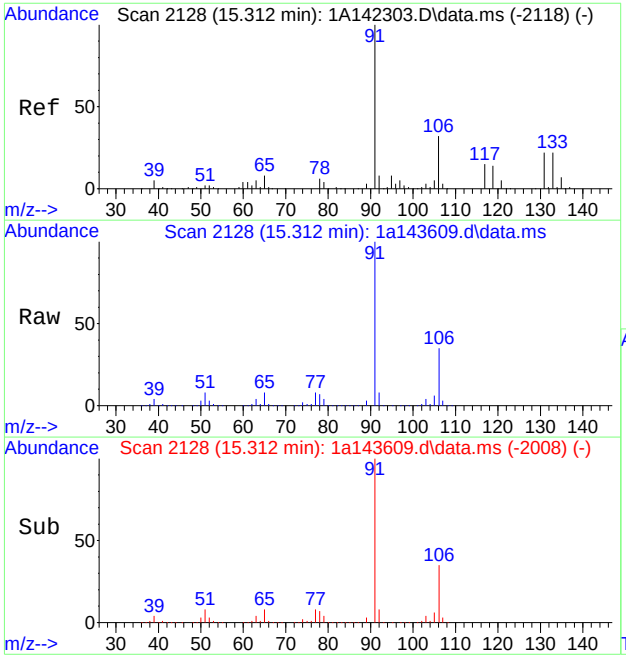


#72
toluene
Concen: 432.77 ug/L
RT: 13.685 min Scan# 1817
Delta R.T. -0.005 min
Lab File: 1a143609.d
Acq: 30 Sep 2014 5:55 pm

Tgt Ion: 92 Resp: 2408919

Ion	Ratio	Lower	Upper
92	100		
91	158.0	136.8	196.8
65	18.0	0.0	47.8

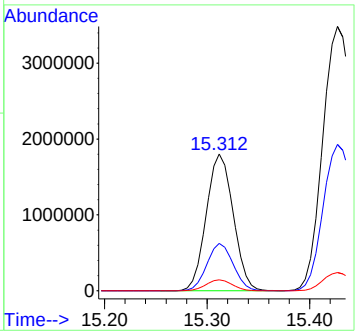


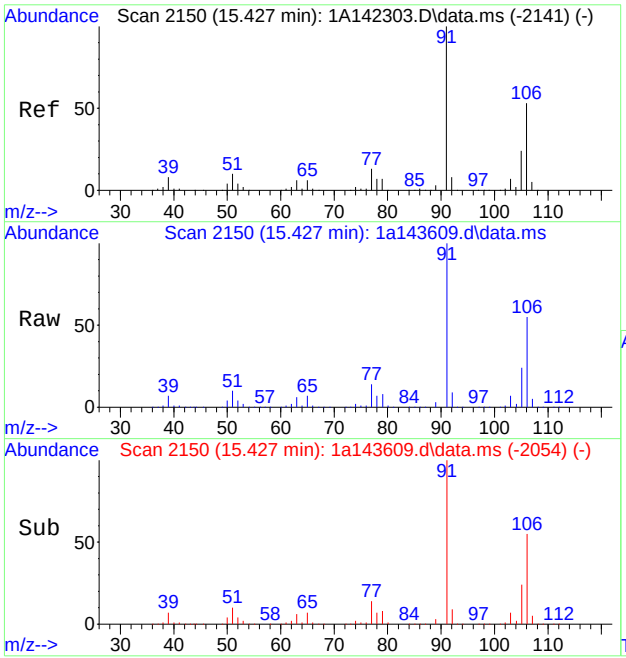


#87
ethylbenzene
Concen: 282.92 ug/L
RT: 15.312 min Scan# 2128
Delta R.T. 0.000 min
Lab File: 1a143609.d
Acq: 30 Sep 2014 5:55 pm

Tgt Ion: 91 Resp: 3285432

Ion	Ratio	Lower	Upper
91	100		
106	34.6	2.2	62.2
65	8.0	0.0	38.3

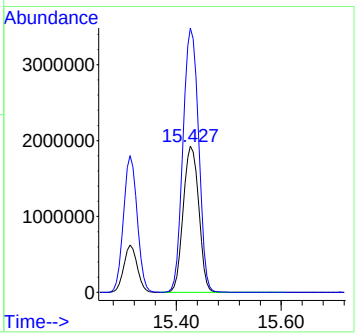


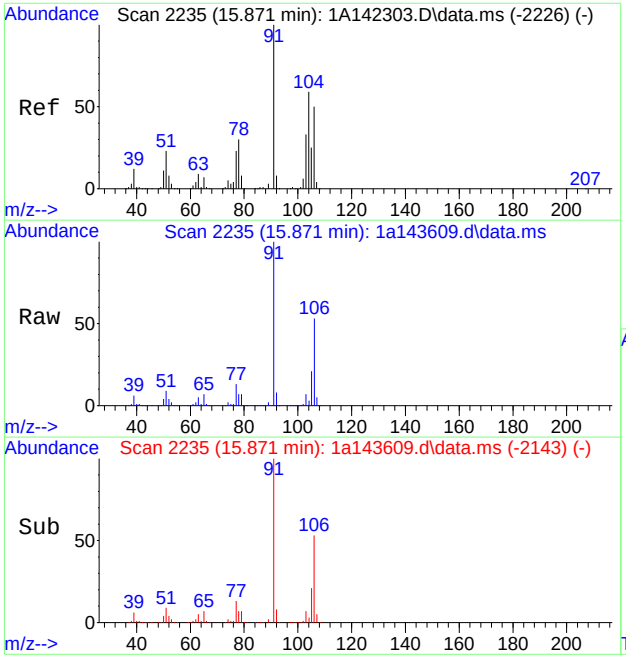


#88
m,p-xylene
Concen: 865.06 ug/L
RT: 15.427 min Scan# 2150
Delta R.T. 0.000 min
Lab File: 1a143609.d
Acq: 30 Sep 2014 5:55 pm

Tgt Ion:106 Resp: 3975448

Ion	Ratio	Lower	Upper
106	100		
91	180.7	160.3	220.3

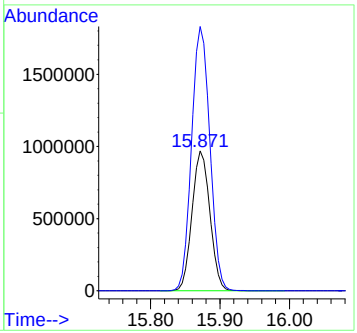


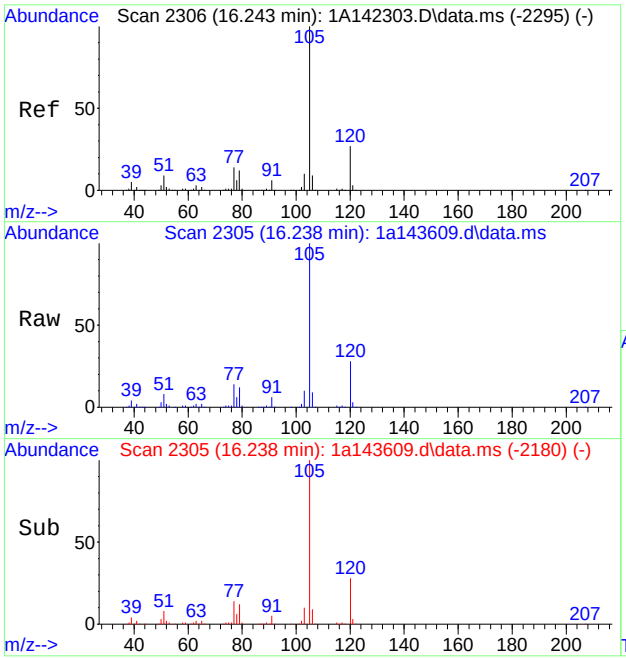


#89
o-xylene
Concen: 347.31 ug/L
RT: 15.871 min Scan# 2235
Delta R.T. 0.000 min
Lab File: 1a143609.d
Acq: 30 Sep 2014 5:55 pm

Tgt Ion:106 Resp: 1729072

Ion	Ratio	Lower	Upper
106	100		
91	189.2	171.1	231.1

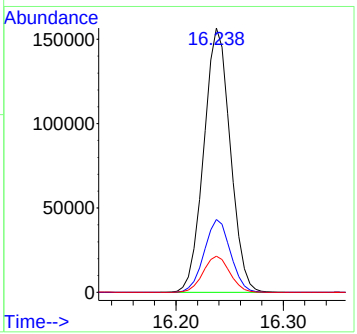




#93
isopropylbenzene
Concen: 23.71 ug/L
RT: 16.238 min Scan# 2305
Delta R.T. -0.005 min
Lab File: 1a143609.d
Acq: 30 Sep 2014 5:55 pm

Tgt Ion:105 Resp: 268787

Ion	Ratio	Lower	Upper
105	100		
120	27.6	0.0	57.1
77	13.7	0.0	44.2



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143609.d
Acq On : 30 Sep 2014 5:55 pm
Operator : DejanaS
Sample : jb77674-10
Misc : MS74584,V1A6195,W,,,,5
ALS Vial : 21 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 300 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.4 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

Signal : TIC: 1a143609.d\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.825	100	123	168	rBV	100436	602897	2.89%	0.500%
2	5.202	169	195	218	rVV2	251464	1499356	7.19%	1.243%
3	5.359	218	225	256	rVV	96832	384072	1.84%	0.318%
4	5.578	257	267	295	rVB	62715	190463	0.91%	0.158%
5	6.086	348	364	382	rVV2	33818	112972	0.54%	0.094%
6	6.316	386	408	413	rBV2	231306	796258	3.82%	0.660%
7	6.373	414	419	477	rVV	269173	1613349	7.73%	1.338%
8	6.734	477	488	498	rVV	77573	250142	1.20%	0.207%
9	6.844	498	509	547	rVV2	230268	955470	4.58%	0.792%
10	7.111	547	560	583	rVV	342888	962756	4.62%	0.798%
11	7.325	583	601	612	rVV2	185118	521632	2.50%	0.433%
12	7.435	612	622	655	rVB	302593	872997	4.18%	0.724%
13	7.754	664	683	709	rBV4	10770	57159	0.27%	0.047%
14	8.377	784	802	808	rBV4	19241	84377	0.40%	0.070%
15	8.465	808	819	823	rVV	206464	581012	2.79%	0.482%
16	8.513	823	828	840	rVV2	227706	723118	3.47%	0.600%
17	8.643	841	853	891	rVV4	200836	814083	3.90%	0.675%
18	8.915	891	905	932	rVB	136401	446658	2.14%	0.370%
19	9.172	942	954	967	rVB3	23377	67186	0.32%	0.056%
20	9.302	967	979	996	rVV	85109	213659	1.02%	0.177%
21	9.444	996	1006	1014	rVV	42603	100544	0.48%	0.083%
22	9.532	1014	1023	1029	rVV	87599	210969	1.01%	0.175%
23	9.595	1029	1035	1049	rVV	91194	221642	1.06%	0.184%
24	9.731	1049	1061	1071	rVV2	65708	166058	0.80%	0.138%
25	9.857	1071	1085	1094	rVV3	101709	366969	1.76%	0.304%
26	9.951	1094	1103	1115	rVV3	113445	315804	1.51%	0.262%
27	10.061	1115	1124	1143	rVV4	17665	51681	0.25%	0.043%
28	10.223	1143	1155	1171	rVV	487189	1260363	6.04%	1.045%
29	10.694	1224	1245	1255	rVB5	12041	48412	0.23%	0.040%
30	10.840	1255	1273	1283	rBV2	62667	170171	0.82%	0.141%
31	10.945	1283	1293	1310	rBV2	342509	1055200	5.06%	0.875%
32	11.107	1310	1324	1334	rBV3	181313	561228	2.69%	0.465%
33	11.180	1334	1338	1355	rVB	53865	117697	0.56%	0.098%
34	11.421	1368	1384	1391	rBV2	136907	371644	1.78%	0.308%
35	11.504	1391	1400	1411	rVV	923066	2043192	9.79%	1.694%
36	11.604	1411	1419	1426	rVV2	105008	238810	1.14%	0.198%
37	11.886	1459	1473	1483	rBV	306499	693702	3.33%	0.575%
38	11.970	1483	1489	1496	rVV5	16128	38504	0.18%	0.032%
39	12.142	1511	1522	1531	rBV3	23331	50940	0.24%	0.042%
40	12.430	1551	1577	1580	rBV4	59612	148951	0.71%	0.124%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143609.d
Acq On : 30 Sep 2014 5:55 pm
Operator : DejanaS
Sample : jb77674-10
Misc : MS74584,V1A6195,W,,,,5
ALS Vial : 21 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 300 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.4 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

41	12.472	1580	1585	1595	rVV	138983	297995	1.43%	0.247%
42	12.655	1612	1620	1628	rBV2	34520	70408	0.34%	0.058%
43	12.890	1650	1665	1676	rBV4	64584	189486	0.91%	0.157%
44	13.031	1680	1692	1708	rBV3	102603	299656	1.44%	0.248%
45	13.225	1716	1729	1744	rBV2	37164	95875	0.46%	0.080%
46	13.450	1754	1772	1780	rVB3	54539	119609	0.57%	0.099%
47	13.549	1781	1791	1795	rBV2	19223	38549	0.18%	0.032%
48	13.612	1795	1803	1809	rVV	569569	1077689	5.17%	0.894%
49	13.685	1809	1817	1830	rVV	4659752	8973787	43.02%	7.441%
50	14.046	1876	1886	1891	rBV2	16945	41965	0.20%	0.035%
51	14.365	1941	1947	1956	rVV3	17767	37136	0.18%	0.031%
52	15.097	2078	2087	2097	rBV2	20567	41248	0.20%	0.034%
53	15.218	2097	2110	2119	rBV	441030	826935	3.96%	0.686%
54	15.312	2119	2128	2139	rVV	4012226	7243966	34.73%	6.007%
55	15.427	2139	2150	2172	rVB	10209530	20860541	100.00%	17.298%
56	15.615	2180	2186	2200	rVB2	15645	34879	0.17%	0.029%
57	15.871	2222	2235	2258	rVB	5094443	9218104	44.19%	7.644%
58	16.238	2297	2305	2320	rVB	353655	611260	2.93%	0.507%
59	16.447	2336	2345	2359	rBV	426150	739212	3.54%	0.613%
60	16.672	2379	2388	2395	rBV	971516	1646305	7.89%	1.365%
61	16.750	2395	2403	2407	rVV	3273600	6101041	29.25%	5.059%
62	16.782	2407	2409	2414	rVV	1745439	2372422	11.37%	1.967%
63	16.829	2414	2418	2433	rVB	1878899	3188022	15.28%	2.644%
64	17.085	2458	2467	2484	rVB	1891115	3289706	15.77%	2.728%
65	17.258	2484	2500	2511	rBV	6265756	11209947	53.74%	9.296%
66	17.409	2522	2529	2532	rBV2	38374	70563	0.34%	0.059%
67	17.446	2532	2536	2541	rVB	46967	71634	0.34%	0.059%
68	17.503	2541	2547	2554	rVB	103788	167722	0.80%	0.139%
69	17.571	2554	2560	2567	rVB	29873	47518	0.23%	0.039%
70	17.733	2575	2591	2603	rBV2	1870985	4158630	19.94%	3.449%
71	17.880	2612	2619	2622	rBV	368390	628088	3.01%	0.521%
72	17.911	2622	2625	2629	rVV	323412	489950	2.35%	0.406%
73	17.995	2629	2641	2658	rVB3	1676200	4214878	20.21%	3.495%
74	18.131	2658	2667	2675	rVB	60066	104717	0.50%	0.087%
75	18.209	2675	2682	2686	rBV	173286	310382	1.49%	0.257%
76	18.277	2686	2695	2699	rVV2	405460	874630	4.19%	0.725%
77	18.319	2699	2703	2710	rVV	336031	543062	2.60%	0.450%
78	18.392	2710	2717	2733	rVB	781846	1364237	6.54%	1.131%
79	18.518	2733	2741	2747	rBV	110327	210409	1.01%	0.174%
80	18.596	2747	2756	2765	rVB2	281643	595513	2.85%	0.494%
81	18.759	2776	2787	2795	rBV	176726	320248	1.54%	0.266%
82	18.837	2795	2802	2808	rVV	400490	686563	3.29%	0.569%
83	18.900	2808	2814	2826	rVV	496852	919870	4.41%	0.763%
84	19.250	2863	2881	2893	rVV	398532	791256	3.79%	0.656%
85	19.350	2893	2900	2902	rVV3	24322	40774	0.20%	0.034%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143609.d
Acq On : 30 Sep 2014 5:55 pm
Operator : DejanaS
Sample : jb77674-10
Misc : MS74584,V1A6195,W,,,,5
ALS Vial : 21 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 300 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.4 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

86	19.391	2902	2908	2913	rVV	216580	397182	1.90%	0.329%
87	19.444	2913	2918	2926	rVV	595606	1038867	4.98%	0.861%
88	19.522	2926	2933	2947	rVB	47252	113776	0.55%	0.094%
89	19.658	2949	2959	2970	rBV5	100270	258516	1.24%	0.214%
90	19.747	2970	2976	2987	rVV4	76331	227814	1.09%	0.189%
91	19.836	2987	2993	2998	rVV	31407	56058	0.27%	0.046%
92	19.888	2998	3003	3008	rVV2	30309	56513	0.27%	0.047%
93	19.946	3008	3014	3027	rVB	56103	113691	0.55%	0.094%
94	20.223	3055	3067	3079	rBV	1381339	2503963	12.00%	2.076%
95	20.307	3079	3083	3090	rVV3	26535	57660	0.28%	0.048%
96	20.375	3090	3096	3110	rVB2	35244	104572	0.50%	0.087%
97	20.542	3120	3128	3136	rBV	39041	71906	0.34%	0.060%
98	20.762	3164	3170	3185	rVV	30633	74327	0.36%	0.062%
99	21.013	3213	3218	3231	rVB	17079	34070	0.16%	0.028%
100	21.499	3299	3311	3313	rBV	163677	264881	1.27%	0.220%

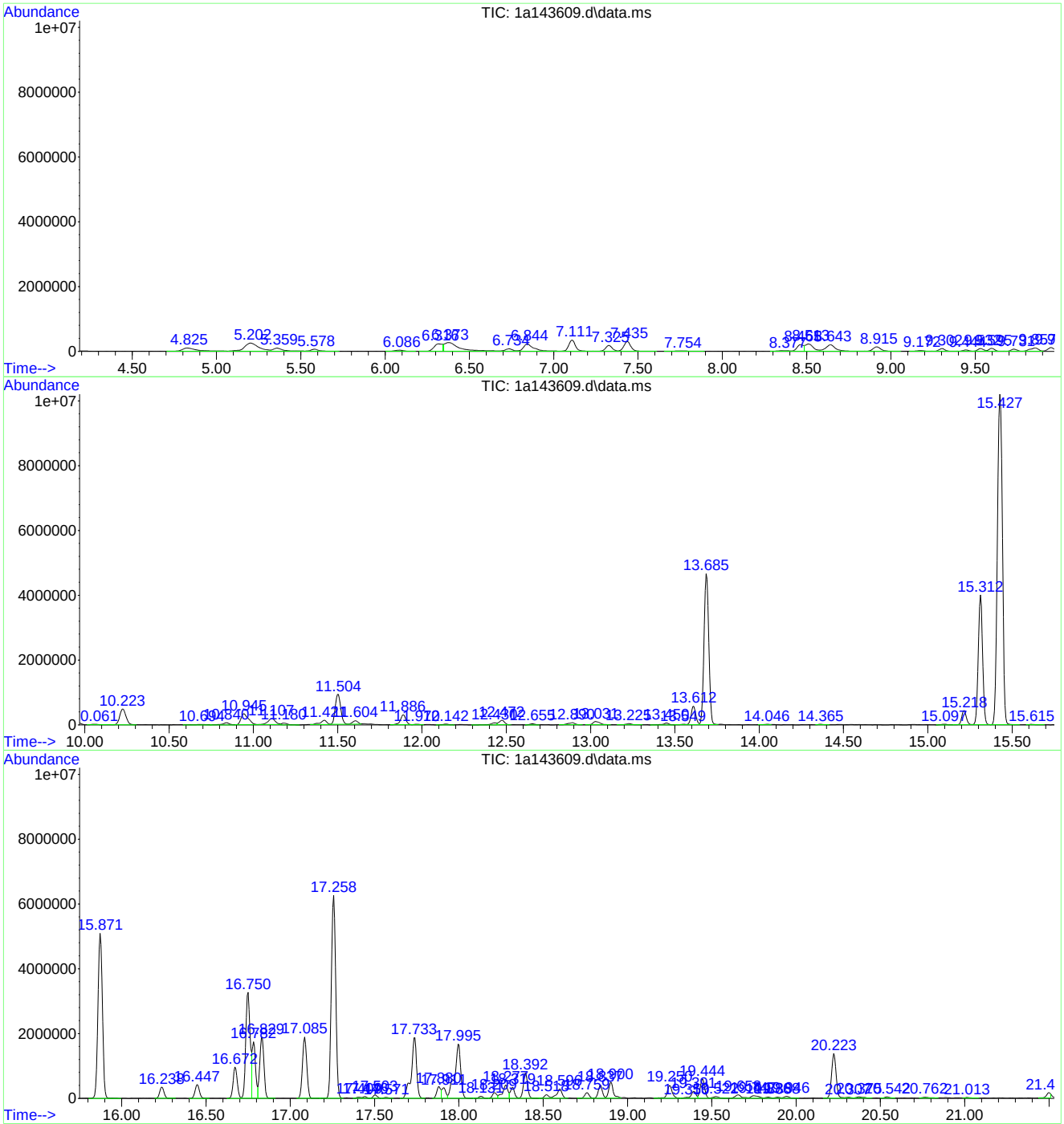
Sum of corrected areas: 120592280

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143609.d
Acq On : 30 Sep 2014 5:55 pm
Operator : DejanaS
Sample : jb77674-10
Misc : MS74584,V1A6195,W,,,,5
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143609.d
Acq On : 30 Sep 2014 5:55 pm
Operator : DejanaS
Sample : jb77674-10
Misc : MS74584,V1A6195,W,,,,5
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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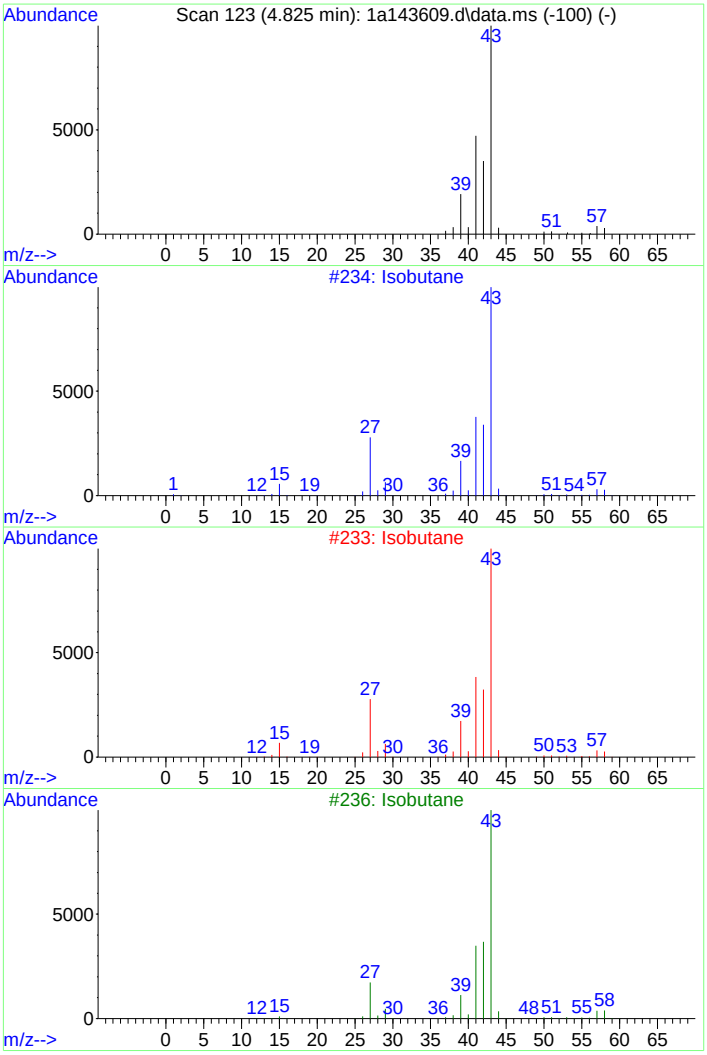
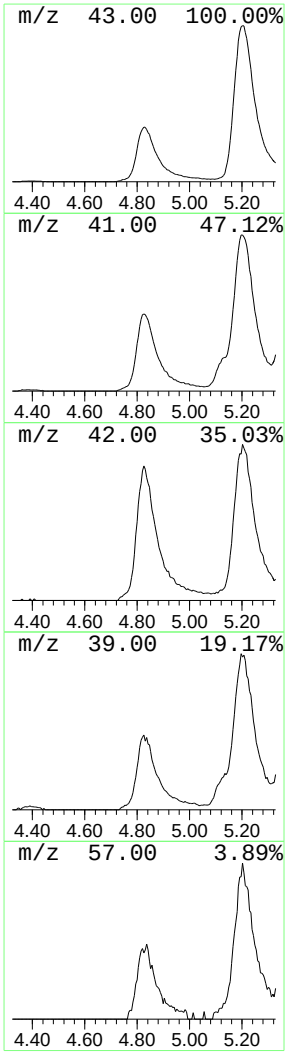
Peak Number 1 alkane Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.825	28.57 ug/L	602897	pentafluorobenzene	10.939

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Isobutane	58	C4H10	000075-28-5	86
2	Isobutane	58	C4H10	000075-28-5	86
3	Isobutane	58	C4H10	000075-28-5	64
4	Isobutane	58	C4H10	000075-28-5	64
5	Isopropylsulfonyl chloride	142	C3H7ClO2S	010147-37-2	9





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Acq On : 30 Sep 2014 5:55 pm
Operator : DejanaS
Sample : jb77674-10
Misc : MS74584,V1A6195,W,,,,5
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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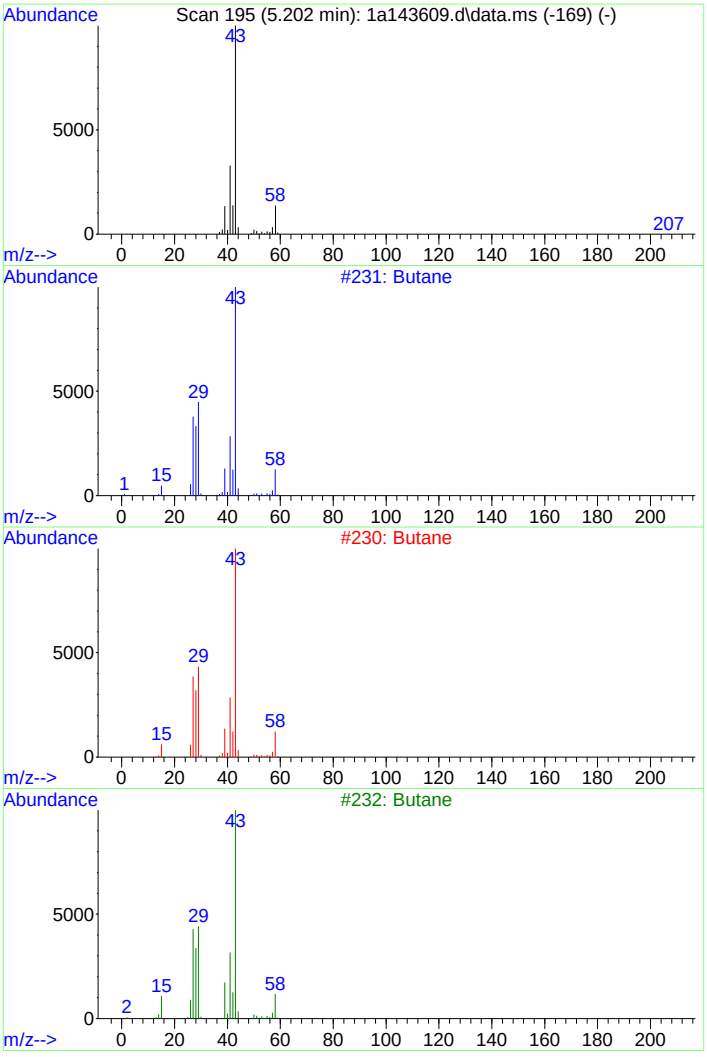
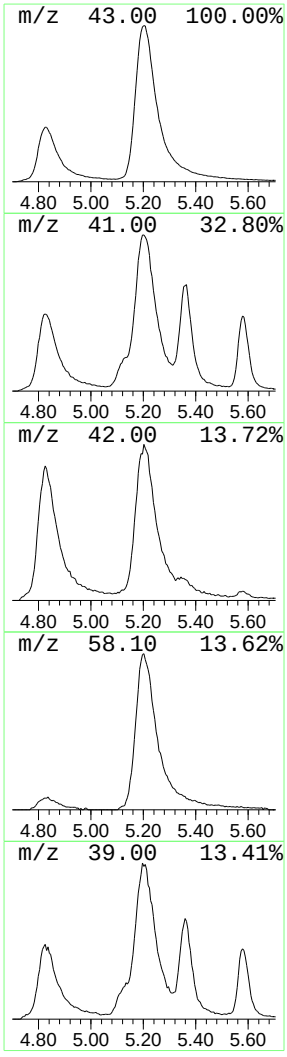
Peak Number 2 alkane Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.202	71.05 ug/L	1499360	pentafluorobenzene	10.939

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	72
2	Butane	58	C4H10	000106-97-8	72
3	Butane	58	C4H10	000106-97-8	52
4	Isopropylsulfonyl chloride	142	C3H7ClO2S	010147-37-2	9
5	Isobutane	58	C4H10	000075-28-5	9





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Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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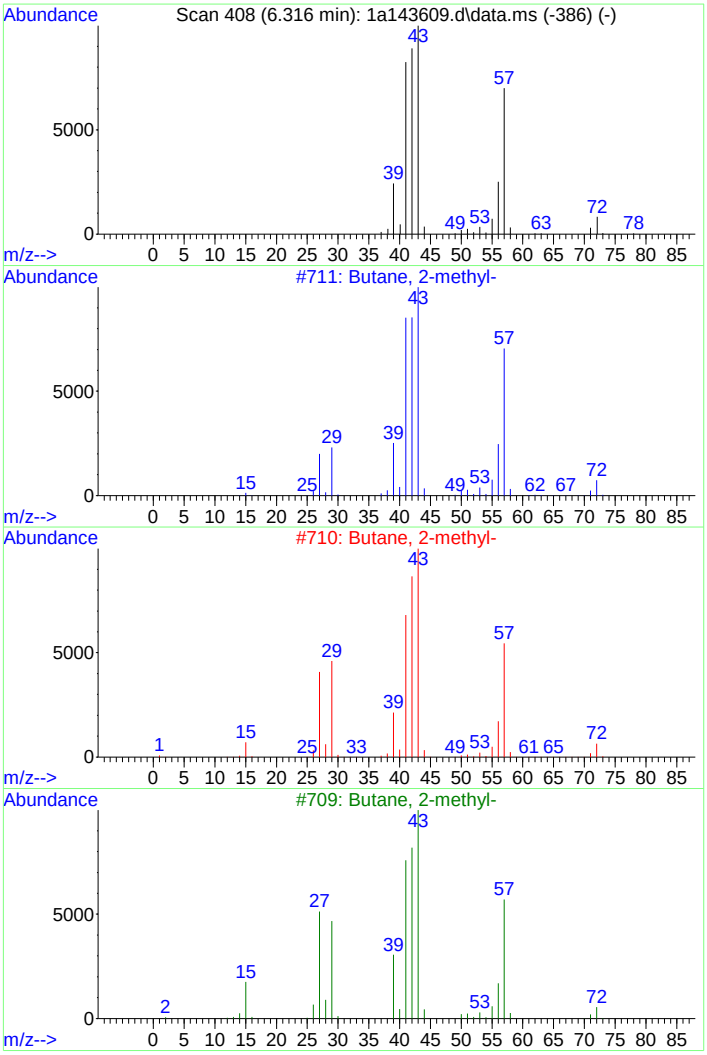
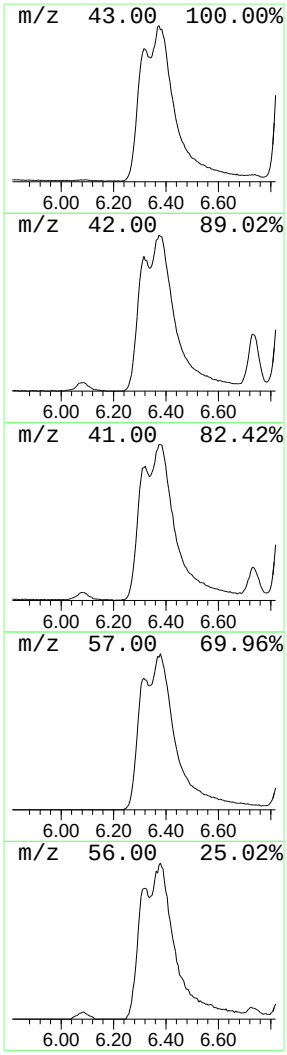
Peak Number 3 alkane Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.316	37.73 ug/L	796258	pentafluorobenzene	10.939

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	94
2	Butane, 2-methyl-	72	C5H12	000078-78-4	91
3	Butane, 2-methyl-	72	C5H12	000078-78-4	86
4	3-Buten-1-ol	72	C4H8O	000627-27-0	47
5	Pentane	72	C5H12	000109-66-0	39





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ALS Vial : 21 Sample Multiplier: 1

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Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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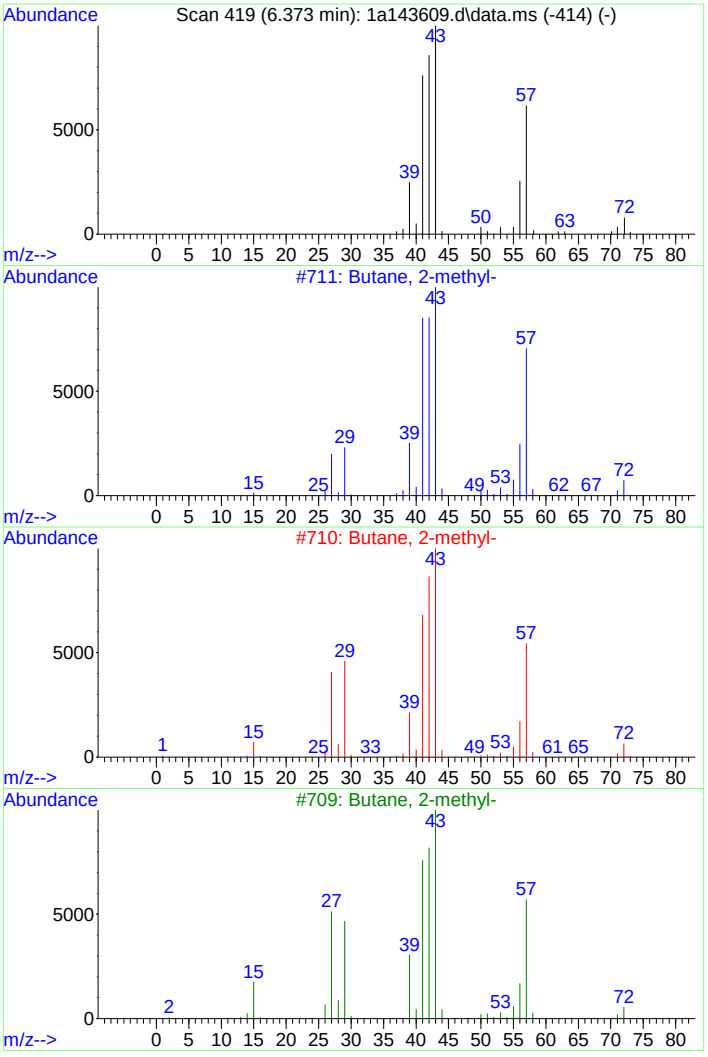
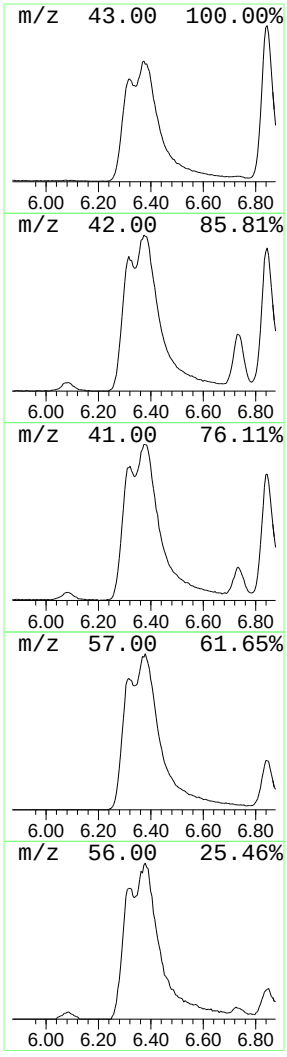
Peak Number 4 alkane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.373	76.45 ug/L	1613350	pentafluorobenzene	10.939

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	87
2	Butane, 2-methyl-	72	C5H12	000078-78-4	72
3	Butane, 2-methyl-	72	C5H12	000078-78-4	64
4	3-Buten-1-ol	72	C4H8O	000627-27-0	47
5	Pentane	72	C5H12	000109-66-0	40





ACCUTEST LABORATORIES JB77674

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ALS Vial : 21 Sample Multiplier: 1

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Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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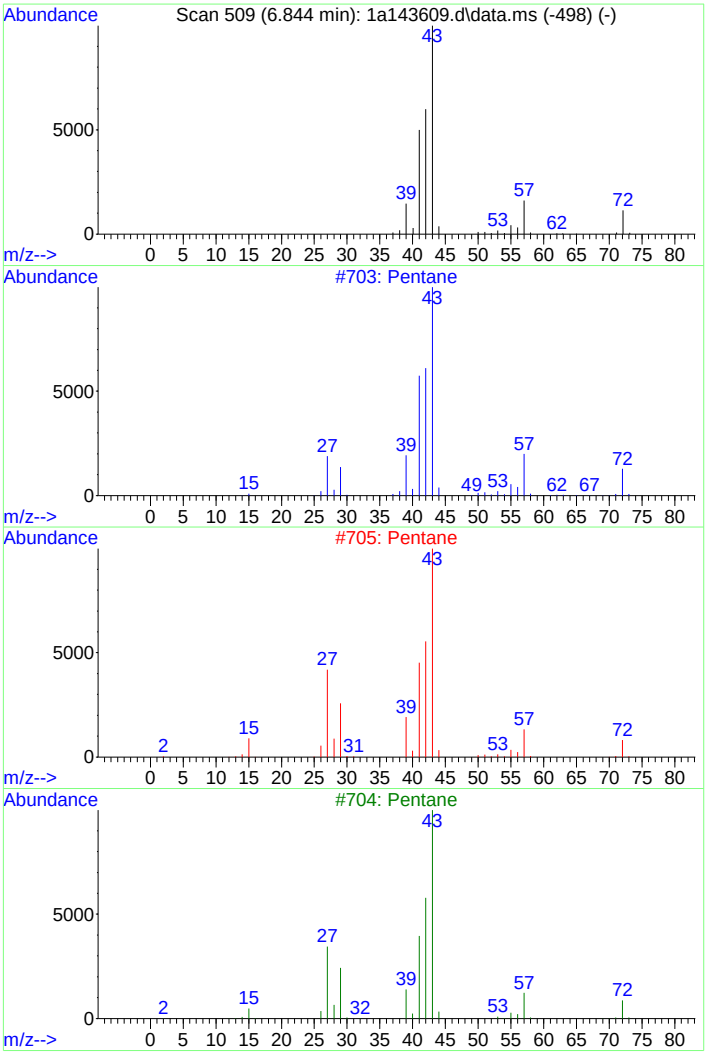
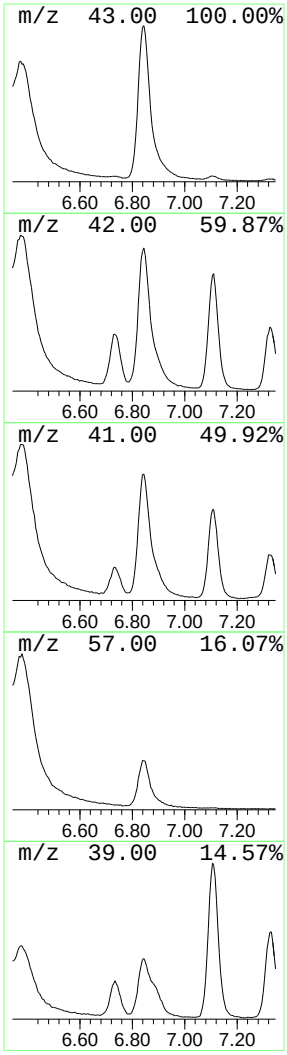
Peak Number 5 alkane-Pentane Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.844	45.27 ug/L	955470	pentafluorobenzene	10.939

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	91
2	Pentane	72	C5H12	000109-66-0	90
3	Pentane	72	C5H12	000109-66-0	90
4	Pentane	72	C5H12	000109-66-0	86
5	Butane, 2-methyl-	72	C5H12	000078-78-4	50





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TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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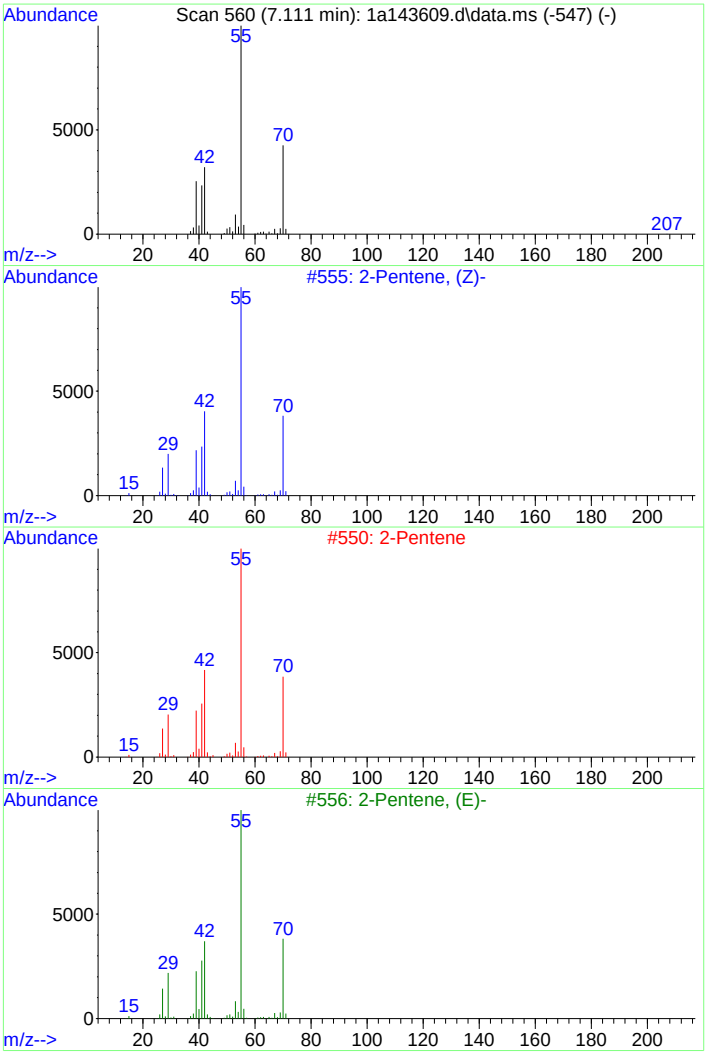
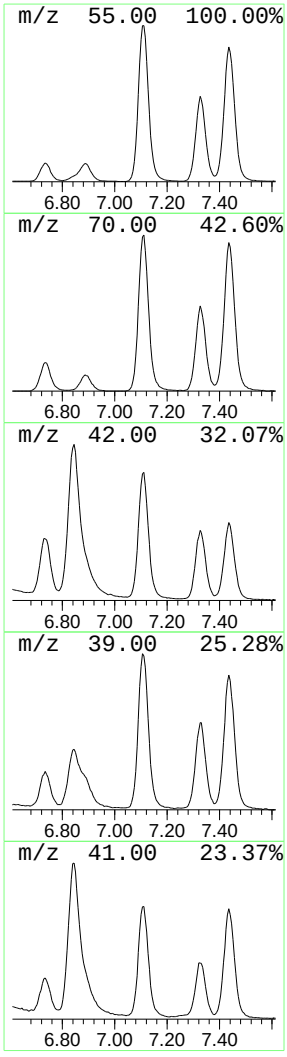
Peak Number 6 alkene Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.111	45.62 ug/L	962756	pentafluorobenzene	10.939

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentene, (Z)-	70	C5H10	000627-20-3	91
2	2-Pentene	70	C5H10	000109-68-2	91
3	2-Pentene, (E)-	70	C5H10	000646-04-8	91
4	2-Pentene, (Z)-	70	C5H10	000627-20-3	91
5	2-Methyl-1-butene	70	C5H10	000563-46-2	91





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ALS Vial : 21 Sample Multiplier: 1

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Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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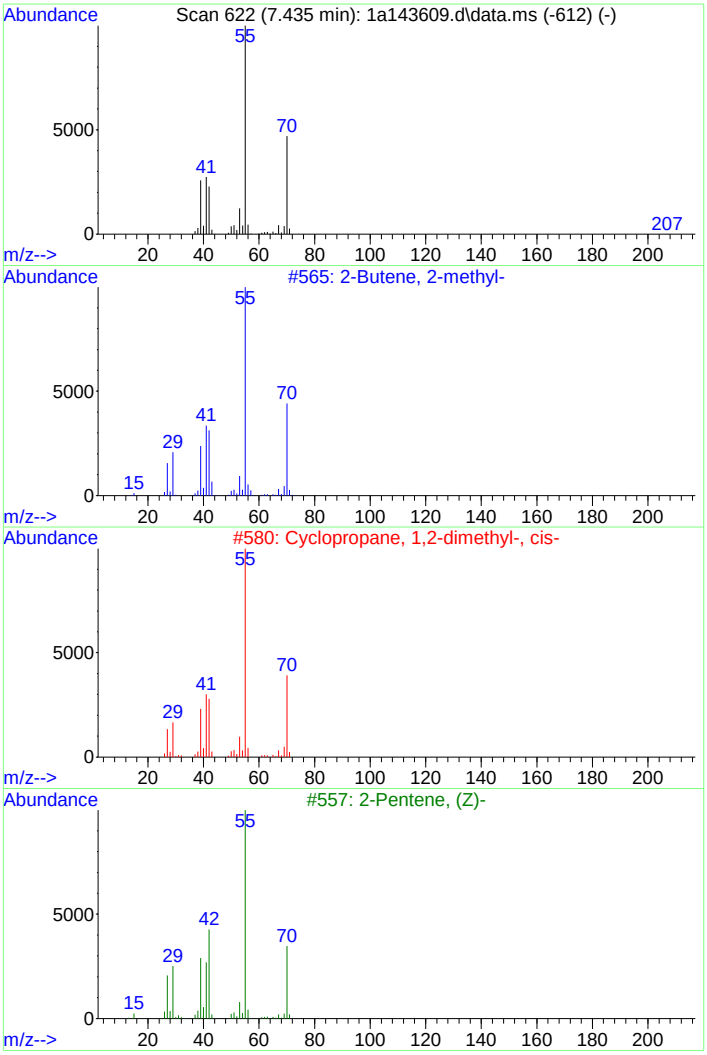
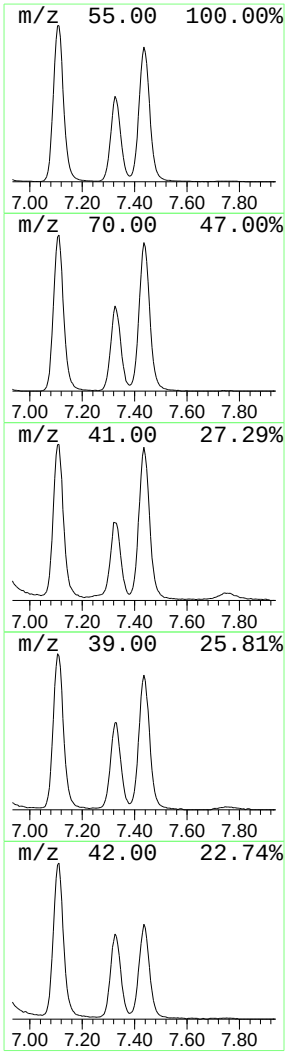
Peak Number 7 alkene Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.435	41.37 ug/L	872997	pentafluorobenzene	10.939

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Butene, 2-methyl-	70	C5H10	000513-35-9	91
2	Cyclopropane, 1,2-dimethyl-, cis-	70	C5H10	000930-18-7	87
3	2-Pentene, (Z)-	70	C5H10	000627-20-3	78
4	Cyclopropane, 1,2-dimethyl-, trans-	70	C5H10	002402-06-4	74
5	2-Pentene	70	C5H10	000109-68-2	74





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ALS Vial : 21 Sample Multiplier: 1

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Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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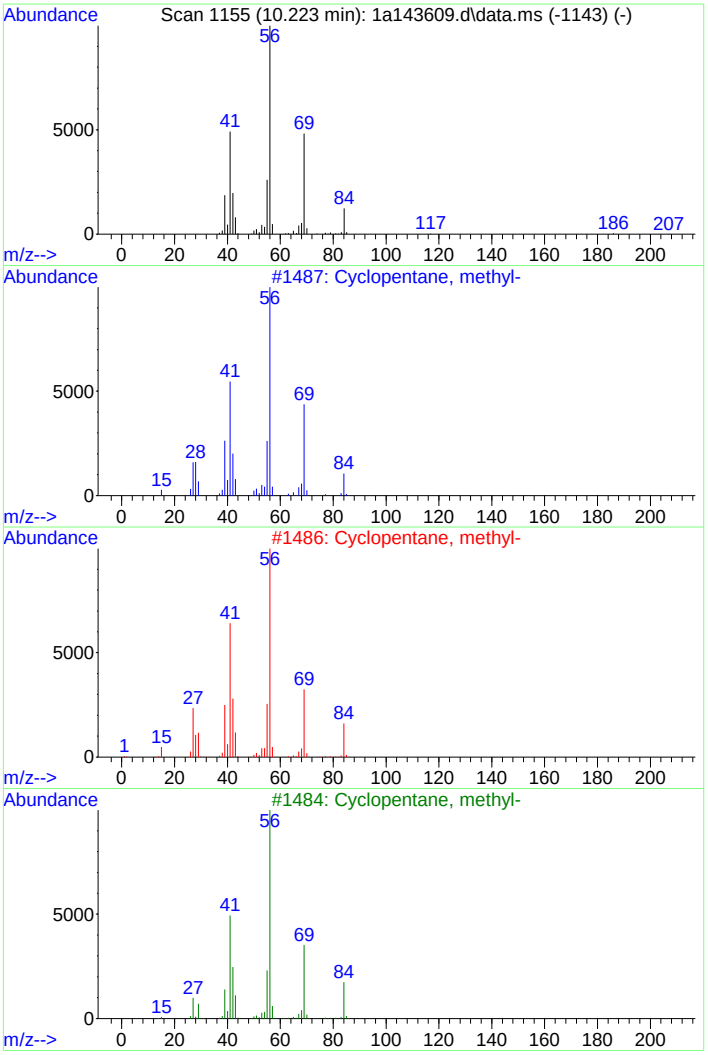
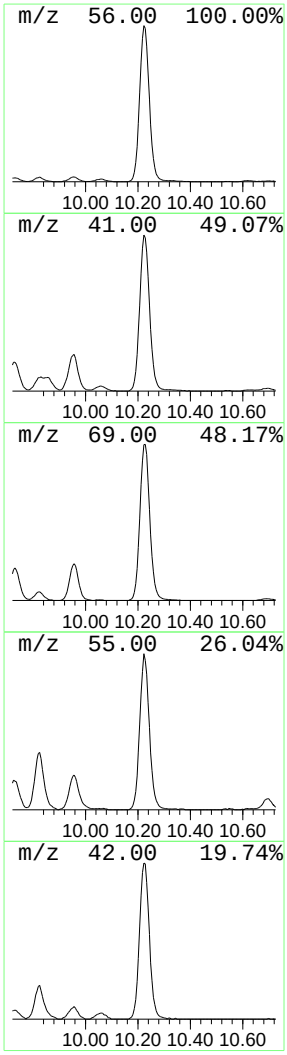
Peak Number 8 alkene Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.223	59.72 ug/L	1260360	pentafluorobenzene	10.939

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	94
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	87
3	Cyclopentane, methyl-	84	C6H12	000096-37-7	86
4	1H-Tetrazole, 5-methyl-	84	C2H4N4	004076-36-2	80
5	Cyclobutane, ethyl-	84	C6H12	004806-61-5	64





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ALS Vial : 21 Sample Multiplier: 1

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Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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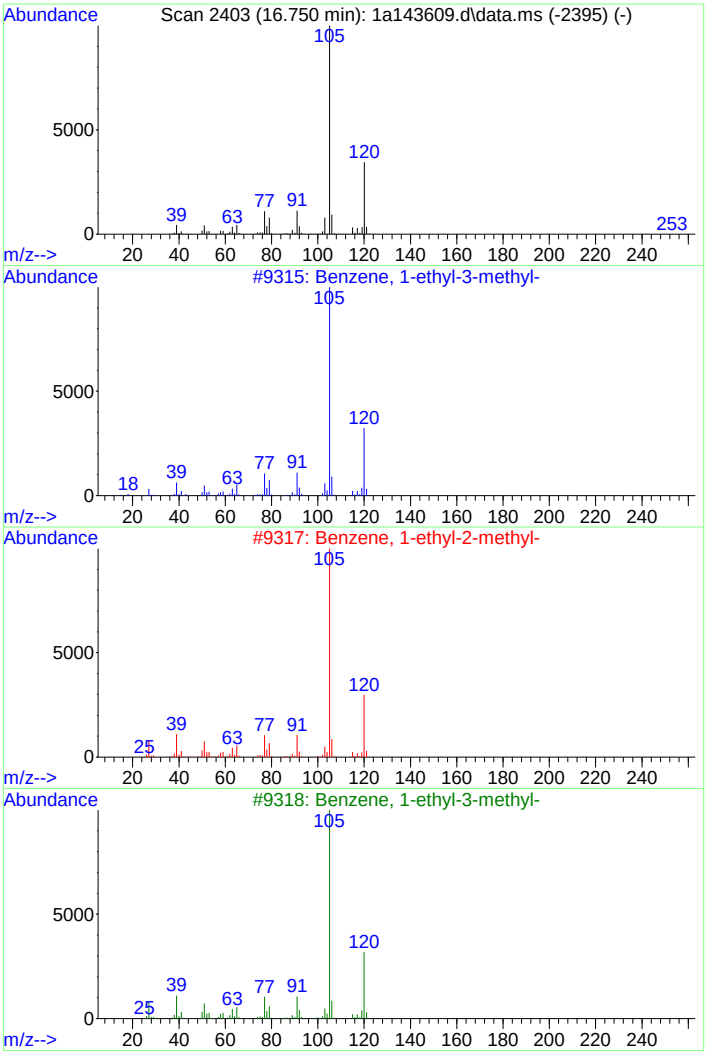
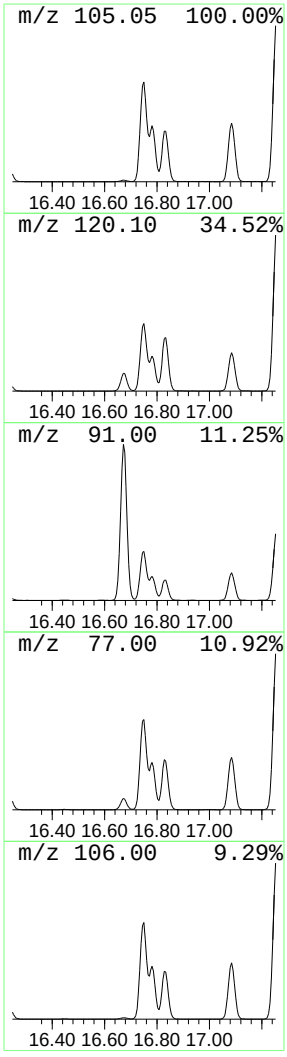
Peak Number 9 C3 alkyl benzene Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.750	73.35 ug/L	6101040	1,4-dichlorobenzene-d4	17.702

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	94
4	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
5	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	91





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Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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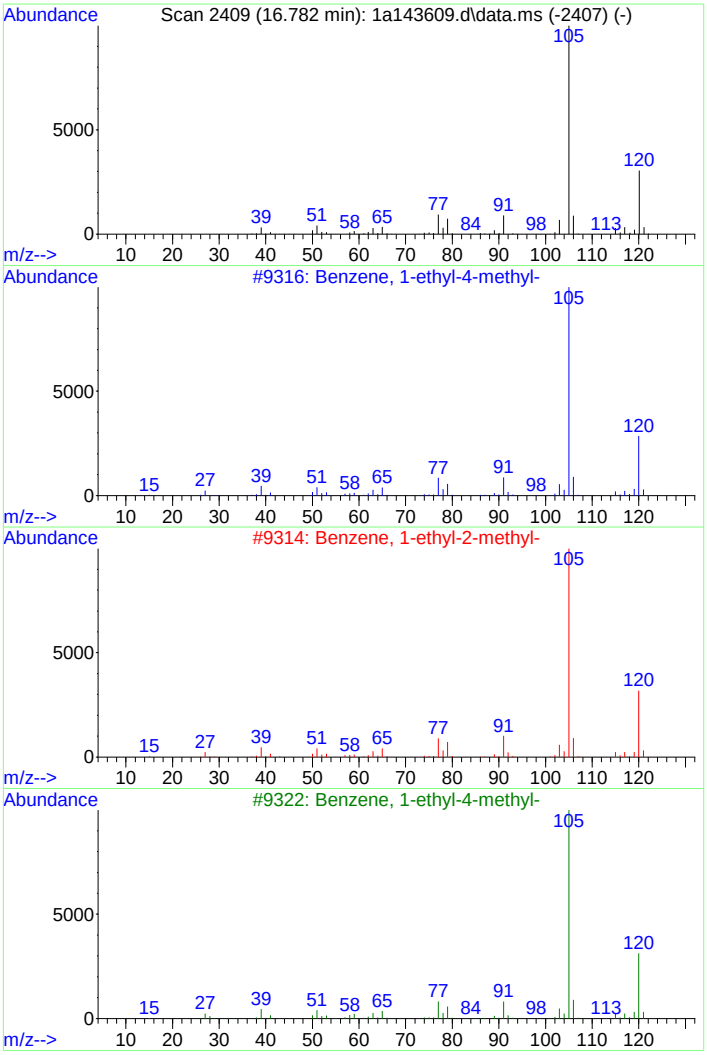
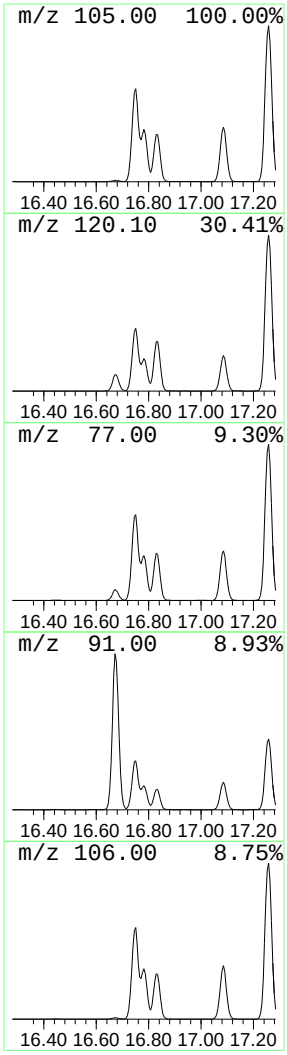
Peak Number 10 C3 alkyl benzene Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.782	28.52 ug/L	2372420	1,4-dichlorobenzene-d4	17.702

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	91
3	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91
4	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91
5	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	91





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Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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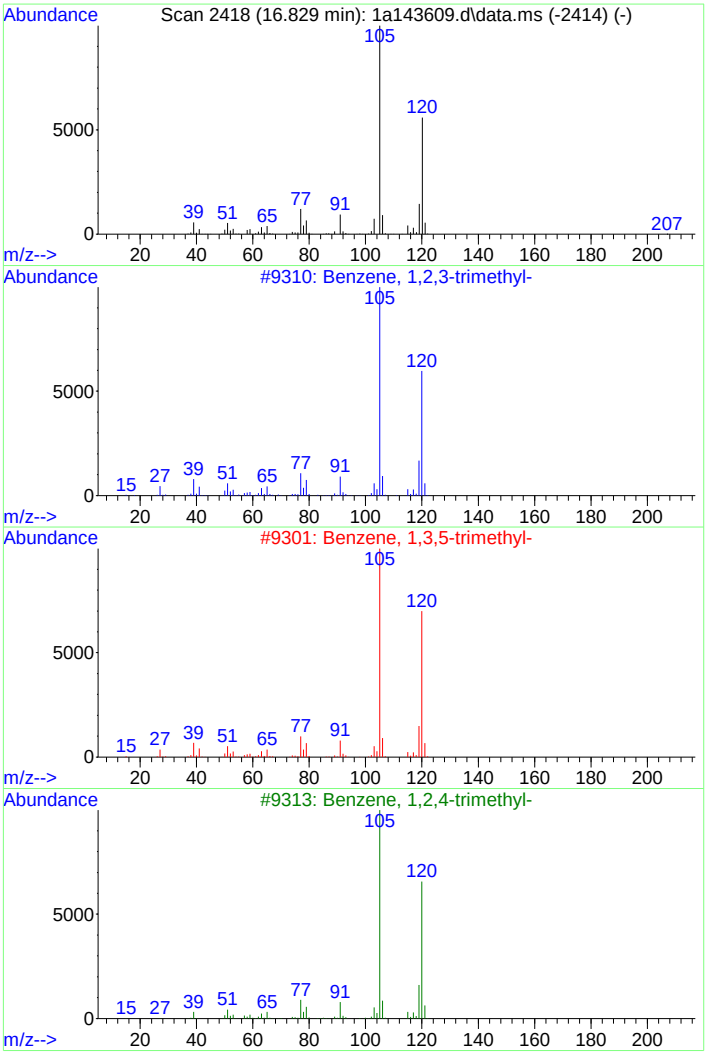
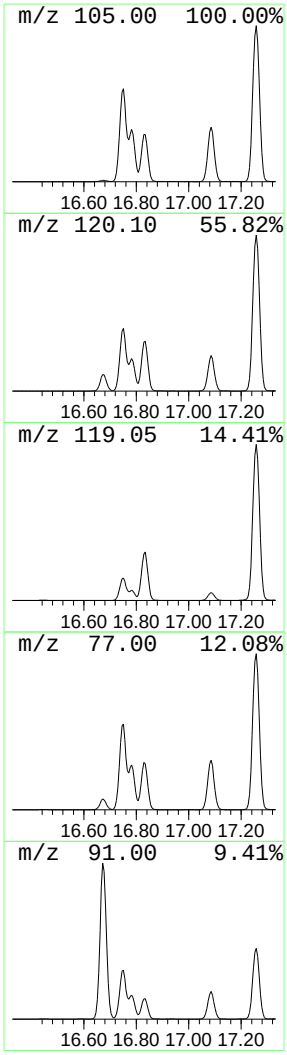
Peak Number 11 C3 alkyl benzene Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.829	38.33 ug/L	3188020	1,4-dichlorobenzene-d4	17.702

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
5	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94





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ALS Vial : 21 Sample Multiplier: 1

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Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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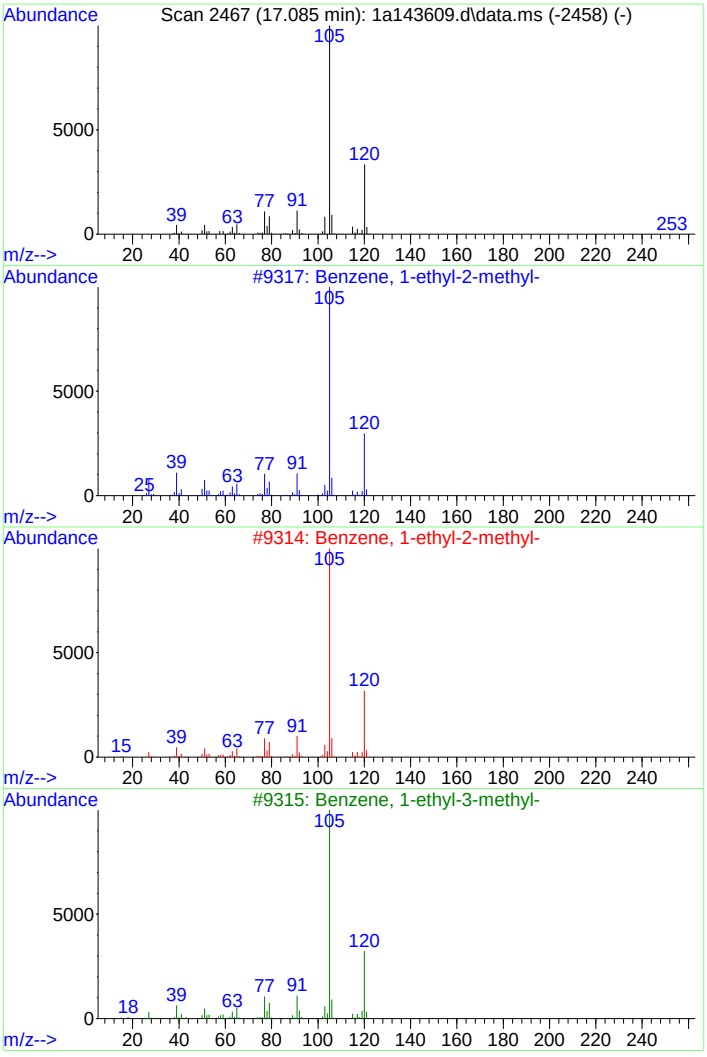
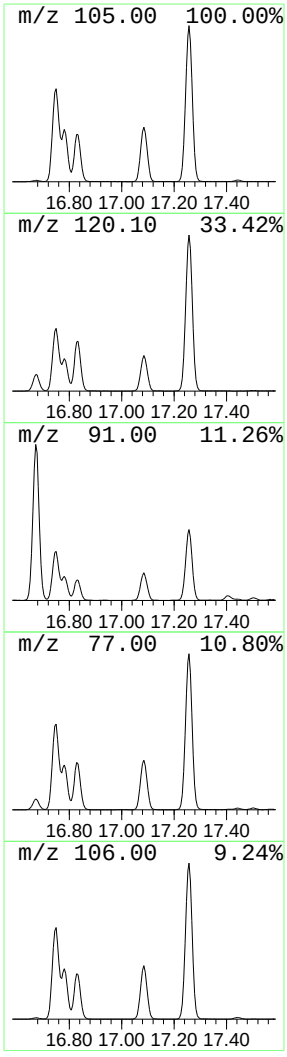
Peak Number 12 C3 alkyl benzene Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.085	39.55 ug/L	3289710	1,4-dichlorobenzene-d4	17.702

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	90
4	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	90
5	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	90





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Misc : MS74584,V1A6195,W,,,,5
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

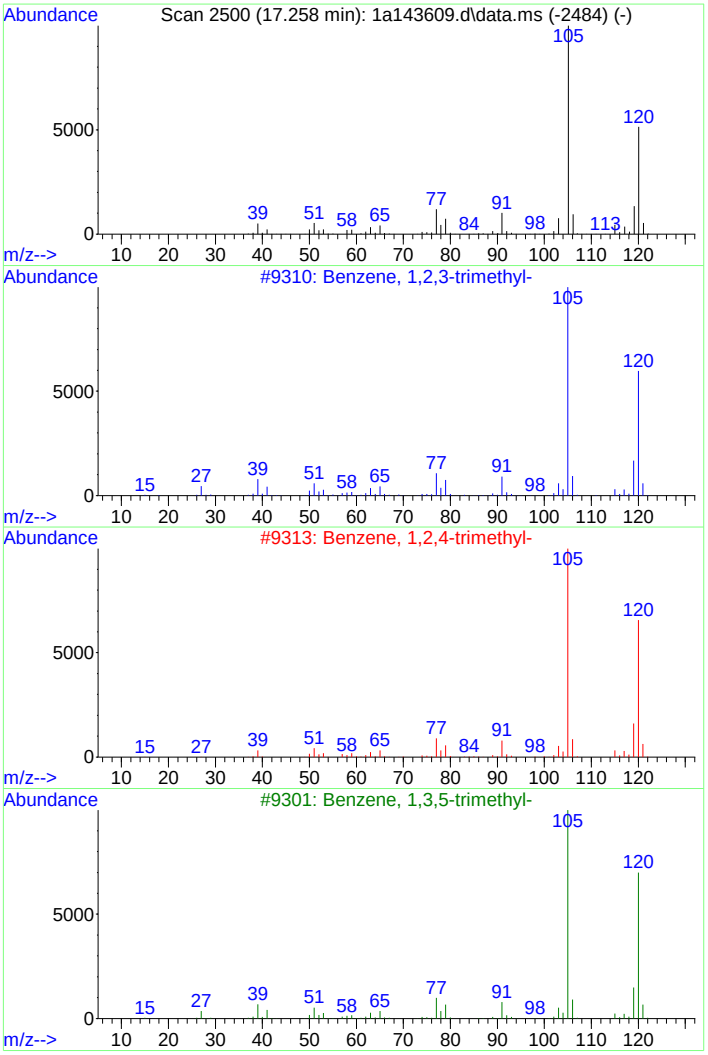
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

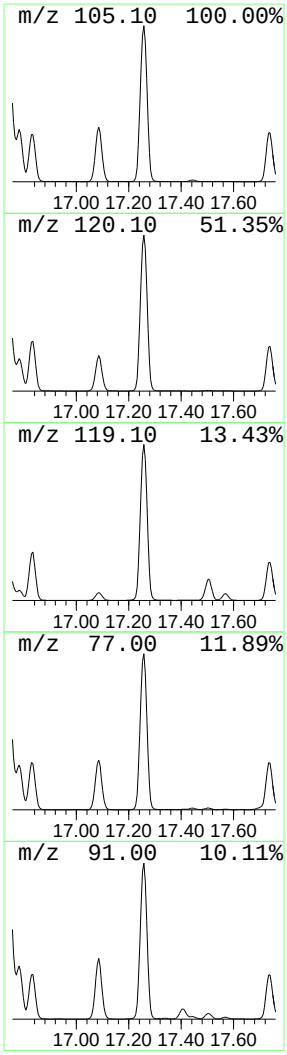
****

Peak Number 13 C3 alkyl benzene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.258	134.78 ug/L	11209900	1,4-dichlorobenzene-d4	17.702

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
2	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
5	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143609.d
Acq On : 30 Sep 2014 5:55 pm
Operator : DejanaS
Sample : jb77674-10
Misc : MS74584,V1A6195,W,,,,5
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

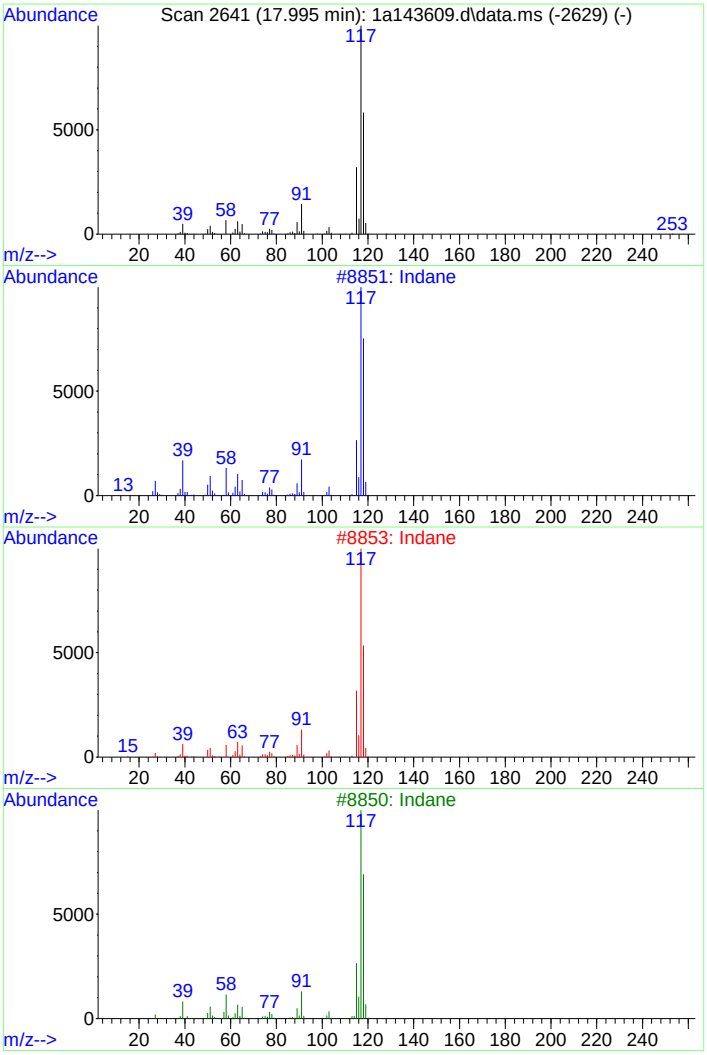
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

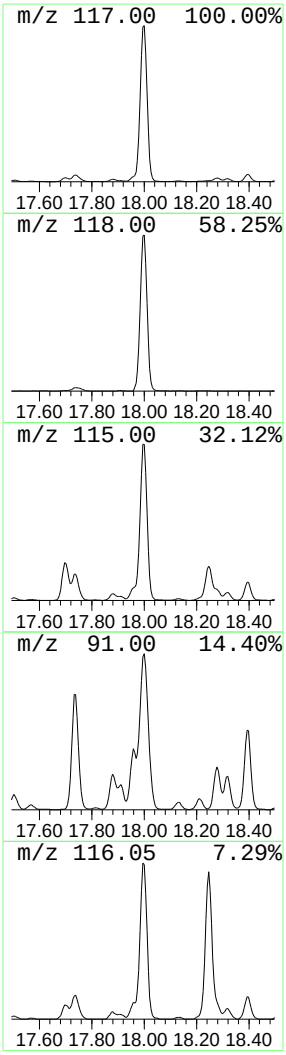
****

Peak Number 14 Indane Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.995	50.68 ug/L	4214880	1,4-dichlorobenzene-d4	17.702

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indane	118	C9H10	000496-11-7	91
2	Indane	118	C9H10	000496-11-7	87
3	Indane	118	C9H10	000496-11-7	87
4	Benzene, cyclopropyl-	118	C9H10	000873-49-4	83
5	Tetracyclo[3.3.1.0(2,8).0(4,6)]-...	118	C9H10	1000191-13-7	80





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143609.d
Acq On : 30 Sep 2014 5:55 pm
Operator : DejanaS
Sample : jb77674-10
Misc : MS74584,V1A6195,W,,,,5
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

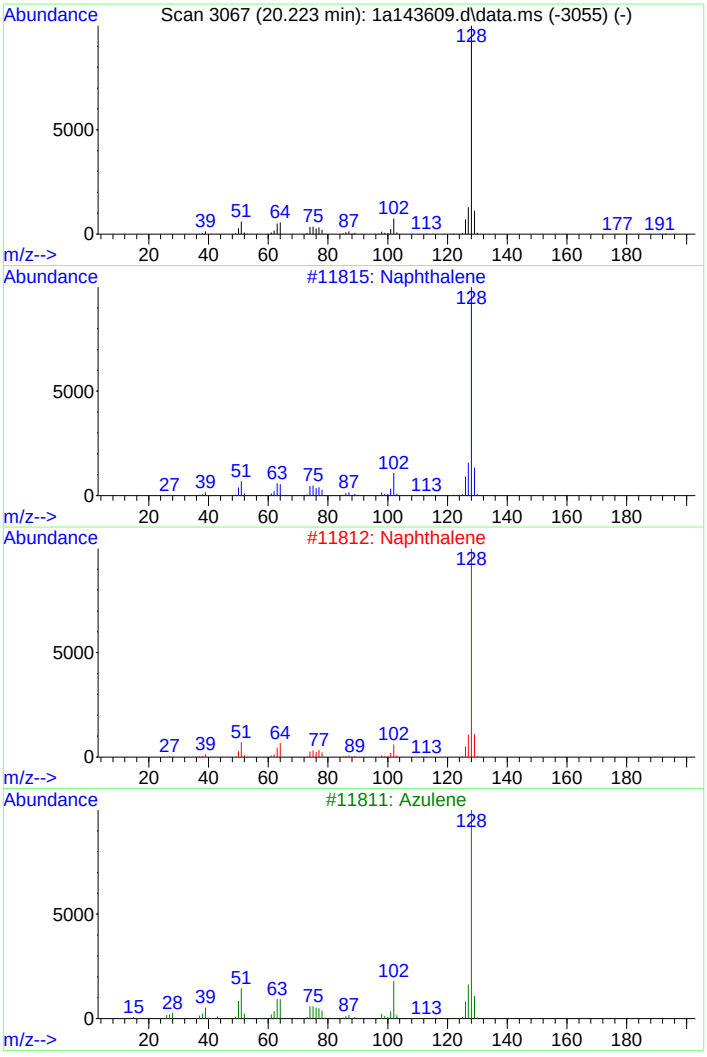
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

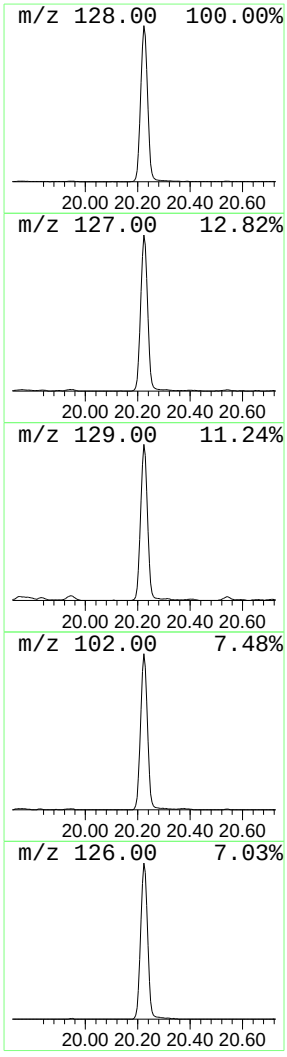
****

Peak Number 15 Naphthalene Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
20.223	30.11 ug/L	2503960	1,4-dichlorobenzene-d4	17.702

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Naphthalene	128	C10H8	000091-20-3	97
2	Naphthalene	128	C10H8	000091-20-3	94
3	Azulene	128	C10H8	000275-51-4	91
4	Azulene	128	C10H8	000275-51-4	91
5	Naphthalene	128	C10H8	000091-20-3	91





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143609.d
Acq On : 30 Sep 2014 5:55 pm
Operator : DejanaS
Sample : jb77674-10
Misc : MS74584,V1A6195,W,,,,5
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
alkane	4.825	28.6	ug/L	602897	2	10.939	1055200	50.0
alkane	5.202	71.0	ug/L	1499360	2	10.939	1055200	50.0
alkane	6.316	37.7	ug/L	796258	2	10.939	1055200	50.0
alkane	6.373	76.5	ug/L	1613350	2	10.939	1055200	50.0
alkane-Pentane	6.844	45.3	ug/L	955470	2	10.939	1055200	50.0
alkene	7.111	45.6	ug/L	962756	2	10.939	1055200	50.0
alkene	7.435	41.4	ug/L	872997	2	10.939	1055200	50.0
alkene	10.223	59.7	ug/L	1260360	2	10.939	1055200	50.0
C3 alkyl benzene	16.750	73.3	ug/L	6101040	5	17.702	4158630	50.0
C3 alkyl benzene	16.782	28.5	ug/L	2372420	5	17.702	4158630	50.0
C3 alkyl benzene	16.829	38.3	ug/L	3188020	5	17.702	4158630	50.0
C3 alkyl benzene	17.085	39.5	ug/L	3289710	5	17.702	4158630	50.0
C3 alkyl benzene	17.258	134.8	ug/L	11209900	5	17.702	4158630	50.0
Indane	17.995	50.7	ug/L	4214880	5	17.702	4158630	50.0
Naphthalene	20.223	30.1	ug/L	2503960	5	17.702	4158630	50.0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 1A143736.D
Acq On : 3 Oct 2014 12:58 pm
Operator : DejanaS
Sample : jb77674-10
Misc : MS74584,V1A6201,W,,,,50
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 03 15:32:00 2014
Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 27 17:10:31 2014
Response via : Initial Calibration

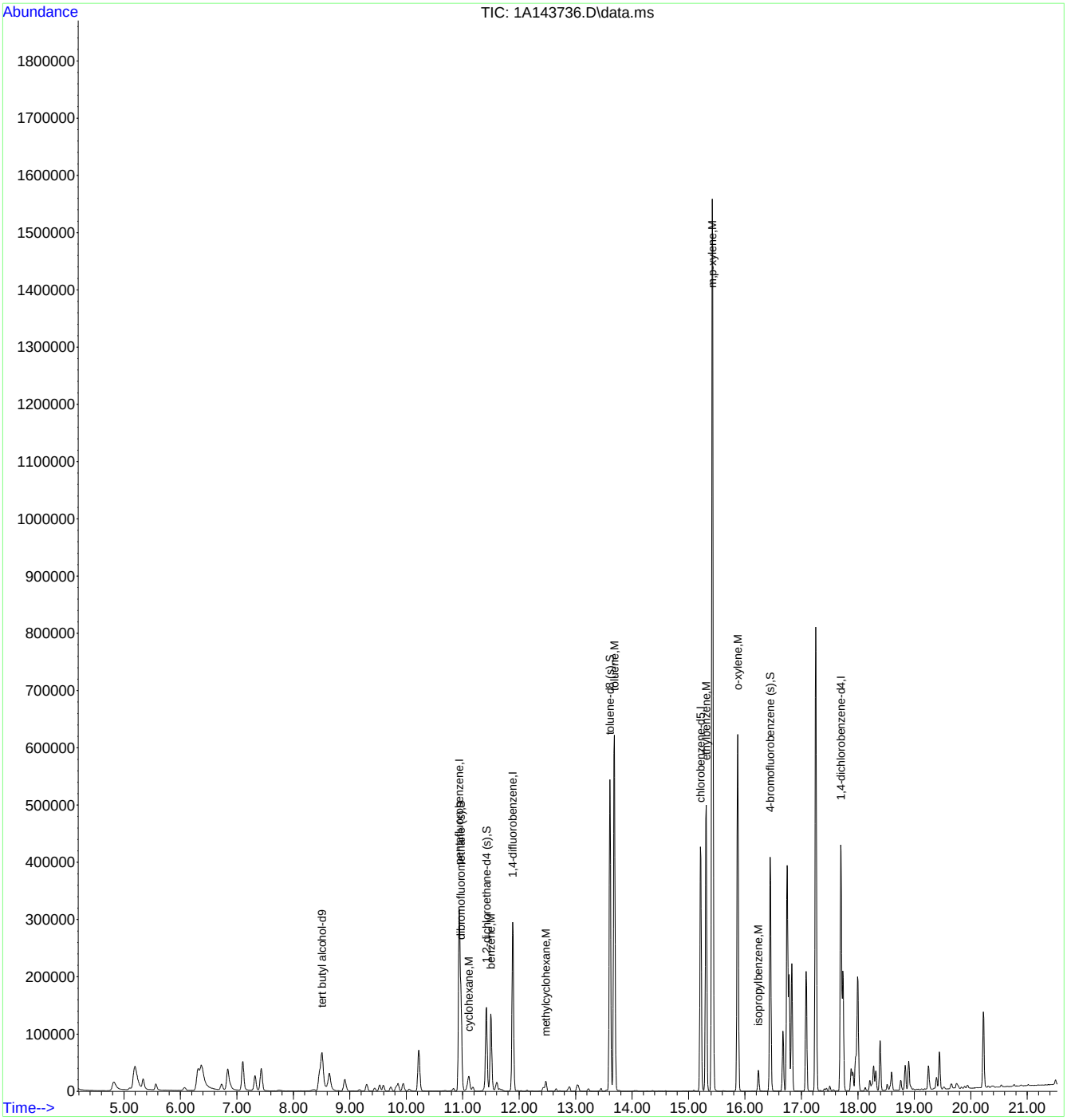
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	8.507	65	84329	500.00	ug/L	0.00
5) pentafluorobenzene	10.939	168	247209	50.00	ug/L	0.00
49) 1,4-difluorobenzene	11.886	114	275623	50.00	ug/L	0.00
78) chlorobenzene-d5	15.212	117	269554	50.00	ug/L	0.00
92) 1,4-dichlorobenzene-d4	17.697	152	135008	50.00	ug/L	0.00
System Monitoring Compounds						
42) dibromofluoromethane (s)	10.971	113	99336	47.18	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 94.36%			
43) 1,2-dichloroethane-d4 (s)	11.420	65	111012	44.90	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 89.80%			
70) toluene-d8 (s)	13.607	98	399795	51.74	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 103.48%			
94) 4-bromofluorobenzene (s)	16.447	95	144947	49.79	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 99.58%			
Target Compounds						Qvalue
47) cyclohexane	11.112	84	11425	3.66	ug/L	80
56) benzene	11.499	78	128588	15.23	ug/L	100
67) methylcyclohexane	12.472	83	8486	2.45	ug/L	98
72) toluene	13.685	92	297295	54.72	ug/L	99
87) ethylbenzene	15.312	91	394101	37.15	ug/L	100
88) m,p-xylene	15.422	106	528453	125.87	ug/L	100
89) o-xylene	15.871	106	195605	43.01	ug/L	99
93) isopropylbenzene	16.238	105	27853	2.69	ug/L	97

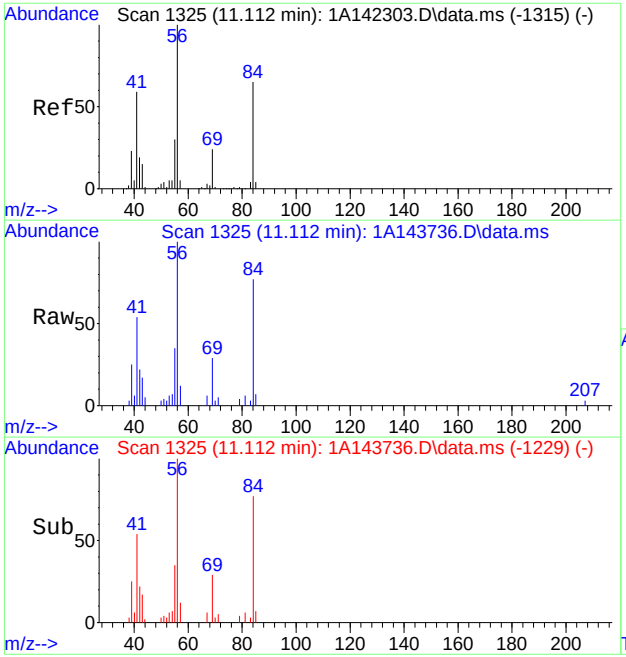
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 1A143736.D
Acq On : 3 Oct 2014 12:58 pm
Operator : DejanaS
Sample : jb77674-10
Misc : MS74584,V1A6201,W,,,,50
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 03 15:32:00 2014
Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 27 17:10:31 2014
Response via : Initial Calibration

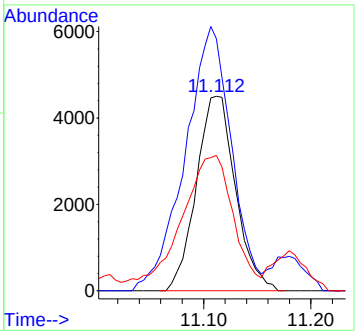


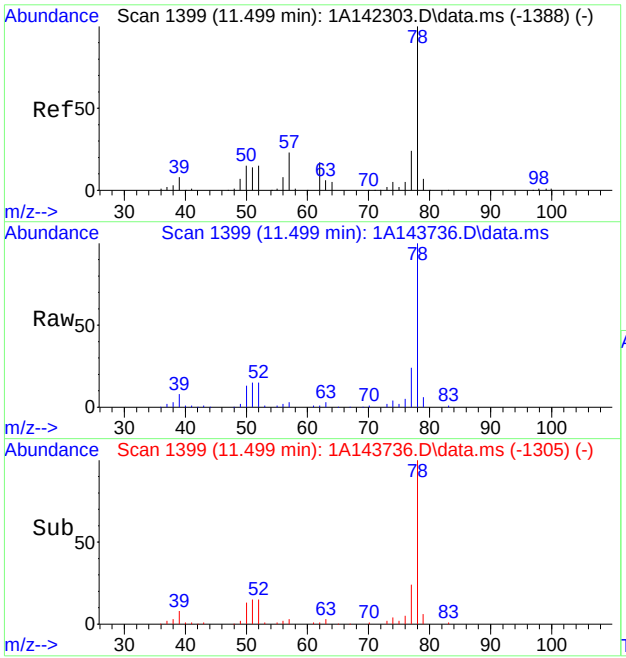


#47
cyclohexane
Concen: 3.66 ug/L
RT: 11.112 min Scan# 1325
Delta R.T. 0.000 min
Lab File: 1A143736.D
Acq: 3 Oct 2014 12:58 pm

Tgt Ion: 84 Resp: 11425

Ion	Ratio	Lower	Upper
84	100		
56	129.6	124.1	184.1
41	69.6	61.0	121.0

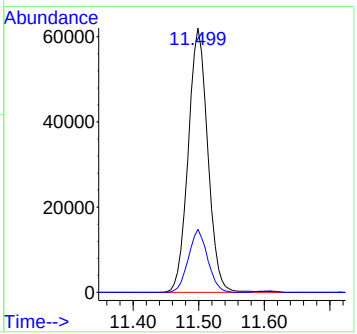


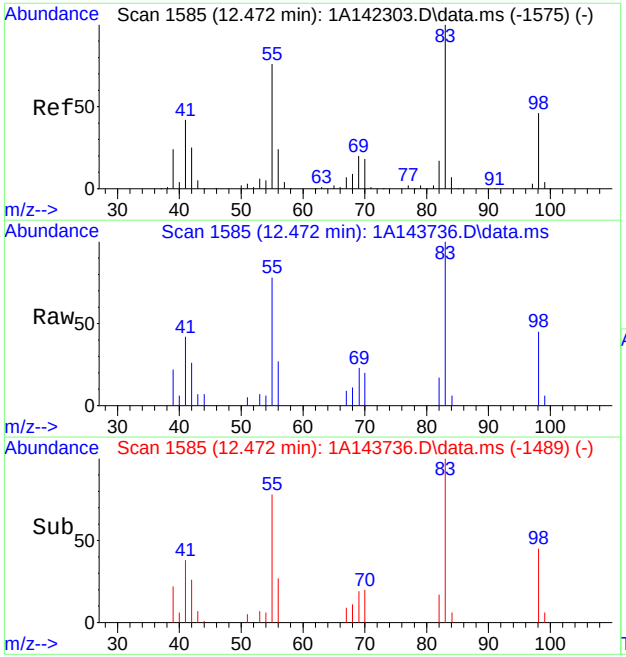


#56
benzene
Concen: 15.23 ug/L
RT: 11.499 min Scan# 1399
Delta R.T. 0.000 min
Lab File: 1A143736.D
Acq: 3 Oct 2014 12:58 pm

Tgt Ion: 78 Resp: 128588

Ion	Ratio	Lower	Upper
78	100		
77	23.9	0.0	53.9

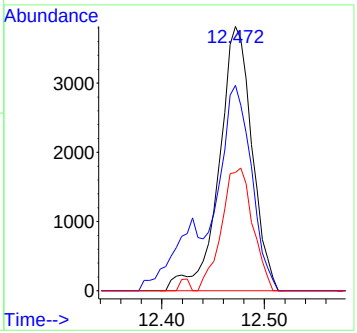


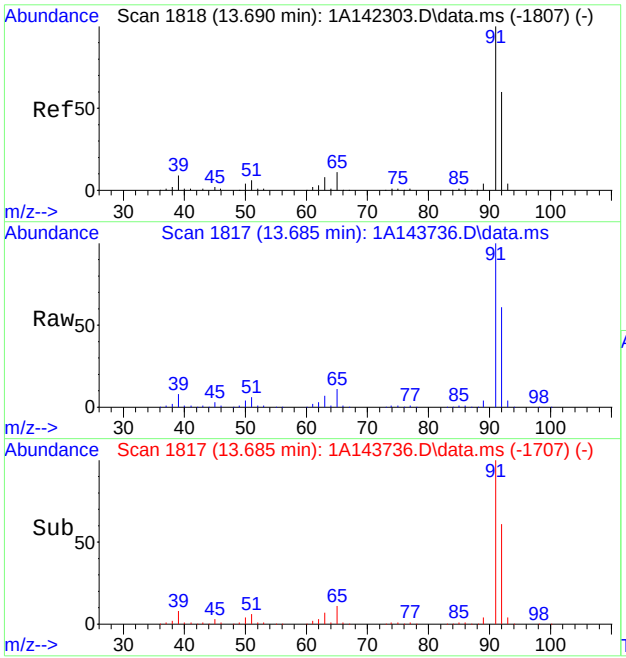


#67
methylcyclohexane
Concen: 2.45 ug/L
RT: 12.472 min Scan# 1585
Delta R.T. 0.000 min
Lab File: 1A143736.D
Acq: 3 Oct 2014 12:58 pm

Tgt Ion: 83 Resp: 8486

Ion	Ratio	Lower	Upper
83	100		
55	77.7	46.1	106.1
98	44.8	15.7	75.7

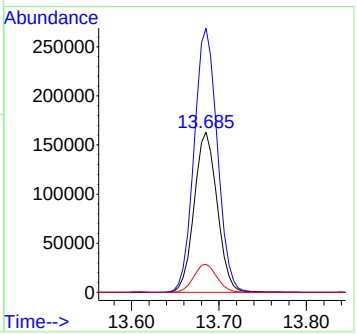


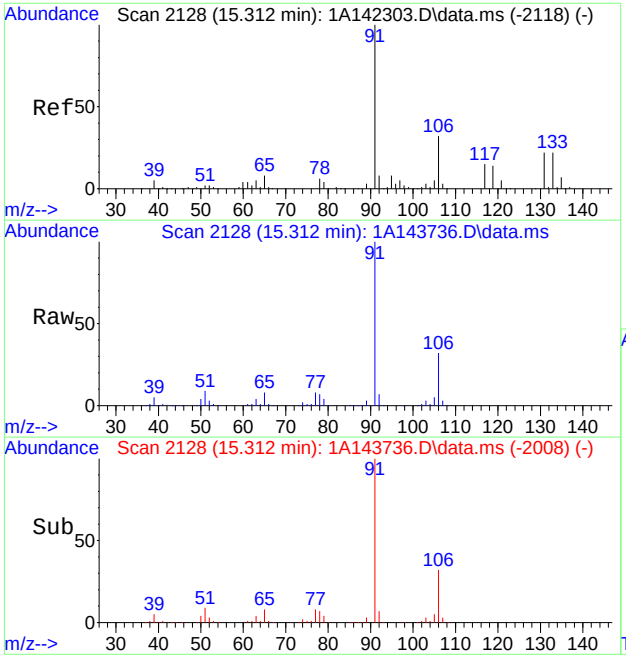


#72
toluene
Concen: 54.72 ug/L
RT: 13.685 min Scan# 1817
Delta R.T. -0.005 min
Lab File: 1A143736.D
Acq: 3 Oct 2014 12:58 pm

Tgt Ion: 92 Resp: 297295

Ion	Ratio	Lower	Upper
92	100		
91	164.8	136.8	196.8
65	17.5	0.0	47.8

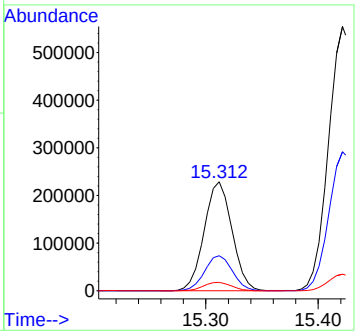


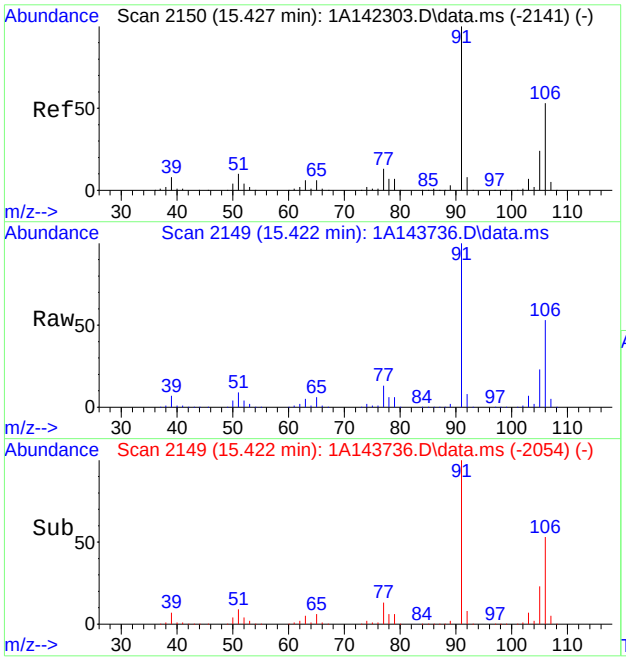


#87
ethylbenzene
Concen: 37.15 ug/L
RT: 15.312 min Scan# 2128
Delta R.T. 0.000 min
Lab File: 1A143736.D
Acq: 3 Oct 2014 12:58 pm

Tgt Ion: 91 Resp: 394101

Ion	Ratio	Lower	Upper
91	100		
106	32.3	2.2	62.2
65	7.7	0.0	38.3

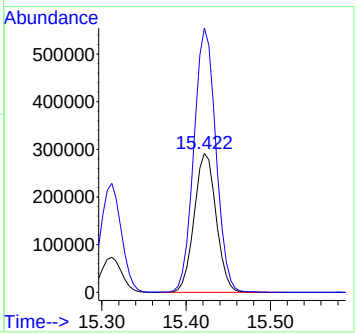


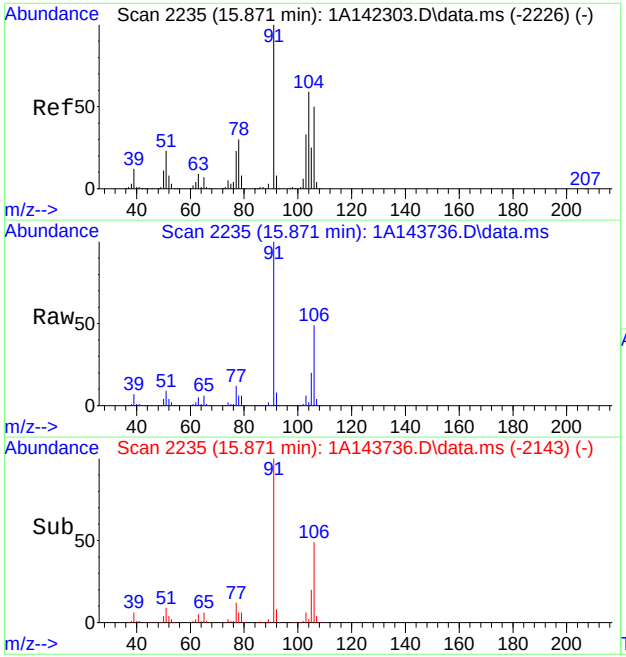


#88
m,p-xylene
Concen: 125.87 ug/L
RT: 15.422 min Scan# 2149
Delta R.T. -0.005 min
Lab File: 1A143736.D
Acq: 3 Oct 2014 12:58 pm

Tgt Ion:106 Resp: 528453

Ion	Ratio	Lower	Upper
106	100		
91	190.0	160.3	220.3

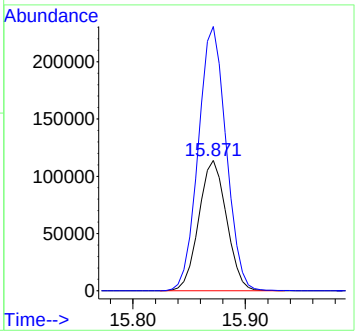


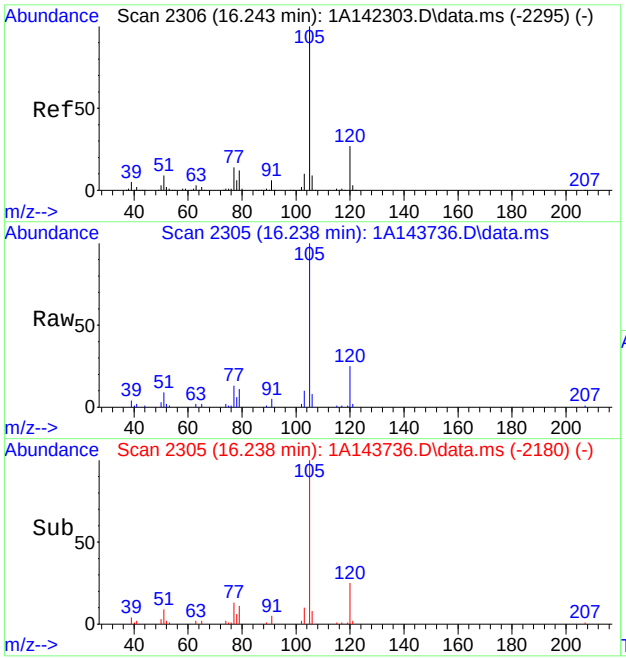


#89
o-xylene
Concen: 43.01 ug/L
RT: 15.871 min Scan# 2235
Delta R.T. 0.000 min
Lab File: 1A143736.D
Acq: 3 Oct 2014 12:58 pm

Tgt Ion:106 Resp: 195605

Ion	Ratio	Lower	Upper
106	100		
91	203.1	171.1	231.1

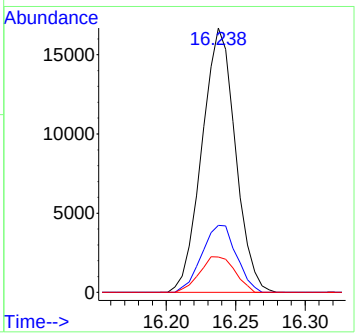




#93
isopropylbenzene
Concen: 2.69 ug/L
RT: 16.238 min Scan# 2305
Delta R.T. -0.005 min
Lab File: 1A143736.D
Acq: 3 Oct 2014 12:58 pm

Tgt Ion:105 Resp: 27853

Ion	Ratio	Lower	Upper
105	100		
120	25.3	0.0	57.1
77	13.4	0.0	44.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 1A143737.D
Acq On : 3 Oct 2014 1:27 pm
Operator : DejanaS
Sample : jb77674-11
Misc : MS74584,V1A6201,W,,,,50
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 03 15:32:45 2014
Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 27 17:10:31 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	8.507	65	86786	500.00	ug/L	0.00
5) pentafluorobenzene	10.939	168	255800	50.00	ug/L	0.00
49) 1,4-difluorobenzene	11.886	114	279416	50.00	ug/L	0.00
78) chlorobenzene-d5	15.212	117	271934	50.00	ug/L	0.00
92) 1,4-dichlorobenzene-d4	17.697	152	133901	50.00	ug/L	0.00
System Monitoring Compounds						
42) dibromofluoromethane (s)	10.971	113	103569	47.54	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 95.08%			
43) 1,2-dichloroethane-d4 (s)	11.415	65	113164	44.23	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 88.46%			
70) toluene-d8 (s)	13.607	98	399111	50.95	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 101.90%			
94) 4-bromofluorobenzene (s)	16.447	95	149628	51.82	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 103.64%			

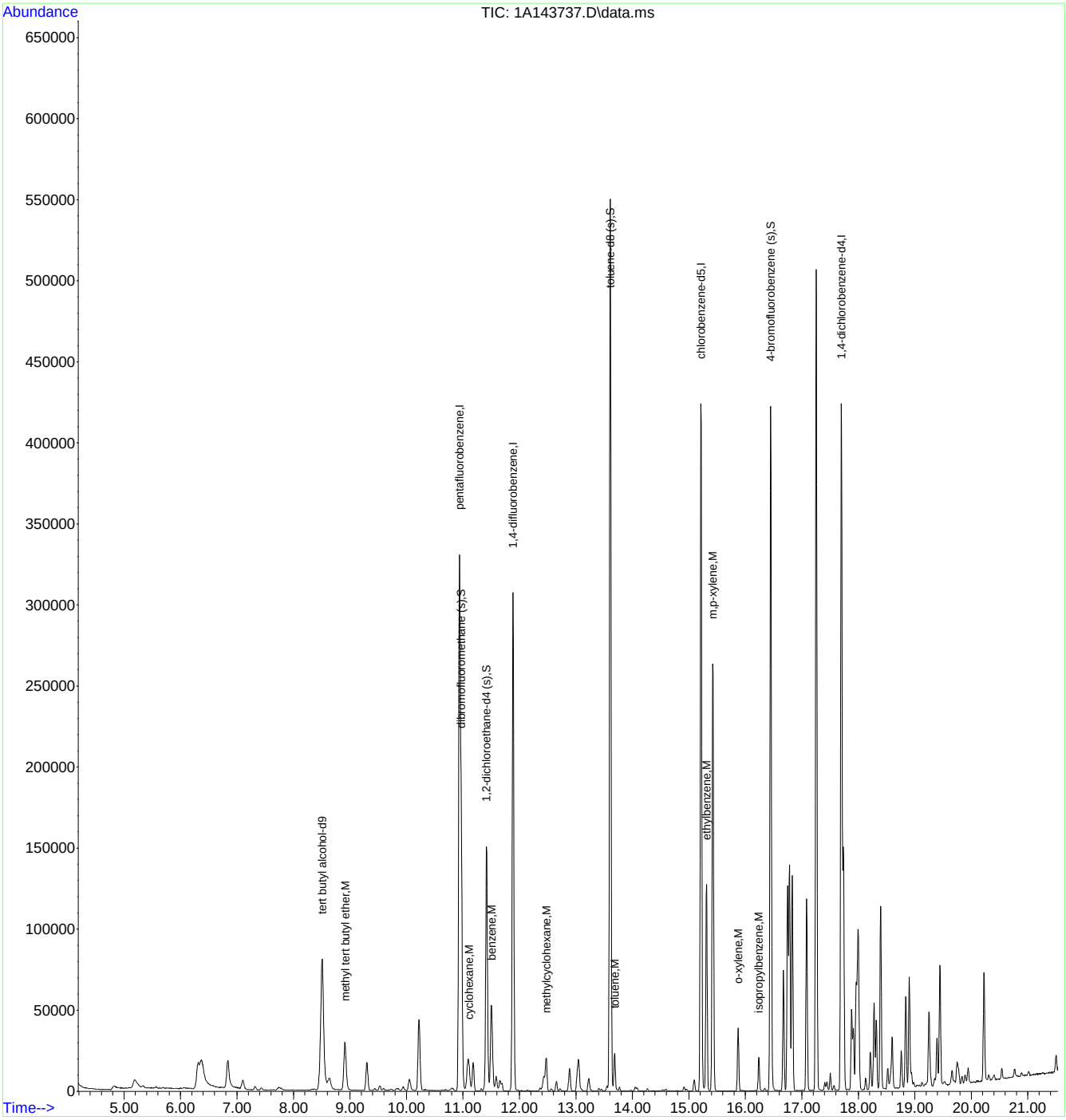
Target Compounds						Qvalue
24) methyl tert butyl ether	8.921	73	2242	0.30	ug/L #	1
47) cyclohexane	11.112	84	5616	1.74	ug/L	93
56) benzene	11.499	78	37555	4.39	ug/L	98
67) methylcyclohexane	12.472	83	10001	2.84	ug/L	94
72) toluene	13.685	92	10278	1.87	ug/L	100
87) ethylbenzene	15.312	91	101045	9.44	ug/L	98
88) m,p-xylene	15.422	106	90227	21.30	ug/L	99
89) o-xylene	15.871	106	12030	2.62	ug/L	95
93) isopropylbenzene	16.238	105	16454	1.60	ug/L	98

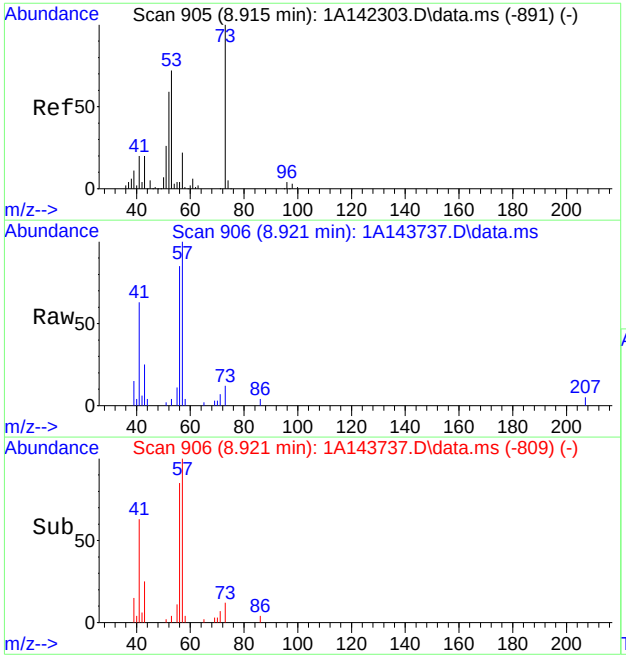
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 1A143737.D
Acq On : 3 Oct 2014 1:27 pm
Operator : DejanaS
Sample : jb77674-11
Misc : MS74584,V1A6201,W,,,,50
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 03 15:32:45 2014
Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 27 17:10:31 2014
Response via : Initial Calibration

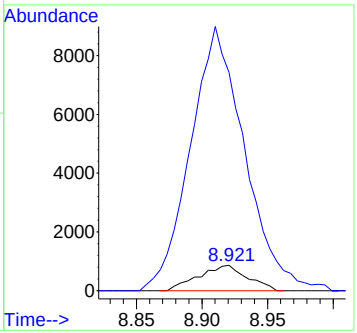


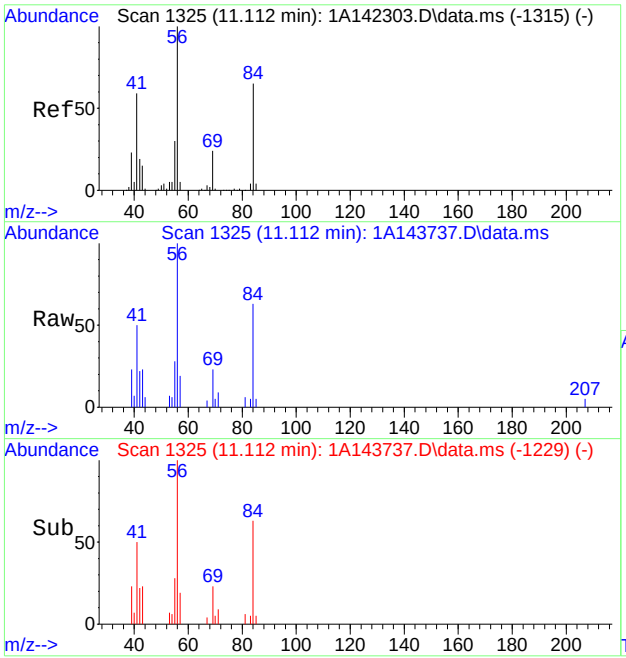


#24
methyl tert butyl ether
Concen: 0.30 ug/L
RT: 8.921 min Scan# 906
Delta R.T. 0.005 min
Lab File: 1A143737.D
Acq: 3 Oct 2014 1:27 pm

Tgt Ion: 73 Resp: 2242

Ion	Ratio	Lower	Upper
73	100		
57	777.9	0.0	64.8#

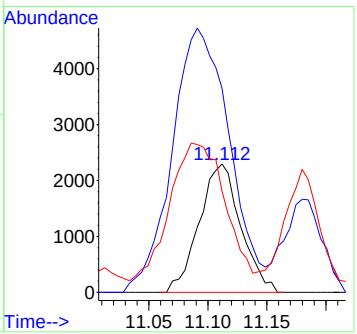


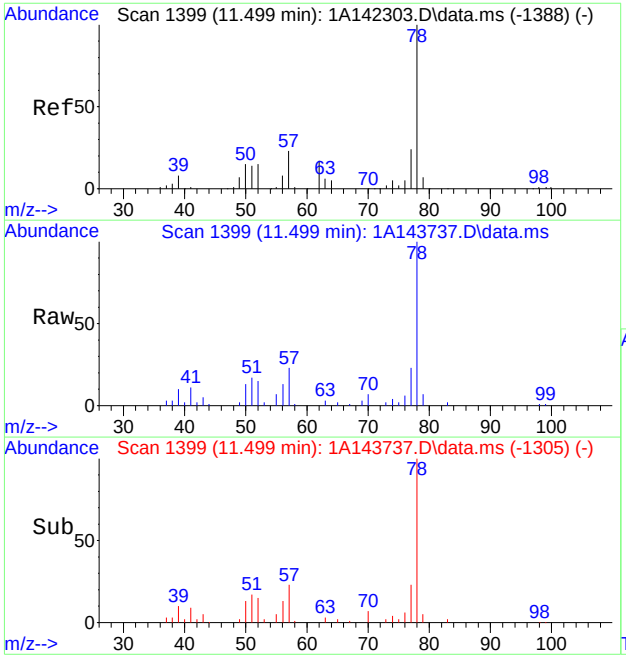


#47
cyclohexane
Concen: 1.74 ug/L
RT: 11.112 min Scan# 1325
Delta R.T. 0.000 min
Lab File: 1A143737.D
Acq: 3 Oct 2014 1:27 pm

Tgt Ion: 84 Resp: 5616

Ion	Ratio	Lower	Upper
84	100		
56	159.0	124.1	184.1
41	78.9	61.0	121.0

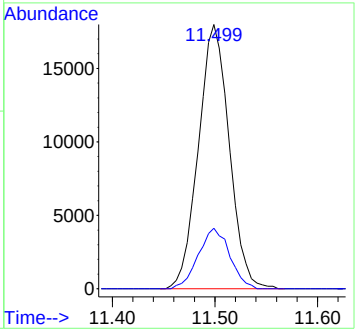


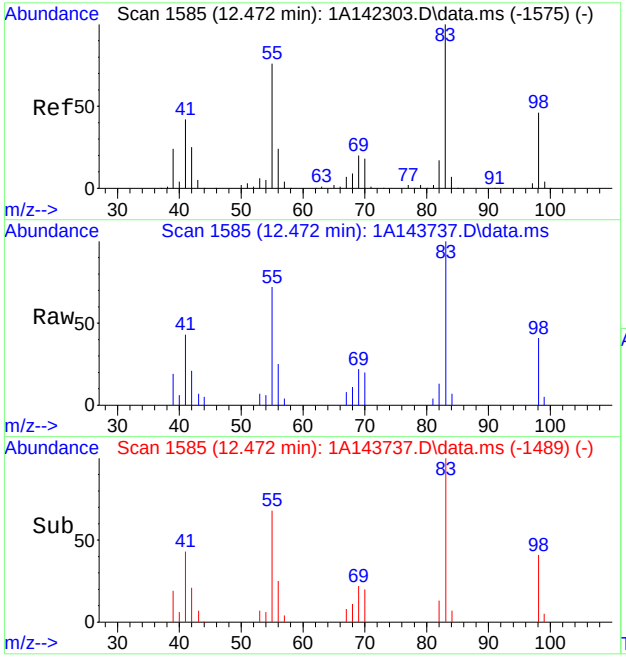


#56
benzene
Concen: 4.39 ug/L
RT: 11.499 min Scan# 1399
Delta R.T. 0.000 min
Lab File: 1A143737.D
Acq: 3 Oct 2014 1:27 pm

Tgt Ion: 78 Resp: 37555

Ion	Ratio	Lower	Upper
78	100		
77	23.0	0.0	53.9

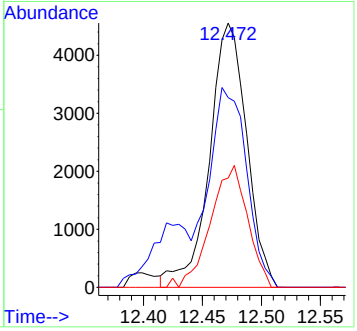


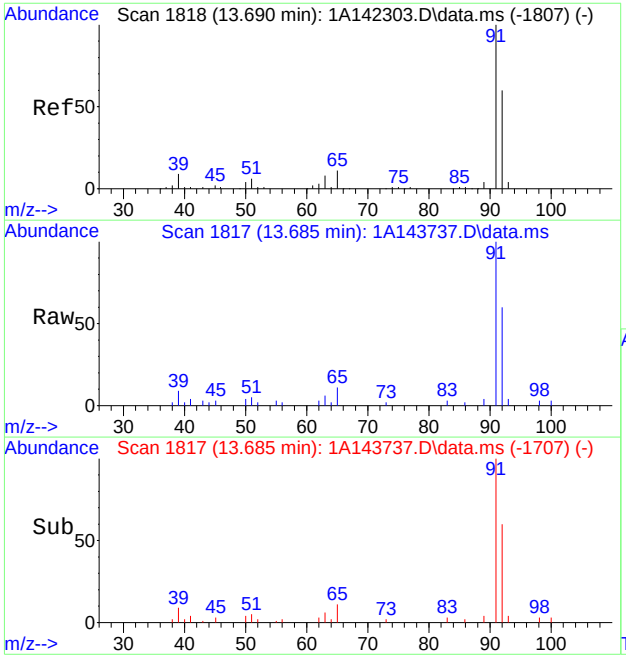


#67
methylcyclohexane
Concen: 2.84 ug/L
RT: 12.472 min Scan# 1585
Delta R.T. 0.000 min
Lab File: 1A143737.D
Acq: 3 Oct 2014 1:27 pm

Tgt Ion: 83 Resp: 10001

Ion	Ratio	Lower	Upper
83	100		
55	71.7	46.1	106.1
98	41.3	15.7	75.7

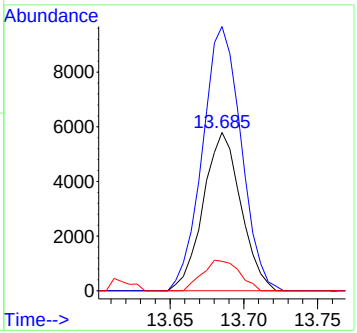


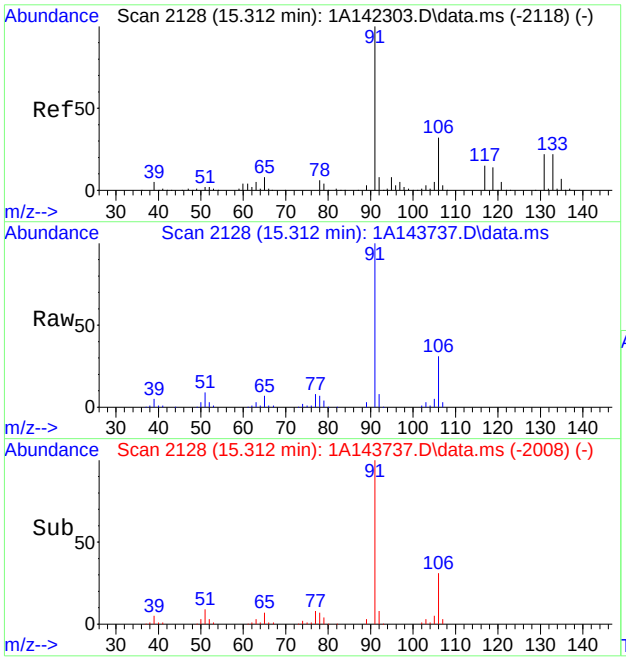


#72
toluene
Concen: 1.87 ug/L
RT: 13.685 min Scan# 1817
Delta R.T. -0.005 min
Lab File: 1A143737.D
Acq: 3 Oct 2014 1:27 pm

Tgt Ion: 92 Resp: 10278

Ion	Ratio	Lower	Upper
92	100		
91	167.0	136.8	196.8
65	18.5	0.0	47.8

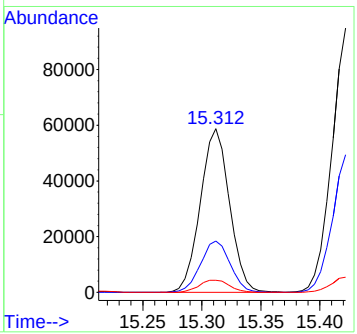


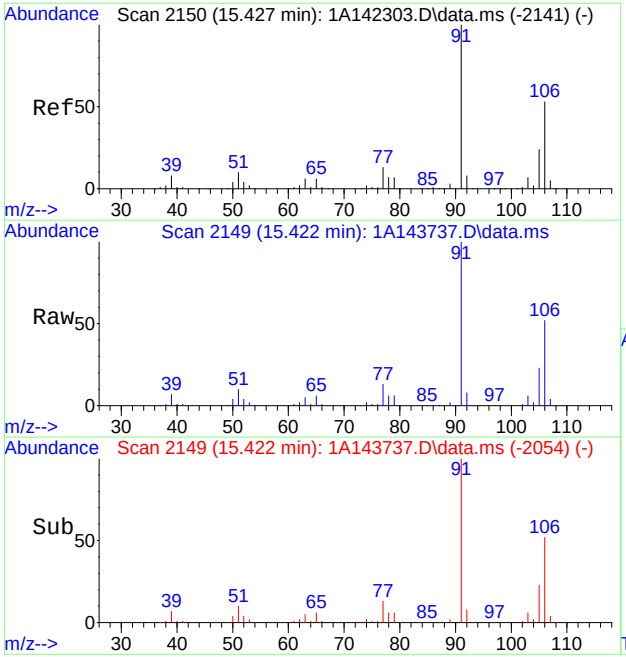


#87
ethylbenzene
Concen: 9.44 ug/L
RT: 15.312 min Scan# 2128
Delta R.T. 0.000 min
Lab File: 1A143737.D
Acq: 3 Oct 2014 1:27 pm

Tgt Ion: 91 Resp: 101045

Ion	Ratio	Lower	Upper
91	100		
106	31.4	2.2	62.2
65	7.5	0.0	38.3

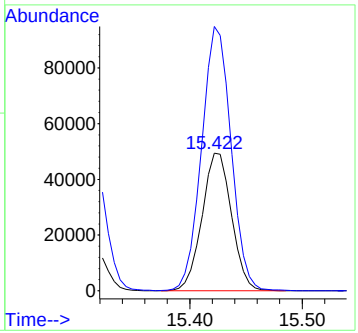


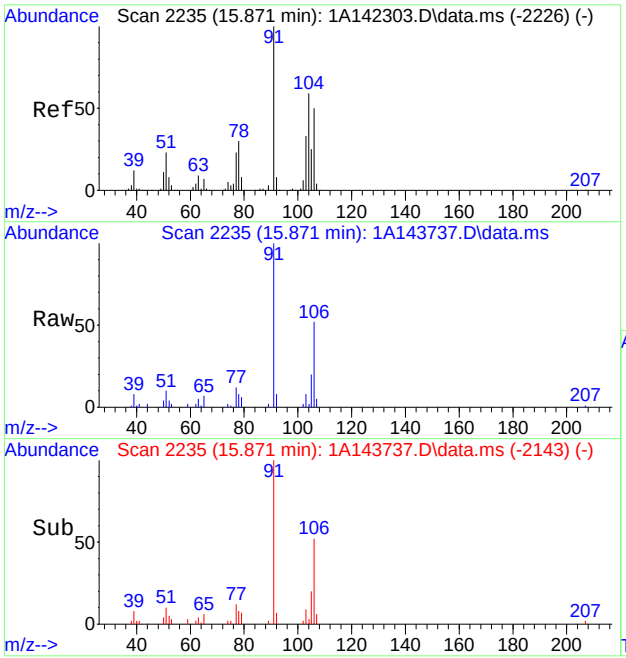


#88
m,p-xylene
Concen: 21.30 ug/L
RT: 15.422 min Scan# 2149
Delta R.T. -0.005 min
Lab File: 1A143737.D
Acq: 3 Oct 2014 1:27 pm

Tgt Ion:106 Resp: 90227

Ion	Ratio	Lower	Upper
106	100		
91	191.9	160.3	220.3

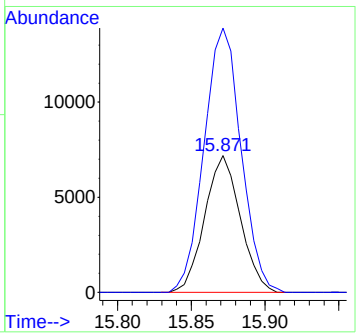


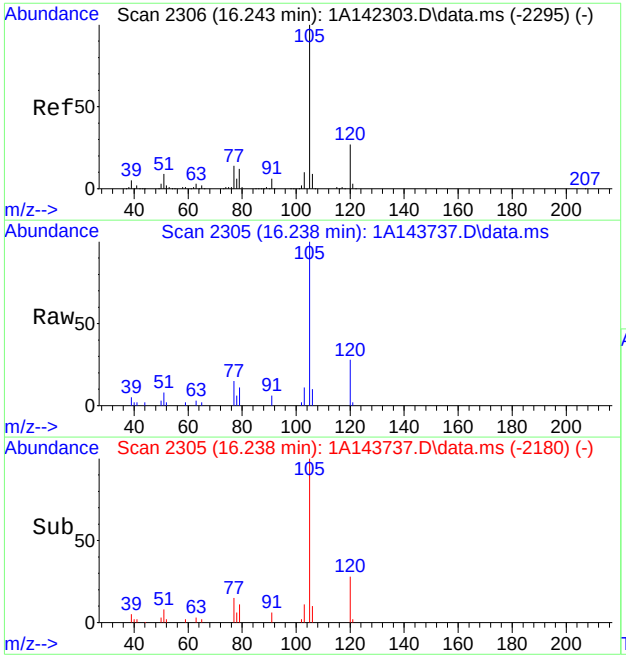


#89
o-xylene
Concen: 2.62 ug/L
RT: 15.871 min Scan# 2235
Delta R.T. 0.000 min
Lab File: 1A143737.D
Acq: 3 Oct 2014 1:27 pm

Tgt Ion:106 Resp: 12030

Ion	Ratio	Lower	Upper
106	100		
91	193.3	171.1	231.1

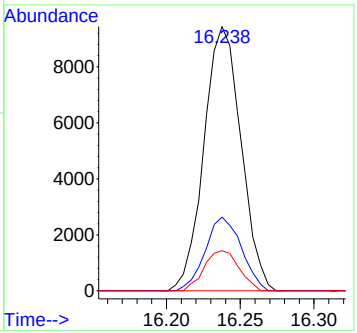




#93
isopropylbenzene
Concen: 1.60 ug/L
RT: 16.238 min Scan# 2305
Delta R.T. -0.005 min
Lab File: 1A143737.D
Acq: 3 Oct 2014 1:27 pm

Tgt Ion:105 Resp: 16454

Ion	Ratio	Lower	Upper
105	100		
120	27.8	0.0	57.1
77	15.2	0.0	44.2



Quantitation Report (QT/LSC Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 2A151106.D
Acq On : 30 Sep 2014 7:12 pm
Operator : Dejanas
Sample : jb77674-11
Misc : MS74595,V2A6440,w,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 03 11:55:54 2014
Quant Method : C:\MSDCHEM\1\METHODS\M2A6388.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Aug 28 16:51:38 2014
Response via : Initial Calibration

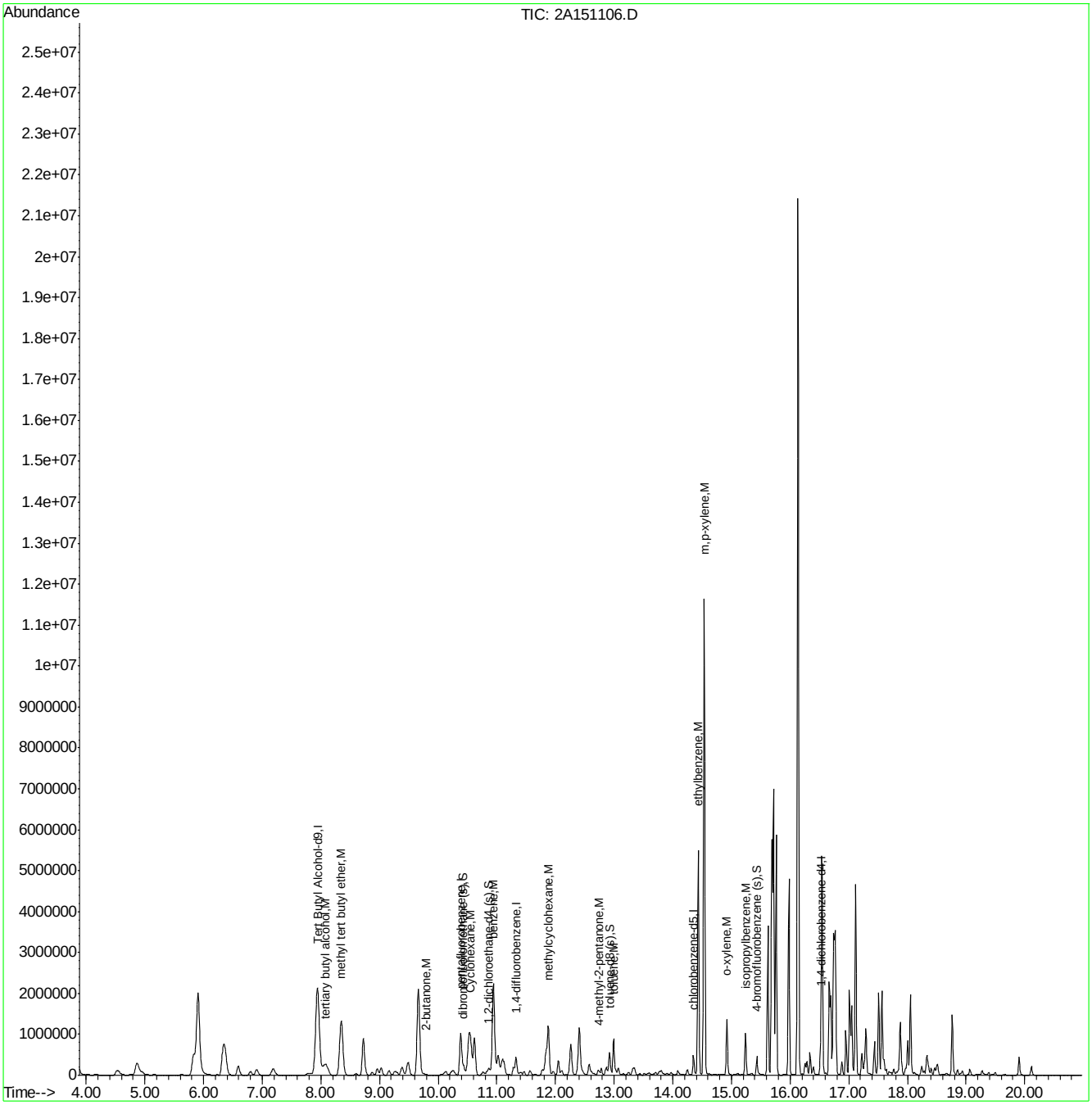
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.94	65	126452	500.00	ug/L	-0.01
5) pentafluorobenzene	10.39	168	318916	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.32	114	321252	50.00	ug/L	0.00
84) chlorobenzene-d5	14.35	117	274507	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	16.52	152	164770	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.43	113	101609	45.99	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 91.98%			
47) 1,2-dichloroethane-d4 (s)	10.86	65	109776	41.39	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 82.78%			
76) toluene-d8 (s)	12.92	98	344031	48.22	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 96.44%			
100) 4-bromofluorobenzene (s)	15.43	95	130548	44.86	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 89.72%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	8.07	59	3548	11.43	ug/L	# 1
28) methyl tert butyl ether	8.34	73	40068	5.90	ug/L	# 1
31) 2-butanone	9.80	72	3388	14.25	ug/L	# 46
51) Cyclohexane	10.56	84	373176	120.75	ug/L	# 78
60) benzene	10.94	78	1066773	123.81	ug/L	99
73) methylcyclohexane	11.88	83	644366	201.88	ug/L	97
77) 4-methyl-2-pentanone	12.74	58	6403	8.59	ug/L	92
78) toluene	12.99	92	339015	70.95	ug/L	96
93) ethylbenzene	14.43	91	3873123	406.19	ug/L	99
94) m,p-xylene	14.53	106	3290064	923.56	ug/L	97
95) o-xylene	14.92	106	365449	100.06	ug/L	98
99) isopropylbenzene	15.24	105	671590	67.60	ug/L	99

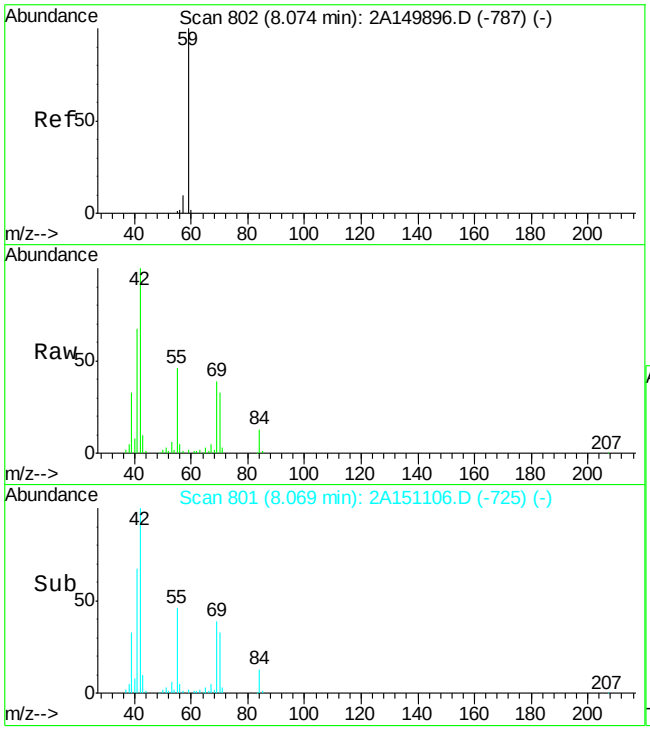
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 2A151106.D
Acq On : 30 Sep 2014 7:12 pm
Operator : Dejanas
Sample : jb77674-11
Misc : MS74595,V2A6440,w,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 03 11:55:54 2014
Quant Method : C:\MSDCHEM\1\METHODS\M2A6388.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Aug 28 16:51:38 2014
Response via : Initial Calibration

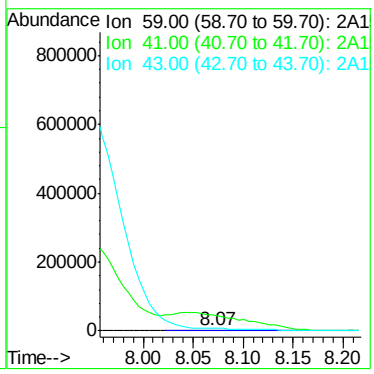


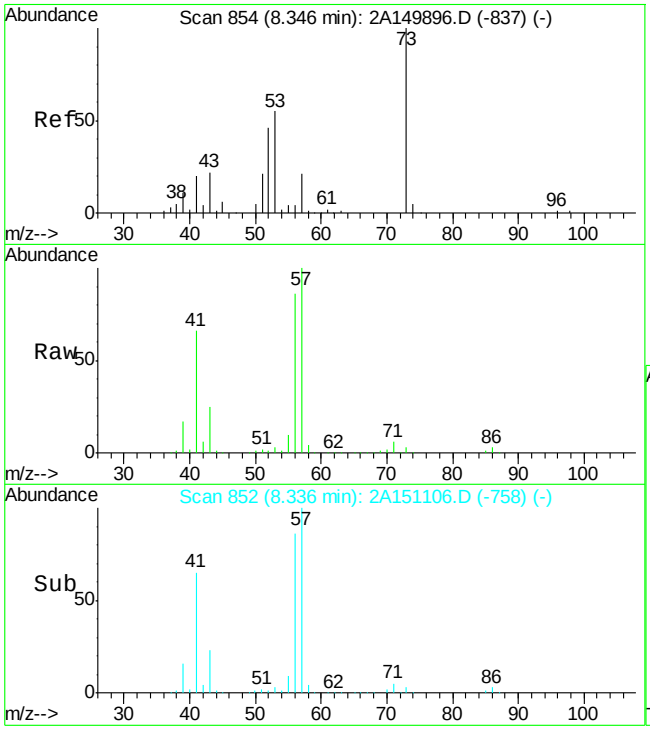


#2
tertiary butyl alcohol
Concen: 11.43 ug/L
RT: 8.07 min Scan# 801
Delta R.T. -0.00 min
Lab File: 2A151106.D
Acq: 30 Sep 2014 7:12 pm

Tgt Ion: 59 Resp: 3548

Ion	Ratio	Lower	Upper
59	100		
41	3778.0	0.0	53.0#
43	543.9	0.0	45.8#

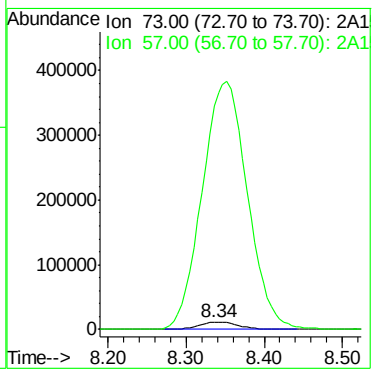


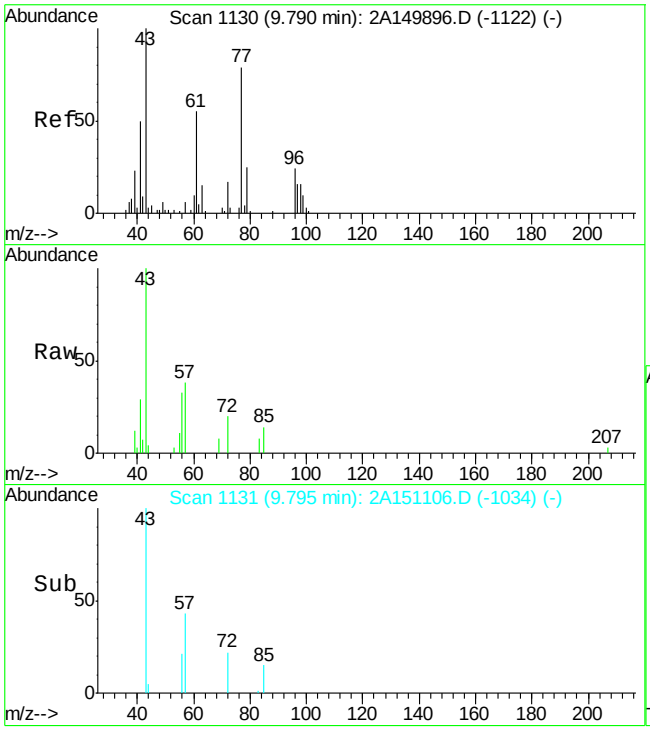


#28
methyl tert butyl ether
Concen: 5.90 ug/L
RT: 8.34 min Scan# 852
Delta R.T. -0.01 min
Lab File: 2A151106.D
Acq: 30 Sep 2014 7:12 pm

Tgt Ion: 73 Resp: 40068

Ion	Ratio	Lower	Upper
73	100		
57	3066.1	0.0	41.8#

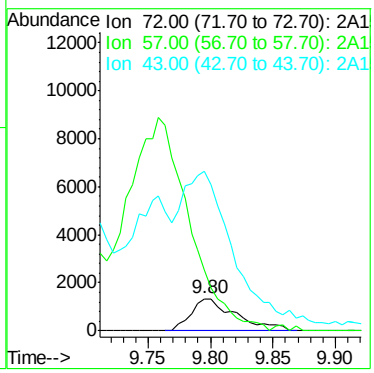


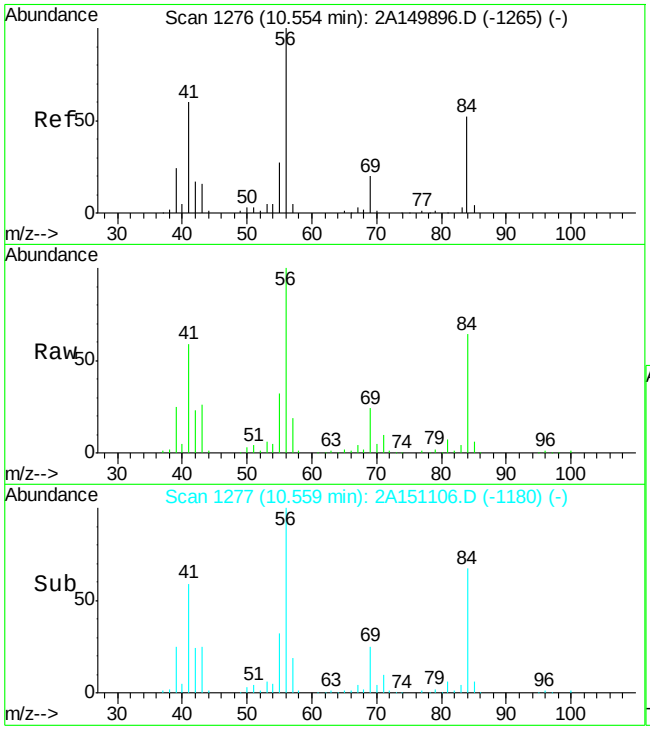


#31
2-butanone
Concen: 14.25 ug/L
RT: 9.80 min Scan# 1131
Delta R.T. 0.01 min
Lab File: 2A151106.D
Acq: 30 Sep 2014 7:12 pm

Tgt Ion: 72 Resp: 3388

Ion	Ratio	Lower	Upper
72	100		
57	176.6	4.9	64.9#
43	458.4	559.7	619.7#

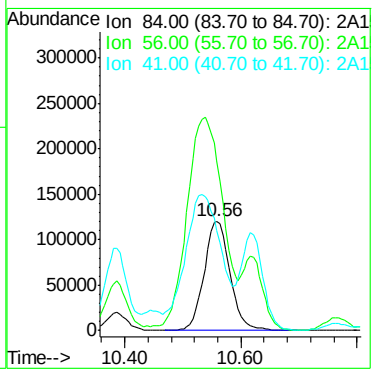


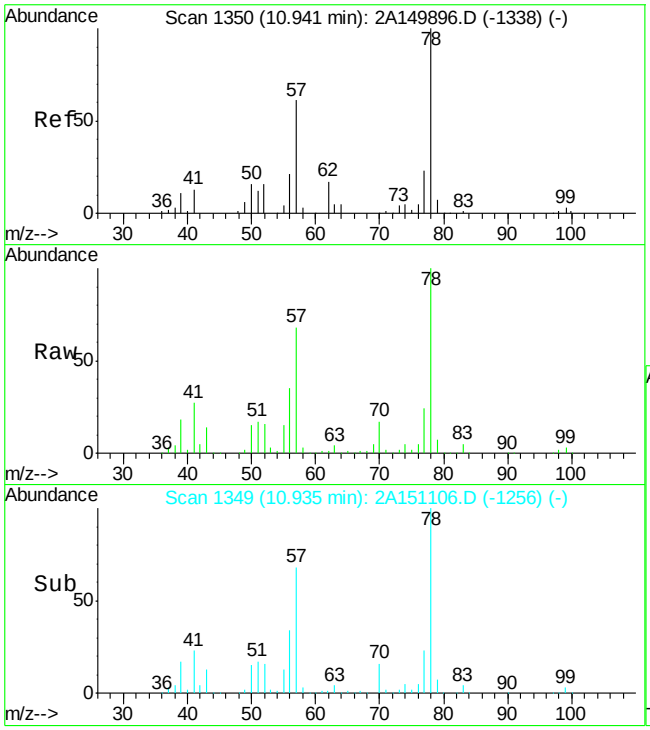


#51
Cyclohexane
Concen: 120.75 ug/L
RT: 10.56 min Scan# 1277
Delta R.T. 0.01 min
Lab File: 2A151106.D
Acq: 30 Sep 2014 7:12 pm

Tgt Ion: 84 Resp: 373176

Ion	Ratio	Lower	Upper
84	100		
56	155.5	159.1	219.1#
41	91.5	83.5	143.5

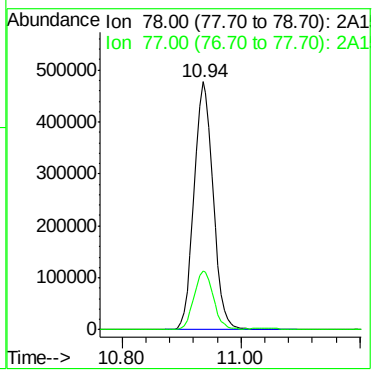


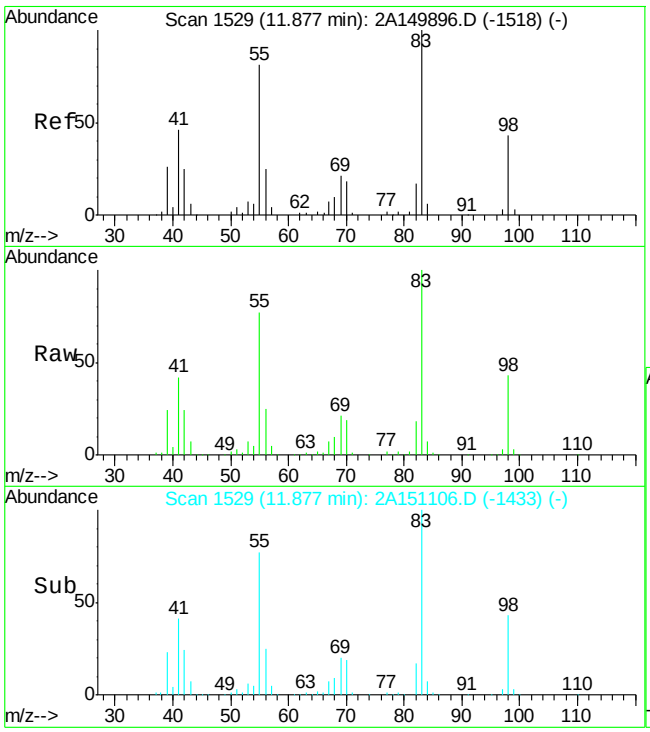


#60
benzene
Concen: 123.81 ug/L
RT: 10.94 min Scan# 1349
Delta R.T. -0.01 min
Lab File: 2A151106.D
Acq: 30 Sep 2014 7:12 pm

Tgt Ion: 78 Resp: 1066773

Ion	Ratio	Lower	Upper
78	100		
77	23.6	0.0	53.2

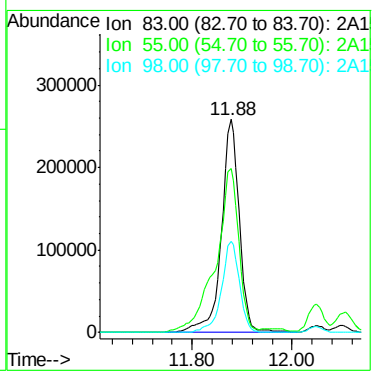




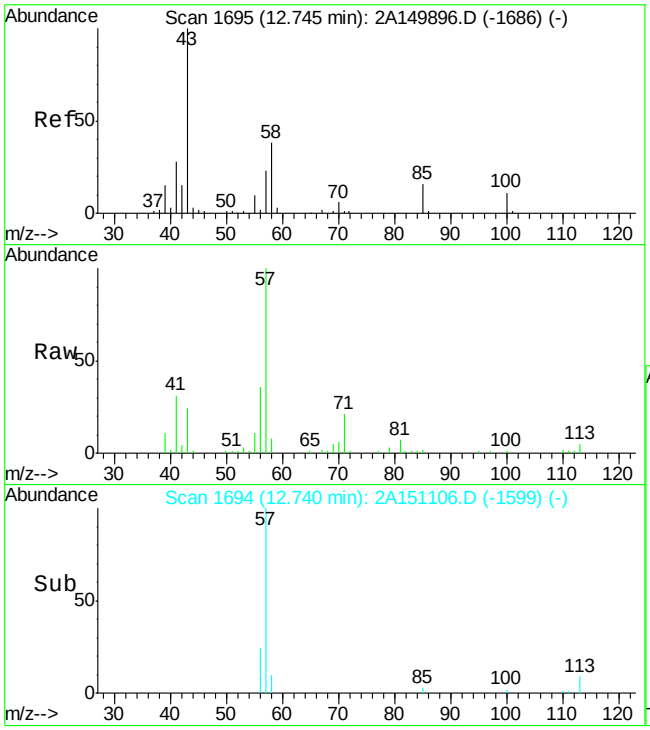
#73
methylcyclohexane
Concen: 201.88 ug/L
RT: 11.88 min Scan# 1529
Delta R.T. 0.00 min
Lab File: 2A151106.D
Acq: 30 Sep 2014 7:12 pm

Tgt Ion: 83 Resp: 644366

Ion	Ratio	Lower	Upper
83	100		
55	76.7	50.8	110.8
98	42.8	13.1	73.1



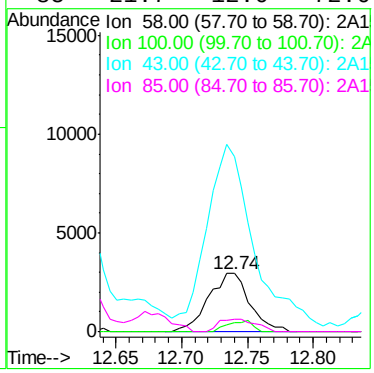
ACCUTEST LABORATORIES JB77674

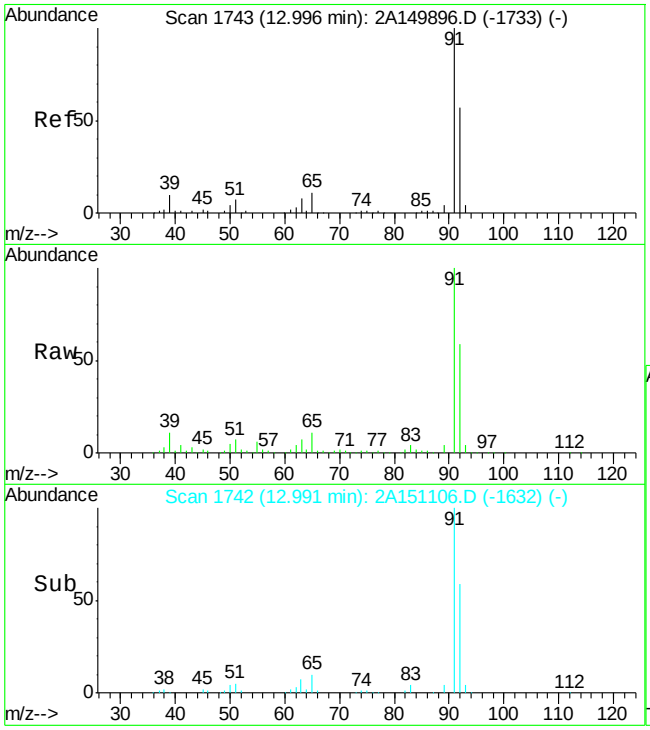


#77
4-methyl-2-pentanone
Concen: 8.59 ug/L
RT: 12.74 min Scan# 1694
Delta R.T. -0.01 min
Lab File: 2A151106.D
Acq: 30 Sep 2014 7:12 pm

Tgt Ion: 58 Resp: 6403

Ion	Ratio	Lower	Upper
58	100		
100	14.9	0.2	60.2
43	268.6	234.6	294.6
85	21.7	12.0	72.0

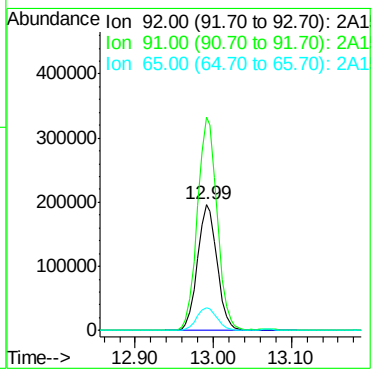


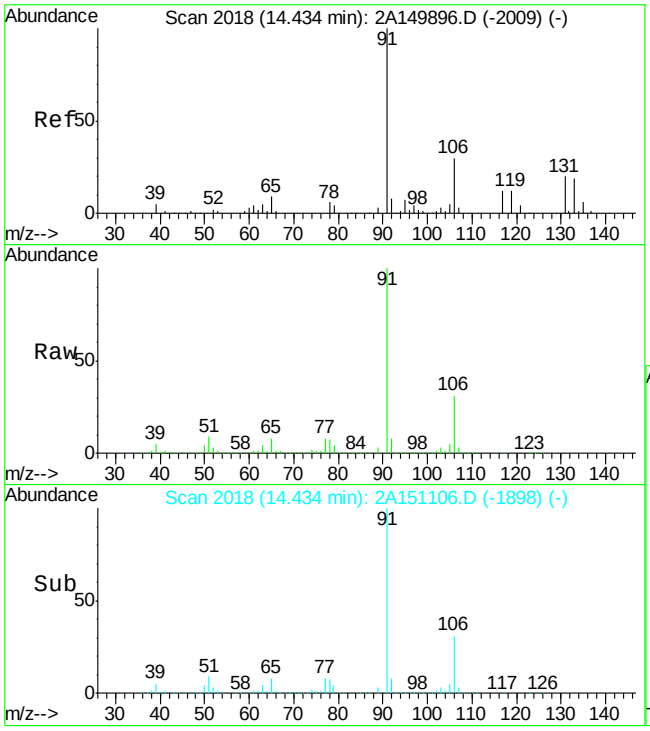


#78
toluene
Concen: 70.95 ug/L
RT: 12.99 min Scan# 1742
Delta R.T. -0.01 min
Lab File: 2A151106.D
Acq: 30 Sep 2014 7:12 pm

Tgt Ion: 92 Resp: 339015

Ion	Ratio	Lower	Upper
92	100		
91	168.9	144.0	204.0
65	18.1	0.0	49.1

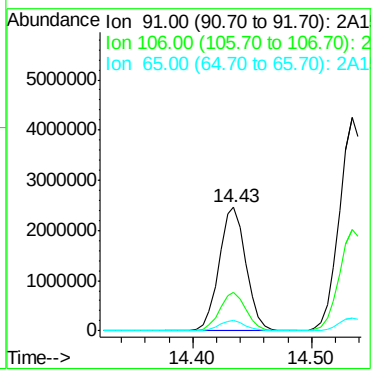


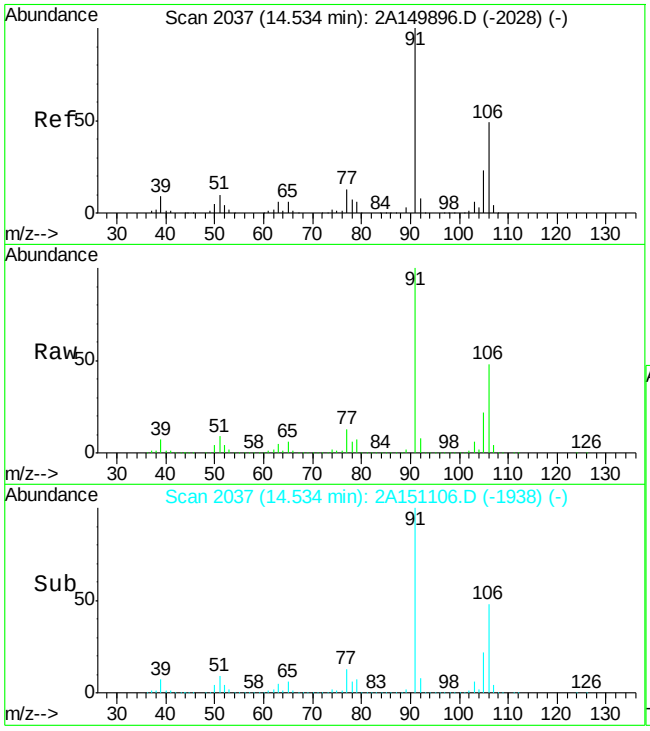


#93
ethylbenzene
Concen: 406.19 ug/L
RT: 14.43 min Scan# 2018
Delta R.T. 0.00 min
Lab File: 2A151106.D
Acq: 30 Sep 2014 7:12 pm

Tgt Ion: 91 Resp: 3873123

Ion	Ratio	Lower	Upper
91	100		
106	30.8	0.1	60.1
65	8.3	0.0	38.7

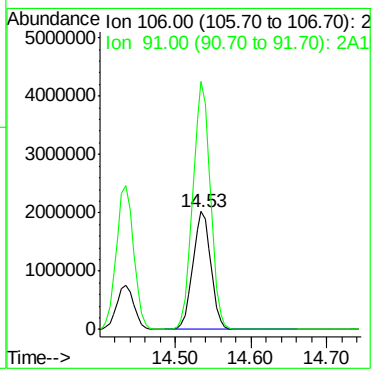


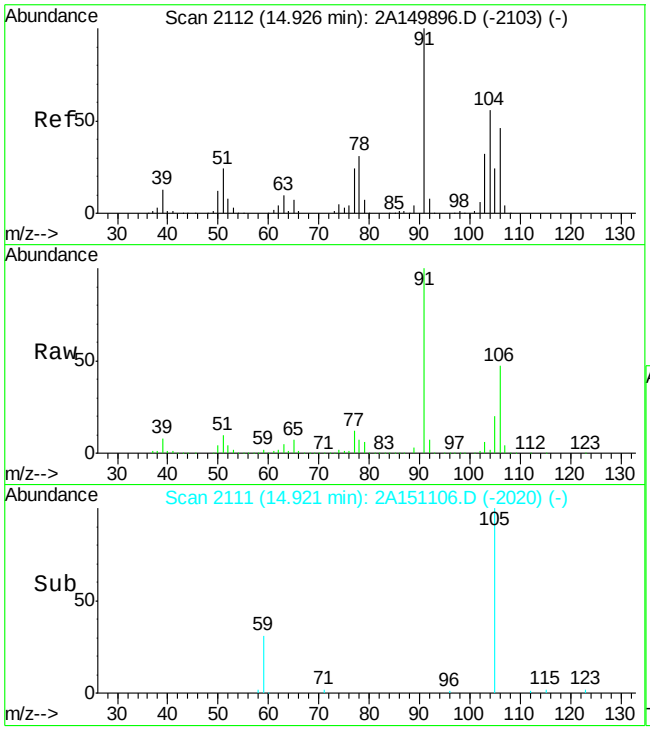


#94
m,p-xylene
Concen: 923.56 ug/L
RT: 14.53 min Scan# 2037
Delta R.T. 0.00 min
Lab File: 2A151106.D
Acq: 30 Sep 2014 7:12 pm

Tgt Ion:106 Resp: 3290064

Ion	Ratio	Lower	Upper
106	100		
91	210.0	174.8	234.8

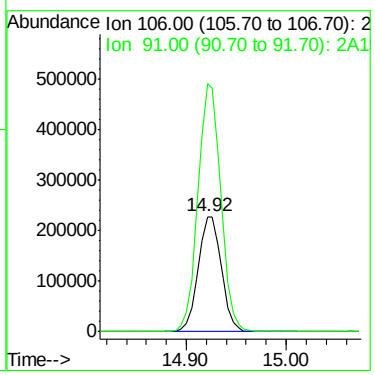


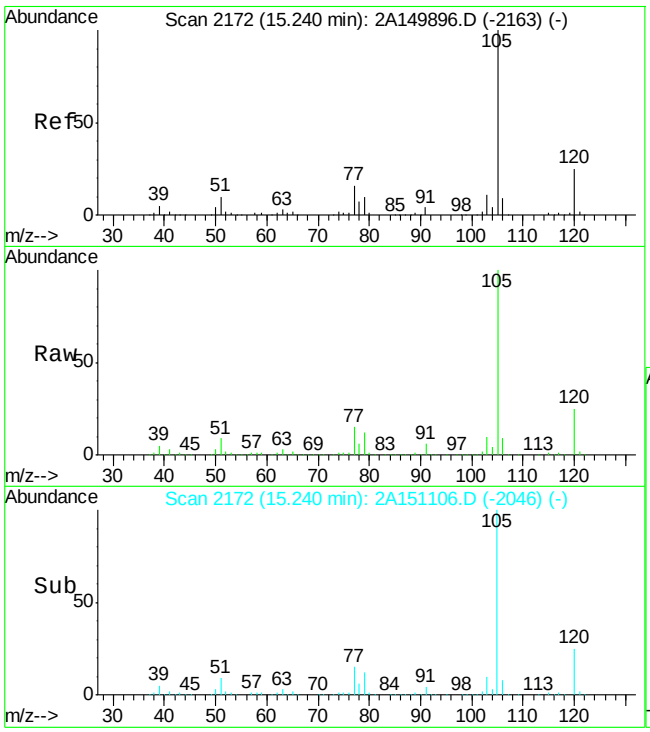


#95
o-xylene
Concen: 100.06 ug/L
RT: 14.92 min Scan# 2111
Delta R.T. -0.01 min
Lab File: 2A151106.D
Acq: 30 Sep 2014 7:12 pm

Tgt Ion:106 Resp: 365449

Ion	Ratio	Lower	Upper
106	100		
91	214.7	187.2	247.2

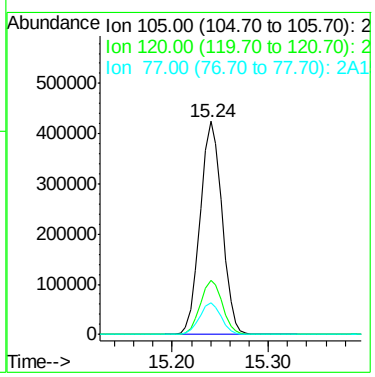




#99
isopropylbenzene
Concen: 67.60 ug/L
RT: 15.24 min Scan# 2172
Delta R.T. 0.00 min
Lab File: 2A151106.D
Acq: 30 Sep 2014 7:12 pm

Tgt Ion:105 Resp: 671590

Ion	Ratio	Lower	Upper
105	100		
120	25.2	0.0	54.6
77	14.8	0.0	45.6



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\
Data File : 2A151106.D
Acq On : 30 Sep 2014 7:12 pm
Operator : Dejanas
Sample : jb77674-11
Misc : MS74595,V2A6440,w,,,,1
ALS Vial : 13 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2A6388.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.528	109	124	156	rBV3	113301	589945	1.80%	0.235%
2	4.863	173	188	234	rVB2	284625	1639537	5.01%	0.652%
3	5.909	354	388	440	rBV	2024744	10021162	30.64%	3.986%
4	6.343	455	471	505	rVB2	760947	3668391	11.21%	1.459%
5	6.589	505	518	537	rBV	232771	710124	2.17%	0.282%
6	6.793	537	557	568	rBV2	91441	293737	0.90%	0.117%
7	6.903	568	578	605	rVB2	145394	509372	1.56%	0.203%
8	7.185	605	632	658	rBV2	165076	697907	2.13%	0.278%
9	7.808	730	751	758	rBV6	55625	282945	0.87%	0.113%
10	7.944	758	777	793	rBV2	2098938	9561766	29.23%	3.803%
11	8.074	793	802	831	rVB5	278613	1572042	4.81%	0.625%
12	8.352	835	855	891	rBV	1328340	5354901	16.37%	2.130%
13	8.728	914	927	945	rVB	888004	2526791	7.72%	1.005%
14	8.869	945	954	962	rBV2	71080	184939	0.57%	0.074%
15	8.958	962	971	977	rBV	151654	378355	1.16%	0.150%
16	9.026	977	984	997	rVB	179793	493963	1.51%	0.196%
17	9.157	997	1009	1019	rBV	115773	339515	1.04%	0.135%
18	9.256	1019	1028	1042	rBV3	77215	329698	1.01%	0.131%
19	9.382	1042	1052	1061	rBV3	173053	499217	1.53%	0.199%
20	9.487	1061	1072	1090	rVB	316692	1050747	3.21%	0.418%
21	9.659	1090	1105	1149	rVB	2106712	6932066	21.19%	2.757%
22	10.125	1173	1194	1204	rBV5	86007	351493	1.07%	0.140%
23	10.240	1204	1216	1233	rVB6	101728	473627	1.45%	0.188%
24	10.386	1233	1244	1259	rBV2	1025780	3153521	9.64%	1.254%
25	10.533	1259	1272	1282	rBV6	961851	3866896	11.82%	1.538%
26	10.616	1282	1288	1305	rVB	905758	2461166	7.52%	0.979%
27	10.763	1305	1316	1322	rBV2	79109	215229	0.66%	0.086%
28	10.867	1322	1336	1340	rBV3	140667	456187	1.39%	0.181%
29	10.941	1340	1350	1360	rBV2	2109663	5632115	17.22%	2.240%
30	11.024	1360	1366	1373	rVB2	306697	675468	2.07%	0.269%
31	11.098	1373	1380	1399	rVB5	386350	1547435	4.73%	0.616%
32	11.281	1407	1415	1418	rBV2	186925	379749	1.16%	0.151%
33	11.322	1418	1423	1432	rVB	404622	859876	2.63%	0.342%
34	11.464	1444	1450	1459	rVB	92629	200844	0.61%	0.080%

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\
Data File : 2A151106.D
Acq On : 30 Sep 2014 7:12 pm
Operator : Dejanas
Sample : jb77674-11
Misc : MS74595,V2A6440,w,,,,1
ALS Vial : 13 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2A6388.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

35	11.563	1459	1469	1480	rBV2	116771	297777	0.91%	0.118%
36	11.772	1499	1509	1513	rBV2	141364	338146	1.03%	0.135%
37	11.877	1513	1529	1539	rVB2	1186984	3959871	12.11%	1.575%
38	11.955	1539	1544	1554	rVB	80969	197489	0.60%	0.079%
39	12.049	1554	1562	1568	rBV	357281	750221	2.29%	0.298%
40	12.102	1568	1572	1582	rVB3	109712	239680	0.73%	0.095%
41	12.259	1590	1602	1617	rBV2	746754	1873618	5.73%	0.745%
42	12.405	1617	1630	1652	rVB2	1160239	3184401	9.74%	1.267%
43	12.572	1652	1662	1685	rVB4	263731	827498	2.53%	0.329%
44	12.729	1685	1692	1697	rBV2	116581	245993	0.75%	0.098%
45	12.782	1697	1702	1709	rVB	164678	311062	0.95%	0.124%
46	12.865	1709	1718	1723	rBV	204563	468070	1.43%	0.186%
47	12.923	1723	1729	1736	rVB	491999	894535	2.73%	0.356%
48	12.991	1736	1742	1753	rBV	826384	1460260	4.46%	0.581%
49	13.069	1753	1757	1767	rVB	173219	333726	1.02%	0.133%
50	13.341	1797	1809	1821	rVB4	175617	615246	1.88%	0.245%
51	13.802	1893	1897	1910	rVB4	104747	231557	0.71%	0.092%
52	14.084	1941	1951	1965	rBV3	108264	263940	0.81%	0.105%
53	14.246	1973	1982	1995	rBV2	126980	277360	0.85%	0.110%
54	14.351	1995	2002	2010	rBV	482484	802244	2.45%	0.319%
55	14.434	2010	2018	2028	rVB	5471643	8634766	26.40%	3.435%
56	14.534	2028	2037	2050	rBV	11618527	18654222	57.03%	7.420%
57	14.921	2101	2111	2129	rVB	1353813	2225200	6.80%	0.885%
58	15.240	2164	2172	2180	rVB	1000578	1558732	4.77%	0.620%
59	15.433	2200	2209	2215	rBV	458598	699032	2.14%	0.278%
60	15.622	2234	2245	2251	rBV	3650665	5443598	16.64%	2.165%
61	15.690	2251	2258	2261	rBV	5694040	9610333	29.38%	3.823%
62	15.716	2261	2263	2268	rVB	5981541	6808764	20.82%	2.708%
63	15.763	2268	2272	2286	rVB	5874070	8315647	25.42%	3.308%
64	15.983	2305	2314	2327	rVB	4780338	7467651	22.83%	2.970%
65	16.134	2327	2343	2354	rBV	21412600	32709814	100.00%	13.011%
66	16.249	2360	2365	2368	rBV	279629	425587	1.30%	0.169%
67	16.286	2368	2372	2377	rVB	295033	447483	1.37%	0.178%
68	16.338	2377	2382	2388	rBV	517841	764046	2.34%	0.304%
69	16.396	2388	2393	2400	rVB	193133	286813	0.88%	0.114%
70	16.542	2410	2421	2430	rBV	5354268	8847170	27.05%	3.519%
71	16.668	2438	2445	2448	rBV	2275122	3922401	11.99%	1.560%

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\
Data File : 2A151106.D
Acq On : 30 Sep 2014 7:12 pm
Operator : Dejanas
Sample : jb77674-11
Misc : MS74595,V2A6440,w,,,,1
ALS Vial : 13 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2A6388.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

72	16.694	2448	2450	2454	rVB	1552451	1531720	4.68%	0.609%
73	16.741	2454	2459	2462	rBV3	3083209	5550394	16.97%	2.208%
74	16.882	2478	2486	2493	rVB	330951	524525	1.60%	0.209%
75	16.950	2493	2499	2505	rVV	1091147	1681194	5.14%	0.669%
76	17.013	2505	2511	2515	rVV	2068086	3422244	10.46%	1.361%
77	17.050	2515	2518	2524	rVV	1699105	2411810	7.37%	0.959%
78	17.118	2524	2531	2544	rVB	4657187	7043362	21.53%	2.802%
79	17.222	2544	2551	2556	rBV2	539798	954525	2.92%	0.380%
80	17.290	2556	2564	2581	rVV2	1131108	2367356	7.24%	0.942%
81	17.437	2581	2592	2599	rVV	820291	1365319	4.17%	0.543%
82	17.510	2599	2606	2611	rVV	2008621	3134592	9.58%	1.247%
83	17.567	2611	2617	2628	rVV	2047629	3858945	11.80%	1.535%
84	17.641	2628	2631	2635	rVV	137868	190770	0.58%	0.076%
85	17.766	2650	2655	2660	rVV3	148786	259972	0.79%	0.103%
86	17.876	2666	2676	2687	rVV2	1294059	2655364	8.12%	1.056%
87	18.007	2687	2701	2705	rVV	843546	1688908	5.16%	0.672%
88	18.054	2705	2710	2718	rVV	1960081	3115203	9.52%	1.239%
89	18.247	2738	2747	2751	rBV4	211321	418791	1.28%	0.167%
90	18.336	2758	2764	2773	rVV3	481246	1200152	3.67%	0.477%
91	18.404	2773	2777	2783	rVV	172698	293387	0.90%	0.117%
92	18.467	2783	2789	2792	rVV	171601	307840	0.94%	0.122%
93	18.509	2792	2797	2807	rVV	266389	520621	1.59%	0.207%
94	18.760	2837	2845	2857	rBV	1475371	2501861	7.65%	0.995%
95	18.849	2857	2862	2868	rVV2	120331	216550	0.66%	0.086%
96	18.932	2868	2878	2889	rVB2	99093	242594	0.74%	0.096%
97	19.063	2889	2903	2918	rVB	150140	295688	0.90%	0.118%
98	19.272	2937	2943	2958	rVV	113784	254222	0.78%	0.101%
99	19.905	3054	3064	3083	rBV	434097	720977	2.20%	0.287%
100	20.114	3097	3104	3116	rVV	217516	368548	1.13%	0.147%

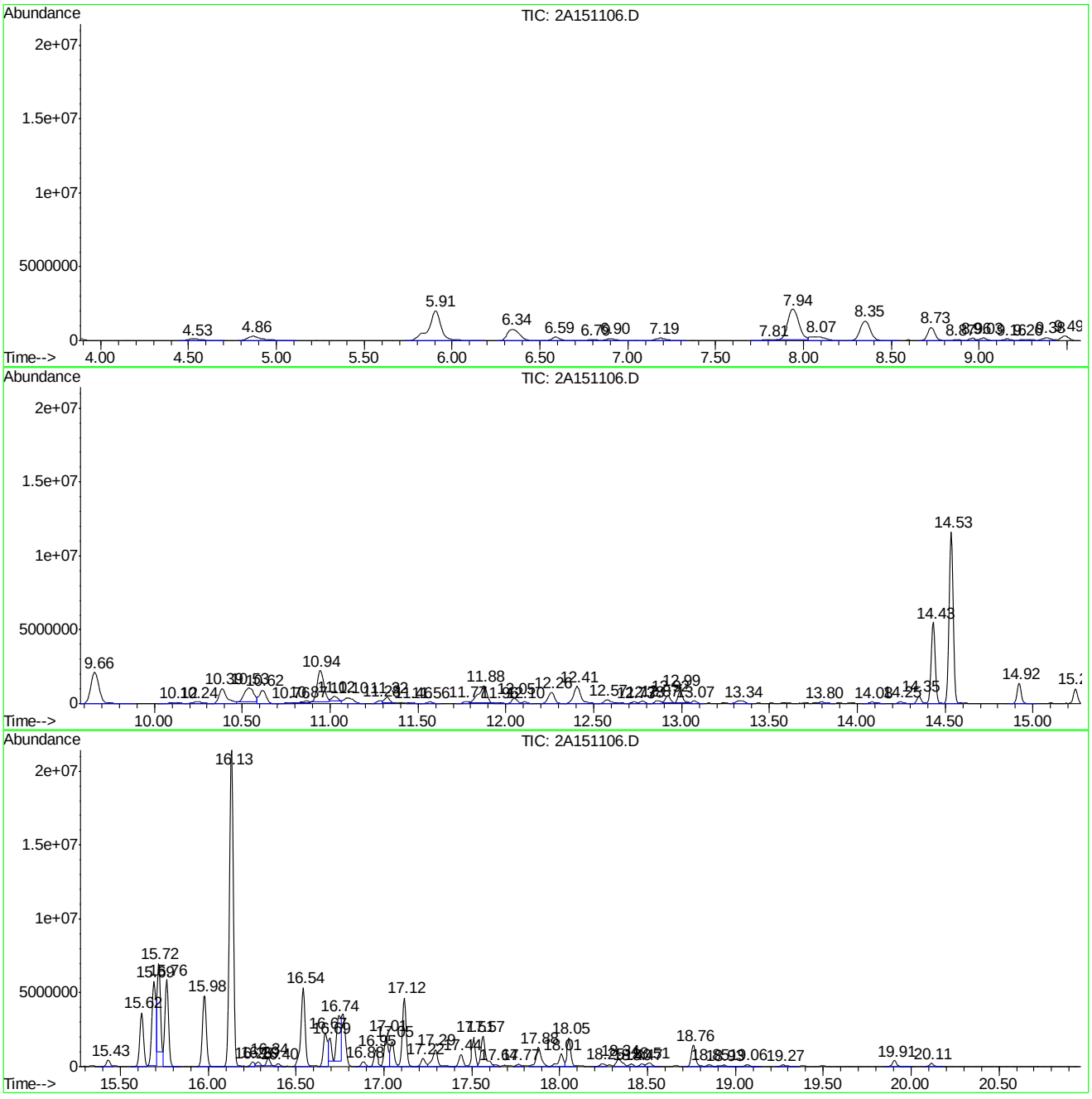
Sum of corrected areas: 251402113

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\
Data File : 2A151106.D
Acq On : 30 Sep 2014 7:12 pm
Operator : Dejanas
Sample : jb77674-11
Misc : MS74595,V2A6440,w,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A6388.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\
Data File : 2A151106.D
Acq On : 30 Sep 2014 7:12 pm
Operator : Dejanas
Sample : jb77674-11
Misc : MS74595,V2A6440,w,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A6388.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

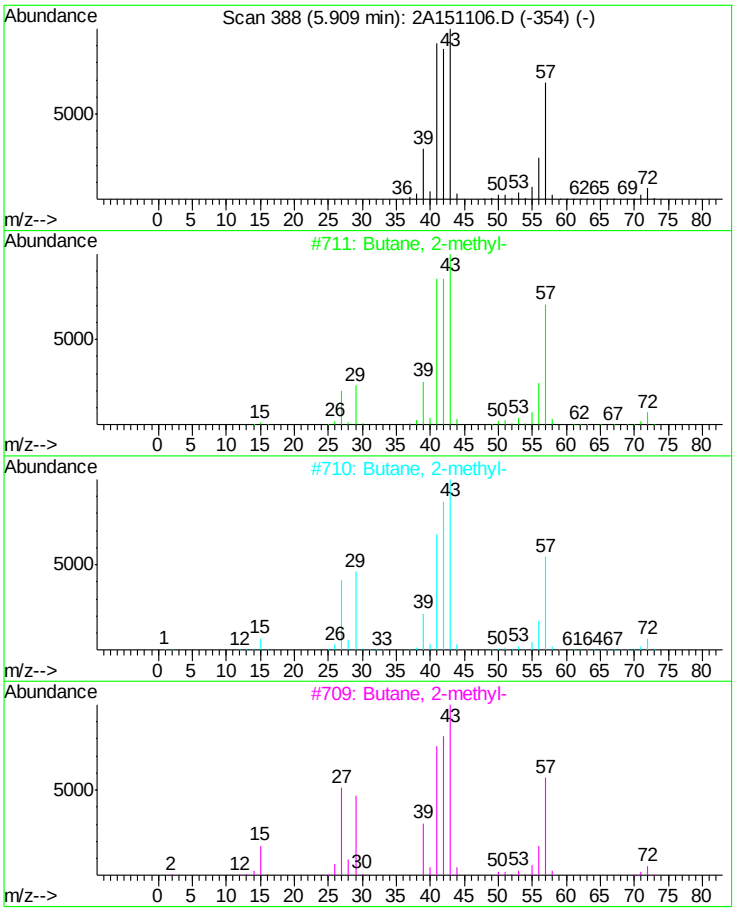
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: LSCINT.P

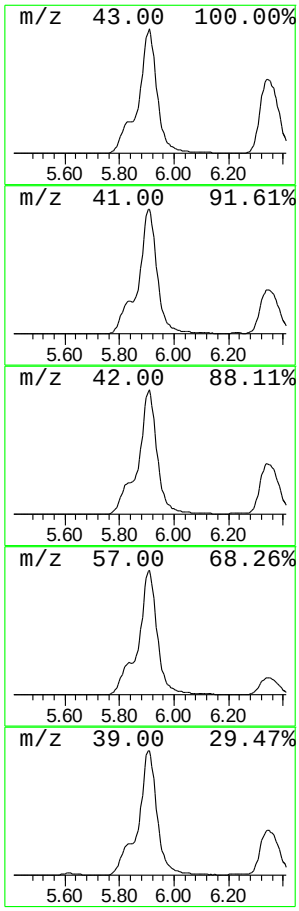
****

Peak Number 1 alkane Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.91	158.89 ug/L	10021200	pentafluorobenzene	10.39

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	94
2	Butane, 2-methyl-	72	C5H12	000078-78-4	91
3	Butane, 2-methyl-	72	C5H12	000078-78-4	90
4	3-Buten-1-ol	72	C4H8O	000627-27-0	47
5	Pentane	72	C5H12	000109-66-0	36





Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\
Data File : 2A151106.D
Acq On : 30 Sep 2014 7:12 pm
Operator : Dejanas
Sample : jb77674-11
Misc : MS74595,V2A6440,w,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A6388.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

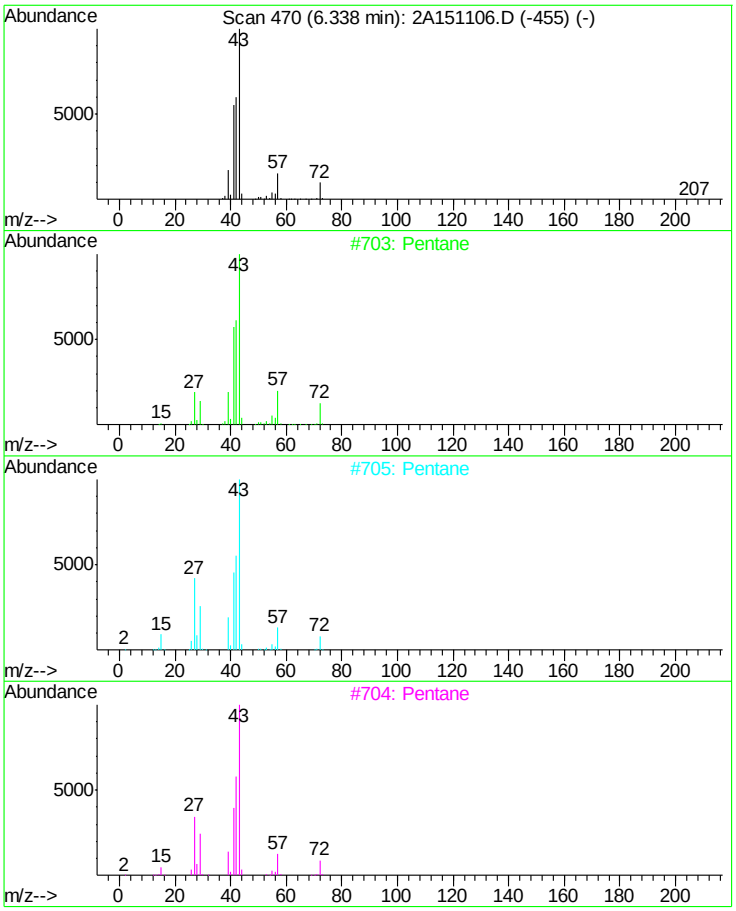
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: LSCINT.P

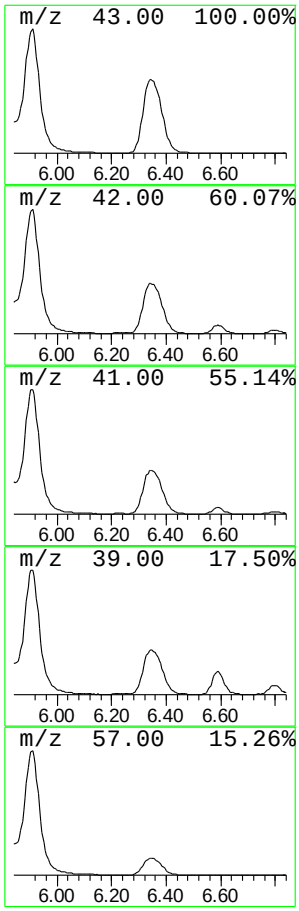
****

Peak Number 2 alkane-Pentane Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.34	58.16 ug/L	3668390	pentafluorobenzene	10.39

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	91
2	Pentane	72	C5H12	000109-66-0	90
3	Pentane	72	C5H12	000109-66-0	86
4	Pentane	72	C5H12	000109-66-0	78
5	Butane, 2-methyl-	72	C5H12	000078-78-4	53





Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\
Data File : 2A151106.D
Acq On : 30 Sep 2014 7:12 pm
Operator : Dejanas
Sample : jb77674-11
Misc : MS74595,V2A6440,w,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A6388.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

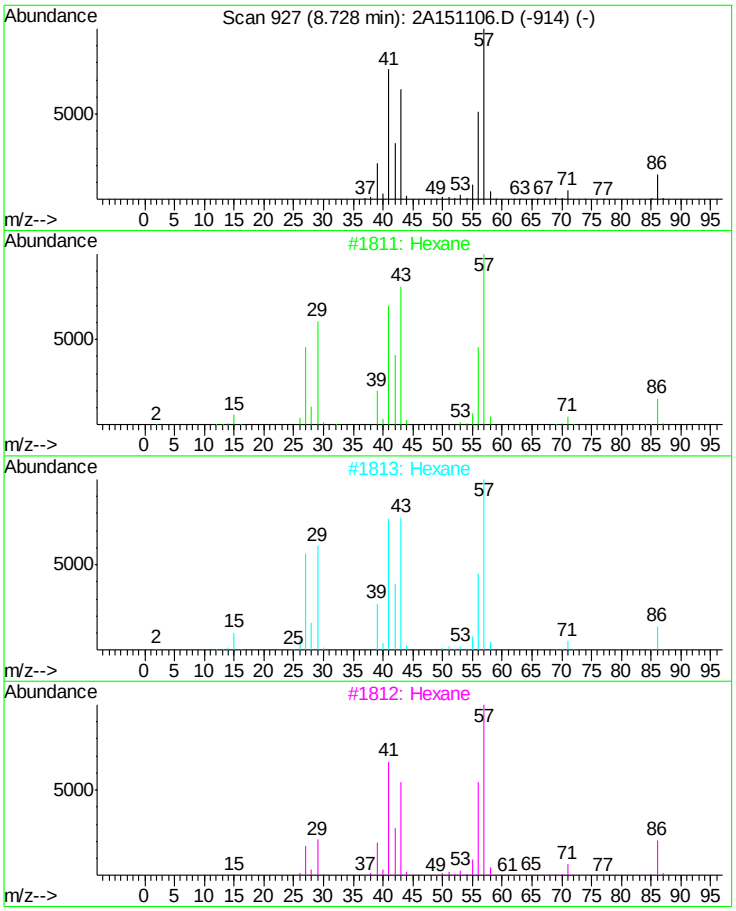
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: LSCINT.P

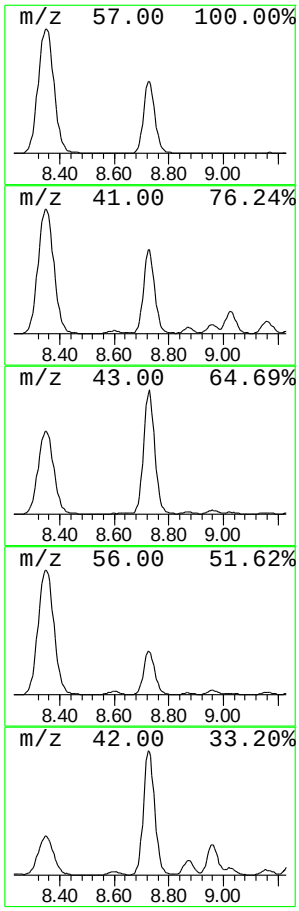
****

Peak Number 3 alkane-Hexane Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.73	40.06 ug/L	2526790	pentafluorobenzene	10.39

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexane	86	C6H14	000110-54-3	91
2	Hexane	86	C6H14	000110-54-3	91
3	Hexane	86	C6H14	000110-54-3	91
4	Pentane, 2,2,3,4-tetramethyl-	128	C9H20	001186-53-4	40
5	Butanal, 2-methyl-	86	C5H10O	000096-17-3	38





Library Search Compound Report

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Acq On : 30 Sep 2014 7:12 pm
Operator : Dejanas
Sample : jb77674-11
Misc : MS74595,V2A6440,w,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A6388.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: LSCINT.P

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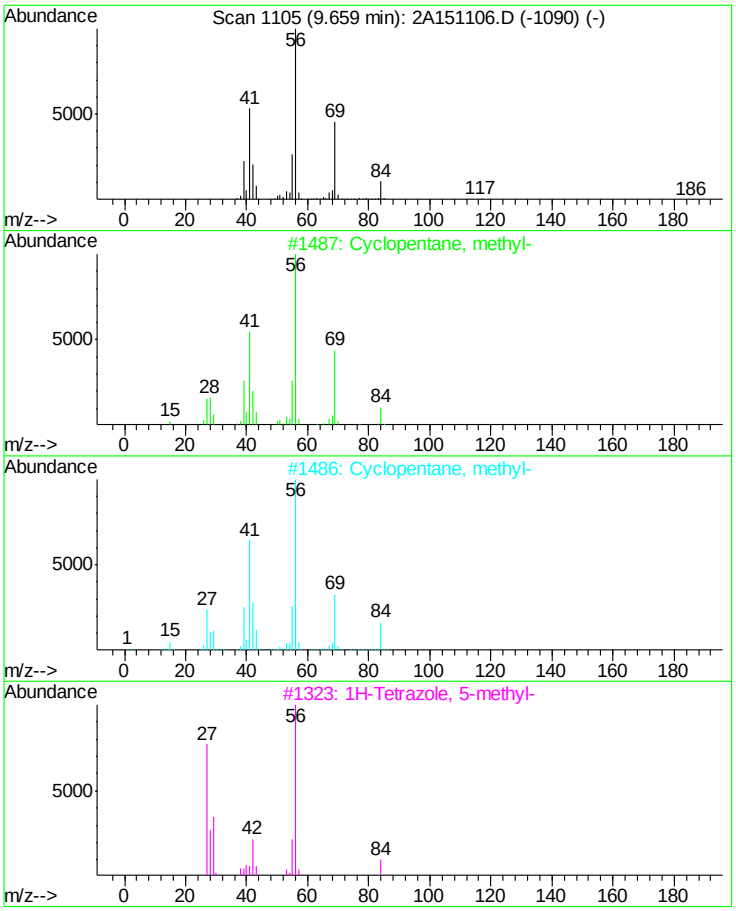
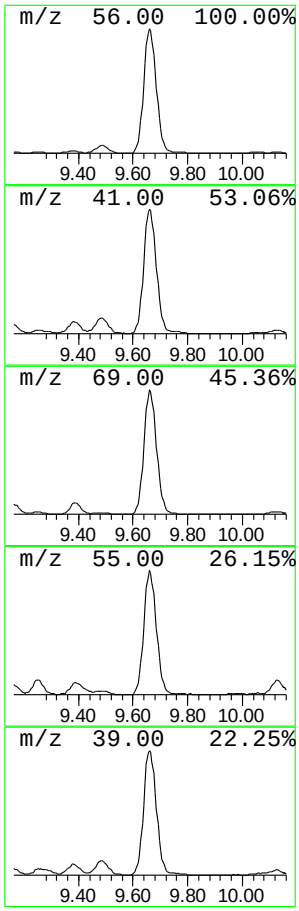
Peak Number 4 alkene Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.66	109.91 ug/L	6932070	pentafluorobenzene	10.39

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	94
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	91
3	1H-Tetrazole, 5-methyl-	84	C2H4N4	004076-36-2	80
4	Cyclopentane, methyl-	84	C6H12	000096-37-7	78
5	Cyclobutane, butyl-	112	C8H16	013152-44-8	64





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ALS Vial : 13 Sample Multiplier: 1

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Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: LSCINT.P

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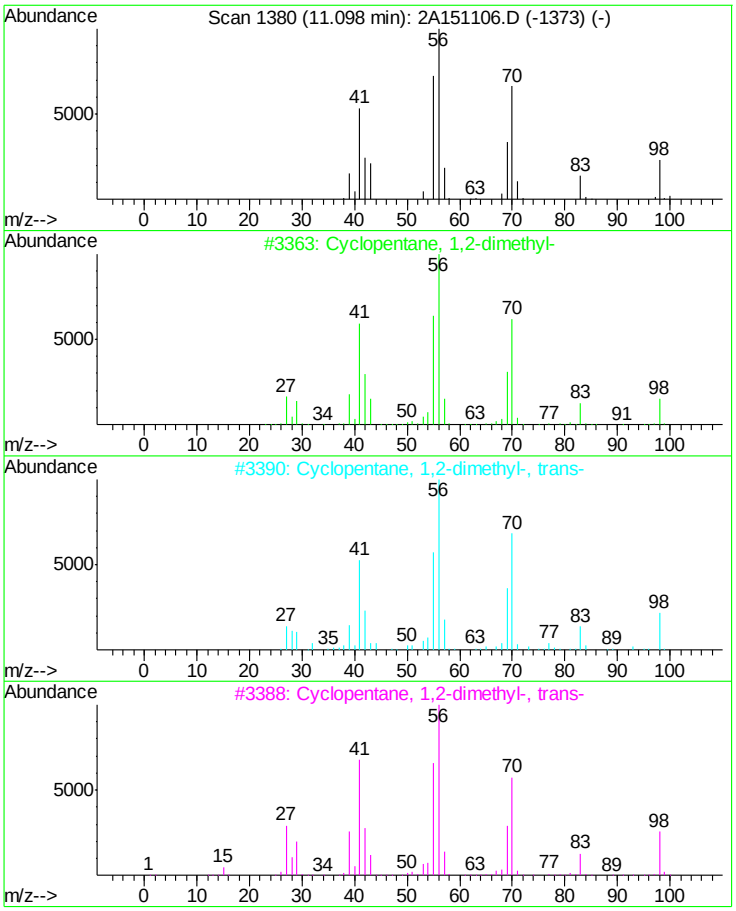
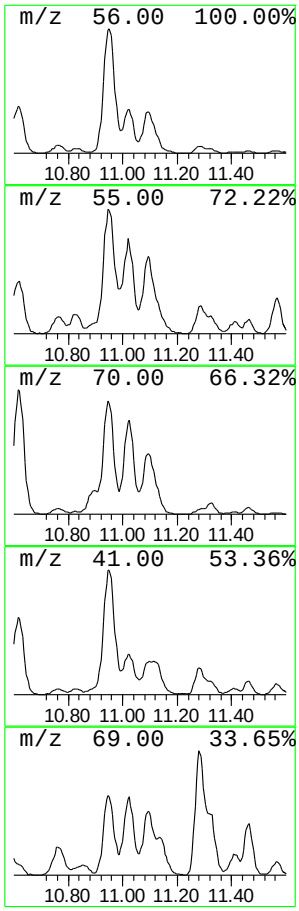
Peak Number 6 alkene Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.10	89.98 ug/L	1547440	1,4-difluorobenzene	11.32

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, 1,2-dimethyl-	98	C7H14	002452-99-5	91
2	Cyclopentane, 1,2-dimethyl-, trans-	98	C7H14	000822-50-4	90
3	Cyclopentane, 1,2-dimethyl-, trans-	98	C7H14	000822-50-4	87
4	Isopropylcyclobutane	98	C7H14	000872-56-0	86
5	Cyclopentane, 1,3-dimethyl-, cis-	98	C7H14	002532-58-3	72





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Misc : MS74595,V2A6440,w,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A6388.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: LSCINT.P

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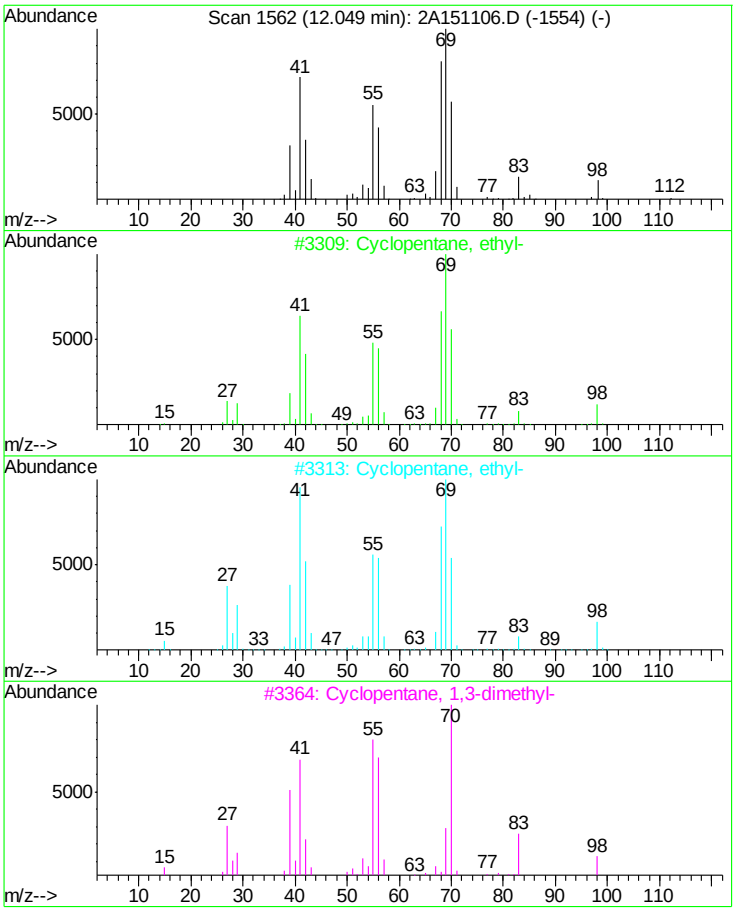
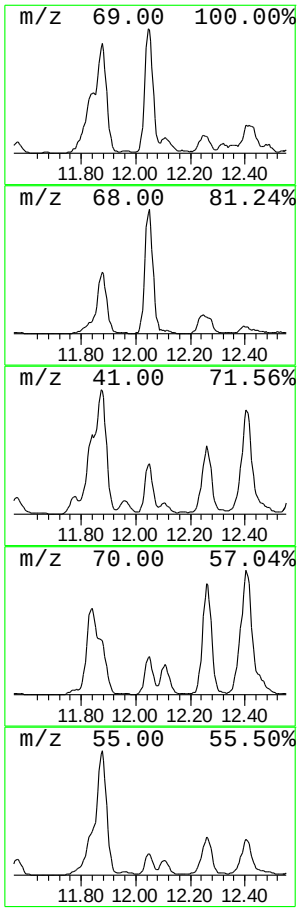
Peak Number 7 alkene Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.05	43.62 ug/L	750221	1,4-difluorobenzene	11.32

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, ethyl-	98	C7H14	001640-89-7	97
2	Cyclopentane, ethyl-	98	C7H14	001640-89-7	91
3	Cyclopentane, 1,3-dimethyl-	98	C7H14	002453-00-1	46
4	(R)-(+)-3-Methylcyclopentanone	98	C6H10O	006672-30-6	43
5	3-Hexene, 2-methyl-, (E)-	98	C7H14	000692-24-0	43





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ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A6388.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: LSCINT.P

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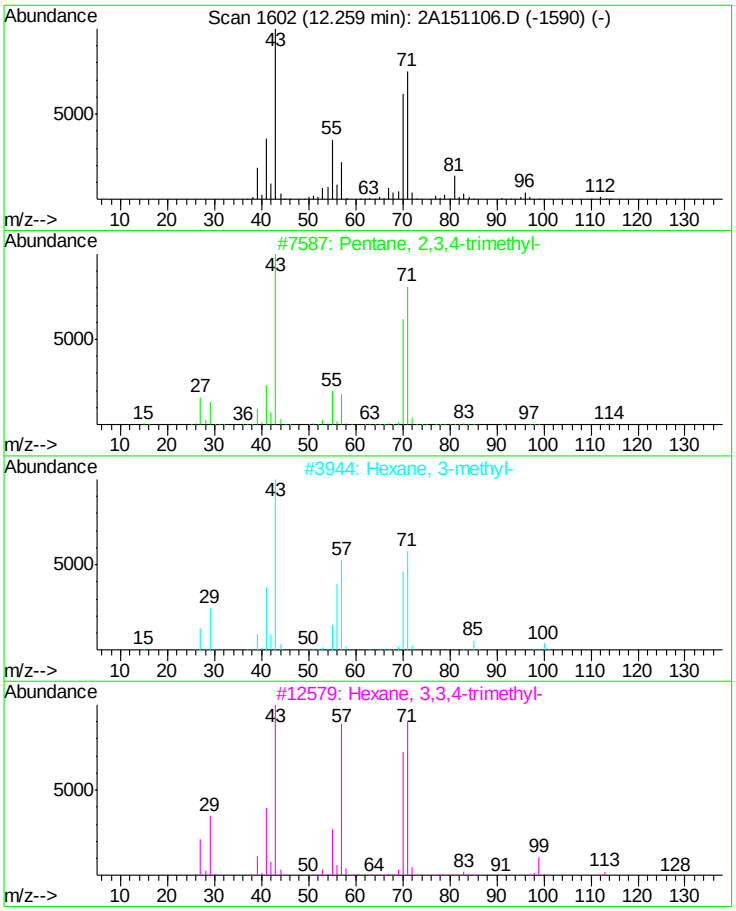
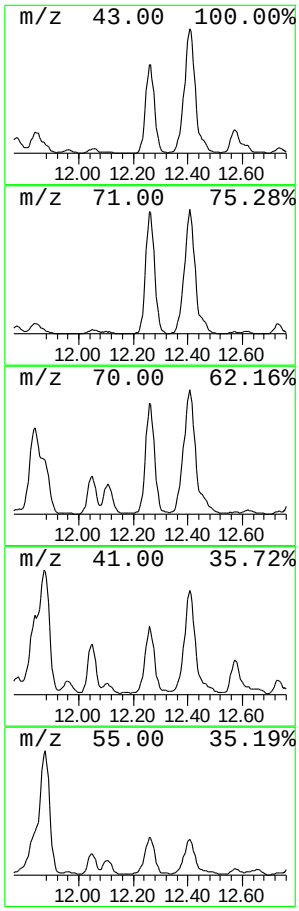
Peak Number 8 alkane Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.26	108.95 ug/L	1873620	1,4-difluorobenzene	11.32

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	72
2	Hexane, 3-methyl-	100	C7H16	000589-34-4	72
3	Hexane, 3,3,4-trimethyl-	128	C9H20	016747-31-2	72
4	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	72
5	Heptane, 4-methyl-	114	C8H18	000589-53-7	72





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ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A6388.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: LSCINT.P

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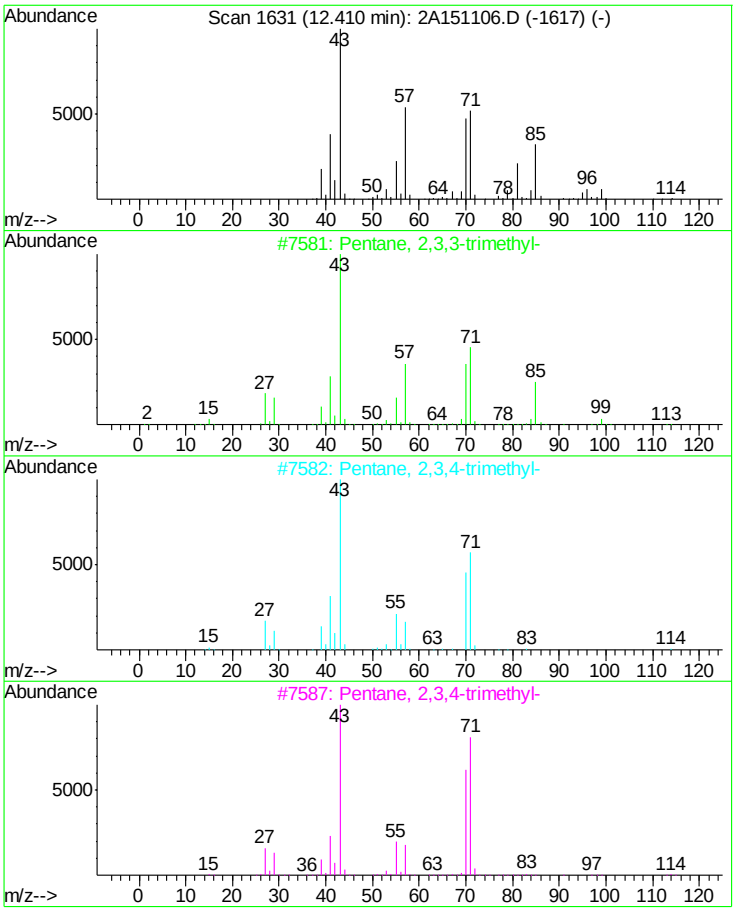
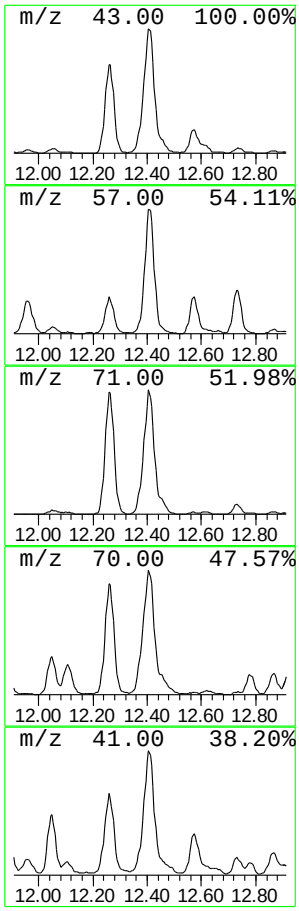
Peak Number 9 alkane Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.41	185.17 ug/L	3184400	1,4-difluorobenzene	11.32

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	86
2	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	68
3	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	64
4	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	64
5	Hexane, 3-methyl-	100	C7H16	000589-34-4	64





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Misc : MS74595,V2A6440,w,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A6388.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: LSCINT.P

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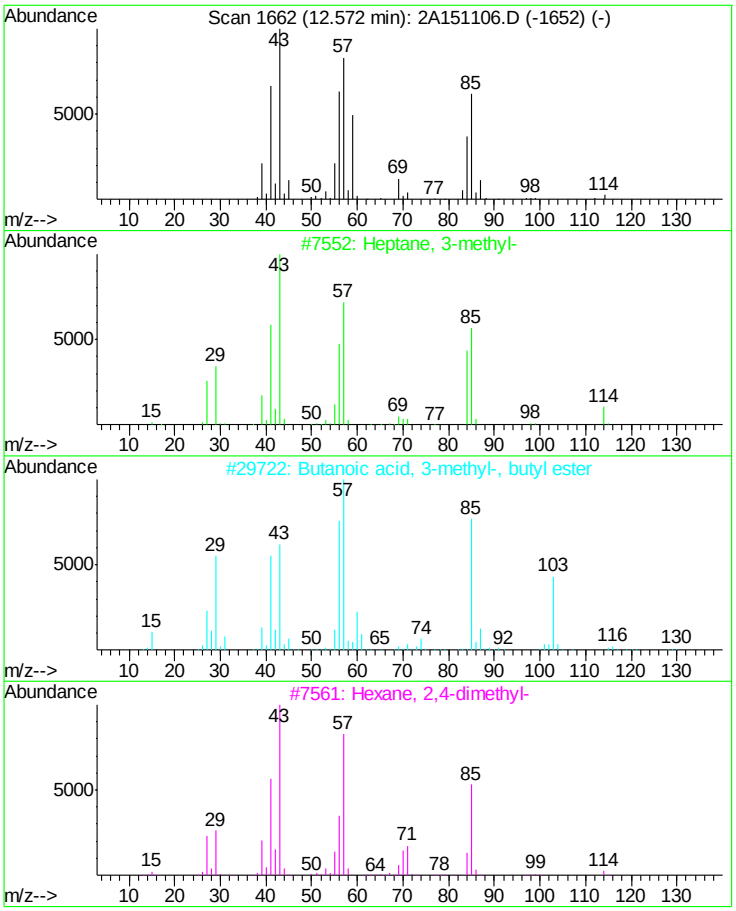
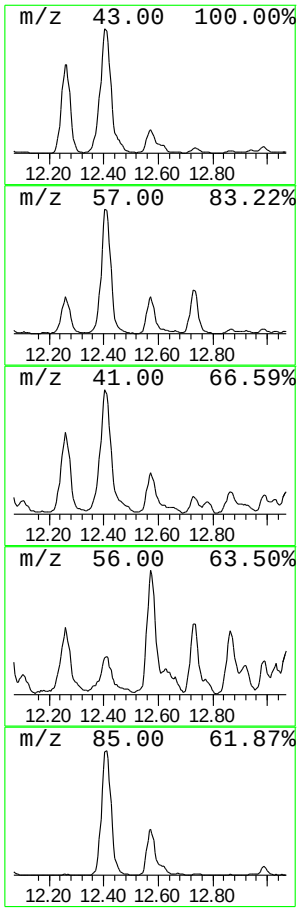
Peak Number 10 alkane Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.57	48.12 ug/L	827498	1,4-difluorobenzene	11.32

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptane, 3-methyl-	114	C8H18	000589-81-1	50
2	Butanoic acid, 3-methyl-, butyl ...	158	C9H18O2	000109-19-3	47
3	Hexane, 2,4-dimethyl-	114	C8H18	000589-43-5	46
4	Heptane, 3-methyl-	114	C8H18	000589-81-1	46
5	Hexane, 2,4-dimethyl-	114	C8H18	000589-43-5	43





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ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A6388.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: LSCINT.P

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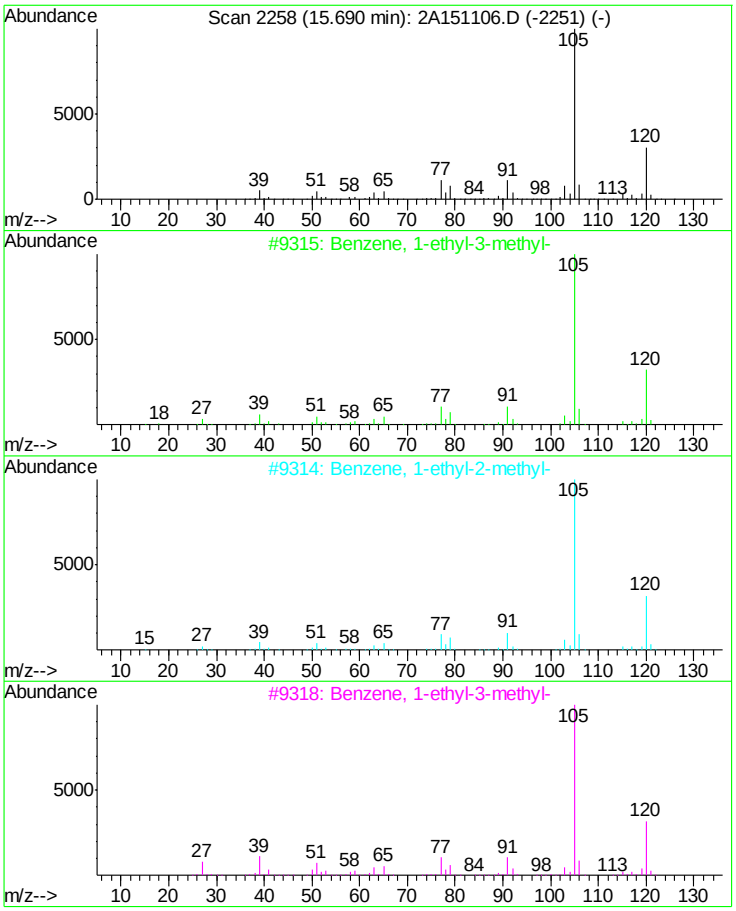
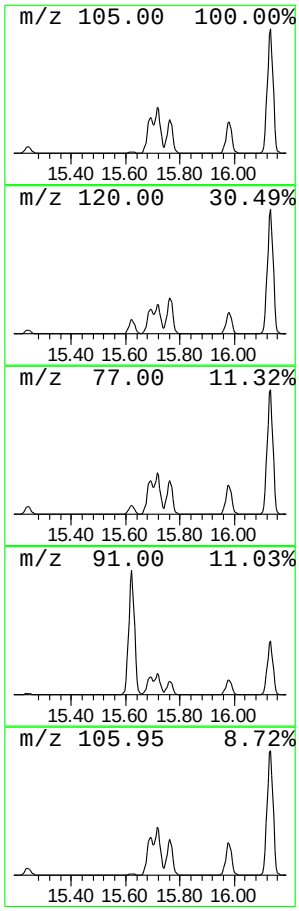
Peak Number 11 C3 alkyl benzene Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.69	54.31 ug/L	9610330	1,4-dichlorobenzene-d4	16.52

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
3	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	95
4	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91





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ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A6388.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: LSCINT.P

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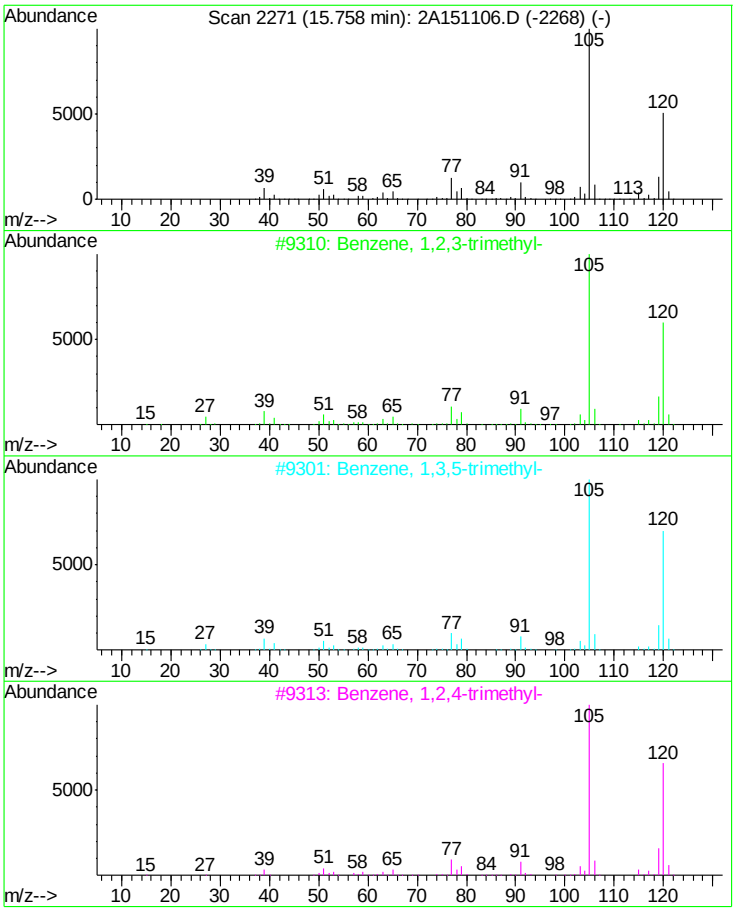
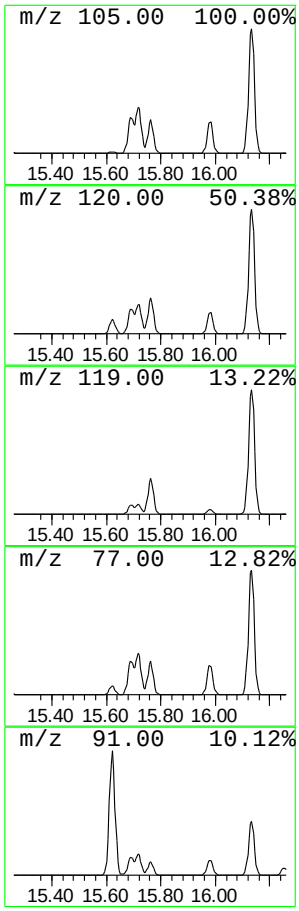
Peak Number 12 Benzene, 1,3,5-trimethyl- Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.76	47.00 ug/L	8315650	1,4-dichlorobenzene-d4	16.52

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	97
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
5	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94





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ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A6388.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: LSCINT.P

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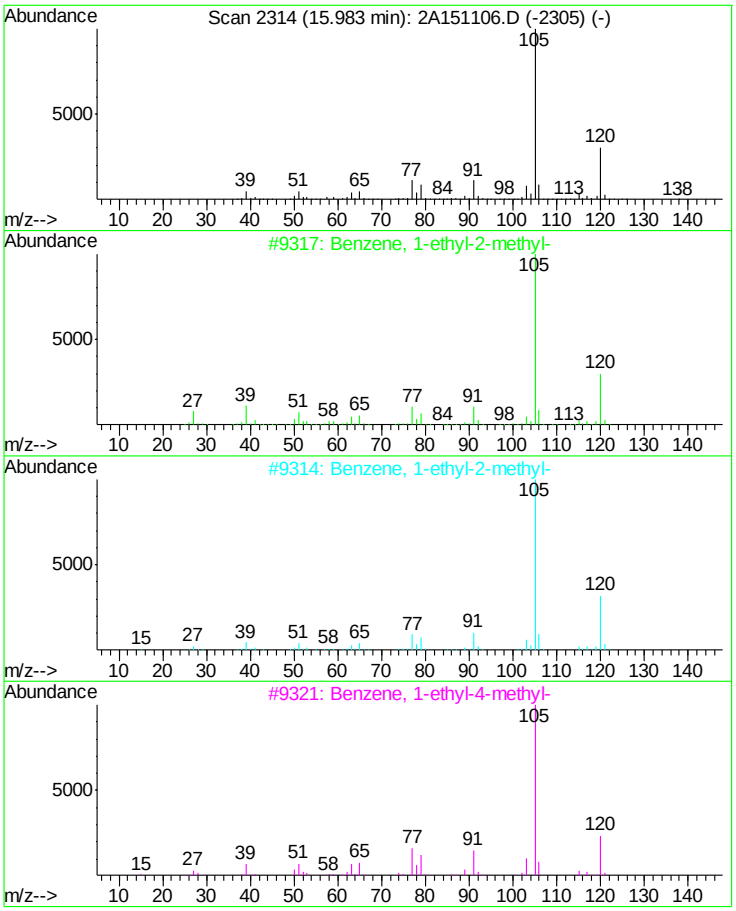
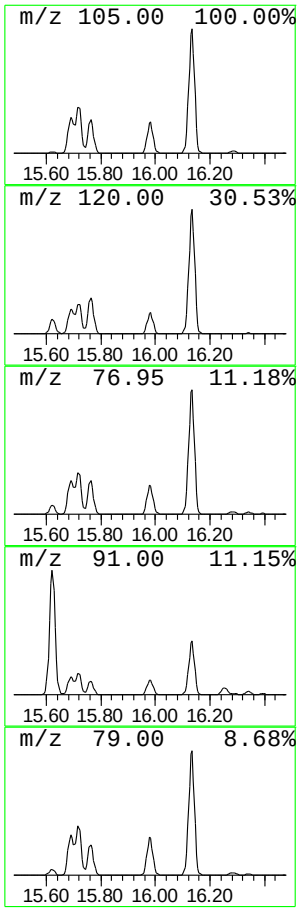
Peak Number 13 C3 alkyl benzene Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.98	42.20 ug/L	7467650	1,4-dichlorobenzene-d4	16.52

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	93
4	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91
5	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91





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ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A6388.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: LSCINT.P

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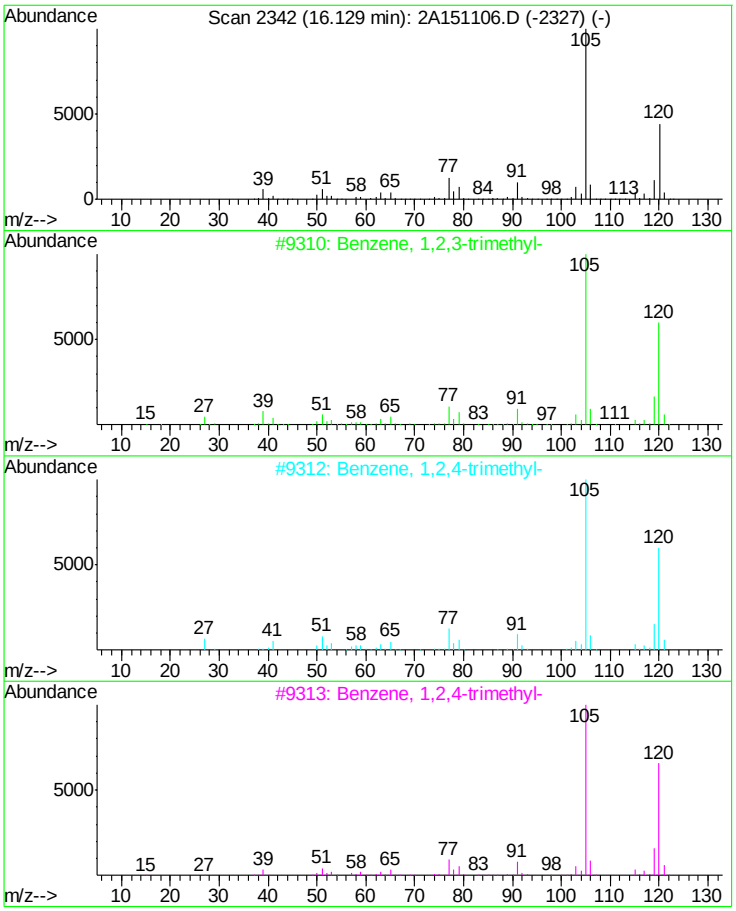
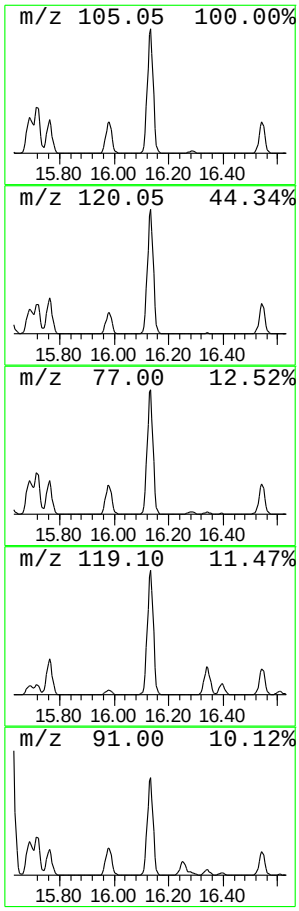
Peak Number 14 Benzene, 1,2,4-trimethyl- Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.13	184.86 ug/L	32709800	1,4-dichlorobenzene-d4	16.52

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
4	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	94
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	93





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ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A6388.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: LSCINT.P

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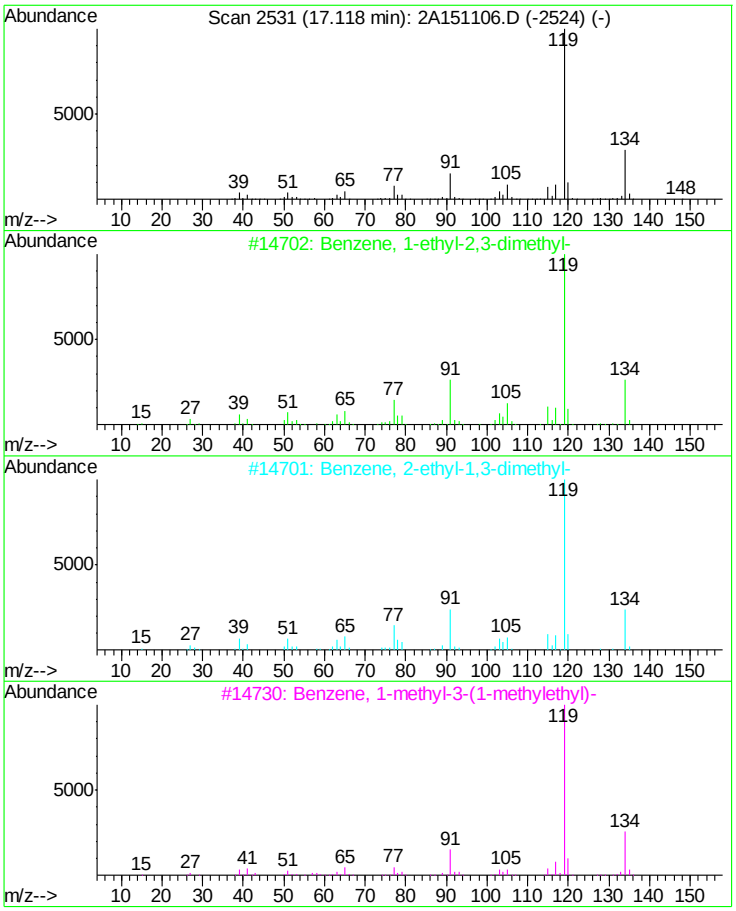
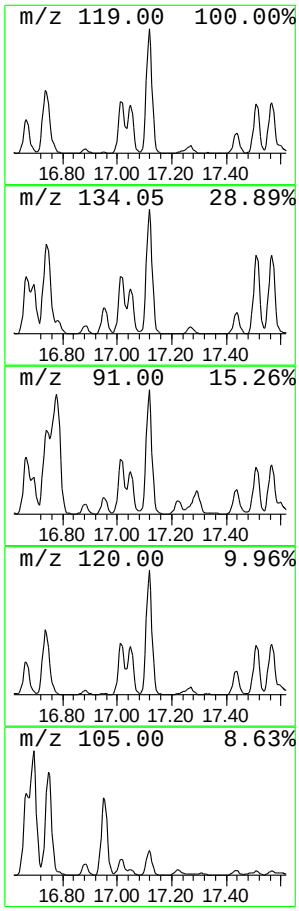
Peak Number 15 C4 alkyl benzene Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.12	39.81 ug/L	7043360	1,4-dichlorobenzene-d4	16.52

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	95
2	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14	002870-04-4	95
3	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	94
4	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	94
5	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	94





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Misc : MS74595,V2A6440,w,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A6388.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: LSCINT.P

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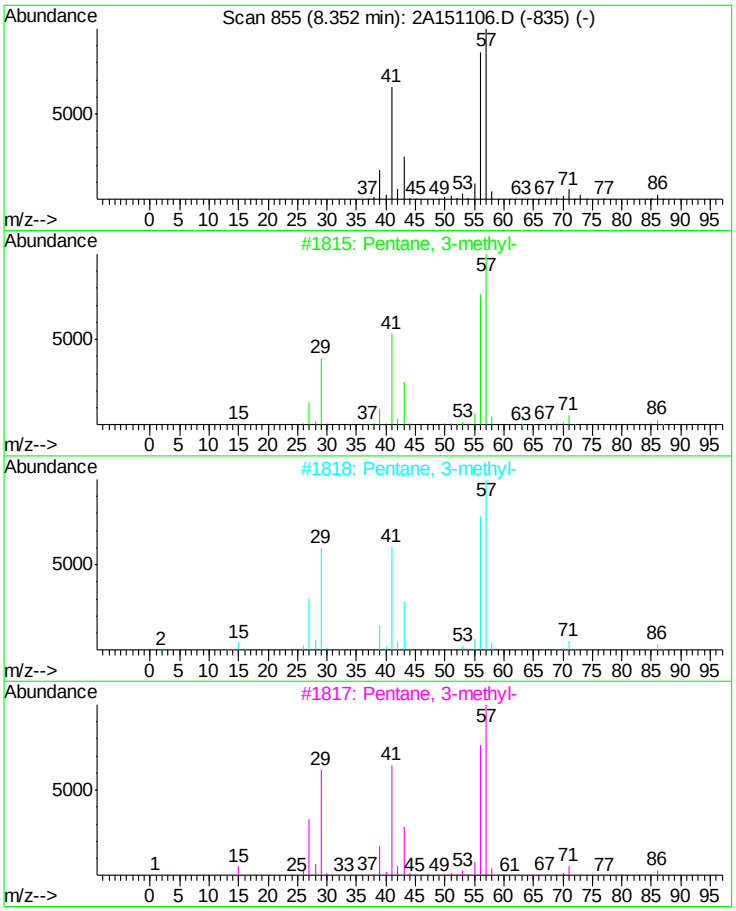
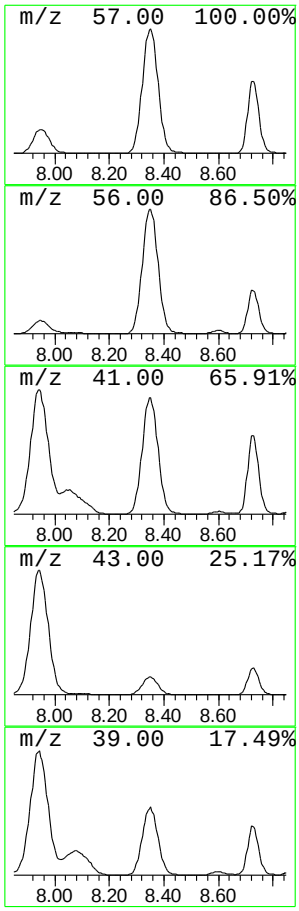
Peak Number 16 alkane Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.35	84.90 ug/L	5354900	pentafluorobenzene	10.39

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
2	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
3	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
4	Pentane, 3-ethyl-2,2-dimethyl-	128	C9H20	016747-32-3	64
5	Butyl isocyanatoacetate	157	C7H11NO3	017046-22-9	40





Tentatively Identified Compound (LSC) summary

Data Path : C:\MSDChem\1\DATA\
Data File : 2A151106.D
Acq On : 30 Sep 2014 7:12 pm
Operator : Dejanas
Sample : jb77674-11
Misc : MS74595,V2A6440,w,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A6388.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: LSCINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
alkane	5.91	158.9	ug/L	10021200	2	10.39	3153520	50.0
alkane-Pentane	6.34	58.2	ug/L	3668390	2	10.39	3153520	50.0
alkane-Hexane	8.73	40.1	ug/L	2526790	2	10.39	3153520	50.0
alkene	9.66	109.9	ug/L	6932070	2	10.39	3153520	50.0
alkene	11.10	90.0	ug/L	1547440	3	11.32	859876	50.0
alkene	12.05	43.6	ug/L	750221	3	11.32	859876	50.0
alkane	12.26	109.0	ug/L	1873620	3	11.32	859876	50.0
alkane	12.41	185.2	ug/L	3184400	3	11.32	859876	50.0
alkane	12.57	48.1	ug/L	827498	3	11.32	859876	50.0
C3 alkyl benzene	15.69	54.3	ug/L	9610330	5	16.52	8847170	50.0
Benzene, 1,3,5-tr...	15.76	47.0	ug/L	8315650	5	16.52	8847170	50.0
C3 alkyl benzene	15.98	42.2	ug/L	7467650	5	16.52	8847170	50.0
Benzene, 1,2,4-tr...	16.13	184.9	ug/L	32709800	5	16.52	8847170	50.0
C4 alkyl benzene	17.12	39.8	ug/L	7043360	5	16.52	8847170	50.0
alkane	8.35	84.9	ug/L	5354900	2	10.39	3153520	50.0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143591.d
Acq On : 30 Sep 2014 9:26 am
Operator : DejanaS
Sample : mb
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 01 10:57:33 2014
Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 27 17:10:31 2014
Response via : Initial Calibration

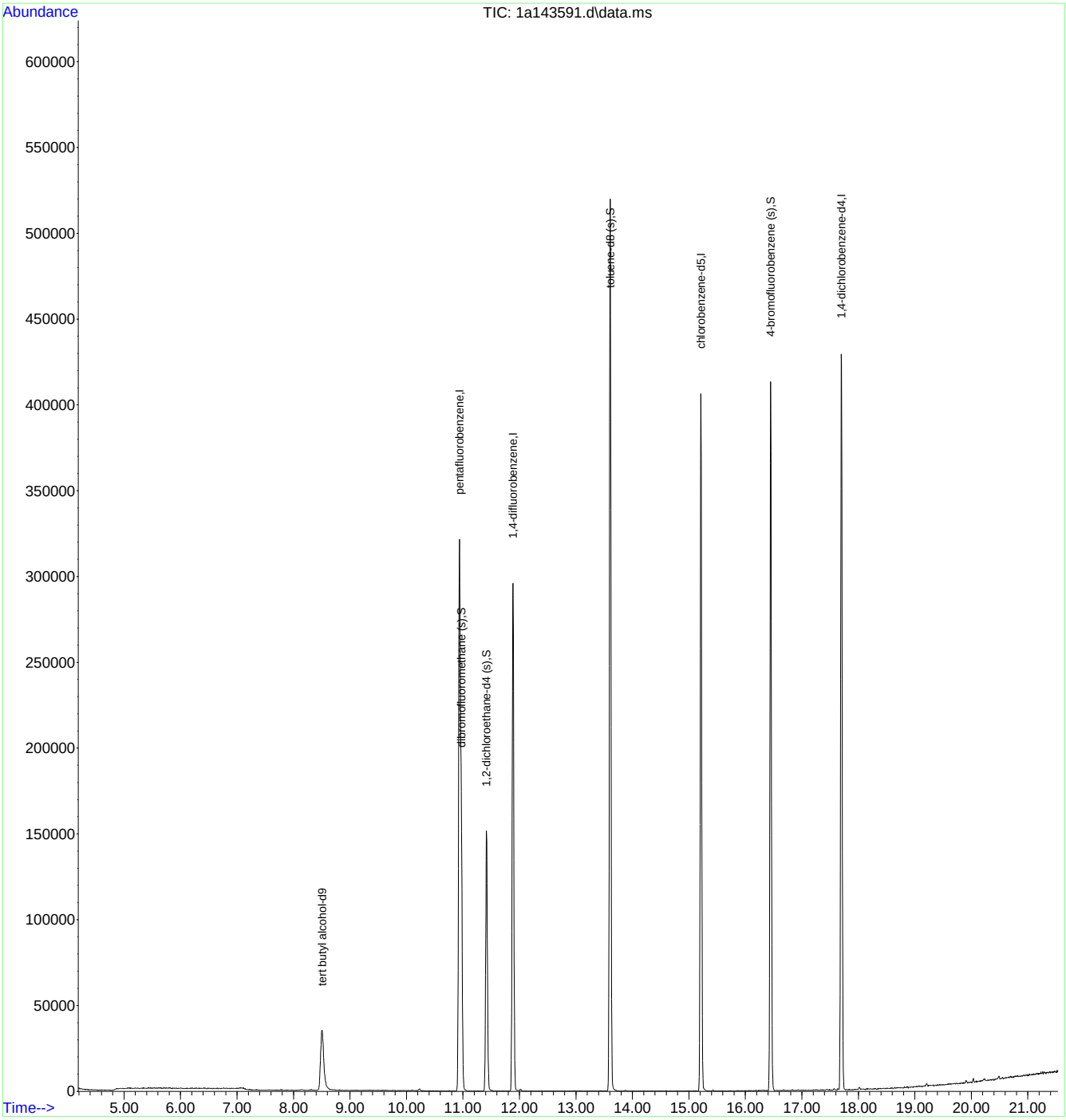
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	8.507	65	80326	500.00	ug/L	0.00
5) pentafluorobenzene	10.939	168	262511	50.00	ug/L	0.00
49) 1,4-difluorobenzene	11.886	114	281342	50.00	ug/L	0.00
78) chlorobenzene-d5	15.212	117	257162	50.00	ug/L	0.00
92) 1,4-dichlorobenzene-d4	17.702	152	139641	50.00	ug/L	0.00
System Monitoring Compounds						
42) dibromofluoromethane (s)	10.971	113	106929	47.83	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 95.66%			
43) 1,2-dichloroethane-d4 (s)	11.415	65	114180	43.49	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 86.98%			
70) toluene-d8 (s)	13.607	98	384114	48.70	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 97.40%			
94) 4-bromofluorobenzene (s)	16.447	95	145961	48.47	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 96.94%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143591.d
Acq On : 30 Sep 2014 9:26 am
Operator : DejanaS
Sample : mb
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 01 10:57:33 2014
Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 27 17:10:31 2014
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143591.d
Acq On : 30 Sep 2014 9:26 am
Operator : DejanaS
Sample : mb
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 3 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.02 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

Signal : TIC: 1a143591.d\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.229	7	9	16	rVB3	460	552	0.06%	0.010%
2	4.522	64	65	69	rVB	555	531	0.05%	0.010%
3	4.605	79	81	85	rBV2	472	569	0.06%	0.011%
4	4.830	119	124	125	rBV2	561	665	0.07%	0.013%
5	4.862	125	130	131	rVV2	621	666	0.07%	0.013%
6	5.024	158	161	164	rBV2	407	576	0.06%	0.011%
7	5.202	189	195	200	rBV4	426	958	0.10%	0.018%
8	5.244	200	203	208	rVB4	463	608	0.06%	0.011%
9	5.432	235	239	241	rBV3	668	620	0.06%	0.012%
10	5.526	254	257	262	rVB3	575	757	0.08%	0.014%
11	5.578	262	267	269	rBV2	461	657	0.07%	0.012%
12	5.709	286	292	296	rBV3	725	770	0.08%	0.015%
13	5.756	298	301	303	rBV2	526	508	0.05%	0.010%
14	5.861	319	321	323	rBV2	729	534	0.05%	0.010%
15	5.923	330	333	338	rVB2	579	744	0.07%	0.014%
16	6.002	346	348	356	rVB3	446	645	0.06%	0.012%
17	6.206	385	387	391	rVB2	724	536	0.05%	0.010%
18	6.269	396	399	401	rBV4	482	534	0.05%	0.010%
19	6.342	412	413	418	rBV2	575	723	0.07%	0.014%
20	6.415	423	427	429	rBV2	667	727	0.07%	0.014%
21	6.483	438	440	443	rBV	741	731	0.07%	0.014%
22	6.650	470	472	476	rVB2	688	680	0.07%	0.013%
23	6.703	476	482	483	rBV3	510	900	0.09%	0.017%
24	6.760	489	493	497	rVB4	384	530	0.05%	0.010%
25	6.860	510	512	516	rVB3	574	706	0.07%	0.013%
26	6.907	516	521	523	rBV2	555	873	0.09%	0.016%
27	7.011	538	541	544	rBV2	584	505	0.05%	0.010%
28	7.048	544	548	551	rBV2	629	759	0.08%	0.014%
29	7.221	579	581	585	rBV3	488	615	0.06%	0.012%
30	7.550	637	644	646	rBV2	261	526	0.05%	0.010%
31	7.775	682	687	689	rVB3	432	554	0.06%	0.010%
32	7.791	689	690	698	rVB2	657	667	0.07%	0.013%
33	8.131	751	755	756	rBV2	451	552	0.06%	0.010%
34	8.298	781	787	788	rBV3	455	548	0.06%	0.010%
35	8.319	788	791	798	rVB3	590	899	0.09%	0.017%
36	8.502	810	826	854	rBV	34999	142373	14.31%	2.687%
37	9.851	1079	1084	1089	rBV2	316	688	0.07%	0.013%
38	10.233	1147	1157	1162	rBV3	1180	2423	0.24%	0.046%
39	10.939	1280	1292	1319	rVB2	321528	994743	100.00%	18.776%
40	11.415	1372	1383	1399	rBV	151672	318371	32.01%	6.009%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143591.d
Acq On : 30 Sep 2014 9:26 am
Operator : DejanaS
Sample : mb
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 3 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.02 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

41	11.886	1461	1473	1493	rBV	295927	594248	59.74%	11.216%
42	12.011	1494	1497	1504	rVB3	1041	1792	0.18%	0.034%
43	13.607	1792	1802	1820	rBV	519831	964921	97.00%	18.213%
44	13.884	1846	1855	1861	rVB2	475	985	0.10%	0.019%
45	15.212	2099	2109	2132	rVB	406388	720857	72.47%	13.606%
46	15.427	2144	2150	2155	rBV2	627	894	0.09%	0.017%
47	16.101	2276	2279	2284	rVB2	291	539	0.05%	0.010%
48	16.185	2292	2295	2301	rBV2	450	630	0.06%	0.012%
49	16.447	2335	2345	2358	rVB	413259	705441	70.92%	13.315%
50	16.682	2384	2390	2393	rBV3	648	1009	0.10%	0.019%
51	16.828	2415	2418	2423	rVB2	589	747	0.08%	0.014%
52	16.938	2434	2439	2446	rVB	514	910	0.09%	0.017%
53	17.200	2485	2489	2491	rBV	490	519	0.05%	0.010%
54	17.257	2496	2500	2503	rVB2	421	620	0.06%	0.012%
55	17.440	2530	2535	2541	rBV	629	1123	0.11%	0.021%
56	17.571	2554	2560	2567	rVB2	986	1374	0.14%	0.026%
57	17.634	2567	2572	2576	rBV2	874	1051	0.11%	0.020%
58	17.697	2576	2584	2598	rVB	428904	781548	78.57%	14.752%
59	17.786	2598	2601	2606	rBV3	382	536	0.05%	0.010%
60	17.838	2610	2611	2617	rBV	475	593	0.06%	0.011%
61	18.016	2641	2645	2649	rBV2	1416	2072	0.21%	0.039%
62	18.089	2657	2659	2666	rVB5	573	1081	0.11%	0.020%
63	18.204	2680	2681	2690	rVB3	364	640	0.06%	0.012%
64	18.293	2695	2698	2705	rVB3	641	988	0.10%	0.019%
65	18.371	2710	2713	2716	rBV2	516	532	0.05%	0.010%
66	18.450	2726	2728	2732	rVB3	532	538	0.05%	0.010%
67	18.513	2736	2740	2742	rBV2	664	707	0.07%	0.013%
68	18.575	2746	2752	2753	rVB3	557	693	0.07%	0.013%
69	18.586	2753	2754	2759	rVB4	728	910	0.09%	0.017%
70	18.649	2759	2766	2769	rBV4	981	1585	0.16%	0.030%
71	18.685	2769	2773	2775	rBV2	579	592	0.06%	0.011%
72	18.816	2794	2798	2801	rBV4	972	959	0.10%	0.018%
73	18.863	2806	2807	2811	rVB2	1113	898	0.09%	0.017%
74	18.889	2811	2812	2817	rBV4	779	1109	0.11%	0.021%
75	18.947	2817	2823	2827	rVB5	579	1044	0.10%	0.020%
76	18.989	2827	2831	2835	rBV4	819	1334	0.13%	0.025%
77	19.177	2857	2867	2868	rBV4	898	1967	0.20%	0.037%
78	19.208	2868	2873	2878	rVB4	1837	3016	0.30%	0.057%
79	19.250	2878	2881	2884	rBV5	931	1261	0.13%	0.024%
80	19.360	2898	2902	2906	rBV4	703	1317	0.13%	0.025%
81	19.747	2971	2976	2977	rBV4	693	955	0.10%	0.018%
82	19.904	3002	3006	3012	rVB5	1738	2757	0.28%	0.052%
83	20.035	3026	3031	3036	rBV5	2796	4101	0.41%	0.077%
84	20.239	3063	3070	3076	rBV3	1381	2847	0.29%	0.054%
85	20.490	3113	3118	3122	rVB5	1762	2266	0.23%	0.043%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143591.d
Acq On : 30 Sep 2014 9:26 am
Operator : DejanaS
Sample : mb
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 3 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.02 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

Sum of corrected areas: 5298029

LSC Report - Integrated Chromatogram

```
Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143591.d
Acq On    : 30 Sep 2014   9:26 am
Operator  : DejanaS
Sample    : mb
Misc      : MS74584,V1A6195,W,,,,1
ALS Vial  : 3   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title  : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library   : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p
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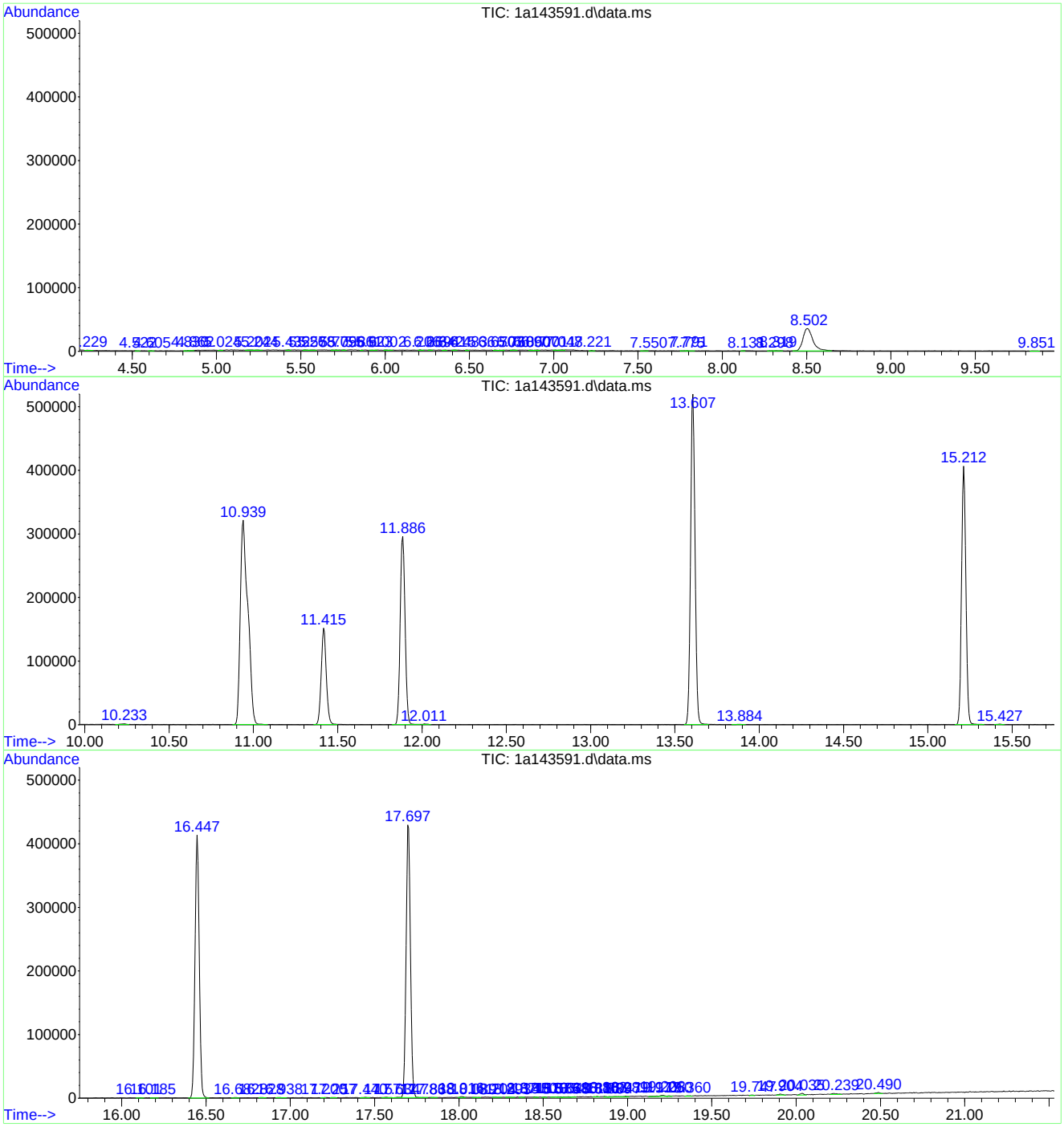


M1A6142.M Wed Oct 01 10:57:40 2014 T

Page: 4

ACCUTEST LABORATORIES JB77674

Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\1A\v1a6195-6196\
Data File : 1a143591.d
Acq On : 30 Sep 2014 9:26 am
Operator : DejanaS
Sample : mb
Misc : MS74584,V1A6195,W,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 1A143729.D
Acq On : 3 Oct 2014 9:31 am
Operator : DejanaS
Sample : mb
Misc : MS74461,V1A6201,W,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 03 15:28:48 2014
Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 27 17:10:31 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	8.497	65	91440	500.00	ug/L	-0.01
5) pentafluorobenzene	10.934	168	261230	50.00	ug/L	-0.01
49) 1,4-difluorobenzene	11.886	114	287072	50.00	ug/L	0.00
78) chlorobenzene-d5	15.212	117	269228	50.00	ug/L	0.00
92) 1,4-dichlorobenzene-d4	17.697	152	139741	50.00	ug/L	0.00
System Monitoring Compounds						
42) dibromofluoromethane (s)	10.966	113	105346	47.35	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 94.70%			
43) 1,2-dichloroethane-d4 (s)	11.415	65	116064	44.42	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 88.84%			
70) toluene-d8 (s)	13.607	98	400800	49.80	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 99.60%			
94) 4-bromofluorobenzene (s)	16.447	95	150761	50.03	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 100.06%			

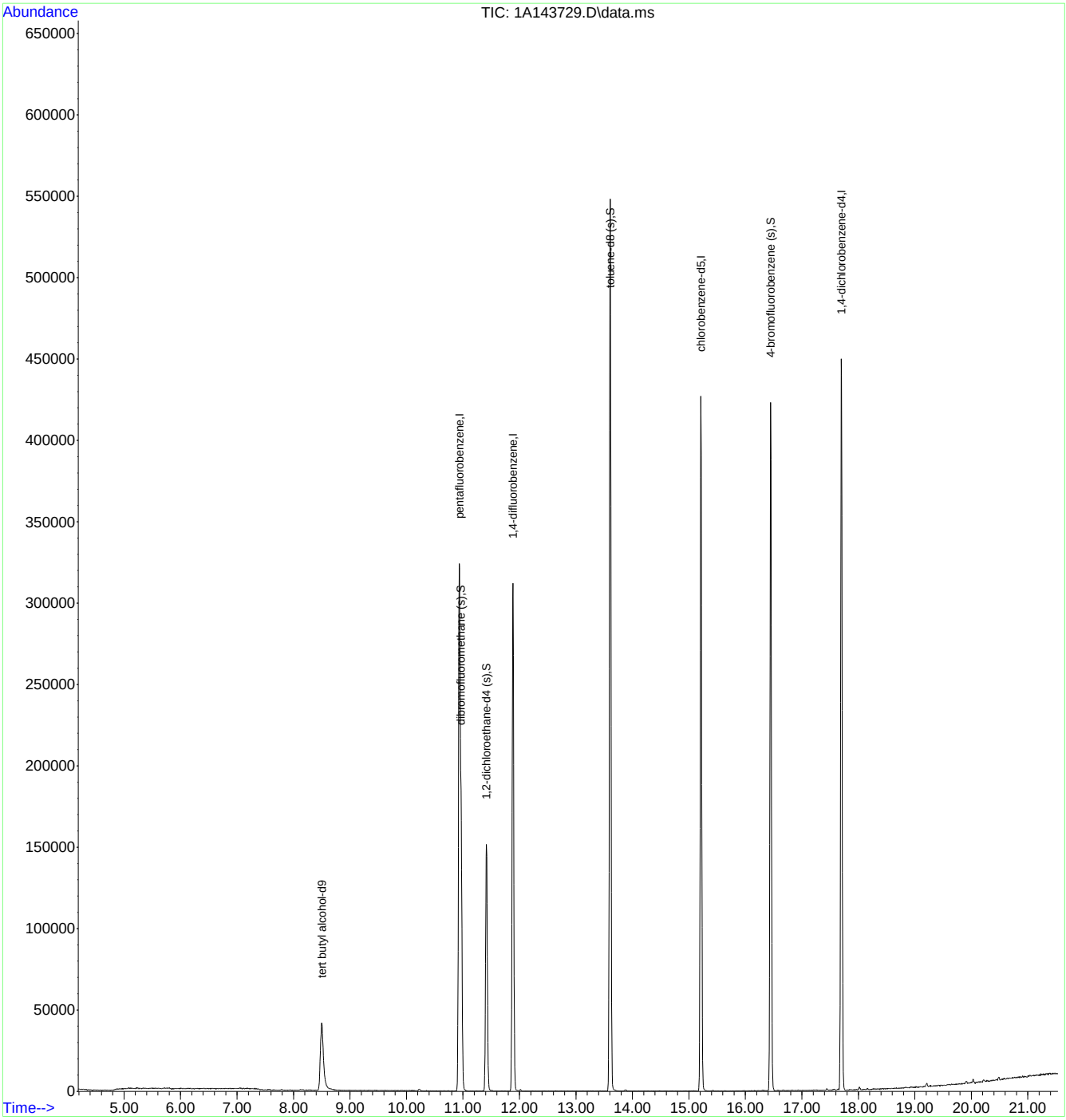
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 1A143729.D
Acq On : 3 Oct 2014 9:31 am
Operator : DejanaS
Sample : mb
Misc : MS74461,V1A6201,W,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 03 15:28:48 2014
Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 27 17:10:31 2014
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : 1A143729.D
Acq On : 3 Oct 2014 9:31 am
Operator : DejanaS
Sample : mb
Misc : MS74461,V1A6201,W,,,,1
ALS Vial : 3 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.02 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

Signal : TIC: 1A143729.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.365	32	35	37	rBV	472	597	0.06%	0.011%
2	4.407	41	43	49	rVB2	588	916	0.09%	0.017%
3	4.475	52	56	58	rBV	501	763	0.08%	0.014%
4	4.522	64	65	71	rVB	457	651	0.06%	0.012%
5	4.574	72	75	82	rVB2	479	872	0.09%	0.016%
6	4.705	97	100	104	rBV2	423	543	0.05%	0.010%
7	4.846	121	127	129	rBV	746	1088	0.11%	0.020%
8	4.867	129	131	134	rVV3	557	591	0.06%	0.011%
9	5.081	169	172	175	rBV2	707	726	0.07%	0.013%
10	5.233	199	201	207	rVB3	835	1008	0.10%	0.018%
11	5.275	207	209	216	rBV2	507	788	0.08%	0.014%
12	5.343	216	222	224	rBV3	598	823	0.08%	0.015%
13	5.364	225	226	238	rVB3	457	897	0.09%	0.016%
14	6.007	347	349	354	rBV4	655	664	0.07%	0.012%
15	6.159	377	378	385	rBV2	518	748	0.07%	0.014%
16	6.410	425	426	431	rVB3	513	566	0.06%	0.010%
17	6.462	434	436	442	rVB4	491	778	0.08%	0.014%
18	6.509	443	445	449	rVB2	500	556	0.05%	0.010%
19	6.535	449	450	454	rBV3	556	561	0.06%	0.010%
20	6.572	454	457	461	rVB4	379	554	0.05%	0.010%
21	6.603	461	463	468	rVB3	717	980	0.10%	0.018%
22	6.645	468	471	476	rBV2	598	1172	0.12%	0.021%
23	6.870	512	514	518	rVB3	538	531	0.05%	0.010%
24	7.048	545	548	551	rBV2	464	542	0.05%	0.010%
25	7.372	609	610	617	rVB2	794	1163	0.11%	0.021%
26	7.550	639	644	646	rBV	514	543	0.05%	0.010%
27	7.786	684	689	698	rVB2	575	1130	0.11%	0.021%
28	7.948	716	720	724	rVB3	359	592	0.06%	0.011%
29	8.120	749	753	759	rBV3	517	697	0.07%	0.013%
30	8.298	781	787	790	rVB2	488	717	0.07%	0.013%
31	8.502	808	826	856	rBV	41577	164139	16.18%	3.005%
32	10.228	1149	1156	1163	rVB3	1046	2347	0.23%	0.043%
33	10.934	1281	1291	1317	rVB2	324140	991971	97.77%	18.161%
34	11.415	1373	1383	1398	rBV	151653	324139	31.95%	5.934%
35	11.515	1398	1402	1407	rVB3	479	751	0.07%	0.014%
36	11.886	1461	1473	1495	rBV	311987	611758	60.30%	11.200%
37	12.017	1495	1498	1506	rVB3	985	1281	0.13%	0.023%
38	13.607	1790	1802	1826	rBV	548231	1014553	100.00%	18.574%
39	13.868	1847	1852	1862	rBV2	757	1507	0.15%	0.028%
40	14.407	1949	1955	1957	rBV	292	582	0.06%	0.011%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : 1A143729.D
Acq On : 3 Oct 2014 9:31 am
Operator : DejanaS
Sample : mb
Misc : MS74461,V1A6201,W,,,,1
ALS Vial : 3 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.02 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

41	15.212	2099	2109	2125	rBV	426972	757273	74.64%	13.864%
42	15.432	2143	2151	2154	rBV2	457	718	0.07%	0.013%
43	16.447	2336	2345	2359	rVB	423156	730791	72.03%	13.379%
44	16.661	2380	2386	2394	rBV3	430	776	0.08%	0.014%
45	17.258	2497	2500	2503	rVB3	568	502	0.05%	0.009%
46	17.441	2530	2535	2542	rVB2	1153	1481	0.15%	0.027%
47	17.503	2542	2547	2550	rBV3	395	501	0.05%	0.009%
48	17.571	2553	2560	2566	rVV2	816	1639	0.16%	0.030%
49	17.645	2566	2574	2575	rVV3	922	1116	0.11%	0.020%
50	17.697	2575	2584	2599	rVB	449501	793454	78.21%	14.527%
51	17.843	2608	2612	2617	rBV2	505	843	0.08%	0.015%
52	18.016	2638	2645	2653	rVV2	1941	3273	0.32%	0.060%
53	18.157	2667	2672	2676	rBV3	875	981	0.10%	0.018%
54	18.267	2686	2693	2695	rBV2	802	1478	0.15%	0.027%
55	18.298	2695	2699	2702	rVV3	619	999	0.10%	0.018%
56	18.340	2702	2707	2708	rVV3	545	648	0.06%	0.012%
57	18.377	2709	2714	2715	rVB3	657	898	0.09%	0.016%
58	18.392	2715	2717	2720	rBV	739	904	0.09%	0.017%
59	18.466	2728	2731	2735	rBV3	658	857	0.08%	0.016%
60	18.518	2740	2741	2746	rBV3	517	630	0.06%	0.012%
61	18.591	2751	2755	2758	rVB2	352	570	0.06%	0.010%
62	18.753	2783	2786	2788	rVB3	541	511	0.05%	0.009%
63	18.832	2796	2801	2810	rBV4	735	1837	0.18%	0.034%
64	18.926	2816	2819	2821	rBV3	883	1015	0.10%	0.019%
65	19.020	2835	2837	2841	rBV3	904	952	0.09%	0.017%
66	19.214	2868	2874	2880	rVB5	2081	3379	0.33%	0.062%
67	19.475	2918	2924	2927	rBV6	965	1952	0.19%	0.036%
68	19.517	2927	2932	2936	rVV4	484	1153	0.11%	0.021%
69	19.653	2955	2958	2960	rBV3	729	531	0.05%	0.010%
70	19.909	3002	3007	3012	rBV4	1798	3335	0.33%	0.061%
71	20.030	3027	3030	3037	rVB4	2772	4496	0.44%	0.082%
72	20.218	3062	3066	3072	rBV5	1694	3610	0.36%	0.066%
73	20.490	3113	3118	3122	rBV6	2007	3210	0.32%	0.059%

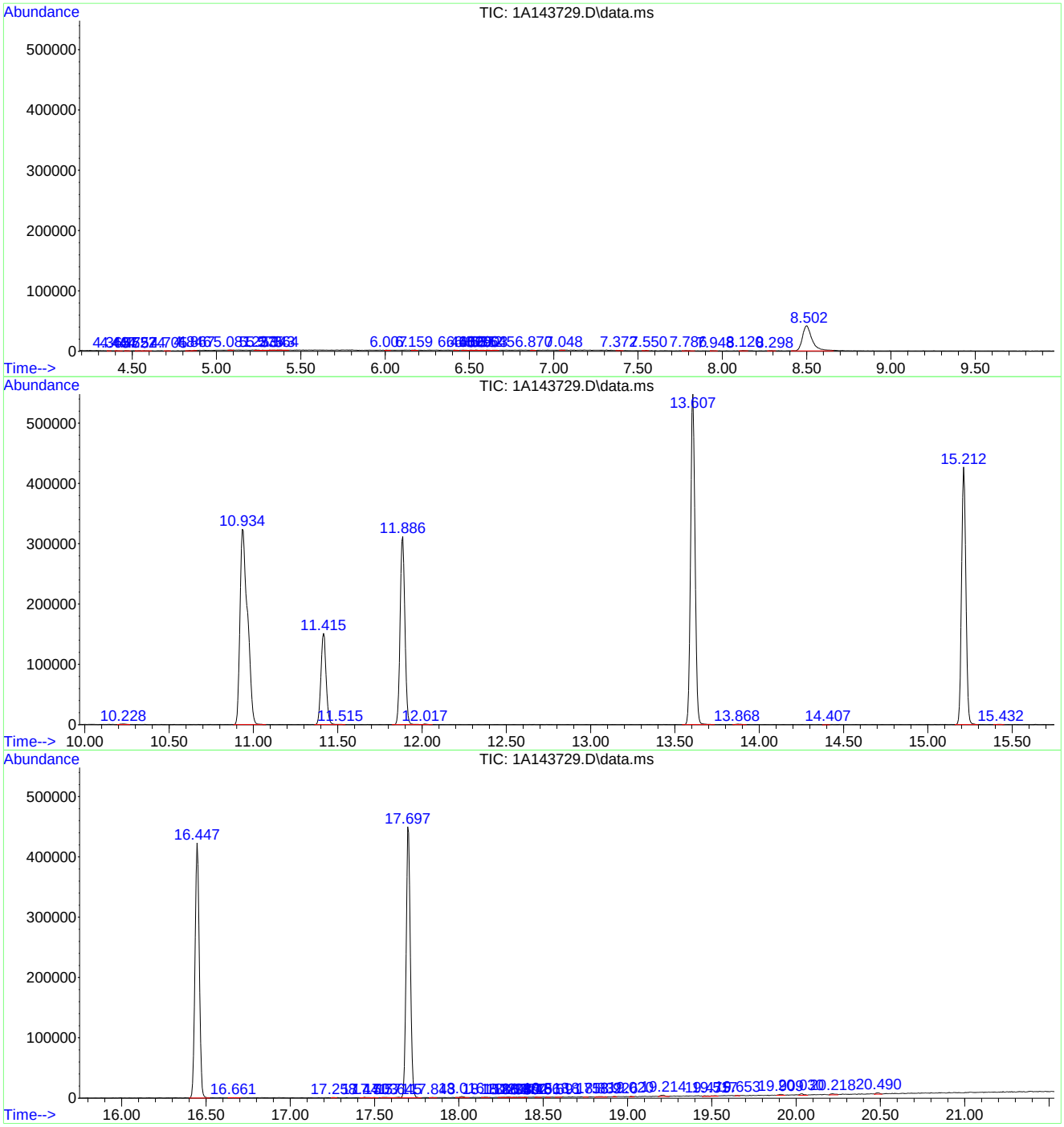
Sum of corrected areas: 5462098

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\
Data File : 1A143729.D
Acq On : 3 Oct 2014 9:31 am
Operator : DejanaS
Sample : mb
Misc : MS74461,V1A6201,W,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p



Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\
Data File : 1A143729.D
Acq On : 3 Oct 2014 9:31 am
Operator : DejanaS
Sample : mb
Misc : MS74461,V1A6201,W,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1A6142.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	Internal Standard RT	Internal Standard Resp	Internal Standard Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 2A151097.D
Acq On : 30 Sep 2014 1:47 pm
Operator : Dejanas
Sample : mb
Misc : MS74595,V2A6440,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 01 12:20:25 2014
Quant Method : C:\MSDCHEM\1\METHODS\M2A6388.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Aug 28 16:51:38 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.94	65	98645	500.00	ug/L	0.00
5) pentafluorobenzene	10.39	168	291152	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.32	114	290041	50.00	ug/L	0.00
84) chlorobenzene-d5	14.36	117	251635	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	16.52	152	142810	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.43	113	92499	45.86	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 91.72%			
47) 1,2-dichloroethane-d4 (s)	10.86	65	104909	43.33	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 86.66%			
76) toluene-d8 (s)	12.92	98	313729	48.70	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 97.40%			
100) 4-bromofluorobenzene (s)	15.43	95	116456	46.17	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 92.34%			

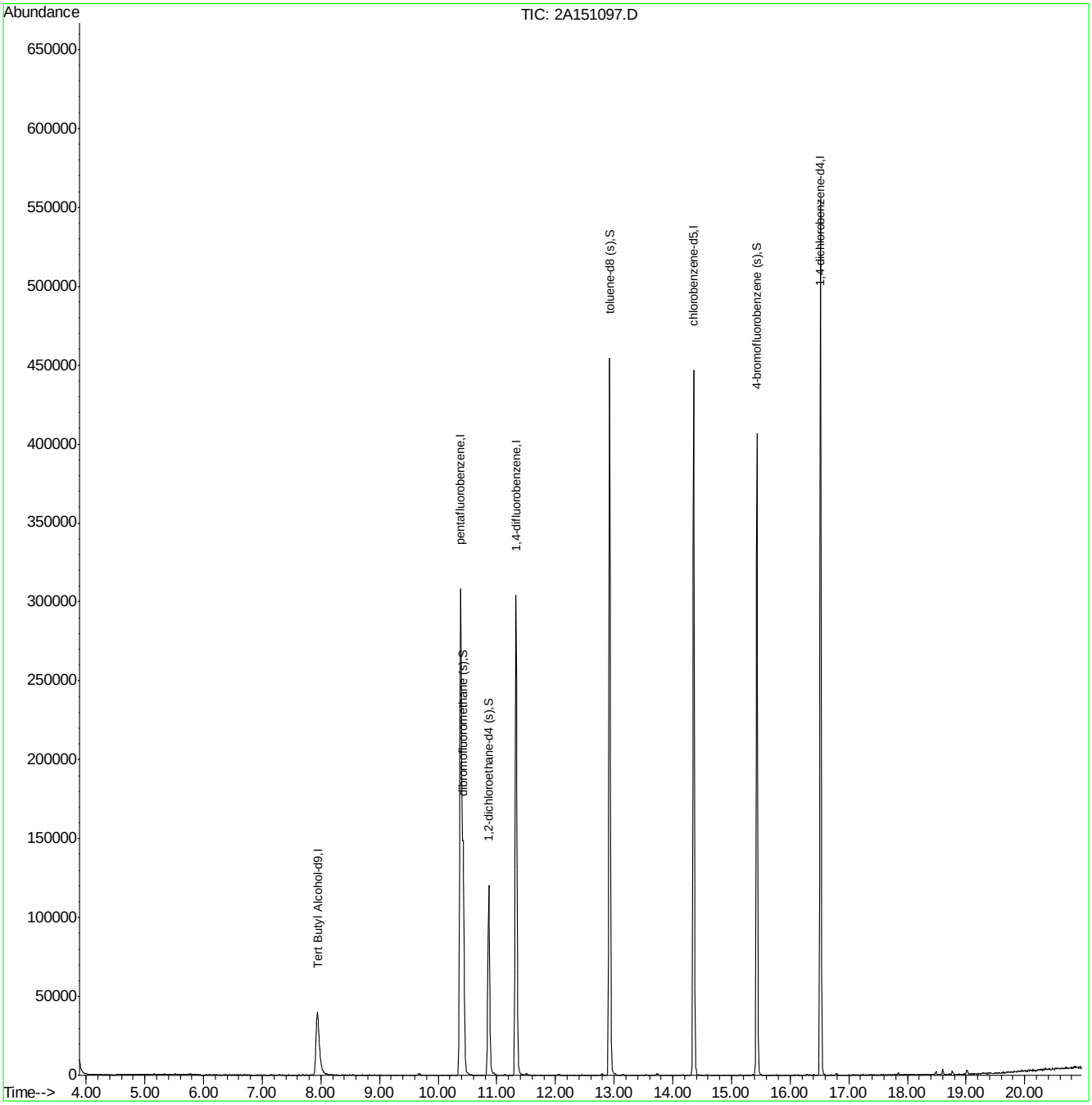
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 2A151097.D
Acq On : 30 Sep 2014 1:47 pm
Operator : Dejanas
Sample : mb
Misc : MS74595,V2A6440,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 01 12:20:25 2014
Quant Method : C:\MSDCHEM\1\METHODS\M2A6388.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Aug 28 16:51:38 2014
Response via : Initial Calibration



ACCUTEST LABORATORIES JB77674

LSC Area Percent Report

Data Path : C:\MSDCHEM\1\DATA\
Data File : 2A151097.D
Acq On : 30 Sep 2014 1:47 pm
Operator : Dejanas
Sample : mb
Misc : MS74595,V2A6440,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.06 Max Peaks: 100
Stop Thrs : 0.04 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2A6388.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.241	65	69	78	rVB	214	509	0.05%	0.010%
2	4.393	96	98	103	rVB	456	631	0.06%	0.012%
3	4.806	172	177	180	rBV	482	511	0.05%	0.010%
4	5.465	301	303	308	rBV	335	559	0.05%	0.011%
5	5.517	308	313	316	rVV	481	605	0.06%	0.012%
6	5.690	343	346	351	rVV	354	411	0.04%	0.008%
7	5.726	351	353	358	rVV	396	538	0.05%	0.010%
8	5.784	361	364	372	rVB2	737	895	0.09%	0.017%
9	6.239	445	451	456	rBV	545	861	0.08%	0.017%
10	6.359	472	474	478	rVB	539	494	0.05%	0.010%
11	6.516	501	504	507	rBB	491	502	0.05%	0.010%
12	6.584	516	517	522	rVB	418	484	0.05%	0.009%
13	6.872	570	572	577	rBB	300	438	0.04%	0.008%
14	6.919	577	581	585	rBB	473	490	0.05%	0.009%
15	6.971	590	591	597	rBB	458	452	0.04%	0.009%
16	7.693	725	729	732	rBB	451	425	0.04%	0.008%
17	7.944	762	777	804	rBV	40188	166562	16.14%	3.221%
18	8.095	804	806	813	rVB2	861	933	0.09%	0.018%
19	9.680	1102	1109	1117	rBB2	1092	2265	0.22%	0.044%
20	10.381	1230	1243	1277	rBB2	308192	1031952	100.00%	19.955%
21	10.862	1325	1335	1357	rBV	120525	275365	26.68%	5.325%
22	10.983	1357	1358	1362	rVB	485	483	0.05%	0.009%
23	11.129	1383	1386	1395	rBB	655	805	0.08%	0.016%
24	11.323	1414	1423	1446	rBV	304236	636889	61.72%	12.316%
25	11.516	1454	1460	1464	rVB	1203	1696	0.16%	0.033%
26	12.060	1557	1564	1567	rBV	722	1009	0.10%	0.020%
27	12.792	1700	1704	1709	rBB	1277	1374	0.13%	0.027%
28	12.923	1717	1729	1754	rBB	454353	804535	77.96%	15.557%
29	13.153	1769	1773	1778	rBB	716	1124	0.11%	0.022%
30	13.728	1878	1883	1889	rBB3	1438	2206	0.21%	0.043%
31	14.178	1967	1969	1974	rBB3	429	432	0.04%	0.008%
32	14.356	1994	2003	2021	rBV	446834	736086	71.33%	14.234%
33	15.355	2190	2194	2198	rBB	441	600	0.06%	0.012%
34	15.434	2199	2209	2225	rBB	406794	620210	60.10%	11.993%

LSC Area Percent Report

Data Path : C:\MSDCHEM\1\DATA\
Data File : 2A151097.D
Acq On : 30 Sep 2014 1:47 pm
Operator : Dejanas
Sample : mb
Misc : MS74595,V2A6440,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.06 Max Peaks: 100
Stop Thrs : 0.04 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2A6388.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

35	16.286	2366	2372	2376	rBB2	451	961	0.09%	0.019%
36	16.333	2376	2381	2383	rBB	404	411	0.04%	0.008%
37	16.396	2388	2393	2399	rBB2	613	1117	0.11%	0.022%
38	16.516	2406	2416	2433	rBB	555681	804459	77.96%	15.556%
39	16.694	2445	2450	2455	rBB	417	600	0.06%	0.012%
40	16.783	2460	2467	2472	rBV	1368	2050	0.20%	0.040%
41	17.003	2506	2509	2513	rVB	459	469	0.05%	0.009%
42	17.092	2521	2526	2530	rBB2	464	554	0.05%	0.011%
43	17.243	2552	2555	2563	rBB2	491	925	0.09%	0.018%
44	17.473	2596	2599	2601	rBV	567	529	0.05%	0.010%
45	17.536	2606	2611	2614	rBV	548	798	0.08%	0.015%
46	17.588	2619	2621	2623	rVB	657	481	0.05%	0.009%
47	17.635	2627	2630	2633	rBV	507	601	0.06%	0.012%
48	17.709	2643	2644	2649	rBV	456	627	0.06%	0.012%
49	17.771	2649	2656	2658	rVB	640	968	0.09%	0.019%
50	17.803	2658	2662	2663	rBV	556	645	0.06%	0.012%
51	17.845	2665	2670	2675	rVV3	1816	2588	0.25%	0.050%
52	17.902	2678	2681	2683	rBV	645	758	0.07%	0.015%
53	18.101	2718	2719	2725	rVB	591	989	0.10%	0.019%
54	18.159	2725	2730	2732	rBV	719	994	0.10%	0.019%
55	18.195	2735	2737	2743	rVB	302	488	0.05%	0.009%
56	18.336	2762	2764	2770	rVB	392	474	0.05%	0.009%
57	18.404	2773	2777	2781	rBV	438	617	0.06%	0.012%
58	18.488	2787	2793	2800	rVB2	1979	3530	0.34%	0.068%
59	18.546	2800	2804	2809	rBV	410	608	0.06%	0.012%
60	18.598	2809	2814	2820	rVB4	3374	4127	0.40%	0.080%
61	18.687	2825	2831	2833	rBV2	423	675	0.07%	0.013%
62	18.765	2838	2846	2860	rBV	2266	4624	0.45%	0.089%
63	18.875	2863	2867	2868	rBV	407	404	0.04%	0.008%
64	19.016	2887	2894	2899	rVB4	2808	4354	0.42%	0.084%
65	19.084	2899	2907	2911	rBV2	648	1007	0.10%	0.019%
66	19.137	2913	2917	2925	rBV2	846	1581	0.15%	0.031%
67	19.205	2926	2930	2932	rVB2	773	848	0.08%	0.016%
68	19.246	2932	2938	2939	rBV	807	1240	0.12%	0.024%
69	19.283	2944	2945	2948	rVB	590	418	0.04%	0.008%
70	19.341	2954	2956	2958	rVB	762	404	0.04%	0.008%
71	19.388	2962	2965	2966	rBV	828	665	0.06%	0.013%

LSC Area Percent Report

Data Path : C:\MSDCHEM\1\DATA\
Data File : 2A151097.D
Acq On : 30 Sep 2014 1:47 pm
Operator : Dejanas
Sample : mb
Misc : MS74595,V2A6440,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.06 Max Peaks: 100
Stop Thrs : 0.04 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2A6388.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

72	19.409	2966	2969	2971	rVV2	578	561	0.05%	0.011%
73	19.477	2979	2982	2983	rBV	410	437	0.04%	0.008%
74	19.497	2984	2986	2988	rVV	508	449	0.04%	0.009%
75	19.539	2992	2994	2995	rVB	865	410	0.04%	0.008%
76	19.560	2996	2998	3003	rBV2	464	582	0.06%	0.011%
77	19.602	3005	3006	3010	rBV2	684	733	0.07%	0.014%
78	19.628	3010	3011	3014	rVB2	1105	729	0.07%	0.014%
79	19.649	3014	3015	3017	rBV	738	443	0.04%	0.009%
80	19.691	3017	3023	3025	rBV2	688	1042	0.10%	0.020%
81	19.717	3025	3028	3031	rVV4	521	595	0.06%	0.012%
82	19.822	3045	3048	3051	rBV2	935	1289	0.12%	0.025%
83	19.890	3057	3061	3065	rBV3	807	1271	0.12%	0.025%
84	19.932	3065	3069	3071	rVV2	848	1227	0.12%	0.024%
85	19.947	3071	3072	3078	rVB	1202	1189	0.12%	0.023%
86	20.005	3078	3083	3091	rBV4	1122	2652	0.26%	0.051%
87	20.052	3091	3092	3096	rVB3	1224	1289	0.12%	0.025%
88	20.088	3096	3099	3101	rBV2	1276	1182	0.11%	0.023%
89	20.136	3107	3108	3111	rBV2	1206	957	0.09%	0.019%
90	20.193	3116	3119	3120	rBV2	853	876	0.08%	0.017%
91	20.256	3125	3131	3133	rVB3	854	1152	0.11%	0.022%
92	20.277	3133	3135	3139	rVB2	1162	1069	0.10%	0.021%
93	20.303	3139	3140	3142	rBV2	1214	734	0.07%	0.014%
94	20.345	3147	3148	3157	rVB4	1140	1750	0.17%	0.034%
95	20.481	3170	3174	3179	rBV6	1233	2558	0.25%	0.049%
96	20.638	3203	3204	3207	rVB3	966	746	0.07%	0.014%
97	20.685	3208	3213	3214	rVB3	711	920	0.09%	0.018%
98	20.836	3240	3242	3245	rBV2	1598	1442	0.14%	0.028%
99	20.863	3245	3247	3248	rVB2	956	668	0.06%	0.013%
100	20.936	3257	3261	3262	rBV3	1254	1557	0.15%	0.030%

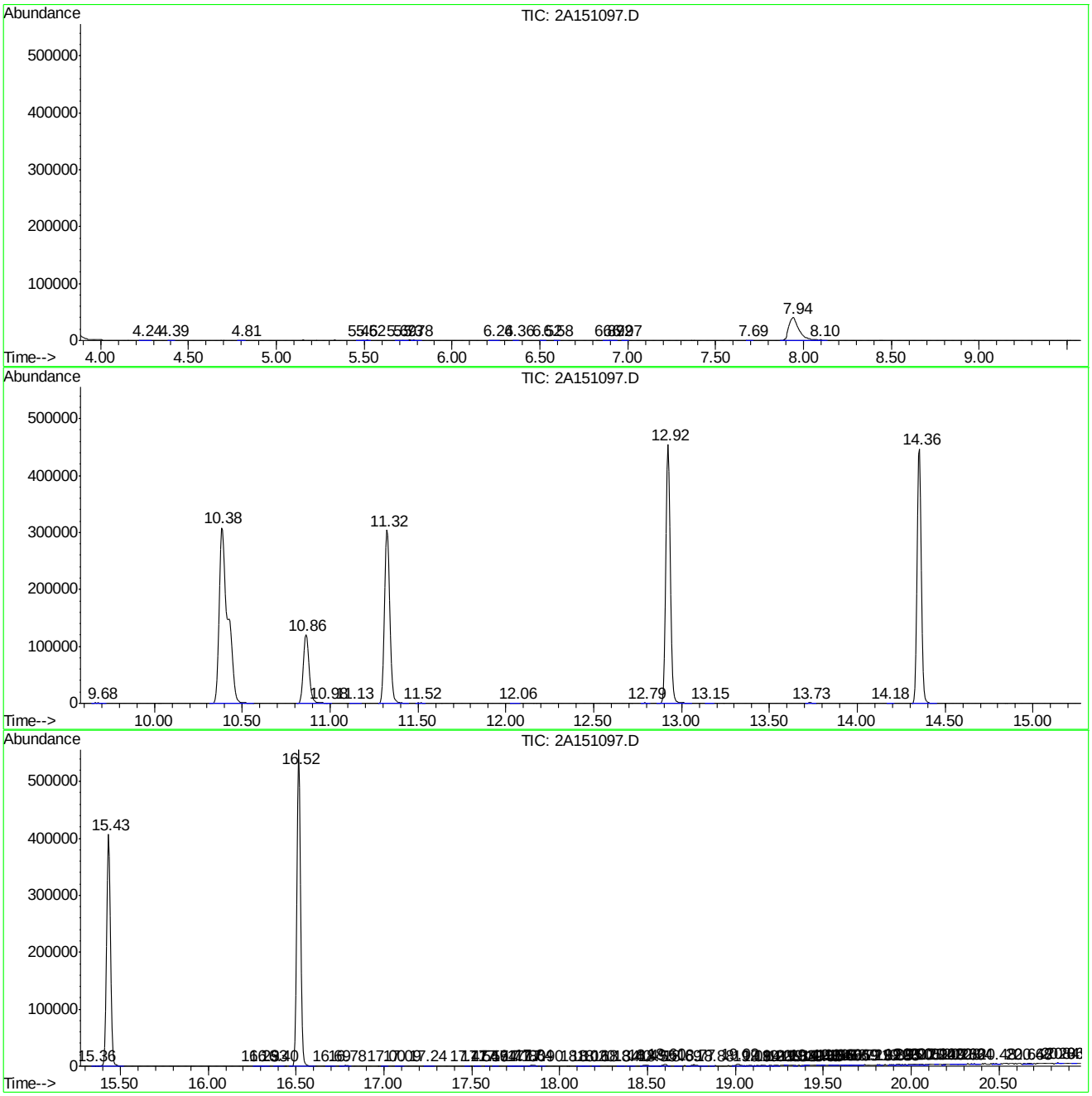
Sum of corrected areas: 5171428

LSC Report - Integrated Chromatogram

Data Path : C:\MSDCHEM\1\DATA\
Data File : 2A151097.D
Acq On : 30 Sep 2014 1:47 pm
Operator : Dejanas
Sample : mb
Misc : MS74595,V2A6440,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A6388.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : C:\MSDCHEM\1\DATA\
Data File : 2A151097.D
Acq On : 30 Sep 2014 1:47 pm
Operator : Dejanas
Sample : mb
Misc : MS74595,V2A6440,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A6388.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: LSCINT.P

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	Internal Standard RT	Internal Standard Resp	Internal Standard Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135318.D
Acq On : 5 Oct 2014 11:46 am
Operator : JemimaM
Sample : mb
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 06 14:27:03 2014
Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Sep 25 16:01:33 2014
Response via : Initial Calibration

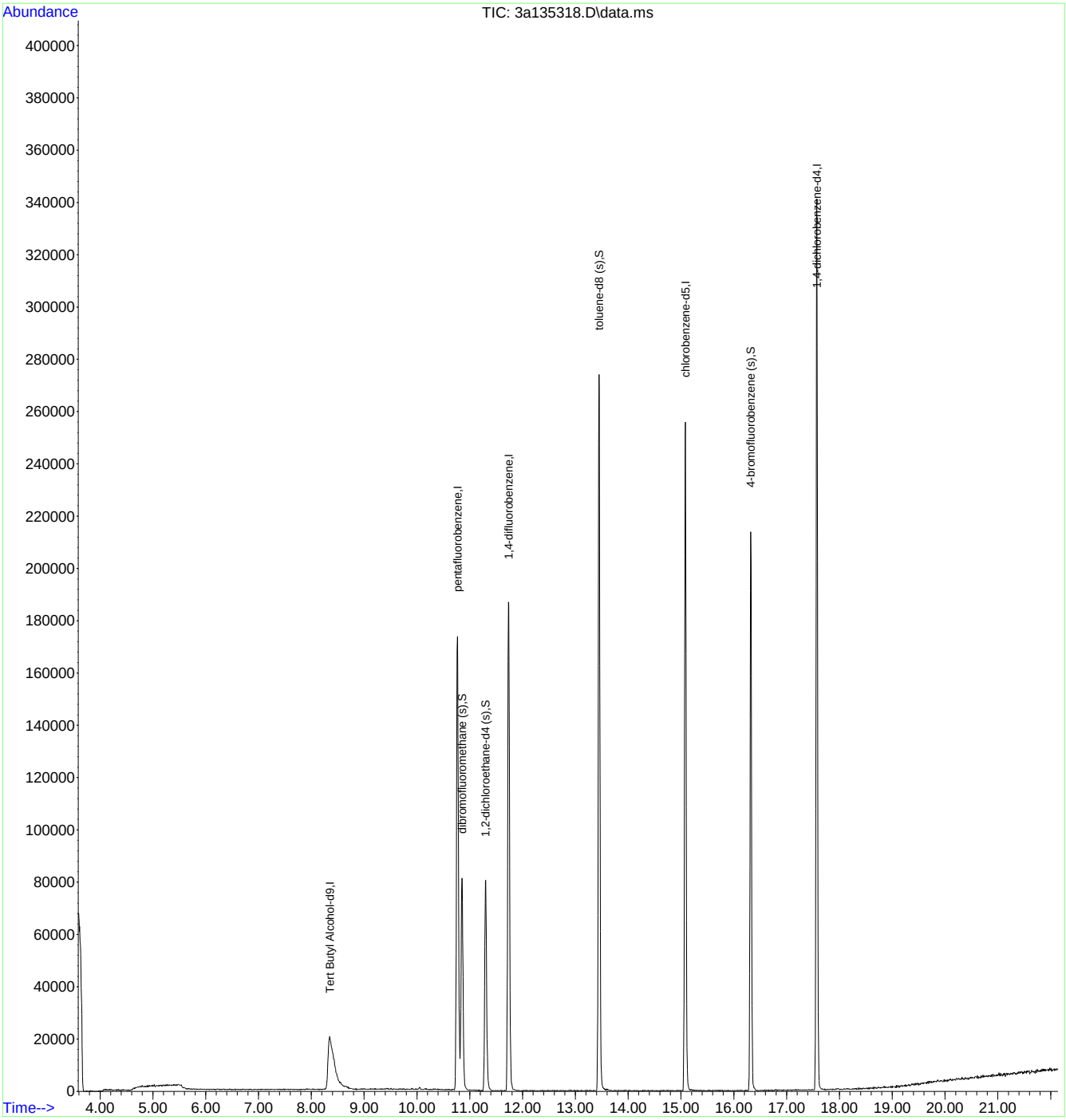
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.350	65	105026	500.00	ug/L	0.00
5) pentafluorobenzene	10.767	168	167255	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.737	114	202263	50.00	ug/L	0.00
87) chlorobenzene-d5	15.082	117	172781	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.573	152	111002	50.00	ug/L	0.00
System Monitoring Compounds						
49) dibromofluoromethane (s)	10.851	113	65123	54.60	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 109.20%			
50) 1,2-dichloroethane-d4 (s)	11.297	65	71852	49.82	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 99.64%			
79) toluene-d8 (s)	13.447	98	230682	54.75	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 109.50%			
104) 4-bromofluorobenzene (s)	16.320	95	88944	49.51	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 99.02%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135318.D
Acq On : 5 Oct 2014 11:46 am
Operator : JemimaM
Sample : mb
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 06 14:27:03 2014
Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Sep 25 16:01:33 2014
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135318.D
Acq On : 5 Oct 2014 11:46 am
Operator : JemimaM
Sample : mb
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

Signal : TIC: 3a135318.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.072	93	99	100	rBV	761	943	0.14%	0.025%
2	4.109	104	106	107	rVV	790	564	0.09%	0.015%
3	4.145	111	113	118	rVV2	565	815	0.12%	0.022%
4	4.187	118	121	123	rVV	554	583	0.09%	0.016%
5	4.214	123	126	129	rVB2	504	586	0.09%	0.016%
6	4.308	135	144	145	rVB2	460	820	0.13%	0.022%
7	4.423	162	166	168	rBV2	416	546	0.08%	0.015%
8	4.439	168	169	184	rVV3	472	1310	0.20%	0.035%
9	4.539	184	188	190	rVB	400	412	0.06%	0.011%
10	4.638	195	207	209	rBV2	976	2190	0.33%	0.059%
11	4.796	236	237	248	rVB4	622	912	0.14%	0.025%
12	5.760	419	421	430	rVB2	373	771	0.12%	0.021%
13	5.829	430	434	446	rVV	358	963	0.15%	0.026%
14	5.902	446	448	470	rVV2	387	1365	0.21%	0.037%
15	6.028	470	472	481	rVV2	314	540	0.08%	0.015%
16	6.101	481	486	490	rVB3	376	621	0.09%	0.017%
17	6.154	494	496	504	rVB2	399	641	0.10%	0.017%
18	6.232	504	511	517	rBV3	406	1035	0.16%	0.028%
19	6.332	528	530	545	rVB3	357	1016	0.16%	0.027%
20	6.505	562	563	571	rVV2	265	431	0.07%	0.012%
21	6.846	621	628	638	rVB2	350	759	0.12%	0.020%
22	7.055	666	668	674	rBV3	370	594	0.09%	0.016%
23	7.103	674	677	683	rVB	302	455	0.07%	0.012%
24	7.181	690	692	704	rVV2	285	560	0.09%	0.015%
25	7.349	716	724	729	rVB2	306	560	0.09%	0.015%
26	7.480	747	749	752	rVB2	473	407	0.06%	0.011%
27	7.506	752	754	761	rBV2	358	632	0.10%	0.017%
28	7.622	773	776	785	rVB2	270	616	0.09%	0.017%
29	7.810	808	812	818	rBV2	406	748	0.11%	0.020%
30	7.905	825	830	852	rBV3	462	1992	0.30%	0.054%
31	8.025	852	853	859	rVV	384	479	0.07%	0.013%
32	8.067	859	861	870	rVV2	313	512	0.08%	0.014%
33	8.120	870	871	877	rVB	414	475	0.07%	0.013%
34	8.251	877	896	898	rBV3	434	1758	0.27%	0.047%
35	8.345	898	914	1005	rVV3	20375	179066	27.33%	4.825%
36	8.911	1012	1022	1025	rBV2	415	1180	0.18%	0.032%
37	8.943	1025	1028	1033	rVV2	471	733	0.11%	0.020%
38	9.011	1033	1041	1055	rVB3	475	1486	0.23%	0.040%
39	9.153	1065	1068	1074	rBV	253	423	0.06%	0.011%
40	9.336	1100	1103	1110	rBV2	451	685	0.10%	0.018%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135318.D
Acq On : 5 Oct 2014 11:46 am
Operator : JemimaM
Sample : mb
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

41	9.436	1116	1122	1133	rBV3	515	1071	0.16%	0.029%
42	9.509	1133	1136	1142	rVB2	596	707	0.11%	0.019%
43	9.556	1142	1145	1152	rBV2	417	711	0.11%	0.019%
44	9.666	1163	1166	1175	rVB2	303	688	0.11%	0.019%
45	9.981	1223	1226	1232	rBV	418	455	0.07%	0.012%
46	10.054	1232	1240	1254	rBV3	896	1722	0.26%	0.046%
47	10.180	1254	1264	1280	rVB3	561	1898	0.29%	0.051%
48	10.416	1308	1309	1317	rBV2	401	493	0.08%	0.013%
49	10.469	1317	1319	1329	rVB	420	626	0.10%	0.017%
50	10.610	1339	1346	1353	rVB	536	1526	0.23%	0.041%
51	10.663	1353	1356	1360	rBV2	562	878	0.13%	0.024%
52	10.767	1365	1376	1385	rVV	173482	438031	66.86%	11.802%
53	10.851	1385	1392	1419	rVB	81155	211174	32.24%	5.690%
54	10.998	1419	1420	1430	rBV2	292	439	0.07%	0.012%
55	11.171	1451	1453	1461	rVB2	477	434	0.07%	0.012%
56	11.229	1461	1464	1467	rVB	439	473	0.07%	0.013%
57	11.302	1467	1478	1512	rBV	80802	203326	31.04%	5.478%
58	11.732	1549	1560	1590	rVB	186963	440095	67.18%	11.858%
59	12.634	1729	1732	1735	rBV	300	455	0.07%	0.012%
60	13.268	1848	1853	1865	rBV	290	583	0.09%	0.016%
61	13.447	1873	1887	1907	rBV	273988	581693	88.79%	15.673%
62	13.588	1912	1914	1917	rVV2	796	691	0.11%	0.019%
63	13.609	1917	1918	1927	rVV3	669	900	0.14%	0.024%
64	13.945	1979	1982	1986	rBV	317	398	0.06%	0.011%
65	14.233	2035	2037	2044	rVB	290	546	0.08%	0.015%
66	14.642	2109	2115	2117	rBV	410	739	0.11%	0.020%
67	15.082	2188	2199	2215	rVV	255697	508140	77.57%	13.691%
68	15.198	2219	2221	2227	rVB2	582	663	0.10%	0.018%
69	15.717	2319	2320	2324	rVB	478	452	0.07%	0.012%
70	15.743	2324	2325	2332	rBV	462	935	0.14%	0.025%
71	16.320	2426	2435	2458	rVB	213821	410528	62.67%	11.061%
72	16.514	2470	2472	2480	rVB	310	642	0.10%	0.017%
73	16.619	2489	2492	2499	rVB2	387	628	0.10%	0.017%
74	16.802	2519	2527	2531	rVB	507	1040	0.16%	0.028%
75	16.834	2531	2533	2539	rBV	464	704	0.11%	0.019%
76	16.870	2539	2540	2548	rVB2	389	738	0.11%	0.020%
77	16.944	2552	2554	2563	rBV	472	858	0.13%	0.023%
78	17.028	2568	2570	2577	rBV2	416	703	0.11%	0.019%
79	17.138	2584	2591	2595	rBV2	370	749	0.11%	0.020%
80	17.568	2664	2673	2701	rBV	340918	655100	100.00%	17.651%
81	17.877	2731	2732	2740	rBV2	427	512	0.08%	0.014%
82	17.935	2740	2743	2746	rVV	510	505	0.08%	0.014%
83	17.971	2746	2750	2756	rVB2	577	1182	0.18%	0.032%
84	18.087	2770	2772	2778	rBV	394	446	0.07%	0.012%
85	18.150	2778	2784	2787	rVB3	484	626	0.10%	0.017%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135318.D
Acq On : 5 Oct 2014 11:46 am
Operator : JemimaM
Sample : mb
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

86	18.176	2787	2789	2801	rVB2	381	749	0.11%	0.020%
87	18.249	2801	2803	2808	rBV2	383	458	0.07%	0.012%
88	18.307	2808	2814	2820	rBV2	483	996	0.15%	0.027%
89	18.386	2825	2829	2833	rBV2	587	675	0.10%	0.018%
90	18.448	2838	2841	2848	rBV2	622	1175	0.18%	0.032%
91	18.574	2863	2865	2867	rBV2	565	525	0.08%	0.014%
92	18.637	2876	2877	2879	rVB2	905	493	0.08%	0.013%
93	18.663	2879	2882	2892	rBV3	900	2084	0.32%	0.056%
94	18.737	2892	2896	2914	rVV4	806	2909	0.44%	0.078%
95	18.842	2914	2916	2941	rVB2	772	3244	0.50%	0.087%
96	19.004	2946	2947	2958	rBV4	885	1875	0.29%	0.051%
97	19.078	2958	2961	2971	rVB5	1025	2352	0.36%	0.063%
98	19.183	2972	2981	2992	rBV5	634	1554	0.24%	0.042%
99	19.251	2992	2994	3016	rBV3	802	3631	0.55%	0.098%
100	19.487	3032	3039	3047	rBV4	830	1673	0.26%	0.045%

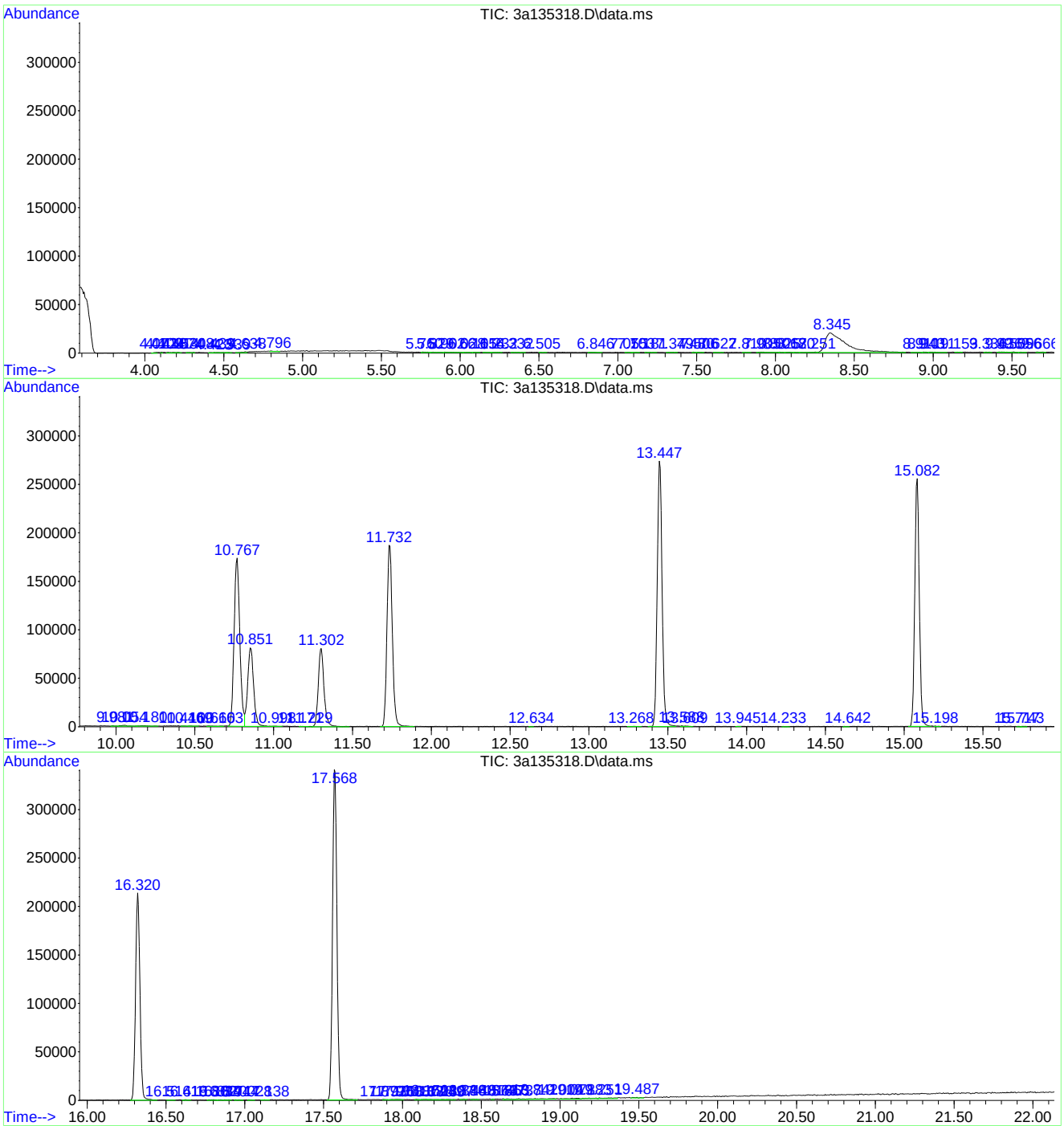
Sum of corrected areas: 3711480

LSC Report - Integrated Chromatogram

```
Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135318.D
Acq On    :  5 Oct 2014  11:46 am
Operator  : JemimaM
Sample    : mb
Misc      : MS74584,V3A5854,5.0,,,,1
ALS Vial  : 5   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title  : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library   : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p
```



Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\3A\v3a5850-5854\
Data File : 3a135318.D
Acq On : 5 Oct 2014 11:46 am
Operator : JemimaM
Sample : mb
Misc : MS74584,V3A5854,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3A5831.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: rteint.p

					|--Internal Standard---|	
TIC Top Hit name	RT	EstConc	Units	Response	# RT Resp Conc

No Library Search Compounds Detected
****

New Jersey ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA35094
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:57	MA35094-STD1	1		STDA
13:03	MA35094-STD2	1		STDB
13:09	ZZZZZZ	1		
13:14	ZZZZZZ	1		
13:20	MA35094-ICV1	1		
13:32	MA35094-ICB1	1		
13:38	MA35094-ICCV1	1		
13:48	MA35094-CCB1	1		
13:54	MA35094-CRI1	1		
13:59	MA35094-CRID1	1		
14:05	MA35094-CRIA1	1		
14:11	ZZZZZZ	1		
14:17	MA35094-ICSA1	1		
14:23	MA35094-ICSAB1	1		
14:28	ZZZZZZ	1		
14:34	ZZZZZZ	1		
14:40	MA35094-CCV1	1		
14:47	MA35094-CCB2	1		
14:53	MP82333-MB1	1		
14:59	MP82333-MB2	1		
15:05	MA35094-CRID2	1		
15:10	ZZZZZZ	1		
15:16	ZZZZZZ	1		
15:22	MA35094-CCV2	1		
15:28	MA35094-CCB3	1		
15:33	MP82333-B1	1		
15:39	MP82333-B2	1		
15:45	MP82333-S1	1		
15:50	MP82333-S2	1		
15:56	JB77427-2	1		(sample used for QC only; not part of login JB77674)
16:02	MP82333-SD1	5		
16:07	ZZZZZZ	1		
16:13	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA35094
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:19	ZZZZZZ	1		
16:25	MA35094-CCV3	1		
16:32	MA35094-CCB4	1		
16:38	ZZZZZZ	1		
16:44	ZZZZZZ	1		
16:50	ZZZZZZ	1		
16:55	ZZZZZZ	1		
17:01	ZZZZZZ	1		
17:07	ZZZZZZ	1		
17:12	ZZZZZZ	1		
17:18	ZZZZZZ	1		
17:24	ZZZZZZ	1		
17:30	MA35094-CCV4	1		
17:37	MA35094-CCB5	1		
17:43	ZZZZZZ	1		
17:49	ZZZZZZ	1		
17:55	ZZZZZZ	1		
18:01	ZZZZZZ	5		
18:06	ZZZZZZ	1		
18:12	ZZZZZZ	1		
18:18	ZZZZZZ	1		
18:24	ZZZZZZ	5		
18:30	MA35094-CCV5	1		
18:37	MA35094-CCB6	1		
18:43	MP82333-MB1	1		
18:49	ZZZZZZ	1		
18:55	ZZZZZZ	1		
19:00	ZZZZZZ	1		
19:06	MA35094-CCV6	1		
19:12	MA35094-CCB7	1		
19:18	ZZZZZZ	5		
19:23	ZZZZZZ	5		
19:29	ZZZZZZ	5		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA35094
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
19:35	MP82366-MB1	5		
19:41	MP82366-B1	5		
19:46	MP82366-S1	5		
19:52	MP82366-S2	5		
19:58	JB77620-1	5		(sample used for QC only; not part of login JB77674)
20:03	MP82366-SD1	25		
20:09	MA35094-CCV7	1		
20:15	MA35094-CCB8	1		
20:21	MP82376-MB1	5		
20:27	MP82376-B1	5		
20:32	MP82376-S1	5		
20:38	MP82376-S2	5		
20:44	JB78289-1	5		(sample used for QC only; not part of login JB77674)
20:49	MP82376-SD1	25		
20:55	MP82364-MB1	1		
21:01	MP82364-MB2	1		
21:07	MP82364-MB3	1		
21:13	MA35094-CCV8	1		
21:18	MA35094-CCB9	1		
21:24	MP82364-B1	1		out for SE
21:30	MP82364-B2	1		
21:35	MP82364-B3	1		
21:41	MP82364-S1	1		
21:46	MP82364-S2	1		
21:52	JB78176-1F	1		(sample used for QC only; not part of login JB77674)
21:58	MP82364-SD1	5		
22:04	MP82364-S3	1		
22:09	JB77674-7	1		
22:15	MA35094-CCV9	1		
22:21	MA35094-CCB10	1		
22:26	MA35094-CRID3	1		
22:32	MA35094-CRI2	1		
22:38	MA35094-CRIA2	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA35094
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
22:44	MA35094-CRID4	1		
22:50	MA35094-ICSA2	1		
22:55	MA35094-ICSAB2	1		
23:01	MA35094-CCV10	1		
23:07	MA35094-CCB11	1		
23:12	ZZZZZZ	1		
23:18	MP82353-S1	1		
23:24	MP82353-S2	1		
23:30	JB77369-16A	1		(sample used for QC only; not part of login JB77674)
23:35	MP82353-SD1	5		
23:41	ZZZZZZ	5		
23:47	ZZZZZZ	10		
23:53	ZZZZZZ	5		
23:58	ZZZZZZ	3		
00:04	ZZZZZZ	2		
00:10	MA35094-CCV11	1		
00:16	MA35094-CCB12	1		
00:21	ZZZZZZ	10		
00:27	ZZZZZZ	5		
00:33	ZZZZZZ	10		
00:39	ZZZZZZ	1		
00:44	ZZZZZZ	1		
00:50	ZZZZZZ	1		
00:56	ZZZZZZ	1		
01:02	ZZZZZZ	1		
01:08	ZZZZZZ	1		
01:13	JB77674-1	1		
01:19	MA35094-CCV12	1		
01:25	MA35094-CCB13	1		
01:31	JB77674-2	1		
01:36	JB77674-3	1		
01:42	JB77674-4	1		
01:48	JB77674-5	1		FE high

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA35094
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
01:54	JB77674-6	1		Si high
01:59	JB77674-8	1		
02:05	JB77674-9	1		
02:11	JB77674-10	1		
02:17	JB77674-11	1		Si high
---------->	Last reportable sample/prep for job JB77674			
02:22	ZZZZZZ	1		
02:28	MA35094-CCV13	1		
02:34	MA35094-CCB14	1		
02:40	ZZZZZZ	1		
02:45	MP82381-MB1	1		
02:51	MP82381-B1	1		
02:57	MP82381-S1	1		
03:02	MP82381-S2	1		
03:08	JB77589-14	1		(sample used for QC only; not part of login JB77674)
03:14	MP82381-SD1	5		
03:19	MP82381-S3	1		
03:25	ZZZZZZ	1		
03:31	ZZZZZZ	1		
03:37	MA35094-CCV14	1		
03:42	MA35094-CCB15	1		
03:48	ZZZZZZ	1		
03:54	ZZZZZZ	1		
03:59	ZZZZZZ	1		
04:05	ZZZZZZ	1		
04:11	ZZZZZZ	1		
04:17	ZZZZZZ	1		
04:22	ZZZZZZ	1		
04:28	ZZZZZZ	1		
04:34	ZZZZZZ	1		
04:40	MA35094-CCV15	1		
04:45	MA35094-CCB16	1		
04:51	ZZZZZZ	1		
04:57	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA35094
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
05:03	JB77589-15	1		(sample used for QC only; not part of login JB77674)
05:08	ZZZZZZ	1		
05:14	ZZZZZZ	1		
05:20	ZZZZZZ	1		
05:26	MA35094-CCV16	1		
05:31	MA35094-CCB17	1		
05:37	MA35094-CRI3	1		
05:43	MA35094-CRID5	1		
05:49	MA35094-CRIA3	1		
05:54	MA35094-ICSA3	1		
06:00	MA35094-ICSAB3	1		
06:06	MA35094-CCV17	1		
06:12	MA35094-CCB18	1		
---------->	Last reportable CCB for job JB77674			
06:17	ZZZZZZ	1		
06:23	ZZZZZZ	1		
06:29	ZZZZZZ	1		
06:35	ZZZZZZ	1		
06:41	ZZZZZZ	1		
06:46	ZZZZZZ	1		
06:52	ZZZZZZ	1		
06:58	ZZZZZZ	1		
07:04	ZZZZZZ	1		
07:10	ZZZZZZ	1		
07:53	ZZZZZZ	1		
07:57	ZZZZZZ	1		
08:02	ZZZZZZ	1		
08:49	ZZZZZZ	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA35094
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
12:57	MA35094-STD1	4492 R	94618 R	7404 R	6760 R
13:03	MA35094-STD2	4042	87913	7469	5659
13:09	ZZZZZZ	4168	88200	7429	5909
13:14	ZZZZZZ	4491	94425	7413	6752
13:20	MA35094-ICV1	4200	90276	7518	5944
13:32	MA35094-ICB1	4516	95144	7466	6773
13:38	MA35094-ICCV1	4219	88670	7451	5960
13:48	MA35094-CCB1	4525	95796	7490	6795
13:54	MA35094-CRI1	4452	93556	7495	6650
13:59	MA35094-CRID1	No results reported for the elements associated with this internal standard.			
14:05	MA35094-CRIA1	4492	95170	7538	6740
14:11	ZZZZZZ	8438 !	172490 !	13228 !	12186 !
14:17	MA35094-ICSA1	3660	78912	7285	5011
14:23	MA35094-ICSAB1	3651	79236	7218	4999
14:28	ZZZZZZ	4440	94255	7624	6702
14:34	ZZZZZZ	4364	94329	7417	6726
14:40	MA35094-CCV1	4175	88592	7432	5886
14:47	MA35094-CCB2	4484	96286	7553	6704
14:53	MP82333-MB1	4571	96257	7588	6834
14:59	MP82333-MB2	4582	95373	7591	6833
15:05	MA35094-CRID2	4510	93832	7535	6708
15:10	ZZZZZZ	4495	94603	7478	6744
15:16	ZZZZZZ	4544	95879	7545	6810
15:22	MA35094-CCV2	4250	90207	7535	5974
15:28	MA35094-CCB3	4520	95205	7454	6748
15:33	MP82333-B1	4310	91293	7552	6114
15:39	MP82333-B2	4321	90927	7555	6128
15:45	MP82333-S1	4265	90459	7571	6073
15:50	MP82333-S2	4292	90876	7573	6107
15:56	JB77427-2	4441	93825	7530	6510
16:02	MP82333-SD1	4510	94114	7456	6735
16:07	ZZZZZZ	4521	94512	7484	6751
16:13	ZZZZZZ	4037	87198	7553	5673

INTERNAL STANDARD SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA35094
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
16:19	ZZZZZZ	4177	87716	7448	5960
16:25	MA35094-CCV3	4225	89242	7451	5950
16:32	MA35094-CCB4	4556	95396	7535	6801
16:38	ZZZZZZ	4196	88299	7572	5987
16:44	ZZZZZZ	4263	90377	7574	6127
16:50	ZZZZZZ	4147	90088	7566	5804
16:55	ZZZZZZ	4108	86218	7599	5696
17:01	ZZZZZZ	4060	88589	7486	5722
17:07	ZZZZZZ	4193	88930	7489	5991
17:12	ZZZZZZ	4199	88612	7569	5998
17:18	ZZZZZZ	4259	89298	7457	6134
17:24	ZZZZZZ	4105	85421	7511	5681
17:30	MA35094-CCV4	4218	89749	7491	5935
17:37	MA35094-CCB5	4541	95239	7483	6773
17:43	ZZZZZZ	4511	95176	7618	6676
17:49	ZZZZZZ	4512	92271	7508	6645
17:55	ZZZZZZ	3812	79418	7317	5094
18:01	ZZZZZZ	4153	87312	7259	5810
18:06	ZZZZZZ	4184	87825	7481	5904
18:12	ZZZZZZ	4047	84261	7463	5532
18:18	ZZZZZZ	3772	80327	7532	4929
18:24	ZZZZZZ	4222	88374	7628	5810
18:30	MA35094-CCV5	4239	90360	7606	5950
18:37	MA35094-CCB6	4551	94517	7610	6793
18:43	MP82333-MB1	4626	96995	7645	6919
18:49	ZZZZZZ	4544	96729	7604	6783
18:55	ZZZZZZ	4479	94915	7635	6678
19:00	ZZZZZZ	4518	95161	7611	6771
19:06	MA35094-CCV6	4207	90861	7622	5961
19:12	MA35094-CCB7	4533	96666	7607	6809
19:18	ZZZZZZ	4264	91747	7672	6084
19:23	ZZZZZZ	4197	91404	7693	5946
19:29	ZZZZZZ	4254	89211	7724	6106

INTERNAL STANDARD SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA35094
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
19:35	MP82366-MB1	4549	97113	7695	6845
19:41	MP82366-B1	4501	96012	7612	6658
19:46	MP82366-S1	4328	93177	7737	6292
19:52	MP82366-S2	4316	93388	7763	6280
19:58	JB77620-1	4322	93785	7754	6332
20:03	MP82366-SD1	4469	97190	7738	6698
20:09	MA35094-CCV7	4186	91914	7702	5957
20:15	MA35094-CCB8	4510	97597	7680	6799
20:21	MP82376-MB1	4231	91674	7747	5913
20:27	MP82376-B1	4206	92134	7712	5905
20:32	MP82376-S1	4251	93388	7802	6011
20:38	MP82376-S2	4230	91949	7773	5974
20:44	JB78289-1	4229	92114	7674	6054
20:49	MP82376-SD1	4459	96286	7800	6631
20:55	MP82364-MB1	4610	99147	7867	7096
21:01	MP82364-MB2	4592	99880	7887	7026
21:07	MP82364-MB3	4584	99284	7833	7035
21:13	MA35094-CCV8	4239	92273	7681	6037
21:18	MA35094-CCB9	4538	98191	7825	6844
21:24	MP82364-B1	4342	94084	7893	6356
21:30	MP82364-B2	4360	95175	7868	6367
21:35	MP82364-B3	4353	95798	7892	6312
21:41	MP82364-S1	4248	92868	7864	6104
21:46	MP82364-S2	4251	93734	7837	6116
21:52	JB78176-1F	4409	97646	7926	6627
21:58	MP82364-SD1	4560	99624	7826	6967
22:04	MP82364-S3	4289	94539	7897	6146
22:09	JB77674-7	4386	97346	7887	6479
22:15	MA35094-CCV9	4294	93980	7765	6108
22:21	MA35094-CCB10	4589	99723	7788	6935
22:26	MA35094-CRID3	4560	98466	7714	6891
22:32	MA35094-CRI2	4525	97911	7747	6808
22:38	MA35094-CRIA2	4593	97846	7860	6971

INTERNAL STANDARD SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA35094
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
22:44	MA35094-CRID4	4569	100160	7810	6929
22:50	MA35094-ICSA2	3676	82699	7483	5082
22:55	MA35094-ICSAB2	3684	83070	7450	5102
23:01	MA35094-CCV10	4285	94408	7835	6131
23:07	MA35094-CCB11	4552	99451	7707	6915
23:12	ZZZZZZ	4639	100830	8053	7047
23:18	MP82353-S1	4282	96504	8433	5882
23:24	MP82353-S2	4371	97561	8442	5969
23:30	JB77369-16A	4470	99664	8476	6165
23:35	MP82353-SD1	4506	98296	7920	6655
23:41	ZZZZZZ	4449	97405	7944	6361
23:47	ZZZZZZ	4513	96762	7926	6575
23:53	ZZZZZZ	4704	104280	8613	5874
23:58	ZZZZZZ	4352	96283	7784	6659
00:04	ZZZZZZ	4858	110430	9962 !a	5259
00:10	MA35094-CCV11	4236	94229	7728	6065
00:16	MA35094-CCB12	4610	100750	7610	6989
00:21	ZZZZZZ	4526	99688	8158	6115
00:27	ZZZZZZ	4691	103510	8772	5804
00:33	ZZZZZZ	4593	101560	8264	6172
00:39	ZZZZZZ	4588	98745	7668	6943
00:44	ZZZZZZ	3809	86679	7600	5235
00:50	ZZZZZZ	3638	79047	7701	4613 !
00:56	ZZZZZZ	4666	99776	7732	7057
01:02	ZZZZZZ	4618	100160	7885	7083
01:08	ZZZZZZ	4597	99622	7938	7044
01:13	JB77674-1	4514	97998	8033	6710
01:19	MA35094-CCV12	4291	93243	7709	6101
01:25	MA35094-CCB13	4575	99472	7800	6918
01:31	JB77674-2	4362	94586	7838	6441
01:36	JB77674-3	4513	99684	8089	6497
01:42	JB77674-4	4402	95349	7853	6380
01:48	JB77674-5	4226	94285	7985	6565

INTERNAL STANDARD SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA35094
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
01:54	JB77674-6	4477	98764	8198	6251
01:59	JB77674-8	4498	98161	7866	6804
02:05	JB77674-9	4105	91075	7790	5573
02:11	JB77674-10	4382	96751	8039	6242
02:17	JB77674-11	4366	96481	8046	6136
02:22	ZZZZZZ	4281	93796	7772	6213
02:28	MA35094-CCV13	4271	93486	7651	6066
02:34	MA35094-CCB14	4614	99580	7721	6959
02:40	ZZZZZZ	4482	97968	7892	6754
02:45	MP82381-MB1	4618	99159	7744	7083
02:51	MP82381-B1	4379	95224	7819	6357
02:57	MP82381-S1	4346	95930	7878	6282
03:02	MP82381-S2	4334	96079	7816	6258
03:08	JB77589-14	4545	98759	7850	6952
03:14	MP82381-SD1	4593	99688	7769	6975
03:19	MP82381-S3	4327	94210	7908	6299
03:25	ZZZZZZ	4556	97980	7938	6837
03:31	ZZZZZZ	4558	98716	7948	6875
03:37	MA35094-CCV14	4287	92780	7646	6059
03:42	MA35094-CCB15	4592	98390	7747	6905
03:48	ZZZZZZ	4518	97879	7899	6767
03:54	ZZZZZZ	4597	99422	7948	6978
03:59	ZZZZZZ	4600	99159	7878	6859
04:05	ZZZZZZ	4521	98549	7910	6810
04:11	ZZZZZZ	4431	96202	7902	6620
04:17	ZZZZZZ	4536	96514	7896	6836
04:22	ZZZZZZ	4590	99838	7976	6996
04:28	ZZZZZZ	4553	97927	7860	6864
04:34	ZZZZZZ	4488	97229	7870	6750
04:40	MA35094-CCV15	4250	87989	7699	6017
04:45	MA35094-CCB16	4624	99158	7772	6963
04:51	ZZZZZZ	4528	97508	7988	6878
04:57	ZZZZZZ	4549	100210	7925	6947

INTERNAL STANDARD SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA35094
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
05:03	JB77589-15	4549	97353	7870	6918
05:08	ZZZZZZ	4499	97899	7865	6818
05:14	ZZZZZZ	4589	100020	7958	7014
05:20	ZZZZZZ	4569	100670	7986	7018
05:26	MA35094-CCV16	4288	93588	7726	6076
05:31	MA35094-CCB17	4646	99443	7662	6990
05:37	MA35094-CRI3	4532	98149	7753	6797
05:43	MA35094-CRID5	4615	99442	7804	6947
05:49	MA35094-CRIA3	4613	99596	7823	6978
05:54	MA35094-ICSA3	3735	83365	7511	5125
06:00	MA35094-ICSAB3	3757	83233	7480	5172
06:06	MA35094-CCV17	4280	94642	7805	6097
06:12	MA35094-CCB18	4646	100860	7819	7033
06:17	ZZZZZZ	4598	100630	7882	6971
06:23	ZZZZZZ	4634	100410	7871	7050
06:29	ZZZZZZ	4617	101140	7775	7014
06:35	ZZZZZZ	4609	100840	7965	7115
06:41	ZZZZZZ	4620	99840	7796	6974
06:46	ZZZZZZ	4617	99386	7790	6945
06:52	ZZZZZZ	4599	101420	7867	7016
06:58	ZZZZZZ	4099	89518	7624	5491
07:04	ZZZZZZ	4262	91228	7815	6269
07:10	ZZZZZZ	4199	93224	7733	5857
07:53	ZZZZZZ	4624	100580	7745	7008
07:57	ZZZZZZ	4587	99726	7698	6975
08:02	ZZZZZZ	4602	102100	7782	6982
08:49	ZZZZZZ	4611	101270	7772	6997

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

(a) No samples reported for the elements associated with this internal standard.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35094 Units: ug/l

Time:			13:32		13:48		14:47		15:28	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	19	anr							
Antimony	6.0	1.2	anr							
Arsenic	3.0	1.7	anr							
Barium	200	.4	anr							
Beryllium	1.0	.13	anr							
Bismuth	20	2.1								
Boron	100	1.1	anr							
Cadmium	3.0	.22	anr							
Calcium	5000	32	anr							
Chromium	10	.52	anr							
Cobalt	50	.29	anr							
Copper	10	1.2	anr							
Iron	100	8.8	-8.5	<100	-5.6	<100	10.0	<100	-11	<100
Lead	3.0	.97	anr							
Lithium	20	1.7								
Magnesium	5000	32	anr							
Manganese	15	.14	anr							
Molybdenum	20	.37								
Nickel	10	.54	anr							
Palladium	50	1.9								
Potassium	10000	38	anr							
Selenium	10	2	anr							
Silicon	200	10								
Silver	10	.74	anr							
Sodium	10000	10	anr							
Sulfur	50	3.7								
Strontium	10	.16								
Thallium	2.0	1.4	anr							
Tin	10	.8								
Titanium	10	.53								
Tungsten	50	4.8								
Vanadium	50	.52	anr							
Zinc	20	6.5	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35094 Units: ug/l

Time:			13:32		13:48		14:47		15:28	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.32								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35094 Units: ug/l

Time:			16:32		17:37		18:37		19:12	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	19	anr							
Antimony	6.0	1.2	anr							
Arsenic	3.0	1.7	anr							
Barium	200	.4	anr							
Beryllium	1.0	.13	anr							
Bismuth	20	2.1								
Boron	100	1.1	anr							
Cadmium	3.0	.22	anr							
Calcium	5000	32	anr							
Chromium	10	.52	anr							
Cobalt	50	.29	anr							
Copper	10	1.2	anr							
Iron	100	8.8	-6.5	<100	-14	<100	-12	<100	-11	<100
Lead	3.0	.97	anr							
Lithium	20	1.7								
Magnesium	5000	32	anr							
Manganese	15	.14	anr							
Molybdenum	20	.37								
Nickel	10	.54	anr							
Palladium	50	1.9								
Potassium	10000	38	anr							
Selenium	10	2	anr							
Silicon	200	10								
Silver	10	.74	anr							
Sodium	10000	10	anr							
Sulfur	50	3.7								
Strontium	10	.16								
Thallium	2.0	1.4	anr							
Tin	10	.8								
Titanium	10	.53								
Tungsten	50	4.8								
Vanadium	50	.52	anr							
Zinc	20	6.5	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35094 Units: ug/l

Time:			16:32		17:37		18:37		19:12	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.32								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35094 Units: ug/l

Time:			20:15		21:18		22:21		23:07	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	19	anr							
Antimony	6.0	1.2	anr							
Arsenic	3.0	1.7	anr							
Barium	200	.4	anr							
Beryllium	1.0	.13	anr							
Bismuth	20	2.1								
Boron	100	1.1	anr							
Cadmium	3.0	.22	anr							
Calcium	5000	32	anr							
Chromium	10	.52	anr							
Cobalt	50	.29	anr							
Copper	10	1.2	anr							
Iron	100	8.8	-0.80	<100	6.9	<100	8.7	<100	31.0	<100
Lead	3.0	.97	anr							
Lithium	20	1.7								
Magnesium	5000	32	anr							
Manganese	15	.14	anr							
Molybdenum	20	.37								
Nickel	10	.54	anr							
Palladium	50	1.9								
Potassium	10000	38	anr							
Selenium	10	2	anr							
Silicon	200	10								
Silver	10	.74	anr							
Sodium	10000	10	anr							
Sulfur	50	3.7								
Strontium	10	.16								
Thallium	2.0	1.4	anr							
Tin	10	.8								
Titanium	10	.53								
Tungsten	50	4.8								
Vanadium	50	.52	anr							
Zinc	20	6.5	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35094 Units: ug/l

Time:			20:15		21:18		22:21		23:07	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.32								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35094 Units: ug/l

Time:			00:16		01:25		02:34		03:42	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	19	anr							
Antimony	6.0	1.2	anr							
Arsenic	3.0	1.7	anr							
Barium	200	.4	anr							
Beryllium	1.0	.13	anr							
Bismuth	20	2.1								
Boron	100	1.1	anr							
Cadmium	3.0	.22	anr							
Calcium	5000	32	anr							
Chromium	10	.52	anr							
Cobalt	50	.29	anr							
Copper	10	1.2	anr							
Iron	100	8.8	60.1	<100*(a)	13.8	<100	20.9	<100	2.8	<100
Lead	3.0	.97	anr							
Lithium	20	1.7								
Magnesium	5000	32	anr							
Manganese	15	.14	anr							
Molybdenum	20	.37								
Nickel	10	.54	anr							
Palladium	50	1.9								
Potassium	10000	38	anr							
Selenium	10	2	anr							
Silicon	200	10								
Silver	10	.74	anr							
Sodium	10000	10	anr							
Sulfur	50	3.7								
Strontium	10	.16								
Thallium	2.0	1.4	anr							
Tin	10	.8								
Titanium	10	.53								
Tungsten	50	4.8								
Vanadium	50	.52	anr							
Zinc	20	6.5	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35094 Units: ug/l

Time:			00:16		01:25		02:34		03:42	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.32								

(*) Outside of QC limits
(anr) Analyte not requested
(a) All samples reported 10 x CCB value.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35094 Units: ug/l

Time:			04:45		05:31		06:12	
Sample ID:			CCB16		CCB17		CCB18	
Metal	RL	IDL	raw	final	raw	final	raw	final
Aluminum	200	19	anr					
Antimony	6.0	1.2	anr					
Arsenic	3.0	1.7	anr					
Barium	200	.4	anr					
Beryllium	1.0	.13	anr					
Bismuth	20	2.1						
Boron	100	1.1	anr					
Cadmium	3.0	.22	anr					
Calcium	5000	32	anr					
Chromium	10	.52	anr					
Cobalt	50	.29	anr					
Copper	10	1.2	anr					
Iron	100	8.8	11.8	<100	3.9	<100	30.1	<100
Lead	3.0	.97	anr					
Lithium	20	1.7						
Magnesium	5000	32	anr					
Manganese	15	.14	anr					
Molybdenum	20	.37						
Nickel	10	.54	anr					
Palladium	50	1.9						
Potassium	10000	38	anr					
Selenium	10	2	anr					
Silicon	200	10						
Silver	10	.74	anr					
Sodium	10000	10	anr					
Sulfur	50	3.7						
Strontium	10	.16						
Thallium	2.0	1.4	anr					
Tin	10	.8						
Titanium	10	.53						
Tungsten	50	4.8						
Vanadium	50	.52	anr					
Zinc	20	6.5	anr					

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35094 Units: ug/l

Time:			04:45		05:31		06:12	
Sample ID:			CCB16		CCB17		CCB18	
Metal	RL	IDL	raw	final	raw	final	raw	final
Zirconium	10	.32						

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35094 Units: ug/l

Time:		13:38	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	anr		
Beryllium	anr		
Bismuth			
Boron	anr		
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	40000	40300	100.8
Lead	anr		
Lithium			
Magnesium	anr		
Manganese	anr		
Molybdenum			
Nickel	anr		
Palladium			
Potassium	anr		
Selenium	anr		
Silicon			
Silver	anr		
Sodium	anr		
Sulfur			
Strontium			
Thallium	anr		
Tin			
Titanium			
Tungsten			
Vanadium	anr		
Zinc	anr		

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35094 Units: ug/l

Time:		13:38	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35094 Units: ug/l

Time:		13:20			14:40			15:22	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40000	100.0	40000	40800	102.0	40000	40200	100.5
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35094 Units: ug/l

Time:		13:20			14:40			15:22	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35094 Units: ug/l

Time:		16:25			17:30			18:30	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40400	101.0	40000	40400	101.0	40000	40800	102.0
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35094 Units: ug/l

Time:		16:25			17:30			18:30	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35094 Units: ug/l

Time:		19:06			20:09			21:13	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	41300	103.3	40000	41500	103.8	40000	41700	104.3
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35094 Units: ug/l

Time:		19:06			20:09			21:13	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35094 Units: ug/l

Time:		22:15			23:01			00:10	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40900	102.3	40000	40400	101.0	40000	40600	101.5
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35094 Units: ug/l

Time:		22:15			23:01			00:10	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35094 Units: ug/l

Time:		01:19			02:28			03:37	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40800	102.0	40000	41000	102.5	40000	41600	104.0
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35094 Units: ug/l

Time:		01:19			02:28			03:37	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35094 Units: ug/l

Time:		04:40			05:26			06:06	
Sample ID:	CCV	CCV15		CCV	CCV16		CCV	CCV17	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	41500	103.8	40000	41100	102.8	40000	40800	102.0
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35094 Units: ug/l

Time:		04:40			05:26			06:06	
Sample ID:	CCV	CCV15		CCV	CCV16		CCV	CCV17	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35094 Units: ug/l

Time:				13:54		14:05		15:05	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		118	118.0	533	106.6		
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	anr					
Molybdenum	20								
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50								
Strontium	10								
Thallium	10		2.0	anr					
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35094 Units: ug/l

Time:				13:54		14:05		15:05	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10								

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35094 Units: ug/l

Time:				22:26		22:32		22:38	
Sample ID:	CRI	CRIA	CRID	CRID3		CRI2		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0						
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0						
Iron	100	500				111	111.0	531	106.2
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	anr					
Molybdenum	20								
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0						
Sodium	5000		1000	anr					
Sulfur	50								
Strontium	10								
Thallium	10		2.0	anr					
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35094 Units: ug/l

Time:				22:26		22:32		22:38	
Sample ID:	CRI	CRIA	CRID	CRID3		CRI2		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10								

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35094 Units: ug/l

Time:				22:44		05:37		05:43	
Sample ID:	CRI	CRIA	CRID	CRID4		CRI3		CRID5	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0						
Iron	100	500				104	104.0		
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	anr					
Molybdenum	20								
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50								
Strontium	10								
Thallium	10		2.0	anr					
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35094 Units: ug/l

Time:				22:44		05:37		05:43	
Sample ID:	CRI	CRIA	CRID	CRID4		CRI3		CRID5	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10								

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35094 Units: ug/l

Time:				05:49	
Sample ID:	CRI	CRIA	CRID	CRIA3	
Metal	True	True	True	Results	% Rec
Aluminum	200	500	100	anr	
Antimony	6.0	20	3.0	anr	
Arsenic	8.0	20	3.0	anr	
Barium	200		4.0		
Beryllium	2.0		1.0		
Bismuth	20				
Boron	100		10		
Cadmium	3.0		1.0		
Calcium	5000	2000	1000	anr	
Chromium	10		2.0		
Cobalt	50		3.0		
Copper	10		2.0		
Iron	100	500		532	106.4
Lead	3.0	20	2.5	anr	
Lithium	20				
Magnesium	5000	2000	100	anr	
Manganese	15		3.0		
Molybdenum	20				
Nickel	10		4.0		
Palladium	50				
Potassium	5000		2000		
Selenium	10	20	5.0	anr	
Silicon	200				
Silver	5.0		1.0		
Sodium	5000		1000		
Sulfur	50				
Strontium	10				
Thallium	10		2.0		
Tin	10				
Titanium	10				
Tungsten	50				
Vanadium	50		2.0		
Zinc	20		10		

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35094 Units: ug/l

Time:				05:49	
Sample ID:	CRI	CRIA	CRID	CRIA3	
Metal	True	True	True	Results	% Rec
Zirconium	10				

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA35094 Units: ug/l

Time:			14:17		14:23		22:50		22:55	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	506000	101.2	502000	100.4	517000	103.4	519000	103.8
Antimony		1000	-4.0		993	99.3	-3.1		1030	103.0
Arsenic		1000	0.60		1060	106.0	1.5		1080	108.0
Barium		500	-1.4		519	103.8	-1.7		532	106.4
Beryllium		500	0.70		503	100.6	0.80		524	104.8
Bismuth		500	22.0		387	77.4	21.3		412	82.4
Boron			-1.8		-1.2		-0.50		-0.90	
Cadmium		1000	1.0		1030	103.0	1.1		1070	107.0
Calcium	400000	400000	389000	97.3	389000	97.3	389000	97.3	392000	98.0
Chromium		500	1.6		516	103.2	1.5		512	102.4
Cobalt		500	2.8		509	101.8	2.7		514	102.8
Copper		500	4.7		536	107.2	6.3		554	110.8
Iron	200000	200000	188000	94.0	199000	99.5	189000	94.5	201000	100.5
Lead		1000	2.0		987	98.7	3.4		987	98.7
Lithium		500	8.5		546	109.2	9.9		567	113.4
Magnesium	500000	500000	476000	95.2	495000	99.0	471000	94.2	494000	98.8
Manganese		500	-0.30		529	105.8	1.5		534	106.8
Molybdenum		500	-0.70		511	102.2	-1.2		525	105.0
Nickel		1000	-1.5		988	98.8	-1.3		983	98.3
Palladium		500	-1.5		513	102.6	-3.1		542	108.4
Potassium			-21		18.5		-64		4.1	
Selenium		1000	7.6		1060	106.0	5.8		1080	108.0
Silicon			-15		-19		-15		-19	
Silver		1000	0.10		1110	111.0	9.7		1140	114.0
Sodium			11.2		21.9		45.3		63.1	
Sulfur		500	-37		469	93.8	-38		488	97.6
Strontium			-4.9		-4.9		-4.8		-4.7	
Thallium		1000	-0.80		982	98.2	-3.5		987	98.7
Tin			-3.7		-3.5		-4.1		-3.1	
Titanium			4.1		3.9		4.4		4.5	
Tungsten		500	4.0		457	91.4	6.0		473	94.6
Vanadium		500	-2.6		525	105.0	-2.8		515	103.0
Zinc		1000	1.3		1030	103.0	1.3		1020	102.0

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA35094 Units: ug/l

Time:			14:17		14:23		22:50		22:55	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	-0.60		489	97.8	0.70		498	99.6

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA35094 Units: ug/l

Time:			05:54		06:00	
Sample ID:	ICSA	ICSAB	ICSA3		ICSAB3	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	500000	500000	526000	105.2	524000	104.8
Antimony		1000	-3.5		1010	101.0
Arsenic		1000	1.9		1060	106.0
Barium		500	-1.2		539	107.8
Beryllium		500	0.70		523	104.6
Bismuth		500	21.6		406	81.2
Boron			-1.3		-2.3	
Cadmium		1000	1.0		1050	105.0
Calcium	400000	400000	393000	98.3	388000	97.0
Chromium		500	1.7		516	103.2
Cobalt		500	2.8		510	102.0
Copper		500	3.8		551	110.2
Iron	200000	200000	188000	94.0	200000	100.0
Lead		1000	4.0		981	98.1
Lithium		500	11.2		576	115.2
Magnesium	500000	500000	467000	93.4	491000	98.2
Manganese		500	1.3		535	107.0
Molybdenum		500	-0.80		519	103.8
Nickel		1000	-1.5		976	97.6
Palladium		500	-1.7		538	107.6
Potassium			-19		4.4	
Selenium		1000	7.9		1060	106.0
Silicon			-17		-21	
Silver		1000	8.0		1140	114.0
Sodium			41.0		57.3	
Sulfur		500	-34		485	97.0
Strontium			-4.7		-4.4	
Thallium		1000	-1.8		976	97.6
Tin			-3.1		-4.0	
Titanium			3.3		4.8	
Tungsten		500	5.0		463	92.6
Vanadium		500	-3.5		520	104.0
Zinc		1000	1.1		1010	101.0

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC100614M1.ICP Date Analyzed: 10/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA35094 Units: ug/l

Time:			05:54		06:00	
Sample ID:	ICSA	ICSAB	ICSA3		ICSAB3	
Metal	True	True	Results	% Rec	Results	% Rec
Zirconium		500	0.60		500	100.0

(*) Outside of QC limits
(anr) Analyte not requested

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
Analyst: MET Run ID: MA35124
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:25	MA35124-STD1	1		STDA
14:31	MA35124-STD2	1		STDB
14:37	ZZZZZZ	1		
14:43	ZZZZZZ	1		
14:50	MA35124-ICV1	1		
14:58	MA35124-ICV2	1		
15:11	MA35124-ICB1	1		
15:17	MA35124-ICCV1	1		
15:32	MA35124-CCB1	1		
15:37	MA35124-CRI1	1		
15:43	MA35124-CRID1	1		
15:49	MA35124-CRIA1	1		
15:55	MA35124-CRID2	1		
16:01	MA35124-ICSA1	1		
16:07	MA35124-ICSAB1	1		
16:13	ZZZZZZ	1		
16:19	ZZZZZZ	1		
16:25	MA35124-CCV1	1		
16:31	MA35124-CCB2	1		
16:37	MP82378-MB1	1		
16:43	MP82378-B1	1		
16:49	MP82378-S1	1		
16:55	MP82378-S2	1		
17:01	JB77105-7R	1		(sample used for QC only; not part of login JB77674)
17:07	MP82378-SD1	5		
17:13	MP82375-B1	5		
17:19	MP82375-S1	5		
17:25	MP82375-S2	5		
17:30	MA35124-CCV2	1		
17:36	MA35124-CCB3	1		
17:43	MP82375-MB1	5		
17:49	JB78260-1	5		(sample used for QC only; not part of login JB77674)
17:54	MP82375-SD1	25		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
Analyst: MET Run ID: MA35124
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:00	ZZZZZZ	1		
18:06	ZZZZZZ	1		
18:12	ZZZZZZ	1		
18:18	JB77674-5	2		
18:24	JB77674-6	2		
18:30	JB77674-11	2		
---------->	Last reportable sample/prep for job JB77674			
18:36	MA35124-CCV3	1		
18:42	MA35124-CCB4	1		
18:48	ZZZZZZ	1		
18:54	ZZZZZZ	1		
19:00	MP82392-MB2	1		
19:06	MP82392-B2	1		
19:12	MP82392-S1	1		
19:18	MP82392-S2	1		
19:24	JB77628-1	1		(sample used for QC only; not part of login JB77674)
19:30	MP82392-SD1	5		
19:36	ZZZZZZ	1		
19:42	MA35124-CCV4	1		
19:48	MA35124-CCB5	1		
19:54	ZZZZZZ	1		
20:00	ZZZZZZ	1		
20:06	ZZZZZZ	1		
20:12	ZZZZZZ	1		
20:18	MP82418-S1	1		MN high
20:25	MP82418-S2	1		MN high
20:31	JB77931-1	1		(sample used for QC only; not part of login JB77674)
20:37	MP82418-SD1	5		MN high
20:43	ZZZZZZ	1		
20:49	MA35124-CCV5	1		
20:55	MA35124-CCB6	1		
21:01	ZZZZZZ	1		
21:07	ZZZZZZ	1		
21:13	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
Analyst: MET Run ID: MA35124
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
21:20	ZZZZZZ	1		
21:26	ZZZZZZ	1		
21:33	ZZZZZZ	1		
21:39	ZZZZZZ	1		
21:45	MP82450-MB1	5		
21:51	MP82450-B1	5		
21:57	MA35124-CCV6	1		
22:03	MA35124-CCB7	1		
22:09	MP82450-S1	5		
22:15	MP82450-S2	5		
22:21	JB78482-1AB	5		(sample used for QC only; not part of login JB77674)
22:27	MP82450-SD1	25		bad reading
22:33	ZZZZZZ	5		
22:39	ZZZZZZ	5		
22:45	ZZZZZZ	5		
22:51	ZZZZZZ	5		
22:58	ZZZZZZ	5		
23:04	MA35124-CCV7	1		
23:10	MA35124-CCB8	1		
23:16	MA35124-CRI2	1		
23:22	MA35124-CRID3	1		
23:28	MA35124-CRIA2	1		
23:34	MA35124-ICSA2	1		
23:40	MA35124-ICSAB2	1		
23:46	MA35124-CCV8	1		
23:52	MA35124-CCB9	1		
---------->	Last reportable CCB for job JB77674			
23:58	ZZZZZZ	5		
00:04	ZZZZZZ	5		
00:10	ZZZZZZ	5		
00:16	ZZZZZZ	5		
00:23	ZZZZZZ	5		
00:29	ZZZZZZ	5		
00:35	ZZZZZZ	5		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
Analyst: MET Run ID: MA35124
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
00:41	ZZZZZZ	5		
00:47	MP82450-SD1	25		
00:53	ZZZZZZ	5		
00:59	MA35124-CCV9	1		
01:05	MA35124-CCB10	1		
01:11	MP82451-MB1	1		
01:17	MP82451-B1	1		
01:23	MP82451-S1	1		
01:29	MP82451-S2	1		
01:35	JB76930-4R	1		(sample used for QC only; not part of login JB77674)
01:40	MP82451-SD1	5		
01:46	ZZZZZZ	1		
01:52	ZZZZZZ	1		
01:58	ZZZZZZ	1		
02:04	MP82425-B1	1		
02:10	MA35124-CCV10	1		
02:16	MA35124-CCB11	1		
02:22	MP82425-MB1	1		Batch to redigestion for low Zn hit. high rsd-s on CCV. Zn=14.5ppb
02:28	MP82425-S1	1		high rsd-s on CCV
02:34	MP82425-S2	1		high rsd-s on CCV
02:40	JB77789-38	1		(sample used for QC only; not part of login JB77674)
02:46	MP82425-SD1	5		high rsd-s on CCV
02:52	ZZZZZZ	1		
02:58	ZZZZZZ	1		
03:04	ZZZZZZ	1		
03:11	ZZZZZZ	1		
03:16	ZZZZZZ	1		
03:22	MA35124-CCV11	1		
03:28	MA35124-CCB12	1		
03:35	ZZZZZZ	1		
03:41	ZZZZZZ	1		
03:47	ZZZZZZ	1		
03:53	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
Analyst: MET Run ID: MA35124
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
03:59	ZZZZZZ	1		
04:05	ZZZZZZ	1		
04:11	ZZZZZZ	1		
04:17	ZZZZZZ	1		
04:23	ZZZZZZ	1		
04:29	ZZZZZZ	1		
04:36	MA35124-CCV12	1		
04:42	MA35124-CCB13	1		
04:48	ZZZZZZ	1		
04:54	ZZZZZZ	1		
05:00	MP82358-B2	1		
05:06	MP82358-MB2	1		Zn=10.6ppb
05:12	ZZZZZZ	1		
05:18	ZZZZZZ	1		
05:24	ZZZZZZ	1		
05:30	ZZZZZZ	1		
05:37	MP82446-B1	1		
05:43	MP82446-MB1	1		
05:49	MA35124-CCV13	1		
05:55	MA35124-CCB14	1		
06:01	MA35124-CRI3	1		
06:07	MA35124-CRID4	1		
06:13	MA35124-CRIA3	1		
06:19	MA35124-ICSA3	1		
06:25	MA35124-ICSAB3	1		
06:31	MA35124-CCV14	1		
06:37	MA35124-CCB15	1		
06:43	MP82446-S1	1		
06:49	MP82446-S2	1		
06:55	JB78543-2	1		(sample used for QC only; not part of login JB77674)
07:01	MP82446-SD1	5		
07:07	ZZZZZZ	1		
07:13	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
Analyst: MET Run ID: MA35124
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
07:19	ZZZZZZ	1		
07:25	ZZZZZZ	1		
07:31	ZZZZZZ	1		
07:37	ZZZZZZ	1		
07:43	MA35124-CCV15	1		
07:50	MA35124-CCB16	1		
07:56	ZZZZZZ	1		
08:02	ZZZZZZ	1		
08:08	MA35124-CRI4	1		
08:14	MA35124-CRID5	1		
08:20	MA35124-CCV16	1		
08:26	MA35124-CCB17	1		
08:32	ZZZZZZ	1		
08:38	ZZZZZZ	1		
08:44	ZZZZZZ	1		
08:50	ZZZZZZ	1		
08:56	ZZZZZZ	1		
09:02	ZZZZZZ	1		
09:08	ZZZZZZ	1		
09:14	ZZZZZZ	1		
09:22	ZZZZZZ	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
Analyst: MET Run ID: MA35124
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
14:25	MA35124-STD1	2688 R	112270 R	47262 R	6644 R
14:31	MA35124-STD2	2486	107070	45765	6175
14:37	ZZZZZZ	2514	108190	46151	6204
14:43	ZZZZZZ	2638	112170	46599	6524
14:50	MA35124-ICV1	No results reported for the elements associated with this internal standard.			
14:58	MA35124-ICV2	2561	109860	46284	6309
15:11	MA35124-ICB1	2664	111150	46491	6597
15:17	MA35124-ICCV1	2560	108730	46420	6309
15:32	MA35124-CCB1	2683	112580	47462	6638
15:37	MA35124-CRI1	2646	111840	46848	6533
15:43	MA35124-CRID1	No results reported for the elements associated with this internal standard.			
15:49	MA35124-CRIA1	2690	113550	47558	6646
15:55	MA35124-CRID2	2663	112490	47087	6567
16:01	MA35124-ICSA1	2351	101760	44983	5766
16:07	MA35124-ICSAB1	2355	101830	45365	5802
16:13	ZZZZZZ	999999 !	113750	48155	999999 !
16:19	ZZZZZZ	2628	113280	46889	6570
16:25	MA35124-CCV1	2566	109980	46568	6319
16:31	MA35124-CCB2	2677	109030	45925	6598
16:37	MP82378-MB1	2662	111190	47462	6603
16:43	MP82378-B1	2571	110200	46828	6360
16:49	MP82378-S1	2578	110340	48872	6343
16:55	MP82378-S2	2563	110140	46640	6318
17:01	JB77105-7R	2604	112080	46866	6417
17:07	MP82378-SD1	2635	112450	46389	6519
17:13	MP82375-B1	2625	111440	46951	6474
17:19	MP82375-S1	2621	110880	46686	6468
17:25	MP82375-S2	2607	110660	46241	6408
17:30	MA35124-CCV2	2584	109230	46840	6334
17:36	MA35124-CCB3	2678	112590	46732	6585
17:43	MP82375-MB1	2670	112280	46539	6558
17:49	JB78260-1	2643	111800	46828	6520
17:54	MP82375-SD1	2640	112100	46671	6523

INTERNAL STANDARD SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
Analyst: MET Run ID: MA35124
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
18:00	ZZZZZZ	2688	118630	48261	6666
18:06	ZZZZZZ	2679	114050	48159	6622
18:12	ZZZZZZ	2696	114740	48324	6699
18:18	JB77674-5	2598	111360	47134	6559
18:24	JB77674-6	2670	114110	48959	6453
18:30	JB77674-11	2692	112660	47750	6519
18:36	MA35124-CCV3	2564	110270	46935	6301
18:42	MA35124-CCB4	2690	114310	47275	6631
18:48	ZZZZZZ	2619	113060	48088	6405
18:54	ZZZZZZ	2608	113290	48350	6529
19:00	MP82392-MB2	2650	114530	48501	6619
19:06	MP82392-B2	2606	112030	48145	6498
19:12	MP82392-S1	2556	109560	48463	6386
19:18	MP82392-S2	2569	111820	48696	6435
19:24	JB77628-1	2606	113600	48943	6551
19:30	MP82392-SD1	2636	112570	47906	6614
19:36	ZZZZZZ	2564	113050	48954	6515
19:42	MA35124-CCV4	2582	109270	44818	6432
19:48	MA35124-CCB5	2626	112520	47506	6577
19:54	ZZZZZZ	2654	116510	48608	6690
20:00	ZZZZZZ	2618	114190	48850	6621
20:06	ZZZZZZ	2623	114600	48756	6583
20:12	ZZZZZZ	2658	123060	49281	6726
20:18	MP82418-S1	2448	109810	47628	6085
20:25	MP82418-S2	2480	109920	47529	6152
20:31	JB77931-1	2513	111470	45458	6211
20:37	MP82418-SD1	2593	116000	46335	6497
20:43	ZZZZZZ	2539	110500	48148	6296
20:49	MA35124-CCV5	2546	110320	47502	6371
20:55	MA35124-CCB6	2670	113410	47884	6691
21:01	ZZZZZZ	2517	112340	47617	6255
21:07	ZZZZZZ	2698	116420	49498	6809
21:13	ZZZZZZ	No results reported for the elements associated with this internal standard.			

INTERNAL STANDARD SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
Analyst: MET Run ID: MA35124
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
21:20	ZZZZZZ	2517	111590	47595	6272
21:26	ZZZZZZ	2481	119950	47223	6194
21:33	ZZZZZZ	2514	110630	47261	6076
21:39	ZZZZZZ	2495	109380	47229	6045
21:45	MP82450-MB1	2594	111680	46579	6355
21:51	MP82450-B1	2617	112750	47248	6395
21:57	MA35124-CCV6	2589	112590	46064	6468
22:03	MA35124-CCB7	2707	115970	48328	6803
22:09	MP82450-S1	2516	110160	46179	6188
22:15	MP82450-S2	2513	109620	46662	6179
22:21	JB78482-1AB	2552	111690	46303	6267
22:27	MP82450-SD1	No results reported for the elements associated with this internal standard.			
22:33	ZZZZZZ	2572	113510	47112	6341
22:39	ZZZZZZ	2564	110690	46955	6296
22:45	ZZZZZZ	2589	111200	46709	6334
22:51	ZZZZZZ	2616	112210	45809	6400
22:58	ZZZZZZ	No results reported for the elements associated with this internal standard.			
23:04	MA35124-CCV7	2661	112890	46248	6597
23:10	MA35124-CCB8	2744	115730	46855	6860
23:16	MA35124-CRI2	2751	115660	46761	6855
23:22	MA35124-CRID3	2766	115760	48597	6902
23:28	MA35124-CRIA2	2756	115750	46810	6882
23:34	MA35124-ICSA2	2452	106960	44733	6034
23:40	MA35124-ICSAB2	2452	105410	44949	6066
23:46	MA35124-CCV8	2670	113570	46098	6621
23:52	MA35124-CCB9	2763	116190	46721	6891
23:58	ZZZZZZ	2678	113020	45802	6520
00:04	ZZZZZZ	2678	113360	46066	6519
00:10	ZZZZZZ	2664	113010	45659	6475
00:16	ZZZZZZ	2677	113300	45646	6509
00:23	ZZZZZZ	2676	113370	45690	6487
00:29	ZZZZZZ	2676	112930	45610	6489
00:35	ZZZZZZ	2683	113230	47153	6511

INTERNAL STANDARD SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
Analyst: MET Run ID: MA35124
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
00:41	ZZZZZZ	2685	112490	45806	6515
00:47	MP82450-SD1	2725	114390	48881	6719
00:53	ZZZZZZ	2658	111150	45296	6449
00:59	MA35124-CCV9	2687	112960	46180	6623
01:05	MA35124-CCB10	2777	112430	47215	6881
01:11	MP82451-MB1	2765	116090	46465	6860
01:17	MP82451-B1	2698	113640	46295	6680
01:23	MP82451-S1	2695	113740	46242	6662
01:29	MP82451-S2	2697	113310	46211	6653
01:35	JB76930-4R	2763	115180	46708	6832
01:40	MP82451-SD1	2777	116100	46685	6873
01:46	ZZZZZZ	2766	115580	46784	6828
01:52	ZZZZZZ	2758	114960	46773	6803
01:58	ZZZZZZ	2755	110760	46990	6833
02:04	MP82425-B1	2714	113240	46111	6715
02:10	MA35124-CCV10	2692	114000	45769	6615
02:16	MA35124-CCB11	2783	118200	45977	6872
02:22	MP82425-MB1	2780	115290	46829	6868
02:28	MP82425-S1	2677	111970	45871	6618
02:34	MP82425-S2	2678	112550	45941	6611
02:40	JB77789-38	2716	113840	46214	6712
02:46	MP82425-SD1	2792	115750	46522	6910
02:52	ZZZZZZ	2764	109520	46718	6787
02:58	ZZZZZZ	2540	108030	43911	6076
03:04	ZZZZZZ	2703	112640	45472	6606
03:11	ZZZZZZ	2683	113060	46041	6579
03:16	ZZZZZZ	2744	114590	46395	6738
03:22	MA35124-CCV11	2684	112210	48493	6582
03:28	MA35124-CCB12	2789	118340	46353	6886
03:35	ZZZZZZ	2443	102260	42135	5632
03:41	ZZZZZZ	2685	112420	45922	6574
03:47	ZZZZZZ	2315	99489	40661	5307
03:53	ZZZZZZ	2670	112030	45420	6432

INTERNAL STANDARD SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
Analyst: MET Run ID: MA35124
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
03:59	ZZZZZZ	2714	113820	45740	6715
04:05	ZZZZZZ	2792	115110	46241	6910
04:11	ZZZZZZ	2360	103960	46612	5762
04:17	ZZZZZZ	2511	113640	47448	6140
04:23	ZZZZZZ	1985	91160	40897	4810
04:29	ZZZZZZ	2386	106580	45984	5827
04:36	MA35124-CCV12	2601	112280	48551	6512
04:42	MA35124-CCB13	2697	116650	49556	6789
04:48	ZZZZZZ	2499	110610	47345	6136
04:54	ZZZZZZ	1989	91457	42507	4818
05:00	MP82358-B2	2600	114180	49367	6552
05:06	MP82358-MB2	2736	117440	49297	6885
05:12	ZZZZZZ	2416	107080	46731	5828
05:18	ZZZZZZ	2607	113500	48412	6439
05:24	ZZZZZZ	2552	112420	48275	6334
05:30	ZZZZZZ	2459	108310	46874	6076
05:37	MP82446-B1	2698	117080	48924	6828
05:43	MP82446-MB1	2698	125360	49960	6867
05:49	MA35124-CCV13	2607	112690	48735	6537
05:55	MA35124-CCB14	2722	115600	49467	6851
06:01	MA35124-CRI3	2710	115770	48964	6809
06:07	MA35124-CRID4	2708	116000	49247	6822
06:13	MA35124-CRIA3	2712	118900	48536	6847
06:19	MA35124-ICSA3	2383	104580	46809	5956
06:25	MA35124-ICSAB3	2374	104360	47297	5961
06:31	MA35124-CCV14	2623	112640	48966	6579
06:37	MA35124-CCB15	2723	116840	48369	6888
06:43	MP82446-S1	2636	116610	50999	6682
06:49	MP82446-S2	2636	120380	51030	6681
06:55	JB78543-2	2719	115140	51475	6911
07:01	MP82446-SD1	2704	114110	50120	6888
07:07	ZZZZZZ	2648	117120	50755	6742
07:13	ZZZZZZ	2643	127110	51084	6759

INTERNAL STANDARD SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
Analyst: MET Run ID: MA35124
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
07:19	ZZZZZZ	2676	117880	51075	6855
07:25	ZZZZZZ	2671	113950	49942	6811
07:31	ZZZZZZ	2699	117770	51319	6871
07:37	ZZZZZZ	2689	118220	51139	6862
07:43	MA35124-CCV15	2612	113850	49630	6594
07:50	MA35124-CCB16	2709	118600	51201	6908
07:56	ZZZZZZ	2704	118930	51992	6903
08:02	ZZZZZZ	2689	119310	52347	6895
08:08	MA35124-CRI4	2674	117850	50936	6810
08:14	MA35124-CRID5	2698	118180	51072	6884
08:20	MA35124-CCV16	2611	114340	50590	6611
08:26	MA35124-CCB17	2694	118810	51165	6871
08:32	ZZZZZZ	2689	125820	50572	6986
08:38	ZZZZZZ	2714	118520	51175	6931
08:44	ZZZZZZ	2716	118420	51331	6916
08:50	ZZZZZZ	2701	118420	51194	6871
08:56	ZZZZZZ	2710	118480	51031	6915
09:02	ZZZZZZ	2627	111660	52067	6609
09:08	ZZZZZZ	2717	118300	50957	6958
09:14	ZZZZZZ	2709	118880	50918	6959
09:22	ZZZZZZ	2688	123290	51427	6907

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35124 Units: ug/l

Time:			15:11		15:32		16:31		17:36	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	9.9	anr							
Antimony	6.0	3	anr							
Arsenic	3.0	.82	anr							
Barium	200	.24	anr							
Beryllium	1.0	.01	anr							
Bismuth	20	1.4								
Boron	100	.09	anr							
Cadmium	3.0	.2	anr							
Calcium	5000	41	anr							
Chromium	10	.3	anr							
Cobalt	50	.25	anr							
Copper	10	.37	anr							
Iron	100	2.1	0.60	<100	0.70	<100	3.4	<100	5.2	<100
Lead	3.0	1.1	anr							
Lithium	20	1.9								
Magnesium	5000	11	anr							
Manganese	15	.05	anr							
Molybdenum	20	.47	anr							
Nickel	10	.3	anr							
Palladium	50	.7								
Potassium	10000	40	anr							
Selenium	10	1.4	anr							
Silicon	200	7.6								
Silver	10	.54	anr							
Sodium	10000	12	anr							
Sulfur	50	2.4								
Strontium	10	.15								
Thallium	2.0	1.3	anr							
Tin	10	.69	anr							
Titanium	10	.68								
Tungsten	50	7.4								
Vanadium	50	.28	anr							
Zinc	20	.92	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35124 Units: ug/l

Time:			15:11		15:32		16:31		17:36	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.39								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35124 Units: ug/l

Time:			18:42		19:48		20:55		22:03	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	9.9	anr							
Antimony	6.0	3	anr							
Arsenic	3.0	.82	anr							
Barium	200	.24	anr							
Beryllium	1.0	.01	anr							
Bismuth	20	1.4								
Boron	100	.09	anr							
Cadmium	3.0	.2	anr							
Calcium	5000	41	anr							
Chromium	10	.3	anr							
Cobalt	50	.25	anr							
Copper	10	.37	anr							
Iron	100	2.1	16.6	<100*(a)	16.4	<100*(a)	6.0	<100	9.8	<100
Lead	3.0	1.1	anr							
Lithium	20	1.9								
Magnesium	5000	11	anr							
Manganese	15	.05	anr							
Molybdenum	20	.47	anr							
Nickel	10	.3	anr							
Palladium	50	.7								
Potassium	10000	40	anr							
Selenium	10	1.4	anr							
Silicon	200	7.6								
Silver	10	.54	anr							
Sodium	10000	12	anr							
Sulfur	50	2.4								
Strontium	10	.15								
Thallium	2.0	1.3	anr							
Tin	10	.69	anr							
Titanium	10	.68								
Tungsten	50	7.4								
Vanadium	50	.28	anr							
Zinc	20	.92	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35124 Units: ug/l

Time:			18:42		19:48		20:55		22:03	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.39								

(*) Outside of QC limits
(anr) Analyte not requested
(a) All samples reported 10 x CCB value.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35124 Units: ug/l

Time: / Sample ID:			23:10 CCB8		23:52 CCB9	
Metal	RL	IDL	raw	final	raw	final
Aluminum	200	9.9	anr			
Antimony	6.0	3	anr			
Arsenic	3.0	.82	anr			
Barium	200	.24	anr			
Beryllium	1.0	.01	anr			
Bismuth	20	1.4				
Boron	100	.09	anr			
Cadmium	3.0	.2	anr			
Calcium	5000	41	anr			
Chromium	10	.3	anr			
Cobalt	50	.25	anr			
Copper	10	.37	anr			
Iron	100	2.1	4.9	<100	21.5	<100
Lead	3.0	1.1	anr			
Lithium	20	1.9				
Magnesium	5000	11	anr			
Manganese	15	.05	anr			
Molybdenum	20	.47	anr			
Nickel	10	.3	anr			
Palladium	50	.7				
Potassium	10000	40	anr			
Selenium	10	1.4	anr			
Silicon	200	7.6				
Silver	10	.54	anr			
Sodium	10000	12	anr			
Sulfur	50	2.4				
Strontium	10	.15				
Thallium	2.0	1.3	anr			
Tin	10	.69	anr			
Titanium	10	.68				
Tungsten	50	7.4				
Vanadium	50	.28	anr			
Zinc	20	.92	anr			

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35124 Units: ug/l

Time:			23:10		23:52	
Sample ID:			CCB8		CCB9	
Metal	RL	IDL	raw	final	raw	final
Zirconium	10	.39				

(*) Outside of QC limits
(anr) Analyte not requested

8.2.2
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35124 Units: ug/l

Time:		15:17	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	anr		
Beryllium	anr		
Bismuth			
Boron	anr		
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	40000	40900	102.3
Lead	anr		
Lithium			
Magnesium	anr		
Manganese	anr		
Molybdenum	anr		
Nickel	anr		
Palladium			
Potassium	anr		
Selenium	anr		
Silicon			
Silver	anr		
Sodium	anr		
Sulfur			
Strontium			
Thallium	anr		
Tin	anr		
Titanium			
Tungsten			
Vanadium	anr		
Zinc	anr		

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35124 Units: ug/l

Time:		15:17	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35124 Units: ug/l

Time:		14:58			16:25			17:30	
Sample ID:	ICV	ICV2		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	39900	99.8	40000	40900	102.3	40000	40300	100.8
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35124 Units: ug/l

Time:		14:58			16:25			17:30	
Sample ID:	ICV	ICV2		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35124 Units: ug/l

Time:		18:36			19:42			20:49	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	41000	102.5	40000	43400	108.5	40000	40600	101.5
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35124 Units: ug/l

Time:		18:36			19:42			20:49	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35124 Units: ug/l

Time:		21:57			23:04			23:46	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	41800	104.5	40000	41000	102.5	40000	40900	102.3
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35124 Units: ug/l

Time:		21:57			23:04			23:46	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35124 Units: ug/l

Time:				15:37		15:49		15:55	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		103	103.0	527	105.4		
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	anr					
Molybdenum	20			anr					
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50								
Strontium	10								
Thallium	10		2.0	anr					
Tin	10			anr					
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35124 Units: ug/l

Time:				15:37		15:49		15:55	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

8.2.5

8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35124 Units: ug/l

Time:				23:16		23:22		23:28	
Sample ID:	CRI	CRIA	CRID	CRI2		CRID3		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		106	106.0			530	106.0
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	anr					
Molybdenum	20			anr					
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50								
Strontium	10								
Thallium	10		2.0	anr					
Tin	10			anr					
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35124 Units: ug/l

Time:				23:16		23:22		23:28	
Sample ID:	CRI	CRIA	CRID	CRI2		CRID3		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA35124 Units: ug/l

Time:			16:01		16:07		23:34		23:40	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	507000	101.4	494000	98.8	499000	99.8	487000	97.4
Antimony		1000	2.0		1050	105.0	1.9		1010	101.0
Arsenic		1000	2.1		1070	107.0	3.4		1030	103.0
Barium		500	-0.50		510	102.0	-0.40		490	98.0
Beryllium		500	-0.10		507	101.4	0.0		515	103.0
Bismuth		500	-2.3		521	104.2	1.7		534	106.8
Boron			-1.0		-1.3		-3.6		-4.5	
Cadmium		1000	2.2		1060	106.0	1.8		1040	104.0
Calcium	400000	400000	388000	97.0	381000	95.3	400000	100.0	392000	98.0
Chromium		500	1.0		502	100.4	0.60		500	100.0
Cobalt		500	0.10		496	99.2	-0.30		494	98.8
Copper		500	3.2		531	106.2	0.70		504	100.8
Iron	200000	200000	185000	92.5	191000	95.5	187000	93.5	193000	96.5
Lead		1000	1.8		984	98.4	-1.3		959	95.9
Lithium		500	-0.60		525	105.0	-0.50		508	101.6
Magnesium	500000	500000	517000	103.4	526000	105.2	517000	103.4	527000	105.4
Manganese		500	-5.6		509	101.8	-2.1		516	103.2
Molybdenum		500	-2.4		513	102.6	-3.1		488	97.6
Nickel		1000	-2.5		995	99.5	-3.6		966	96.6
Palladium		500	4.9		614	122.8*	5.4		635	127.0*
Potassium			90.0		101		88.1		95.7	
Selenium		1000	-10		1040	104.0	6.7		1020	102.0
Silicon			-50		-63		-52		-66	
Silver		1000	8.3		1070	107.0	-4.5		1030	103.0
Sodium			15.7		16.1		31.4		24.4	
Sulfur		500	20.9		574	114.8	-14		517	103.4
Strontium			-5.8		-5.8		-6.8		-6.7	
Thallium		1000	-2.3		987	98.7	1.2		1010	101.0
Tin			0.10		0.60		2.2		-0.50	
Titanium			0.20		0.30		-0.10		0.20	
Tungsten		500	7.1		408	81.6	0.10		380	76.0*
Vanadium		500	5.2		513	102.6	2.8		509	101.8
Zinc		1000	0.30		991	99.1	0.90		1010	101.0

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA100814M1.ICP Date Analyzed: 10/08/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA35124 Units: ug/l

Time:			16:01		16:07		23:34		23:40	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	-2.1		393	78.6*	0.40		375	75.0*

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP82364
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 10/03/14 10/03/14

Metal	RL	IDL	MDL	MB raw	final	MB raw	final
Aluminum	200	9.9	16				
Antimony	6.0	1.2	3.8				
Arsenic	3.0	.82	2.1				
Barium	200	.24	.51				
Beryllium	1.0	.01	.17				
Bismuth	20	1.4	3.9				
Boron	100	.09	1.5				
Cadmium	3.0	.2	.3				
Calcium	5000	32	17				
Chromium	10	.3	.99				
Cobalt	50	.25	.69				
Copper	10	.37	.86				
Iron	100	2.1	9.5	1.1	<100	-6.4	<100
Lead	3.0	.97	1.5				
Lithium	20	1.7	1.6				
Magnesium	5000	11	46				
Manganese	15	.05	.28				
Molybdenum	20	.37	2.5				
Nickel	10	.3	1.2				
Palladium	50	.7	2.3				
Potassium	10000	38	41				
Selenium	10	1.4	4.7				
Silicon	200	7.6	7.4				
Silver	10	.54	.91				
Sodium	10000	10	37				
Sulfur	50	2.4	7.2				
Strontium	10	.15	.28				
Thallium	2.0	1.3	1.7				
Tin	10	.69	1.8				
Titanium	10	.53	.83				
Tungsten	50	4.8	8				
Vanadium	50	.28	.91				
Zinc	20	.92	3.2				

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP82364
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 10/03/14 10/03/14

Metal	RL	IDL	MDL	MB raw	final	MB raw	final
Zirconium	10	.32	1.2				

Associated samples MP82364: JB77674-1, JB77674-2, JB77674-3, JB77674-4, JB77674-5, JB77674-6, JB77674-7, JB77674-8, JB77674-9, JB77674-10, JB77674-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP82364 Methods: EPA 200.7
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/06/14

Metal	JB78176-1F Original	MS	Spikelot MPSPK	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	anr				
Barium	anr				
Beryllium					
Bismuth					
Boron	anr				
Cadmium	anr				
Calcium					
Chromium	anr				
Cobalt					
Copper	anr				
Iron	20.2	27200	25000	108.7	70-130
Lead	anr				
Lithium					
Magnesium					
Manganese	anr				
Molybdenum					
Nickel	anr				
Palladium					
Potassium					
Selenium	anr				
Silicon					
Silver	anr				
Sodium					
Sulfur					
Strontium					
Thallium					
Tin					
Titanium					
Tungsten					
Vanadium					
Zinc	anr				

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP82364
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 10/06/14

Metal	JB78176-1F Original MS	Spikelot MPSPK	% Rec	QC Limits
Zirconium				

Associated samples MP82364: JB77674-1, JB77674-2, JB77674-3, JB77674-4, JB77674-5, JB77674-6, JB77674-7, JB77674-8, JB77674-9, JB77674-10, JB77674-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP82364 Methods: EPA 200.7
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/06/14

Metal	JB78176-1F Original	MSD	Spikelot MPSPK	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	anr					
Barium	anr					
Beryllium						
Bismuth						
Boron	anr					
Cadmium	anr					
Calcium						
Chromium	anr					
Cobalt						
Copper	anr					
Iron	20.2	27200	25000	108.7	0.0	16
Lead	anr					
Lithium						
Magnesium						
Manganese	anr					
Molybdenum						
Nickel	anr					
Palladium						
Potassium						
Selenium	anr					
Silicon						
Silver	anr					
Sodium						
Sulfur						
Strontium						
Thallium						
Tin						
Titanium						
Tungsten						
Vanadium						
Zinc	anr					

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP82364 Methods: EPA 200.7
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/06/14

Metal	JB78176-1F Original MSD	Spikelot MPSPK	% Rec	MSD RPD	QC Limit
Zirconium					

Associated samples MP82364: JB77674-1, JB77674-2, JB77674-3, JB77674-4, JB77674-5, JB77674-6, JB77674-7, JB77674-8, JB77674-9, JB77674-10, JB77674-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP82364 Methods: EPA 200.7
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/03/14

Metal	JB77674-7 Original	MS	Spikelot MPSPK	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	anr				
Barium	anr				
Beryllium					
Bismuth					
Boron	anr				
Cadmium	anr				
Calcium					
Chromium	anr				
Cobalt					
Copper	anr				
Iron	655	25900	25000	101.0	70-130
Lead	anr				
Lithium					
Magnesium					
Manganese	anr				
Molybdenum					
Nickel	anr				
Palladium					
Potassium					
Selenium					
Silicon					
Silver	anr				
Sodium					
Sulfur					
Strontium					
Thallium					
Tin					
Titanium					
Tungsten					
Vanadium					
Zinc	anr				

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP82364 Methods: EPA 200.7
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/03/14

Metal	JB77674-7 Original MS	Spikelot MPSPK	% Rec	QC Limits
Zirconium				

Associated samples MP82364: JB77674-1, JB77674-2, JB77674-3, JB77674-4, JB77674-5, JB77674-6, JB77674-7, JB77674-8, JB77674-9, JB77674-10, JB77674-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP82364
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date:	10/03/14				10/03/14			
Metal	BSP Result	Spikelot MPSPK	% Rec	QC Limits	BSP Result	Spikelot MPSPK	% Rec	QC Limits
Aluminum								
Antimony								
Arsenic	anr							
Barium	anr							
Beryllium								
Bismuth								
Boron	anr							
Cadmium	anr							
Calcium								
Chromium	anr							
Cobalt								
Copper	anr							
Iron	27500	25000	110.0	85-115	25300	25000	101.2	85-115
Lead	anr							
Lithium								
Magnesium								
Manganese	anr							
Molybdenum								
Nickel	anr							
Palladium								
Potassium								
Selenium	anr							
Silicon								
Silver	anr							
Sodium								
Sulfur								
Strontium								
Thallium								
Tin								
Titanium								
Tungsten								
Vanadium								
Zinc	anr							

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP82364
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date:	10/03/14				10/03/14			
Metal	BSP Result	Spikelot MPSPK	% Rec	QC Limits	BSP Result	Spikelot MPSPK	% Rec	QC Limits
Zirconium								

Associated samples MP82364: JB77674-1, JB77674-2, JB77674-3, JB77674-4, JB77674-5, JB77674-6, JB77674-7, JB77674-8, JB77674-9, JB77674-10, JB77674-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP82364
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 10/06/14

Metal	JB78176-1F Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Bismuth				
Boron	anr			
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper	anr			
Iron	20.2	0.00	100.0(a)	0-10
Lead	anr			
Lithium				
Magnesium				
Manganese	anr			
Molybdenum				
Nickel	anr			
Palladium				
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Sulfur				
Strontium				
Thallium				
Tin				
Titanium				
Tungsten				
Vanadium				
Zinc	anr			

SERIAL DILUTION RESULTS SUMMARY

Login Number: JB77674
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP82364 Methods: EPA 200.7
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/06/14

	JB78176-1F		QC
Metal	Original SDL 1:5	%DIF	Limits
Zirconium			

Associated samples MP82364: JB77674-1, JB77674-2, JB77674-3, JB77674-4, JB77674-5, JB77674-6, JB77674-7, JB77674-8, JB77674-9, JB77674-10, JB77674-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

New Jersey
ACCUTEST
LABORATORIES

11/17/14

Technical Report for

Atlantic Richfield Company

ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Accutest Job Number: JB80728

Sampling Date: 10/31/14

Report to:

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South Plainfield, NJ 07080
donnan@envirotrac.com

ATTN: Donna Nicholls

Total number of pages in report: **455**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Kelly Patterson 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, OH VAP (CL0056), AZ (AZ0786), PA, RI, SC, TN, VA, WV, DoD ELAP (L-A-B L2248)

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Accutest Laboratories

Sample Summary

Atlantic Richfield Company

Job No: JB80728

ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JB80728-1	10/31/14	10:57	KM	11/03/14	AQ	Ground Water	MW-1
JB80728-2	10/31/14	12:06	KM	11/03/14	AQ	Ground Water	MW-3
JB80728-3	10/31/14	15:12	KM	11/03/14	AQ	Ground Water	MW-11
JB80728-4	10/31/14	10:30	KM	11/03/14	AQ	Ground Water	MW-19
JB80728-5	10/31/14	12:16	KM	11/03/14	AQ	Ground Water	MW-6
JB80728-6	10/31/14	14:47	KM	11/03/14	AQ	Ground Water	MW-12
JB80728-7	10/31/14	11:30	KM	11/03/14	AQ	Ground Water	MW-2
JB80728-8	10/31/14	14:26	KM	11/03/14	AQ	Ground Water	MW-14
JB80728-9	10/31/14	13:35	KM	11/03/14	AQ	Ground Water	MW-16R
JB80728-10	10/31/14	13:55	KM	11/03/14	AQ	Ground Water	MW-17R
JB80728-11	10/31/14	13:08	KM	11/03/14	AQ	Ground Water	MW-18R

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Atlantic Richfield Company	**Job No**	JB80728
Site:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ	**Report Date**	11/17/2014 12:28:50 P

On 11/03/2014, 11 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 4.1 C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of JB80728 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix: AQ **Batch ID:** VA7919

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB80728-6MS, JB80728-6MSD were used as the QC samples indicated.
- JB80728-11: (pH=11)Sample pH did not satisfy field preservation criteria.

Matrix: AQ **Batch ID:** VA7921

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB80915-1MS, JB80915-1MSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for Styrene, Trichloroethene are outside control limits. Outside control limits due to matrix interference.
- Matrix Spike Duplicate Recovery(s) for Trichloroethene, Styrene are outside control limits. Outside control limits due to matrix interference.
- RPD(s) for MS/MSD for Styrene are outside control limits. Outside control limits due to matrix interference.

Metals By Method EPA 200.7

Matrix: AQ **Batch ID:** MP83046

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB80512-18MS, JB80512-18MSD, JB80512-18SDL were used as the QC samples for metals.

Matrix: AQ **Batch ID:** MP83225

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB80728-8MS, JB80728-8MSD, JB80728-8SDL were used as the QC samples for metals.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

Summary of Hits

Job Number: JB80728
Account: Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Collected: 10/31/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB80728-1	**MW-1**					
Methyl Tert Butyl Ether		0.95 J	1.0	0.26	ug/l	SW846 8260B
Tert Butyl Alcohol		11.7	10	4.7	ug/l	SW846 8260B
Total TIC, Volatile		14.8 J			ug/l	
Total Alkanes		17.4 J			ug/l	
Iron		2010	100		ug/l	EPA 200.7
JB80728-2	**MW-3**					
Benzene		38.5	0.50	0.21	ug/l	SW846 8260B
Cyclohexane		11.8	5.0	0.37	ug/l	SW846 8260B
Isopropylbenzene		6.9	1.0	0.26	ug/l	SW846 8260B
Methylcyclohexane		8.4	5.0	0.22	ug/l	SW846 8260B
Methyl Tert Butyl Ether		3.3	1.0	0.26	ug/l	SW846 8260B
Tert Butyl Alcohol		22.6	10	4.7	ug/l	SW846 8260B
Toluene		0.86 J	1.0	0.22	ug/l	SW846 8260B
m,p-Xylene		5.0	1.0	0.45	ug/l	SW846 8260B
o-Xylene		0.36 J	1.0	0.20	ug/l	SW846 8260B
Xylene (total)		5.4	1.0	0.20	ug/l	SW846 8260B
Total TIC, Volatile		145.4 J			ug/l	
Total Alkanes		221 J			ug/l	
Iron		1060	100		ug/l	EPA 200.7
JB80728-3	**MW-11**					
Acetone		123	10	2.6	ug/l	SW846 8260B
Benzene		2.8	0.50	0.21	ug/l	SW846 8260B
2-Butanone (MEK)		48.9	10	2.5	ug/l	SW846 8260B
Cyclohexane		36.3	5.0	0.37	ug/l	SW846 8260B
Ethylbenzene		40.7	1.0	0.40	ug/l	SW846 8260B
2-Hexanone		150	5.0	1.7	ug/l	SW846 8260B
Isopropylbenzene		6.9	1.0	0.26	ug/l	SW846 8260B
Methylcyclohexane		33.1	5.0	0.22	ug/l	SW846 8260B
Methyl Tert Butyl Ether		0.56 J	1.0	0.26	ug/l	SW846 8260B
4-Methyl-2-pentanone(MIBK)		41.6	5.0	1.1	ug/l	SW846 8260B
Tert Butyl Alcohol		59.2	10	4.7	ug/l	SW846 8260B
Toluene		8.8	1.0	0.22	ug/l	SW846 8260B
m,p-Xylene		208	1.0	0.45	ug/l	SW846 8260B
o-Xylene		103	1.0	0.20	ug/l	SW846 8260B
Xylene (total)		311	1.0	0.20	ug/l	SW846 8260B
Total TIC, Volatile		494 J			ug/l	
Total Alkanes		2212 J			ug/l	
Iron		551	100		ug/l	EPA 200.7

Summary of Hits

Job Number: JB80728
Account: Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Collected: 10/31/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB80728-4	**MW-19**					
Benzene		13.6	0.50	0.21	ug/l	SW846 8260B
Cyclohexane		1.9 J	5.0	0.37	ug/l	SW846 8260B
Isopropylbenzene		0.34 J	1.0	0.26	ug/l	SW846 8260B
Methylcyclohexane		0.44 J	5.0	0.22	ug/l	SW846 8260B
Methyl Tert Butyl Ether		2.5	1.0	0.26	ug/l	SW846 8260B
Tert Butyl Alcohol		5.5 J	10	4.7	ug/l	SW846 8260B
Xylene (total)		0.22 J	1.0	0.20	ug/l	SW846 8260B
Total Alkanes		25 J			ug/l	
Iron		1610	100		ug/l	EPA 200.7
JB80728-5	**MW-6**					
Acetone		41.9	10	2.6	ug/l	SW846 8260B
Benzene		8.0	0.50	0.21	ug/l	SW846 8260B
2-Butanone (MEK)		18.0	10	2.5	ug/l	SW846 8260B
Cyclohexane		59.1	5.0	0.37	ug/l	SW846 8260B
Ethylbenzene		6.8	1.0	0.40	ug/l	SW846 8260B
Isopropylbenzene		26.5	1.0	0.26	ug/l	SW846 8260B
Methylcyclohexane		62.3	5.0	0.22	ug/l	SW846 8260B
Toluene		15.5	1.0	0.22	ug/l	SW846 8260B
m,p-Xylene		21.4	1.0	0.45	ug/l	SW846 8260B
o-Xylene		0.79 J	1.0	0.20	ug/l	SW846 8260B
Xylene (total)		22.1	1.0	0.20	ug/l	SW846 8260B
Total TIC, Volatile		621 J			ug/l	
Total Alkanes		595 J			ug/l	
Iron		29200	100		ug/l	EPA 200.7
JB80728-6	**MW-12**					
Benzene		61.8	0.50	0.21	ug/l	SW846 8260B
2-Butanone (MEK)		5.0 J	10	2.5	ug/l	SW846 8260B
Cyclohexane		35.4	5.0	0.37	ug/l	SW846 8260B
Ethylbenzene		125	1.0	0.40	ug/l	SW846 8260B
Isopropylbenzene		11.0	1.0	0.26	ug/l	SW846 8260B
Methylcyclohexane		34.2	5.0	0.22	ug/l	SW846 8260B
Methyl Tert Butyl Ether		0.99 J	1.0	0.26	ug/l	SW846 8260B
Tert Butyl Alcohol		22.3	10	4.7	ug/l	SW846 8260B
Toluene		53.1	1.0	0.22	ug/l	SW846 8260B
m,p-Xylene		639	10	4.5	ug/l	SW846 8260B
o-Xylene		200	10	2.0	ug/l	SW846 8260B
Xylene (total)		840	10	2.0	ug/l	SW846 8260B
Total TIC, Volatile		376 J			ug/l	
Total Alkanes		721 J			ug/l	

Summary of Hits

Job Number: JB80728
Account: Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Collected: 10/31/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Iron		9780	100		ug/l	EPA 200.7
JB80728-7	**MW-2**					
Benzene		1.1	0.50	0.21	ug/l	SW846 8260B
Cyclohexane		0.91 J	5.0	0.37	ug/l	SW846 8260B
Isopropylbenzene		0.77 J	1.0	0.26	ug/l	SW846 8260B
Methylcyclohexane		0.54 J	5.0	0.22	ug/l	SW846 8260B
Methyl Tert Butyl Ether		0.61 J	1.0	0.26	ug/l	SW846 8260B
Xylene (total)		0.30 J	1.0	0.20	ug/l	SW846 8260B
Total TIC, Volatile		51 J			ug/l	
Total Alkanes		18.2 J			ug/l	
Iron		1890	100		ug/l	EPA 200.7
JB80728-8	**MW-14**					
Acetone		16.0	10	2.6	ug/l	SW846 8260B
Benzene		35.4	0.50	0.21	ug/l	SW846 8260B
2-Butanone (MEK)		5.1 J	10	2.5	ug/l	SW846 8260B
Cyclohexane		35.6	5.0	0.37	ug/l	SW846 8260B
Ethylbenzene		28.4	1.0	0.40	ug/l	SW846 8260B
2-Hexanone		6.5	5.0	1.7	ug/l	SW846 8260B
Isopropylbenzene		4.6	1.0	0.26	ug/l	SW846 8260B
Methylcyclohexane		27.7	5.0	0.22	ug/l	SW846 8260B
Methyl Tert Butyl Ether		4.4	1.0	0.26	ug/l	SW846 8260B
4-Methyl-2-pentanone(MIBK)		4.6 J	5.0	1.1	ug/l	SW846 8260B
Tert Butyl Alcohol		15.4	10	4.7	ug/l	SW846 8260B
Toluene		5.7	1.0	0.22	ug/l	SW846 8260B
m,p-Xylene		141	1.0	0.45	ug/l	SW846 8260B
o-Xylene		23.0	1.0	0.20	ug/l	SW846 8260B
Xylene (total)		164	1.0	0.20	ug/l	SW846 8260B
Total TIC, Volatile		307 J			ug/l	
Total Alkanes		211 J			ug/l	
Iron		348	100		ug/l	EPA 200.7
JB80728-9	**MW-16R**					
Acetone		4.7 J	10	2.6	ug/l	SW846 8260B
Methyl Tert Butyl Ether		0.52 J	1.0	0.26	ug/l	SW846 8260B
m,p-Xylene		0.69 J	1.0	0.45	ug/l	SW846 8260B
Xylene (total)		0.87 J	1.0	0.20	ug/l	SW846 8260B
Iron		8150	100		ug/l	EPA 200.7

Summary of Hits

Job Number: JB80728
Account: Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Collected: 10/31/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB80728-10	**MW-17R**					
Benzene		421	10	4.2	ug/l	SW846 8260B
Cyclohexane		123	100	7.4	ug/l	SW846 8260B
Ethylbenzene		1070	20	7.9	ug/l	SW846 8260B
Isopropylbenzene		87.9	20	5.1	ug/l	SW846 8260B
Methylcyclohexane		86.0 J	100	4.3	ug/l	SW846 8260B
Toluene		1020	20	4.4	ug/l	SW846 8260B
m,p-Xylene		4080	20	9.0	ug/l	SW846 8260B
o-Xylene		1410	20	4.0	ug/l	SW846 8260B
Xylene (total)		5480	20	4.0	ug/l	SW846 8260B
Total TIC, Volatile		6190 J			ug/l	
Total Alkanes		2590 J			ug/l	
Iron		10800	100		ug/l	EPA 200.7
JB80728-11	**MW-18R**					
Acetone [a]		104	50	13	ug/l	SW846 8260B
Benzene [a]		86.9	2.5	1.0	ug/l	SW846 8260B
2-Butanone (MEK) [a]		39.4 J	50	12	ug/l	SW846 8260B
Cyclohexane [a]		19.4 J	25	1.9	ug/l	SW846 8260B
Ethylbenzene [a]		302	5.0	2.0	ug/l	SW846 8260B
2-Hexanone [a]		27.4	25	8.7	ug/l	SW846 8260B
Isopropylbenzene [a]		46.9	5.0	1.3	ug/l	SW846 8260B
Methylcyclohexane [a]		35.1	25	1.1	ug/l	SW846 8260B
Methyl Tert Butyl Ether [a]		6.4	5.0	1.3	ug/l	SW846 8260B
4-Methyl-2-pentanone(MIBK) [a]		17.8 J	25	5.3	ug/l	SW846 8260B
Toluene [a]		140	5.0	1.1	ug/l	SW846 8260B
m,p-Xylene [a]		1250	5.0	2.2	ug/l	SW846 8260B
o-Xylene [a]		283	5.0	1.0	ug/l	SW846 8260B
Xylene (total) [a]		1530	5.0	1.0	ug/l	SW846 8260B
Total TIC, Volatile		2081 J			ug/l	
Total Alkanes		63 J			ug/l	
Iron		819	100		ug/l	EPA 200.7

(a) (pH= 11)Sample pH did not satisfy field preservation criteria.

New Jersey ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	JB80728-1	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A209878.D	1	11/12/14	CM	n/a	n/a	VA7919
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.6	ug/l	
71-43-2	Benzene	ND	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-1
Lab Sample ID: JB80728-1 **Date Sampled:** 10/31/14
Matrix: AQ - Ground Water **Date Received:** 11/03/14
Method: SW846 8260B **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.95	1.0	0.26	ug/l	J
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	11.7	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	ND	1.0	0.45	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		79-120%
17060-07-0	1,2-Dichloroethane-D4	92%		72-123%
2037-26-5	Toluene-D8	101%		78-119%
460-00-4	4-Bromofluorobenzene	106%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	alcohols	12.38	9.5	ug/l	J
	ketones	13.55	5.3	ug/l	J
	Total TIC, Volatile		14.8	ug/l	J
	Total Alkanes		17.4	ug/l	J

ND = Not detected MDL = Method Detection Limit
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J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	JB80728-1	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	2010	100	ug/l	1	11/12/14	11/14/14	BS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35417
(2) Prep QC Batch: MP83225

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID: MW-3
Lab Sample ID: JB80728-2 **Date Sampled:** 10/31/14
Matrix: AQ - Ground Water **Date Received:** 11/03/14
Method: SW846 8260B **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A209886.D	1	11/12/14	CM	n/a	n/a	VA7919
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.6	ug/l	
71-43-2	Benzene	38.5	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	11.8	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	JB80728-2	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	6.9	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	8.4	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	3.3	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	22.6	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	0.86	1.0	0.22	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	5.0	1.0	0.45	ug/l	
95-47-6	o-Xylene	0.36	1.0	0.20	ug/l	J
1330-20-7	Xylene (total)	5.4	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		79-120%
17060-07-0	1,2-Dichloroethane-D4	89%		72-123%
2037-26-5	Toluene-D8	100%		78-119%
460-00-4	4-Bromofluorobenzene	112%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	alkene	9.41	38	ug/l	J
103-65-1	Benzene, propyl-	15.96	17	ug/l	JN
	C4 alkyl benzene	17.21	5.7	ug/l	J
496-11-7	Indane	17.34	18	ug/l	JN
	C4 alkyl benzene	17.74	9.9	ug/l	J
	1H-Indene-dihydro-methyl- isomer	17.95	11	ug/l	J
	C4 alkyl benzene	18.19	7.6	ug/l	J
	1H-Indene-dihydro-methyl- isomer	18.60	9.2	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	JB80728-2	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	1H-Indene-dihydro-methyl- isomer	18.79	17	ug/l	J
91-20-3	Naphthalene	19.61	12	ug/l	JN
	Total TIC, Volatile		145.4	ug/l	J
	Total Alkanes		221	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	JB80728-2	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	1060	100	ug/l	1	11/12/14	11/14/14	BS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35417
(2) Prep QC Batch: MP83225

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID: MW-11
Lab Sample ID: JB80728-3 **Date Sampled:** 10/31/14
Matrix: AQ - Ground Water **Date Received:** 11/03/14
Method: SW846 8260B **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A209880.D	1	11/12/14	CM	n/a	n/a	VA7919
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	123	10	2.6	ug/l	
71-43-2	Benzene	2.8	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	48.9	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	36.3	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	40.7	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-11		
Lab Sample ID:	JB80728-3	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	150	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	6.9	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	33.1	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.56	1.0	0.26	ug/l	J
108-10-1	4-Methyl-2-pentanone(MIBK)	41.6	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	59.2	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	8.8	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	208	1.0	0.45	ug/l	
95-47-6	o-Xylene	103	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	311	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		79-120%
17060-07-0	1,2-Dichloroethane-D4	90%		72-123%
2037-26-5	Toluene-D8	103%		78-119%
460-00-4	4-Bromofluorobenzene	117%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	alkene	6.47	68	ug/l	J
	alkene	6.68	33	ug/l	J
	alkene	6.78	81	ug/l	J
96-37-7	Cyclopentane, methyl-	9.41	100	ug/l	JN
	ketones	11.53	47	ug/l	J
	ketones	12.71	61	ug/l	J
	C3 alkyl benzene	16.04	42	ug/l	J
	C3 alkyl benzene	16.57	62	ug/l	J

ND = Not detected MDL = Method Detection Limit
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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-11		
Lab Sample ID:	JB80728-3	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		494	ug/l	J
	Total Alkanes		2212	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-11		
Lab Sample ID:	JB80728-3	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	551	100	ug/l	1	11/12/14	11/14/14	BS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35417
(2) Prep QC Batch: MP83225

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-19		
Lab Sample ID:	JB80728-4	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A209917.D	1	11/13/14	CM	n/a	n/a	VA7921
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.6	ug/l	
71-43-2	Benzene	13.6	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	1.9	5.0	0.37	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-19		
Lab Sample ID:	JB80728-4	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	0.34	1.0	0.26	ug/l	J
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	0.44	5.0	0.22	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	2.5	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	5.5	10	4.7	ug/l	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	ND	1.0	0.45	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	0.22	1.0	0.20	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		79-120%
17060-07-0	1,2-Dichloroethane-D4	91%		72-123%
2037-26-5	Toluene-D8	102%		78-119%
460-00-4	4-Bromofluorobenzene	106%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
124-38-9	Carbon dioxide	3.70	150	ug/l	JN
	Total TIC, Volatile		0	ug/l	
	Total Alkanes		25	ug/l	J

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-19		
Lab Sample ID:	JB80728-4	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	1610	100	ug/l	1	11/12/14	11/14/14	BS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35417
(2) Prep QC Batch: MP83225

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID: MW-6
Lab Sample ID: JB80728-5 **Date Sampled:** 10/31/14
Matrix: AQ - Ground Water **Date Received:** 11/03/14
Method: SW846 8260B **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A209887.D	1	11/12/14	CM	n/a	n/a	VA7919
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	41.9	10	2.6	ug/l	
71-43-2	Benzene	8.0	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	18.0	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	59.1	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	6.8	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-6		
Lab Sample ID:	JB80728-5	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	26.5	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	62.3	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	15.5	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	21.4	1.0	0.45	ug/l	
95-47-6	o-Xylene	0.79	1.0	0.20	ug/l	J
1330-20-7	Xylene (total)	22.1	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		79-120%
17060-07-0	1,2-Dichloroethane-D4	89%		72-123%
2037-26-5	Toluene-D8	100%		78-119%
460-00-4	4-Bromofluorobenzene	113%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	alkene	6.78	38	ug/l	J
	alkene	9.41	140	ug/l	J
	alkene	12.18	46	ug/l	J
103-65-1	Benzene, propyl-	15.96	48	ug/l	JN
	C4 alkyl benzene	17.21	40	ug/l	J
873-49-4	Benzene, cyclopropyl-	17.35	79	ug/l	JN
	C4 alkyl benzene	17.74	43	ug/l	J
	1H-Indene-dihydro-methyl- isomer	17.95	39	ug/l	J

ND = Not detected MDL = Method Detection Limit
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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-6		
Lab Sample ID:	JB80728-5	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	C4 alkyl benzene	18.18	45	ug/l	J
	1H-Indene-dihydro-methyl- isomer	18.60	38	ug/l	J
	1H-Indene-dihydro-methyl- isomer	18.80	65	ug/l	J
	Total TIC, Volatile		621	ug/l	J
	Total Alkanes		595	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-6		
Lab Sample ID:	JB80728-5	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	29200	100	ug/l	1	11/12/14	11/14/14	BS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35417
(2) Prep QC Batch: MP83225

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID: MW-12
Lab Sample ID: JB80728-6 **Date Sampled:** 10/31/14
Matrix: AQ - Ground Water **Date Received:** 11/03/14
Method: SW846 8260B **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A209919.D	1	11/13/14	CM	n/a	n/a	VA7921
Run #2	A209885.D	10	11/12/14	CM	n/a	n/a	VA7919

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.6	ug/l	
71-43-2	Benzene	61.8	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	5.0	10	2.5	ug/l	J
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	35.4	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	125	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-12
Lab Sample ID: JB80728-6 **Date Sampled:** 10/31/14
Matrix: AQ - Ground Water **Date Received:** 11/03/14
Method: SW846 8260B **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	11.0	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	34.2	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.99	1.0	0.26	ug/l	J
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	22.3	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	53.1	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	639 [a]	10	4.5	ug/l	
95-47-6	o-Xylene	200 [a]	10	2.0	ug/l	
1330-20-7	Xylene (total)	840 [a]	10	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%	94%	79-120%
17060-07-0	1,2-Dichloroethane-D4	97%	91%	72-123%
2037-26-5	Toluene-D8	106%	101%	78-119%
460-00-4	4-Bromofluorobenzene	109%	108%	74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	unknown	3.70	100	ug/l	J
	alkene	6.78	19	ug/l	J
	alkene	9.41	50	ug/l	J
	C3 alkyl benzene	16.04	50	ug/l	J
	C3 alkyl benzene	16.12	30	ug/l	J
	C3 alkyl benzene	16.40	33	ug/l	J
	C3 alkyl benzene	16.57	72	ug/l	J
91-20-3	Naphthalene	19.61	22	ug/l	JN

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-12		
Lab Sample ID:	JB80728-6	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		376	ug/l	J
	Total Alkanes		721	ug/l	J

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-12		
Lab Sample ID:	JB80728-6	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	9780	100	ug/l	1	11/12/14	11/14/14	BS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35417
(2) Prep QC Batch: MP83225

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID: MW-2
Lab Sample ID: JB80728-7 **Date Sampled:** 10/31/14
Matrix: AQ - Ground Water **Date Received:** 11/03/14
Method: SW846 8260B **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A209879.D	1	11/12/14	CM	n/a	n/a	VA7919
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.6	ug/l	
71-43-2	Benzene	1.1	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	0.91	5.0	0.37	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	

ND = Not detected MDL = Method Detection Limit
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J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-2		
Lab Sample ID:	JB80728-7	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	0.77	1.0	0.26	ug/l	J
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	0.54	5.0	0.22	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	0.61	1.0	0.26	ug/l	J
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	ND	1.0	0.45	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	0.30	1.0	0.20	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		79-120%
17060-07-0	1,2-Dichloroethane-D4	92%		72-123%
2037-26-5	Toluene-D8	100%		78-119%
460-00-4	4-Bromofluorobenzene	111%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
496-11-7	Indane	17.34	12	ug/l	JN
	1H-Indene-dihydro-methyl- isomer	18.79	39	ug/l	J
	Total TIC, Volatile		51	ug/l	J
	Total Alkanes		18.2	ug/l	J

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-2		
Lab Sample ID:	JB80728-7	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	1890	100	ug/l	1	11/12/14	11/14/14	BS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35417
(2) Prep QC Batch: MP83225

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	JB80728-8	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A209888.D	1	11/12/14	CM	n/a	n/a	VA7919
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	16.0	10	2.6	ug/l	
71-43-2	Benzene	35.4	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	5.1	10	2.5	ug/l	J
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	35.6	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	28.4	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-14
Lab Sample ID: JB80728-8 **Date Sampled:** 10/31/14
Matrix: AQ - Ground Water **Date Received:** 11/03/14
Method: SW846 8260B **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	6.5	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	4.6	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	27.7	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	4.4	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	4.6	5.0	1.1	ug/l	J
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	15.4	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	5.7	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	141	1.0	0.45	ug/l	
95-47-6	o-Xylene	23.0	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	164	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		79-120%
17060-07-0	1,2-Dichloroethane-D4	91%		72-123%
2037-26-5	Toluene-D8	103%		78-119%
460-00-4	4-Bromofluorobenzene	110%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	alkene	9.40	66	ug/l	J
	alcohols	12.38	16	ug/l	J
	C3 alkyl benzene	16.04	22	ug/l	J
	C3 alkyl benzene	16.07	19	ug/l	J
108-67-8	Benzene, 1,3,5-trimethyl-	16.13	22	ug/l	JN
	C3 alkyl benzene	16.39	26	ug/l	J
95-63-6	Benzene, 1,2,4-trimethyl-	16.57	69	ug/l	JN
	C4 alkyl benzene	17.21	15	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	JB80728-8	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	C4 alkyl benzene	17.30	16	ug/l	J
	C4 alkyl benzene	17.74	20	ug/l	J
	1H-Indene-dihydro-methyl- isomer	18.79	16	ug/l	J
	Total TIC, Volatile		307	ug/l	J
	Total Alkanes		211	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	JB80728-8	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	348	100	ug/l	1	11/12/14	11/14/14	BS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35417
(2) Prep QC Batch: MP83225

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID: MW-16R
Lab Sample ID: JB80728-9 **Date Sampled:** 10/31/14
Matrix: AQ - Ground Water **Date Received:** 11/03/14
Method: SW846 8260B **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A209916.D	1	11/13/14	CM	n/a	n/a	VA7921
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	4.7	10	2.6	ug/l	J
71-43-2	Benzene	ND	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-16R		
Lab Sample ID:	JB80728-9	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.52	1.0	0.26	ug/l	J
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	0.69	1.0	0.45	ug/l	J
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	0.87	1.0	0.20	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		79-120%
17060-07-0	1,2-Dichloroethane-D4	92%		72-123%
2037-26-5	Toluene-D8	102%		78-119%
460-00-4	4-Bromofluorobenzene	107%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
124-38-9	Carbon dioxide	3.70	250	ug/l	JNB
	Total TIC, Volatile		0	ug/l	
	Total Alkanes		0	ug/l	

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-16R		
Lab Sample ID:	JB80728-9	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	8150	100	ug/l	1	11/12/14	11/14/14	BS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35417
(2) Prep QC Batch: MP83225

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-17R		
Lab Sample ID:	JB80728-10	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A209918.D	20	11/13/14	CM	n/a	n/a	VA7921
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	200	53	ug/l	
71-43-2	Benzene	421	10	4.2	ug/l	
74-97-5	Bromochloromethane	ND	20	9.7	ug/l	
75-27-4	Bromodichloromethane	ND	20	5.6	ug/l	
75-25-2	Bromoform	ND	20	6.2	ug/l	
74-83-9	Bromomethane	ND	40	7.7	ug/l	
78-93-3	2-Butanone (MEK)	ND	200	50	ug/l	
75-15-0	Carbon disulfide	ND	40	9.9	ug/l	
56-23-5	Carbon tetrachloride	ND	20	4.7	ug/l	
108-90-7	Chlorobenzene	ND	20	5.4	ug/l	
75-00-3	Chloroethane	ND	20	11	ug/l	
67-66-3	Chloroform	ND	20	4.1	ug/l	
74-87-3	Chloromethane	ND	20	6.6	ug/l	
110-82-7	Cyclohexane	123	100	7.4	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	40	23	ug/l	
124-48-1	Dibromochloromethane	ND	20	5.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	20	4.5	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	20	3.2	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	20	5.1	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	20	4.7	ug/l	
75-71-8	Dichlorodifluoromethane	ND	40	15	ug/l	
75-34-3	1,1-Dichloroethane	ND	20	7.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	20	6.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	20	9.9	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	20	6.5	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	20	10	ug/l	
78-87-5	1,2-Dichloropropane	ND	20	8.7	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	20	5.7	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	20	6.3	ug/l	
123-91-1	1,4-Dioxane	ND	2500	1000	ug/l	
100-41-4	Ethylbenzene	1070	20	7.9	ug/l	
76-13-1	Freon 113	ND	100	8.9	ug/l	

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E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-17R		
Lab Sample ID:	JB80728-10	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	100	35	ug/l	
98-82-8	Isopropylbenzene	87.9	20	5.1	ug/l	
79-20-9	Methyl Acetate	ND	100	62	ug/l	
108-87-2	Methylcyclohexane	86.0	100	4.3	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	ND	20	5.3	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	100	21	ug/l	
75-09-2	Methylene chloride	ND	40	16	ug/l	
100-42-5	Styrene	ND	20	5.1	ug/l	
75-65-0	Tert Butyl Alcohol	ND	200	93	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	20	7.9	ug/l	
127-18-4	Tetrachloroethene	ND	20	7.0	ug/l	
108-88-3	Toluene	1020	20	4.4	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	20	5.3	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	20	4.5	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	20	6.4	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	20	5.5	ug/l	
79-01-6	Trichloroethene	ND	20	5.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	40	5.6	ug/l	
75-01-4	Vinyl chloride	ND	20	3.5	ug/l	
	m,p-Xylene	4080	20	9.0	ug/l	
95-47-6	o-Xylene	1410	20	4.0	ug/l	
1330-20-7	Xylene (total)	5480	20	4.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		79-120%
17060-07-0	1,2-Dichloroethane-D4	93%		72-123%
2037-26-5	Toluene-D8	102%		78-119%
460-00-4	4-Bromofluorobenzene	107%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	unknown	3.70	1600	ug/l	J
	alkene	6.48	190	ug/l	J
	alkene	6.78	250	ug/l	J
	alkene	9.41	410	ug/l	J
	C3 alkyl benzene	16.04	770	ug/l	J
	C3 alkyl benzene	16.13	330	ug/l	J
	C3 alkyl benzene	16.39	350	ug/l	J
	C3 alkyl benzene	16.57	1300	ug/l	J

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J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-17R		
Lab Sample ID:	JB80728-10	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	unknown	17.34	360	ug/l	J
	C4 alkyl benzene	17.74	180	ug/l	J
91-20-3	Naphthalene	19.61	450	ug/l	JN
	Total TIC, Volatile		6190	ug/l	J
	Total Alkanes		2590	ug/l	J

ND = Not detected MDL = Method Detection Limit
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E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-17R		
Lab Sample ID:	JB80728-10	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	10800	100	ug/l	1	11/12/14	11/14/14	BS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35417
(2) Prep QC Batch: MP83225

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID: MW-18R
Lab Sample ID: JB80728-11 **Date Sampled:** 10/31/14
Matrix: AQ - Ground Water **Date Received:** 11/03/14
Method: SW846 8260B **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	A209890.D	5	11/12/14	CM	n/a	n/a	VA7919
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	104	50	13	ug/l	
71-43-2	Benzene	86.9	2.5	1.0	ug/l	
74-97-5	Bromochloromethane	ND	5.0	2.4	ug/l	
75-27-4	Bromodichloromethane	ND	5.0	1.4	ug/l	
75-25-2	Bromoform	ND	5.0	1.6	ug/l	
74-83-9	Bromomethane	ND	10	1.9	ug/l	
78-93-3	2-Butanone (MEK)	39.4	50	12	ug/l	J
75-15-0	Carbon disulfide	ND	10	2.5	ug/l	
56-23-5	Carbon tetrachloride	ND	5.0	1.2	ug/l	
108-90-7	Chlorobenzene	ND	5.0	1.4	ug/l	
75-00-3	Chloroethane	ND	5.0	2.8	ug/l	
67-66-3	Chloroform	ND	5.0	1.0	ug/l	
74-87-3	Chloromethane	ND	5.0	1.7	ug/l	
110-82-7	Cyclohexane	19.4	25	1.9	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	5.9	ug/l	
124-48-1	Dibromochloromethane	ND	5.0	1.2	ug/l	
106-93-4	1,2-Dibromoethane	ND	5.0	1.1	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.0	0.80	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.3	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.2	ug/l	
75-71-8	Dichlorodifluoromethane	ND	10	3.6	ug/l	
75-34-3	1,1-Dichloroethane	ND	5.0	1.7	ug/l	
107-06-2	1,2-Dichloroethane	ND	5.0	1.5	ug/l	
75-35-4	1,1-Dichloroethene	ND	5.0	2.5	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	5.0	1.6	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	2.6	ug/l	
78-87-5	1,2-Dichloropropane	ND	5.0	2.2	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.4	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.6	ug/l	
123-91-1	1,4-Dioxane	ND	630	250	ug/l	
100-41-4	Ethylbenzene	302	5.0	2.0	ug/l	
76-13-1	Freon 113	ND	25	2.2	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-18R		
Lab Sample ID:	JB80728-11	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	27.4	25	8.7	ug/l	
98-82-8	Isopropylbenzene	46.9	5.0	1.3	ug/l	
79-20-9	Methyl Acetate	ND	25	15	ug/l	
108-87-2	Methylcyclohexane	35.1	25	1.1	ug/l	
1634-04-4	Methyl Tert Butyl Ether	6.4	5.0	1.3	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	17.8	25	5.3	ug/l	J
75-09-2	Methylene chloride	ND	10	4.1	ug/l	
100-42-5	Styrene	ND	5.0	1.3	ug/l	
75-65-0	Tert Butyl Alcohol	ND	50	23	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	2.0	ug/l	
127-18-4	Tetrachloroethene	ND	5.0	1.8	ug/l	
108-88-3	Toluene	140	5.0	1.1	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.3	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.1	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.6	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.4	ug/l	
79-01-6	Trichloroethene	ND	5.0	1.2	ug/l	
75-69-4	Trichlorofluoromethane	ND	10	1.4	ug/l	
75-01-4	Vinyl chloride	ND	5.0	0.87	ug/l	
	m,p-Xylene	1250	5.0	2.2	ug/l	
95-47-6	o-Xylene	283	5.0	1.0	ug/l	
1330-20-7	Xylene (total)	1530	5.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		79-120%
17060-07-0	1,2-Dichloroethane-D4	90%		72-123%
2037-26-5	Toluene-D8	104%		78-119%
460-00-4	4-Bromofluorobenzene	111%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	alkene	9.41	61	ug/l	J
	C3 alkyl benzene	16.04	310	ug/l	J
108-67-8	Benzene, 1,3,5-trimethyl-	16.13	170	ug/l	JN
	C3 alkyl benzene	16.39	130	ug/l	J
95-63-6	Benzene, 1,2,4-trimethyl-	16.57	530	ug/l	JN
	C4 alkyl benzene	17.21	96	ug/l	J
	C4 alkyl benzene	17.30	120	ug/l	J
	unknown	17.34	93	ug/l	J

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-18R		
Lab Sample ID:	JB80728-11	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	C4 alkyl benzene	17.62	63	ug/l	J
	C4 alkyl benzene	17.74	130	ug/l	J
	C4 alkyl benzene	18.19	66	ug/l	J
	C4 alkyl benzene	18.24	110	ug/l	J
	1H-Indene-dihydro-methyl- isomer	18.79	92	ug/l	J
91-20-3	Naphthalene	19.61	110	ug/l	JN
	Total TIC, Volatile		2081	ug/l	J
	Total Alkanes		63	ug/l	J

(a) (pH= 11)Sample pH did not satisfy field preservation criteria.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-18R		
Lab Sample ID:	JB80728-11	**Date Sampled:**	10/31/14
Matrix:	AQ - Ground Water	**Date Received:**	11/03/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	819	100	ug/l	1	11/06/14	11/06/14	TG	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35338
(2) Prep QC Batch: MP83046

RL = Reporting Limit

New Jersey ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

GW

ACCUTEST Laboratories
Mid Atlantic
2235 Route 130, Dayton, NJ 08810
Tel. (732) 329-0200 Fax: (732) 329-3499/3480

Chain Of Custody Record

10/04

☐ SCIENCE & ENGINEERING
☐ TECHNICAL SERVICES
☑ BILL CONSULTANT

Accutest Job #
Accutest Quote #

DATE: October 2014
PAGE: 1 of 1

CONSULTANT: EnviroTrac Ltd.
ADDRESS: 400 E Corporate Court
CITY: South Plainfield, NJ 07080
TELEPHONE: (908) 757-1900 FAX: (908) 757-0017 E-MAIL: christineh@envirotrac.com

SITE ADDRESS (Street and City): 945 Pleasant Valley Way, West Orange
PROJECT NAME: BP # 84849
PROJECT CONTACT (Report to): Christine Hahn
Enfos Project No.
SAMPLER NAME(S) (Print): Kevin C. Mallon
LAB JOB NUMBER (SDG): JB80728

TURNAROUND TIME (BUSINESS DAYS): ☑ STANDARD ☐ 7 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS
DATA DELIVERABLES (CHECK ONE) ☐ COMMA ☐ COMMB ☑ NJ REDT2 ☐ FULL T1 ☐ OTHER

SPECIAL INSTRUCTIONS OR NOTES :

REQUESTED ANALYSIS if more than one method is listed, circle one

LAB Sample #	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VO+10,MTBE, TBA by EPA 8260	Sulfate via 300/SW846/ 9056A	Nitrate via 300	Total Iron via 200.7	Total Manganese via 200.7	Container PID Readings or Laboratory Notes
1	MW-1	10/31/14	1057	GW	3	1				4	X			X		A14
2	MW-3		1206	GW	3	1				4	X			X		V157
3	MW-11		1512	GW	3	1				4	X			X		
4	MW-19		1030	GW	3	1				4	X			X		
5	MW-6		1216	GW	3	1				4	X			X		
6	MW-12		1447	GW	3	1				4	X			X		
7	MW-2		1130	GW	3	1				4	X			X		
8	MW-14		1426	GW	3	1				4	X			X		
9	MW-16R		1335	GW	3	1				4	X			X		
10	MW-17R		1555	GW	3	1				4	X			X		
11	MW-18R		1308	GW	3	1				4	X			X		

ALL SAMPLES RECEIVED
PRESERVED AS APPLICABLE

Relinquished by: (Sampler Signature)	Received by: (Signature)	Date: 11/3/14	Time: 0935
Relinquished by: (Signature)	Received by: (Signature)	Date: 11/3/14	Time: 940
Relinquished by: (Signature)	Received by: (Signature)	Date: 11/3/14	Time: 1140

CS# 833 ACCUTEST

SAMPLE RECEIVED @ LAB ☐ ICE? ☐ NO
SAMPLE TEMP UPON RECEIPT: 4.2 Degrees C

JB80728: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JB80728 **Client:** **Project:**

Date / Time Received: 11/3/2014 **Delivery Method:** **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (4.1/4.1); 0

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☑		☐	☐
2. Trip Blank listed on COC:	☑		☐	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Accutest Laboratories
V:732.329.0200
2235 US Highway 130
F: 732.329.3499
Dayton, New Jersey
www/accutest.com

JB80728: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Atlantic Richfield Company

Job No: JB80728

ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JB80728-1 MW-1	Collected: 31-OCT-14 10:57 By: KM		Received: 03-NOV-14 By: AS			
JB80728-1	SW846 8260B	12-NOV-14 16:40	CM			V8260TCL11+
JB80728-1	EPA 200.7	14-NOV-14 16:29	BS	12-NOV-14	ND	FE
JB80728-2 MW-3	Collected: 31-OCT-14 12:06 By: KM		Received: 03-NOV-14 By: AS			
JB80728-2	SW846 8260B	12-NOV-14 20:47	CM			V8260TCL11+
JB80728-2	EPA 200.7	14-NOV-14 16:35	BS	12-NOV-14	ND	FE
JB80728-3 MW-11	Collected: 31-OCT-14 15:12 By: KM		Received: 03-NOV-14 By: AS			
JB80728-3	SW846 8260B	12-NOV-14 17:42	CM			V8260TCL11+
JB80728-3	EPA 200.7	14-NOV-14 16:41	BS	12-NOV-14	ND	FE
JB80728-4 MW-19	Collected: 31-OCT-14 10:30 By: KM		Received: 03-NOV-14 By: AS			
JB80728-4	SW846 8260B	13-NOV-14 12:46	CM			V8260TCL11+
JB80728-4	EPA 200.7	14-NOV-14 16:47	BS	12-NOV-14	ND	FE
JB80728-5 MW-6	Collected: 31-OCT-14 12:16 By: KM		Received: 03-NOV-14 By: AS			
JB80728-5	SW846 8260B	12-NOV-14 21:18	CM			V8260TCL11+
JB80728-5	EPA 200.7	14-NOV-14 16:53	BS	12-NOV-14	ND	FE
JB80728-6 MW-12	Collected: 31-OCT-14 14:47 By: KM		Received: 03-NOV-14 By: AS			
JB80728-6	SW846 8260B	12-NOV-14 20:16	CM			V8260TCL11+
JB80728-6	SW846 8260B	13-NOV-14 14:19	CM			V8260TCL11+
JB80728-6	EPA 200.7	14-NOV-14 17:00	BS	12-NOV-14	ND	FE
JB80728-7 MW-2	Collected: 31-OCT-14 11:30 By: KM		Received: 03-NOV-14 By: AS			

Internal Sample Tracking Chronicle

Atlantic Richfield Company

Job No: JB80728

ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JB80728-7	SW846 8260B	12-NOV-14 17:11	CM			V8260TCL11+
JB80728-7	EPA 200.7	14-NOV-14 17:06	BS	12-NOV-14	ND	FE
JB80728-8	Collected: 31-OCT-14 14:26 By: KM		Received: 03-NOV-14 By: AS			
MW-14						
JB80728-8	SW846 8260B	12-NOV-14 21:49	CM			V8260TCL11+
JB80728-8	EPA 200.7	14-NOV-14 15:16	BS	12-NOV-14	ND	FE
JB80728-9	Collected: 31-OCT-14 13:35 By: KM		Received: 03-NOV-14 By: AS			
MW-16R						
JB80728-9	SW846 8260B	13-NOV-14 12:15	CM			V8260TCL11+
JB80728-9	EPA 200.7	14-NOV-14 17:12	BS	12-NOV-14	ND	FE
JB80728-10	Collected: 31-OCT-14 13:55 By: KM		Received: 03-NOV-14 By: AS			
MW-17R						
JB80728-10	SW846 8260B	13-NOV-14 13:17	CM			V8260TCL11+
JB80728-10	EPA 200.7	14-NOV-14 17:30	BS	12-NOV-14	ND	FE
JB80728-11	Collected: 31-OCT-14 13:08 By: KM		Received: 03-NOV-14 By: AS			
MW-18R						
JB80728-11	EPA 200.7	06-NOV-14 19:54	TG	06-NOV-14	FP	FE
JB80728-11	SW846 8260B	12-NOV-14 22:51	CM			V8260TCL11+

Accutest Internal Chain of Custody

Job Number: JB80728
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Received: 11/03/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB80728-1.1	Secured Storage	Todd Shoemaker	11/12/14 14:25	Retrieve from Storage
JB80728-1.1	Todd Shoemaker	Nancy Duan	11/12/14 15:38	Custody Transfer
JB80728-1.1	Wei Zhou	Secured Storage	11/13/14 07:46	Return to Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JB80728-1.2	Secured Storage	Courtney McKenna	11/12/14 11:28	Retrieve from Storage
JB80728-1.2	Courtney McKenna	GCMSA	11/12/14 14:30	Load on Instrument
JB80728-1.2	GCMSA	Courtney McKenna	11/13/14 08:54	Unload from Instrument
JB80728-1.2	Courtney McKenna	Secured Storage	11/13/14 08:54	Return to Storage
JB80728-2.1	Secured Storage	Todd Shoemaker	11/12/14 14:25	Retrieve from Storage
JB80728-2.1	Todd Shoemaker	Nancy Duan	11/12/14 15:38	Custody Transfer
JB80728-2.1	Wei Zhou	Secured Storage	11/13/14 07:46	Return to Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JB80728-2.2	Secured Storage	Courtney McKenna	11/12/14 11:28	Retrieve from Storage
JB80728-2.2	Courtney McKenna	GCMSA	11/12/14 14:30	Load on Instrument
JB80728-2.2	GCMSA	Courtney McKenna	11/13/14 08:54	Unload from Instrument
JB80728-2.2	Courtney McKenna	Secured Storage	11/13/14 08:54	Return to Storage
JB80728-3.1	Secured Storage	Todd Shoemaker	11/12/14 14:25	Retrieve from Storage
JB80728-3.1	Todd Shoemaker	Nancy Duan	11/12/14 15:38	Custody Transfer
JB80728-3.1	Wei Zhou	Secured Storage	11/13/14 07:46	Return to Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JB80728-3.2	Secured Storage	Courtney McKenna	11/12/14 11:28	Retrieve from Storage
JB80728-3.2	Courtney McKenna	GCMSA	11/12/14 14:30	Load on Instrument
JB80728-3.2	GCMSA	Courtney McKenna	11/13/14 08:54	Unload from Instrument
JB80728-3.2	Courtney McKenna	Secured Storage	11/13/14 08:54	Return to Storage
JB80728-4.1	Secured Storage	Todd Shoemaker	11/12/14 14:25	Retrieve from Storage
JB80728-4.1	Todd Shoemaker	Nancy Duan	11/12/14 15:38	Custody Transfer
JB80728-4.1	Wei Zhou	Secured Storage	11/13/14 07:46	Return to Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JB80728-4.2	Secured Storage	Courtney McKenna	11/12/14 11:28	Retrieve from Storage
JB80728-4.2	Courtney McKenna	GCMSA	11/12/14 14:30	Load on Instrument
JB80728-4.2	GCMSA	Courtney McKenna	11/13/14 08:54	Unload from Instrument
JB80728-4.2	Courtney McKenna	Secured Storage	11/13/14 08:54	Return to Storage
JB80728-4.3	Secured Storage	Courtney McKenna	11/13/14 08:59	Retrieve from Storage
JB80728-4.3	Courtney McKenna	GCMSA	11/13/14 10:30	Load on Instrument
JB80728-4.3	GCMSA	Courtney McKenna	11/14/14 08:46	Unload from Instrument
JB80728-4.3	Courtney McKenna	Secured Storage	11/14/14 08:47	Return to Storage

Accutest Internal Chain of Custody

Job Number: JB80728
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Received: 11/03/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB80728-5.1	Secured Storage	Todd Shoemaker	11/12/14 14:25	Retrieve from Storage
JB80728-5.1	Todd Shoemaker	Nancy Duan	11/12/14 15:38	Custody Transfer
JB80728-5.1	Wei Zhou	Secured Storage	11/13/14 07:46	Return to Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JB80728-5.2	Secured Storage	Courtney McKenna	11/12/14 11:28	Retrieve from Storage
JB80728-5.2	Courtney McKenna	GCMSA	11/12/14 14:30	Load on Instrument
JB80728-5.2	GCMSA	Courtney McKenna	11/13/14 08:54	Unload from Instrument
JB80728-5.2	Courtney McKenna	Secured Storage	11/13/14 08:54	Return to Storage
JB80728-6.1	Secured Storage	Todd Shoemaker	11/12/14 14:25	Retrieve from Storage
JB80728-6.1	Todd Shoemaker	Nancy Duan	11/12/14 15:38	Custody Transfer
JB80728-6.1	Wei Zhou	Secured Storage	11/13/14 07:46	Return to Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JB80728-6.2	Secured Storage	Courtney McKenna	11/12/14 11:28	Retrieve from Storage
JB80728-6.2	Courtney McKenna	VOA Prep Storage	11/12/14 16:40	Return to Storage
JB80728-6.2	VOA Prep Storage	Courtney McKenna	11/13/14 08:55	Retrieve from Storage
JB80728-6.2	Courtney McKenna	Secured Storage	11/13/14 08:55	Return to Storage
JB80728-6.3	Secured Storage	Courtney McKenna	11/13/14 08:59	Retrieve from Storage
JB80728-6.3	Courtney McKenna	GCMSA	11/13/14 10:30	Load on Instrument
JB80728-6.3	GCMSA	Courtney McKenna	11/14/14 08:46	Unload from Instrument
JB80728-6.3	Courtney McKenna	Secured Storage	11/14/14 08:47	Return to Storage
JB80728-7.1	Secured Storage	Todd Shoemaker	11/12/14 14:25	Retrieve from Storage
JB80728-7.1	Todd Shoemaker	Nancy Duan	11/12/14 15:38	Custody Transfer
JB80728-7.1	Wei Zhou	Secured Storage	11/13/14 07:46	Return to Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JB80728-7.2	Secured Storage	Courtney McKenna	11/12/14 11:28	Retrieve from Storage
JB80728-7.2	Courtney McKenna	GCMSA	11/12/14 14:30	Load on Instrument
JB80728-7.2	GCMSA	Courtney McKenna	11/13/14 08:54	Unload from Instrument
JB80728-7.2	Courtney McKenna	Secured Storage	11/13/14 08:54	Return to Storage
JB80728-8.1	Secured Storage	Todd Shoemaker	11/12/14 14:25	Retrieve from Storage
JB80728-8.1	Todd Shoemaker	Nancy Duan	11/12/14 15:38	Custody Transfer
JB80728-8.1	Wei Zhou	Secured Storage	11/13/14 07:46	Return to Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JB80728-8.2	Secured Storage	Courtney McKenna	11/12/14 11:28	Retrieve from Storage
JB80728-8.2	Courtney McKenna	GCMSA	11/12/14 14:30	Load on Instrument
JB80728-8.2	GCMSA	Courtney McKenna	11/13/14 08:54	Unload from Instrument

Accutest Internal Chain of Custody

Job Number: JB80728
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Received: 11/03/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB80728-8.2	Courtney McKenna	Secured Storage	11/13/14 08:54	Return to Storage
JB80728-9.1	Secured Storage	Todd Shoemaker	11/12/14 14:25	Retrieve from Storage
JB80728-9.1	Todd Shoemaker	Nancy Duan	11/12/14 15:38	Custody Transfer
JB80728-9.1	Wei Zhou	Secured Storage	11/13/14 07:46	Return to Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JB80728-9.2	Secured Storage	Courtney McKenna	11/12/14 11:28	Retrieve from Storage
JB80728-9.2	Courtney McKenna	GCMSA	11/12/14 14:30	Load on Instrument
JB80728-9.2	GCMSA	Courtney McKenna	11/13/14 08:54	Unload from Instrument
JB80728-9.2	Courtney McKenna	Secured Storage	11/13/14 08:54	Return to Storage
JB80728-9.3	Secured Storage	Courtney McKenna	11/13/14 08:59	Retrieve from Storage
JB80728-9.3	Courtney McKenna	GCMSA	11/13/14 10:30	Load on Instrument
JB80728-9.3	GCMSA	Courtney McKenna	11/14/14 08:46	Unload from Instrument
JB80728-9.3	Courtney McKenna	Secured Storage	11/14/14 08:47	Return to Storage
JB80728-10.1	Secured Storage	Todd Shoemaker	11/12/14 14:25	Retrieve from Storage
JB80728-10.1	Todd Shoemaker	Nancy Duan	11/12/14 15:38	Custody Transfer
JB80728-10.1	Wei Zhou	Secured Storage	11/13/14 07:46	Return to Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JB80728-10.2	Secured Storage	Courtney McKenna	11/12/14 11:28	Retrieve from Storage
JB80728-10.2	Courtney McKenna	VOA Prep Storage	11/12/14 16:40	Return to Storage
JB80728-10.2	VOA Prep Storage	Courtney McKenna	11/13/14 08:55	Retrieve from Storage
JB80728-10.2	Courtney McKenna	Secured Storage	11/13/14 08:55	Return to Storage
JB80728-10.3	Secured Storage	Courtney McKenna	11/13/14 08:59	Retrieve from Storage
JB80728-10.3	Jessica Reitan-Chu	Secured Storage	11/13/14 15:31	Return to Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JB80728-11.1	Secured Storage	Alfredo Crespo	11/06/14 07:07	Retrieve from Storage
JB80728-11.1	Alfredo Crespo	Secured Staging Area	11/06/14 07:07	Return to Storage
JB80728-11.1	Secured Staging Area	Khushboo Patel	11/06/14 07:25	Retrieve from Storage
JB80728-11.1	Khushboo Patel	Secured Storage	11/06/14 14:54	Return to Storage
JB80728-11.1.1	Khushboo Patel	Metals Digestion	11/06/14 13:43	Digestate from JB80728-11.1
JB80728-11.1.1	Metals Digestion	Khushboo Patel	11/06/14 13:44	Digestate from JB80728-11.1
JB80728-11.1.1	Khushboo Patel	Metals Digestate Storage	11/06/14 13:44	Return to Storage
JB80728-11.2	Secured Storage	Courtney McKenna	11/12/14 11:28	Retrieve from Storage
JB80728-11.2	Courtney McKenna	VOA Prep Storage	11/12/14 16:40	Return to Storage
JB80728-11.2	VOA Prep Storage	Courtney McKenna	11/13/14 08:55	Retrieve from Storage
JB80728-11.2	Courtney McKenna	Secured Storage	11/13/14 08:55	Return to Storage

New Jersey ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: JB80728
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA7919-MB	A209873.D	1	11/12/14	CM	n/a	n/a	VA7919

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB80728-1, JB80728-2, JB80728-3, JB80728-5, JB80728-6, JB80728-7, JB80728-8, JB80728-11

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.6	ug/l	
71-43-2	Benzene	ND	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	

Method Blank Summary

Job Number: JB80728
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA7919-MB	A209873.D	1	11/12/14	CM	n/a	n/a	VA7919

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB80728-1, JB80728-2, JB80728-3, JB80728-5, JB80728-6, JB80728-7, JB80728-8, JB80728-11

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	ND	1.0	0.45	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	92%	79-120%
17060-07-0	1,2-Dichloroethane-D4	91%	72-123%
2037-26-5	Toluene-D8	102%	78-119%
460-00-4	4-Bromofluorobenzene	110%	74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JB80728
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA7921-MB	A209911.D	1	11/13/14	CM	n/a	n/a	VA7921

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB80728-4, JB80728-6, JB80728-9, JB80728-10

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.6	ug/l	
71-43-2	Benzene	ND	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	

Method Blank Summary

Job Number: JB80728
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA7921-MB	A209911.D	1	11/13/14	CM	n/a	n/a	VA7921

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB80728-4, JB80728-6, JB80728-9, JB80728-10

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	ND	1.0	0.45	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	96%	79-120%
17060-07-0	1,2-Dichloroethane-D4	92%	72-123%
2037-26-5	Toluene-D8	103%	78-119%
460-00-4	4-Bromofluorobenzene	104%	74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: JB80728
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA7919-BS	A209874.D	1	11/12/14	CM	n/a	n/a	VA7919

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB80728-1, JB80728-2, JB80728-3, JB80728-5, JB80728-6, JB80728-7, JB80728-8, JB80728-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	43.0	86	52-152
71-43-2	Benzene	50	47.3	95	80-121
74-97-5	Bromochloromethane	50	42.5	85	82-125
75-27-4	Bromodichloromethane	50	46.0	92	83-127
75-25-2	Bromoform	50	49.1	98	74-131
74-83-9	Bromomethane	50	40.4	81	45-155
78-93-3	2-Butanone (MEK)	50	45.3	91	67-136
75-15-0	Carbon disulfide	50	44.8	90	69-129
56-23-5	Carbon tetrachloride	50	49.2	98	77-138
108-90-7	Chlorobenzene	50	47.6	95	82-119
75-00-3	Chloroethane	50	45.1	90	61-151
67-66-3	Chloroform	50	43.2	86	79-124
74-87-3	Chloromethane	50	41.4	83	48-148
110-82-7	Cyclohexane	50	45.1	90	72-129
96-12-8	1,2-Dibromo-3-chloropropane	50	46.9	94	66-137
124-48-1	Dibromochloromethane	50	49.3	99	81-127
106-93-4	1,2-Dibromoethane	50	48.2	96	79-122
95-50-1	1,2-Dichlorobenzene	50	46.2	92	81-121
541-73-1	1,3-Dichlorobenzene	50	48.0	96	81-119
106-46-7	1,4-Dichlorobenzene	50	45.0	90	80-116
75-71-8	Dichlorodifluoromethane	50	34.2	68	33-161
75-34-3	1,1-Dichloroethane	50	45.3	91	78-129
107-06-2	1,2-Dichloroethane	50	47.4	95	75-133
75-35-4	1,1-Dichloroethene	50	47.8	96	74-128
156-59-2	cis-1,2-Dichloroethene	50	39.8	80	78-123
156-60-5	trans-1,2-Dichloroethene	50	38.8	78	75-122
78-87-5	1,2-Dichloropropane	50	47.8	96	80-124
10061-01-5	cis-1,3-Dichloropropene	50	47.1	94	75-114
10061-02-6	trans-1,3-Dichloropropene	50	44.4	89	78-123
123-91-1	1,4-Dioxane	1250	1200	96	57-154
100-41-4	Ethylbenzene	50	48.0	96	82-120
76-13-1	Freon 113	50	44.7	89	65-150
591-78-6	2-Hexanone	50	48.9	98	65-135
98-82-8	Isopropylbenzene	50	52.7	105	80-124
79-20-9	Methyl Acetate	50	38.4	77	53-137
108-87-2	Methylcyclohexane	50	52.0	104	62-142

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB80728
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA7919-BS	A209874.D	1	11/12/14	CM	n/a	n/a	VA7919

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB80728-1, JB80728-2, JB80728-3, JB80728-5, JB80728-6, JB80728-7, JB80728-8, JB80728-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	100	83.1	83	74-123
108-10-1	4-Methyl-2-pentanone(MIBK)	50	48.2	96	68-135
75-09-2	Methylene chloride	50	45.4	91	75-121
100-42-5	Styrene	50	49.4	99	81-123
75-65-0	Tert Butyl Alcohol	250	248	99	70-132
79-34-5	1,1,2,2-Tetrachloroethane	50	48.9	98	71-123
127-18-4	Tetrachloroethene	50	48.8	98	69-141
108-88-3	Toluene	50	44.8	90	80-122
87-61-6	1,2,3-Trichlorobenzene	50	49.0	98	71-138
120-82-1	1,2,4-Trichlorobenzene	50	47.7	95	77-132
71-55-6	1,1,1-Trichloroethane	50	46.5	93	80-132
79-00-5	1,1,2-Trichloroethane	50	45.9	92	80-127
79-01-6	Trichloroethene	50	46.9	94	82-126
75-69-4	Trichlorofluoromethane	50	44.9	90	63-141
75-01-4	Vinyl chloride	50	48.0	96	53-135
	m,p-Xylene	100	96.7	97	81-121
95-47-6	o-Xylene	50	49.5	99	82-121
1330-20-7	Xylene (total)	150	146	97	82-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	79-120%
17060-07-0	1,2-Dichloroethane-D4	93%	72-123%
2037-26-5	Toluene-D8	102%	78-119%
460-00-4	4-Bromofluorobenzene	110%	74-119%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB80728
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA7921-BS	A209912.D	1	11/13/14	CM	n/a	n/a	VA7921

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB80728-4, JB80728-6, JB80728-9, JB80728-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	41.3	83	52-152
71-43-2	Benzene	50	49.1	98	80-121
74-97-5	Bromochloromethane	50	43.6	87	82-125
75-27-4	Bromodichloromethane	50	48.4	97	83-127
75-25-2	Bromoform	50	50.9	102	74-131
74-83-9	Bromomethane	50	37.9	76	45-155
78-93-3	2-Butanone (MEK)	50	46.8	94	67-136
75-15-0	Carbon disulfide	50	44.9	90	69-129
56-23-5	Carbon tetrachloride	50	51.4	103	77-138
108-90-7	Chlorobenzene	50	50.2	100	82-119
75-00-3	Chloroethane	50	48.5	97	61-151
67-66-3	Chloroform	50	44.7	89	79-124
74-87-3	Chloromethane	50	42.4	85	48-148
110-82-7	Cyclohexane	50	46.6	93	72-129
96-12-8	1,2-Dibromo-3-chloropropane	50	46.3	93	66-137
124-48-1	Dibromochloromethane	50	50.5	101	81-127
106-93-4	1,2-Dibromoethane	50	49.7	99	79-122
95-50-1	1,2-Dichlorobenzene	50	48.5	97	81-121
541-73-1	1,3-Dichlorobenzene	50	50.7	101	81-119
106-46-7	1,4-Dichlorobenzene	50	48.1	96	80-116
75-71-8	Dichlorodifluoromethane	50	38.8	78	33-161
75-34-3	1,1-Dichloroethane	50	46.2	92	78-129
107-06-2	1,2-Dichloroethane	50	49.1	98	75-133
75-35-4	1,1-Dichloroethene	50	46.1	92	74-128
156-59-2	cis-1,2-Dichloroethene	50	40.5	81	78-123
156-60-5	trans-1,2-Dichloroethene	50	40.4	81	75-122
78-87-5	1,2-Dichloropropane	50	50.2	100	80-124
10061-01-5	cis-1,3-Dichloropropene	50	51.5	103	75-114
10061-02-6	trans-1,3-Dichloropropene	50	47.9	96	78-123
123-91-1	1,4-Dioxane	1250	1210	97	57-154
100-41-4	Ethylbenzene	50	51.2	102	82-120
76-13-1	Freon 113	50	42.1	84	65-150
591-78-6	2-Hexanone	50	51.7	103	65-135
98-82-8	Isopropylbenzene	50	56.2	112	80-124
79-20-9	Methyl Acetate	50	37.3	75	53-137
108-87-2	Methylcyclohexane	50	50.1	100	62-142

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB80728
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA7921-BS	A209912.D	1	11/13/14	CM	n/a	n/a	VA7921

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB80728-4, JB80728-6, JB80728-9, JB80728-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	100	81.3	81	74-123
108-10-1	4-Methyl-2-pentanone(MIBK)	50	50.6	101	68-135
75-09-2	Methylene chloride	50	45.4	91	75-121
100-42-5	Styrene	50	51.8	104	81-123
75-65-0	Tert Butyl Alcohol	250	243	97	70-132
79-34-5	1,1,2,2-Tetrachloroethane	50	51.0	102	71-123
127-18-4	Tetrachloroethene	50	51.1	102	69-141
108-88-3	Toluene	50	48.8	98	80-122
87-61-6	1,2,3-Trichlorobenzene	50	50.3	101	71-138
120-82-1	1,2,4-Trichlorobenzene	50	50.1	100	77-132
71-55-6	1,1,1-Trichloroethane	50	48.6	97	80-132
79-00-5	1,1,2-Trichloroethane	50	49.4	99	80-127
79-01-6	Trichloroethene	50	50.6	101	82-126
75-69-4	Trichlorofluoromethane	50	44.9	90	63-141
75-01-4	Vinyl chloride	50	46.2	92	53-135
	m,p-Xylene	100	104	104	81-121
95-47-6	o-Xylene	50	52.4	105	82-121
1330-20-7	Xylene (total)	150	157	105	82-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	95%	79-120%
17060-07-0	1,2-Dichloroethane-D4	92%	72-123%
2037-26-5	Toluene-D8	106%	78-119%
460-00-4	4-Bromofluorobenzene	111%	74-119%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB80728
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB80728-6MS	A209882.D	10	11/12/14	CM	n/a	n/a	VA7919
JB80728-6MSD	A209883.D	10	11/12/14	CM	n/a	n/a	VA7919
JB80728-6	A209885.D	10	11/12/14	CM	n/a	n/a	VA7919

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB80728-1, JB80728-2, JB80728-3, JB80728-5, JB80728-6, JB80728-7, JB80728-8, JB80728-11

CAS No.	Compound	JB80728-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		500	455	91	500	457	91	0	44-160/20
71-43-2	Benzene	61.7		500	516	91	500	509	89	1	50-136/12
74-97-5	Bromochloromethane	ND		500	454	91	500	452	90	0	74-131/11
75-27-4	Bromodichloromethane	ND		500	479	96	500	483	97	1	74-132/11
75-25-2	Bromoform	ND		500	515	103	500	525	105	2	68-136/12
74-83-9	Bromomethane	ND		500	335	67	500	341	68	2	37-157/21
78-93-3	2-Butanone (MEK)	ND		500	473	95	500	480	96	1	60-145/15
75-15-0	Carbon disulfide	ND		500	411	82	500	412	82	0	37-143/17
56-23-5	Carbon tetrachloride	ND		500	452	90	500	449	90	1	46-152/17
108-90-7	Chlorobenzene	ND		500	484	97	500	479	96	1	70-127/12
75-00-3	Chloroethane	ND		500	348	70	500	351	70	1	44-147/16
67-66-3	Chloroform	ND		500	428	86	500	423	85	1	67-129/12
74-87-3	Chloromethane	ND		500	337	67	500	340	68	1	40-149/19
110-82-7	Cyclohexane	31.3	J	500	444	83	500	444	83	0	31-153/21
96-12-8	1,2-Dibromo-3-chloropropane	ND		500	453	91	500	459	92	1	61-144/14
124-48-1	Dibromochloromethane	ND		500	526	105	500	525	105	0	74-131/10
106-93-4	1,2-Dibromoethane	ND		500	510	102	500	508	102	0	74-129/10
95-50-1	1,2-Dichlorobenzene	ND		500	450	90	500	460	92	2	73-126/11
541-73-1	1,3-Dichlorobenzene	ND		500	456	91	500	471	94	3	71-124/12
106-46-7	1,4-Dichlorobenzene	ND		500	438	88	500	439	88	0	71-123/12
75-71-8	Dichlorodifluoromethane	ND		500	297	59	500	291	58	2	20-161/25
75-34-3	1,1-Dichloroethane	ND		500	439	88	500	438	88	0	61-134/12
107-06-2	1,2-Dichloroethane	ND		500	503	101	500	493	99	2	68-137/11
75-35-4	1,1-Dichloroethene	ND		500	428	86	500	420	84	2	40-143/17
156-59-2	cis-1,2-Dichloroethene	ND		500	398	80	500	399	80	0	59-133/12
156-60-5	trans-1,2-Dichloroethene	ND		500	381	76	500	372	74	2	55-132/14
78-87-5	1,2-Dichloropropane	ND		500	489	98	500	485	97	1	70-128/11
10061-01-5	cis-1,3-Dichloropropene	ND		500	496	99	500	495	99	0	73-127/11
10061-02-6	trans-1,3-Dichloropropene	ND		500	486	97	500	483	97	1	72-128/11
123-91-1	1,4-Dioxane	ND		12500	13200	106	12500	13300	106	1	49-161/26
100-41-4	Ethylbenzene	124		500	577	91	500	577	91	0	49-137/13
76-13-1	Freon 113	ND		500	422	84	500	414	83	2	32-161/23
591-78-6	2-Hexanone	ND		500	546	109	500	533	107	2	59-145/14
98-82-8	Isopropylbenzene	11.0		500	485	95	500	495	97	2	57-136/14
79-20-9	Methyl Acetate	ND		500	457	91	500	446	89	2	46-148/15
108-87-2	Methylcyclohexane	ND		500	490	98	500	483	97	1	30-155/21

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB80728
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB80728-6MS	A209882.D	10	11/12/14	CM	n/a	n/a	VA7919
JB80728-6MSD	A209883.D	10	11/12/14	CM	n/a	n/a	VA7919
JB80728-6	A209885.D	10	11/12/14	CM	n/a	n/a	VA7919

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB80728-1, JB80728-2, JB80728-3, JB80728-5, JB80728-6, JB80728-7, JB80728-8, JB80728-11

CAS No.	Compound	JB80728-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	ND		500	447	89	500	453	91	1	64-134/11
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		500	537	107	500	533	107	1	63-144/13
75-09-2	Methylene chloride	ND		500	466	93	500	462	92	1	64-128/11
100-42-5	Styrene	ND		500	502	100	500	505	101	1	67-130/12
75-65-0	Tert Butyl Alcohol	ND		2500	2710	108	2500	2690	108	1	64-154/16
79-34-5	1,1,2,2-Tetrachloroethane	ND		500	499	100	500	506	101	1	68-131/11
127-18-4	Tetrachloroethene	ND		500	462	92	500	455	91	2	48-143/15
108-88-3	Toluene	50.1		500	494	89	500	491	88	1	54-137/13
87-61-6	1,2,3-Trichlorobenzene	ND		500	488	98	500	495	99	1	62-143/13
120-82-1	1,2,4-Trichlorobenzene	ND		500	468	94	500	477	95	2	66-138/12
71-55-6	1,1,1-Trichloroethane	ND		500	430	86	500	429	86	0	52-145/16
79-00-5	1,1,2-Trichloroethane	ND		500	504	101	500	496	99	2	73-130/10
79-01-6	Trichloroethene	ND		500	455	91	500	456	91	0	54-141/13
75-69-4	Trichlorofluoromethane	ND		500	363	73	500	355	71	2	33-159/25
75-01-4	Vinyl chloride	ND		500	363	73	500	364	73	0	36-149/19
	m,p-Xylene	639		1000	1500	86	1000	1500	86	0	50-137/12
95-47-6	o-Xylene	200		500	682	96	500	680	96	0	60-134/12
1330-20-7	Xylene (total)	840		1500	2190	90	1500	2180	89	0	53-136/12

CAS No.	Surrogate Recoveries	MS	MSD	JB80728-6	Limits
1868-53-7	Dibromofluoromethane	94%	94%	94%	79-120%
17060-07-0	1,2-Dichloroethane-D4	92%	92%	91%	72-123%
2037-26-5	Toluene-D8	104%	103%	101%	78-119%
460-00-4	4-Bromofluorobenzene	106%	106%	108%	74-119%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB80728
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB80915-1MS	A209920.D	1	11/13/14	CM	n/a	n/a	VA7921
JB80915-1MSD	A209921.D	1	11/13/14	CM	n/a	n/a	VA7921
JB80915-1	A209914.D	1	11/13/14	CM	n/a	n/a	VA7921

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB80728-4, JB80728-6, JB80728-9, JB80728-10

CAS No.	Compound	JB80915-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50	47.9	96	50	47.2	94	1	44-160/20
71-43-2	Benzene	ND		50	43.8	88	50	43.5	87	1	50-136/12
74-97-5	Bromochloromethane	ND		50	41.5	83	50	41.8	84	1	74-131/11
75-27-4	Bromodichloromethane	ND		50	43.7	87	50	44.1	88	1	74-132/11
75-25-2	Bromoform	0.57	J	50	48.4	96	50	48.1	95	1	68-136/12
74-83-9	Bromomethane	ND		50	38.2	76	50	39.2	78	3	37-157/21
78-93-3	2-Butanone (MEK)	ND		50	42.9	86	50	42.9	86	0	60-145/15
75-15-0	Carbon disulfide	ND		50	40.9	82	50	41.2	82	1	37-143/17
56-23-5	Carbon tetrachloride	ND		50	45.2	90	50	45.3	91	0	46-152/17
108-90-7	Chlorobenzene	ND		50	45.2	90	50	45.1	90	0	70-127/12
75-00-3	Chloroethane	ND		50	39.2	78	50	40.4	81	3	44-147/16
67-66-3	Chloroform	ND		50	40.8	82	50	40.5	81	1	67-129/12
74-87-3	Chloromethane	0.41	J	50	45.4	90	50	47.0	93	3	40-149/19
110-82-7	Cyclohexane	ND		50	42.7	85	50	43.2	86	1	31-153/21
96-12-8	1,2-Dibromo-3-chloropropane	ND		50	44.8	90	50	41.1	82	9	61-144/14
124-48-1	Dibromochloromethane	ND		50	47.7	95	50	47.5	95	0	74-131/10
106-93-4	1,2-Dibromoethane	ND		50	47.2	94	50	46.1	92	2	74-129/10
95-50-1	1,2-Dichlorobenzene	ND		50	44.4	89	50	41.4	83	7	73-126/11
541-73-1	1,3-Dichlorobenzene	ND		50	46.2	92	50	43.4	87	6	71-124/12
106-46-7	1,4-Dichlorobenzene	ND		50	44.4	89	50	41.6	83	7	71-123/12
75-71-8	Dichlorodifluoromethane	ND		50	39.1	78	50	39.2	78	0	20-161/25
75-34-3	1,1-Dichloroethane	ND		50	42.7	85	50	42.0	84	2	61-134/12
107-06-2	1,2-Dichloroethane	1.7		50	46.4	89	50	46.4	89	0	68-137/11
75-35-4	1,1-Dichloroethene	ND		50	42.9	86	50	43.0	86	0	40-143/17
156-59-2	cis-1,2-Dichloroethene	5.5		50	41.3	72	50	41.2	71	0	59-133/12
156-60-5	trans-1,2-Dichloroethene	1.0		50	38.0	74	50	37.9	74	0	55-132/14
78-87-5	1,2-Dichloropropane	ND		50	43.2	86	50	44.1	88	2	70-128/11
10061-01-5	cis-1,3-Dichloropropene	ND		50	45.8	92	50	45.2	90	1	73-127/11
10061-02-6	trans-1,3-Dichloropropene	ND		50	44.3	89	50	43.3	87	2	72-128/11
123-91-1	1,4-Dioxane	ND		1250	1140	91	1250	1170	94	3	49-161/26
100-41-4	Ethylbenzene	ND		50	44.6	89	50	44.7	89	0	49-137/13
76-13-1	Freon 113	ND		50	41.5	83	50	43.1	86	4	32-161/23
591-78-6	2-Hexanone	ND		50	47.4	95	50	46.8	94	1	59-145/14
98-82-8	Isopropylbenzene	ND		50	46.5	93	50	46.2	92	1	57-136/14
79-20-9	Methyl Acetate	ND		50	40.3	81	50	38.0	76	6	46-148/15
108-87-2	Methylcyclohexane	0.41	J	50	46.0	91	50	46.0	91	0	30-155/21

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB80728
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB80915-1MS	A209920.D	1	11/13/14	CM	n/a	n/a	VA7921
JB80915-1MSD	A209921.D	1	11/13/14	CM	n/a	n/a	VA7921
JB80915-1	A209914.D	1	11/13/14	CM	n/a	n/a	VA7921

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB80728-4, JB80728-6, JB80728-9, JB80728-10

CAS No.	Compound	JB80915-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	ND		50	40.8	82	50	41.6	83	2	64-134/11
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		50	44.1	88	50	46.7	93	6	63-144/13
75-09-2	Methylene chloride	ND		50	43.4	87	50	43.9	88	1	64-128/11
100-42-5	Styrene	ND		50	2.9	6* [a]	50	1.6	3* [a]	58* [a]	67-130/12
75-65-0	Tert Butyl Alcohol	ND		250	256	102	250	259	104	1	64-154/16
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	46.5	93	50	44.7	89	4	68-131/11
127-18-4	Tetrachloroethene	ND		50	45.4	91	50	45.9	92	1	48-143/15
108-88-3	Toluene	ND		50	42.0	84	50	42.3	85	1	54-137/13
87-61-6	1,2,3-Trichlorobenzene	ND		50	50.0	100	50	46.1	92	8	62-143/13
120-82-1	1,2,4-Trichlorobenzene	ND		50	48.6	97	50	44.9	90	8	66-138/12
71-55-6	1,1,1-Trichloroethane	ND		50	42.8	86	50	43.5	87	2	52-145/16
79-00-5	1,1,2-Trichloroethane	ND		50	44.6	89	50	44.8	90	0	73-130/10
79-01-6	Trichloroethene	46.9		50	70.4	47* [a]	50	71.3	49* [a]	1	54-141/13
75-69-4	Trichlorofluoromethane	ND		50	43.6	87	50	43.4	87	0	33-159/25
75-01-4	Vinyl chloride	ND		50	46.7	93	50	45.7	91	2	36-149/19
	m,p-Xylene	ND		100	88.8	89	100	88.5	89	0	50-137/12
95-47-6	o-Xylene	ND		50	44.3	89	50	45.7	91	3	60-134/12
1330-20-7	Xylene (total)	ND		150	133	89	150	134	89	1	53-136/12

CAS No.	Surrogate Recoveries	MS	MSD	JB80915-1	Limits
1868-53-7	Dibromofluoromethane	97%	97%	96%	79-120%
17060-07-0	1,2-Dichloroethane-D4	91%	92%	91%	72-123%
2037-26-5	Toluene-D8	102%	102%	100%	78-119%
460-00-4	4-Bromofluorobenzene	111%	106%	107%	74-119%

(a) Outside control limits due to matrix interference.

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JB80728
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample: VA7918-BFB
Lab File ID: A209848.D
Instrument ID: GCMSA
Injection Date: 11/11/14
Injection Time: 16:11

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.95 - 40.0% of mass 95	7683	17.6		Pass
75	30.0 - 60.0% of mass 95	20301	46.4		Pass
95	Base peak, 100% relative abundance	43765	100.0		Pass
96	5.0 - 9.0% of mass 95	3219	7.36		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	37973	86.8		Pass
175	5.0 - 9.0% of mass 174	2780	6.35	(7.32) [a]	Pass
176	95.0 - 101.0% of mass 174	36744	84.0	(96.8) [a]	Pass
177	5.0 - 9.0% of mass 176	2549	5.82	(6.94) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VA7918-IC7918	A209849.D	11/11/14	16:42	00:31	Initial cal 0.2
VA7918-IC7918	A209850.D	11/11/14	17:13	01:02	Initial cal 0.5
VA7918-IC7918	A209851.D	11/11/14	17:44	01:33	Initial cal 1.0
VA7918-IC7918	A209852.D	11/11/14	18:15	02:04	Initial cal 2.0
VA7918-IC7918	A209853.D	11/11/14	18:46	02:35	Initial cal 5.0
VA7918-IC7918	A209854.D	11/11/14	19:17	03:06	Initial cal 10
VA7918-IC7918	A209855.D	11/11/14	19:48	03:37	Initial cal 20
VA7918-ICC7918	A209856.D	11/11/14	20:19	04:08	Initial cal 50
VA7918-IC7918	A209857.D	11/11/14	20:50	04:39	Initial cal 100
VA7918-IC7918	A209858.D	11/11/14	21:21	05:10	Initial cal 200
VA7918-ICV7918	A209861.D	11/11/14	22:54	06:43	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JB80728
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample: VA7919-BFB
Lab File ID: A209869.D
Instrument ID: GCMSA
Injection Date: 11/12/14
Injection Time: 12:00

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.95 - 40.0% of mass 95	9898	17.9		Pass
75	30.0 - 60.0% of mass 95	25891	46.8		Pass
95	Base peak, 100% relative abundance	55304	100.0		Pass
96	5.0 - 9.0% of mass 95	3645	6.59		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	46096	83.4		Pass
175	5.0 - 9.0% of mass 174	3548	6.42	(7.70) [a]	Pass
176	95.0 - 101.0% of mass 174	45173	81.7	(98.0) [a]	Pass
177	5.0 - 9.0% of mass 176	3010	5.44	(6.66) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VA7919-CC7918	A209871.D	11/12/14	13:02	01:02	Continuing cal 20
VA7919-MB	A209873.D	11/12/14	14:05	02:05	Method Blank
VA7919-BS	A209874.D	11/12/14	14:36	02:36	Blank Spike
ZZZZZZ	A209876.D	11/12/14	15:38	03:38	(unrelated sample)
ZZZZZZ	A209877.D	11/12/14	16:09	04:09	(unrelated sample)
JB80728-1	A209878.D	11/12/14	16:40	04:40	MW-1
JB80728-7	A209879.D	11/12/14	17:11	05:11	MW-2
JB80728-3	A209880.D	11/12/14	17:42	05:42	MW-11
JB80728-6MS	A209882.D	11/12/14	18:44	06:44	Matrix Spike
JB80728-6MSD	A209883.D	11/12/14	19:15	07:15	Matrix Spike Duplicate
JB80728-6	A209885.D	11/12/14	20:16	08:16	MW-12
JB80728-2	A209886.D	11/12/14	20:47	08:47	MW-3
JB80728-5	A209887.D	11/12/14	21:18	09:18	MW-6
JB80728-8	A209888.D	11/12/14	21:49	09:49	MW-14
JB80728-11	A209890.D	11/12/14	22:51	10:51	MW-18R

Instrument Performance Check (BFB)

Job Number: JB80728
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample: VA7921-BFB
Lab File ID: A209908.D
Instrument ID: GCMSA
Injection Date: 11/13/14
Injection Time: 08:07

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.95 - 40.0% of mass 95	9448	17.0		Pass
75	30.0 - 60.0% of mass 95	25970	46.7		Pass
95	Base peak, 100% relative abundance	55573	100.0		Pass
96	5.0 - 9.0% of mass 95	3624	6.52		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	49189	88.5		Pass
175	5.0 - 9.0% of mass 174	3756	6.76	(7.64) [a]	Pass
176	95.0 - 101.0% of mass 174	48736	87.7	(99.1) [a]	Pass
177	5.0 - 9.0% of mass 176	3338	6.01	(6.85) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VA7921-CC7918	A209909.D	11/13/14	08:38	00:31	Continuing cal 20
VA7921-MB	A209911.D	11/13/14	09:40	01:33	Method Blank
VA7921-BS	A209912.D	11/13/14	10:11	02:04	Blank Spike
JB80915-1	A209914.D	11/13/14	11:13	03:06	(used for QC only; not part of job JB80728)
ZZZZZZ	A209915.D	11/13/14	11:44	03:37	(unrelated sample)
JB80728-9	A209916.D	11/13/14	12:15	04:08	MW-16R
JB80728-4	A209917.D	11/13/14	12:46	04:39	MW-19
JB80728-10	A209918.D	11/13/14	13:17	05:10	MW-17R
JB80728-6	A209919.D	11/13/14	14:19	06:12	MW-12
JB80915-1MS	A209920.D	11/13/14	14:50	06:43	Matrix Spike
JB80915-1MSD	A209921.D	11/13/14	15:20	07:13	Matrix Spike Duplicate
ZZZZZZ	A209923.D	11/13/14	16:22	08:15	(unrelated sample)
ZZZZZZ	A209924.D	11/13/14	16:53	08:46	(unrelated sample)
ZZZZZZ	A209925.D	11/13/14	17:24	09:17	(unrelated sample)
ZZZZZZ	A209926.D	11/13/14	17:55	09:48	(unrelated sample)

Volatile Internal Standard Area Summary

Job Number: JB80728
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Check Std: VA7919-CC7918 **Injection Date:** 11/12/14
Lab File ID: A209871.D **Injection Time:** 13:02
Instrument ID: GCMSA **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	335788	7.77	230953	10.10	264328	11.05	235568	14.45	138688	17.05
Upper Limit [a]	671576	8.27	461906	10.60	528656	11.55	471136	14.95	277376	17.55
Lower Limit [b]	167894	7.27	115477	9.60	132164	10.55	117784	13.95	69344	16.55

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VA7919-MB	346911	7.77	248686	10.10	280694	11.05	242706	14.45	139392	17.05
VA7919-BS	344142	7.77	233046	10.10	269599	11.05	234461	14.45	131413	17.05
ZZZZZZ	339152	7.76	238234	10.10	274223	11.05	231215	14.45	131858	17.05
ZZZZZZ	327673	7.77	231170	10.10	263191	11.05	222335	14.45	129927	17.05
JB80728-1	328800	7.77	227534	10.10	251492	11.05	216089	14.45	131523	17.05
JB80728-7	326516	7.76	230230	10.10	259034	11.05	216755	14.45	123944	17.05
JB80728-3	339559	7.76	235232	10.10	270417	11.05	239443	14.45	133642	17.05
JB80728-6MS	365353	7.78	240311	10.10	274628	11.05	243173	14.45	145033	17.05
JB80728-6MSD	363558	7.78	241017	10.10	278435	11.05	245891	14.45	145646	17.04
JB80728-6	339351	7.77	241088	10.10	274707	11.05	236186	14.45	141045	17.05
JB80728-2	343542	7.76	239830	10.10	274590	11.05	230851	14.45	131409	17.05
JB80728-5	356209	7.76	233357	10.10	260451	11.05	222895	14.45	130830	17.05
JB80728-8	359640	7.76	242340	10.10	274652	11.05	240041	14.45	138633	17.05
JB80728-11 [c]	348343	7.76	245273	10.10	280075	11.05	245081	14.45	138458	17.05

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) (pH= 11)Sample pH did not satisfy field preservation criteria.

Volatile Internal Standard Area Summary

Job Number: JB80728
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Check Std: VA7921-CC7918 **Injection Date:** 11/13/14
Lab File ID: A209909.D **Injection Time:** 08:38
Instrument ID: GCMSA **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	328059	7.77	235011	10.10	266197	11.05	229106	14.45	133358	17.05
Upper Limit [a]	656118	8.27	470022	10.60	532394	11.55	458212	14.95	266716	17.55
Lower Limit [b]	164030	7.27	117506	9.60	133099	10.55	114553	13.95	66679	16.55

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VA7921-MB	340550	7.77	238941	10.10	274337	11.05	238472	14.45	146978	17.05
VA7921-BS	329978	7.76	232920	10.10	269186	11.05	243659	14.45	134860	17.05
JB80915-1	327687	7.76	236053	10.10	264674	11.05	222233	14.45	132176	17.04
ZZZZZZ	350815	7.76	238317	10.10	274627	11.05	239326	14.45	142283	17.05
JB80728-9	339395	7.78	229182	10.10	257909	11.05	221937	14.45	136297	17.05
JB80728-4	343202	7.77	234152	10.10	263955	11.05	228826	14.45	140165	17.05
JB80728-10	327250	7.77	227015	10.10	262494	11.05	227894	14.45	134989	17.05
JB80728-6	352154	7.76	238952	10.10	281384	11.05	254832	14.45	148164	17.05
JB80915-1MS	355085	7.76	234345	10.10	269600	11.05	239822	14.45	138098	17.05
JB80915-1MSD	365369	7.77	244139	10.10	283944	11.05	251720	14.45	149558	17.05
ZZZZZZ	360728	7.76	242264	10.10	277388	11.05	236148	14.45	146391	17.04
ZZZZZZ	358521	7.76	245527	10.10	281645	11.05	249893	14.45	141589	17.05
ZZZZZZ	364436	7.77	250516	10.10	287217	11.05	255962	14.45	145486	17.05
ZZZZZZ	373655	7.76	247980	10.10	283950	11.05	250002	14.45	152382	17.05

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: JB80728
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Method: SW846 8260B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JB80728-1	A209878.D	96	92	101	106
JB80728-2	A209886.D	93	89	100	112
JB80728-3	A209880.D	93	90	103	117
JB80728-4	A209917.D	97	91	102	106
JB80728-5	A209887.D	94	89	100	113
JB80728-6	A209919.D	96	97	106	109
JB80728-6	A209885.D	94	91	101	108
JB80728-7	A209879.D	95	92	100	111
JB80728-8	A209888.D	94	91	103	110
JB80728-9	A209916.D	96	92	102	107
JB80728-10	A209918.D	96	93	102	107
JB80728-11	A209890.D	92	90	104	111
JB80728-6MS	A209882.D	94	92	104	106
JB80728-6MSD	A209883.D	94	92	103	106
JB80915-1MS	A209920.D	97	91	102	111
JB80915-1MSD	A209921.D	97	92	102	106
VA7919-BS	A209874.D	96	93	102	110
VA7919-MB	A209873.D	92	91	102	110
VA7921-BS	A209912.D	95	92	106	111
VA7921-MB	A209911.D	96	92	103	104

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	79-120%
S2 = 1,2-Dichloroethane-D4	72-123%
S3 = Toluene-D8	78-119%
S4 = 4-Bromofluorobenzene	74-119%

Initial Calibration Summary

Job Number: JB80728 **Sample:** VA7918-ICC7918
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** A209856.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Response Factor Report MSA

Method : C:\MSDCHEM\1\METHODS\MA7918.M (RTE Integrator)
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
Last Update : Thu Nov 13 13:59:58 2014
Response via : Initial Calibration

Calibration Files
5 =A209853.D 2 =A209852.D 20 =A209855.D 50 =A209856.D
100 =A209857.D 1 =A209851.D 200 =A209858.D 0.5 =A209850.D
10 =A209854.D 0.2 =A209849.D = =

Compound

	5	2	20	50	100	1	200	0.5	10	0.2	Avg	%RSD
1) I	Tert Butyl Alcohol-d9	ISTD										
2)	1,4-dioxane	0.071	0.070	0.072	0.073	0.074	0.064	0.072		0.070		0.071	4.55
3)	tertiary butyl alcohol	0.955	0.916	0.928	0.910	0.922	1.035	0.850	0.788	0.927		0.915	7.40
4) I	pentafluorobenzene	ISTD										
5)	chlorotrifluoroethene										0.000#	-1.00
6)	chlorodifluoromethane	0.619	0.454	0.634	0.654	0.649	0.670		0.611		0.613	11.93
7)	dichlorodifluoromethane	0.660	0.650	0.886	0.905	0.899	0.921		0.888		0.830	14.47
8)	chloromethane	0.504	0.453	0.574	0.608	0.649	0.591	0.710	0.560	0.569	0.624	0.584	12.35
9)	vinyl chloride	0.515	0.508	0.643	0.693	0.738	0.606		0.534	0.628		0.608	13.88
10)	bromomethane	0.324	0.328	0.348	0.339	0.302	0.399	0.255	0.349	0.370	0.412	0.343	13.33
11)	chloroethane	0.250	0.213	0.264	0.244	0.209	0.290			0.283		0.250	12.58
12)	vinyl bromide										0.000#	-1.00	
13)	trichlorofluoromethane	0.572	0.558	0.750	0.768	0.771	0.753	0.817		0.743		0.717	13.41
14)	pentane										0.000#	-1.00	
15)	ethyl ether	0.220	0.190	0.220	0.228	0.219	0.185	0.217		0.206		0.211	7.43
16)	Freon 123a										0.000#	-1.00	
17)	acrolein	0.132	0.123	0.124	0.124		0.124			0.122		0.125	2.80
18)	freon 113	0.320	0.252	0.353	0.353	0.353		0.366		0.333		0.333	11.62
19)	1,1-dichloroethene	0.571	0.508	0.604	0.608	0.616	0.498	0.609		0.567		0.573	8.15
20)	acetone	0.258		0.243	0.234	0.229		0.229		0.220		0.236	5.66
21)	allyl chloride	0.200		0.203	0.214	0.213		0.209		0.186		0.204	5.11
22)	acetonitrile	0.105		0.083	0.081	0.079		0.078		0.086		0.085	11.89
23)	iodomethane												

0.706 0.675 0.745 0.749 0.751 0.642 0.755 0.530 0.678 0.500 0.673 13.68

24) carbon disulfide
1.271 1.195 1.337 1.329 1.334 1.381 1.332 1.346 1.242 1.307 4.51

25) methylene chloride
0.426 0.433 0.440 0.437 0.435 0.424 0.435 0.405 0.408 0.324 0.417 8.34

26) methyl acetate
0.568 0.548 0.502 0.506 0.509 0.498 0.504 0.530 0.521 4.90

27) methyl tert butyl ether
1.617 1.583 1.571 1.604 1.576 1.611 1.568 1.638 1.478 1.497 1.574 3.25

28) trans-1,2-dichloroethene
0.375 0.366 0.377 0.386 0.386 0.403 0.372 0.470 0.376 0.498 0.401 11.36

29) hexane
0.428 0.350 0.429 0.440 0.439 0.453 0.428 0.424 7.96

30) di-isopropyl ether
1.466 1.372 1.449 1.484 1.458 1.294 1.471 1.394 1.452 1.165 1.401 7.22

31) t-butyl formate
0.506 0.482 0.520 0.533 0.535 0.433 0.548 0.498 0.507 7.25

32) ethyl tert-butyl ether
1.564 1.439 1.541 1.591 1.575 1.402 1.605 1.302 1.501 1.225 1.475 8.84

33) 2-butanone
0.070 0.066 0.077 0.083 0.085 0.087 0.067 0.076 11.15

34) 1,1-dichloroethane
0.715 0.651 0.727 0.740 0.729 0.647 0.706 0.577 0.680 0.686 7.68

35) chloroprene
0.471 0.388 0.492 0.510 0.519 0.352 0.519 0.482 0.467 13.45

36) acrylonitrile
0.246 0.244 0.239 0.247 0.244 0.236 0.240 0.185 0.228 0.219 0.233 8.12

37) vinyl acetate
0.062 0.080 0.077 0.081 0.081 0.069 0.075 10.38

38) ethyl acetate
0.078 0.064 0.082 0.094 0.093 0.095 0.081 0.084 13.24

39) ethyl acrylate
0.609 0.453 0.623 0.631 0.632 0.667 0.600 0.602 11.45

40) 2,2-dichloropropane
0.675 0.657 0.707 0.696 0.681 0.699 0.658 0.668 0.680 2.81

41) cis-1,2-dichloroethene
0.423 0.463 0.431 0.435 0.433 0.451 0.424 0.458 0.421 0.544 0.448 8.20

42) propionitrile
0.119 0.115 0.115 0.118 0.120 0.110 0.122 0.096 0.110 0.114 6.94

43) bromochloromethane
0.221 0.209 0.220 0.225 0.223 0.213 0.224 0.169 0.216 0.213 8.14

44) tetrahydrofuran
0.279 0.283 0.265 0.267 0.266 0.305 0.266 0.259 0.274 5.43

45) chloroform
0.683 0.659 0.682 0.704 0.694 0.680 0.676 0.548 0.670 0.686 0.668 6.57

46) dibromofluoromethane (s)
0.420 0.437 0.364 0.376 0.369 0.369 0.367 0.386 7.67

47) 1,2-dichloroethane-d4 (s)
0.506 0.591 0.430 0.446 0.434 0.435 0.435 0.468 12.90

48) methacrylonitrile
0.215 0.207 0.221 0.238 0.244 0.181 0.244 0.207 0.220 9.99

49) cyclohexane
0.604 0.549 0.662 0.702 0.690 0.527 0.682 0.624 0.630 10.45

50) 1,1,1-trichloroethane
0.652 0.603 0.698 0.715 0.698 0.567 0.700 0.442 0.654 0.637 13.83

51) iso-butyl alcohol
0.044 0.042 0.043 0.043 0.044 0.042 0.046 0.043 0.043 3.06

52) tert-amyl methyl ether
1.599 1.513 1.538 1.601 1.584 1.516 1.625 1.623 1.528 1.714 1.584 3.96

Initial Calibration Summary

Job Number: JB80728 **Sample:** VA7918-ICC7918
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** A209856.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

53) I 1,4-difluorobenzene ----------ISTD----------

54) Di-isobutylene

0.000# -1.00

55) epichlorohydrin

0.058 0.059 0.057 0.060 0.061 0.057 0.062 0.043 0.055 0.057 9.87

56) n-butyl alcohol

0.027 0.026 0.028 0.030 0.032 0.023 0.032 0.027 0.028 10.53

57) carbon tetrachloride

0.467 0.435 0.504 0.498 0.490 0.439 0.475 0.464 0.471 5.42

58) 1,1-dichloropropene

0.385 0.358 0.407 0.407 0.405 0.406 0.384 0.326 0.377 0.297 0.375 10.07

59) benzene

1.230 1.182 1.261 1.253 1.229 1.200 1.169 1.079 1.194 1.244 1.204 4.47

60) Iso-octane

0.974 0.787 1.097 1.131 1.134 1.162 1.012 1.043 12.65

61) heptane

0.201 0.174 0.201 0.201 0.197 0.130 0.200 0.193 0.187 13.32

62) tert amyl alcohol

0.000# -1.00

63) isopropyl acetate

0.870 0.889 0.882 0.848 0.839 0.869 0.820 0.853 0.859 2.68

64) 1,2-dichloroethane

0.421 0.410 0.417 0.423 0.409 0.399 0.398 0.403 0.403 0.382 0.406 3.00

65) trichloroethene

0.286 0.270 0.302 0.301 0.304 0.281 0.295 0.237 0.288 0.258 0.282 7.66

66) 2-nitropropane

0.181 0.176 0.174 0.171 0.173 0.181 0.170 0.161 0.173 3.61

67) tert-amyl ethyl ether

0.000# -1.00

68) methylcyclohexane

0.549 0.426 0.567 0.564 0.562 0.385 0.579 0.534 0.521 14.04

69) 2-chloroethyl vinyl ether

0.230 0.223 0.236 0.233 0.234 0.211 0.228 0.223 0.229 0.210 0.226 4.08

70) methyl methacrylate

0.253 0.262 0.276 0.286 0.284 0.256 0.280 0.251 0.269 5.42

71) 1,2-dichloropropane

0.331 0.330 0.339 0.333 0.333 0.322 0.318 0.253 0.315 0.319 8.20

72) dibromomethane

0.208 0.225 0.212 0.213 0.212 0.211 0.207 0.196 0.201 0.162 0.205 8.19

73) bromodichloromethane

0.403 0.415 0.431 0.436 0.431 0.395 0.422 0.405 0.417 3.66

74) cis-1,3-dichloropropene

0.480 0.489 0.509 0.523 0.526 0.490 0.520 0.439 0.480 0.472 0.493 5.54

75) toluene-d8 (s)

1.338 1.095 1.128 1.115 1.089 1.168 1.155 8.10

76) 4-methyl-2-pentanone

0.225 0.213 0.241 0.238 0.237 0.200 0.226 0.199 0.225 0.223 7.08

77) toluene

0.723 0.706 0.758 0.777 0.778 0.745 0.768 0.667 0.738 0.781 0.744 4.96

78) 3-methyl-1-butanol

0.046 0.045 0.048 0.049 0.051 0.044 0.050 0.037 0.048 0.036 0.045 11.21

79) trans-1,3-dichloropropene

0.463 0.468 0.477 0.485 0.495 0.466 0.489 0.425 0.440 0.536 0.474 6.45

80) ethyl methacrylate

0.455 0.449 0.478 0.494 0.500 0.425 0.496 0.375 0.449 0.458 8.83

81) 1,1,2-trichloroethane

0.252 0.268 0.253 0.259 0.261 0.219 0.256 0.213 0.242 0.198 0.242 9.81

82) 2-hexanone

0.184 0.185 0.200 0.207 0.208 0.155 0.204 0.168 0.189 0.189 9.61

Initial Calibration Summary

Job Number: JB80728 **Sample:** VA7918-ICC7918
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** A209856.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

```
 83) I   chlorobenzene-d5      ----------------ISTD---------------------
 84)  tetrachloroethene
       0.266 0.245 0.281 0.272 0.296 0.252 0.258 0.215 0.269        0.262    8.83
 85)  1,3-dichloropropane
       0.532 0.541 0.528 0.516 0.522 0.512 0.496 0.486 0.497 0.511  0.514    3.36
 86)  butyl acetate
       0.320 0.325 0.327 0.314 0.317 0.300 0.295 0.270 0.318        0.310    5.91
 87)  3,3-dimethyl-1-butanol
       0.120 0.115 0.127 0.126 0.134 0.102 0.123 0.106 0.122 0.094  0.117   10.80
 88)  dibromochloromethane
       0.369 0.372 0.396 0.383 0.398 0.351 0.382 0.357 0.360 0.274  0.364    9.70
 89)  1,2-dibromoethane
       0.343 0.325 0.335 0.330 0.343 0.324 0.327 0.301 0.319 0.327  0.327    3.75
 90)  n-butyl ether
                                                                    0.000#  -1.00
 91)  chlorobenzene
       0.896 0.875 0.905 0.892 0.919 0.878 0.885 0.779 0.855 0.886  0.877    4.40
 92)  1,1,1,2-tetrachloroethane
       0.411 0.405 0.445 0.425 0.428 0.447 0.405 0.364 0.410 0.335  0.408    8.51
 93)  ethylbenzene
       1.540 1.500 1.616 1.582 1.616 1.520 1.502 1.369 1.538 1.499  1.528    4.70
 94)  m,p-xylene
       0.587 0.565 0.612 0.608 0.619 0.575 0.576 0.499 0.587        0.581    6.16
 95)  o-xylene
       0.655 0.640 0.690 0.678 0.692 0.582 0.656 0.523 0.655 0.569  0.634    8.95
 96)  styrene
       0.963 0.895 0.989 0.999 1.035 0.934 0.992 0.849 0.928 0.919  0.950    5.88
 97)  bromoform
       0.305 0.316 0.319 0.314 0.331 0.269 0.323 0.256 0.302 0.276  0.301    8.40

 98) I   1,4-dichlorobenzene-d ----------------ISTD---------------------
 99)  isopropylbenzene
       2.946 2.760 3.184 2.971 3.318 2.750 3.081 2.611 2.858        2.942    7.66
100)  cyclohexanone   ** Compound failed for this initial calibration
       0.070       0.066 0.060 0.136       0.062       0.060        0.076   39.45
             ----- Linear regression -----  Coefficient =  0.7687
               Response Ratio = 0.12742 + 0.07120 *A (Compound failed for this IC)

101)  4-bromofluorobenzene (s)
       1.080       0.777 0.720 0.790       0.772       0.830        0.828   15.51
             ----- Linear regression -----  Coefficient =  0.9992
               Response Ratio = 0.00654 + 0.77111 *A

102)  bromobenzene
       0.704 0.752 0.728 0.660 0.751 0.724 0.712 0.650 0.671 0.723  0.708    5.06
103)  1,1,2,2-tetrachloroethane
       1.100 1.124 1.113 1.018 1.126 1.094 1.073 0.999 1.033 0.969  1.065    5.29
104)  trans-1,4-dichloro-2-butene
       0.292 0.271 0.286 0.243 0.273 0.265 0.252 0.266 0.249        0.266    6.16
105)  1,2,3-trichloropropane
       0.293 0.295 0.278 0.252 0.280 0.261 0.261 0.324 0.262        0.279    8.21
106)  n-propylbenzene
       3.119 2.986 3.336 3.028 3.378 2.956 3.095 2.790 3.045 3.188  3.092    5.69
107)  2-chlorotoluene
       0.705 0.704 0.712 0.669 0.760 0.608 0.718 0.705 0.663 0.514  0.676   10.31
108)  4-chlorotoluene
       1.942 1.904 2.002 1.830 2.073 1.913 1.992 1.958 1.867 2.401  1.988    8.10
109)  p-ethyltoluene
                                                                    0.000#  -1.00
110)  1,3,5-trimethylbenzene
```

Initial Calibration Summary

Job Number: JB80728 **Sample:** VA7918-ICC7918
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** A209856.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

```
       2.608 2.371 2.853 2.613 3.011 2.399 2.826 2.361 2.558 2.331  2.593    9.16
111)  tert-butylbenzene
       2.096 1.851 2.377 2.524 2.596 1.925 2.471 1.866 2.070        2.197   13.50
112)  pentachloroethane
       0.596 0.573 0.663 0.602 0.654 0.545 0.690 0.528 0.568        0.602    9.24
113)  1,2,4-trimethylbenzene
       2.563 2.446 2.767 2.554 2.919 2.351 2.769 2.305 2.495 2.486  2.565    7.65
114)  sec-butylbenzene
       3.289 3.010 3.730 3.457 3.998 3.006 3.758 2.677 3.284 2.986  3.320   12.54
115)  1,3-dichlorobenzene
       1.439 1.464 1.464 1.336 1.495 1.429 1.447 1.503 1.354        1.437    4.01
116)  p-isopropyltoluene
       2.814 2.715 3.103 2.909 3.371 2.555 3.213 2.412 2.772 2.561  2.843   10.86
117)  1,2,3-trimethylbenzene
                                                                    0.000#  -1.00
118)  1,4-dichlorobenzene
       1.507 1.539 1.465 1.330 1.500 1.514 1.455 1.586 1.340 2.044  1.528   12.99
119)  p-diethylbenzene
                                                                    0.000#  -1.00
120)  1,2-dichlorobenzene
       1.622 1.708 1.623 1.478 1.672 1.599 1.626 1.788 1.530 1.918  1.656    7.61
121)  n-butylbenzene
       1.364 1.285 1.474 1.362 1.558 1.330 1.512 1.314 1.338 1.584  1.412    7.74
122)  1,2,4,5-tetramethylbenzene
                                                                    0.000#  -1.00
123)  1,2-dibromo-3-chloropropane
       0.363 0.377 0.350 0.310 0.344 0.425 0.335 0.412 0.306        0.358   11.52
124)  1,3,5-trichlorobenzene
       1.594 1.620 1.672 1.520 1.751 1.560 1.733       1.494        1.618    5.84
125)  1,2,4-trichlorobenzene
       1.647 1.709 1.703 1.575 1.805 1.698 1.771 1.802 1.559 2.338  1.761   12.49
126)  hexachlorobutadiene
       0.610 0.564 0.682 0.653 0.778 0.649 0.781 0.581 0.589 0.770  0.666   12.68
127)  naphthalene
       5.597 5.805 5.709 5.145 5.801 5.744 5.347       5.170        5.540    5.02
128)  1,2,3-trichlorobenzene
       1.807 1.852 1.875 1.715 1.933 1.792 1.827 1.959 1.666 2.521  1.895   12.53
129)  hexachloroethane
       0.476 0.419 0.563 0.544 0.654       0.659       0.476        0.541   16.95
             ----- Linear regression -----  Coefficient =  0.9985
               Response Ratio = -0.04044 + 0.66599 *A

130)  Ethylenimine
                                                                    0.000#  -1.00
131)  Bis(chloromethyl)ether
                                                                    0.000#  -1.00
132)  2-methylnaphthalene
                                                                    0.000#  -1.00
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          MA7918.M          Thu Nov 13 17:01:46 2014   RPT1
```

Initial Calibration Verification

Job Number: JB80728 **Sample:** VA7918-ICV7918
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** A209861.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\A209861.D Vial: 15
Acq On : 11 Nov 2014 10:54 pm Operator: CourtneM
Sample : icv7918-50 Inst : MSA
Misc : MS76644,VA7918,w,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA7918.M (RTE Integrator)
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
Last Update : Thu Nov 13 13:59:58 2014
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	104	0.00	7.77
2	M	1,4-dioxane	0.071	0.069	2.8	98	0.00	11.81
3	M	tertiary butyl alcohol	0.915	0.876	4.3	100	0.00	7.90
4	I	pentafluorobenzene	1.000	1.000	0.0	103	0.00	10.10
5		chlorotrifluoroethene		----------NA----------				
6	M	chlorodifluoromethane	0.613	0.532	13.2	83	0.00	4.14
7	M	dichlorodifluoromethane	0.830	0.694	16.4	79	0.00	4.14
8	M	chloromethane	0.584	0.516	11.6	87	0.00	4.48
9	M	vinyl chloride	0.608	0.599	1.5	89	0.00	4.75
10	M	bromomethane	0.343	0.294	14.3	89	0.00	5.45
11	M	chloroethane	0.250	0.237	5.2	100	0.00	5.64
12		vinyl bromide		----------NA----------				
13	M	trichlorofluoromethane	0.717	0.714	0.4	95	0.00	6.15
14	m	pentane		----------NA----------				
15	M	ethyl ether	0.211	0.220	-4.3	99	0.00	6.59
16		Freon 123a		----------NA----------				
17	M	acrolein	0.125	0.125	0.0	104	0.00	6.87
18		freon 113	0.333	0.330	0.9	96	0.00	7.00
19	M	1,1-dichloroethene	0.573	0.565	1.4	95	0.00	7.03
20	M	acetone	0.236	0.228	3.4	100	0.00	7.11
21	M	allyl chloride	0.204	0.209	-2.5	100	0.00	7.60
22	M	acetonitrile	0.085	0.076	10.6	96	0.00	7.59
23	M	iodomethane	0.673	0.695	-3.3	95	0.00	7.34
24	M	carbon disulfide	1.307	1.225	6.3	95	0.00	7.47
25	M	methylene chloride	0.417	0.414	0.7	97	0.00	7.81
26	M	methyl acetate	0.521	0.450	13.6	91	0.00	7.59
27	M	methyl tert butyl ether	1.574	1.500	4.7	192	0.00	8.14
28	M	trans-1,2-dichloroethene	0.401	0.352	12.2	94	0.00	8.20
29		hexane	0.424	0.352	17.0	82	0.00	8.50
30	M	di-isopropyl ether	1.401	1.413	-0.9	98	0.00	8.77
31	m	t-butyl formate	0.507	0.519	-2.4	100	0.00	9.98
32	M	ethyl tert-butyl ether	1.475	1.501	-1.8	97	0.00	9.25
33	M	2-butanone	0.076	0.083	-9.2	102	0.00	9.53
34	M	1,1-dichloroethane	0.686	0.704	-2.6	98	0.00	8.80
35	M	chloroprene	0.467	0.536	-14.8	108	0.00	8.91
36	M	acrylonitrile	0.233	0.215	7.7	89	0.00	8.16
37	M	vinyl acetate	0.075	0.083	-10.7	110	0.00	8.78
38	M	ethyl acetate	0.084	0.093	-10.7	101	0.00	9.55
39		ethyl acrylate	0.602	0.621	-3.2	101	0.00	11.63
40	M	2,2-dichloropropane	0.680	0.631	7.2	93	0.00	9.57
41	M	cis-1,2-dichloroethene	0.448	0.414	7.6	98	0.00	9.57

Initial Calibration Verification

Job Number: JB80728 **Sample:** VA7918-ICV7918
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** A209861.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

42	M	propionitrile	0.114	0.116	-1.8	102	0.00	9.65
43	M	bromochloromethane	0.213	0.215	-0.9	98	0.00	9.90
44	M	tetrahydrofuran	0.274	0.254	7.3	98	0.00	9.93
45	M	chloroform	0.668	0.667	0.1	97	0.00	9.95
46	S	dibromofluoromethane (s)	0.386	0.363	6.0	99	0.00	10.16
47	S	1,2-dichloroethane-d4 (s)	0.468	0.433	7.5	100	0.00	10.60
48	M	methacrylonitrile	0.220	0.228	-3.6	98	0.00	9.83
49		cyclohexane	0.630	0.626	0.6	92	0.00	10.28
50	M	1,1,1-trichloroethane	0.637	0.677	-6.3	97	0.00	10.21
51		iso-butyl alcohol	0.043	0.042	2.3	99	0.00	10.41
52	M	tert-amyl methyl ether	1.584	1.532	3.3	98	0.00	10.69
53	I	1,4-difluorobenzene	1.000	1.000	0.0	102	0.00	11.05
54	M	Di-isobutylene		----------NA----------				
55	M	epichlorohydrin	0.057	0.055	3.5	94	0.00	12.38
56	M	n-butyl alcohol	0.028	0.030	-7.1	102	0.00	11.18
57	M	carbon tetrachloride	0.471	0.471	0.0	97	0.00	10.42
58	M	1,1-dichloropropene	0.375	0.396	-5.6	99	0.00	10.39
59	M	benzene	1.204	1.201	0.2	98	0.00	10.66
60	M	Iso-octane	1.043	1.009	3.3	91	0.00	10.65
61	M	heptane	0.187	0.179	4.3	91	0.00	10.82
62	m	tert amyl alcohol		----------NA----------				
63	M	isopropyl acetate	0.859	1.033	-20.3#	124	0.00	10.58
64	M	1,2-dichloroethane	0.406	0.407	-0.2	98	0.00	10.69
65	M	trichloroethene	0.282	0.287	-1.8	97	0.00	11.40
66	M	2-nitropropane	0.173	0.171	1.2	102	0.00	12.23
67	m	tert-amyl ethyl ether		----------NA----------				
68	m	methylcyclohexane	0.521	0.558	-7.1	101	0.00	11.63
69	M	2-chloroethyl vinyl ether	0.226	0.228	-0.9	100	0.00	12.23
70	M	methyl methacrylate	0.269	0.289	-7.4	103	0.00	11.68
71	M	1,2-dichloropropane	0.319	0.324	-1.6	99	0.00	11.69
72	M	dibromomethane	0.205	0.203	1.0	97	0.00	11.86
73	M	bromodichloromethane	0.417	0.412	1.2	96	0.00	11.99
74	M	cis-1,3-dichloropropene	0.493	0.510	-3.4	99	0.00	12.47
75	S	toluene-d8 (s)	1.155	1.126	2.5	102	0.00	12.78
76	M	4-methyl-2-pentanone	0.223	0.244	-9.4	105	0.00	12.57
77	M	toluene	0.744	0.752	-1.1	99	0.00	12.86
78	M	3-methyl-1-butanol	0.045	0.050	-11.1	105	0.00	12.60
79	M	trans-1,3-dichloropropene	0.474	0.461	2.7	97	0.00	13.08
80	M	ethyl methacrylate	0.458	0.491	-7.2	101	0.00	13.06
81	M	1,1,2-trichloroethane	0.242	0.251	-3.7	99	0.00	13.32
82	M	2-hexanone	0.189	0.210	-11.1	103	0.00	13.50
83	I	chlorobenzene-d5	1.000	1.000	0.0	102	0.00	14.45
84	M	tetrachloroethene	0.262	0.264	-0.8	99	0.00	13.50
85	M	1,3-dichloropropane	0.514	0.501	2.5	99	0.00	13.52
86	M	butyl acetate	0.310	0.315	-1.6	102	0.00	13.57
87		3,3-dimethyl-1-butanol	0.117	0.126	-7.7	102	0.00	13.69
88	M	dibromochloromethane	0.364	0.365	-0.3	97	0.00	13.81
89	M	1,2-dibromoethane	0.327	0.322	1.5	99	0.00	13.98
90	M	n-butyl ether		----------NA----------				
91	M	chlorobenzene	0.877	0.867	1.1	99	0.00	14.48
92	M	1,1,1,2-tetrachloroethane	0.408	0.409	-0.2	98	0.00	14.55
93	M	ethylbenzene	1.528	1.529	-0.1	98	0.00	14.54
94	M	m,p-xylene	0.581	0.597	-2.8	100	0.00	14.65
95	M	o-xylene	0.634	0.650	-2.5	97	0.00	15.13
96	M	styrene	0.950	0.972	-2.3	99	0.00	15.14
97	M	bromoform	0.301	0.309	-2.7	100	0.00	15.45
98	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	98	0.00	17.05

Initial Calibration Verification

Job Number: JB80728 **Sample:** VA7918-ICV7918
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** A209861.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

99	M	isopropylbenzene	2.942	2.989	-1.6	99	0.00	15.50
		----------	True	Calc.	% Drift	----------		
100	m	cyclohexanone	500.000	313.163	37.4#	95	0.00	15.71
101	S	4-bromofluorobenzene (s)	50.000	48.346	3.3	103	0.00	15.74
		----------	AvgRF	CCRF	% Dev	----------		
102	M	bromobenzene	0.708	0.671	5.2	100	0.00	15.96
103	M	1,1,2,2-tetrachloroethane	1.065	0.984	7.6	95	0.00	15.86
104	M	trans-1,4-dichloro-2-bute	0.266	0.264	0.8	107	0.00	15.90
105	M	1,2,3-trichloropropane	0.279	0.251	10.0	98	0.00	15.95
106	M	n-propylbenzene	3.092	3.221	-4.2	104	0.00	15.96
107	M	2-chlorotoluene	0.676	0.688	-1.8	101	0.00	16.14
108	M	4-chlorotoluene	1.988	1.864	6.2	100	0.00	16.24
109	m	p-ethyltoluene		----------NA----------				
110	M	1,3,5-trimethylbenzene	2.593	2.659	-2.5	100	0.00	16.12
111	M	tert-butylbenzene	2.197	2.307	-5.0	90	0.00	16.52
112	M	pentachloroethane	0.602	0.617	-2.5	101	0.00	16.63
113	M	1,2,4-trimethylbenzene	2.565	2.740	-6.8	105	0.00	16.57
114	M	sec-butylbenzene	3.320	3.518	-6.0	100	0.00	16.76
115	M	1,3-dichlorobenzene	1.437	1.338	6.9	98	0.00	16.98
116	M	p-isopropyltoluene	2.843	3.035	-6.8	102	0.00	16.89
117	M	1,2,3-trimethylbenzene		----------NA----------				
118	M	1,4-dichlorobenzene	1.528	1.344	12.0	99	0.00	17.08
119	m	p-diethylbenzene		----------NA----------				
120	M	1,2-dichlorobenzene	1.656	1.508	8.9	100	0.00	17.52
121	M	n-butylbenzene	1.412	1.428	-1.1	103	0.00	17.35
122	m	1,2,4,5-tetramethylbenzen		----------NA----------				
123	M	1,2-dibromo-3-chloropropa	0.358	0.311	13.1	99	0.00	18.37
124	M	1,3,5-trichlorobenzene	1.618	1.536	5.1	99	0.00	18.56
125	M	1,2,4-trichlorobenzene	1.761	1.625	7.7	101	0.00	19.28
126	M	hexachlorobutadiene	0.666	0.662	0.6	99	0.00	19.40
127	M	naphthalene	5.540	5.238	5.5	100	0.00	19.61
128	M	1,2,3-trichlorobenzene	1.895	1.767	6.8	101	0.00	19.89
		----------	True	Calc.	% Drift	----------		
129	M	hexachloroethane	50.000	45.029	9.9	101	0.00	17.80
		----------	AvgRF	CCRF	% Dev	----------		
130		Ethylenimine		----------NA----------				
131		Bis(chloromethyl)ether		----------NA----------				
132		2-methylnaphthalene		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
A209856.D MA7918.M Thu Nov 13 14:02:21 2014 RPT1

Continuing Calibration Summary

Job Number: JB80728 **Sample:** VA7919-CC7918
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** A209871.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\A\va7919-7920\A209871.D Vial: 7
Acq On : 12 Nov 2014 1:02 pm Operator: CourtneM
Sample : cc7918-20 Inst : MSA
Misc : MS76628,VA7919,w,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA7918.M (RTE Integrator)
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
Last Update : Wed Nov 12 09:40:25 2014
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	103	0.00	7.77
2	M	1,4-dioxane	0.071	0.072	-1.4	103	0.00	11.80
3	M	tertiary butyl alcohol	0.915	0.951	-3.9	105	0.00	7.89
4	I	pentafluorobenzene	1.000	1.000	0.0	119	0.00	10.10
5		chlorotrifluoroethene		----------NA----------				
6	M	chlorodifluoromethane	0.613	0.566	7.7	107	0.00	4.15
7	M	dichlorodifluoromethane	0.830	0.720	13.3	97	0.00	4.13
8	M	chloromethane	0.584	0.502	14.0	104	0.00	4.47
9	M	vinyl chloride	0.608	0.575	5.4	107	0.00	4.75
10	M	bromomethane	0.343	0.308	10.2	105	0.00	5.46
11	M	chloroethane	0.250	0.230	8.0	104	0.00	5.65
12		vinyl bromide		----------NA----------				
13	M	trichlorofluoromethane	0.717	0.666	7.1	106	0.00	6.15
14	m	pentane		----------NA----------				
15	M	ethyl ether	0.211	0.194	8.1	105	0.00	6.58
16		Freon 123a		----------NA----------				
17	M	acrolein	0.125	0.108	13.6	105	0.00	6.87
18		freon 113	0.333	0.309	7.2	105	0.00	7.00
19	M	1,1-dichloroethene	0.573	0.571	0.3	113	0.00	7.04
20	M	acetone	0.236	0.208	11.9	102	0.00	7.11
21	M	allyl chloride	0.204	0.184	9.8	108	0.00	7.60
22	M	acetonitrile	0.085	0.075	11.8	108	0.00	7.59
23	M	iodomethane	0.673	0.654	2.8	105	0.00	7.34
24	M	carbon disulfide	1.307	1.234	5.6	110	0.00	7.47
25	M	methylene chloride	0.417	0.381	8.6	103	0.00	7.81
26	M	methyl acetate	0.515	0.469	8.9	112	0.00	7.59
27	M	methyl tert butyl ether	1.574	1.348	14.4	102	0.00	8.14
28	M	trans-1,2-dichloroethene	0.401	0.331	17.5	105	0.00	8.20
29		hexane	0.424	0.415	2.1	116	0.00	8.51
30	M	di-isopropyl ether	1.401	1.320	5.8	109	0.00	8.76
31	m	t-butyl formate	0.507	0.463	8.7	106	0.00	9.98
32	M	ethyl tert-butyl ether	1.475	1.378	6.6	107	0.00	9.25
33	M	2-butanone	0.076	0.071	6.6	110	0.00	9.54
34	M	1,1-dichloroethane	0.686	0.633	7.7	104	0.00	8.80
35	M	chloroprene	0.467	0.452	3.2	109	0.00	8.91
36	M	acrylonitrile	0.233	0.211	9.4	106	0.00	8.16
37	M	vinyl acetate	0.075	0.065	13.3	97	0.00	8.78
38	M	ethyl acetate	0.084	0.082	2.4	119	0.00	9.55
39		ethyl acrylate	0.602	0.555	7.8	106	0.00	11.62
40	M	2,2-dichloropropane	0.680	0.673	1.0	114	0.00	9.58
41	M	cis-1,2-dichloroethene	0.448	0.382	14.7	106	0.00	9.57

Continuing Calibration Summary

Job Number: JB80728 **Sample:** VA7919-CC7918
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** A209871.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

42	M	propionitrile	0.114	0.100	12.3	104	0.00	9.65
43	M	bromochloromethane	0.213	0.190	10.8	103	0.00	9.91
44	M	tetrahydrofuran	0.274	0.231	15.7	104	0.00	9.93
45	M	chloroform	0.668	0.602	9.9	105	0.00	9.96
46	S	dibromofluoromethane (s)	0.386	0.366	5.2	120	0.00	10.16
47	S	1,2-dichloroethane-d4 (s)	0.468	0.427	8.8	119	0.00	10.60
48	M	methacrylonitrile	0.220	0.193	12.3	104	0.00	9.83
49		cyclohexane	0.630	0.605	4.0	109	0.00	10.27
50	M	1,1,1-trichloroethane	0.637	0.606	4.9	104	0.00	10.21
51		iso-butyl alcohol	0.043	0.038	11.6	105	0.00	10.42
52	M	tert-amyl methyl ether	1.584	1.364	13.9	106	0.00	10.69
53	I	1,4-difluorobenzene	1.000	1.000	0.0	109	0.00	11.05
54	M	Di-isobutylene		----------NA----------				
55	M	epichlorohydrin	0.057	0.057	0.0	108	0.00	12.38
56	M	n-butyl alcohol	0.028	0.028	0.0	106	0.00	11.19
57	M	carbon tetrachloride	0.471	0.480	-1.9	104	0.00	10.42
58	M	1,1-dichloropropene	0.375	0.398	-6.1	107	0.00	10.39
59	M	benzene	1.204	1.199	0.4	104	0.00	10.67
60	M	Iso-octane	1.043	1.162	-11.4	115	0.00	10.65
61	M	heptane	0.187	0.207	-10.7	112	0.00	10.83
62	m	tert amyl alcohol		----------NA----------				
63	M	isopropyl acetate	0.859	0.829	3.5	102	0.00	10.58
64	M	1,2-dichloroethane	0.406	0.407	-0.2	106	0.00	10.69
65	M	trichloroethene	0.282	0.282	0.0	102	0.00	11.41
66	M	2-nitropropane	0.173	0.162	6.4	101	0.00	12.23
67	m	tert-amyl ethyl ether		----------NA----------				
68	m	methylcyclohexane	0.521	0.558	-7.1	107	0.00	11.62
69	M	2-chloroethyl vinyl ether	0.226	0.225	0.4	104	0.00	12.24
70	M	methyl methacrylate	0.269	0.267	0.7	106	0.00	11.68
71	M	1,2-dichloropropane	0.319	0.317	0.6	102	0.00	11.68
72	M	dibromomethane	0.205	0.198	3.4	102	0.00	11.86
73	M	bromodichloromethane	0.417	0.409	1.9	103	0.00	11.99
74	M	cis-1,3-dichloropropene	0.493	0.503	-2.0	108	0.00	12.47
75	S	toluene-d8 (s)	1.155	1.195	-3.5	119	0.00	12.78
76	M	4-methyl-2-pentanone	0.223	0.218	2.2	99	0.00	12.57
77	M	toluene	0.744	0.709	4.7	102	0.00	12.86
78	M	3-methyl-1-butanol	0.045	0.046	-2.2	105	0.00	12.59
79	M	trans-1,3-dichloropropene	0.474	0.453	4.4	103	0.00	13.08
80	M	ethyl methacrylate	0.458	0.451	1.5	103	0.00	13.06
81	M	1,1,2-trichloroethane	0.242	0.234	3.3	100	0.00	13.32
82	M	2-hexanone	0.189	0.186	1.6	101	0.00	13.50
83	I	chlorobenzene-d5	1.000	1.000	0.0	105	0.00	14.45
84	M	tetrachloroethene	0.262	0.265	-1.1	100	0.00	13.50
85	M	1,3-dichloropropane	0.514	0.520	-1.2	104	0.00	13.52
86	M	butyl acetate	0.323	0.322	0.3	104	0.00	13.57
87		3,3-dimethyl-1-butanol	0.117	0.128	-9.4	107	0.00	13.69
88	M	dibromochloromethane	0.364	0.365	-0.3	97	0.00	13.81
89	M	1,2-dibromoethane	0.327	0.328	-0.3	103	0.00	13.98
90	M	n-butyl ether		----------NA----------				
91	M	chlorobenzene	0.877	0.867	1.1	101	0.00	14.48
92	M	1,1,1,2-tetrachloroethane	0.408	0.422	-3.4	100	0.00	14.55
93	M	ethylbenzene	1.528	1.556	-1.8	102	0.00	14.53
94	M	m,p-xylene	0.581	0.590	-1.5	102	0.00	14.65
95	M	o-xylene	0.634	0.654	-3.2	100	0.00	15.13
96	M	styrene	0.950	0.965	-1.6	103	0.00	15.14
97	M	bromoform	0.301	0.302	-0.3	100	0.00	15.45
98	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	106	0.00	17.05

Continuing Calibration Summary

Job Number: JB80728 **Sample:** VA7919-CC7918
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** A209871.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

99	M	isopropylbenzene	2.942	3.077	-4.6	102	0.00	15.50
		----------	True	Calc.	% Drift	----------		
100	m	cyclohexanone	200.000	123.947	38.0#	121	0.00	15.71
		----------	AvgRF	CCRF	% Dev	----------		
101	S	4-bromofluorobenzene (s)	0.778	0.829	-6.6	113	0.00	15.74
102	M	bromobenzene	0.708	0.693	2.1	101	0.00	15.96
103	M	1,1,2,2-tetrachloroethane	1.065	1.050	1.4	100	0.00	15.86
104	M	trans-1,4-dichloro-2-bute	0.266	0.277	-4.1	102	0.00	15.90
105	M	1,2,3-trichloropropane	0.279	0.265	5.0	100	0.00	15.95
106	M	n-propylbenzene	3.092	3.176	-2.7	100	0.00	15.96
107	M	2-chlorotoluene	0.676	0.692	-2.4	103	0.00	16.13
108	M	4-chlorotoluene	1.988	1.908	4.0	101	0.00	16.24
109	m	p-ethyltoluene		----------NA----------				
110	M	1,3,5-trimethylbenzene	2.593	2.662	-2.7	98	0.00	16.12
111	M	tert-butylbenzene	2.197	2.323	-5.7	103	0.00	16.52
112	M	pentachloroethane	0.602	0.618	-2.7	98	0.00	16.63
113	M	1,2,4-trimethylbenzene	2.565	2.591	-1.0	99	0.00	16.57
114	M	sec-butylbenzene	3.320	3.597	-8.3	102	0.00	16.76
115	M	1,3-dichlorobenzene	1.437	1.398	2.7	101	0.00	16.98
116	M	p-isopropyltoluene	2.843	2.983	-4.9	101	0.00	16.89
117	M	1,2,3-trimethylbenzene		----------NA----------				
118	M	1,4-dichlorobenzene	1.528	1.390	9.0	100	0.00	17.08
119	m	p-diethylbenzene		----------NA----------				
120	M	1,2-dichlorobenzene	1.656	1.506	9.1	98	0.00	17.52
121	M	n-butylbenzene	1.412	1.457	-3.2	104	0.00	17.35
122	m	1,2,4,5-tetramethylbenzen		----------NA----------				
123	M	1,2-dibromo-3-chloropropa	0.358	0.329	8.1	99	0.00	18.37
124	M	1,3,5-trichlorobenzene	1.618	1.600	1.1	101	0.00	18.56
125	M	1,2,4-trichlorobenzene	1.761	1.646	6.5	102	0.00	19.28
126	M	hexachlorobutadiene	0.666	0.687	-3.2	106	0.00	19.40
127	M	naphthalene	5.540	5.482	1.0	101	0.00	19.61
128	M	1,2,3-trichlorobenzene	1.895	1.814	4.3	102	0.00	19.88
		----------	True	Calc.	% Drift	----------		
129	M	hexachloroethane	20.000	19.435	2.8	102	0.00	17.80
		----------	AvgRF	CCRF	% Dev	----------		
130		Ethylenimine		----------NA----------				
131		Bis(chloromethyl)ether		----------NA----------				
132		2-methylnaphthalene		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
A209855.D MA7918.M Thu Nov 13 11:01:57 2014 T

Continuing Calibration Summary

Job Number: JB80728 **Sample:** VA7921-CC7918
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** A209909.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\A\A209909.D Vial: 2
Acq On : 13 Nov 2014 8:38 am Operator: CourtneM
Sample : cc7918-20 Inst : MSA
Misc : MS76628,VA7921,w,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA7918.M (RTE Integrator)
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
Last Update : Thu Nov 13 13:59:58 2014
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	100	0.00	7.77
2	M	1,4-dioxane	0.071	0.071	0.0	99	0.00	11.81
3	M	tertiary butyl alcohol	0.915	0.954	-4.3	103	0.00	7.89
4	I	pentafluorobenzene	1.000	1.000	0.0	121	0.00	10.10
5		chlorotrifluoroethene		----------NA----------				
6	M	chlorodifluoromethane	0.613	0.525	14.4	101	0.01	4.15
7	M	dichlorodifluoromethane	0.830	0.665	19.9	91	0.02	4.15
8	M	chloromethane	0.584	0.474	18.8	100	0.00	4.47
9	M	vinyl chloride	0.608	0.556	8.6	105	0.00	4.75
10	M	bromomethane	0.343	0.292	14.9	102	0.00	5.46
11	M	chloroethane	0.250	0.232	7.2	106	0.00	5.64
12		vinyl bromide		----------NA----------				
13	M	trichlorofluoromethane	0.717	0.652	9.1	106	0.00	6.16
14	m	pentane		----------NA----------				
15	M	ethyl ether	0.211	0.188	10.9	104	0.00	6.58
16		Freon 123a		----------NA----------				
17	M	acrolein	0.125	0.105	16.0	103	0.00	6.86
18		freon 113	0.333	0.316	5.1	109	0.00	7.00
19	M	1,1-dichloroethene	0.573	0.565	1.4	114	0.00	7.03
20	M	acetone	0.236	0.200	15.3	100	0.00	7.11
21	M	allyl chloride	0.204	0.187	8.3	112	0.00	7.61
22	M	acetonitrile	0.085	0.072	15.3	106	-0.01	7.58
23	M	iodomethane	0.673	0.658	2.2	107	0.00	7.34
24	M	carbon disulfide	1.307	1.271	2.8	116	0.00	7.47
25	M	methylene chloride	0.417	0.396	5.0	109	0.00	7.81
26	M	methyl acetate	0.521	0.461	11.5	112	0.00	7.59
27	M	methyl tert butyl ether	1.574	1.376	12.6	106	0.00	8.14
28	M	trans-1,2-dichloroethene	0.401	0.344	14.2	111	0.00	8.20
29		hexane	0.424	0.401	5.4	114	0.00	8.50
30	M	di-isopropyl ether	1.401	1.275	9.0	107	0.00	8.76
31	m	t-butyl formate	0.507	0.448	11.6	105	0.00	9.98
32	M	ethyl tert-butyl ether	1.475	1.353	8.3	107	0.00	9.25
33	M	2-butanone	0.076	0.065	14.5	103	0.00	9.53
34	M	1,1-dichloroethane	0.686	0.646	5.8	108	0.00	8.80
35	M	chloroprene	0.467	0.433	7.3	107	0.00	8.91
36	M	acrylonitrile	0.233	0.207	11.2	105	0.00	8.16
37	M	vinyl acetate	0.075	0.062	17.3	94	0.00	8.79
38	M	ethyl acetate	0.084	0.078	7.1	115	0.01	9.56
39		ethyl acrylate	0.602	0.548	9.0	107	0.00	11.62
40	M	2,2-dichloropropane	0.680	0.676	0.6	116	0.00	9.57
41	M	cis-1,2-dichloroethene	0.448	0.382	14.7	108	0.00	9.57

Continuing Calibration Summary

Job Number: JB80728 **Sample:** VA7921-CC7918
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** A209909.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

42	M	propionitrile	0.114	0.094	17.5	100	0.00	9.65
43	M	bromochloromethane	0.213	0.196	8.0	108	0.00	9.90
44	M	tetrahydrofuran	0.274	0.222	19.0	102	0.00	9.93
45	M	chloroform	0.668	0.602	9.9	107	0.00	9.95
46	S	dibromofluoromethane (s)	0.386	0.365	5.4	122	0.00	10.16
47	S	1,2-dichloroethane-d4 (s)	0.468	0.425	9.2	120	0.00	10.60
48	M	methacrylonitrile	0.220	0.195	11.4	107	0.00	9.83
49		cyclohexane	0.630	0.597	5.2	109	0.00	10.28
50	M	1,1,1-trichloroethane	0.637	0.595	6.6	103	0.00	10.20
51		iso-butyl alcohol	0.043	0.035	18.6	97	0.00	10.41
52	M	tert-amyl methyl ether	1.584	1.352	14.6	107	0.00	10.69
53	I	1,4-difluorobenzene	1.000	1.000	0.0	110	0.00	11.05
54	M	Di-isobutylene		----------NA----------				
55	M	epichlorohydrin	0.057	0.052	8.8	101	0.00	12.38
56	M	n-butyl alcohol	0.028	0.026	7.1	99	0.00	11.18
57	M	carbon tetrachloride	0.471	0.486	-3.2	106	0.00	10.42
58	M	1,1-dichloropropene	0.375	0.391	-4.3	105	0.00	10.39
59	M	benzene	1.204	1.185	1.6	103	0.00	10.66
60	M	Iso-octane	1.043	1.178	-12.9	118	0.00	10.65
61	M	heptane	0.187	0.202	-8.0	110	0.00	10.82
62	m	tert amyl alcohol		----------NA----------				
63	M	isopropyl acetate	0.859	1.364	-58.8#	170	0.00	10.58
64	M	1,2-dichloroethane	0.406	0.403	0.7	106	0.00	10.69
65	M	trichloroethene	0.282	0.283	-0.4	103	0.00	11.41
66	M	2-nitropropane	0.173	0.159	8.1	100	0.00	12.23
67	m	tert-amyl ethyl ether		----------NA----------				
68	m	methylcyclohexane	0.521	0.552	-6.0	107	0.00	11.62
69	M	2-chloroethyl vinyl ether	0.226	0.215	4.9	100	0.00	12.24
70	M	methyl methacrylate	0.269	0.256	4.8	102	0.00	11.68
71	M	1,2-dichloropropane	0.319	0.312	2.2	101	0.00	11.68
72	M	dibromomethane	0.205	0.195	4.9	101	0.00	11.86
73	M	bromodichloromethane	0.417	0.397	4.8	101	0.00	11.99
74	M	cis-1,3-dichloropropene	0.493	0.488	1.0	105	0.00	12.47
75	S	toluene-d8 (s)	1.155	1.175	-1.7	118	0.00	12.78
76	M	4-methyl-2-pentanone	0.223	0.215	3.6	98	0.00	12.57
77	M	toluene	0.744	0.696	6.5	101	0.00	12.86
78	M	3-methyl-1-butanol	0.045	0.042	6.7	96	0.00	12.59
79	M	trans-1,3-dichloropropene	0.474	0.450	5.1	103	0.00	13.08
80	M	ethyl methacrylate	0.458	0.429	6.3	98	0.00	13.06
81	M	1,1,2-trichloroethane	0.242	0.229	5.4	99	0.00	13.32
82	M	2-hexanone	0.189	0.183	3.2	100	0.00	13.49
83	I	chlorobenzene-d5	1.000	1.000	0.0	103	0.00	14.45
84	M	tetrachloroethene	0.262	0.273	-4.2	100	0.00	13.49
85	M	1,3-dichloropropane	0.514	0.518	-0.8	101	0.00	13.52
86	M	butyl acetate	0.310	0.318	-2.6	100	0.00	13.57
87		3,3-dimethyl-1-butanol	0.117	0.123	-5.1	99	0.00	13.69
88	M	dibromochloromethane	0.364	0.375	-3.0	97	0.00	13.81
89	M	1,2-dibromoethane	0.327	0.329	-0.6	101	0.00	13.98
90	M	n-butyl ether		----------NA----------				
91	M	chlorobenzene	0.877	0.886	-1.0	100	0.00	14.48
92	M	1,1,1,2-tetrachloroethane	0.408	0.426	-4.4	98	0.00	14.55
93	M	ethylbenzene	1.528	1.563	-2.3	99	0.00	14.53
94	M	m,p-xylene	0.581	0.598	-2.9	100	0.00	14.65
95	M	o-xylene	0.634	0.656	-3.5	98	0.00	15.13
96	M	styrene	0.950	0.971	-2.2	101	0.00	15.14
97	M	bromoform	0.301	0.306	-1.7	98	0.00	15.45
98	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	101	0.00	17.05

Continuing Calibration Summary

Job Number: JB80728 **Sample:** VA7921-CC7918
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** A209909.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

99	M	isopropylbenzene	2.942	3.069	-4.3	98	0.00	15.50
		----------	True	Calc.	% Drift	----------		
100	m	cyclohexanone	200.000	415.635	-107.8#	275	0.00	15.71
101	S	4-bromofluorobenzene (s)	50.000	54.057	-8.1	110	0.00	15.74
		----------	AvgRF	CCRF	% Dev	----------		
102	M	bromobenzene	0.708	0.710	-0.3	99	0.00	15.96
103	M	1,1,2,2-tetrachloroethane	1.065	1.068	-0.3	97	0.00	15.86
104	M	trans-1,4-dichloro-2-bute	0.266	0.275	-3.4	97	0.00	15.90
105	M	1,2,3-trichloropropane	0.279	0.263	5.7	96	0.00	15.95
106	M	n-propylbenzene	3.092	3.175	-2.7	97	0.00	15.96
107	M	2-chlorotoluene	0.676	0.690	-2.1	98	0.00	16.14
108	M	4-chlorotoluene	1.988	1.978	0.5	100	0.00	16.24
109	m	p-ethyltoluene		----------NA----------				
110	M	1,3,5-trimethylbenzene	2.593	2.689	-3.7	96	0.00	16.12
111	M	tert-butylbenzene	2.197	2.636	-20.0	113	0.00	16.52
112	M	pentachloroethane	0.602	0.633	-5.1	97	0.00	16.62
113	M	1,2,4-trimethylbenzene	2.565	2.632	-2.6	97	0.00	16.57
114	M	sec-butylbenzene	3.320	3.555	-7.1	97	0.00	16.76
115	M	1,3-dichlorobenzene	1.437	1.440	-0.2	100	0.00	16.98
116	M	p-isopropyltoluene	2.843	2.983	-4.9	98	0.00	16.89
117	M	1,2,3-trimethylbenzene		----------NA----------				
118	M	1,4-dichlorobenzene	1.528	1.465	4.1	101	0.00	17.08
119	m	p-diethylbenzene		----------NA----------				
120	M	1,2-dichlorobenzene	1.656	1.581	4.5	99	0.00	17.52
121	M	n-butylbenzene	1.412	1.461	-3.5	101	0.00	17.35
122	m	1,2,4,5-tetramethylbenzen		----------NA----------				
123	M	1,2-dibromo-3-chloropropa	0.358	0.332	7.3	96	0.00	18.37
124	M	1,3,5-trichlorobenzene	1.618	1.671	-3.3	101	0.00	18.56
125	M	1,2,4-trichlorobenzene	1.761	1.742	1.1	104	0.00	19.28
126	M	hexachlorobutadiene	0.666	0.744	-11.7	111	0.00	19.40
127	M	naphthalene	5.540	5.843	-5.5	104	0.00	19.61
128	M	1,2,3-trichlorobenzene	1.895	1.956	-3.2	106	0.00	19.89
		----------	True	Calc.	% Drift	----------		
129	M	hexachloroethane	20.000	19.661	1.7	100	0.00	17.80
		----------	AvgRF	CCRF	% Dev	----------		
130		Ethylenimine		----------NA----------				
131		Bis(chloromethyl)ether		----------NA----------				
132		2-methylnaphthalene		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
A209855.D MA7918.M Thu Nov 13 15:23:36 2014 RPT1

New Jersey ACCUTEST LABORATORIES

GC/MS Volatiles

Raw Data

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209878.D
Acq On : 12 Nov 2014 4:40 pm
Operator : CourtneM
Sample : jb80728-1
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Nov 13 14:31:53 2014
Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Nov 13 13:59:58 2014
Response via : Initial Calibration

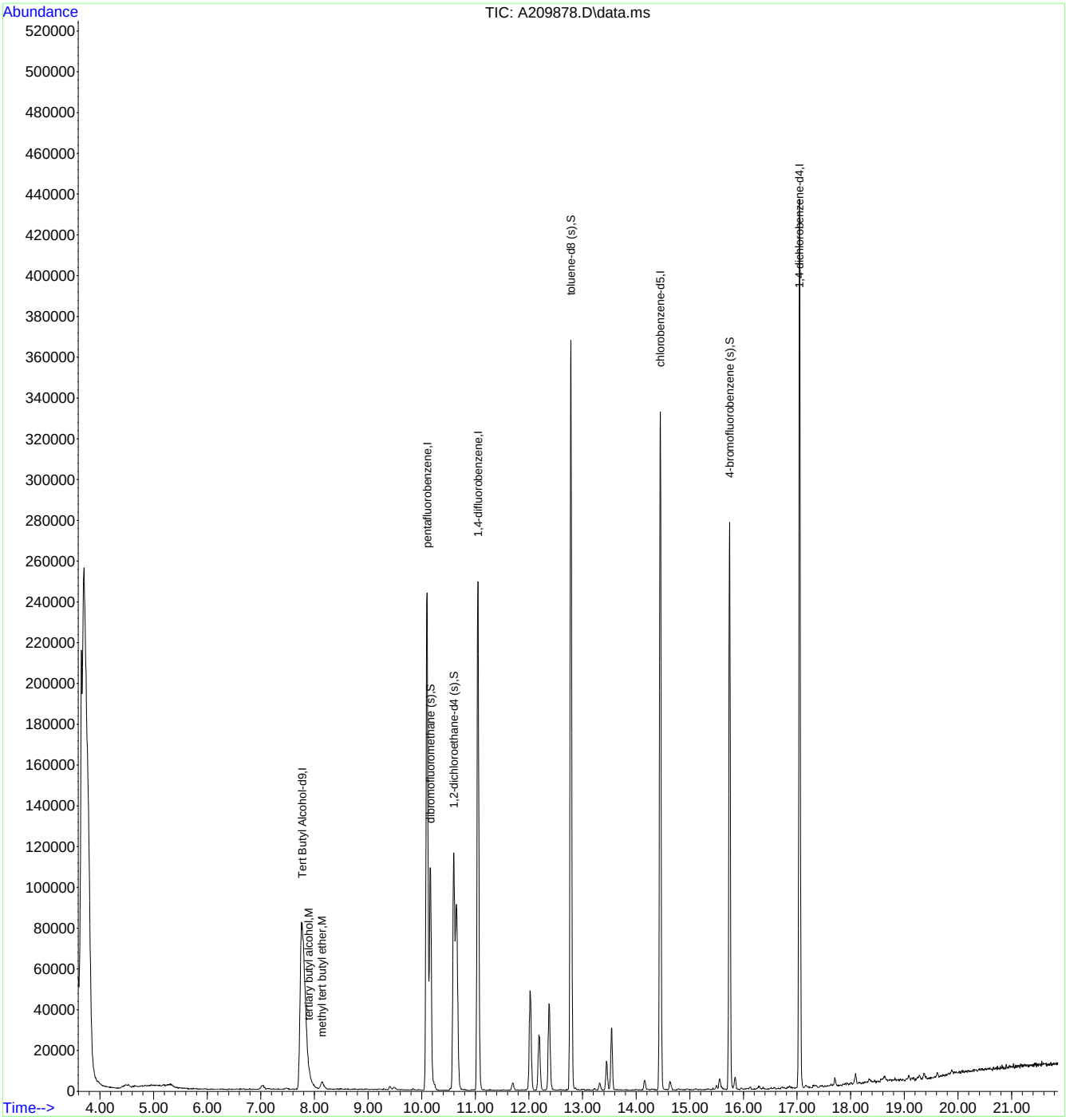
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.772	65	328800	500.00	ug/L	0.00
4) pentafluorobenzene	10.099	168	227534	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.051	114	251492	50.00	ug/L	0.00
83) chlorobenzene-d5	14.451	117	216089	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.045	152	131523	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.162	113	84196	47.96	ug/L	0.00
Spiked Amount 50.000	Range 59 - 130		Recovery = 95.92%			
47) 1,2-dichloroethane-d4 (s)	10.596	65	98308	46.15	ug/L	0.00
Spiked Amount 50.000	Range 65 - 123		Recovery = 92.30%			
75) toluene-d8 (s)	12.783	98	292679	50.36	ug/L	0.00
Spiked Amount 50.000	Range 77 - 125		Recovery = 100.72%			
101) 4-bromofluorobenzene (s)	15.743	95	108117	52.88	ug/L	0.00
Spiked Amount 50.000	Range 71 - 132		Recovery = 105.76%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.892	59	7031	11.69	ug/L	88
27) methyl tert butyl ether	8.143	73	6833	0.95	ug/L	92

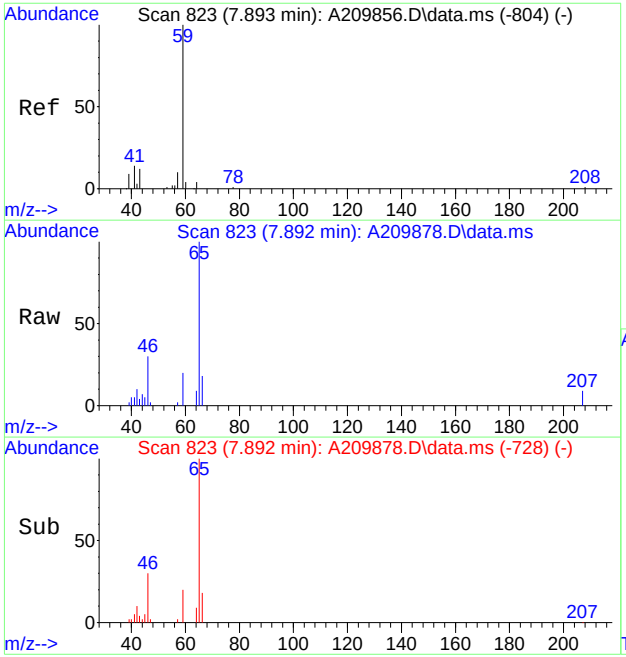
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209878.D
Acq On : 12 Nov 2014 4:40 pm
Operator : CourtneM
Sample : jb80728-1
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Nov 13 14:31:53 2014
Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Nov 13 13:59:58 2014
Response via : Initial Calibration

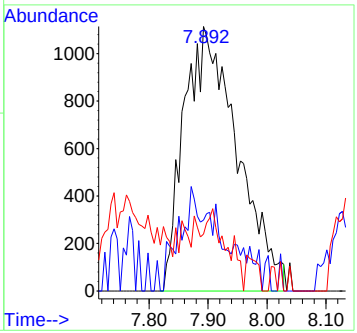


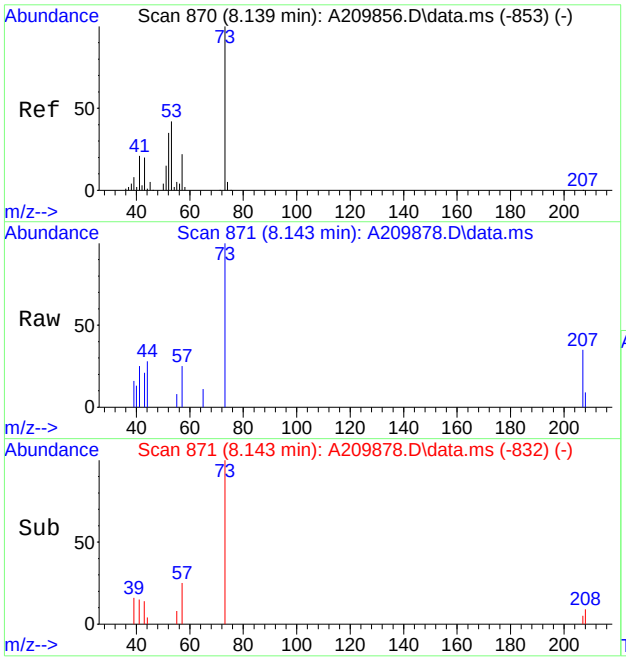


#3
tertiary butyl alcohol
Concen: 11.69 ug/L
RT: 7.892 min Scan# 823
Delta R.T. -0.001 min
Lab File: A209878.D
Acq: 12 Nov 2014 4:40 pm

Tgt Ion: 59 Resp: 7031

Ion	Ratio	Lower	Upper
59	100		
41	28.1	0.0	49.5
43	13.5	0.0	43.1

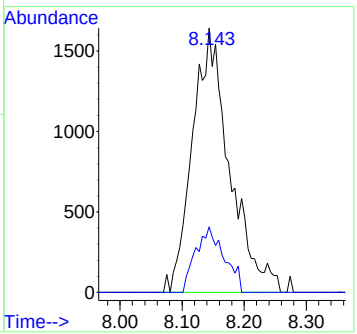




#27
methyl tert butyl ether
Concen: 0.95 ug/L
RT: 8.143 min Scan# 871
Delta R.T. 0.005 min
Lab File: A209878.D
Acq: 12 Nov 2014 4:40 pm

Tgt Ion: 73 Resp: 6833

Ion	Ratio	Lower	Upper
73	100		
57	19.0	0.0	52.7



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209878.D
Acq On : 12 Nov 2014 4:40 pm
Operator : CourtneM
Sample : jb80728-1
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 14 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.6 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\MA7918.M
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

Signal : TIC: A209878.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.703	4	22	410	rVB	255793	2418284	100.00%	24.010%
2	5.743	410	412	431	rVB4	812	2534	0.10%	0.025%
3	5.926	431	447	452	rBV4	426	1943	0.08%	0.019%
4	5.962	452	454	508	rVB3	732	4314	0.18%	0.043%
5	6.684	578	592	598	rBV4	624	2004	0.08%	0.020%
6	6.794	602	613	622	rBV3	705	1424	0.06%	0.014%
7	7.040	638	660	679	rBV7	2296	11218	0.46%	0.111%
8	7.150	679	681	712	rVB5	692	2359	0.10%	0.023%
9	7.479	712	744	754	rVB6	863	5212	0.22%	0.052%
10	7.756	782	797	913	rVB2	82245	596481	24.67%	5.922%
11	8.499	937	939	966	rVB4	674	2990	0.12%	0.030%
12	8.755	974	988	1017	rVB3	542	2921	0.12%	0.029%
13	9.127	1039	1059	1069	rBV3	398	1829	0.08%	0.018%
14	9.189	1069	1071	1086	rVB3	525	1627	0.07%	0.016%
15	9.409	1106	1113	1121	rBV7	1676	4151	0.17%	0.041%
16	9.477	1121	1126	1139	rVB5	1300	4374	0.18%	0.043%
17	10.099	1233	1245	1284	rVB2	244190	888571	36.74%	8.822%
18	10.534	1322	1328	1330	rBV2	1206	1788	0.07%	0.018%
19	10.596	1330	1340	1370	rVB2	116185	552704	22.86%	5.487%
20	10.764	1370	1372	1393	rVB4	681	2300	0.10%	0.023%
21	11.051	1416	1427	1453	rVB	249554	577037	23.86%	5.729%
22	11.700	1541	1551	1562	rBV3	3774	10524	0.44%	0.104%
23	12.019	1603	1612	1629	rVB2	48988	128286	5.30%	1.274%
24	12.186	1634	1644	1662	rBV2	27225	74323	3.07%	0.738%
25	12.375	1666	1680	1699	rBV	42568	110037	4.55%	1.092%
26	12.783	1748	1758	1792	rVB	367773	760243	31.44%	7.548%
27	13.217	1836	1841	1852	rBV4	1065	2390	0.10%	0.024%
28	13.321	1852	1861	1871	rBV2	3749	9410	0.39%	0.093%
29	13.447	1876	1885	1895	rBV2	14342	32792	1.36%	0.326%
30	13.546	1895	1904	1927	rVB	30520	69181	2.86%	0.687%
31	13.834	1958	1959	1976	rVB3	577	1670	0.07%	0.017%
32	14.158	2015	2021	2028	rVV4	4634	10194	0.42%	0.101%
33	14.205	2028	2030	2040	rVB5	644	1401	0.06%	0.014%
34	14.289	2040	2046	2057	rBV5	672	2310	0.10%	0.023%
35	14.451	2064	2077	2099	rBV	332768	658827	27.24%	6.541%
36	14.629	2105	2111	2120	rVB4	4297	9630	0.40%	0.096%
37	14.791	2140	2142	2157	rVB4	738	1908	0.08%	0.019%
38	14.958	2165	2174	2182	rBV4	801	2552	0.11%	0.025%
39	15.120	2195	2205	2212	rVB3	825	3003	0.12%	0.030%
40	15.324	2242	2244	2257	rVB4	673	1890	0.08%	0.019%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209878.D
Acq On : 12 Nov 2014 4:40 pm
Operator : CourtneM
Sample : jb80728-1
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 14 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.6 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\MA7918.M
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

41	15.554	2283	2288	2312	rVB4	5428	14971	0.62%	0.149%
42	15.743	2315	2324	2336	rBV	278105	518838	21.45%	5.151%
43	15.847	2336	2344	2360	rVB2	6286	15987	0.66%	0.159%
44	15.957	2360	2365	2382	rBV6	1092	4149	0.17%	0.041%
45	16.135	2391	2399	2402	rVB4	1410	2817	0.12%	0.028%
46	16.281	2423	2427	2438	rVB6	1808	4272	0.18%	0.042%
47	16.517	2470	2472	2503	rVB6	908	2725	0.11%	0.027%
48	16.862	2506	2538	2557	rBV7	1751	12287	0.51%	0.122%
49	17.045	2564	2573	2619	rVB	435986	798192	33.01%	7.925%
50	21.564	2619	3437	3489	rBV	13156	1721318	71.18%	17.090%

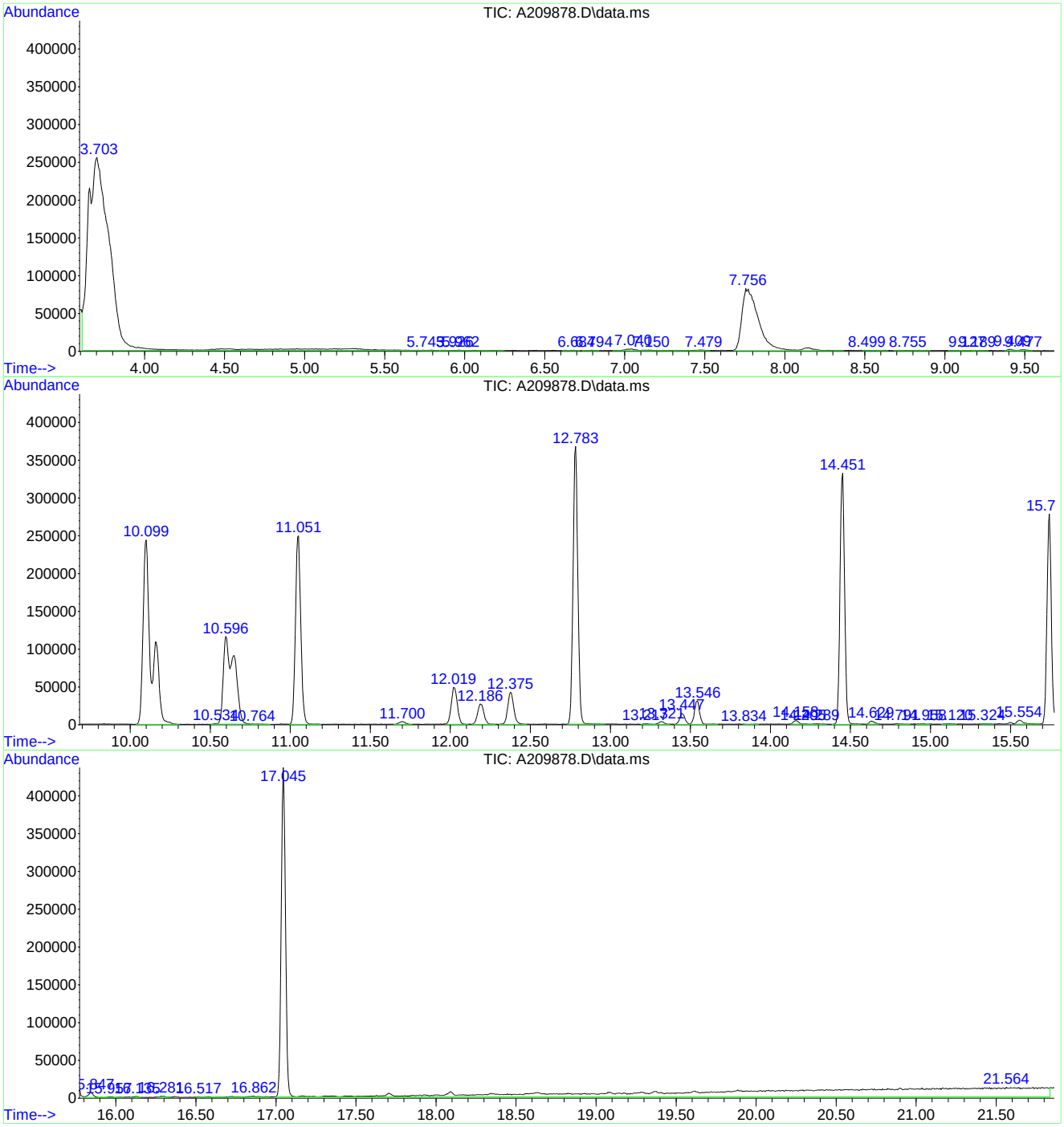
Sum of corrected areas: 10072192

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209878.D
Acq On : 12 Nov 2014 4:40 pm
Operator : CourtneM
Sample : jb80728-1
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209878.D
Acq On : 12 Nov 2014 4:40 pm
Operator : CourtneM
Sample : jb80728-1
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

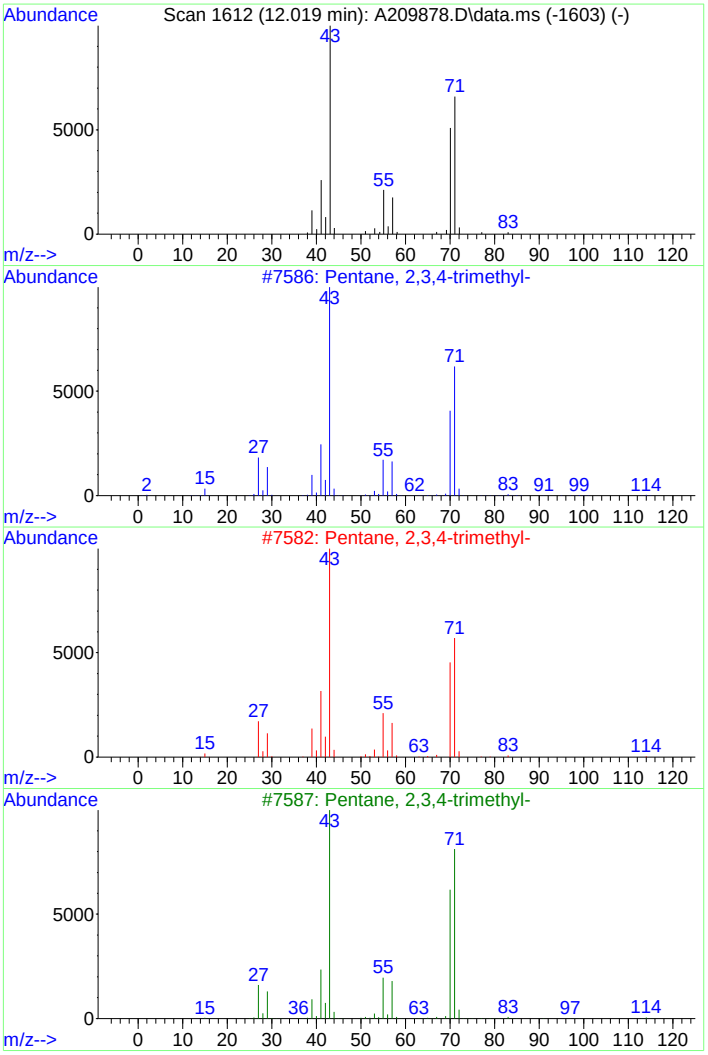
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

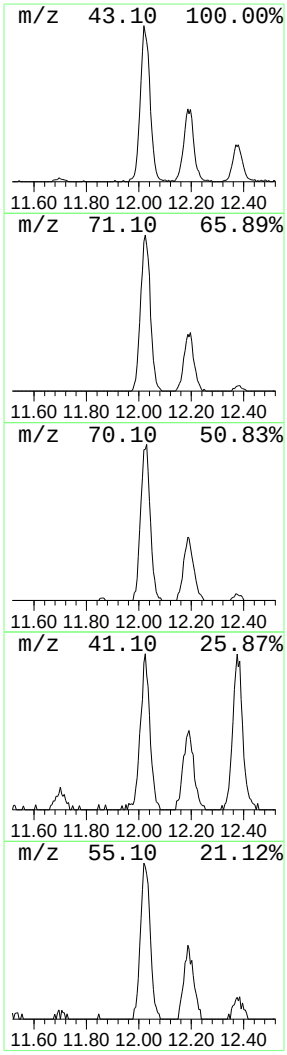
****

Peak Number 2 alkane Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.019	11.12 ug/L	128286	1,4-difluorobenzene	11.051

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	90
2	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	83
3	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	83
4	Pentane, 3-ethyl-	100	C7H16	000617-78-7	78
5	Pentane, 3-ethyl-	100	C7H16	000617-78-7	78





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209878.D
Acq On : 12 Nov 2014 4:40 pm
Operator : CourtneM
Sample : jb80728-1
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

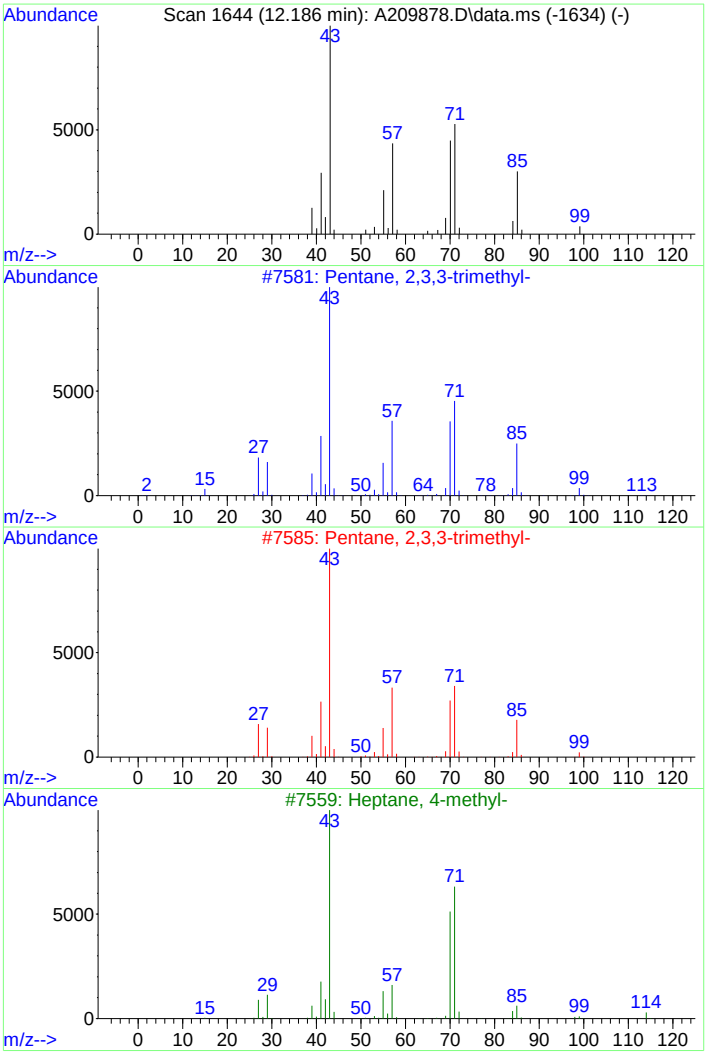
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

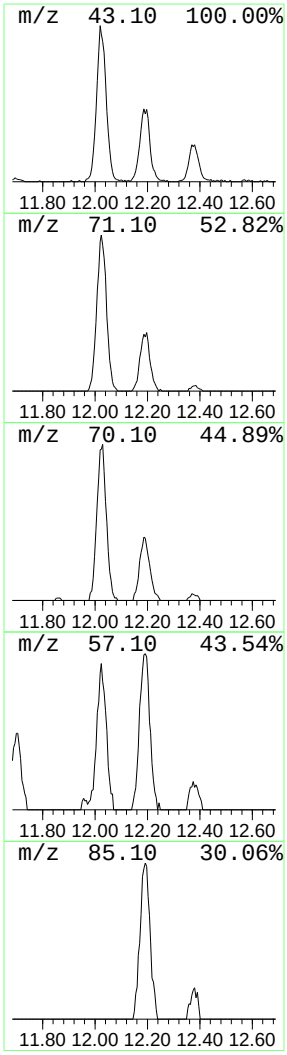
****

Peak Number 3 alkane Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.186	6.44 ug/L	74323	1,4-difluorobenzene	11.051

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	90
2	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	64
3	Heptane, 4-methyl-	114	C8H18	000589-53-7	64
4	Octane, 4-methyl-	128	C9H20	002216-34-4	64
5	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	53





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209878.D
Acq On : 12 Nov 2014 4:40 pm
Operator : CourtneM
Sample : jb80728-1
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

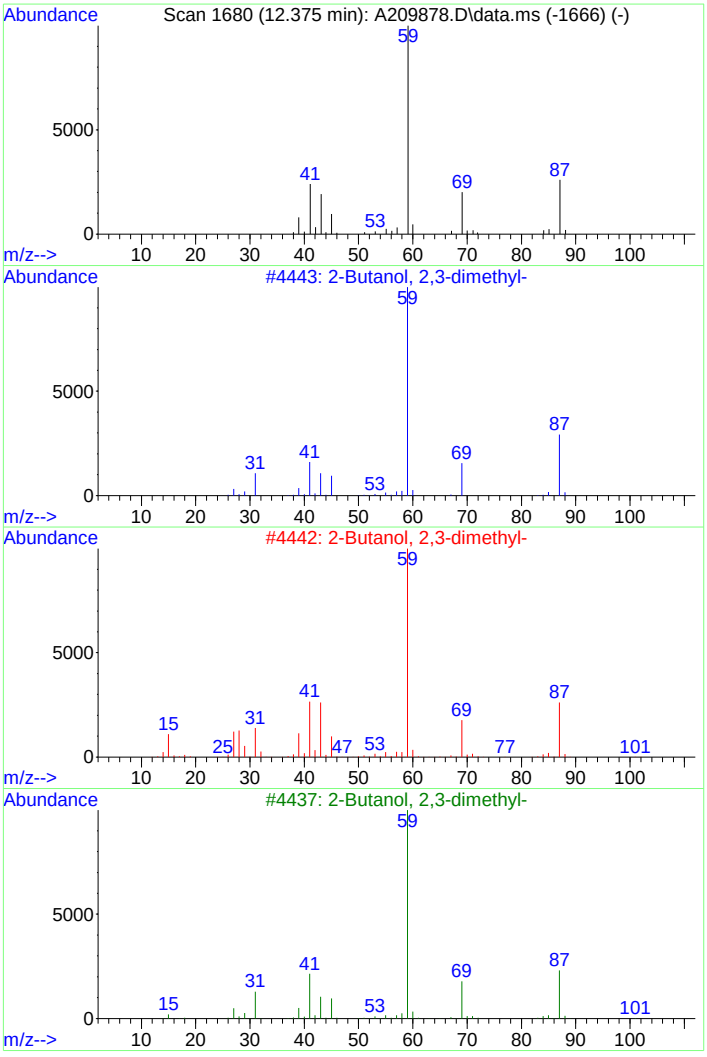
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

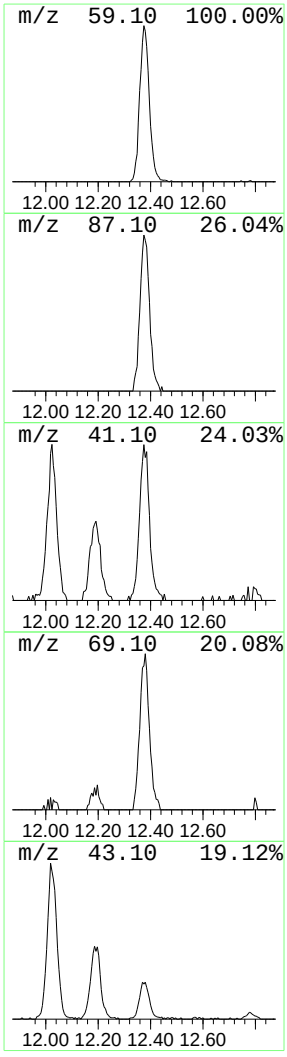
****

Peak Number 4 alcohols Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.375	9.53 ug/L	110037	1,4-difluorobenzene	11.051

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Butanol, 2,3-dimethyl-	102	C6H14O	000594-60-5	83
2	2-Butanol, 2,3-dimethyl-	102	C6H14O	000594-60-5	83
3	2-Butanol, 2,3-dimethyl-	102	C6H14O	000594-60-5	83
4	2-Pentanol, 2-methyl-	102	C6H14O	000590-36-3	78
5	Propane, 2-ethoxy-2-methyl-	102	C6H14O	000637-92-3	64





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209878.D
Acq On : 12 Nov 2014 4:40 pm
Operator : CourtneM
Sample : jb80728-1
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

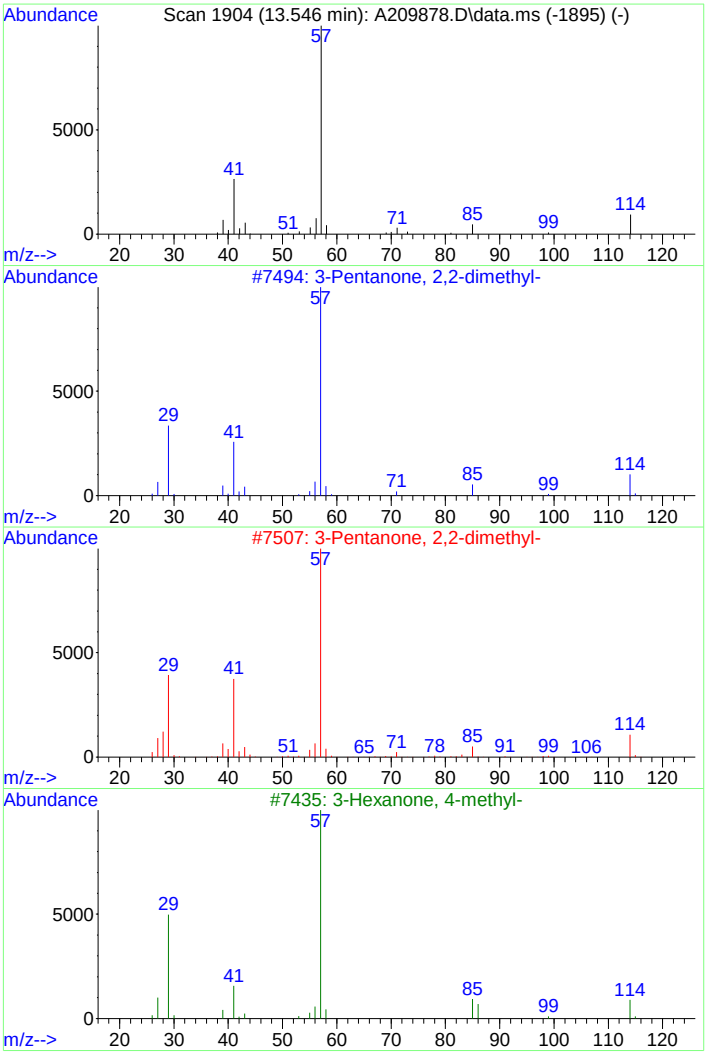
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

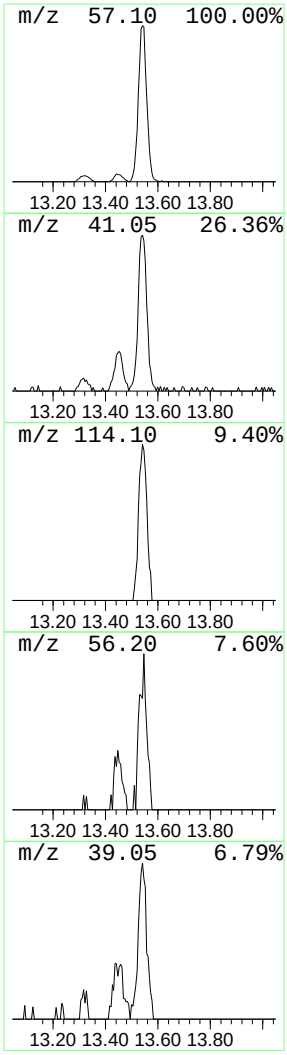
****

Peak Number 5 ketones Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.546	5.25 ug/L	69181	chlorobenzene-d5	14.451

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	3-Pentanone, 2,2-dimethyl-	114	C7H14O	000564-04-5	87
2	3-Pentanone, 2,2-dimethyl-	114	C7H14O	000564-04-5	80
3	3-Hexanone, 4-methyl-	114	C7H14O	017042-16-9	53
4	3-Heptanone	114	C7H14O	000106-35-4	53
5	3-Hexanone, 4-methyl-	114	C7H14O	017042-16-9	43





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209878.D
Acq On : 12 Nov 2014 4:40 pm
Operator : CourtneM
Sample : jb80728-1
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
alkane	12.019	11.1	ug/L	128286	3	11.051	577037	50.0
alkane	12.186	6.4	ug/L	74323	3	11.051	577037	50.0
alcohols	12.375	9.5	ug/L	110037	3	11.051	577037	50.0
ketones	13.546	5.3	ug/L	69181	4	14.451	658827	50.0

Quantitation Report (LSC Reviewed)

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209886.D
Acq On : 12 Nov 2014 8:47 pm
Operator : CourtneM
Sample : jb80728-2
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 13 14:40:10 2014
Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Nov 13 13:59:58 2014
Response via : Initial Calibration

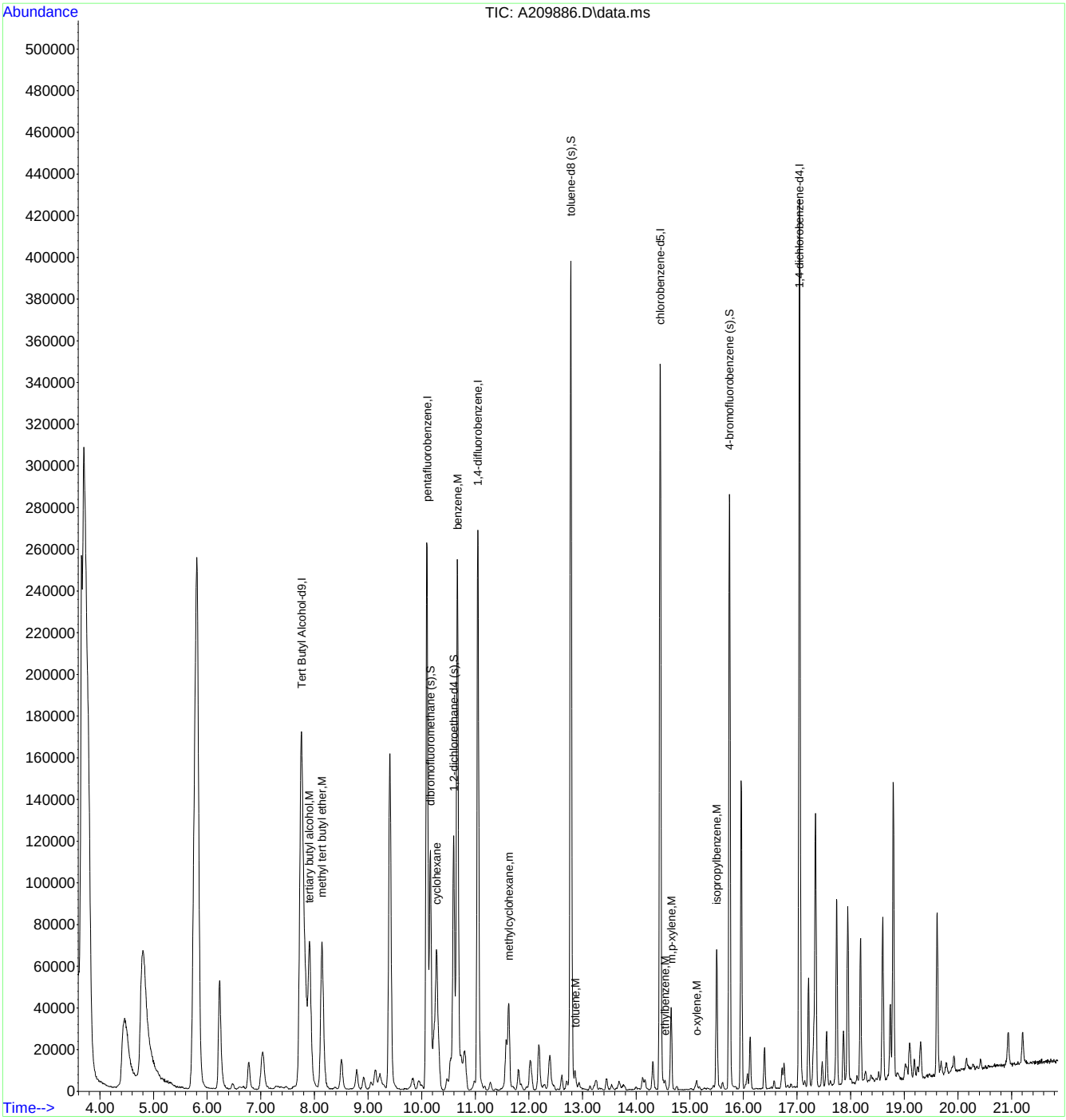
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.762	65	343542	500.00	ug/L	0.00
4) pentafluorobenzene	10.100	168	239830	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.047	114	274590	50.00	ug/L	0.00
83) chlorobenzene-d5	14.452	117	230851	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.046	152	131409	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.163	113	86117	46.53	ug/L	0.00
Spiked Amount 50.000	Range 59 - 130		Recovery = 93.06%			
47) 1,2-dichloroethane-d4 (s)	10.597	65	100337	44.69	ug/L	0.00
Spiked Amount 50.000	Range 65 - 123		Recovery = 89.38%			
75) toluene-d8 (s)	12.783	98	318406	50.18	ug/L	0.00
Spiked Amount 50.000	Range 77 - 125		Recovery = 100.36%			
101) 4-bromofluorobenzene (s)	15.738	95	114828	56.24	ug/L	0.00
Spiked Amount 50.000	Range 71 - 132		Recovery = 112.48%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.898	59	14172	22.55	ug/L #	1
27) methyl tert butyl ether	8.144	73	24995	3.31	ug/L #	1
49) cyclohexane	10.278	84	35684	11.81	ug/L	84
59) benzene	10.670	78	254296	38.45	ug/L	99
68) methylcyclohexane	11.627	83	24061	8.41	ug/L #	86
77) toluene	12.867	92	3518	0.86	ug/L	81
93) ethylbenzene	14.541	91	1762	0.25	ug/L	73
94) m,p-xylene	14.656	106	13524	5.04	ug/L	96
95) o-xylene	15.132	106	1063	0.36	ug/L #	62
99) isopropylbenzene	15.503	105	53010	6.86	ug/L	96

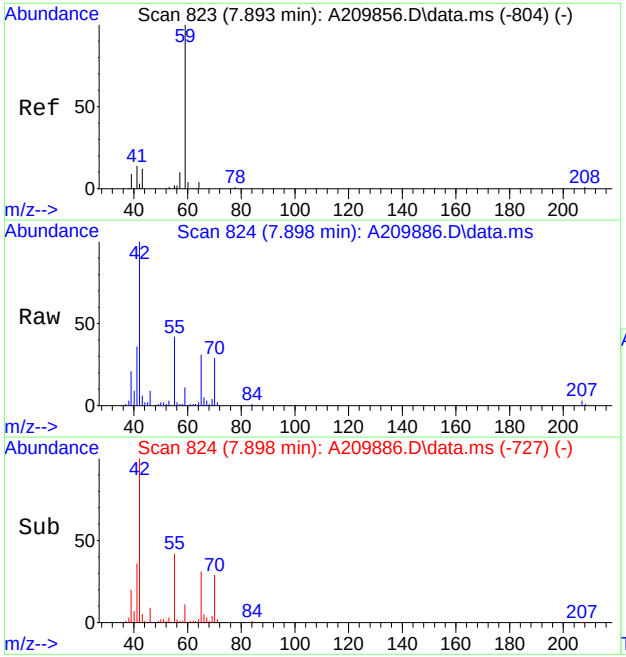
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (LSC Reviewed)

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209886.D
Acq On : 12 Nov 2014 8:47 pm
Operator : CourtneM
Sample : jb80728-2
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 13 14:40:10 2014
Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Nov 13 13:59:58 2014
Response via : Initial Calibration

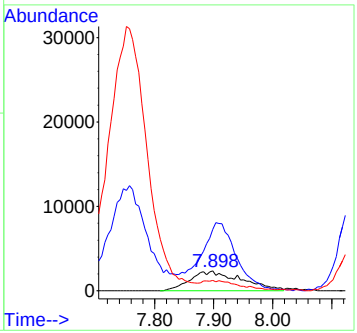


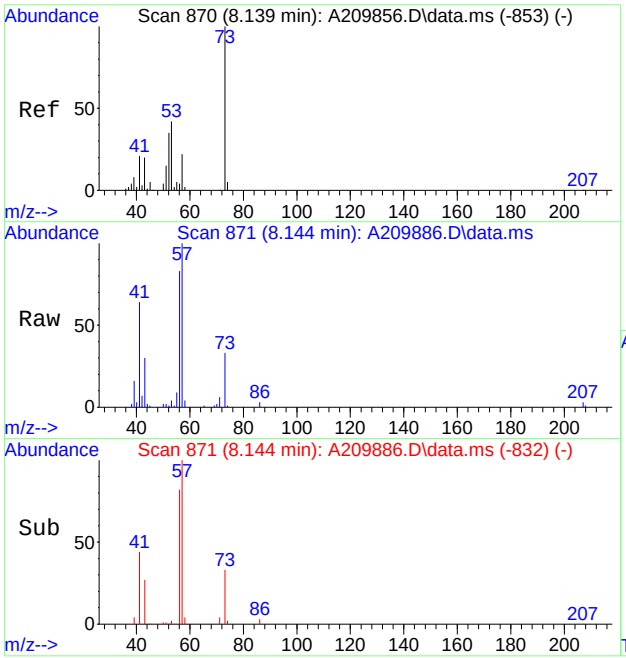


#3
tertiary butyl alcohol
Concen: 22.55 ug/L
RT: 7.898 min Scan# 824
Delta R.T. 0.005 min
Lab File: A209886.D
Acq: 12 Nov 2014 8:47 pm

Tgt Ion: 59 Resp: 14172

Ion	Ratio	Lower	Upper
59	100		
41	251.5	0.0	49.5#
43	0.0	0.0	43.1

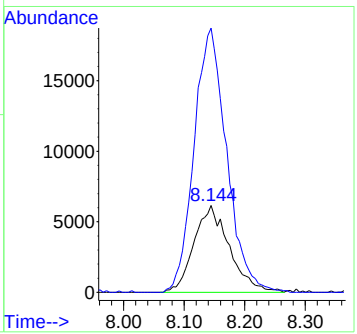


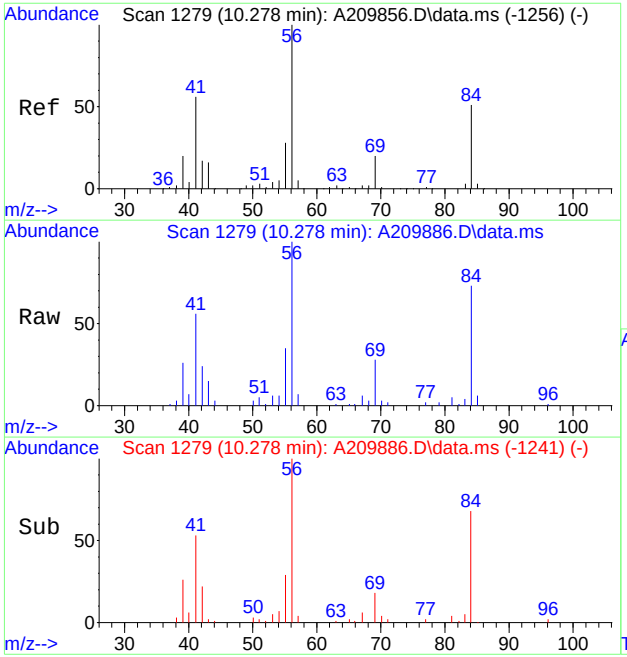


#27
methyl tert butyl ether
Concen: 3.31 ug/L
RT: 8.144 min Scan# 871
Delta R.T. 0.005 min
Lab File: A209886.D
Acq: 12 Nov 2014 8:47 pm

Tgt Ion: 73 Resp: 24995

Ion	Ratio	Lower	Upper
73	100		
57	280.8	0.0	52.7#

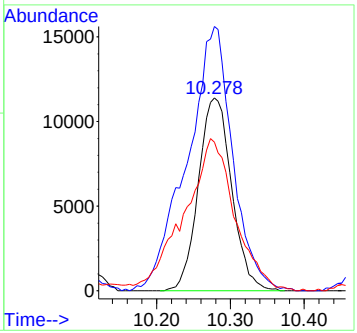


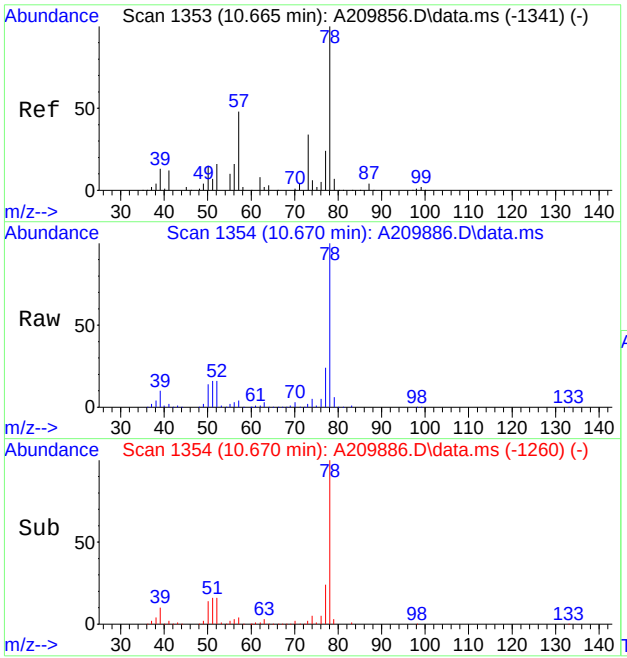


#49
cyclohexane
Concen: 11.81 ug/L
RT: 10.278 min Scan# 1279
Delta R.T. 0.000 min
Lab File: A209886.D
Acq: 12 Nov 2014 8:47 pm

Tgt Ion: 84 Resp: 35684

Ion	Ratio	Lower	Upper
84	100		
56	188.0	157.0	291.6
41	119.9	88.5	164.3

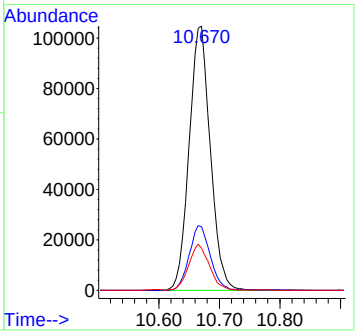


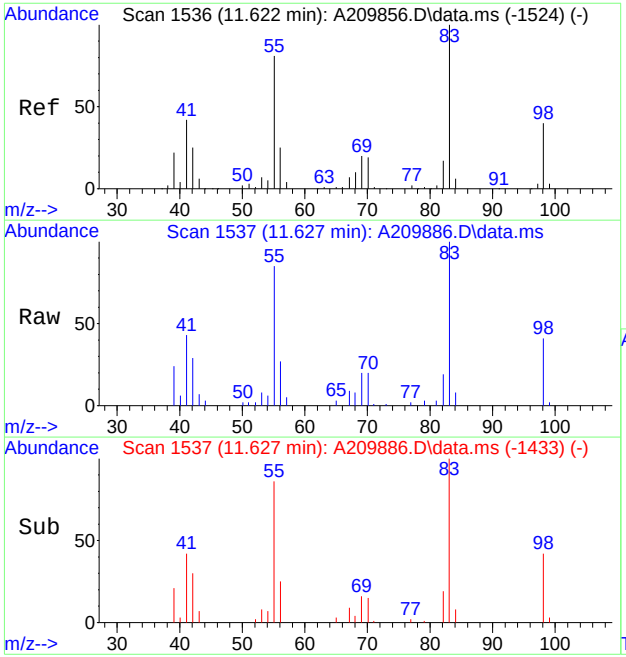


#59
benzene
Concen: 38.45 ug/L
RT: 10.670 min Scan# 1354
Delta R.T. 0.005 min
Lab File: A209886.D
Acq: 12 Nov 2014 8:47 pm

Tgt Ion: 78 Resp: 254296

Ion	Ratio	Lower	Upper
78	100		
77	24.1	0.0	54.5
52	15.8	0.0	45.9

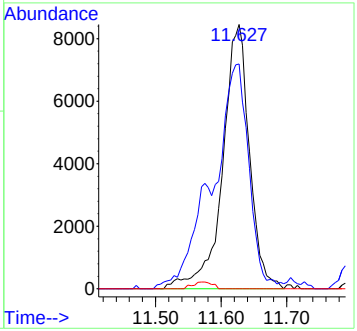


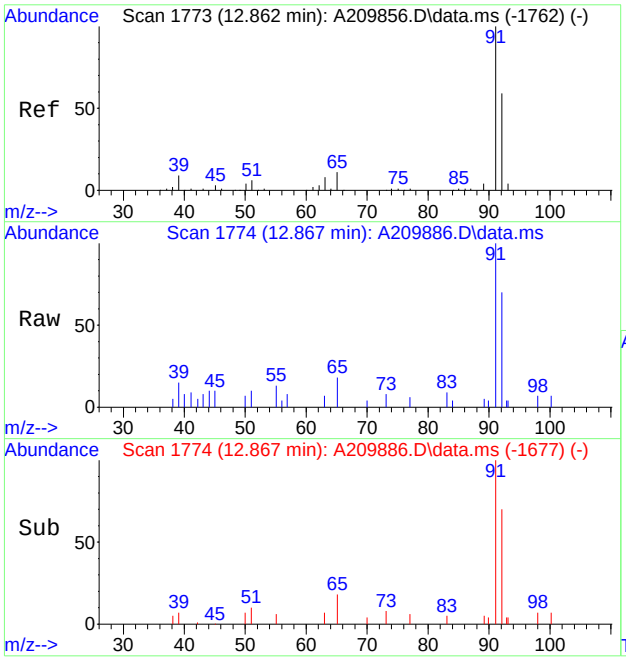


#68
methylcyclohexane
Concen: 8.41 ug/L
RT: 11.627 min Scan# 1537
Delta R.T. 0.005 min
Lab File: A209886.D
Acq: 12 Nov 2014 8:47 pm

Tgt Ion: 83 Resp: 24061

Ion	Ratio	Lower	Upper
83	100		
55	73.1	56.4	116.4
85	0.0	0.0	30.1

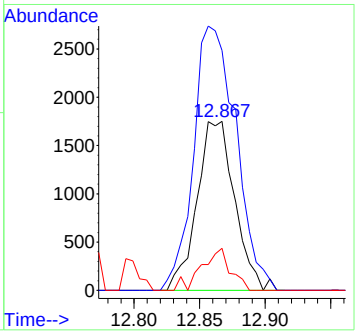


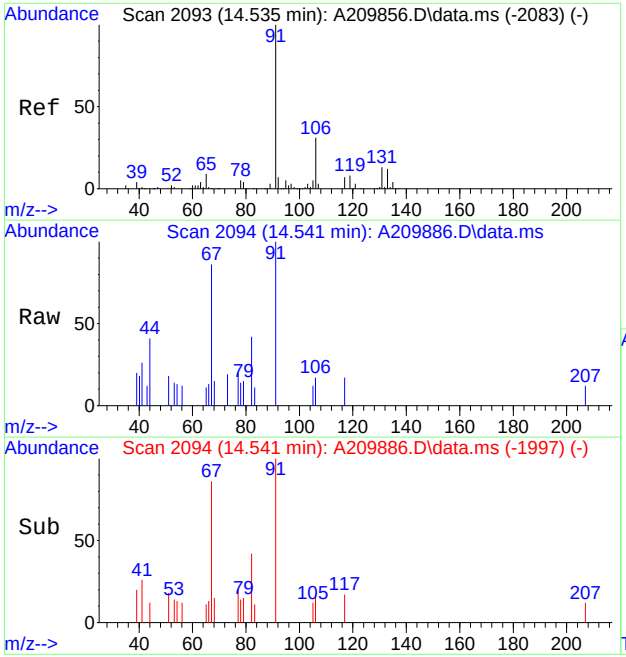


#77
toluene
Concen: 0.86 ug/L
RT: 12.867 min Scan# 1774
Delta R.T. 0.005 min
Lab File: A209886.D
Acq: 12 Nov 2014 8:47 pm

Tgt Ion: 92 Resp: 3518

Ion	Ratio	Lower	Upper
92	100		
91	142.0	139.6	199.6
65	24.9	0.0	49.5

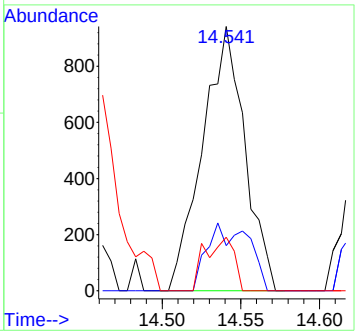


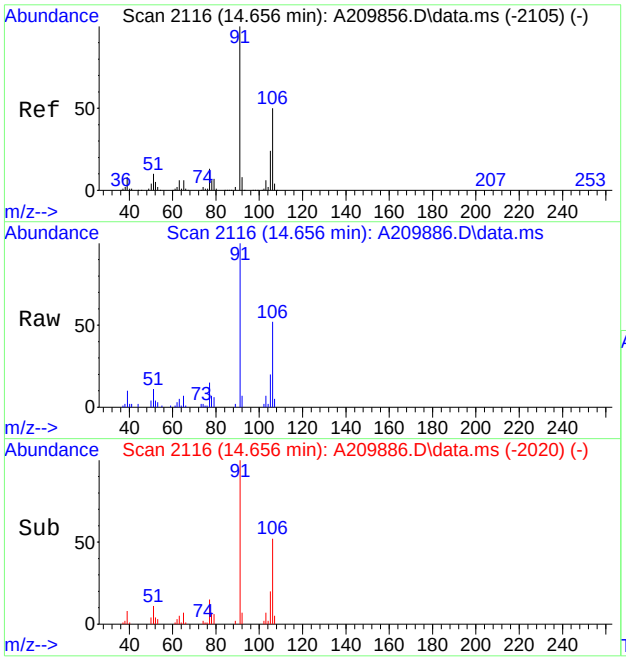


#93
ethylbenzene
Concen: 0.25 ug/L
RT: 14.541 min Scan# 2094
Delta R.T. 0.005 min
Lab File: A209886.D
Acq: 12 Nov 2014 8:47 pm

Tgt Ion: 91 Resp: 1762

Ion	Ratio	Lower	Upper
91	100		
106	17.1	0.8	60.8
77	20.3	0.0	38.5

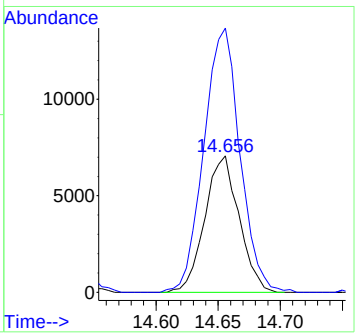


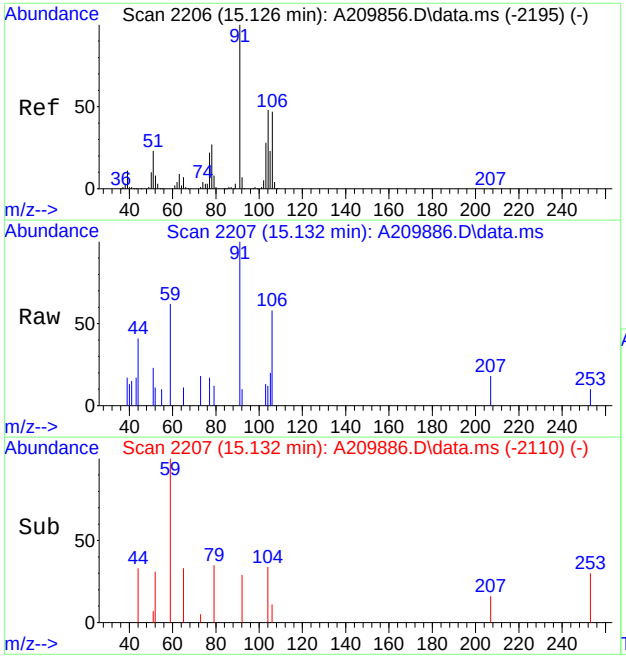


#94
m,p-xylene
Concen: 5.04 ug/L
RT: 14.656 min Scan# 2116
Delta R.T. 0.000 min
Lab File: A209886.D
Acq: 12 Nov 2014 8:47 pm

Tgt Ion:106 Resp: 13524

Ion	Ratio	Lower	Upper
106	100		
91	193.8	169.6	229.6

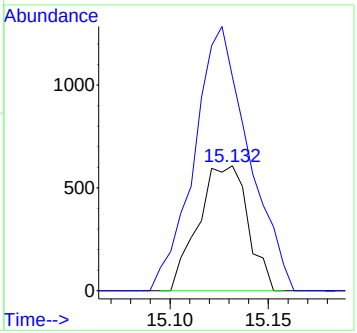


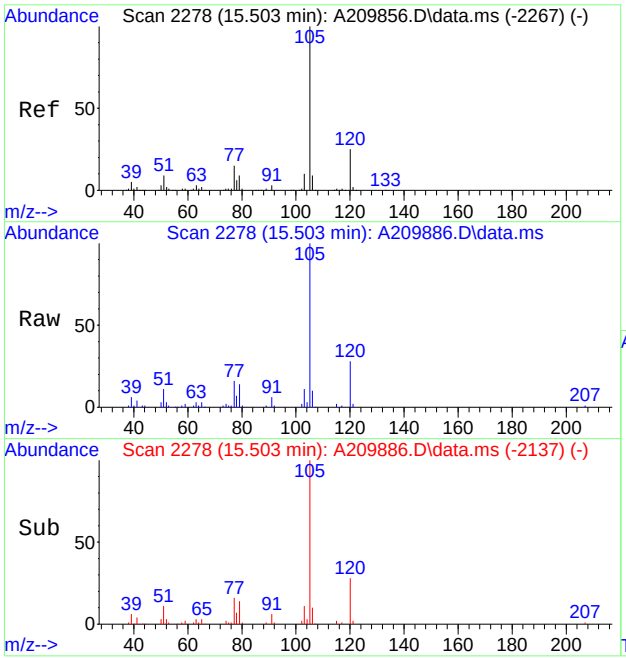


#95
o-xylene
Concen: 0.36 ug/L
RT: 15.132 min Scan# 2207
Delta R.T. 0.005 min
Lab File: A209886.D
Acq: 12 Nov 2014 8:47 pm

Tgt Ion:106 Resp: 1063

Ion	Ratio	Lower	Upper
106	100		
91	153.1	183.9	243.9#

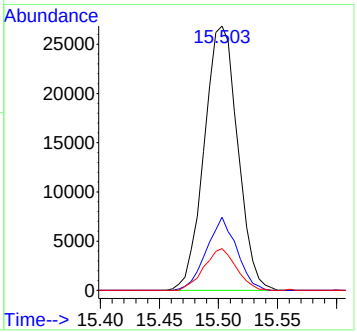




#99
isopropylbenzene
Concen: 6.86 ug/L
RT: 15.503 min Scan# 2278
Delta R.T. 0.000 min
Lab File: A209886.D
Acq: 12 Nov 2014 8:47 pm

Tgt Ion:105 Resp: 53010

Ion	Ratio	Lower	Upper
105	100		
120	27.7	0.0	55.3
77	15.8	0.0	45.1



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209886.D
Acq On : 12 Nov 2014 8:47 pm
Operator : CourtneM
Sample : jb80728-2
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 22 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.6 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\MA7918.M
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

Signal : TIC: A209886.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.699	5	21	122	rVB	307264	2727226	100.00%	16.705%
2	4.462	137	167	217	rVV4	33496	339389	12.44%	2.079%
3	4.802	217	232	360	rVV4	66067	714610	26.20%	4.377%
4	5.806	395	424	480	rVB2	254949	1479103	54.23%	9.060%
5	6.230	491	505	529	rBV	52015	177049	6.49%	1.085%
6	6.779	597	610	634	rVB3	13145	42769	1.57%	0.262%
7	7.035	645	659	684	rVV4	17739	78792	2.89%	0.483%
8	7.757	779	797	856	rVB6	170455	1256187	46.06%	7.695%
9	8.144	856	871	897	rVB	70656	273266	10.02%	1.674%
10	8.505	928	940	977	rVB3	14355	47626	1.75%	0.292%
11	8.787	981	994	1009	rVB4	9575	27887	1.02%	0.171%
12	9.133	1052	1060	1099	rVB9	8689	56629	2.08%	0.347%
13	9.410	1099	1113	1153	rVB	161133	510622	18.72%	3.128%
14	10.095	1233	1244	1252	rBV	261988	674882	24.75%	4.134%
15	10.163	1252	1257	1301	rVB5	115144	590619	21.66%	3.618%
16	10.597	1322	1340	1346	rVV	121269	342602	12.56%	2.099%
17	10.665	1346	1353	1394	rVB	254684	760997	27.90%	4.661%
18	11.047	1417	1426	1446	rVV	267982	627794	23.02%	3.846%
19	11.622	1532	1536	1561	rVB4	41600	102071	3.74%	0.625%
20	11.800	1561	1570	1593	rVB6	9948	31199	1.14%	0.191%
21	12.025	1605	1613	1630	rVB6	14283	46306	1.70%	0.284%
22	12.182	1633	1643	1657	rBV5	21490	60966	2.24%	0.373%
23	12.391	1670	1683	1703	rVB3	16416	57481	2.11%	0.352%
24	12.783	1748	1758	1769	rVV	396640	848108	31.10%	5.195%
25	14.117	2006	2013	2037	rVB4	6168	26841	0.98%	0.164%
26	14.311	2041	2050	2067	rVB3	13491	30997	1.14%	0.190%
27	14.447	2067	2076	2104	rVB	348197	719004	26.36%	4.404%
28	14.650	2104	2115	2124	rBV	39499	81696	3.00%	0.500%
29	15.503	2269	2278	2293	rVB	66842	129372	4.74%	0.792%
30	15.738	2315	2323	2349	rVB	285429	553818	20.31%	3.392%
31	15.958	2357	2365	2374	rVB	147802	271860	9.97%	1.665%
32	16.125	2391	2397	2416	rVB3	24963	47062	1.73%	0.288%
33	16.392	2442	2448	2456	rVB	20062	37877	1.39%	0.232%
34	17.046	2565	2573	2598	rBV	426305	804250	29.49%	4.926%
35	17.213	2598	2605	2615	rBV2	52033	91332	3.35%	0.559%
36	17.344	2615	2630	2647	rVB2	131005	293812	10.77%	1.800%
37	17.470	2647	2654	2663	rBV2	11928	21967	0.81%	0.135%
38	17.553	2663	2670	2681	rBV	25850	48403	1.77%	0.296%
39	17.736	2695	2705	2723	rVB	88587	159080	5.83%	0.974%
40	17.867	2723	2730	2737	rBV2	25381	48763	1.79%	0.299%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209886.D
Acq On : 12 Nov 2014 8:47 pm
Operator : CourtneM
Sample : jb80728-2
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 22 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.6 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\MA7918.M
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

41	17.945	2737	2745	2771	rVB	85350	169263	6.21%	1.037%
42	18.186	2783	2791	2804	rBV	68260	122415	4.49%	0.750%
43	18.599	2862	2870	2890	rBV	77064	147155	5.40%	0.901%
44	18.740	2890	2897	2901	rVV	34683	62904	2.31%	0.385%
45	18.793	2901	2907	2945	rVB	141724	273141	10.02%	1.673%
46	19.101	2960	2966	2978	rVV5	15777	37582	1.38%	0.230%
47	19.305	3000	3005	3056	rVB5	15942	21859	0.80%	0.134%
48	19.614	3056	3064	3120	rBV	77813	193606	7.10%	1.186%
49	20.937	3312	3317	3363	rVV2	14560	26140	0.96%	0.160%
50	21.209	3363	3369	3490	rVV2	14154	30968	1.14%	0.190%

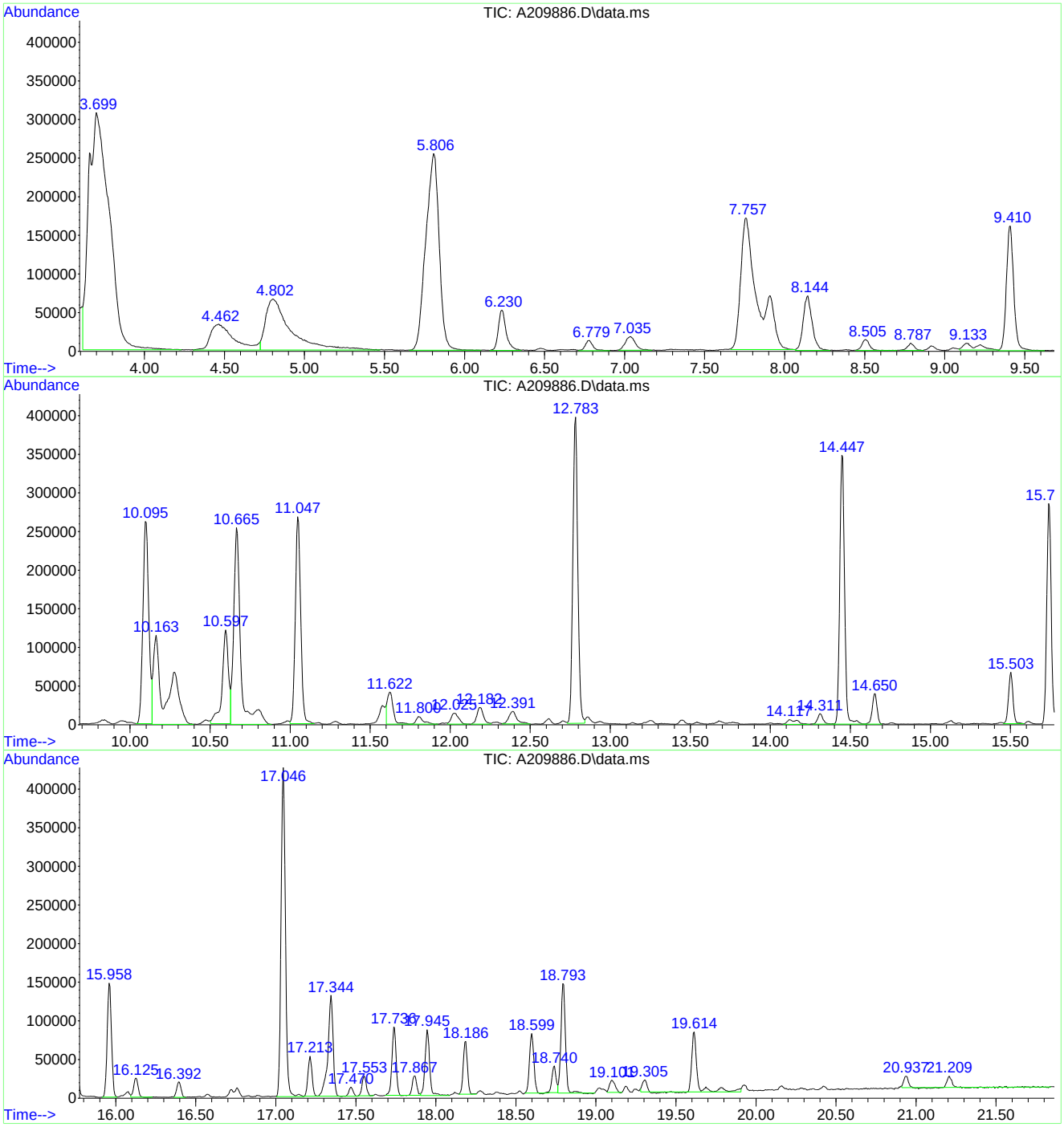
Sum of corrected areas: 16325347

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209886.D
Acq On : 12 Nov 2014 8:47 pm
Operator : CourtneM
Sample : jb80728-2
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209886.D
Acq On : 12 Nov 2014 8:47 pm
Operator : CourtneM
Sample : jb80728-2
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

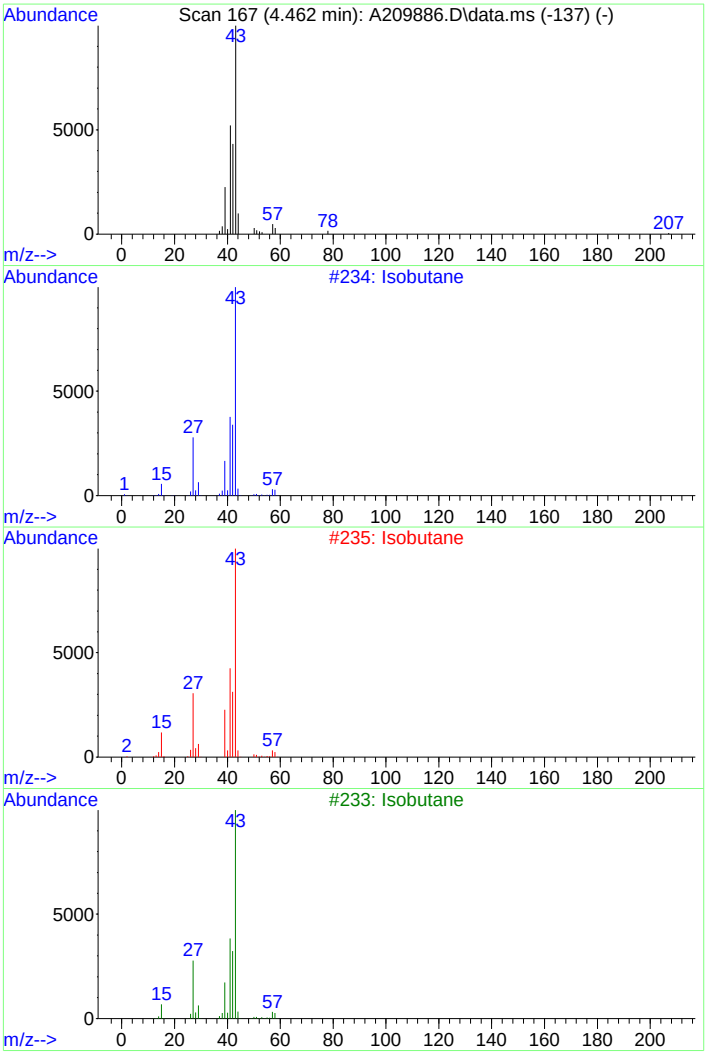
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

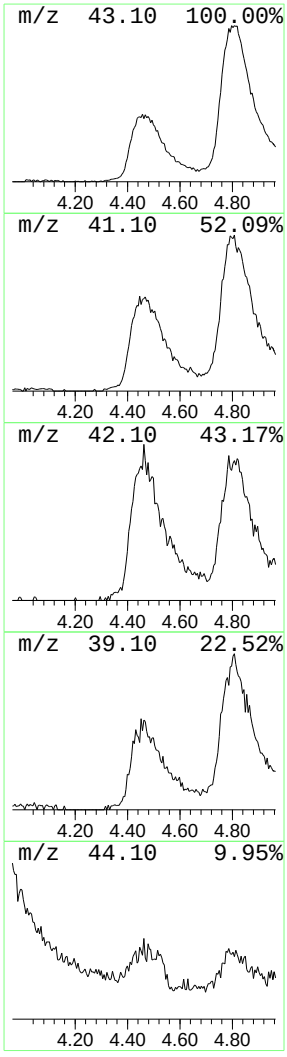
****

Peak Number 2 alkane Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.462	25.14 ug/L	339389	pentafluorobenzene	10.100

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Isobutane	58	C4H10	000075-28-5	64
2	Isobutane	58	C4H10	000075-28-5	50
3	Isobutane	58	C4H10	000075-28-5	9
4	Oxirane, ethyl-	72	C4H8O	000106-88-7	9
5	Isobutane	58	C4H10	000075-28-5	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209886.D
Acq On : 12 Nov 2014 8:47 pm
Operator : CourtneM
Sample : jb80728-2
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

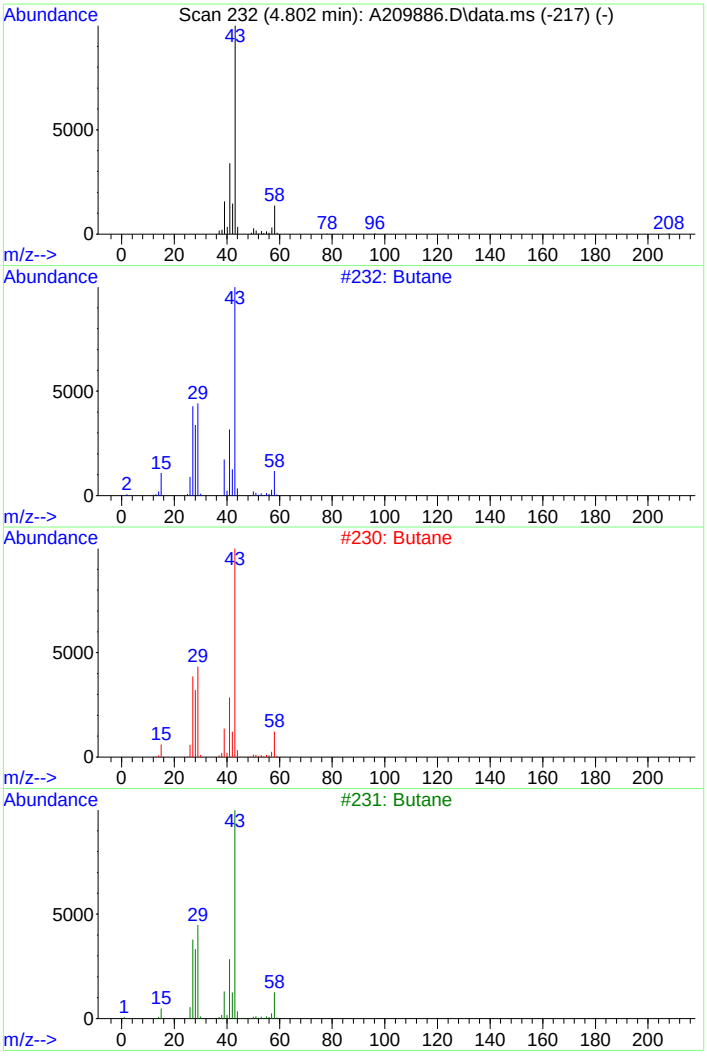
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

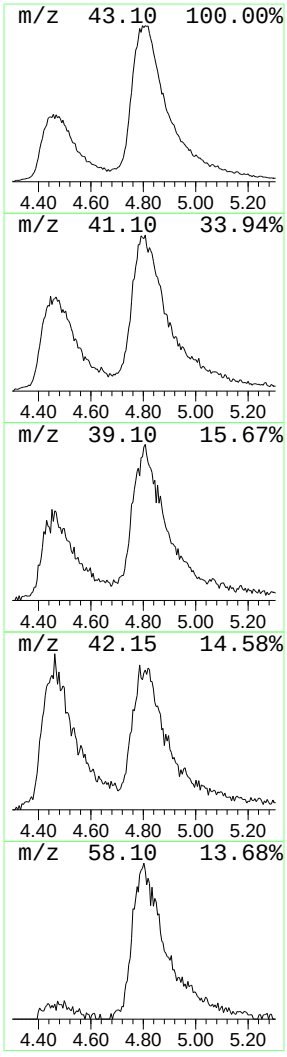
****

Peak Number 3 alkane Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.802	52.94 ug/L	714610	pentafluorobenzene	10.100

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	72
2	Butane	58	C4H10	000106-97-8	64
3	Butane	58	C4H10	000106-97-8	64
4	1-Propen-2-ol, acetate	100	C5H8O2	000108-22-5	56
5	Isobutane	58	C4H10	000075-28-5	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209886.D
Acq On : 12 Nov 2014 8:47 pm
Operator : CourtneM
Sample : jb80728-2
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

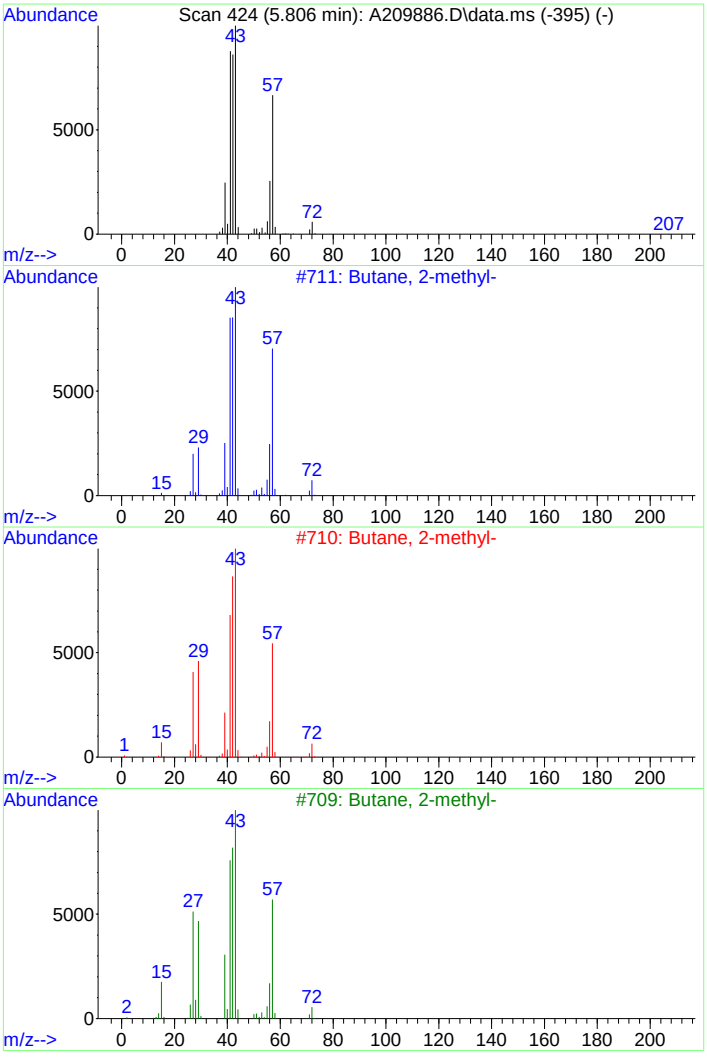
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

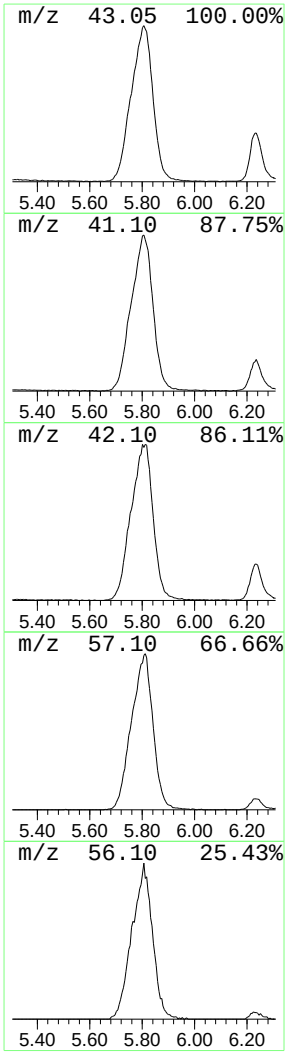
****

Peak Number 4 alkane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.806	109.58 ug/L	1479100	pentafluorobenzene	10.100

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	94
2	Butane, 2-methyl-	72	C5H12	000078-78-4	91
3	Butane, 2-methyl-	72	C5H12	000078-78-4	86
4	Pentane	72	C5H12	000109-66-0	36
5	3-Buten-1-ol	72	C4H8O	000627-27-0	25





Library Search Compound Report

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Data File : A209886.D
Acq On : 12 Nov 2014 8:47 pm
Operator : CourtneM
Sample : jb80728-2
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

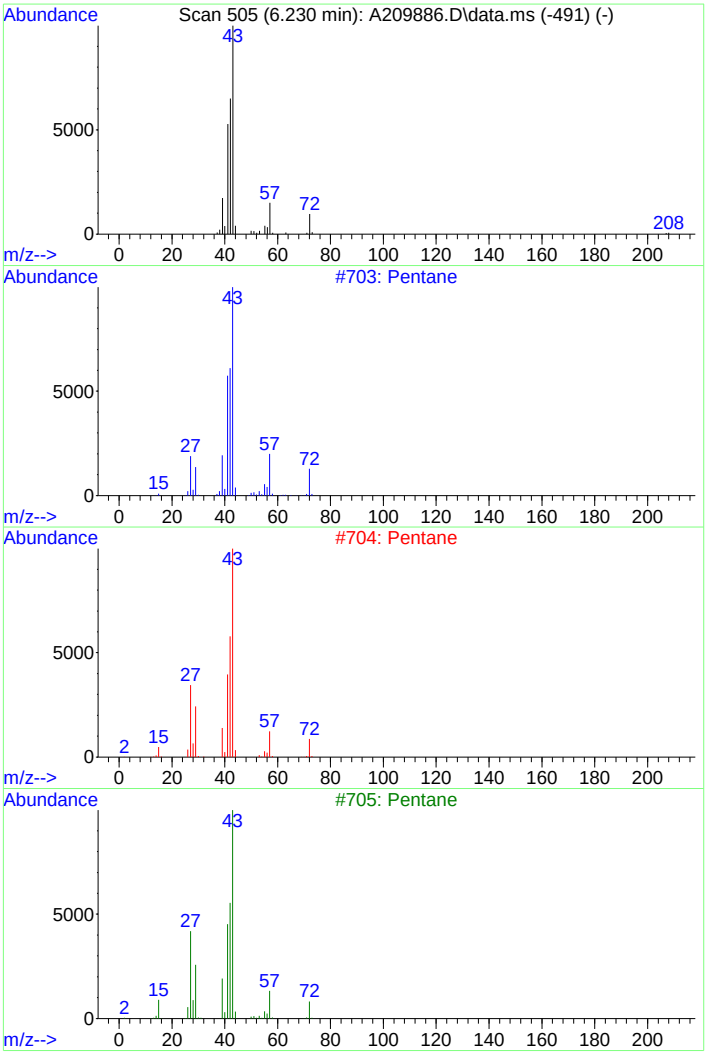
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

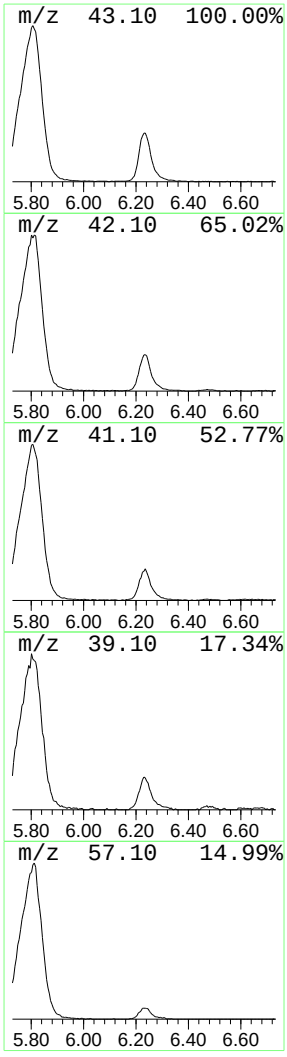
****

Peak Number 5 alkane-Pentane Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.230	13.12 ug/L	177049	pentafluorobenzene	10.100

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	91
2	Pentane	72	C5H12	000109-66-0	90
3	Pentane	72	C5H12	000109-66-0	86
4	Butane, 2-methyl-	72	C5H12	000078-78-4	72
5	Pentane	72	C5H12	000109-66-0	64





Library Search Compound Report

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Sample : jb80728-2
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

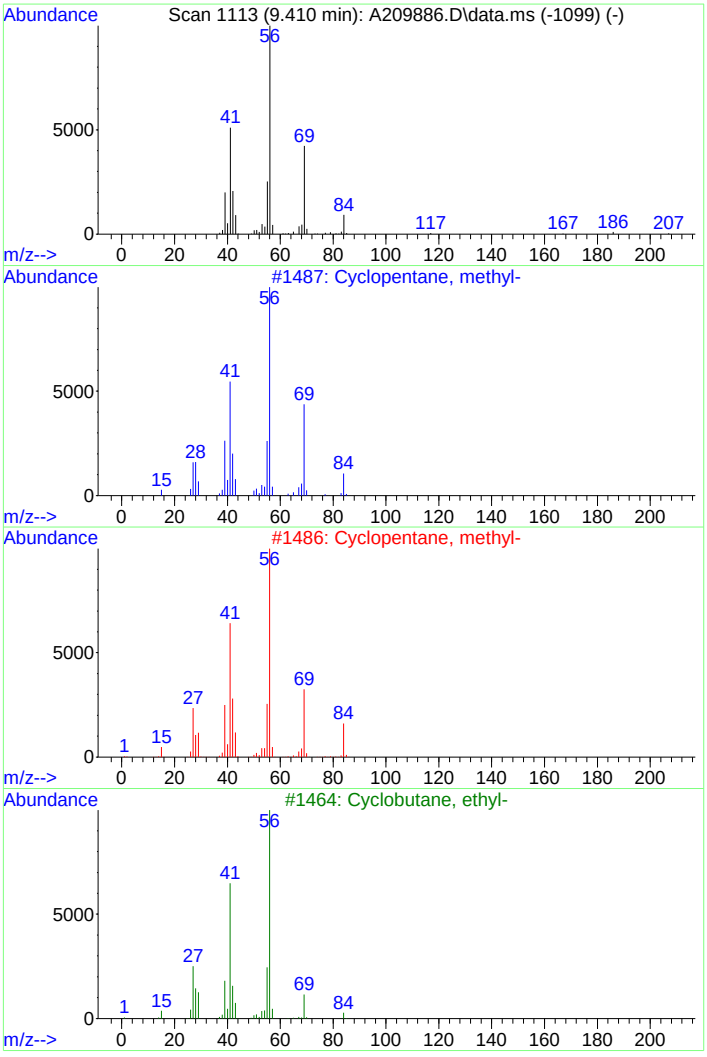
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

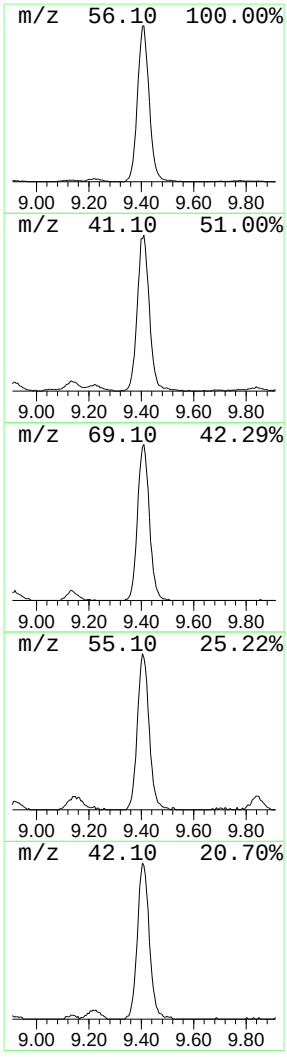
****

Peak Number 7 alkene Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.410	37.83 ug/L	510622	pentafluorobenzene	10.100

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	94
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	90
3	Cyclobutane, ethyl-	84	C6H12	004806-61-5	80
4	Cyclopentane, methyl-	84	C6H12	000096-37-7	78
5	Tetramethylene diisocyanate	140	C6H8N2O2	004538-37-8	78





Library Search Compound Report

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Sample : jb80728-2
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ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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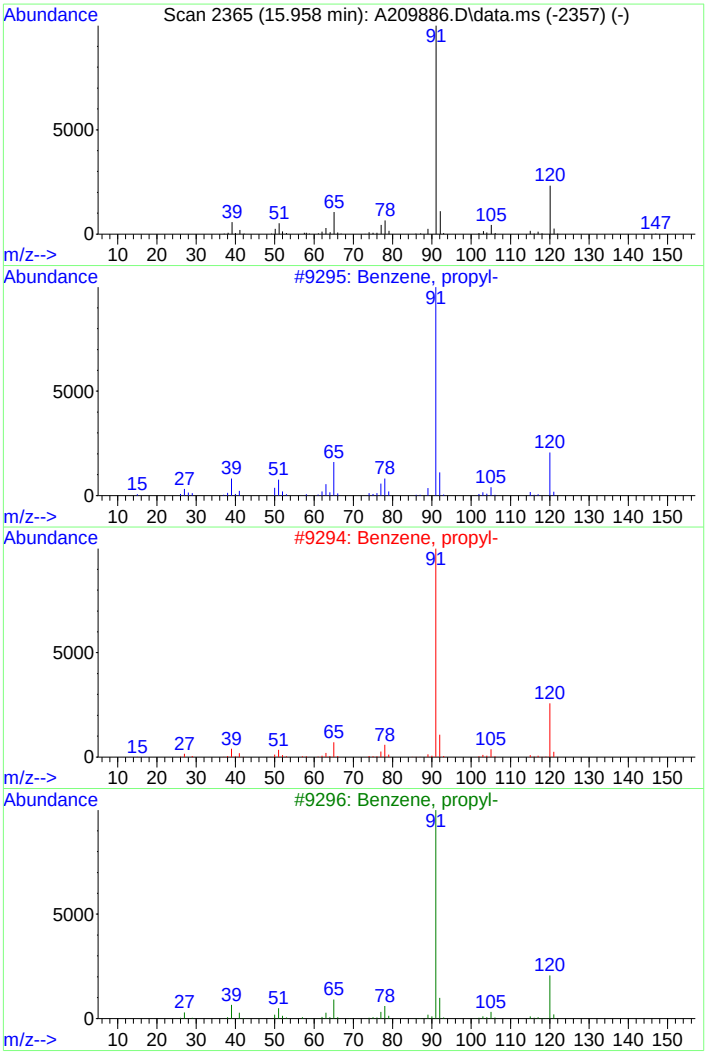
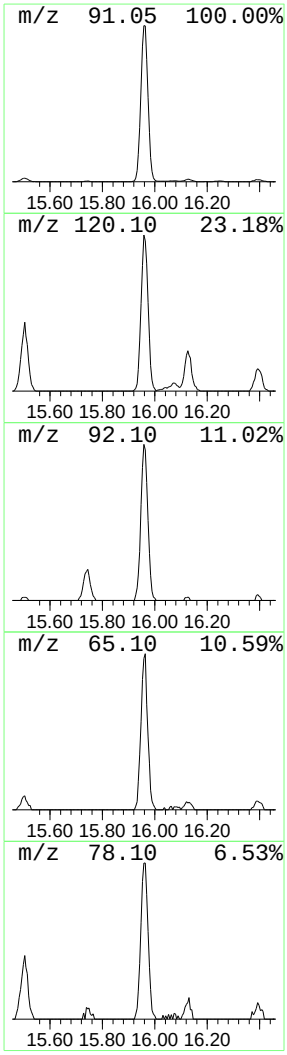
Peak Number 8 Benzene, propyl- Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.958	16.90 ug/L	271860	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, propyl-	120	C9H12	000103-65-1	91
2	Benzene, propyl-	120	C9H12	000103-65-1	90
3	Benzene, propyl-	120	C9H12	000103-65-1	90
4	N-Benzyl-2-phenethylamine	211	C15H17N	003647-71-0	78
5	N-Benzyl-2-phenethylamine	211	C15H17N	003647-71-0	64





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Acq On : 12 Nov 2014 8:47 pm
Operator : CourtneM
Sample : jb80728-2
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

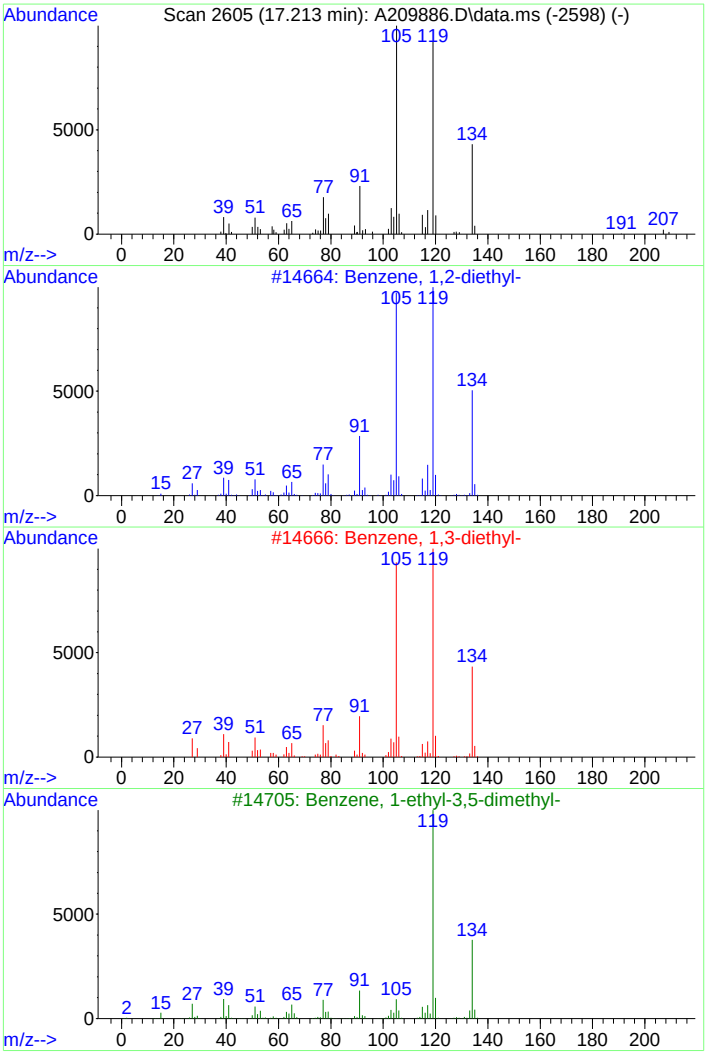
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

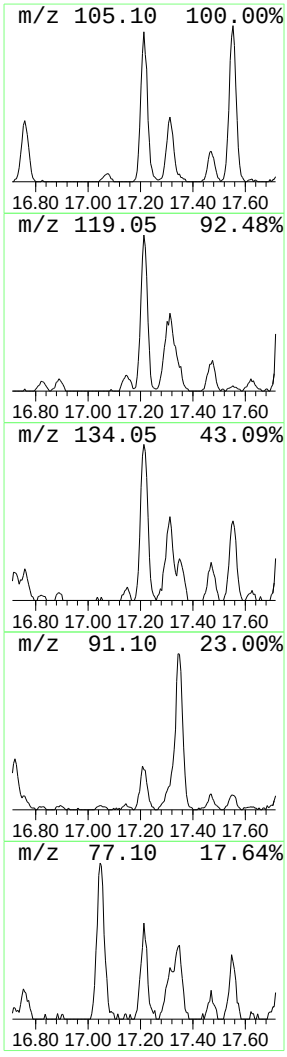
****

Peak Number 9 C4 alkyl benzene Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.213	5.68 ug/L	91332	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2-diethyl-	134	C10H14	000135-01-3	95
2	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	94
3	Benzene, 1-ethyl-3,5-dimethyl-	134	C10H14	000934-74-7	91
4	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	91
5	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	91





Library Search Compound Report

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Data File : A209886.D
Acq On : 12 Nov 2014 8:47 pm
Operator : CourtneM
Sample : jb80728-2
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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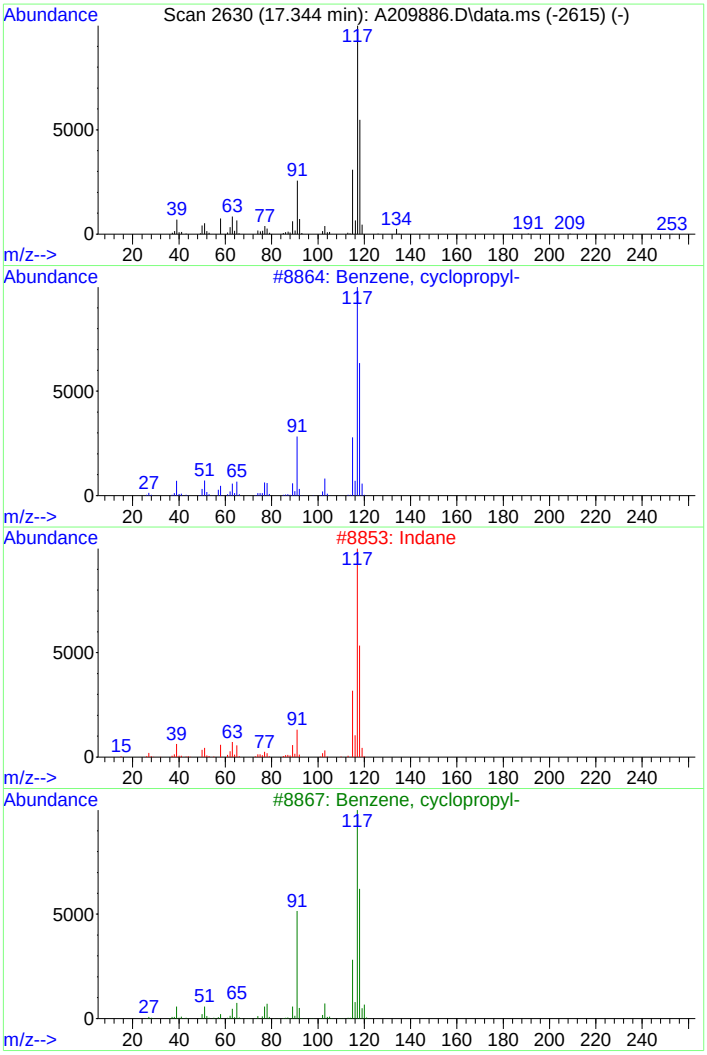
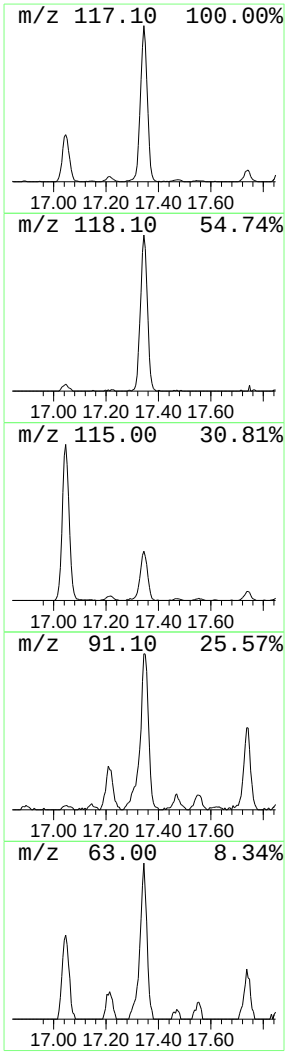
Peak Number 10 Indane Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.344	18.27 ug/L	293812	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, cyclopropyl-	118	C9H10	000873-49-4	74
2	Indane	118	C9H10	000496-11-7	74
3	Benzene, cyclopropyl-	118	C9H10	000873-49-4	74
4	1,4:5,8-Dimethanobiphenylene, 1,...	184	C14H16	001624-13-1	72
5	Tetracyclo[3.3.1.0(2,8).0(4,6)]-...	118	C9H10	1000191-13-7	64





Library Search Compound Report

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Data File : A209886.D
Acq On : 12 Nov 2014 8:47 pm
Operator : CourtneM
Sample : jb80728-2
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

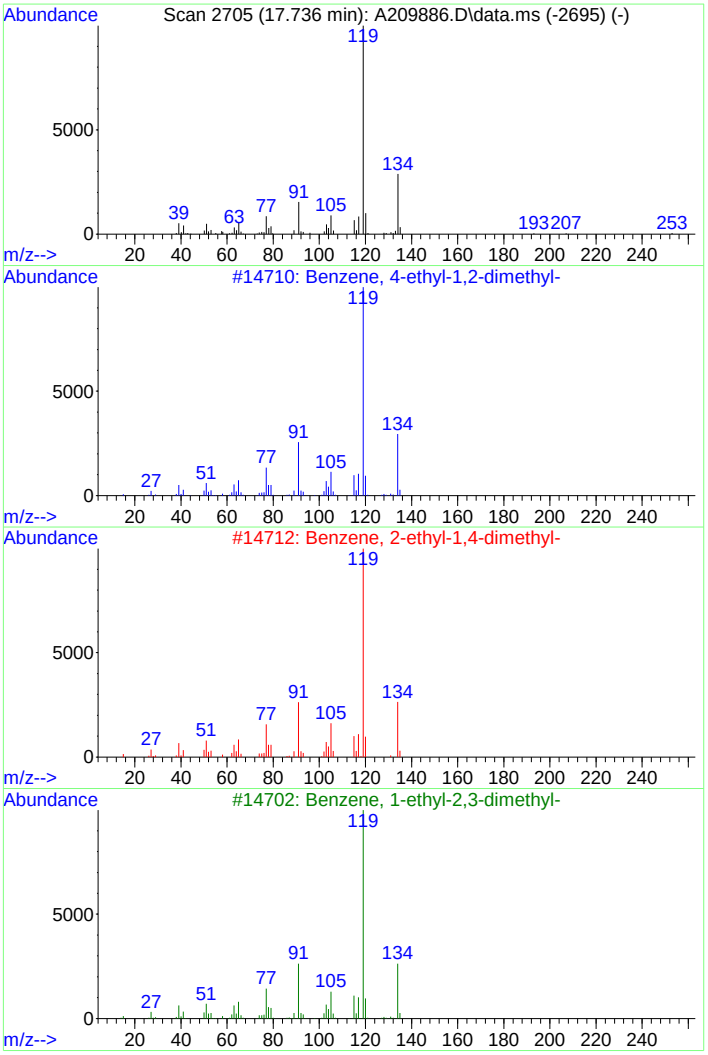
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

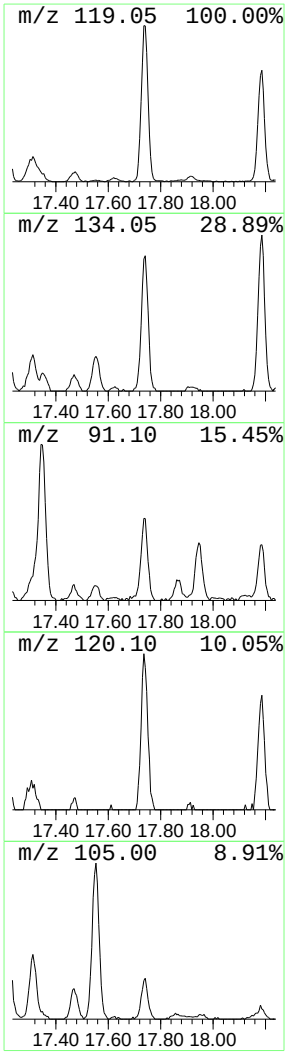
****

Peak Number 11 C4 alkyl benzene Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.736	9.89 ug/L	159080	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	95
2	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	95
3	Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	95
4	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	94
5	Benzene, 1-methyl-4-(1-methyleth...	134	C10H14	000099-87-6	94





Library Search Compound Report

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Sample : jb80728-2
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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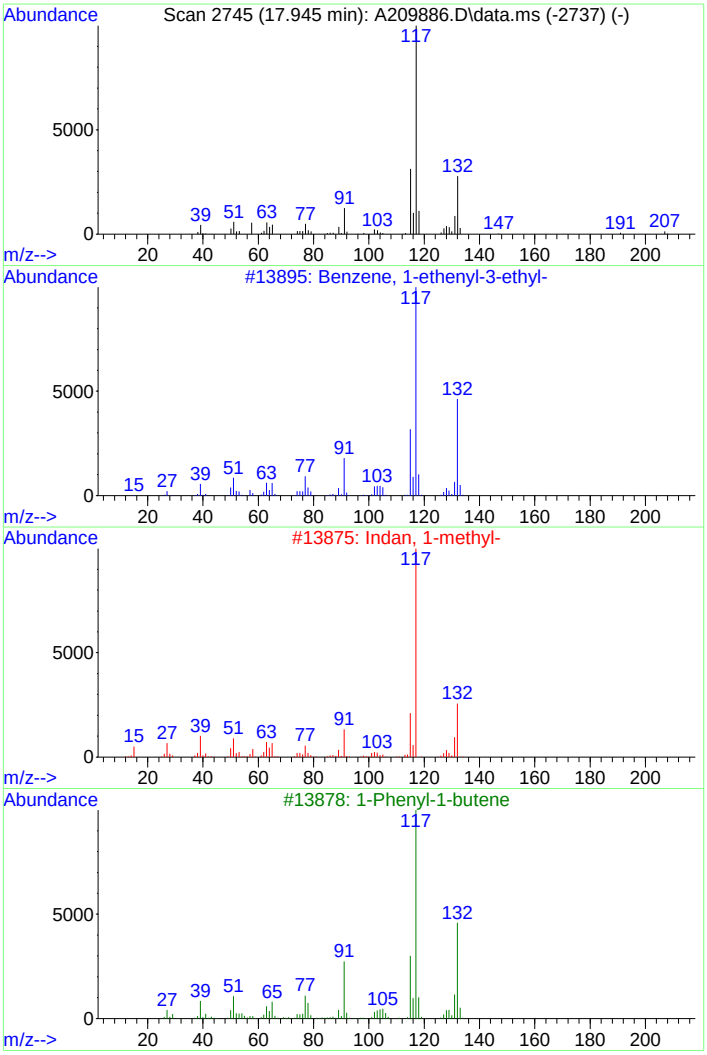
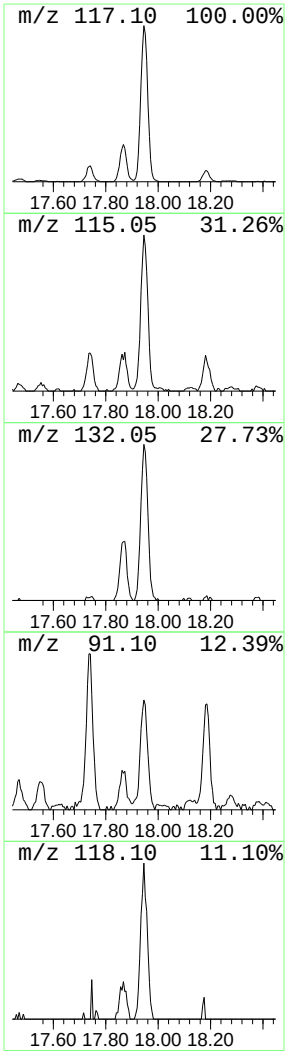
Peak Number 12 1H-Indene-dihydro-methyl- i... Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.945	10.52 ug/L	169263	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethenyl-3-ethyl-	132	C10H12	007525-62-4	90
2	Indan, 1-methyl-	132	C10H12	000767-58-8	87
3	1-Phenyl-1-butene	132	C10H12	000824-90-8	87
4	Indan, 1-methyl-	132	C10H12	000767-58-8	87
5	Benzene, (2-methyl-1-propenyl)-	132	C10H12	000768-49-0	87





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Data File : A209886.D
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Operator : CourtneM
Sample : jb80728-2
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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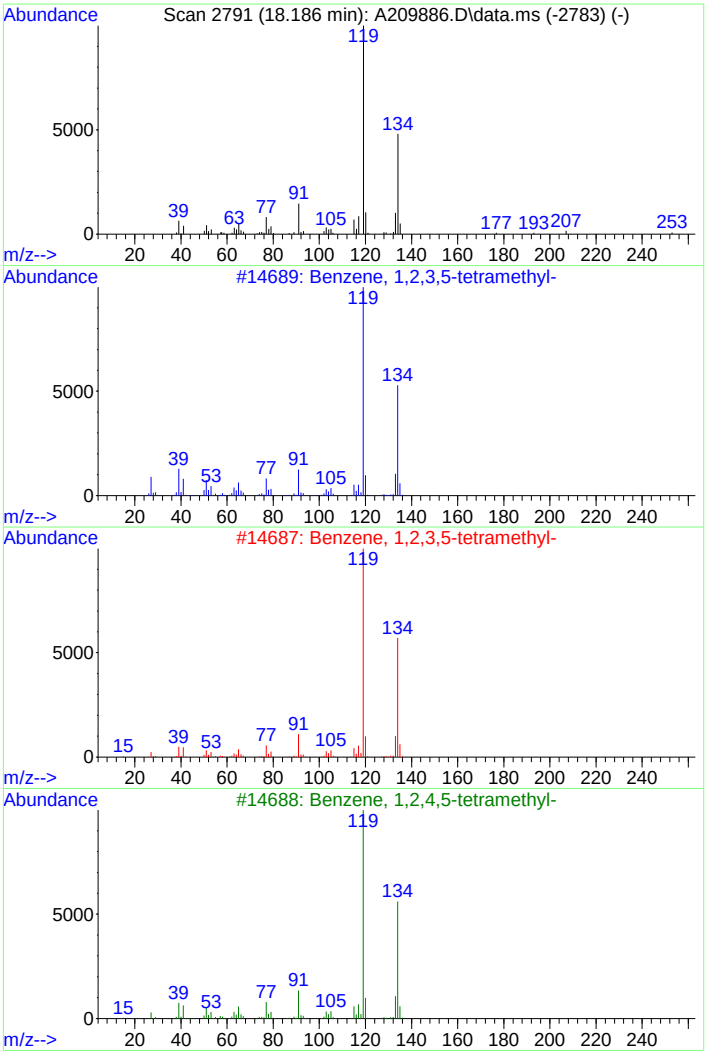
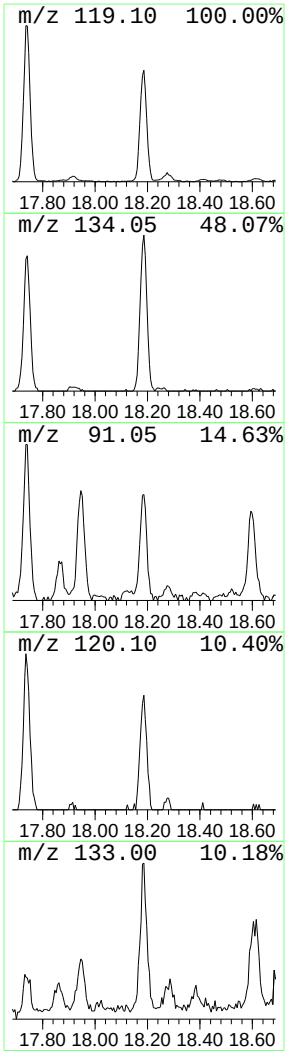
Peak Number 13 C4 alkyl benzene Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.186	7.61 ug/L	122415	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	94
2	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	94
3	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	94
4	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	93
5	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	93





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Data File : A209886.D
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Sample : jb80728-2
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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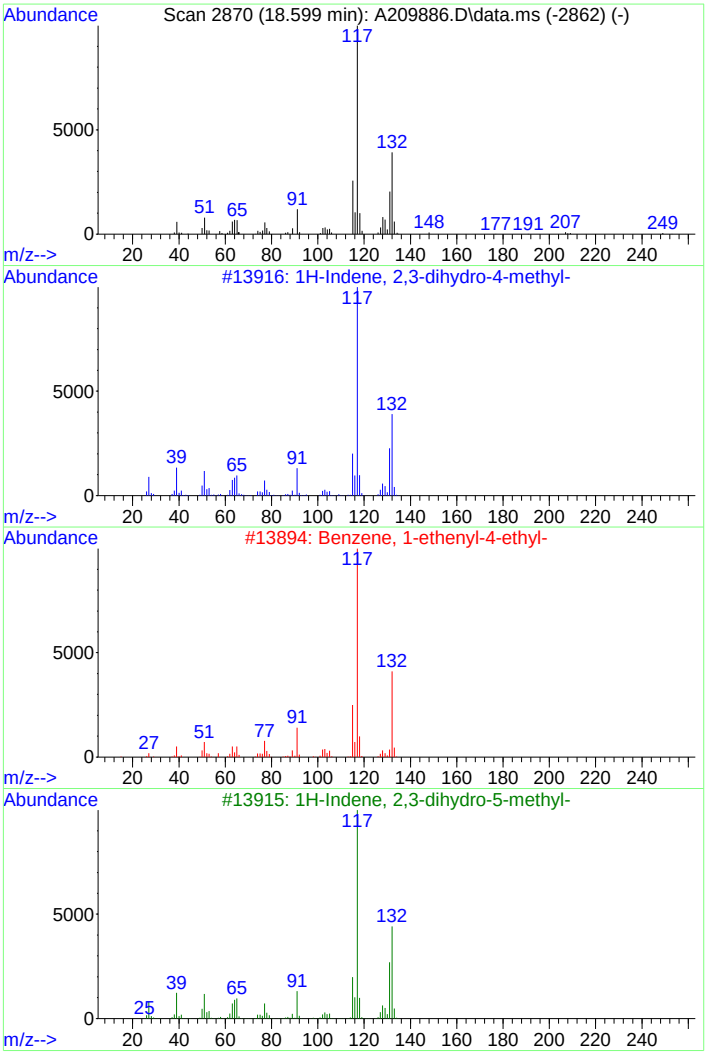
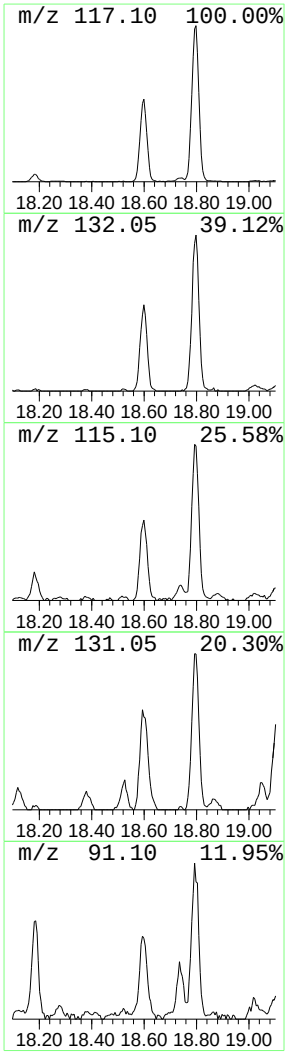
Peak Number 14 1H-Indene-dihydro-methyl- i... Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.599	9.15 ug/L	147155	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	95
2	Benzene, 1-ethenyl-4-ethyl-	132	C10H12	003454-07-7	94
3	1H-Indene, 2,3-dihydro-5-methyl-	132	C10H12	000874-35-1	94
4	Benzene, (1-methyl-1-propenyl)-,...	132	C10H12	000768-00-3	90
5	Benzene, 1-ethenyl-4-ethyl-	132	C10H12	003454-07-7	90





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Sample : jb80728-2
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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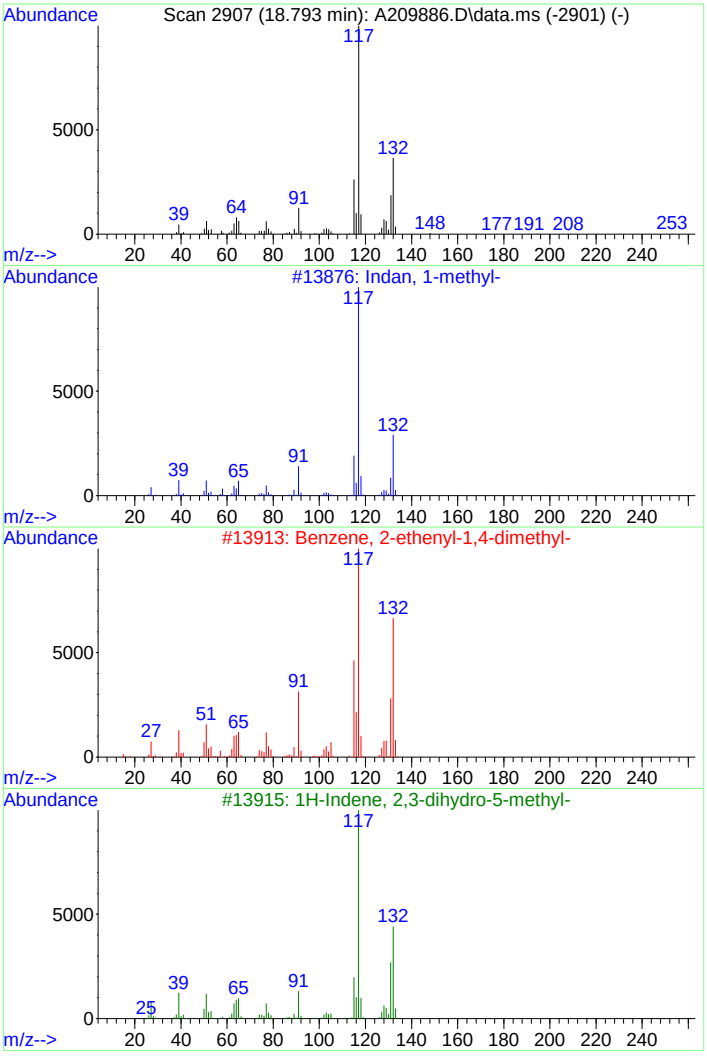
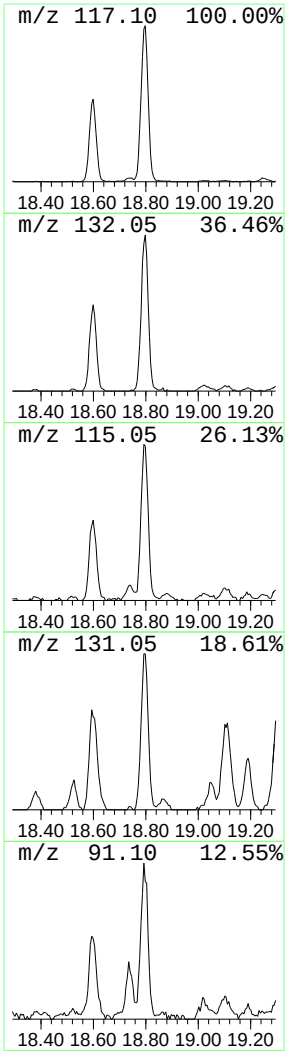
Peak Number 15 1H-Indene-dihydro-methyl- i... Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.793	16.98 ug/L	273141	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indan, 1-methyl-	132	C10H12	000767-58-8	91
2	Benzene, 2-ethenyl-1,4-dimethyl-	132	C10H12	002039-89-6	91
3	1H-Indene, 2,3-dihydro-5-methyl-	132	C10H12	000874-35-1	90
4	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	90
5	Benzene, 1-ethenyl-4-ethyl-	132	C10H12	003454-07-7	87





Library Search Compound Report

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Data File : A209886.D
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Operator : CourtneM
Sample : jb80728-2
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 22 Sample Multiplier: 1

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Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

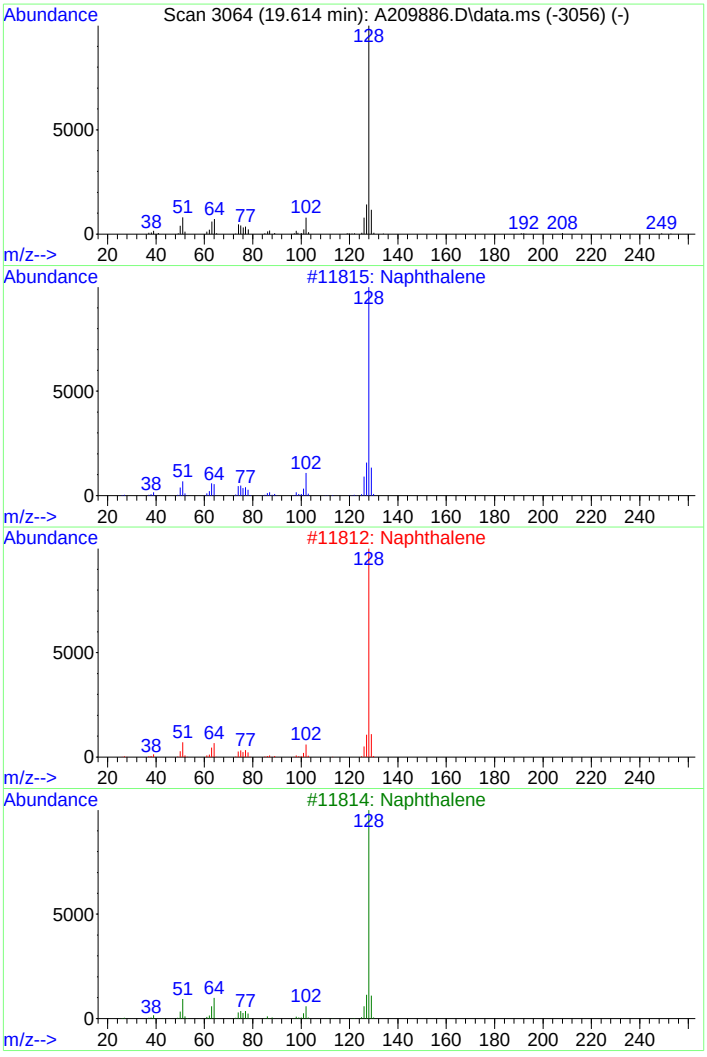
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

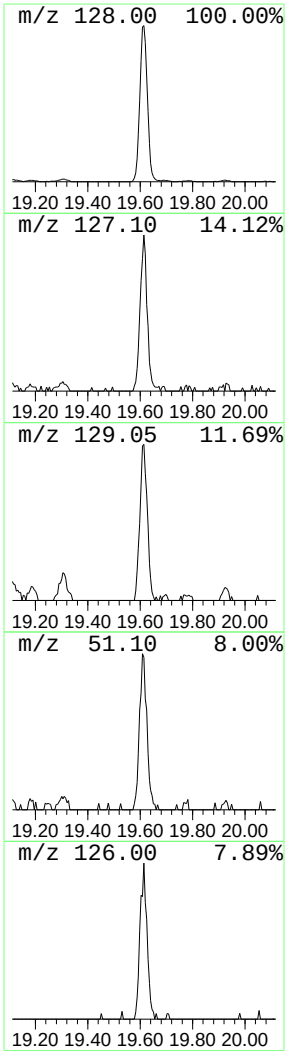
****

Peak Number 16 Naphthalene Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.614	12.04 ug/L	193606	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Naphthalene	128	C10H8	000091-20-3	95
2	Naphthalene	128	C10H8	000091-20-3	94
3	Naphthalene	128	C10H8	000091-20-3	93
4	Azulene	128	C10H8	000275-51-4	90
5	Azulene	128	C10H8	000275-51-4	90





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Data File : A209886.D
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Operator : CourtneM
Sample : jb80728-2
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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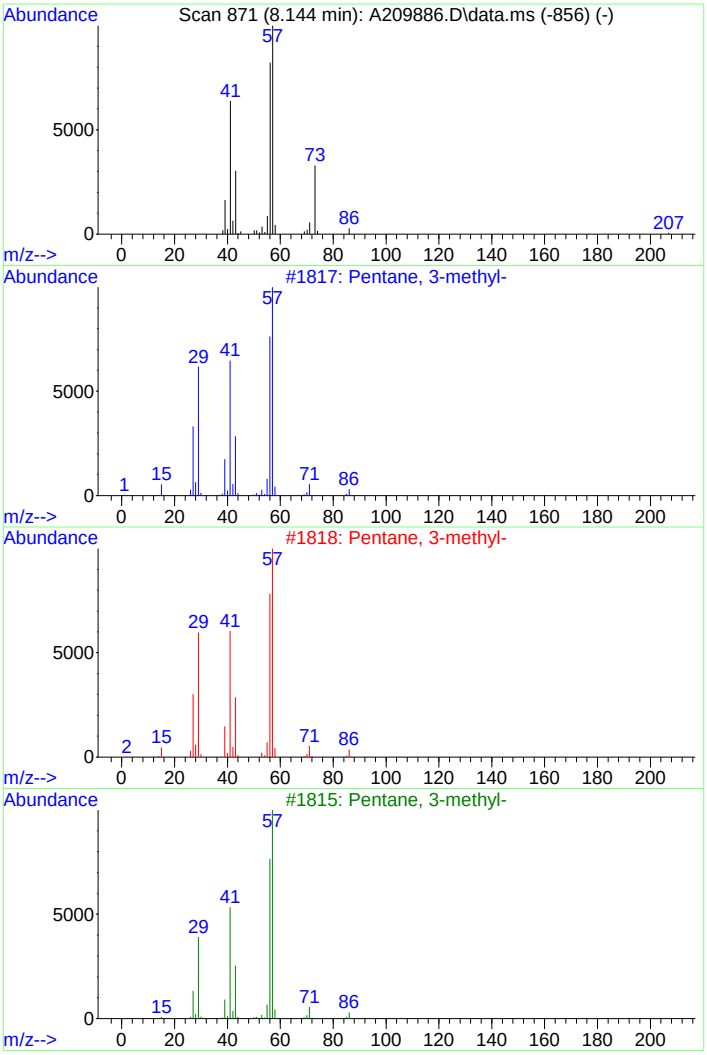
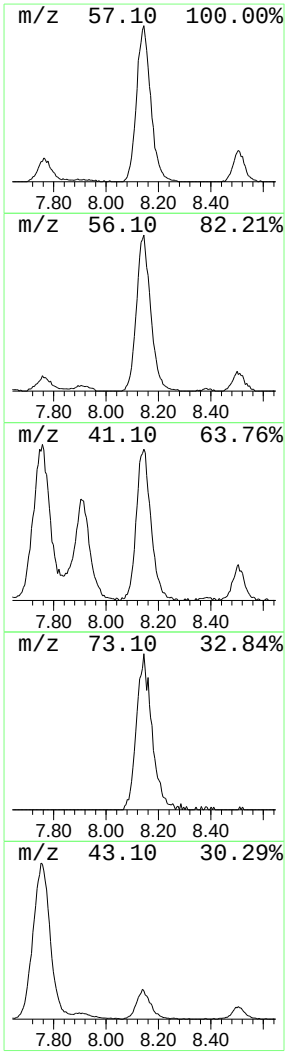
Peak Number 17 alkane Concentration Rank 17

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.144	20.25 ug/L	273266	pentafluorobenzene	10.100

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 3-methyl-	86	C6H14	000096-14-0	74
2	Pentane, 3-methyl-	86	C6H14	000096-14-0	72
3	Pentane, 3-methyl-	86	C6H14	000096-14-0	72
4	Hexane, 2,2,3-trimethyl-	128	C9H20	016747-25-4	50
5	Pentane, 2,2,3-trimethyl-	114	C8H18	000564-02-3	45





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209886.D
Acq On : 12 Nov 2014 8:47 pm
Operator : CourtneM
Sample : jb80728-2
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
alkane	4.462	25.1	ug/L	339389	2	10.100	674882	50.0
alkane	4.802	52.9	ug/L	714610	2	10.100	674882	50.0
alkane	5.806	109.6	ug/L	1479100	2	10.100	674882	50.0
alkane-Pentane	6.230	13.1	ug/L	177049	2	10.100	674882	50.0
alkene	9.410	37.8	ug/L	510622	2	10.100	674882	50.0
Benzene, propyl-	15.958	16.9	ug/L	271860	5	17.046	804250	50.0
C4 alkyl benzene	17.213	5.7	ug/L	91332	5	17.046	804250	50.0
Indane	17.344	18.3	ug/L	293812	5	17.046	804250	50.0
C4 alkyl benzene	17.736	9.9	ug/L	159080	5	17.046	804250	50.0
1H-Indene-dihyd...	17.945	10.5	ug/L	169263	5	17.046	804250	50.0
C4 alkyl benzene	18.186	7.6	ug/L	122415	5	17.046	804250	50.0
1H-Indene-dihyd...	18.599	9.2	ug/L	147155	5	17.046	804250	50.0
1H-Indene-dihyd...	18.793	17.0	ug/L	273141	5	17.046	804250	50.0
Naphthalene	19.614	12.0	ug/L	193606	5	17.046	804250	50.0
alkane	8.144	20.3	ug/L	273266	2	10.100	674882	50.0

Manual Integrations APPROVED (compounds with "m" flag)
Jessica Reitan-Chu 11/13/14 18:30

Quantitation Report (LSC Reviewed)

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209880.D
Acq On : 12 Nov 2014 5:42 pm
Operator : CourtneM
Sample : jb80728-3
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 13 16:55:16 2014
Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Nov 13 13:59:58 2014
Response via : Initial Calibration

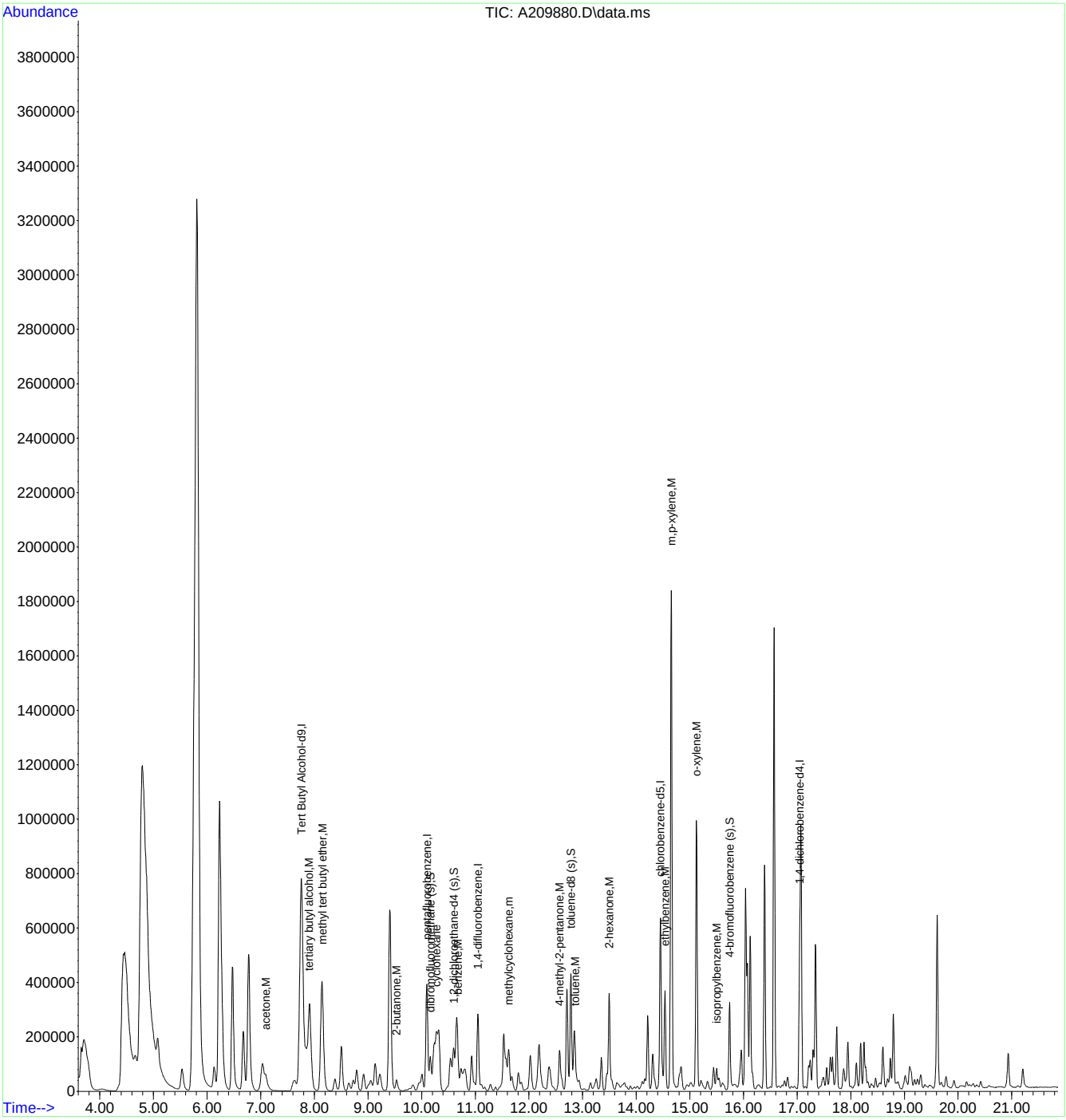
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Tert Butyl Alcohol-d9	7.759	65	339559	500.00	ug/L		0.00
4) pentafluorobenzene	10.097	168	235232	50.00	ug/L		0.00
53) 1,4-difluorobenzene	11.049	114	270417	50.00	ug/L		0.00
83) chlorobenzene-d5	14.449	117	239443	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	17.048	152	133642	50.00	ug/L		0.00
System Monitoring Compounds							
46) dibromofluoromethane (s)	10.165	113	84694	46.66	ug/L		0.00
Spiked Amount 50.000	Range 59 - 130		Recovery = 93.32%				
47) 1,2-dichloroethane-d4 (s)	10.599	65	98884	44.91	ug/L		0.00
Spiked Amount 50.000	Range 65 - 123		Recovery = 89.82%				
75) toluene-d8 (s)	12.780	98	321237	51.41	ug/L		0.00
Spiked Amount 50.000	Range 77 - 125		Recovery = 102.82%				
101) 4-bromofluorobenzene (s)	15.740	95	121147	58.36	ug/L		0.00
Spiked Amount 50.000	Range 71 - 132		Recovery = 116.72%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.895	59	36761	59.18	ug/L	#	1
20) acetone	7.095	43	136498m	123.14	ug/L		
27) methyl tert butyl ether	8.151	73	4161	0.56	ug/L	#	1
33) 2-butanone	9.532	72	17591	48.91	ug/L	#	1
49) cyclohexane	10.275	84	107711	36.34	ug/L	#	55
59) benzene	10.672	78	17913	2.75	ug/L		96
68) methylcyclohexane	11.624	83	93113	33.06	ug/L	#	85
76) 4-methyl-2-pentanone	12.571	58	50088	41.56	ug/L	#	25
77) toluene	12.864	92	35388	8.79	ug/L		98
82) 2-hexanone	13.497	58	153391	150.10	ug/L		90
93) ethylbenzene	14.537	91	297866	40.70	ug/L		99
94) m,p-xylene	14.653	106	578256	207.92	ug/L		98
95) o-xylene	15.123	106	313264	103.18	ug/L		100
99) isopropylbenzene	15.500	105	54462	6.93	ug/L		99

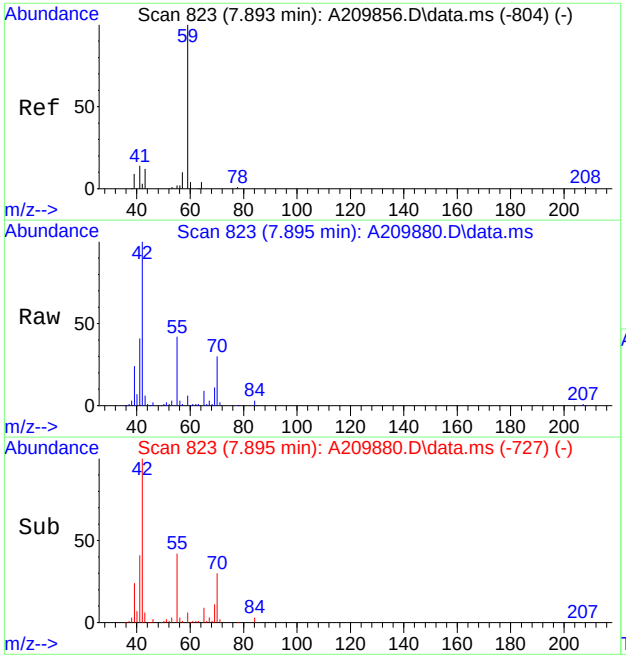
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (LSC Reviewed)

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209880.D
Acq On : 12 Nov 2014 5:42 pm
Operator : CourtneM
Sample : jb80728-3
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 13 16:55:16 2014
Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Nov 13 13:59:58 2014
Response via : Initial Calibration

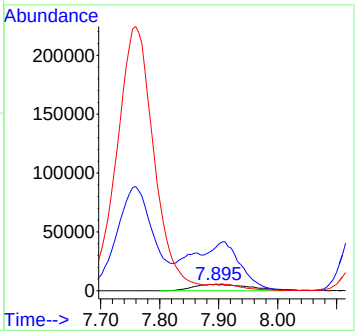


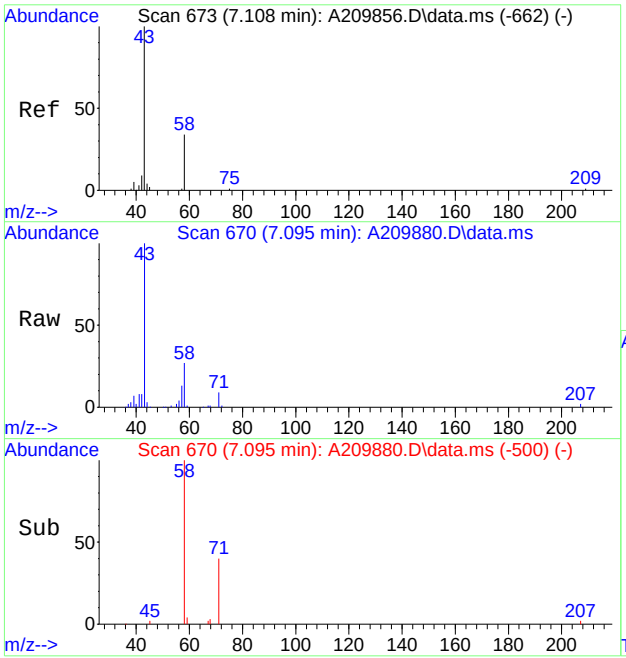


#3
tertiary butyl alcohol
Concen: 59.18 ug/L
RT: 7.895 min Scan# 823
Delta R.T. 0.002 min
Lab File: A209880.D
Acq: 12 Nov 2014 5:42 pm

Tgt Ion: 59 Resp: 36761

Ion	Ratio	Lower	Upper
59	100		
41	393.6	0.0	49.5#
43	0.0	0.0	43.1

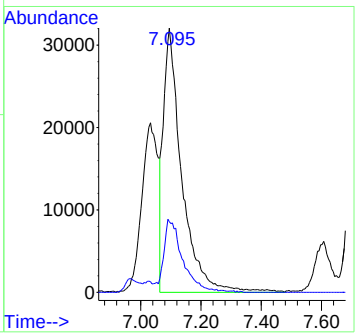


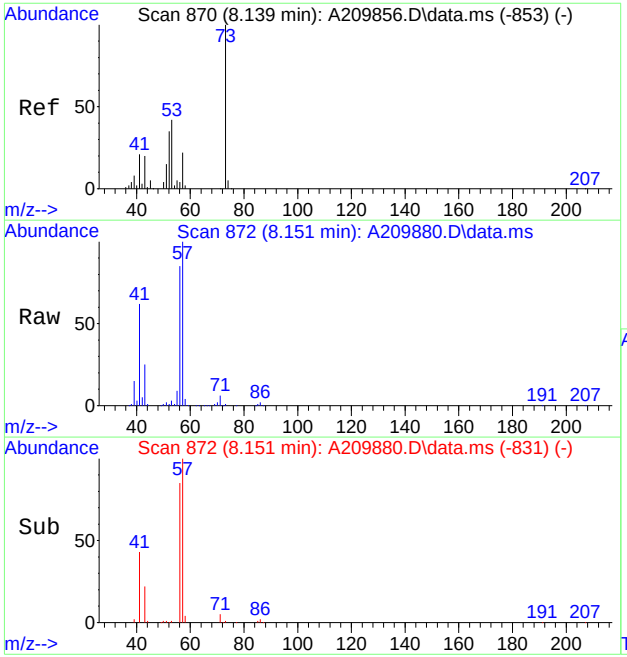


#20
acetone
Concen: 123.14 ug/L m
RT: 7.095 min Scan# 670
Delta R.T. -0.013 min
Lab File: A209880.D
Acq: 12 Nov 2014 5:42 pm

Tgt Ion: 43 Resp: 136498

Ion	Ratio	Lower	Upper
43	100		
58	28.1	1.5	61.5

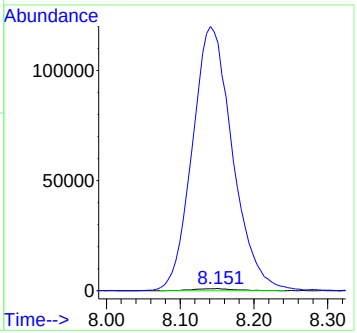


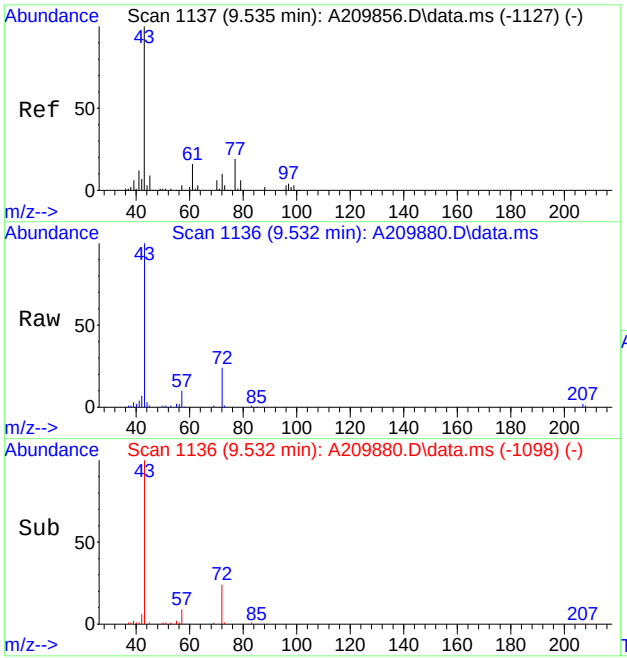


#27
methyl tert butyl ether
Concen: 0.56 ug/L
RT: 8.151 min Scan# 872
Delta R.T. 0.013 min
Lab File: A209880.D
Acq: 12 Nov 2014 5:42 pm

Tgt Ion: 73 Resp: 4161

Ion	Ratio	Lower	Upper
73	100		
57	10996.0	0.0	52.7#

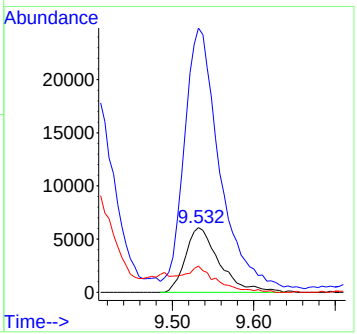


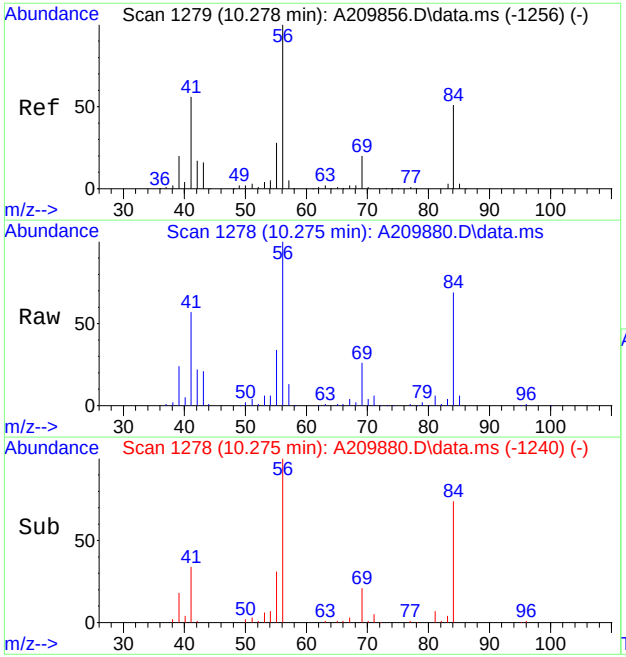


#33
2-butanone
Concen: 48.91 ug/L
RT: 9.532 min Scan# 1136
Delta R.T. -0.003 min
Lab File: A209880.D
Acq: 12 Nov 2014 5:42 pm

Tgt Ion: 72 Resp: 17591

Ion	Ratio	Lower	Upper
72	100		
43	417.5	1081.2	1141.2#
57	0.0	1.6	61.6#

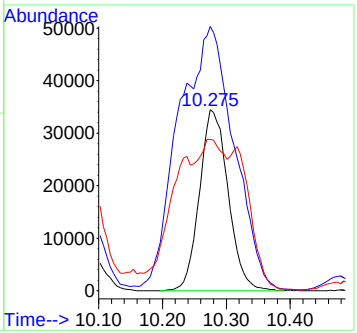


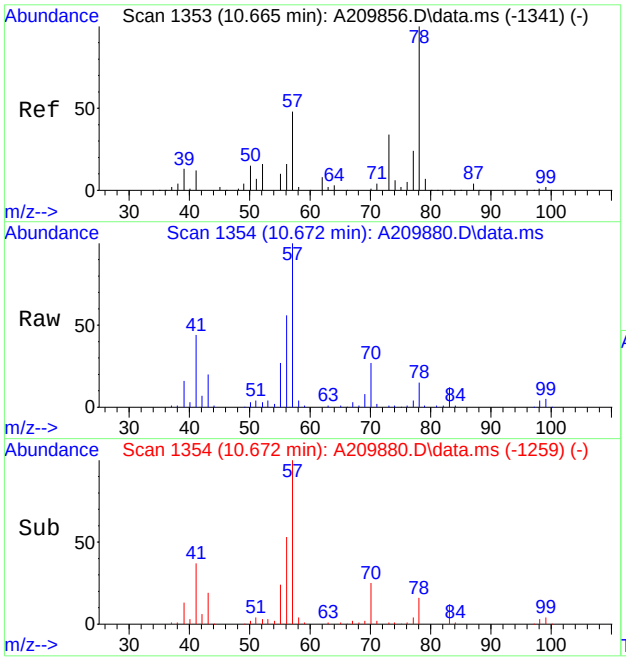


#49
cyclohexane
Concen: 36.34 ug/L
RT: 10.275 min Scan# 1278
Delta R.T. -0.003 min
Lab File: A209880.D
Acq: 12 Nov 2014 5:42 pm

Tgt Ion: 84 Resp: 107711

Ion	Ratio	Lower	Upper
84	100		
56	279.9	157.0	291.6
41	200.7	88.5	164.3#

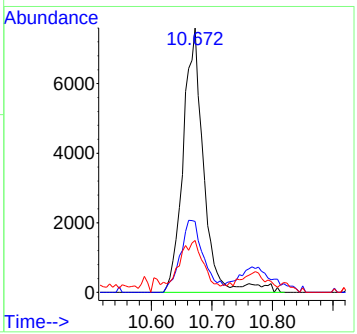


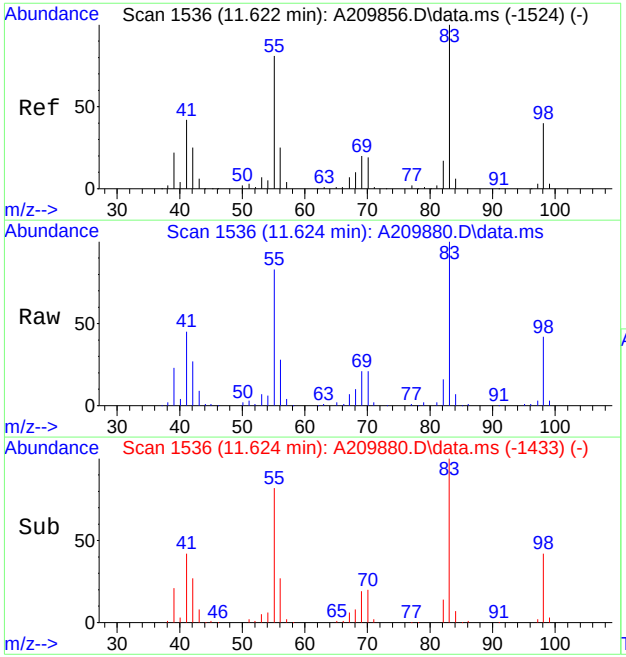


#59
benzene
Concen: 2.75 ug/L
RT: 10.672 min Scan# 1354
Delta R.T. 0.007 min
Lab File: A209880.D
Acq: 12 Nov 2014 5:42 pm

Tgt Ion: 78 Resp: 17913

Ion	Ratio	Lower	Upper
78	100		
77	26.9	0.0	54.5
52	16.7	0.0	45.9

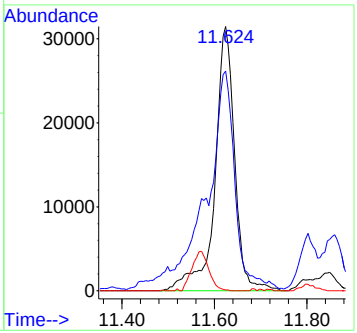


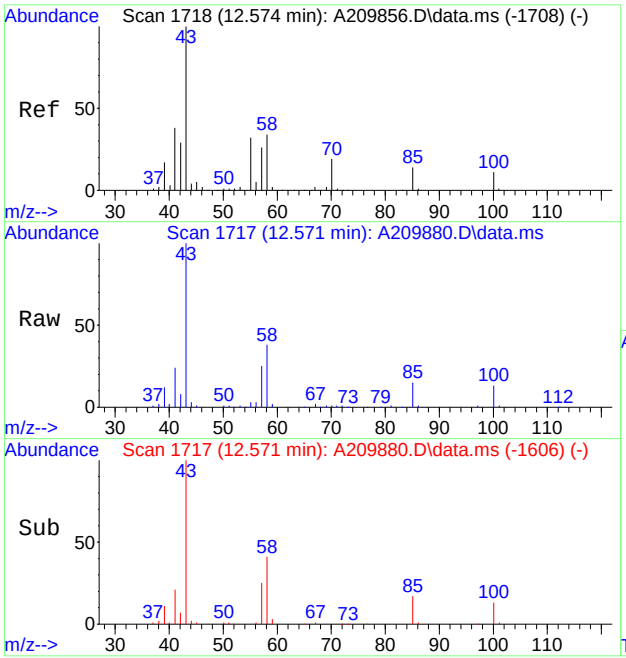


#68
methylcyclohexane
Concen: 33.06 ug/L
RT: 11.624 min Scan# 1536
Delta R.T. 0.002 min
Lab File: A209880.D
Acq: 12 Nov 2014 5:42 pm

Tgt Ion: 83 Resp: 93113

Ion	Ratio	Lower	Upper
83	100		
55	72.8	56.4	116.4
85	0.0	0.0	30.1

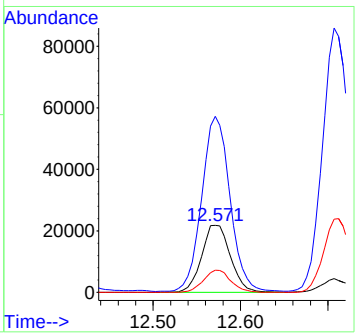


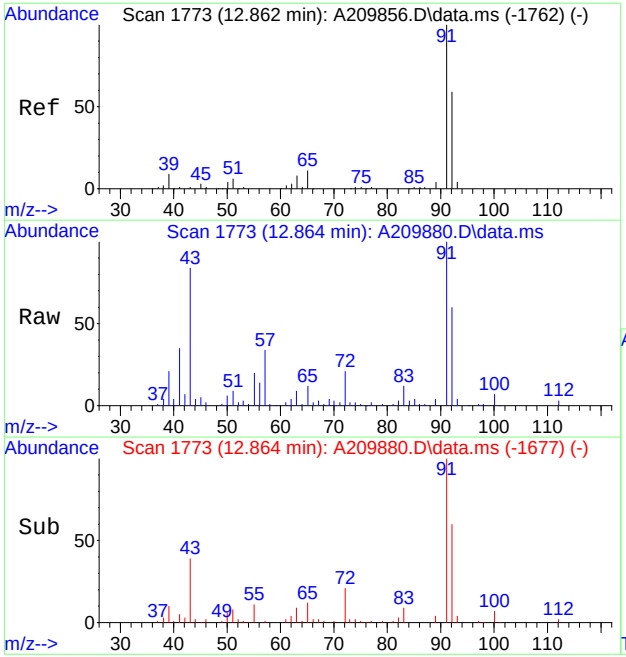


#76
4-methyl-2-pentanone
Concen: 41.56 ug/L
RT: 12.571 min Scan# 1717
Delta R.T. -0.003 min
Lab File: A209880.D
Acq: 12 Nov 2014 5:42 pm

Tgt Ion: 58 Resp: 50088

Ion	Ratio	Lower	Upper
58	100		
43	255.3	437.1	497.1#
100	31.2	1.1	61.1

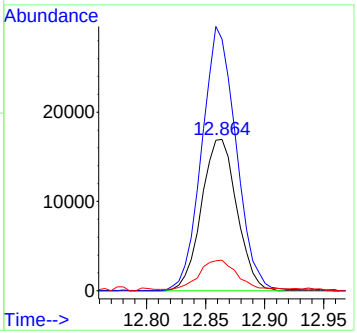


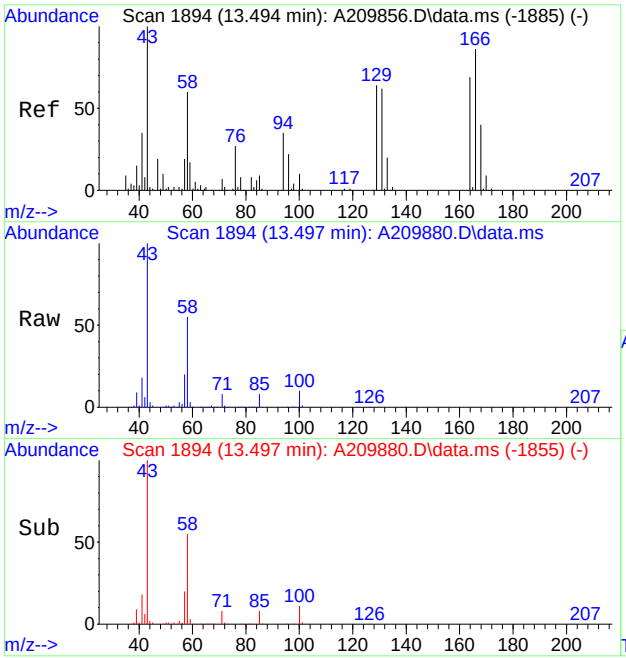


#77
toluene
Concen: 8.79 ug/L
RT: 12.864 min Scan# 1773
Delta R.T. 0.002 min
Lab File: A209880.D
Acq: 12 Nov 2014 5:42 pm

Tgt Ion: 92 Resp: 35388

Ion	Ratio	Lower	Upper
92	100		
91	166.4	139.6	199.6
65	19.2	0.0	49.5

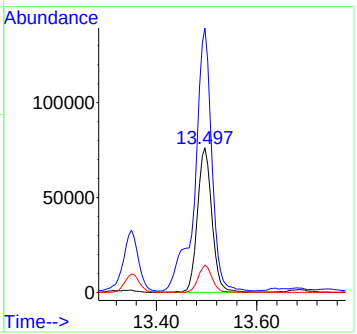


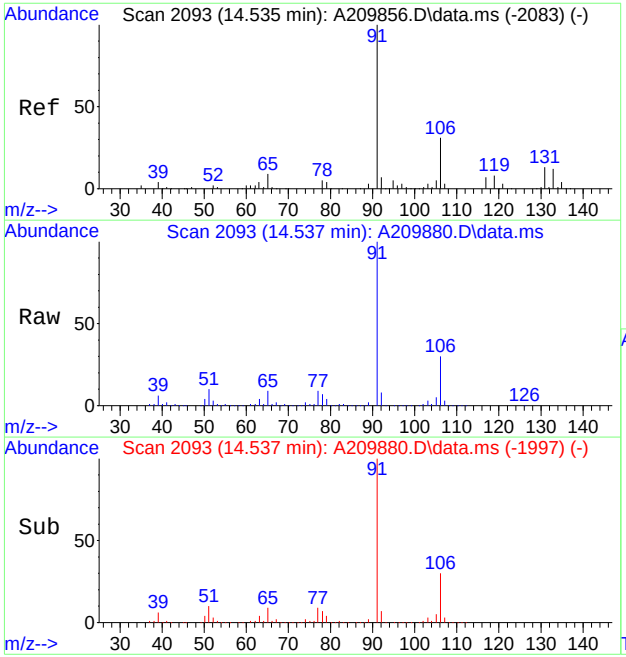


#82
2-hexanone
Concen: 150.10 ug/L
RT: 13.497 min Scan# 1894
Delta R.T. 0.002 min
Lab File: A209880.D
Acq: 12 Nov 2014 5:42 pm

Tgt Ion: 58 Resp: 153391

Ion	Ratio	Lower	Upper
58	100		
43	181.8	137.0	197.0
100	19.1	0.0	47.1

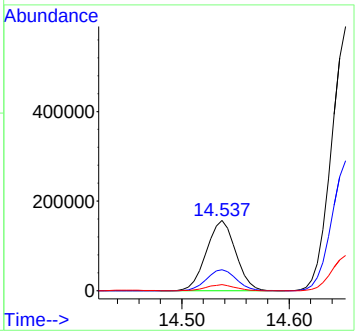


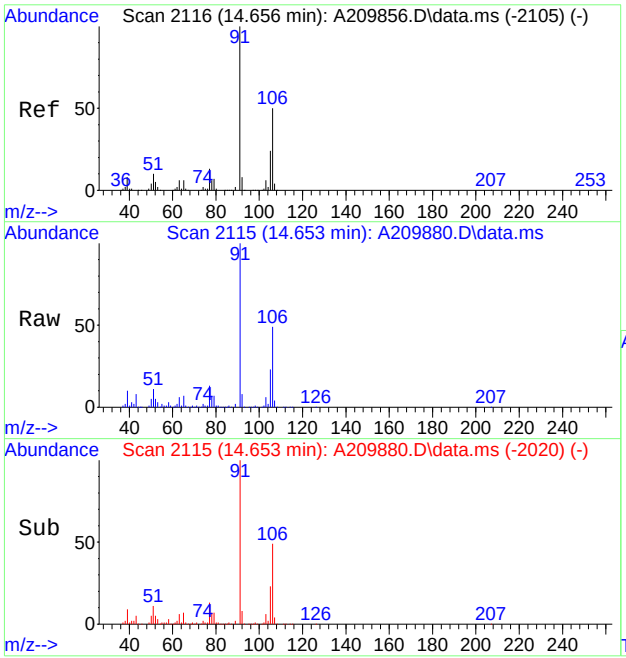


#93
ethylbenzene
Concen: 40.70 ug/L
RT: 14.537 min Scan# 2093
Delta R.T. 0.002 min
Lab File: A209880.D
Acq: 12 Nov 2014 5:42 pm

Tgt Ion: 91 Resp: 297866

Ion	Ratio	Lower	Upper
91	100		
106	30.0	0.8	60.8
77	8.9	0.0	38.5

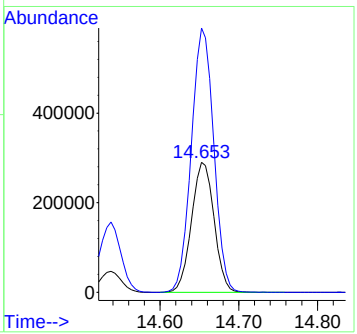


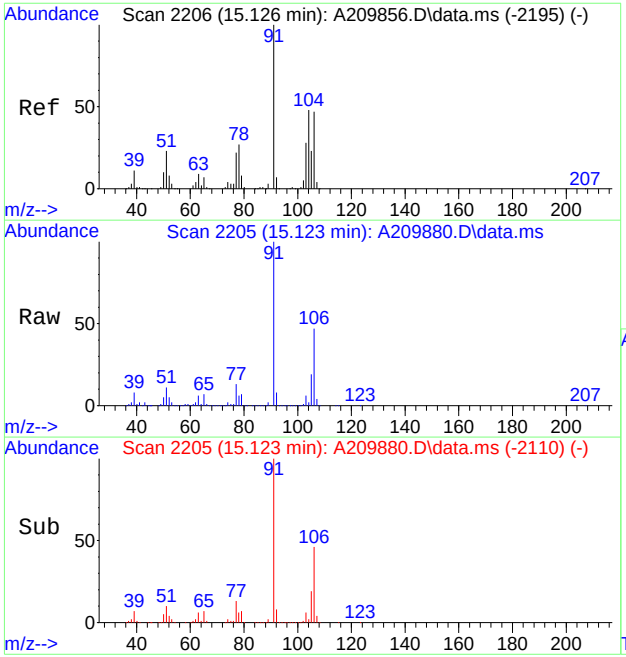


#94
m,p-xylene
Concen: 207.92 ug/L
RT: 14.653 min Scan# 2115
Delta R.T. -0.003 min
Lab File: A209880.D
Acq: 12 Nov 2014 5:42 pm

Tgt Ion:106 Resp: 578256

Ion	Ratio	Lower	Upper
106	100		
91	203.3	169.6	229.6

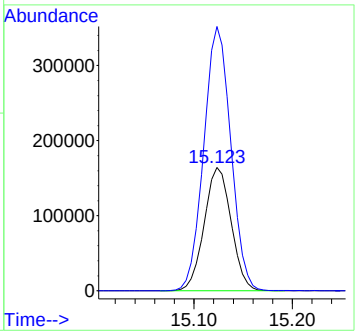


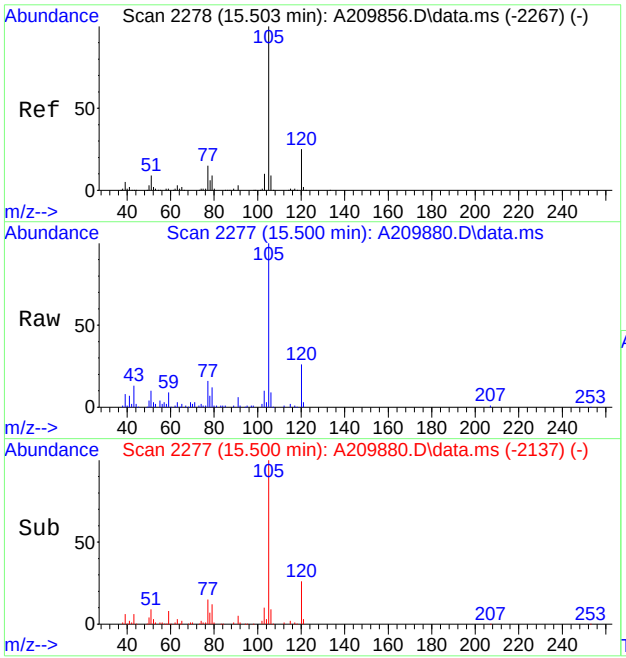


#95
o-xylene
Concen: 103.18 ug/L
RT: 15.123 min Scan# 2205
Delta R.T. -0.003 min
Lab File: A209880.D
Acq: 12 Nov 2014 5:42 pm

Tgt Ion:106 Resp: 313264

Ion	Ratio	Lower	Upper
106	100		
91	214.2	183.9	243.9

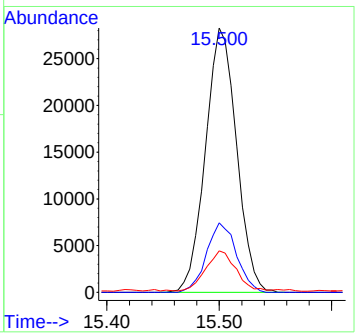




#99
isopropylbenzene
Concen: 6.93 ug/L
RT: 15.500 min Scan# 2277
Delta R.T. -0.003 min
Lab File: A209880.D
Acq: 12 Nov 2014 5:42 pm

Tgt Ion:105 Resp: 54462

Ion	Ratio	Lower	Upper
105	100		
120	26.3	0.0	55.3
77	15.1	0.0	45.1



7.1.5

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209880.D
Acq On : 12 Nov 2014 5:42 pm
Operator : CourtneM
Sample : jb80728-3
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.6 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\MA7918.M
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

Signal : TIC: A209880.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.706	5	22	119	rVB	188754	1730673	9.27%	1.847%
2	4.464	132	167	214	rBV2	510307	5311203	28.44%	5.669%
3	4.794	214	230	360	rVV2	1196050	13201416	70.69%	14.091%
4	5.808	394	424	477	rVV	3277757	18676040	100.00%	19.934%
5	6.232	494	505	540	rVV2	1065508	4245017	22.73%	4.531%
6	6.473	540	551	578	rVV	455769	1356458	7.26%	1.448%
7	6.677	578	590	599	rVV	219278	659861	3.53%	0.704%
8	6.776	599	609	638	rVV	501606	1622322	8.69%	1.732%
9	7.032	638	658	715	rVV3	100575	634770	3.40%	0.678%
10	7.754	781	796	854	rVV4	780879	5230842	28.01%	5.583%
11	8.141	854	870	903	rVV2	402294	1544737	8.27%	1.649%
12	8.502	928	939	956	rVV	164211	486483	2.60%	0.519%
13	9.135	1052	1060	1070	rVV2	100606	322092	1.72%	0.344%
14	9.407	1099	1112	1129	rVV2	665623	2095104	11.22%	2.236%
15	10.097	1234	1244	1252	rVV3	381635	1002683	5.37%	1.070%
16	10.317	1263	1286	1305	rVB4	225174	1634487	8.75%	1.745%
17	10.594	1319	1339	1345	rBV2	142899	715344	3.83%	0.764%
18	10.651	1345	1350	1394	rVB3	268617	1355655	7.26%	1.447%
19	10.934	1394	1404	1418	rBV	126776	381293	2.04%	0.407%
20	11.049	1418	1426	1446	rVV	276597	689189	3.69%	0.736%
21	11.530	1510	1518	1532	rBV	184270	652688	3.49%	0.697%
22	11.619	1532	1535	1560	rVB3	150613	476806	2.55%	0.509%
23	12.027	1603	1613	1629	rVB2	124992	347522	1.86%	0.371%
24	12.189	1629	1644	1669	rBV4	165247	591409	3.17%	0.631%
25	12.377	1669	1680	1704	rVB6	87148	356066	1.91%	0.380%
26	12.571	1704	1717	1733	rBV2	147457	441998	2.37%	0.472%
27	12.707	1733	1743	1751	rBV	368477	837067	4.48%	0.893%
28	12.780	1751	1757	1764	rVV	406884	858279	4.60%	0.916%
29	12.848	1764	1770	1819	rVB3	218486	730806	3.91%	0.780%
30	13.497	1888	1894	1914	rVB	353161	782418	4.19%	0.835%
31	14.213	2025	2031	2040	rVB	268948	537174	2.88%	0.573%
32	14.307	2040	2049	2064	rVB2	129104	330973	1.77%	0.353%
33	14.454	2064	2077	2086	rBV2	629177	1414883	7.58%	1.510%
34	14.537	2086	2093	2104	rVB	360258	710412	3.80%	0.758%
35	14.653	2104	2115	2138	rBV	1830875	3711211	19.87%	3.961%
36	15.123	2196	2205	2218	rBV	975202	1887805	10.11%	2.015%
37	15.740	2312	2323	2353	rBV	322574	752622	4.03%	0.803%
38	15.960	2353	2365	2371	rBV2	135205	327045	1.75%	0.349%
39	16.038	2371	2380	2391	rVV	724321	2139594	11.46%	2.284%
40	16.127	2391	2397	2416	rVB	561262	1168291	6.26%	1.247%

LSC Area Percent Report

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Data File : A209880.D
Acq On : 12 Nov 2014 5:42 pm
Operator : CourtneM
Sample : jb80728-3
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.6 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\MA7918.M
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

41	16.394	2439	2448	2473	rBV	822028	1541180	8.25%	1.645%
42	16.572	2473	2482	2515	rBV	1689504	3136227	16.79%	3.347%
43	17.069	2564	2577	2598	rBV2	970646	2523551	13.51%	2.694%
44	17.241	2598	2610	2615	rBV2	103883	328389	1.76%	0.351%
45	17.341	2624	2629	2642	rVB2	527929	996931	5.34%	1.064%
46	17.738	2698	2705	2721	rVB	227899	424953	2.28%	0.454%
47	17.947	2739	2745	2763	rVB	168979	340353	1.82%	0.363%
48	18.246	2796	2802	2823	rVB2	168595	465714	2.49%	0.497%
49	18.795	2901	2907	2938	rVB2	275360	652402	3.49%	0.696%
50	19.611	3051	3063	3088	rBV	635603	1329217	7.12%	1.419%

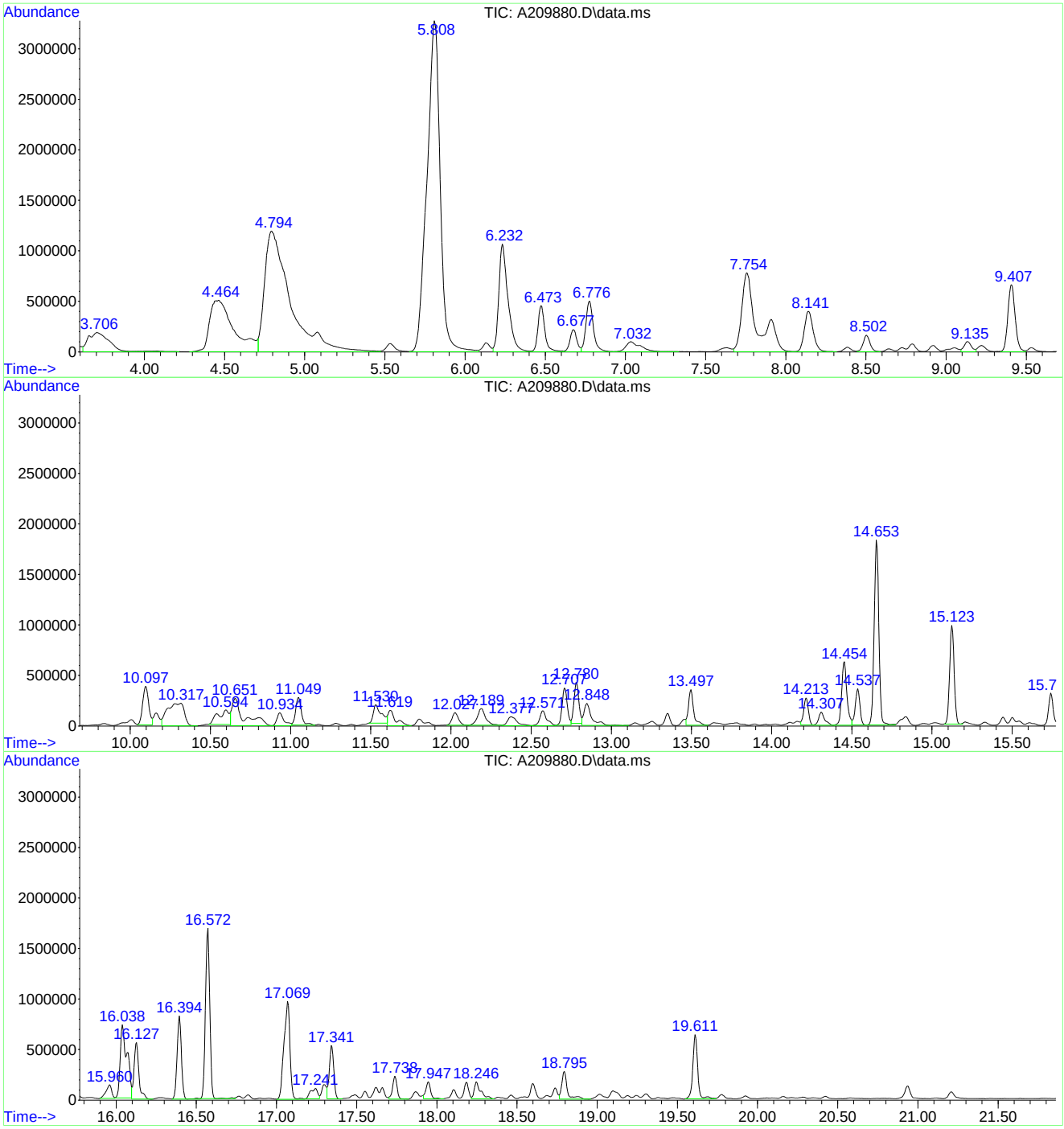
Sum of corrected areas: 93689655

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209880.D
Acq On : 12 Nov 2014 5:42 pm
Operator : CourtneM
Sample : jb80728-3
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209880.D
Acq On : 12 Nov 2014 5:42 pm
Operator : CourtneM
Sample : jb80728-3
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

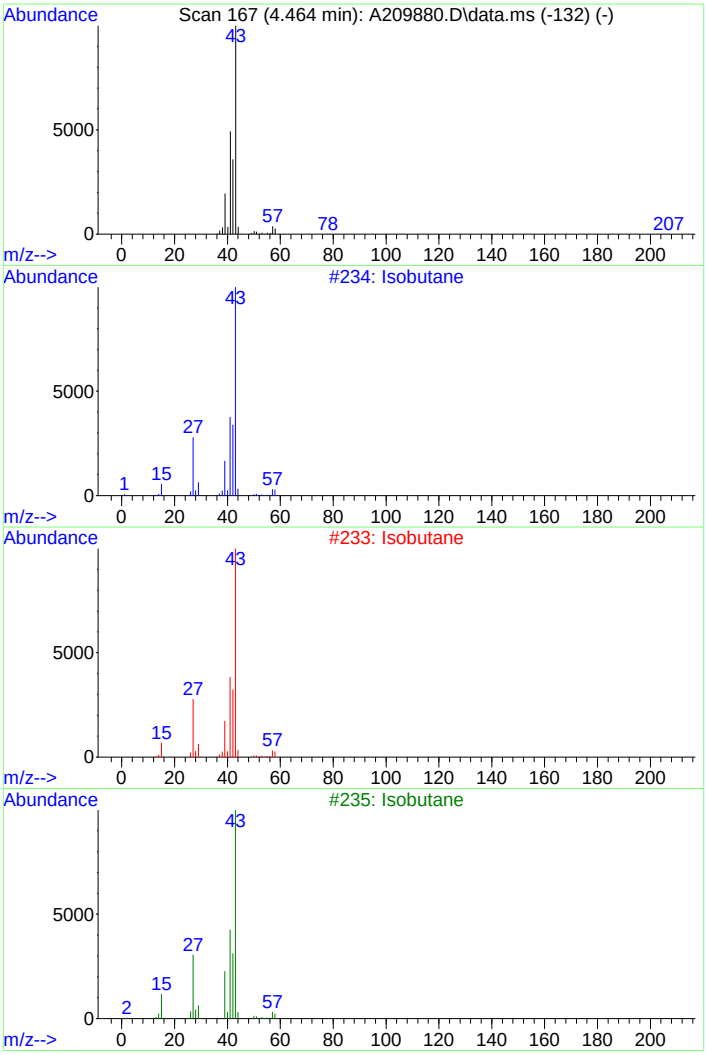
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

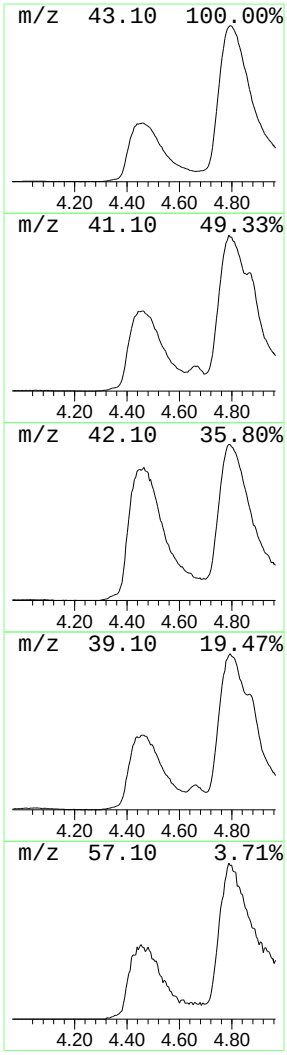
****

Peak Number 2 alkane Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.464	264.85 ug/L	5311200	pentafluorobenzene	10.097

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Isobutane	58	C4H10	000075-28-5	86
2	Isobutane	58	C4H10	000075-28-5	80
3	Isobutane	58	C4H10	000075-28-5	72
4	Isobutane	58	C4H10	000075-28-5	56
5	Propane, 2-nitro-	89	C3H7NO2	000079-46-9	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209880.D
Acq On : 12 Nov 2014 5:42 pm
Operator : CourtneM
Sample : jb80728-3
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

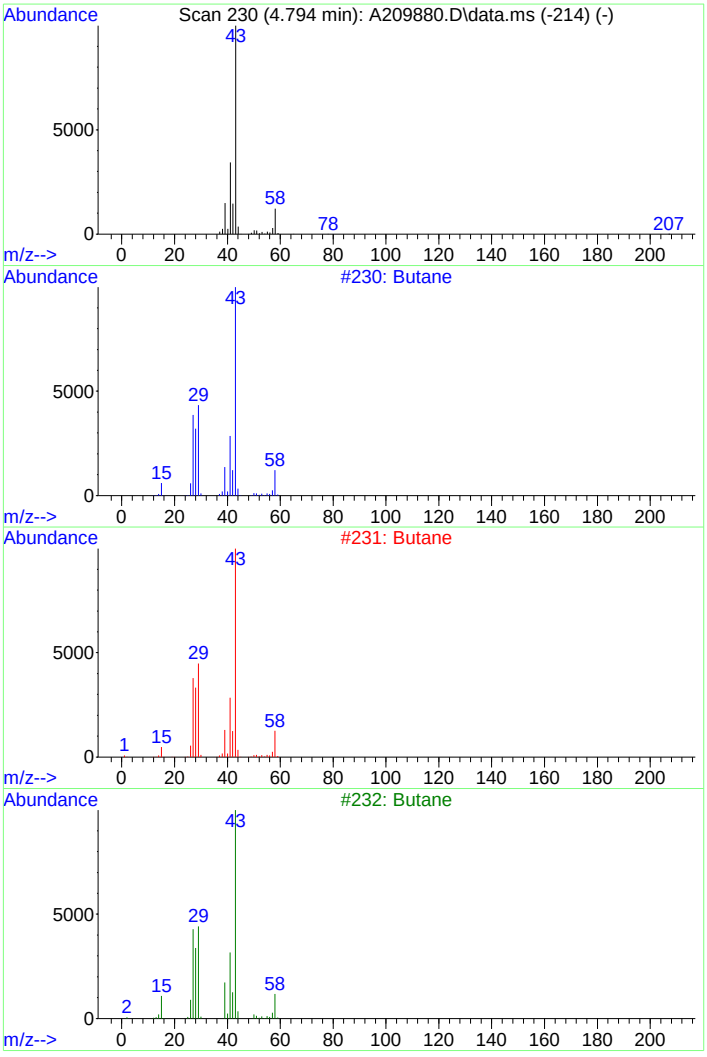
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

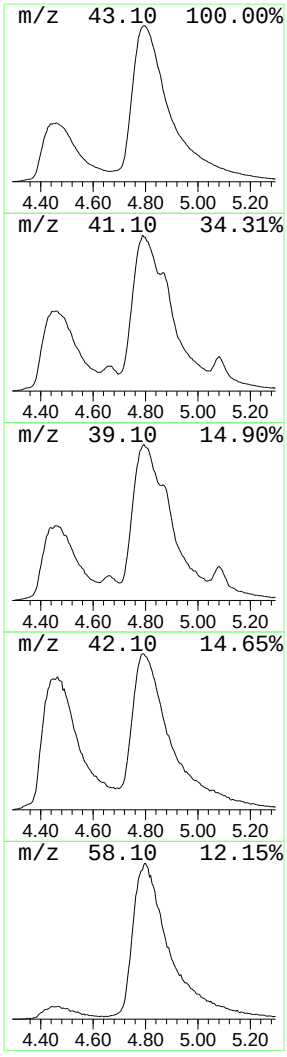
****

Peak Number 3 alkane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.794	658.30 ug/L	13201400	pentafluorobenzene	10.097

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	80
2	Butane	58	C4H10	000106-97-8	80
3	Butane	58	C4H10	000106-97-8	58
4	Isobutane	58	C4H10	000075-28-5	9
5	Isopropylsulfonyl chloride	142	C3H7ClO2S	010147-37-2	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209880.D
Acq On : 12 Nov 2014 5:42 pm
Operator : CourtneM
Sample : jb80728-3
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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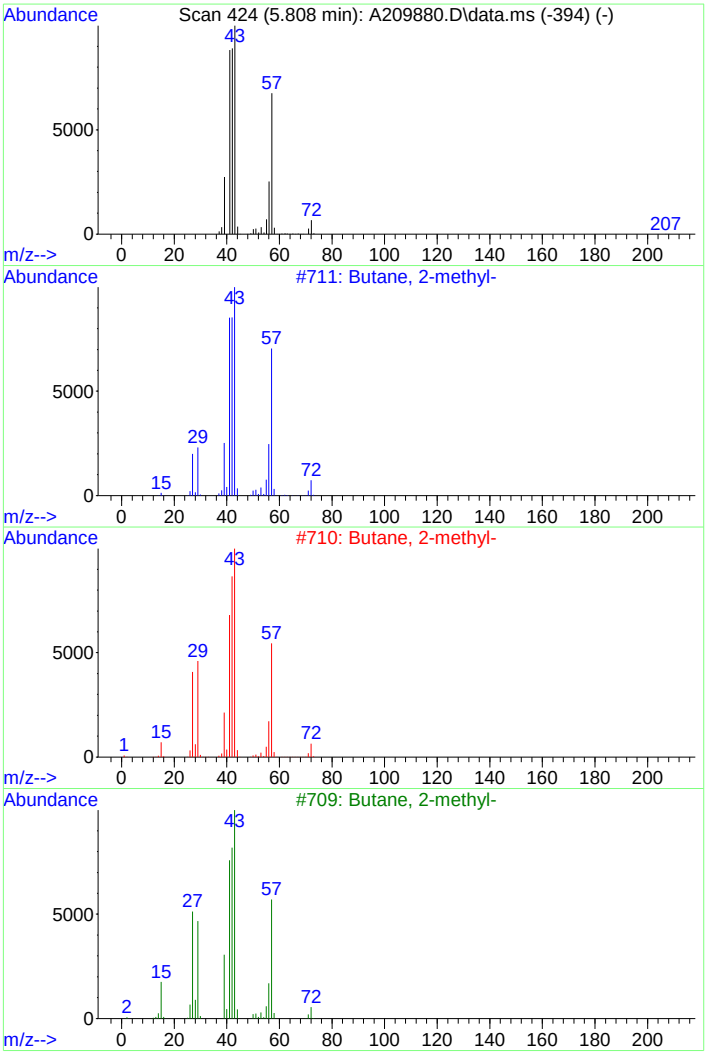
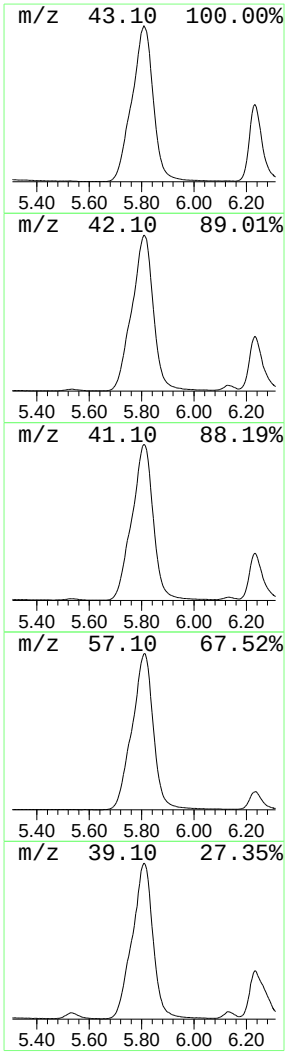
Peak Number 4 alkane Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.808	931.30 ug/L	18676000	pentafluorobenzene	10.097

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	94
2	Butane, 2-methyl-	72	C5H12	000078-78-4	91
3	Butane, 2-methyl-	72	C5H12	000078-78-4	90
4	Cyclobutane, methyl-	70	C5H10	000598-61-8	37
5	Pentane	72	C5H12	000109-66-0	36





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209880.D
Acq On : 12 Nov 2014 5:42 pm
Operator : CourtneM
Sample : jb80728-3
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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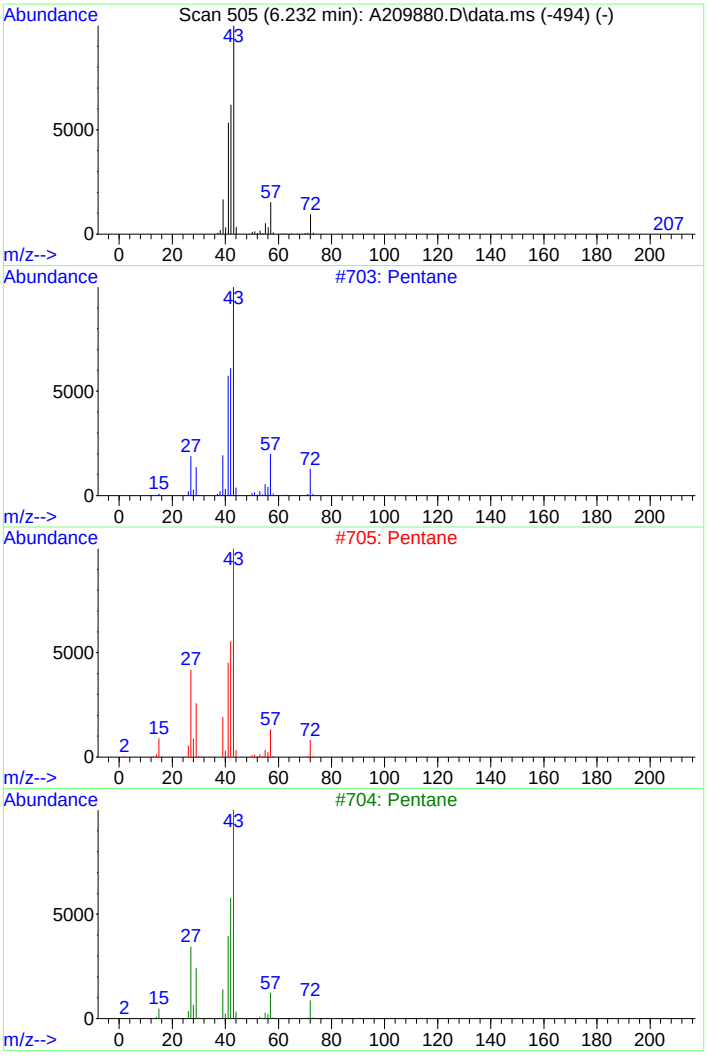
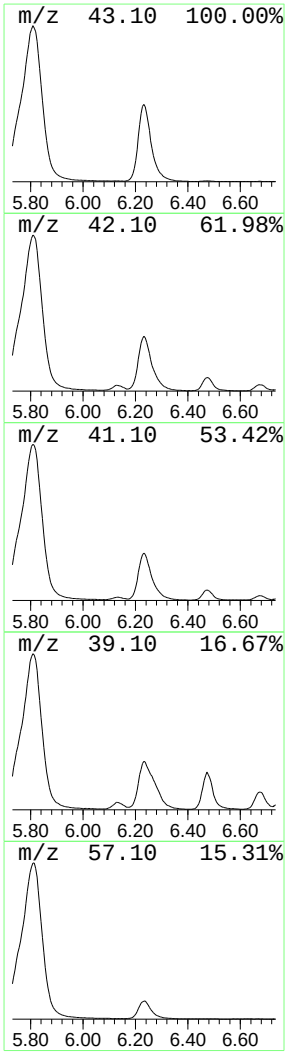
Peak Number 5 Pentane Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.232	211.68 ug/L	4245020	pentafluorobenzene	10.097

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	91
2	Pentane	72	C5H12	000109-66-0	90
3	Pentane	72	C5H12	000109-66-0	90
4	Butane, 2-methyl-	72	C5H12	000078-78-4	72
5	Pentane	72	C5H12	000109-66-0	59





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209880.D
Acq On : 12 Nov 2014 5:42 pm
Operator : CourtneM
Sample : jb80728-3
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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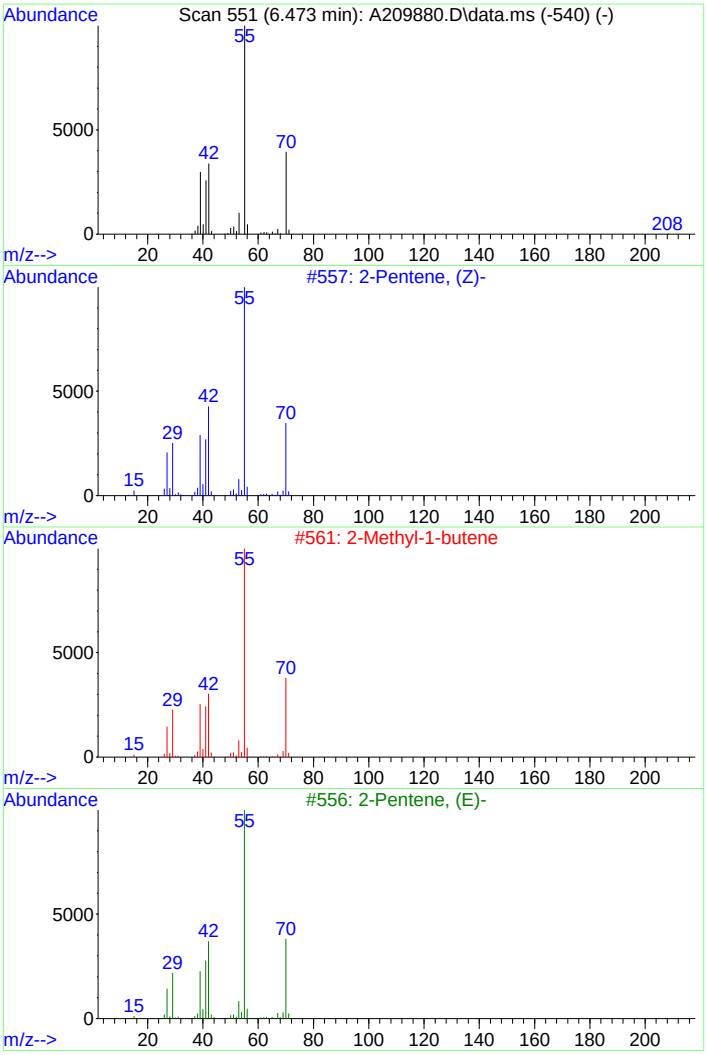
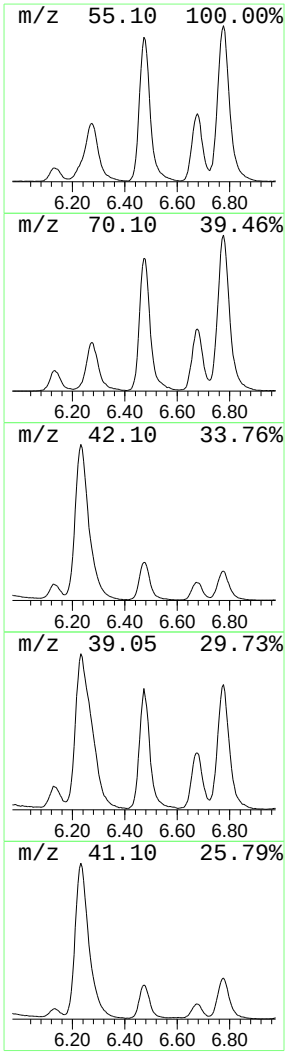
Peak Number 6 alkene Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.473	67.64 ug/L	1356460	pentafluorobenzene	10.097

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentene, (Z)-	70	C5H10	000627-20-3	91
2	2-Methyl-1-butene	70	C5H10	000563-46-2	91
3	2-Pentene, (E)-	70	C5H10	000646-04-8	91
4	2-Pentene, (Z)-	70	C5H10	000627-20-3	91
5	2-Pentene	70	C5H10	000109-68-2	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209880.D
Acq On : 12 Nov 2014 5:42 pm
Operator : CourtneM
Sample : jb80728-3
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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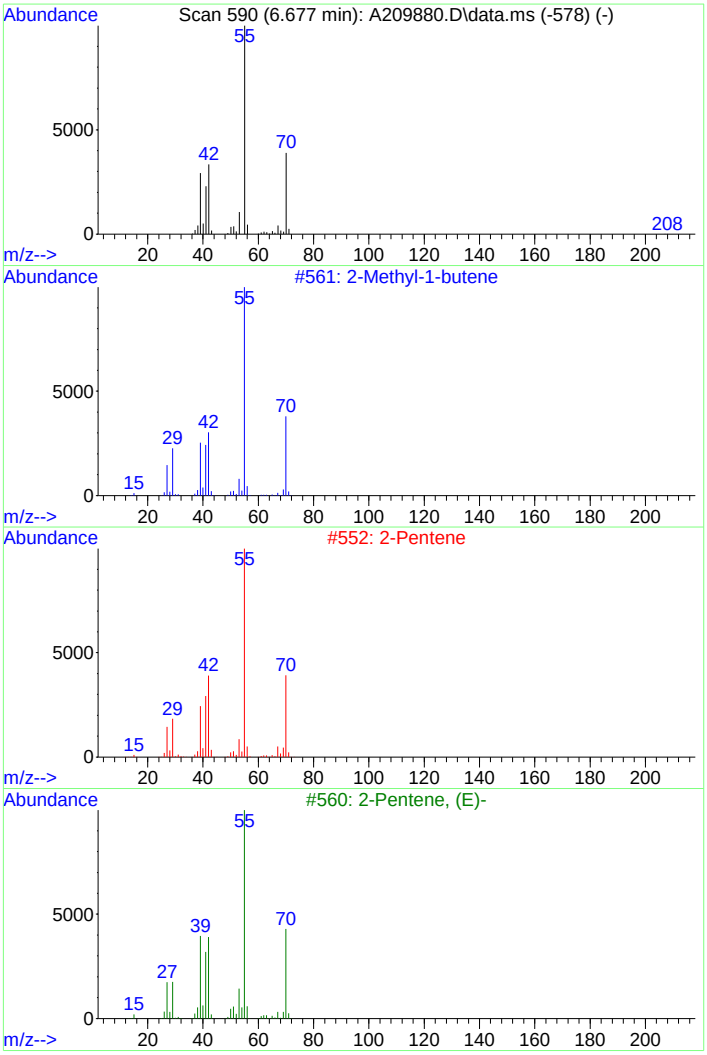
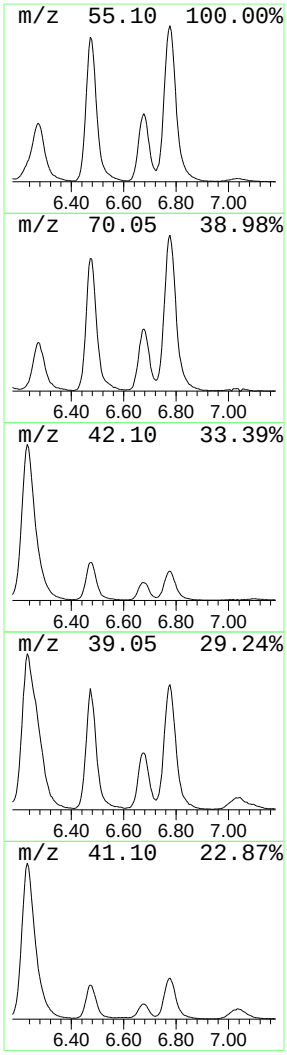
Peak Number 7 alkene Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.677	32.90 ug/L	659861	pentafluorobenzene	10.097

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Methyl-1-butene	70	C5H10	000563-46-2	91
2	2-Pentene	70	C5H10	000109-68-2	90
3	2-Pentene, (E)-	70	C5H10	000646-04-8	87
4	2-Pentene, (Z)-	70	C5H10	000627-20-3	87
5	Cyclopropane, 1,2-dimethyl-, trans-	70	C5H10	002402-06-4	87





Library Search Compound Report

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Operator : CourtneM
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Misc : MS76458,VA7919,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

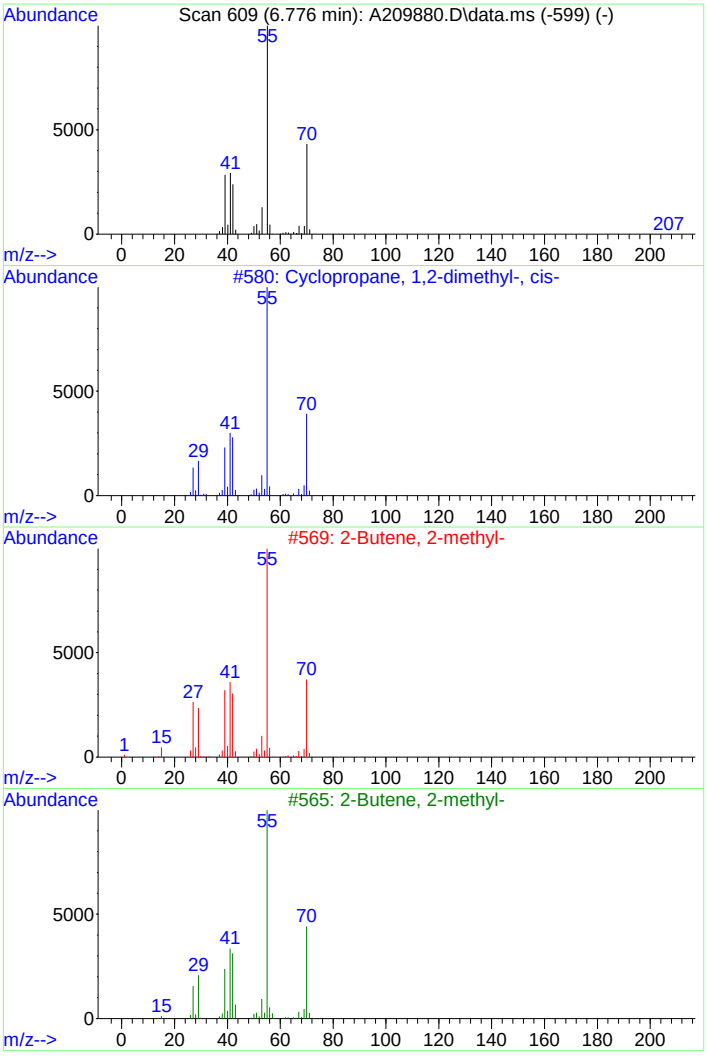
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

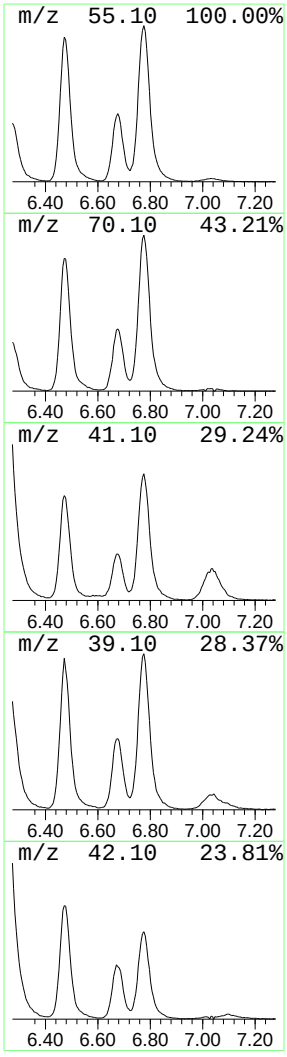
****

Peak Number 8 alkene Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.776	80.90 ug/L	1622320	pentafluorobenzene	10.097

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopropane, 1,2-dimethyl-, cis-	70	C5H10	000930-18-7	91
2	2-Butene, 2-methyl-	70	C5H10	000513-35-9	90
3	2-Butene, 2-methyl-	70	C5H10	000513-35-9	90
4	2-Methyl-1-butene	70	C5H10	000563-46-2	86
5	Cyclopropane, 1,1-dimethyl-	70	C5H10	001630-94-0	86





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Data File : A209880.D
Acq On : 12 Nov 2014 5:42 pm
Operator : CourtneM
Sample : jb80728-3
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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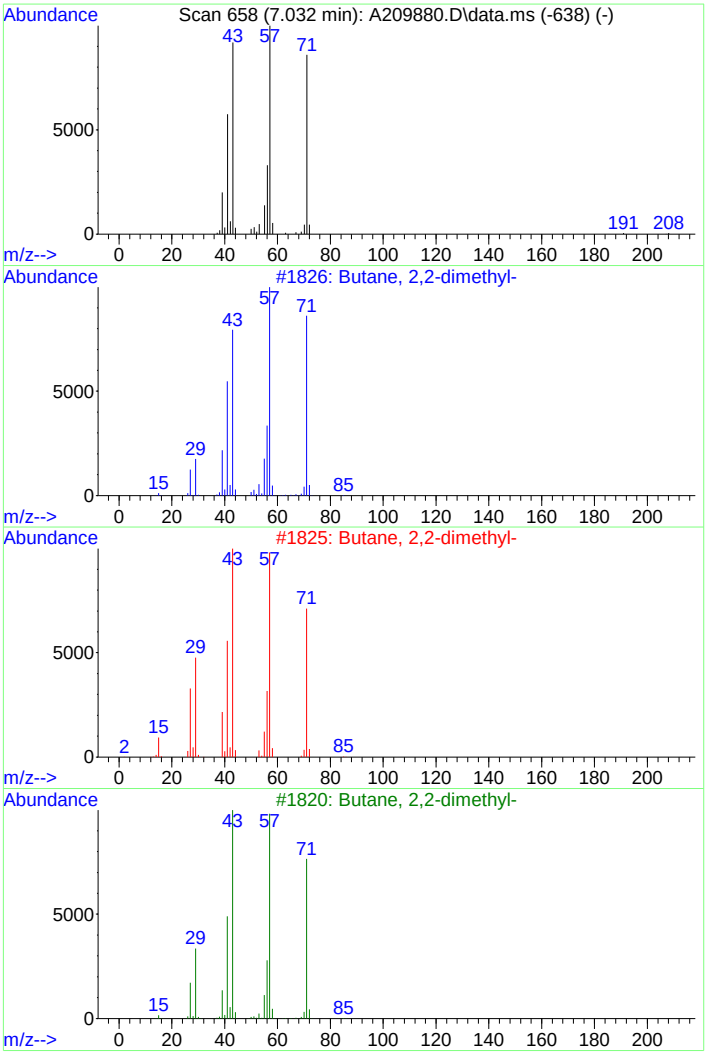
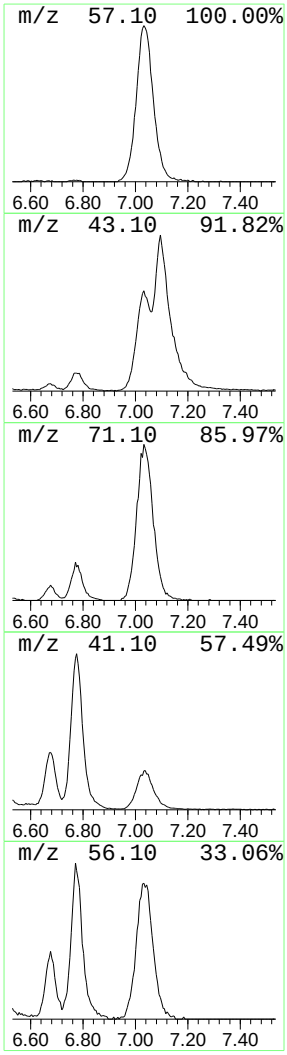
Peak Number 9 alkane Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.032	31.65 ug/L	634770	pentafluorobenzene	10.097

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2,2-dimethyl-	86	C6H14	000075-83-2	90
2	Butane, 2,2-dimethyl-	86	C6H14	000075-83-2	90
3	Butane, 2,2-dimethyl-	86	C6H14	000075-83-2	83
4	Butane, 2,2-dimethyl-	86	C6H14	000075-83-2	83
5	Heptane, 3-ethyl-5-methyl-	142	C10H22	052896-90-9	72





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209880.D
Acq On : 12 Nov 2014 5:42 pm
Operator : CourtneM
Sample : jb80728-3
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

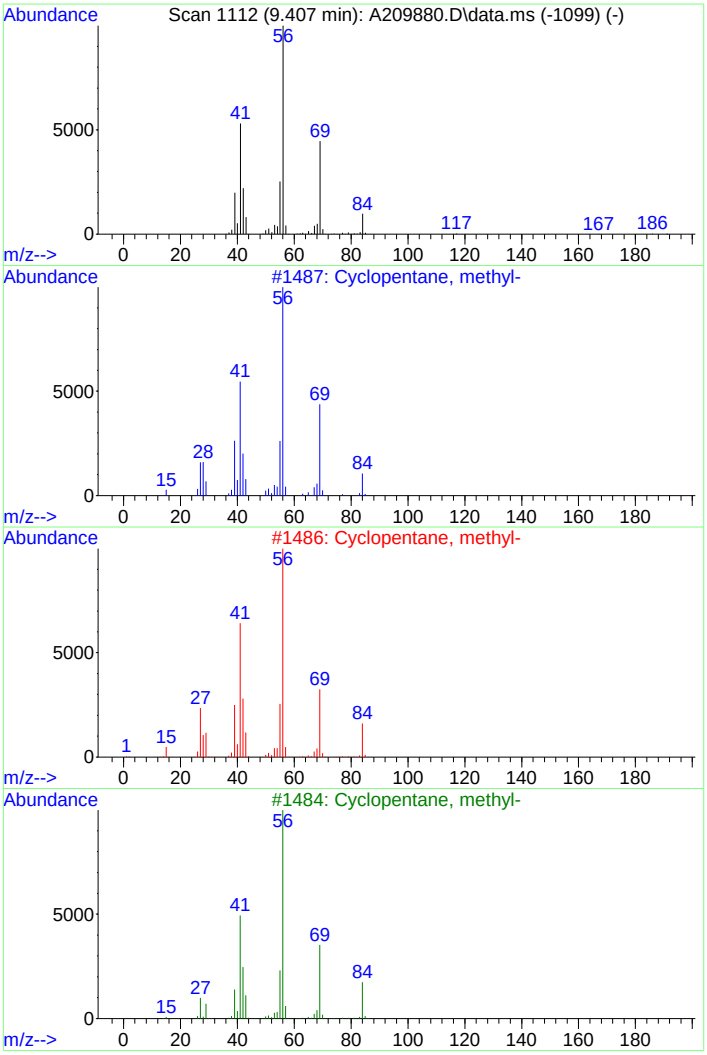
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

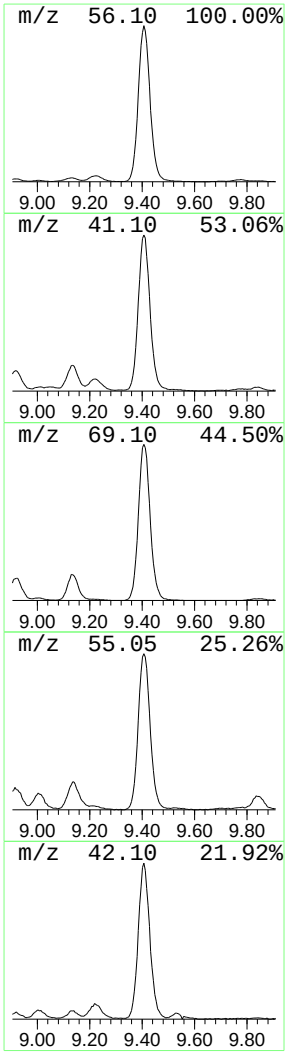
****

Peak Number 10 Cyclopentane, methyl- Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.407	104.47 ug/L	2095100	pentafluorobenzene	10.097

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	94
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	90
3	Cyclopentane, methyl-	84	C6H12	000096-37-7	78
4	1H-Tetrazole, 5-methyl-	84	C2H4N4	004076-36-2	72
5	Cyclopropane, propyl-	84	C6H12	002415-72-7	72





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209880.D
Acq On : 12 Nov 2014 5:42 pm
Operator : CourtneM
Sample : jb80728-3
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

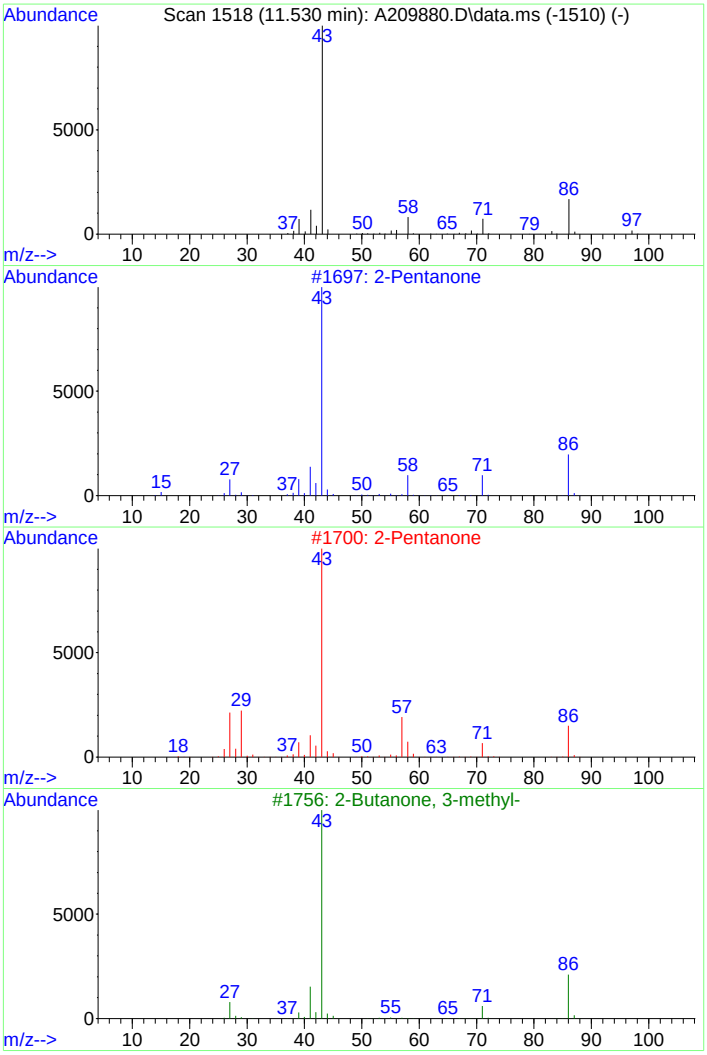
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

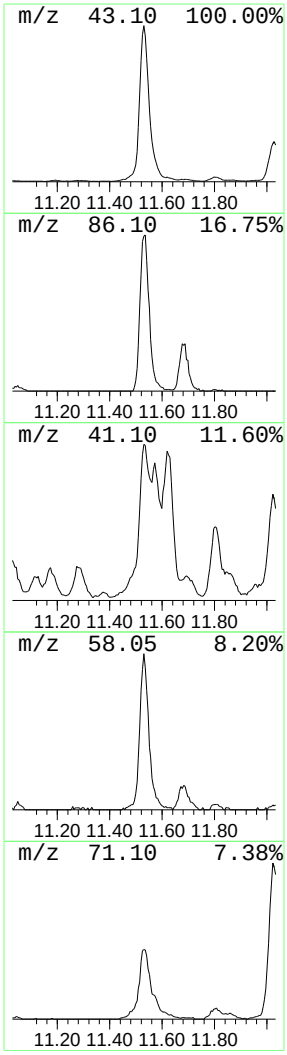
****

Peak Number 11 ketones Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.530	47.35 ug/L	652688	1,4-difluorobenzene	11.049

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentanone	86	C5H10O	000107-87-9	58
2	2-Pentanone	86	C5H10O	000107-87-9	53
3	2-Butanone, 3-methyl-	86	C5H10O	000563-80-4	53
4	2-Pentanone	86	C5H10O	000107-87-9	53
5	2-Pentanone	86	C5H10O	000107-87-9	43





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209880.D
Acq On : 12 Nov 2014 5:42 pm
Operator : CourtneM
Sample : jb80728-3
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

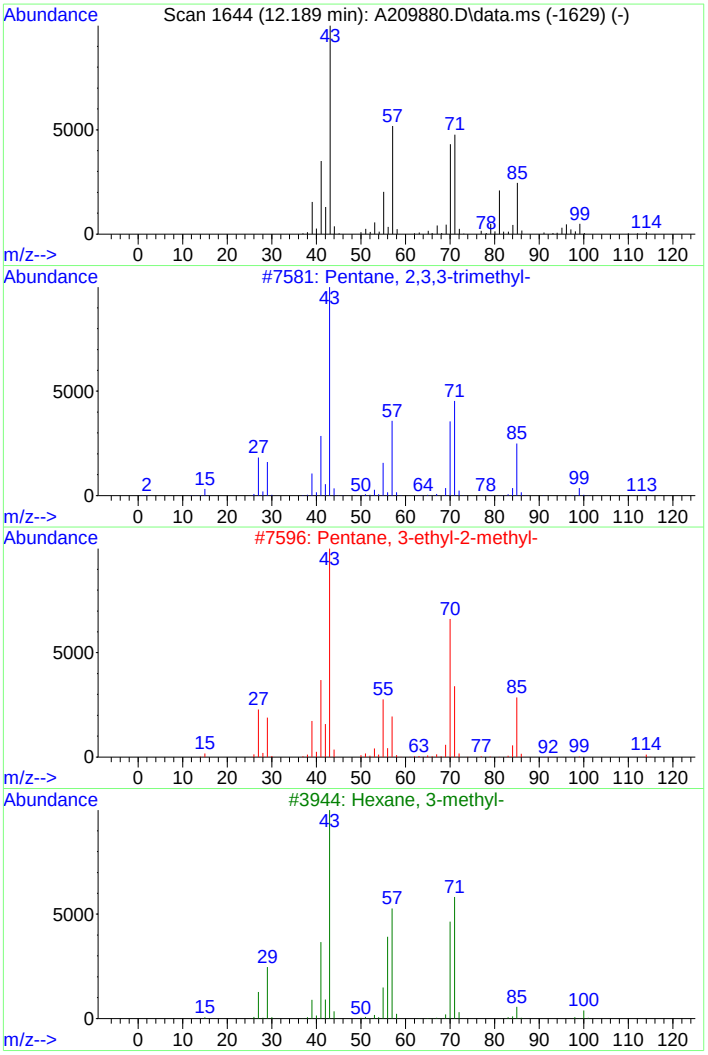
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

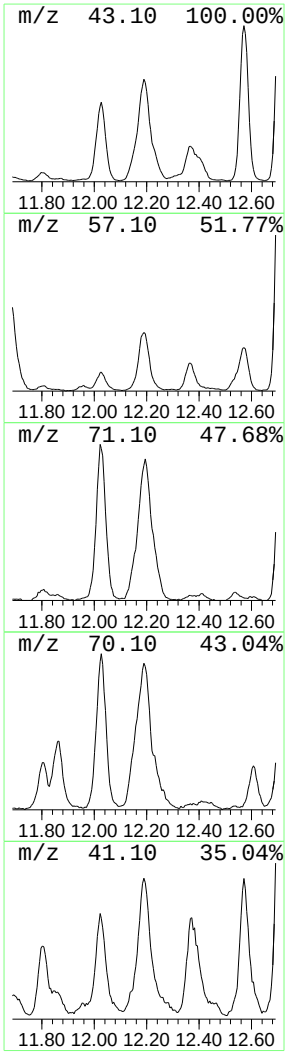
****

Peak Number 12 alkane Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.189	42.91 ug/L	591409	1,4-difluorobenzene	11.049

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	78
2	Pentane, 3-ethyl-2-methyl-	114	C8H18	000609-26-7	68
3	Hexane, 3-methyl-	100	C7H16	000589-34-4	64
4	Hexane, 3-methyl-	100	C7H16	000589-34-4	64
5	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	59





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209880.D
Acq On : 12 Nov 2014 5:42 pm
Operator : CourtneM
Sample : jb80728-3
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

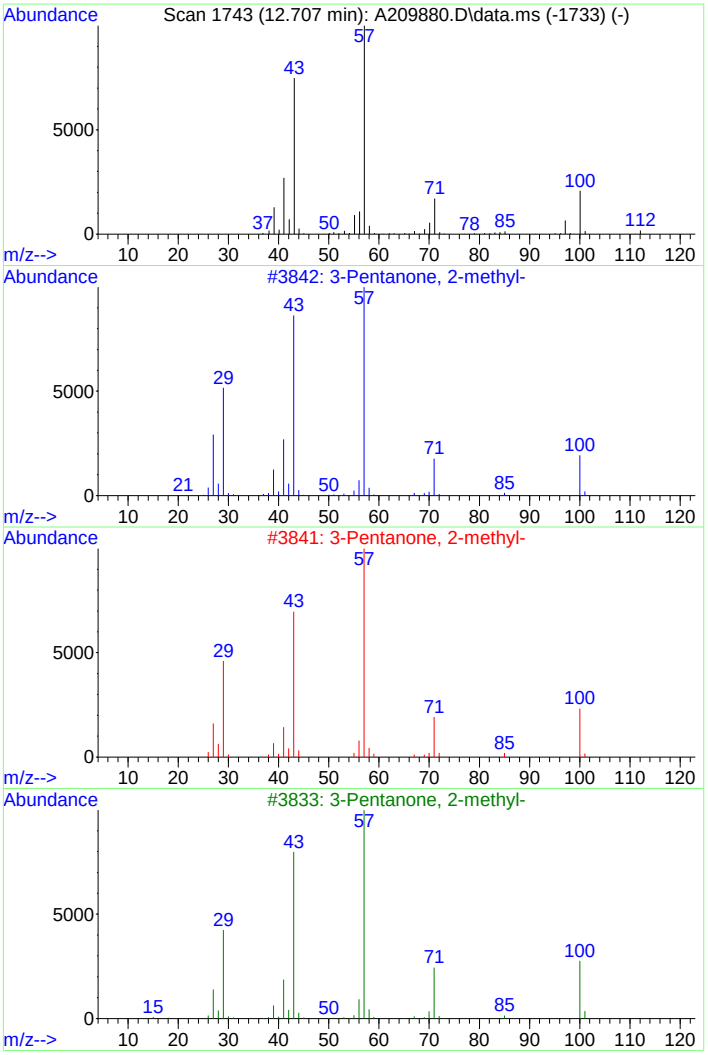
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

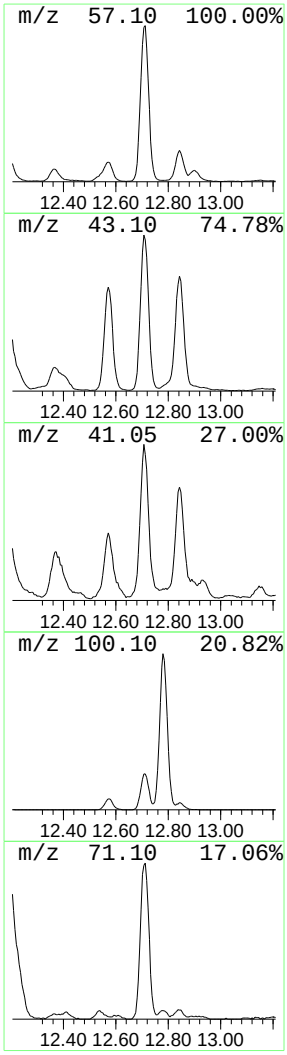
****

Peak Number 13 ketones Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.707	60.73 ug/L	837067	1,4-difluorobenzene	11.049

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	3-Pentanone, 2-methyl-	100	C6H12O	000565-69-5	86
2	3-Pentanone, 2-methyl-	100	C6H12O	000565-69-5	80
3	3-Pentanone, 2-methyl-	100	C6H12O	000565-69-5	80
4	Decane, 2,6,8-trimethyl-	184	C13H28	062108-26-3	50
5	Decane, 2,5,9-trimethyl-	184	C13H28	062108-22-9	42





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209880.D
Acq On : 12 Nov 2014 5:42 pm
Operator : CourtneM
Sample : jb80728-3
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

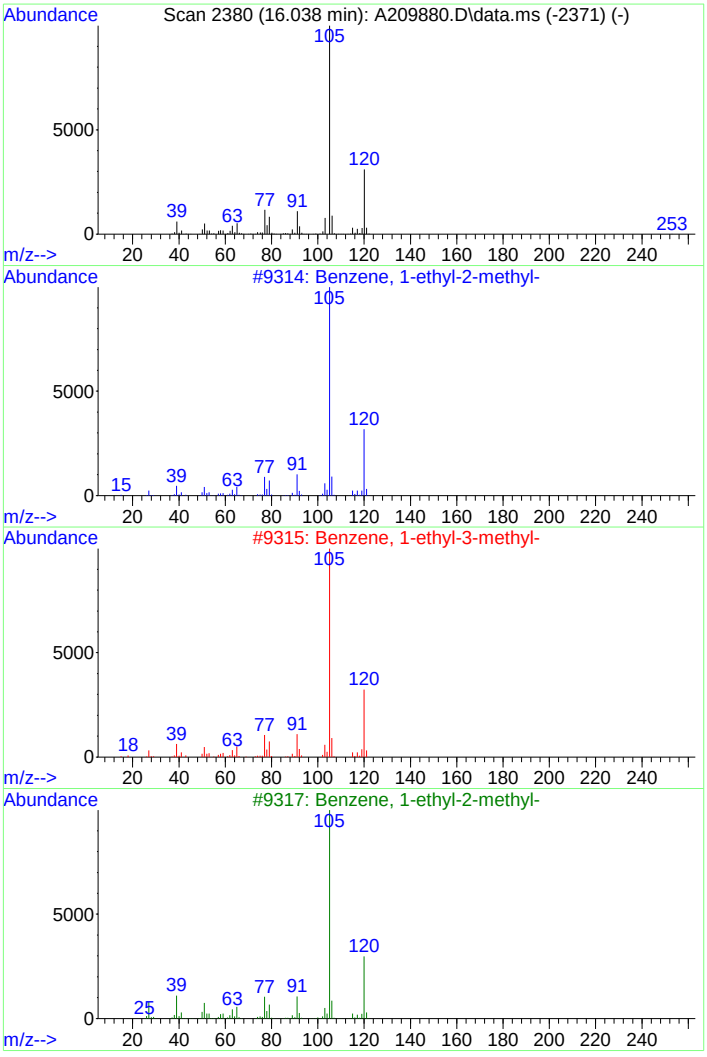
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

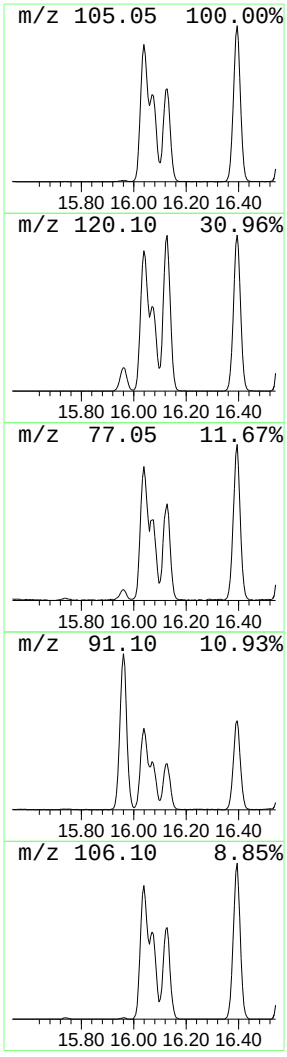
****

Peak Number 14 C3 alkyl benzene Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.038	42.39 ug/L	2139590	1,4-dichlorobenzene-d4	17.048

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
2	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	94
3	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
4	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	94
5	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209880.D
Acq On : 12 Nov 2014 5:42 pm
Operator : CourtneM
Sample : jb80728-3
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

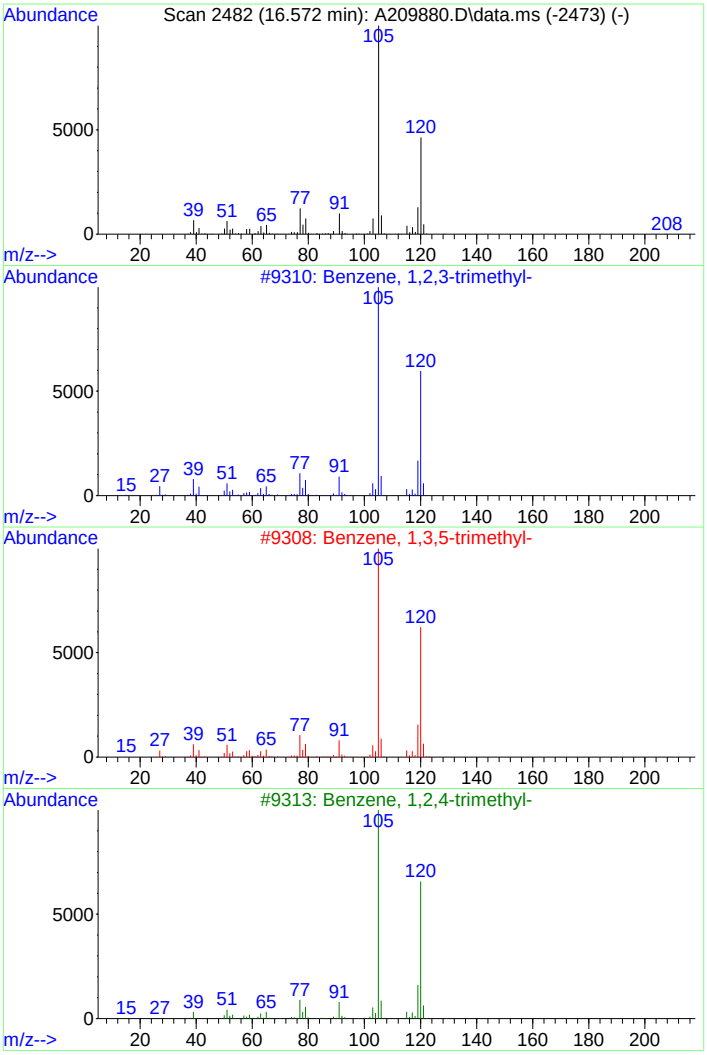
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

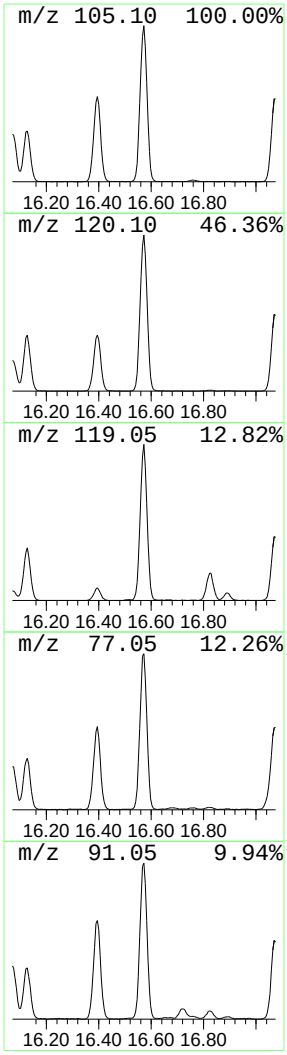
****

Peak Number 16 C3 alkyl benzene Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.572	62.14 ug/L	3136230	1,4-dichlorobenzene-d4	17.048

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
5	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209880.D
Acq On : 12 Nov 2014 5:42 pm
Operator : CourtneM
Sample : jb80728-3
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

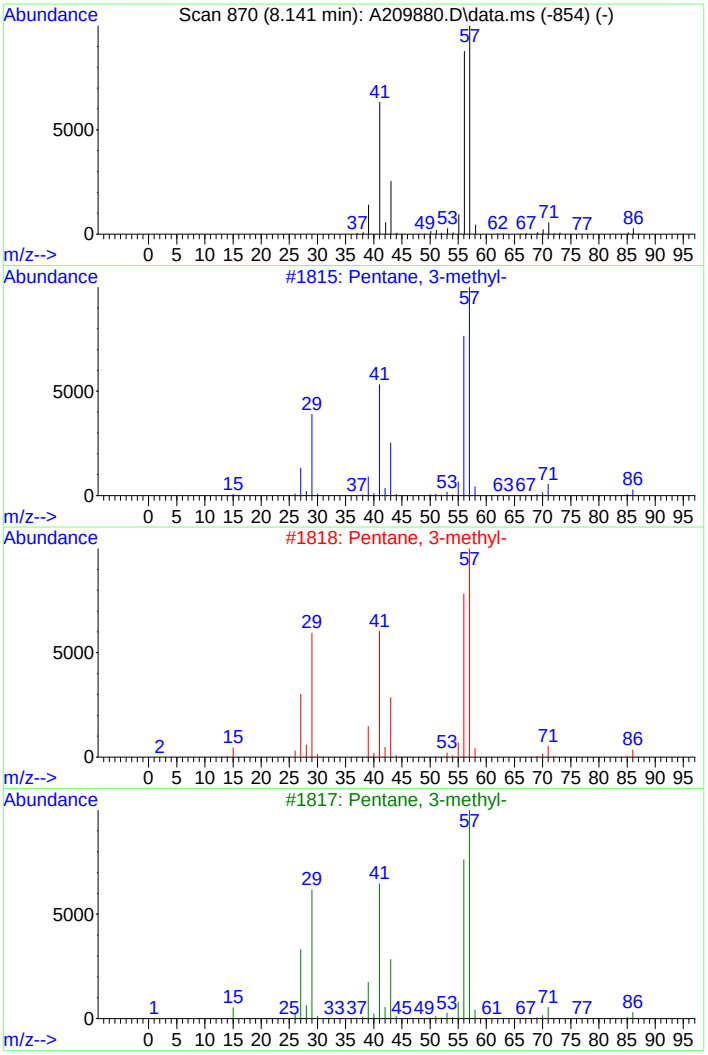
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

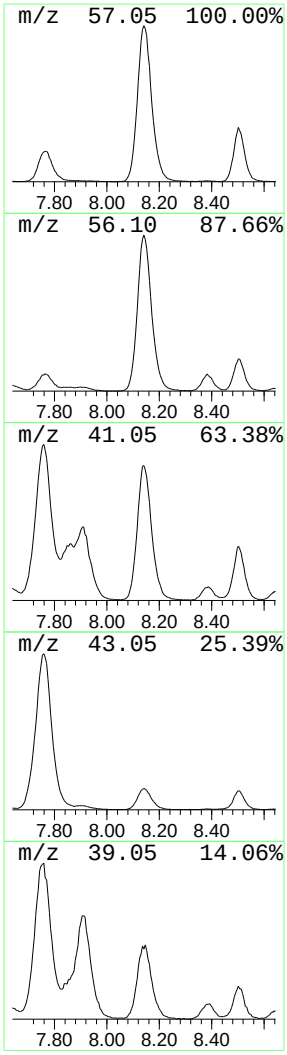
****

Peak Number 17 alkane Concentration Rank 17

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.141	77.03 ug/L	1544740	pentafluorobenzene	10.097

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
2	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
3	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
4	Hexane, 2,2,3-trimethyl-	128	C9H20	016747-25-4	64
5	Oxirane, (1-methylethyl)-	86	C5H10O	001438-14-8	45





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209880.D
Acq On : 12 Nov 2014 5:42 pm
Operator : CourtneM
Sample : jb80728-3
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
alkane	4.464	264.9	ug/L	5311200	2	10.097	1002680	50.0
alkane	4.794	658.3	ug/L	13201400	2	10.097	1002680	50.0
alkane	5.808	931.3	ug/L	18676000	2	10.097	1002680	50.0
Pentane	6.232	211.7	ug/L	4245020	2	10.097	1002680	50.0
alkene	6.473	67.6	ug/L	1356460	2	10.097	1002680	50.0
alkene	6.677	32.9	ug/L	659861	2	10.097	1002680	50.0
alkene	6.776	80.9	ug/L	1622320	2	10.097	1002680	50.0
alkane	7.032	31.6	ug/L	634770	2	10.097	1002680	50.0
Cyclopentane, m...	9.407	104.5	ug/L	2095100	2	10.097	1002680	50.0
ketones	11.530	47.4	ug/L	652688	3	11.049	689189	50.0
alkane	12.189	42.9	ug/L	591409	3	11.049	689189	50.0
ketones	12.707	60.7	ug/L	837067	3	11.049	689189	50.0
C3 alkyl benzene	16.038	42.4	ug/L	2139590	5	17.048	2523550	50.0
C3 alkyl benzene	16.572	62.1	ug/L	3136230	5	17.048	2523550	50.0
alkane	8.141	77.0	ug/L	1544740	2	10.097	1002680	50.0

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\A\
Data File : A209917.D
Acq On : 13 Nov 2014 12:46 pm
Operator : CourtneM
Sample : jb80728-4
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 13 15:37:33 2014
Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 12 09:40:25 2014
Response via : Initial Calibration

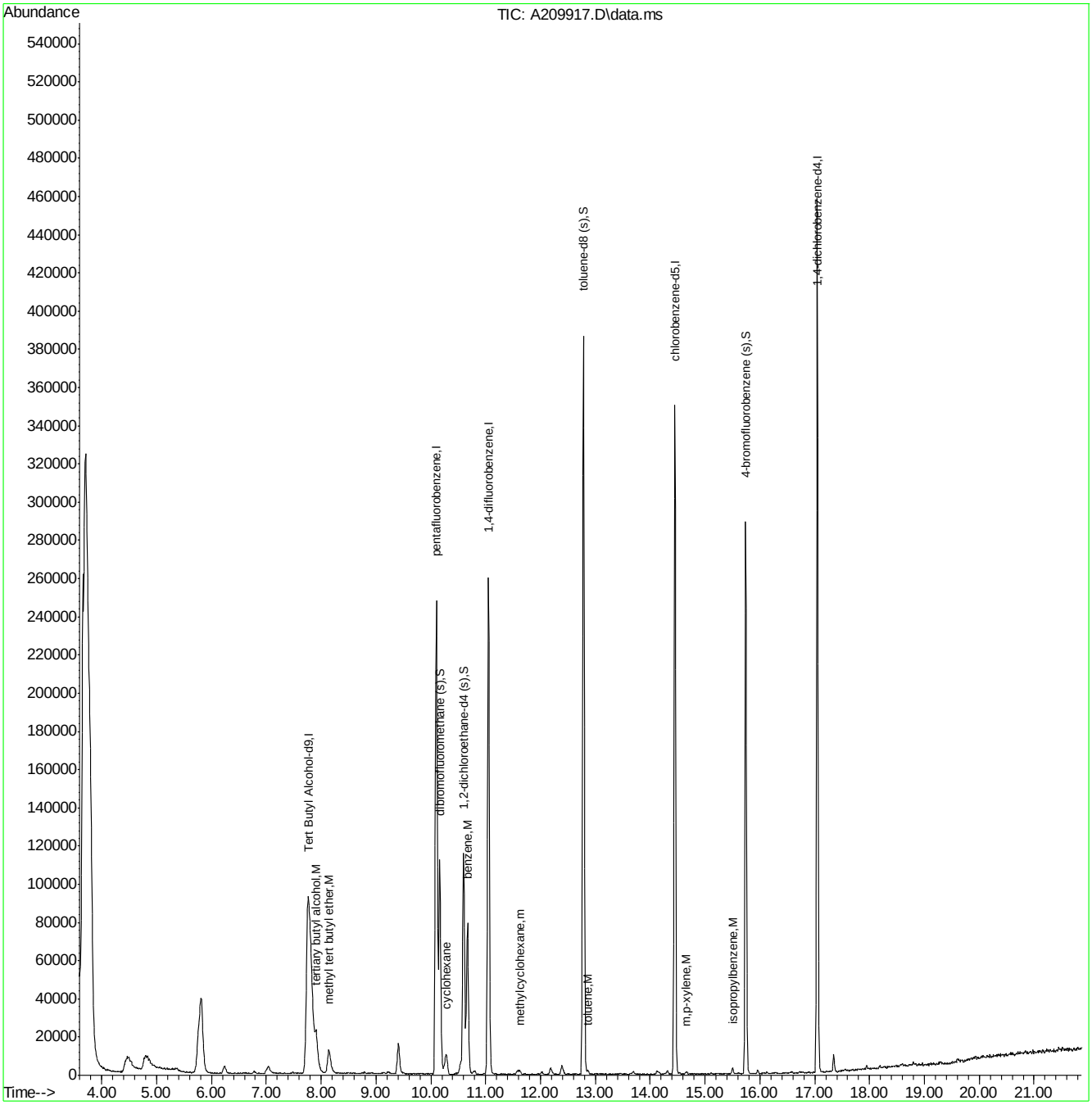
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.767	65	343202	500.00	ug/L	0.00
4) pentafluorobenzene	10.100	168	234152	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.052	114	263955	50.00	ug/L	0.00
83) chlorobenzene-d5	14.451	117	228826	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.046	152	140165	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.163	113	87939	48.67	ug/L	0.00
Spiked Amount 50.000	Range 59 - 130		Recovery = 97.34%			
47) 1,2-dichloroethane-d4 (s)	10.597	65	99991	45.62	ug/L	0.00
Spiked Amount 50.000	Range 65 - 123		Recovery = 91.24%			
75) toluene-d8 (s)	12.783	98	310053	50.83	ug/L	0.00
Spiked Amount 50.000	Range 77 - 125		Recovery = 101.66%			
101) 4-bromofluorobenzene (s)	15.738	95	115578	53.01	ug/L	0.00
Spiked Amount 50.000	Range 71 - 132		Recovery = 106.02%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.914	59	3459	5.51	ug/L #	1
27) methyl tert butyl ether	8.139	73	18138	2.46	ug/L	62
49) cyclohexane	10.278	84	5691	1.93	ug/L	66
59) benzene	10.670	78	86373	13.59	ug/L	97
68) methylcyclohexane	11.627	83	1204	0.44	ug/L #	71
77) toluene	12.867	92	767	0.20	ug/L #	73
94) m,p-xylene	14.661	106	575	0.22	ug/L #	71
99) isopropylbenzene	15.503	105	2777	0.34	ug/L	94

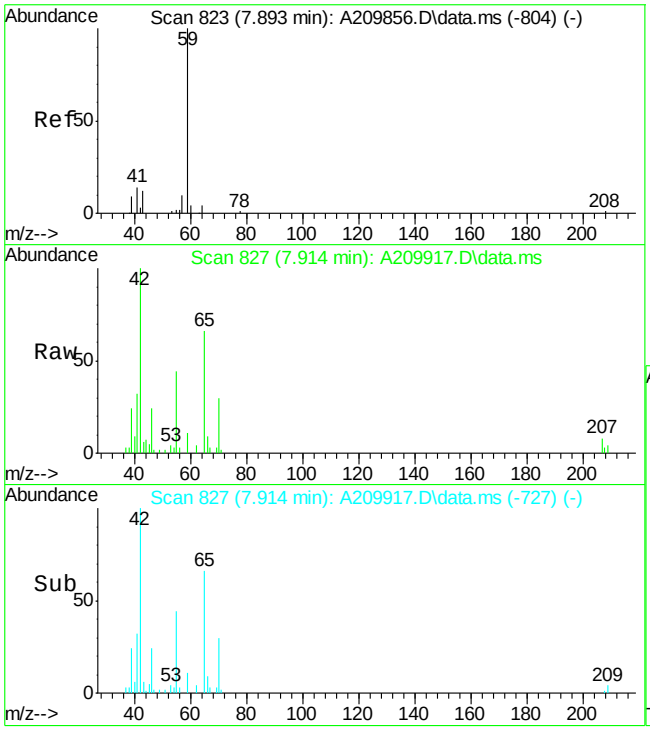
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\A\
Data File : A209917.D
Acq On : 13 Nov 2014 12:46 pm
Operator : CourtneM
Sample : jb80728-4
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 13 15:37:33 2014
Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 12 09:40:25 2014
Response via : Initial Calibration

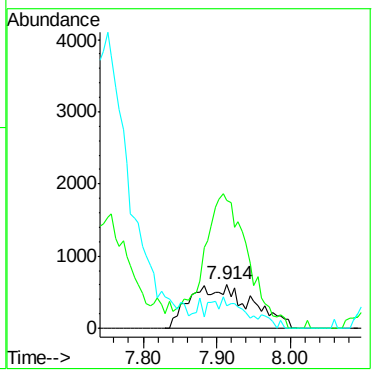


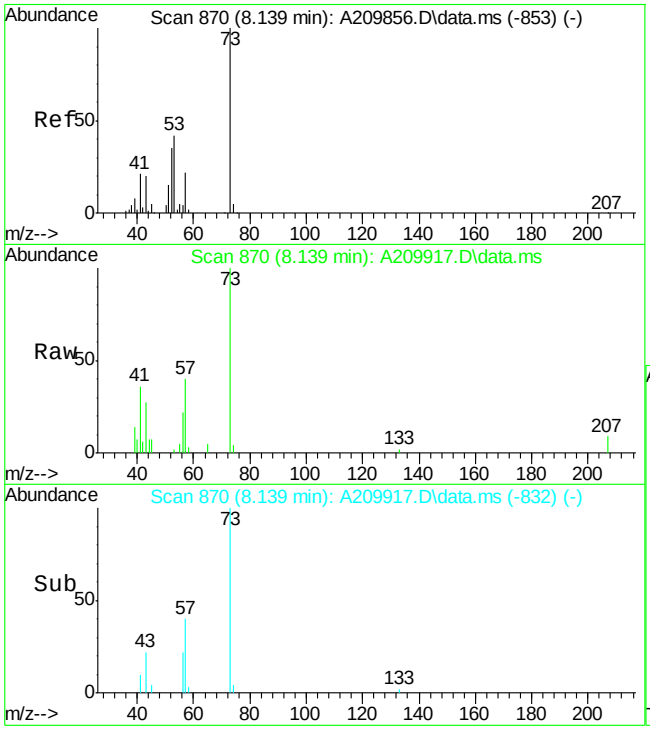


#3
tertiary butyl alcohol
Concen: 5.51 ug/L
RT: 7.914 min Scan# 827
Delta R.T. 0.021 min
Lab File: A209917.D
Acq: 13 Nov 2014 12:46 pm

Tgt Ion: 59 Resp: 3459

Ion	Ratio	Lower	Upper
59	100		
41	272.6	0.0	49.5#
43	14.4	0.0	43.1

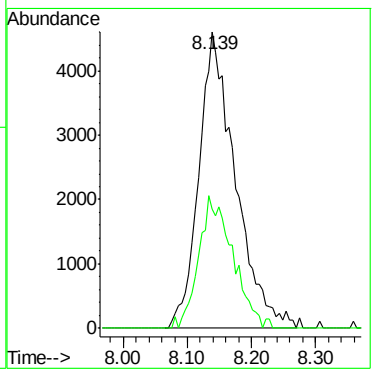


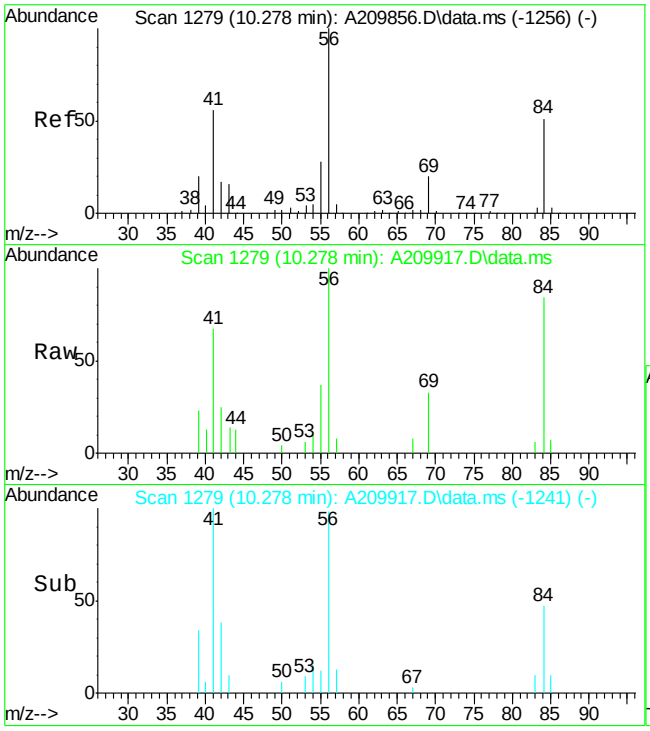


#27
methyl tert butyl ether
Concen: 2.46 ug/L
RT: 8.139 min Scan# 870
Delta R.T. -0.000 min
Lab File: A209917.D
Acq: 13 Nov 2014 12:46 pm

Tgt Ion: 73 Resp: 18138

Ion	Ratio	Lower	Upper
73	100		
57	41.3	0.0	52.7

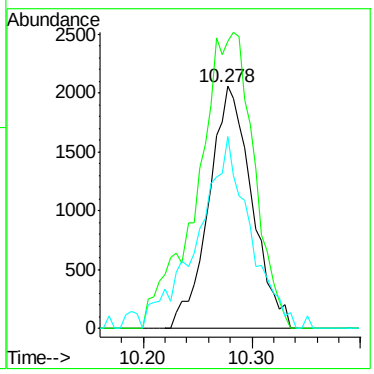


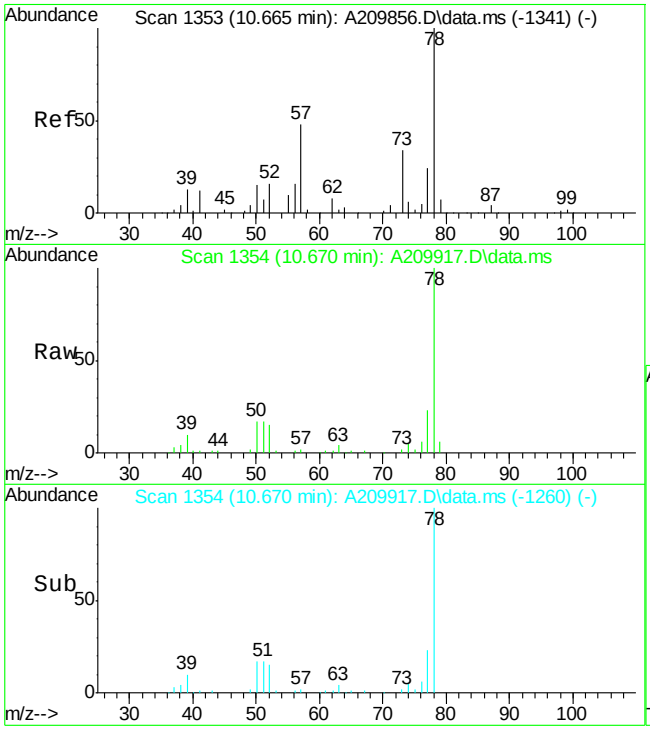


#49
cyclohexane
Concen: 1.93 ug/L
RT: 10.278 min Scan# 1279
Delta R.T. -0.000 min
Lab File: A209917.D
Acq: 13 Nov 2014 12:46 pm

Tgt Ion: 84 Resp: 5691

Ion	Ratio	Lower	Upper
84	100		
56	161.1	157.0	291.6
41	95.7	88.5	164.3

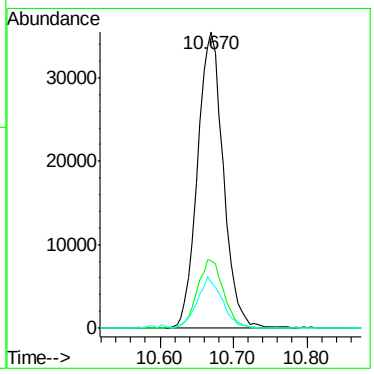


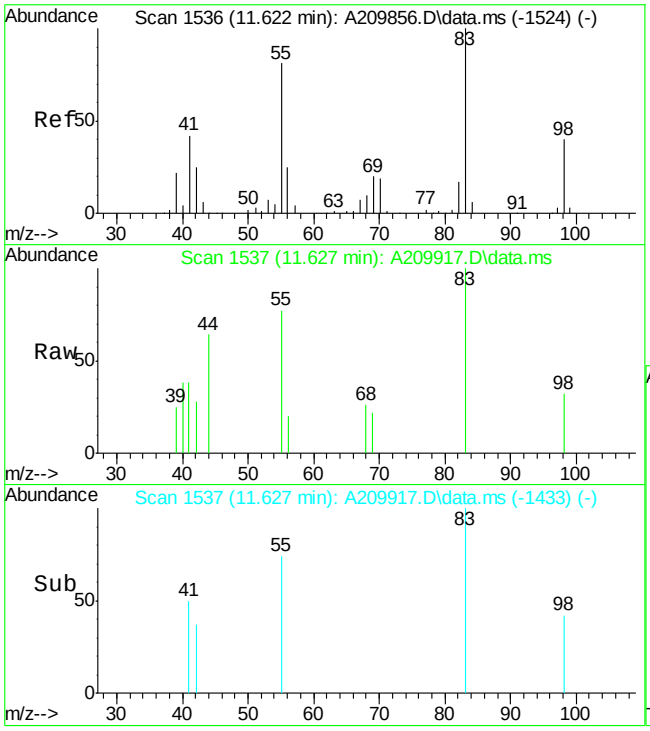


#59
benzene
Concen: 13.59 ug/L
RT: 10.670 min Scan# 1354
Delta R.T. 0.005 min
Lab File: A209917.D
Acq: 13 Nov 2014 12:46 pm

Tgt Ion: 78 Resp: 86373

Ion	Ratio	Lower	Upper
78	100		
77	22.6	0.0	54.5
52	15.5	0.0	45.9

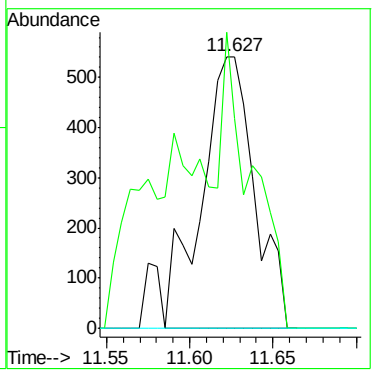


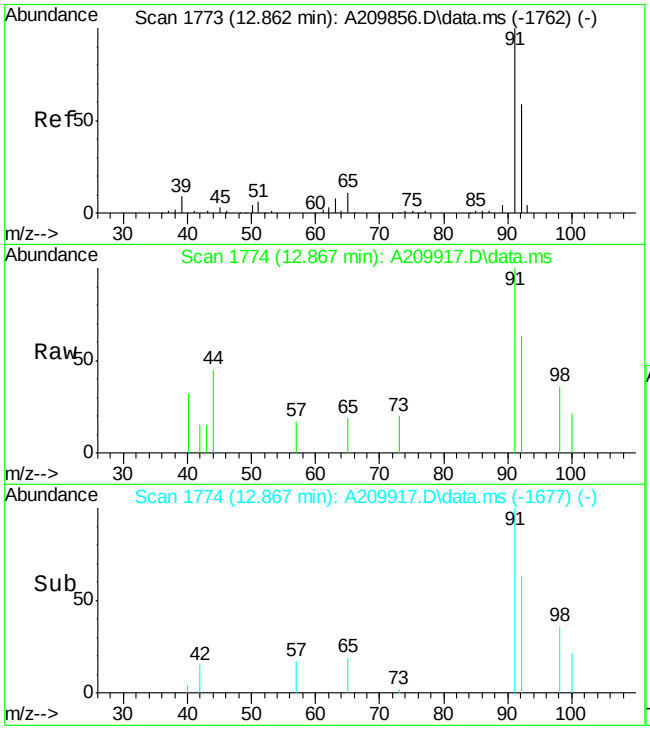


#68
methylcyclohexane
Concen: 0.44 ug/L
RT: 11.627 min Scan# 1537
Delta R.T. 0.005 min
Lab File: A209917.D
Acq: 13 Nov 2014 12:46 pm

Tgt Ion: 83 Resp: 1204

Ion	Ratio	Lower	Upper
83	100		
55	60.0	56.4	116.4
85	0.0	0.0	30.1

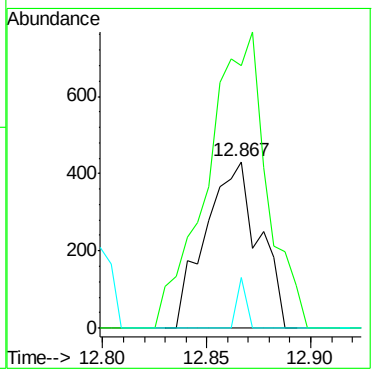


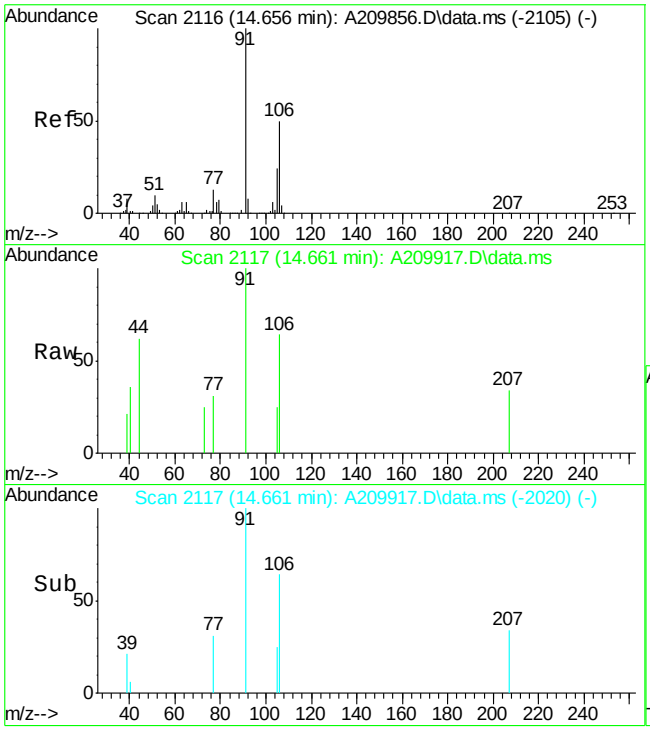


#77
toluene
Concen: 0.20 ug/L
RT: 12.867 min Scan# 1774
Delta R.T. 0.005 min
Lab File: A209917.D
Acq: 13 Nov 2014 12:46 pm

Tgt Ion: 92 Resp: 767

Ion	Ratio	Lower	Upper
92	100		
91	132.5	139.6	199.6#
65	30.6	0.0	49.5

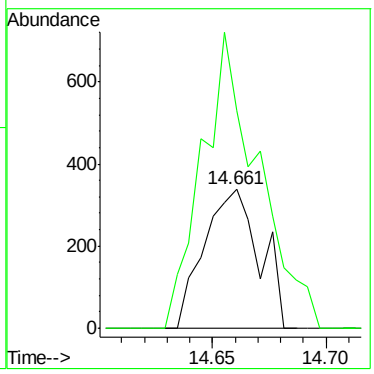


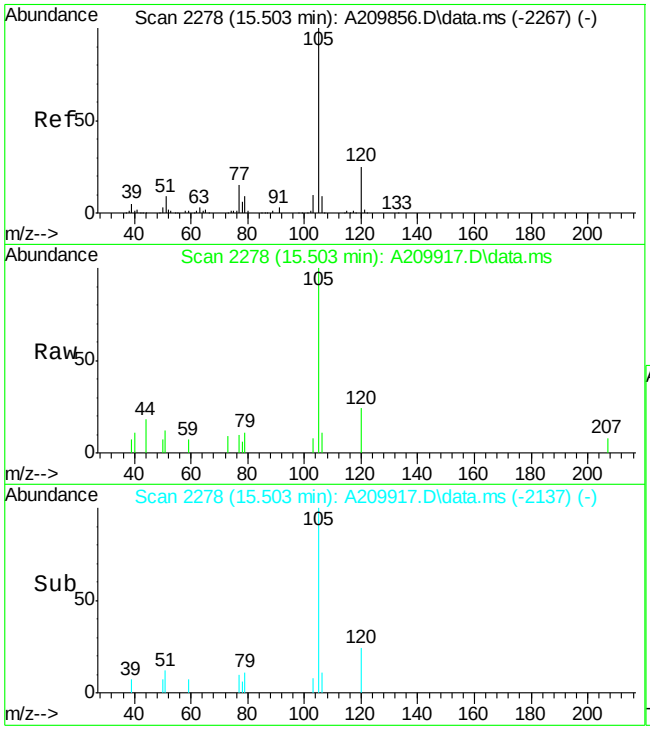


#94
m,p-xylene
Concen: 0.22 ug/L
RT: 14.661 min Scan# 2117
Delta R.T. 0.005 min
Lab File: A209917.D
Acq: 13 Nov 2014 12:46 pm

Tgt Ion:106 Resp: 575

Ion	Ratio	Lower	Upper
106	100		
91	155.9	169.6	229.6#

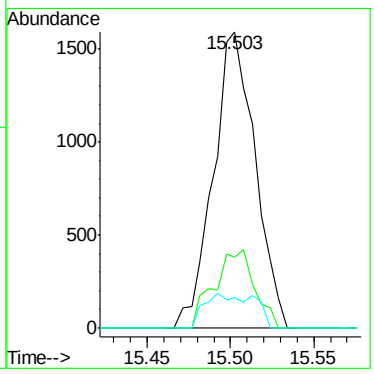




#99
isopropylbenzene
Concen: 0.34 ug/L
RT: 15.503 min Scan# 2278
Delta R.T. -0.000 min
Lab File: A209917.D
Acq: 13 Nov 2014 12:46 pm

Tgt Ion:105 Resp: 2777

Ion	Ratio	Lower	Upper
105	100		
120	23.8	0.0	55.3
77	10.2	0.0	45.1



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209917.D
Acq On : 13 Nov 2014 12:46 pm
Operator : CourtneM
Sample : jb80728-4
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 10 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.6 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\MA7918.M
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

Signal : TIC: A209917.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.704	4	22	149	rVB	323717	2925975	100.00%	27.178%
2	4.802	149	232	386	rVB5	9003	240541	8.22%	2.234%
3	5.811	407	425	498	rVB5	39115	220658	7.54%	2.050%
4	6.235	498	506	541	rVB5	3784	12744	0.44%	0.118%
5	6.428	541	543	572	rVB4	686	1184	0.04%	0.011%
6	6.606	572	577	605	rBV4	678	2366	0.08%	0.022%
7	6.784	605	611	619	rVB5	1440	3521	0.12%	0.033%
8	7.035	647	659	757	rVB6	3951	23696	0.81%	0.220%
9	7.663	757	779	780	rBV4	537	1644	0.06%	0.015%
10	7.767	780	799	857	rBV3	92474	692991	23.68%	6.437%
11	8.139	857	870	930	rVB3	12629	54239	1.85%	0.504%
12	8.531	930	945	972	rVB5	704	5080	0.17%	0.047%
13	8.792	972	995	1012	rBV3	1088	5082	0.17%	0.047%
14	8.923	1012	1020	1026	rBV5	549	1431	0.05%	0.013%
15	8.960	1026	1027	1054	rBV2	365	1331	0.05%	0.012%
16	9.221	1059	1077	1085	rVB8	1113	4868	0.17%	0.045%
17	9.315	1085	1095	1100	rVB4	448	946	0.03%	0.009%
18	9.404	1100	1112	1137	rVB4	16100	52254	1.79%	0.485%
19	9.577	1141	1145	1174	rBV4	438	1465	0.05%	0.014%
20	9.818	1186	1191	1213	rVB4	535	1970	0.07%	0.018%
21	10.016	1213	1229	1231	rVB7	623	1970	0.07%	0.018%
22	10.100	1234	1245	1296	rVB2	247991	944229	32.27%	8.770%
23	10.597	1322	1340	1348	rBV	114782	303773	10.38%	2.822%
24	10.670	1348	1354	1370	rVB	78637	187008	6.39%	1.737%
25	10.790	1370	1377	1385	rVB	1921	6010	0.21%	0.056%
26	11.047	1416	1426	1447	rBV	260176	597195	20.41%	5.547%
27	11.622	1519	1536	1547	rVB9	2530	11447	0.39%	0.106%
28	12.019	1607	1612	1629	rVB7	1604	4492	0.15%	0.042%
29	12.182	1636	1643	1657	rVB5	3459	9410	0.32%	0.087%
30	12.391	1672	1683	1707	rVB3	4673	15423	0.53%	0.143%
31	12.783	1748	1758	1781	rBV	386605	809713	27.67%	7.521%
32	13.432	1868	1882	1883	rBV4	539	1253	0.04%	0.012%
33	13.458	1883	1887	1895	rVB3	670	1245	0.04%	0.012%
34	13.641	1918	1922	1925	rBV2	542	941	0.03%	0.009%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209917.D
Acq On : 13 Nov 2014 12:46 pm
Operator : CourtneM
Sample : jb80728-4
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 10 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.6 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\MA7918.M
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

35	13.688	1925	1931	1960	rVB4	1641	5122	0.18%	0.048%
36	14.122	2007	2014	2042	rBV7	1915	6583	0.22%	0.061%
37	14.315	2042	2051	2058	rVB5	1672	4424	0.15%	0.041%
38	14.451	2067	2077	2099	rVB	350215	699140	23.89%	6.494%
39	14.661	2108	2117	2130	rBV4	1712	4608	0.16%	0.043%
40	14.980	2176	2178	2196	rBV3	431	1678	0.06%	0.016%
41	15.178	2210	2216	2233	rBV5	493	1014	0.03%	0.009%
42	15.341	2233	2247	2255	rBV5	455	1061	0.04%	0.010%
43	15.503	2272	2278	2296	rVB3	3123	5880	0.20%	0.055%
44	15.738	2314	2323	2350	rBV	289135	555489	18.98%	5.160%
45	15.958	2360	2365	2372	rVB4	2407	4803	0.16%	0.045%
46	16.125	2380	2397	2460	rBV7	1095	12387	0.42%	0.115%
47	16.763	2460	2519	2530	rBV7	903	9964	0.34%	0.093%
48	16.988	2530	2562	2565	rBV5	1157	6305	0.22%	0.059%
49	17.046	2565	2573	2625	rBV	457473	846855	28.94%	7.866%
50	21.512	2625	3427	3489	rBV	12259	1452699	49.65%	13.493%

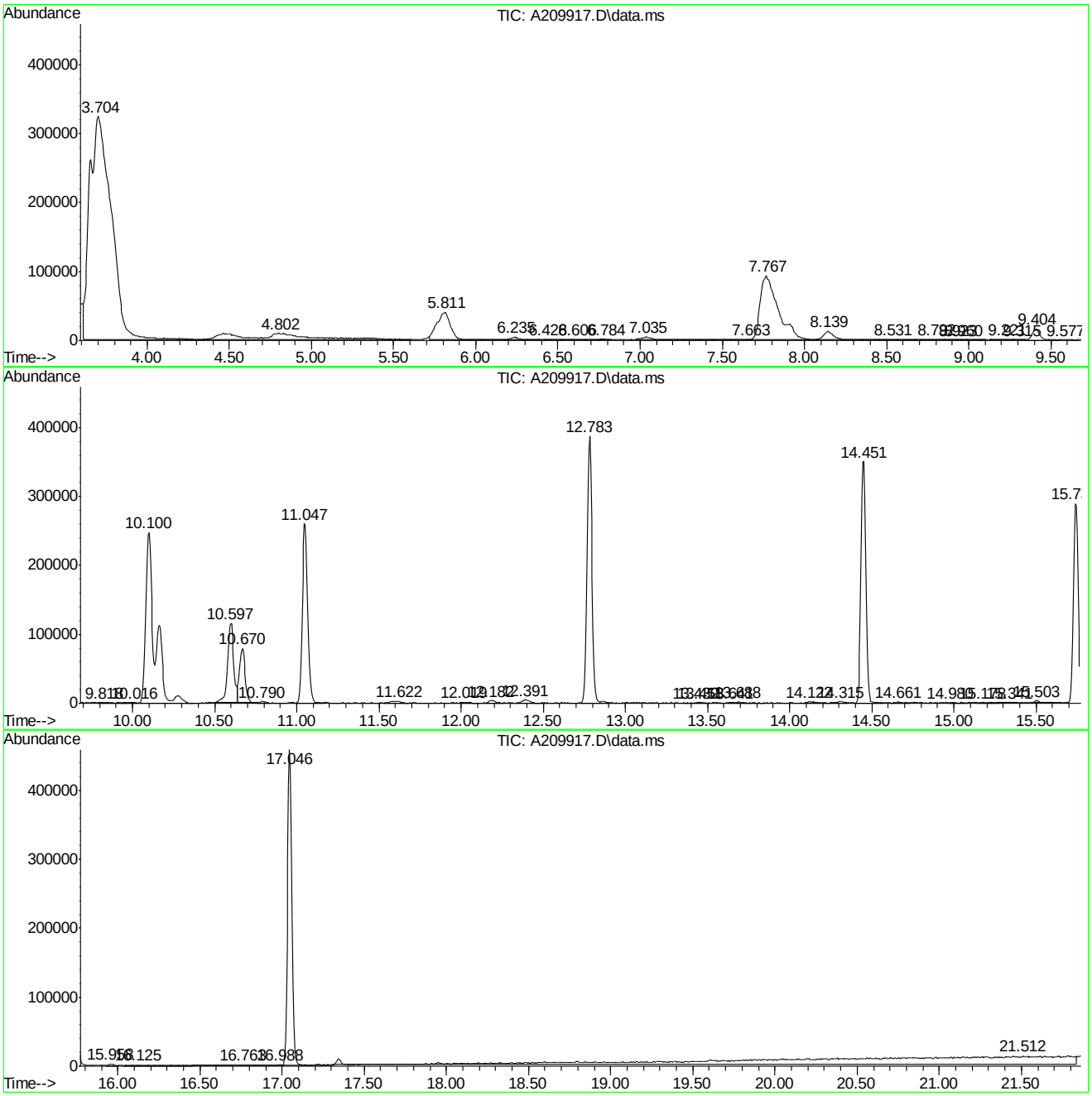
Sum of corrected areas: 10766107

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\A\
Data File : A209917.D
Acq On : 13 Nov 2014 12:46 pm
Operator : CourtneM
Sample : jb80728-4
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209917.D
Acq On : 13 Nov 2014 12:46 pm
Operator : CourtneM
Sample : jb80728-4
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

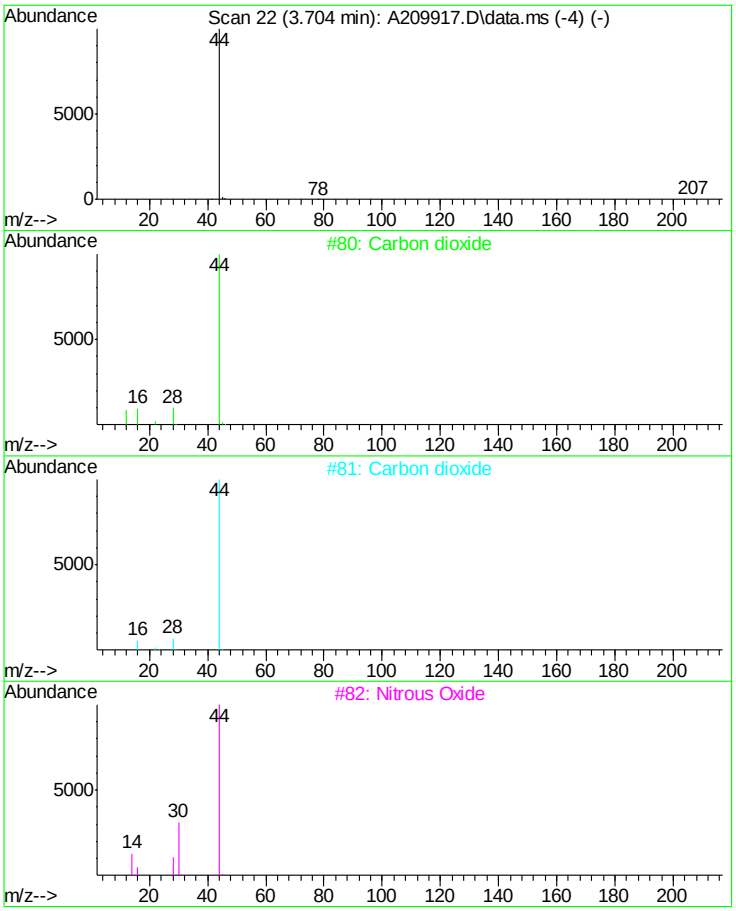
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

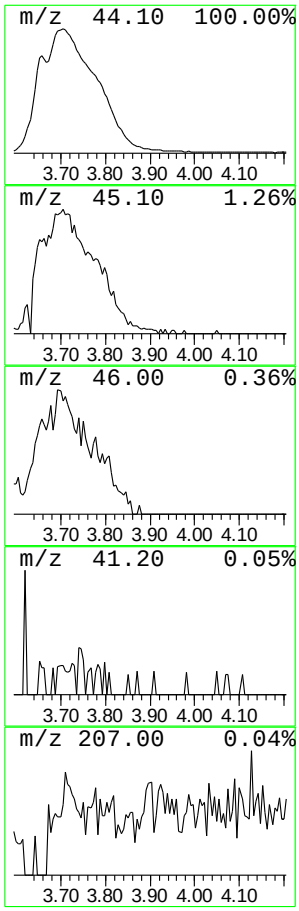
****

Peak Number 1 unknown Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.70	154.94 ug/L	2925980	pentafluorobenzene	10.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	3
3	Nitrous Oxide	44	N2O	010024-97-2	3
4	Nitrous Oxide	44	N2O	010024-97-2	3
5	Ethylene oxide	44	C2H4O	000075-21-8	2





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209917.D
Acq On : 13 Nov 2014 12:46 pm
Operator : CourtneM
Sample : jb80728-4
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

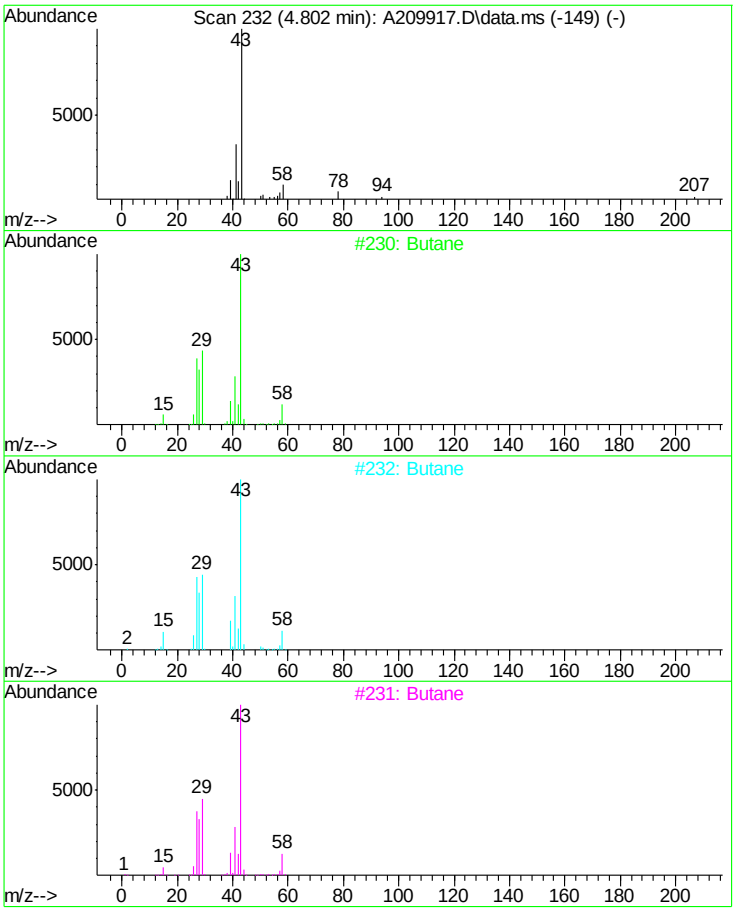
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

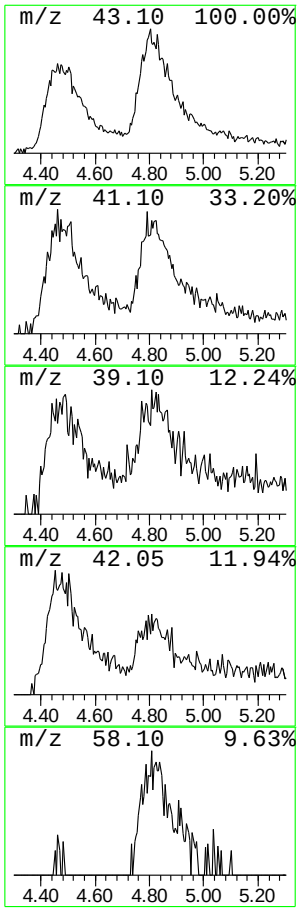
****

Peak Number 2 alkane Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.80	12.74 ug/L	240541	pentafluorobenzene	10.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	38
2	Butane	58	C4H10	000106-97-8	9
3	Butane	58	C4H10	000106-97-8	9
4	1-Propanol, 2-chloro-	94	C3H7ClO	000078-89-7	4
5	Propane, 1,1'-sulfonylbis-	150	C6H14O2S	000598-03-8	4





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209917.D
Acq On : 13 Nov 2014 12:46 pm
Operator : CourtneM
Sample : jb80728-4
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

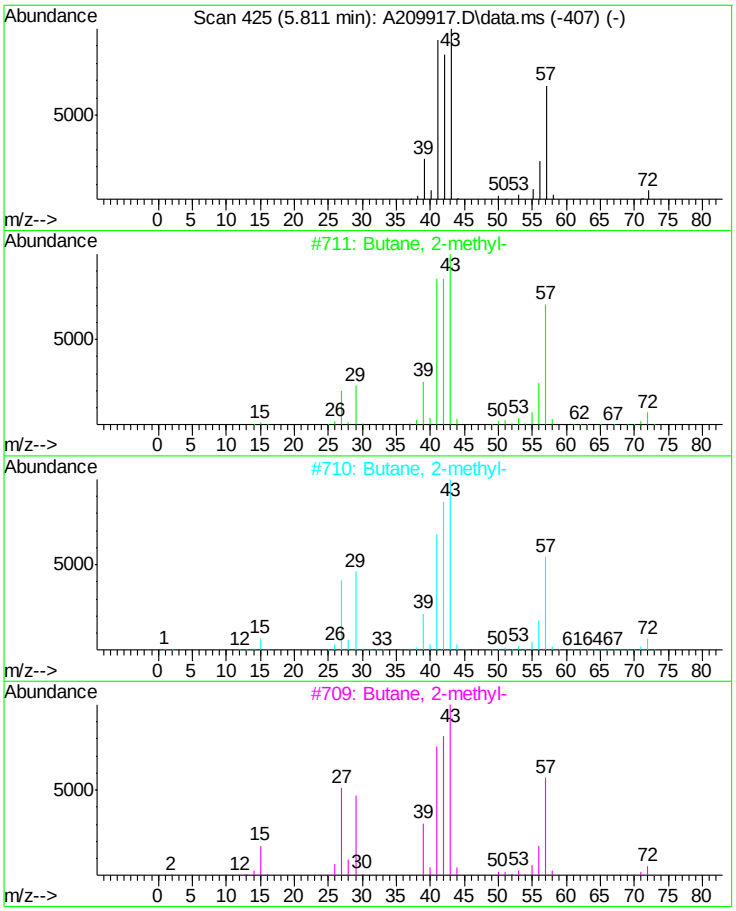
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

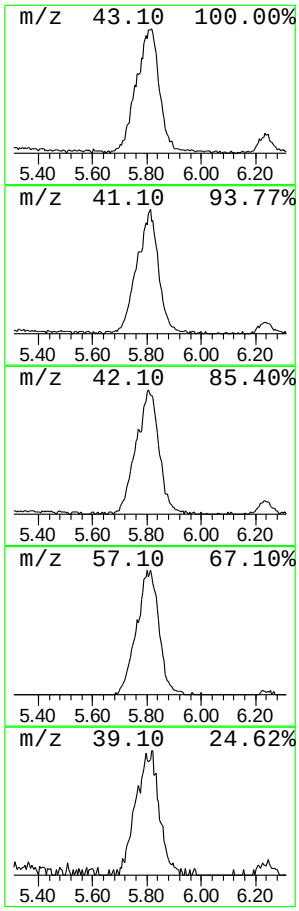
****

Peak Number 3 alkane Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.81	11.68 ug/L	220658	pentafluorobenzene	10.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	91
2	Butane, 2-methyl-	72	C5H12	000078-78-4	91
3	Butane, 2-methyl-	72	C5H12	000078-78-4	90
4	3-Buten-1-ol	72	C4H8O	000627-27-0	38
5	Pentane	72	C5H12	000109-66-0	33





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209917.D
Acq On : 13 Nov 2014 12:46 pm
Operator : CourtneM
Sample : jb80728-4
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

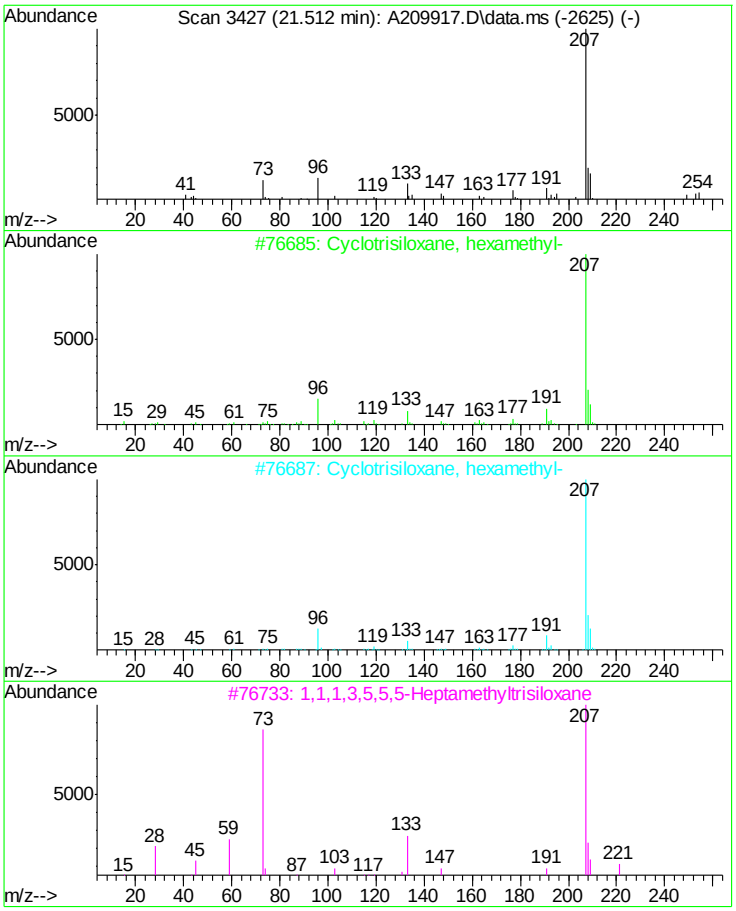
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

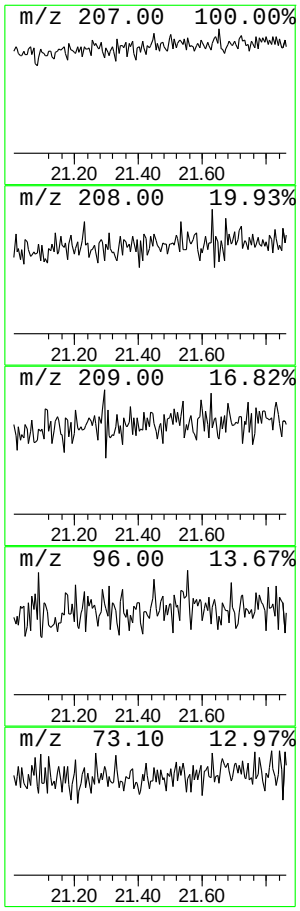
****

Peak Number 4 alkene Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
21.51	85.77 ug/L	1452700	1,4-dichlorobenzene-d4	17.05

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclotrisiloxane, hexamethyl-	222	C6H18O3Si3	000541-05-9	64
2	Cyclotrisiloxane, hexamethyl-	222	C6H18O3Si3	000541-05-9	64
3	1,1,1,3,5,5,5-Heptamethyltrisilo...	222	C7H22O2Si3	001873-88-7	64
4	Cyclotrisiloxane, hexamethyl-	222	C6H18O3Si3	000541-05-9	59
5	Benzo[h]quinoline, 2,4-dimethyl-	207	C15H13N	000605-67-4	50





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\A\
Data File : A209917.D
Acq On : 13 Nov 2014 12:46 pm
Operator : CourtneM
Sample : jb80728-4
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
unknown	3.70	154.9	ug/L	2925980	2	10.10	944229	50.0
alkane	4.80	12.7	ug/L	240541	2	10.10	944229	50.0
alkane	5.81	11.7	ug/L	220658	2	10.10	944229	50.0
alkene	21.51	85.8	ug/L	1452700	5	17.05	846855	50.0

Manual Integrations APPROVED (compounds with "m" flag)
Mei Chen
11/13/14 16:35

7.1.9
7

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209887.D
Acq On : 12 Nov 2014 9:18 pm
Operator : CourtneM
Sample : jb80728-5
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Nov 13 14:42:20 2014
Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Nov 13 13:59:58 2014
Response via : Initial Calibration

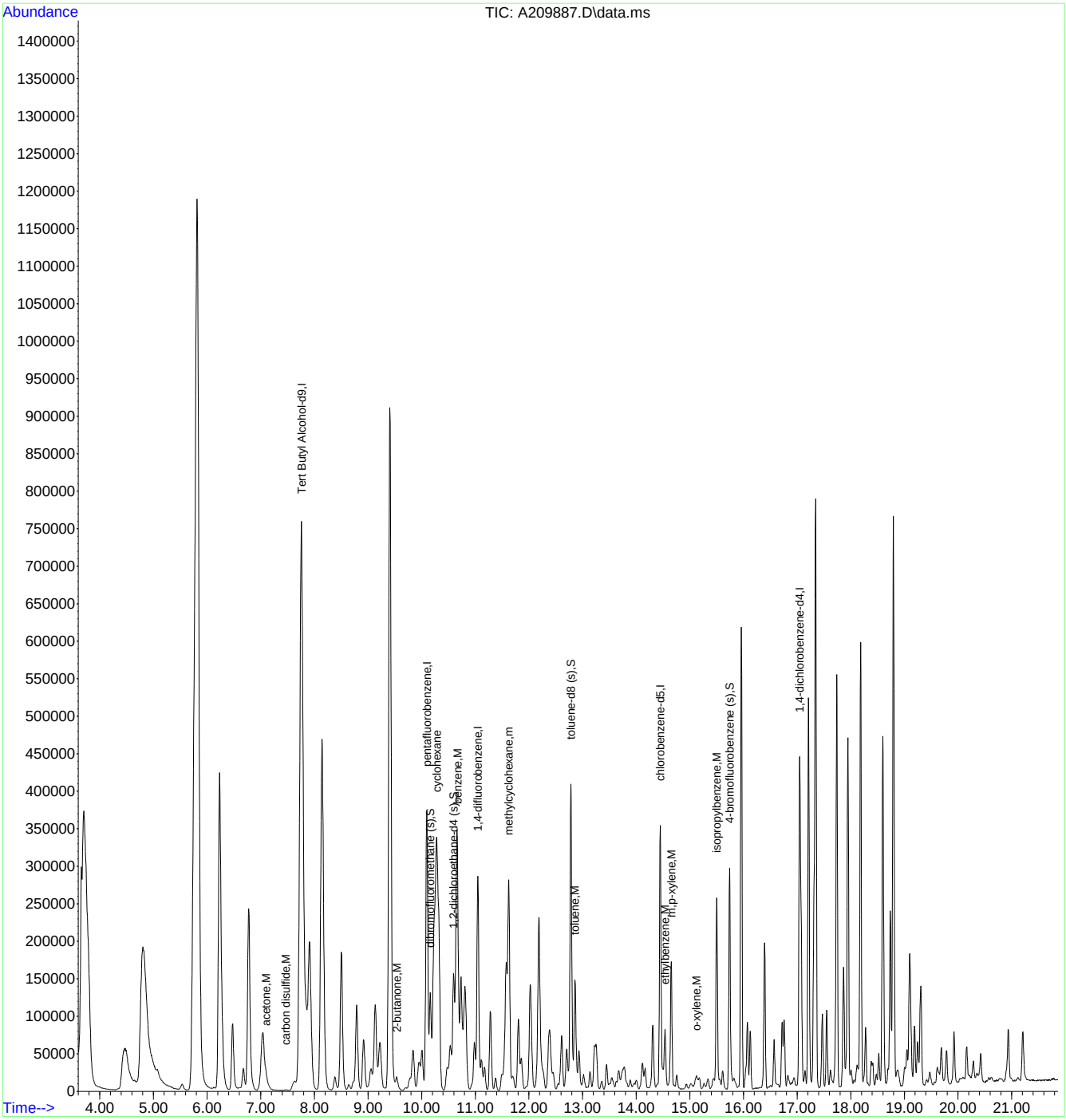
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.764	65	356209	500.00	ug/L	0.00
4) pentafluorobenzene	10.097	168	233357	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.049	114	260451	50.00	ug/L	0.00
83) chlorobenzene-d5	14.448	117	222895	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.048	152	130830	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.160	113	84624	47.00	ug/L	0.00
Spiked Amount 50.000	Range 59 - 130		Recovery = 94.00%			
47) 1,2-dichloroethane-d4 (s)	10.594	65	97622	44.69	ug/L	0.00
Spiked Amount 50.000	Range 65 - 123		Recovery = 89.38%			
75) toluene-d8 (s)	12.780	98	301805	50.14	ug/L	0.00
Spiked Amount 50.000	Range 77 - 125		Recovery = 100.28%			
101) 4-bromofluorobenzene (s)	15.740	95	114992	56.57	ug/L	0.00
Spiked Amount 50.000	Range 71 - 132		Recovery = 113.14%			
Target Compounds						Qvalue
20) acetone	7.100	43	46114m	41.94	ug/L	
24) carbon disulfide	7.466	76	2173	0.36	ug/L	83
33) 2-butanone	9.537	72	6406	17.96	ug/L #	1
49) cyclohexane	10.280	84	173849	59.12	ug/L	82
59) benzene	10.667	78	50049	7.98	ug/L	94
68) methylcyclohexane	11.624	83	168899	62.26	ug/L #	68
77) toluene	12.858	92	60142	15.52	ug/L	99
93) ethylbenzene	14.537	91	46271	6.79	ug/L	98
94) m,p-xylene	14.652	106	55298	21.36	ug/L	99
95) o-xylene	15.123	106	2219	0.79	ug/L	84
99) isopropylbenzene	15.500	105	204166	26.52	ug/L	99

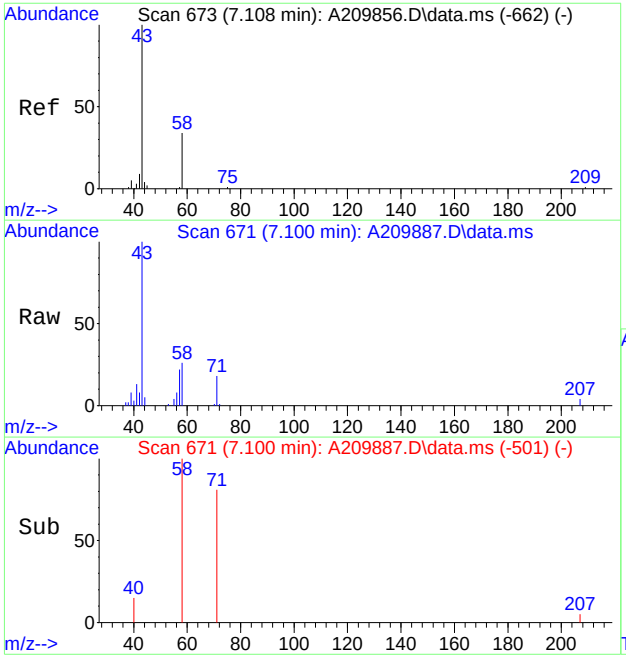
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209887.D
Acq On : 12 Nov 2014 9:18 pm
Operator : CourtneM
Sample : jb80728-5
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Nov 13 14:42:20 2014
Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Nov 13 13:59:58 2014
Response via : Initial Calibration

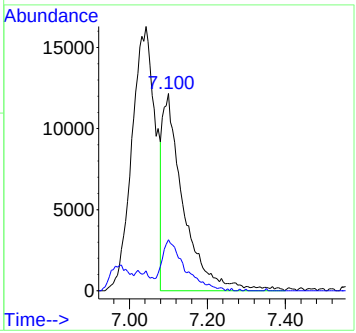


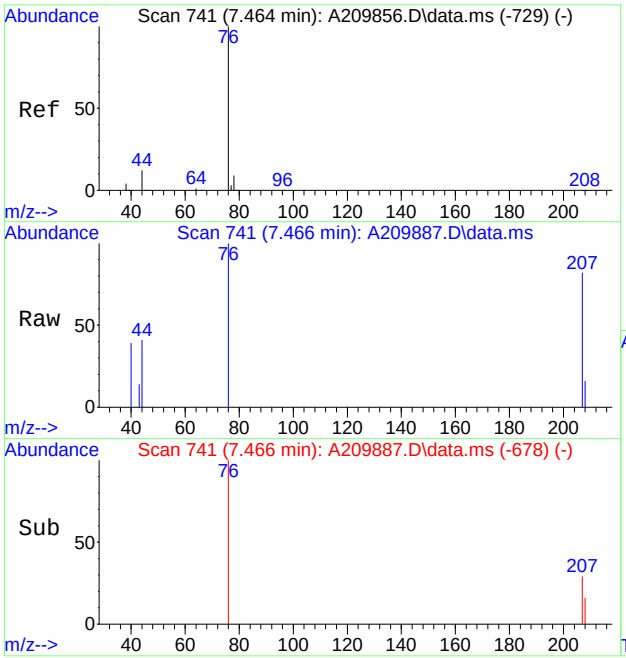


#20
acetone
Concen: 41.94 ug/L m
RT: 7.100 min Scan# 671
Delta R.T. -0.008 min
Lab File: A209887.D
Acq: 12 Nov 2014 9:18 pm

Tgt Ion: 43 Resp: 46114

Ion	Ratio	Lower	Upper
43	100		
58	0.0	1.5	61.5#

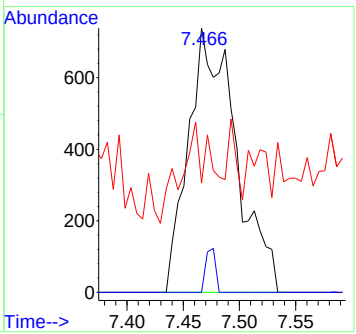




#24
carbon disulfide
Concen: 0.36 ug/L
RT: 7.466 min Scan# 741
Delta R.T. 0.002 min
Lab File: A209887.D
Acq: 12 Nov 2014 9:18 pm

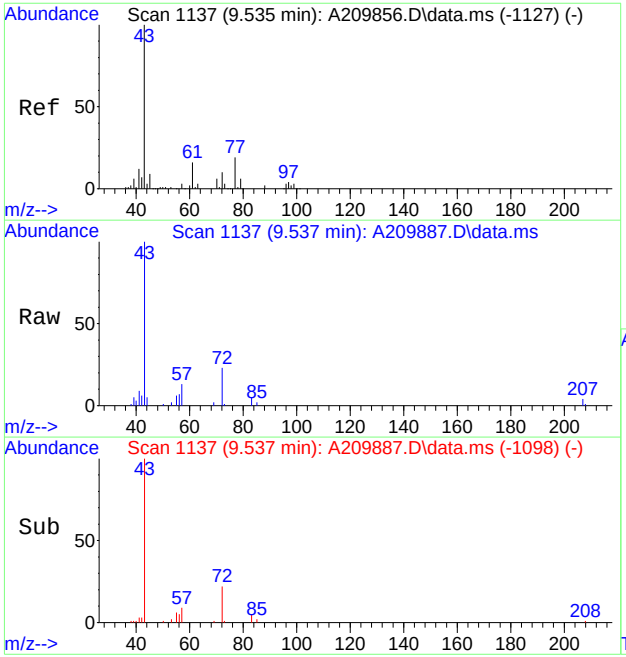
Tgt Ion: 76 Resp: 2173

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	39.0
44	7.4	0.0	41.5



7.1.9

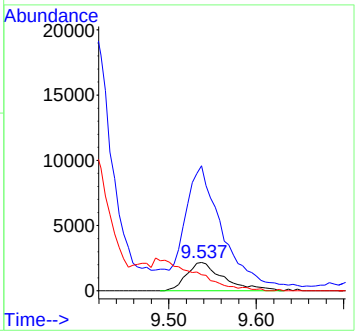
7

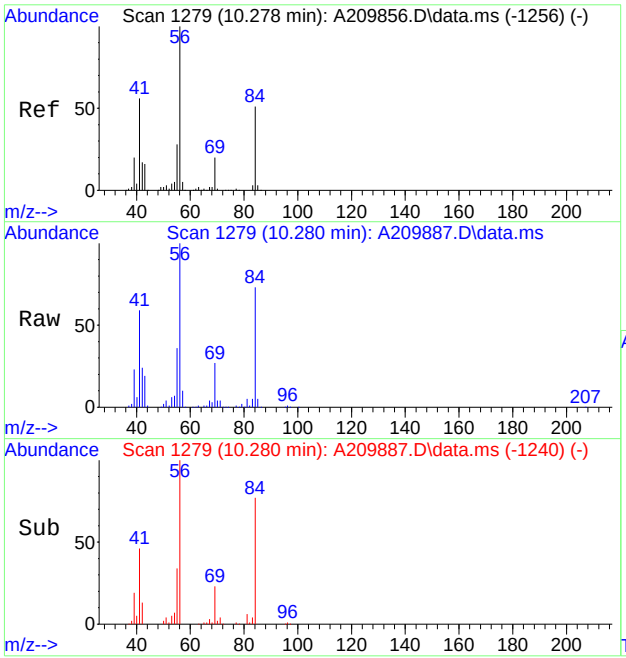


#33
2-butanone
Concen: 17.96 ug/L
RT: 9.537 min Scan# 1137
Delta R.T. 0.002 min
Lab File: A209887.D
Acq: 12 Nov 2014 9:18 pm

Tgt Ion: 72 Resp: 6406

Ion	Ratio	Lower	Upper
72	100		
43	412.0	1081.2	1141.2#
57	0.0	1.6	61.6#

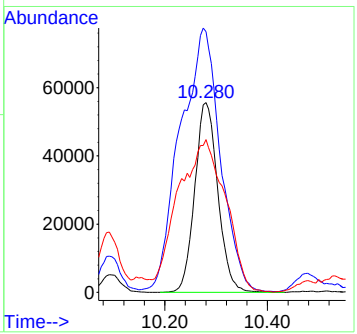


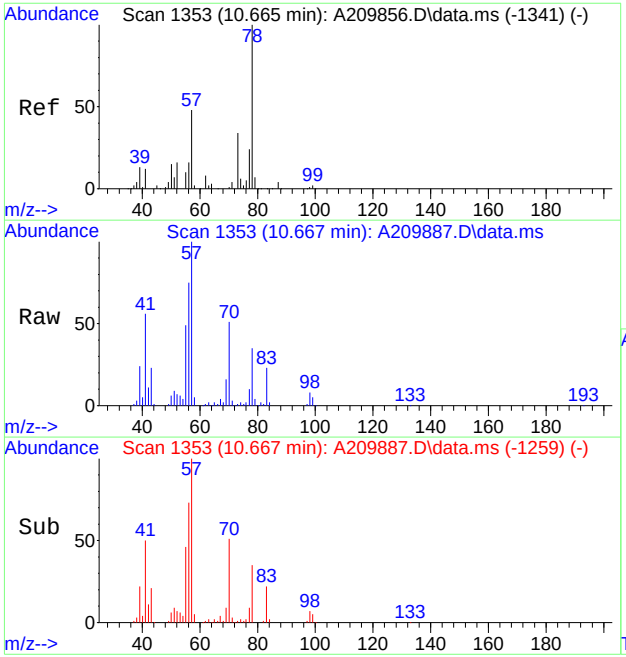


#49
cyclohexane
Concen: 59.12 ug/L
RT: 10.280 min Scan# 1279
Delta R.T. 0.002 min
Lab File: A209887.D
Acq: 12 Nov 2014 9:18 pm

Tgt Ion: 84 Resp: 173849

Ion	Ratio	Lower	Upper
84	100		
56	240.1	157.0	291.6
41	163.7	88.5	164.3

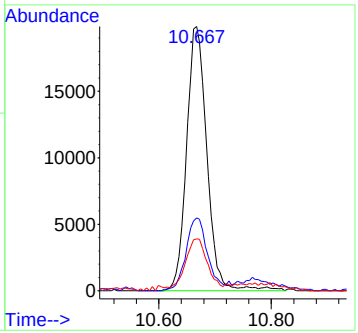


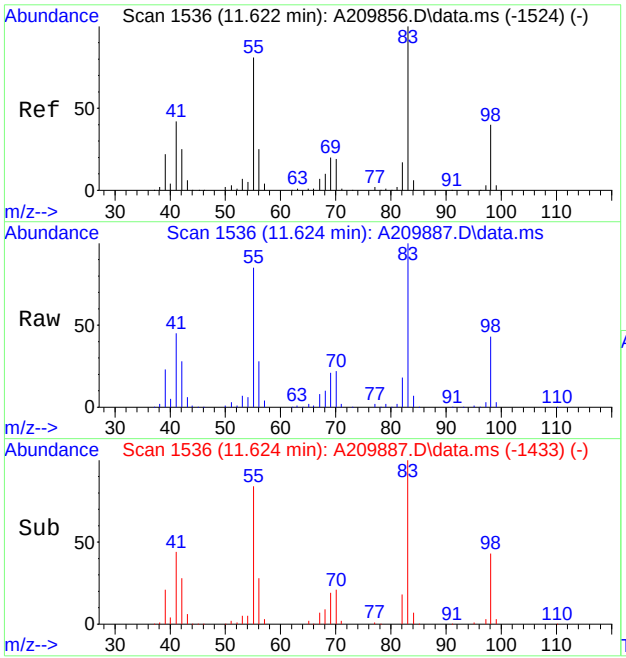


#59
benzene
Concen: 7.98 ug/L
RT: 10.667 min Scan# 1353
Delta R.T. 0.002 min
Lab File: A209887.D
Acq: 12 Nov 2014 9:18 pm

Tgt Ion: 78 Resp: 50049

Ion	Ratio	Lower	Upper
78	100		
77	27.6	0.0	54.5
52	18.1	0.0	45.9

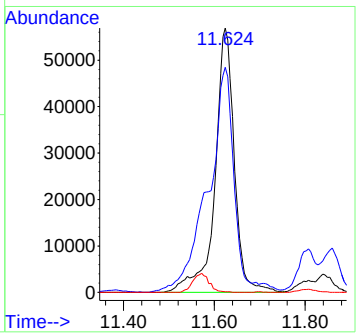


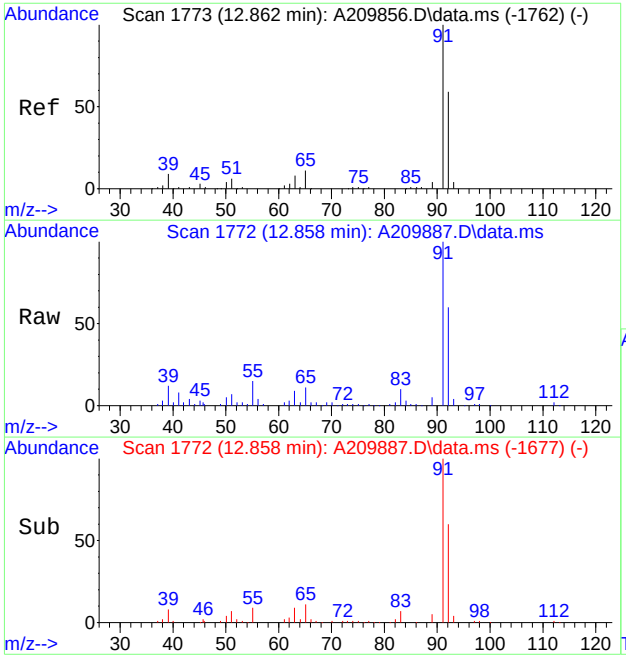


#68
methylcyclohexane
Concen: 62.26 ug/L
RT: 11.624 min Scan# 1536
Delta R.T. 0.002 min
Lab File: A209887.D
Acq: 12 Nov 2014 9:18 pm

Tgt Ion: 83 Resp: 168899

Ion	Ratio	Lower	Upper
83	100		
55	115.6	56.4	116.4
85	0.0	0.0	30.1

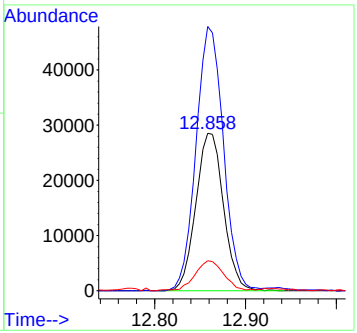


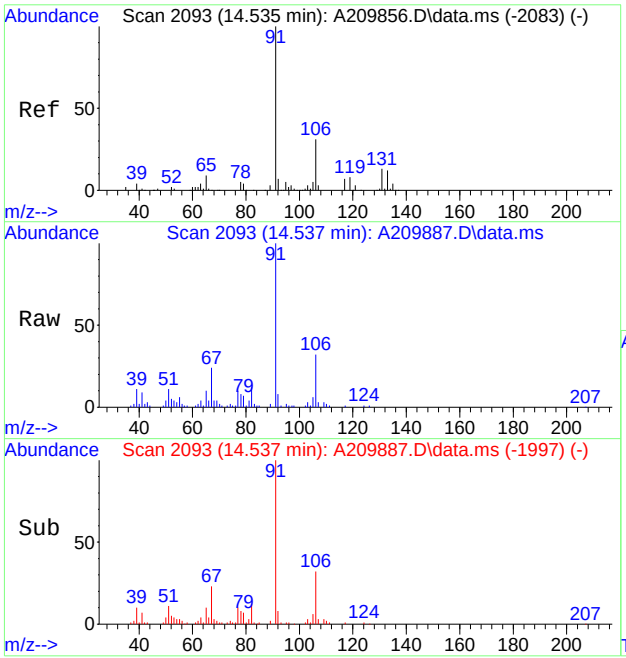


#77
toluene
Concen: 15.52 ug/L
RT: 12.858 min Scan# 1772
Delta R.T. -0.003 min
Lab File: A209887.D
Acq: 12 Nov 2014 9:18 pm

Tgt Ion: 92 Resp: 60142

Ion	Ratio	Lower	Upper
92	100		
91	168.0	139.6	199.6
65	18.5	0.0	49.5

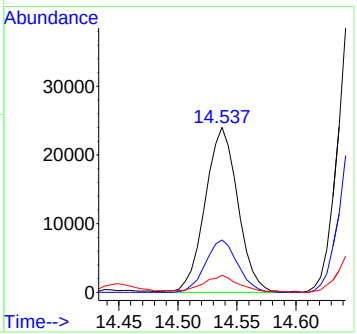


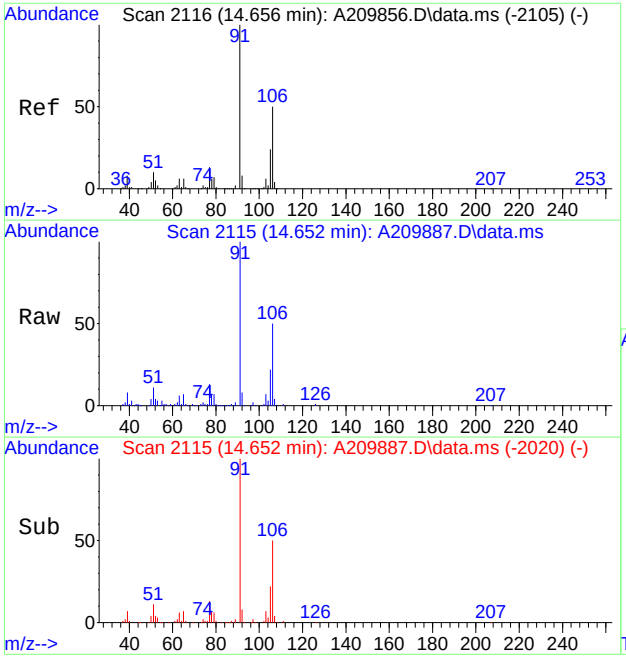


#93
ethylbenzene
Concen: 6.79 ug/L
RT: 14.537 min Scan# 2093
Delta R.T. 0.002 min
Lab File: A209887.D
Acq: 12 Nov 2014 9:18 pm

Tgt Ion: 91 Resp: 46271

Ion	Ratio	Lower	Upper
91	100		
106	31.7	0.8	60.8
77	9.8	0.0	38.5

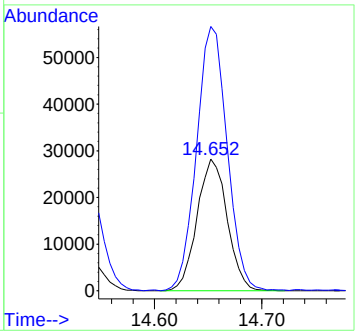


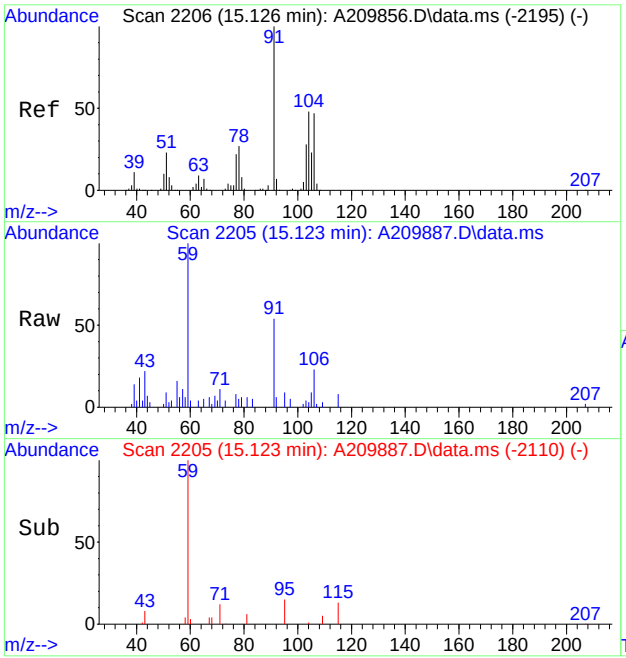


#94
m,p-xylene
Concen: 21.36 ug/L
RT: 14.652 min Scan# 2115
Delta R.T. -0.003 min
Lab File: A209887.D
Acq: 12 Nov 2014 9:18 pm

Tgt Ion:106 Resp: 55298

Ion	Ratio	Lower	Upper
106	100		
91	200.5	169.6	229.6

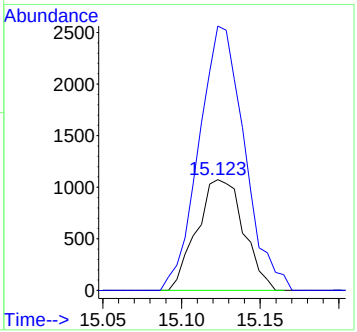


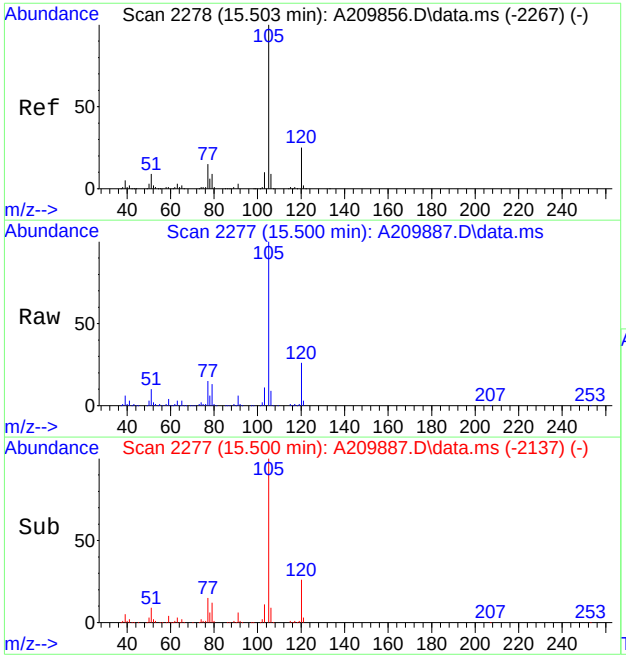


#95
o-xylene
Concen: 0.79 ug/L
RT: 15.123 min Scan# 2205
Delta R.T. -0.003 min
Lab File: A209887.D
Acq: 12 Nov 2014 9:18 pm

Tgt Ion:106 Resp: 2219

Ion	Ratio	Lower	Upper
106	100		
91	238.7	183.9	243.9

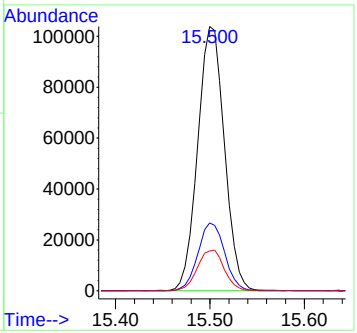




#99
isopropylbenzene
Concen: 26.52 ug/L
RT: 15.500 min Scan# 2277
Delta R.T. -0.003 min
Lab File: A209887.D
Acq: 12 Nov 2014 9:18 pm

Tgt Ion:105 Resp: 204166

Ion	Ratio	Lower	Upper
105	100		
120	25.7	0.0	55.3
77	14.9	0.0	45.1



7.1.9

7

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209887.D
Acq On : 12 Nov 2014 9:18 pm
Operator : CourtneM
Sample : jb80728-5
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 23 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.6 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\MA7918.M
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

Signal : TIC: A209887.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.700	3	21	134	rVB	372160	3270444	47.89%	6.147%
2	4.475	147	169	214	rVV3	56175	554490	8.12%	1.042%
3	4.804	214	232	359	rVV4	191223	2066663	30.26%	3.884%
4	5.813	392	425	483	rVV	1188303	6828957	100.00%	12.835%
5	6.232	491	505	540	rVV	423532	1570857	23.00%	2.952%
6	6.478	540	552	581	rVV	88996	273123	4.00%	0.513%
7	6.776	598	609	639	rVV	242469	787592	11.53%	1.480%
8	7.043	639	660	696	rVV5	77302	418041	6.12%	0.786%
9	7.759	779	797	854	rVV3	758822	4542306	66.52%	8.537%
10	8.141	854	870	904	rVV	468287	1818442	26.63%	3.418%
11	8.502	928	939	958	rVV	184748	563223	8.25%	1.059%
12	8.789	985	994	1008	rVV	114076	337990	4.95%	0.635%
13	8.915	1008	1018	1032	rVV2	67813	219134	3.21%	0.412%
14	9.135	1051	1060	1098	rVV6	114345	626470	9.17%	1.177%
15	9.407	1098	1112	1155	rVV2	910668	2957152	43.30%	5.558%
16	10.008	1205	1227	1234	rVV7	54140	275829	4.04%	0.518%
17	10.097	1234	1244	1252	rVV2	372314	1027210	15.04%	1.931%
18	10.160	1252	1256	1263	rVV2	130877	339642	4.97%	0.638%
19	10.280	1263	1279	1304	rVV3	338219	2127903	31.16%	3.999%
20	10.536	1304	1328	1333	rVV6	60392	285775	4.18%	0.537%
21	10.594	1333	1339	1345	rVV3	156479	453580	6.64%	0.853%
22	10.662	1345	1352	1398	rVV7	347732	2032238	29.76%	3.820%
23	11.049	1418	1426	1445	rVV	286133	829425	12.15%	1.559%
24	11.279	1460	1470	1482	rVV3	105778	276664	4.05%	0.520%
25	11.624	1532	1536	1560	rVB2	277848	668530	9.79%	1.257%
26	11.802	1560	1570	1602	rBV4	92130	332836	4.87%	0.626%
27	12.022	1602	1612	1629	rVV3	137473	417017	6.11%	0.784%
28	12.184	1629	1643	1668	rVB3	228023	762007	11.16%	1.432%
29	12.383	1668	1681	1705	rVB6	78824	348895	5.11%	0.656%
30	12.780	1749	1757	1766	rVV	403917	926642	13.57%	1.742%
31	12.858	1766	1772	1782	rVV	142896	363489	5.32%	0.683%
32	13.251	1833	1847	1860	rVB5	59578	248945	3.65%	0.468%
33	14.448	2068	2076	2088	rVV	347247	726279	10.64%	1.365%
34	14.652	2106	2115	2129	rVB	166585	342476	5.02%	0.644%
35	15.500	2270	2277	2293	rVV	249475	503524	7.37%	0.946%
36	15.740	2314	2323	2356	rBV	295194	626529	9.17%	1.178%
37	15.960	2356	2365	2374	rVB	614367	1141715	16.72%	2.146%
38	16.394	2437	2448	2457	rVB	194363	377061	5.52%	0.709%
39	17.048	2564	2573	2588	rBV2	438055	1178871	17.26%	2.216%
40	17.210	2597	2604	2616	rBV	514730	952171	13.94%	1.790%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209887.D
Acq On : 12 Nov 2014 9:18 pm
Operator : CourtneM
Sample : jb80728-5
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 23 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.6 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\MA7918.M
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

41	17.346	2616	2630	2643	rVB2	785747	1864234	27.30%	3.504%
42	17.738	2693	2705	2720	rVB	549277	1019903	14.93%	1.917%
43	17.864	2720	2729	2737	rBV2	159190	341747	5.00%	0.642%
44	17.947	2737	2745	2771	rVV	460120	914441	13.39%	1.719%
45	18.183	2783	2790	2799	rVV	587329	1059237	15.51%	1.991%
46	18.596	2861	2869	2883	rVB	461610	900046	13.18%	1.692%
47	18.737	2890	2896	2901	rVV	228698	430908	6.31%	0.810%
48	18.795	2901	2907	2939	rVB	759659	1525832	22.34%	2.868%
49	19.098	2959	2965	2976	rVV3	171555	450992	6.60%	0.848%
50	19.307	2998	3005	3022	rVB	130058	297479	4.36%	0.559%

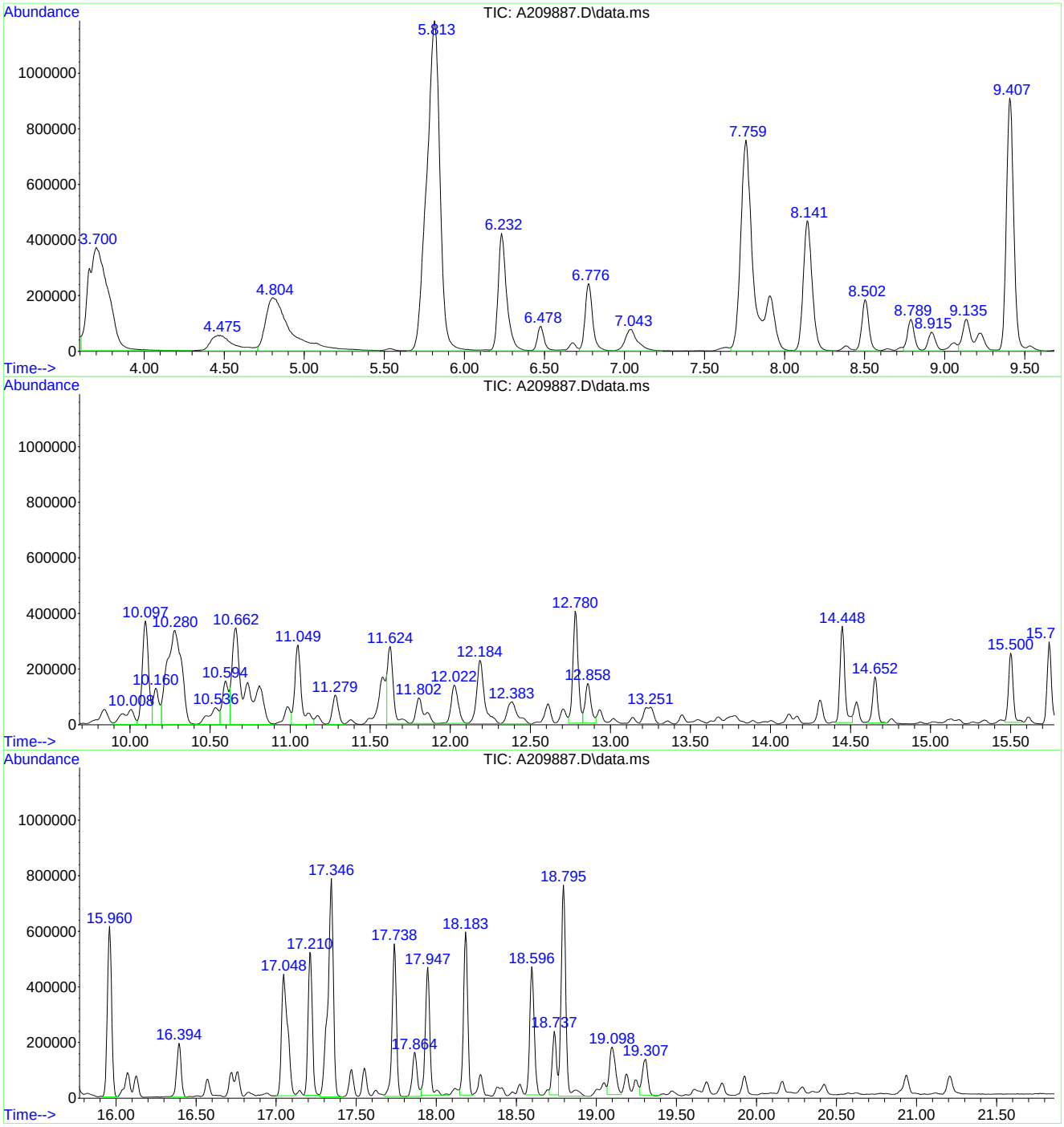
Sum of corrected areas: 53204956

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209887.D
Acq On : 12 Nov 2014 9:18 pm
Operator : CourtneM
Sample : jb80728-5
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209887.D
Acq On : 12 Nov 2014 9:18 pm
Operator : CourtneM
Sample : jb80728-5
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

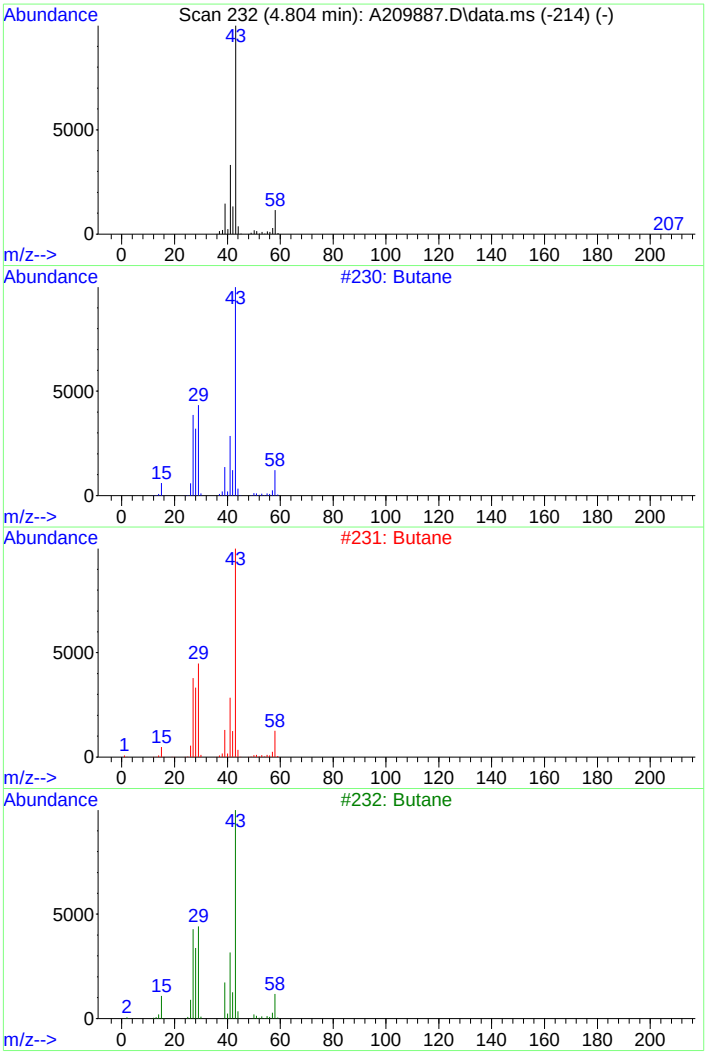
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

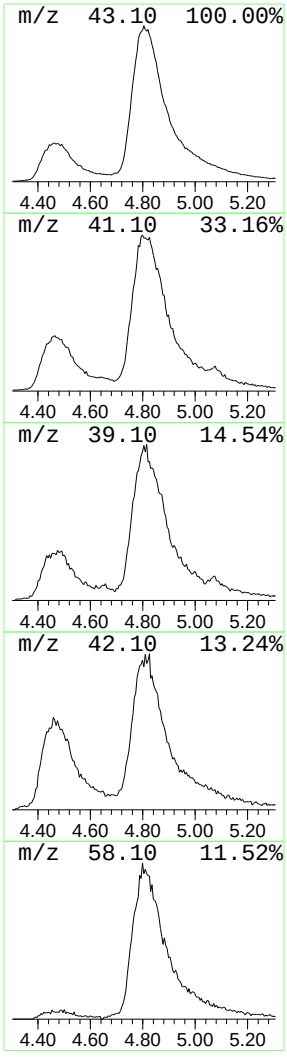
****

Peak Number 2 alkane Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.804	100.60 ug/L	2066660	pentafluorobenzene	10.097

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	80
2	Butane	58	C4H10	000106-97-8	80
3	Butane	58	C4H10	000106-97-8	58
4	Isobutane	58	C4H10	000075-28-5	9
5	Isopropylsulfonyl chloride	142	C3H7ClO2S	010147-37-2	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209887.D
Acq On : 12 Nov 2014 9:18 pm
Operator : CourtneM
Sample : jb80728-5
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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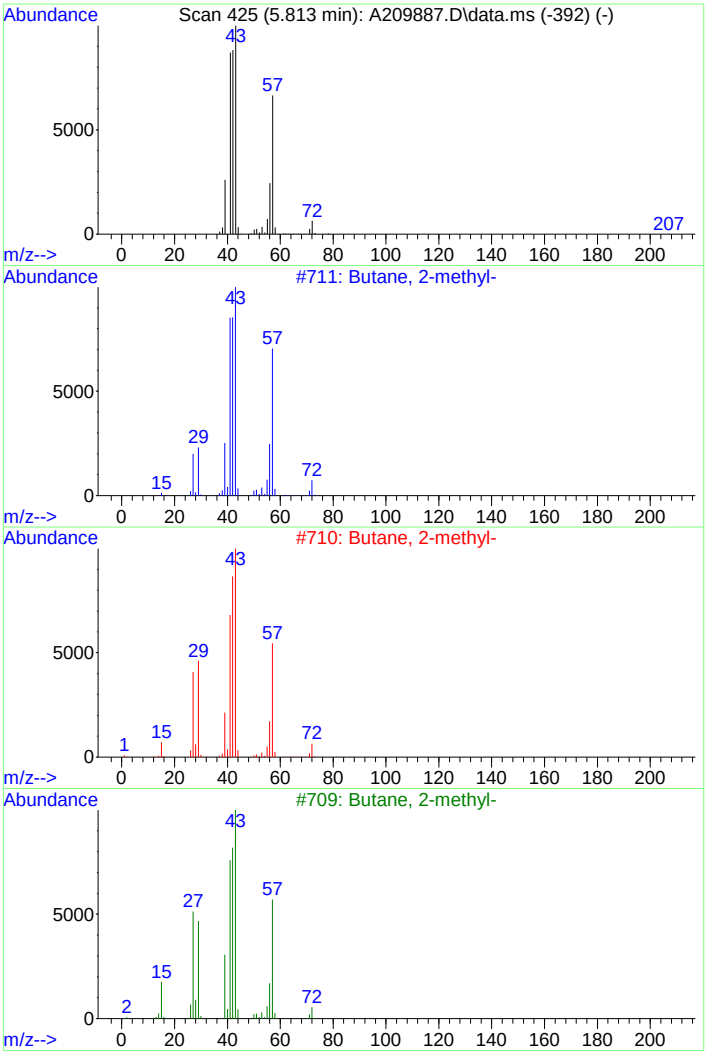
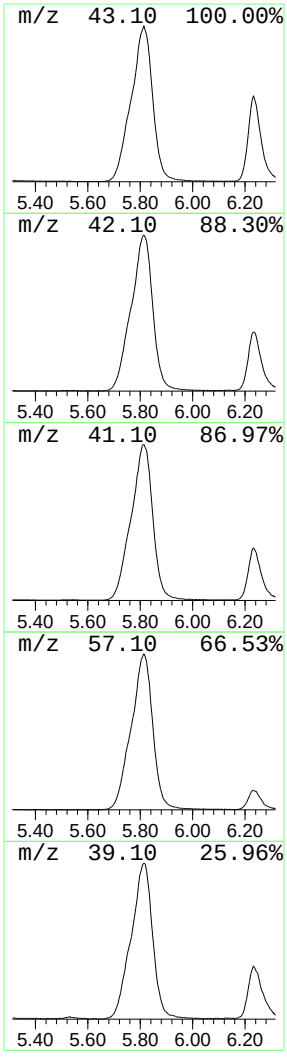
Peak Number 3 alkane Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.813	332.40 ug/L	6828960	pentafluorobenzene	10.097

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	94
2	Butane, 2-methyl-	72	C5H12	000078-78-4	91
3	Butane, 2-methyl-	72	C5H12	000078-78-4	90
4	Pentane	72	C5H12	000109-66-0	36
5	3-Buten-1-ol	72	C4H8O	000627-27-0	28





Library Search Compound Report

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Acq On : 12 Nov 2014 9:18 pm
Operator : CourtneM
Sample : jb80728-5
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
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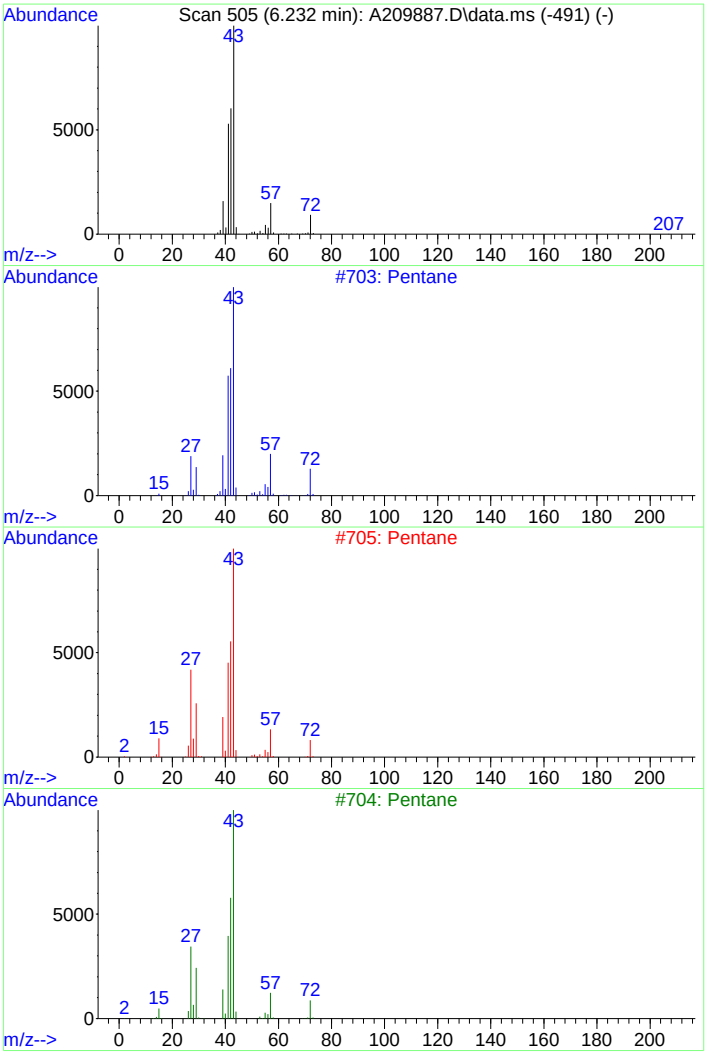
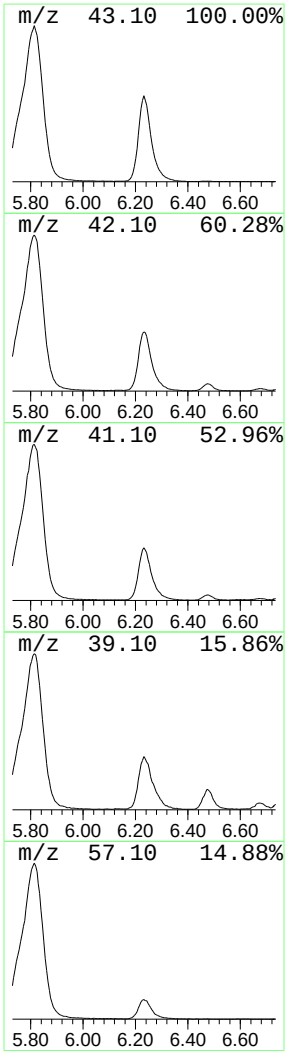
Peak Number 4 alkane-Pentane Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.232	76.46 ug/L	1570860	pentafluorobenzene	10.097

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	91
2	Pentane	72	C5H12	000109-66-0	90
3	Pentane	72	C5H12	000109-66-0	86
4	Pentane	72	C5H12	000109-66-0	64
5	Butane, 2-methyl-	72	C5H12	000078-78-4	64





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Sample : jb80728-5
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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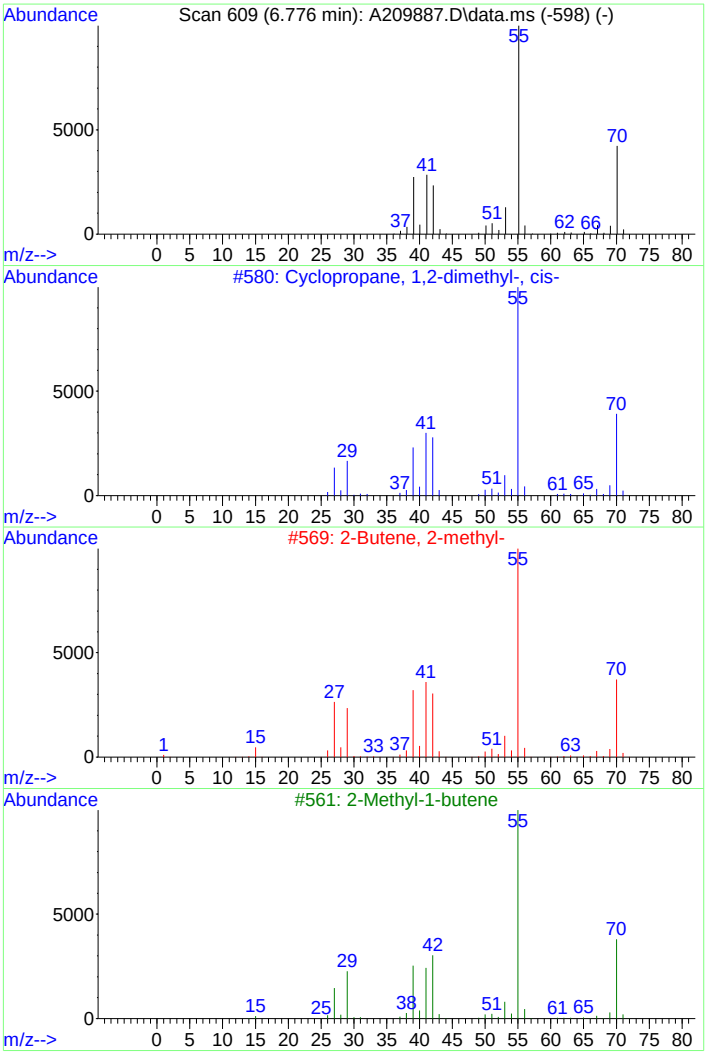
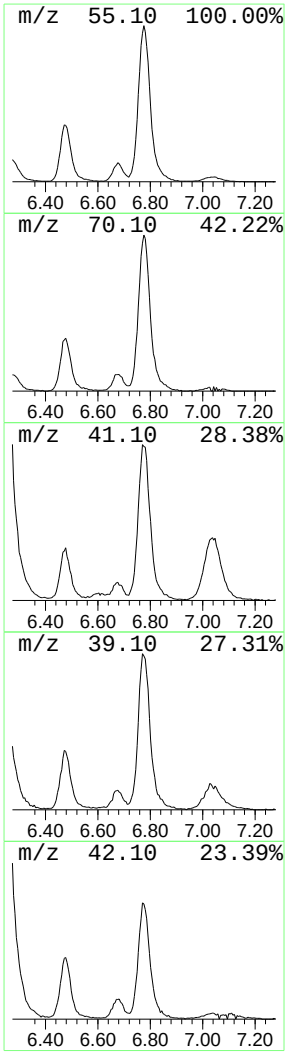
Peak Number 5 alkene Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.776	38.34 ug/L	787592	pentafluorobenzene	10.097

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopropane, 1,2-dimethyl-, cis-	70	C5H10	000930-18-7	90
2	2-Butene, 2-methyl-	70	C5H10	000513-35-9	90
3	2-Methyl-1-butene	70	C5H10	000563-46-2	86
4	2-Butene, 2-methyl-	70	C5H10	000513-35-9	86
5	Cyclopropane, 1,2-dimethyl-, trans-	70	C5H10	002402-06-4	83





Library Search Compound Report

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Acq On : 12 Nov 2014 9:18 pm
Operator : CourtneM
Sample : jb80728-5
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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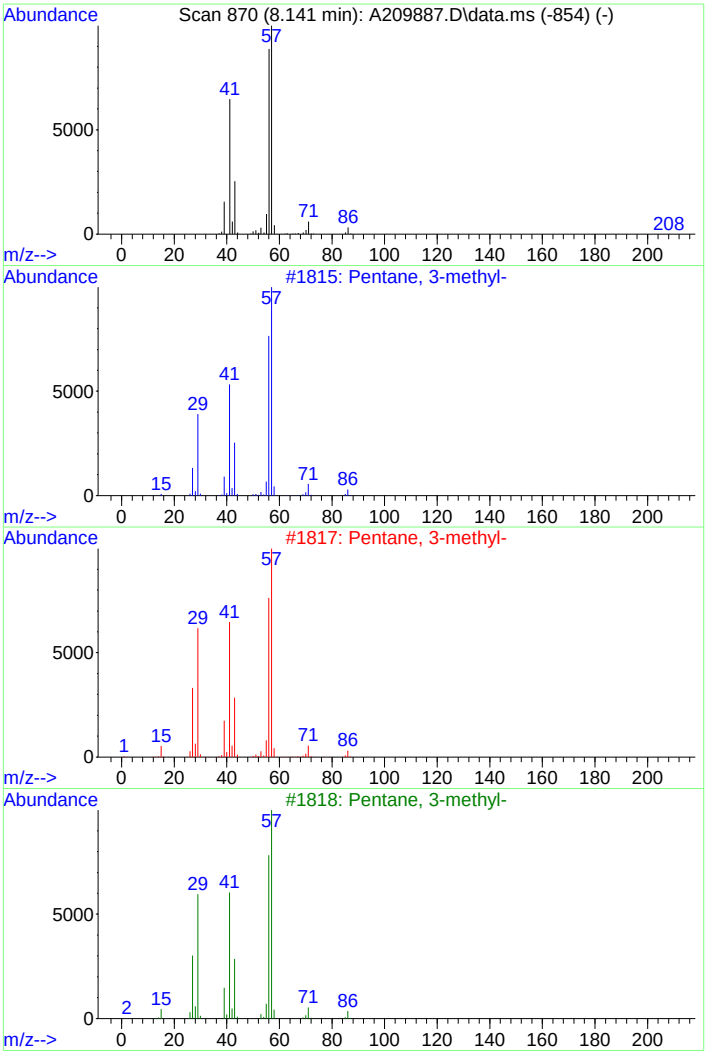
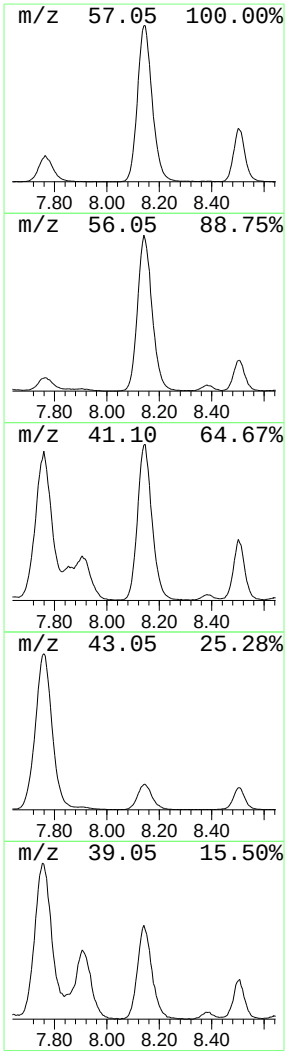
Peak Number 6 alkane Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.141	88.51 ug/L	1818440	pentafluorobenzene	10.097

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
2	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
3	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
4	Hexane, 2,2,3-trimethyl-	128	C9H20	016747-25-4	74
5	Oxirane, (1-methylethyl)-	86	C5H10O	001438-14-8	64





Library Search Compound Report

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Acq On : 12 Nov 2014 9:18 pm
Operator : CourtneM
Sample : jb80728-5
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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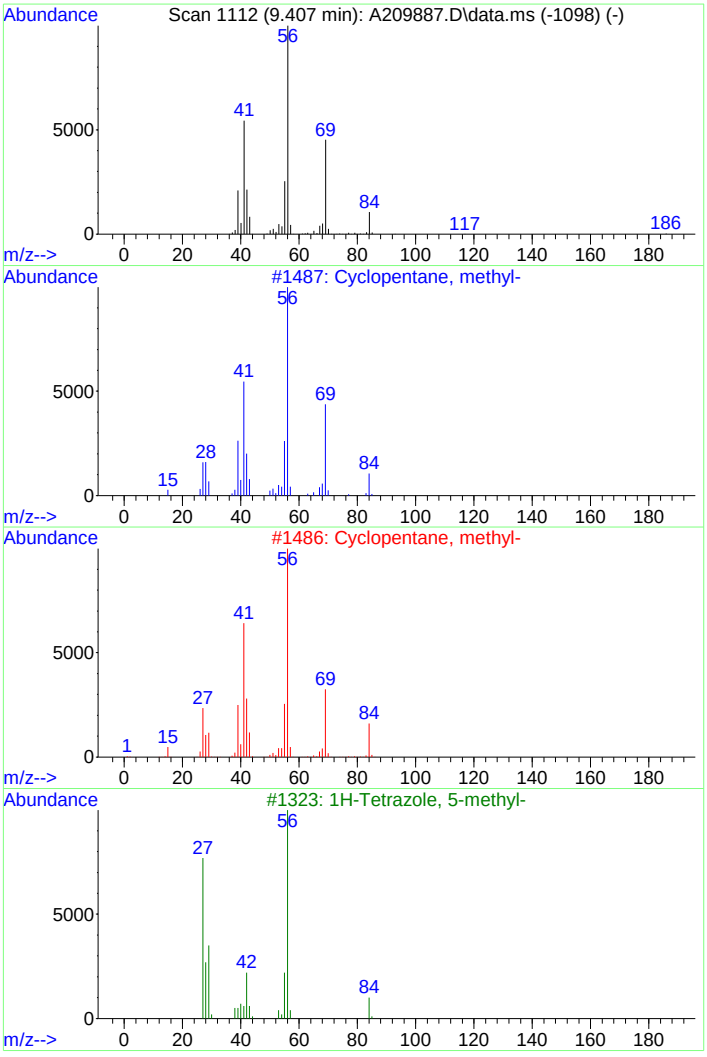
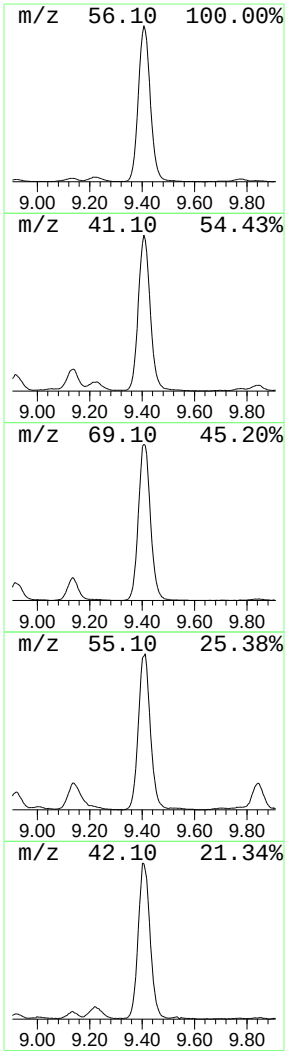
Peak Number 7 alkene Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.407	143.94 ug/L	2957150	pentafluorobenzene	10.097

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	94
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	90
3	1H-Tetrazole, 5-methyl-	84	C2H4N4	004076-36-2	80
4	Cyclobutane, ethyl-	84	C6H12	004806-61-5	80
5	Cyclopentane, methyl-	84	C6H12	000096-37-7	78





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Operator : CourtneM
Sample : jb80728-5
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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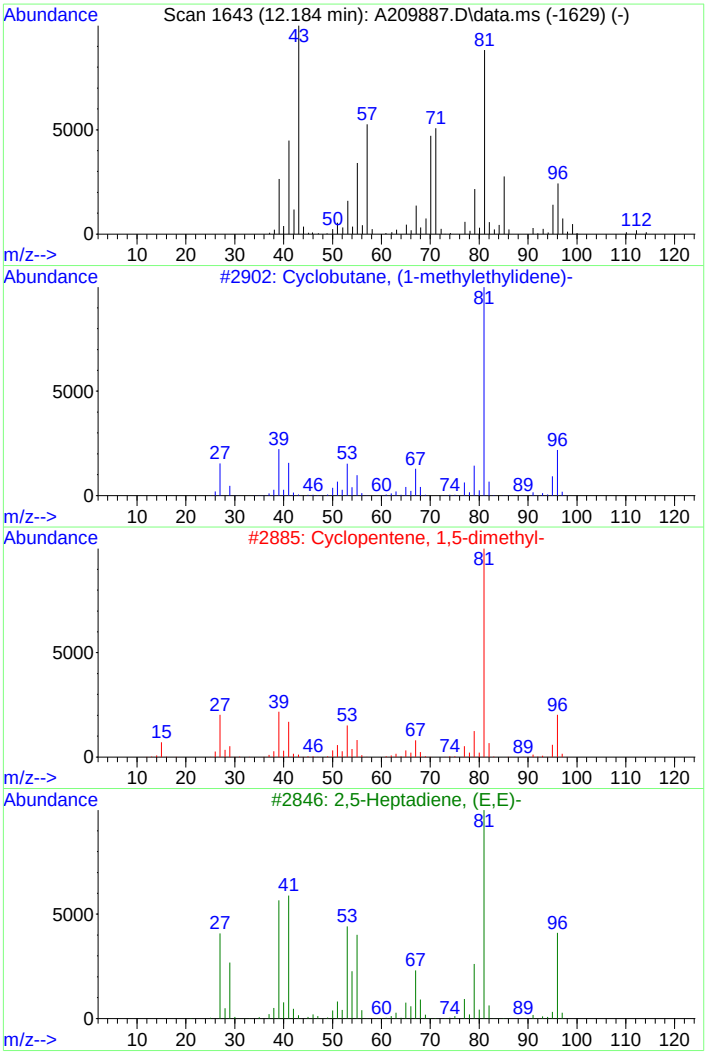
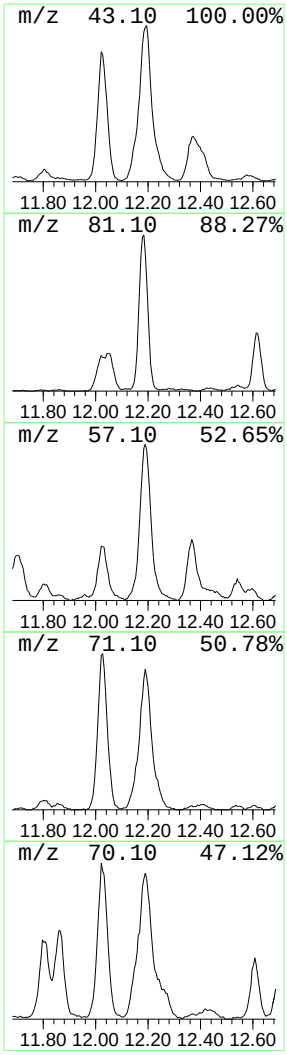
Peak Number 8 alkene Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.184	45.94 ug/L	762007	1,4-difluorobenzene	11.049

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclobutane, (1-methylethylidene)-	96	C7H12	001528-22-9	50
2	Cyclopentene, 1,5-dimethyl-	96	C7H12	016491-15-9	41
3	2,5-Heptadiene, (E,E)-	96	C7H12	039619-60-8	38
4	2,4-Heptadiene, (E,E)-	96	C7H12	002384-94-3	38
5	Cyclopentane, 1-methyl-2-methylene-	96	C7H12	041158-41-2	38





Library Search Compound Report

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Acq On : 12 Nov 2014 9:18 pm
Operator : CourtneM
Sample : jb80728-5
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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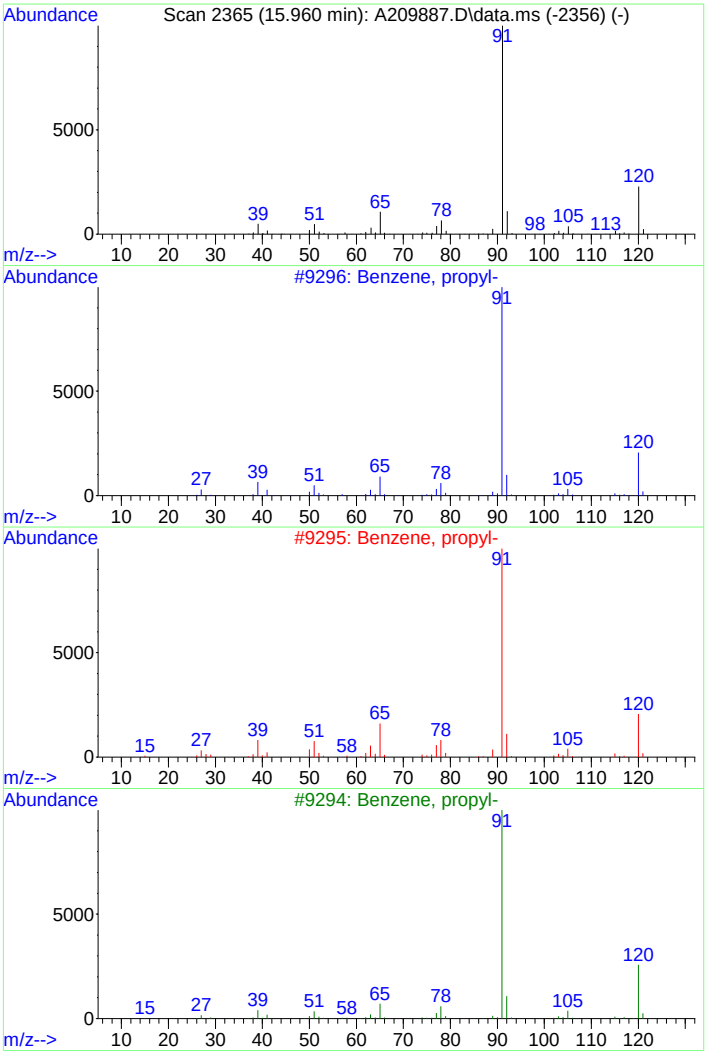
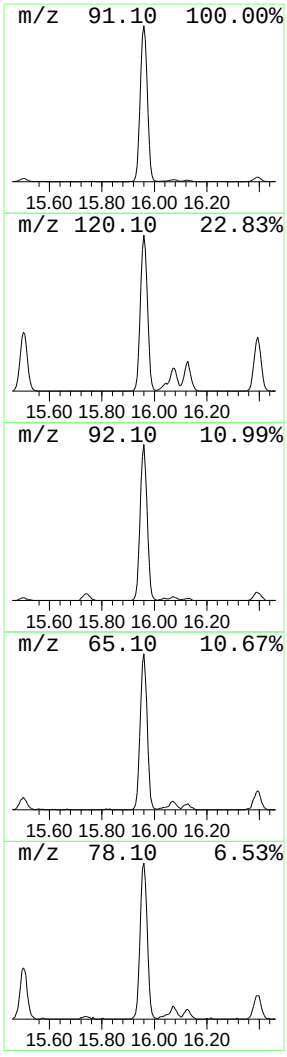
Peak Number 9 Benzene, propyl- Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.960	48.42 ug/L	1141720	1,4-dichlorobenzene-d4	17.048

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, propyl-	120	C9H12	000103-65-1	91
2	Benzene, propyl-	120	C9H12	000103-65-1	91
3	Benzene, propyl-	120	C9H12	000103-65-1	91
4	N-Benzyl-2-phenethylamine	211	C15H17N	003647-71-0	78
5	Ethanol, 2-[(phenylmethyl)amino]-	151	C9H13NO	000104-63-2	72





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Operator : CourtneM
Sample : jb80728-5
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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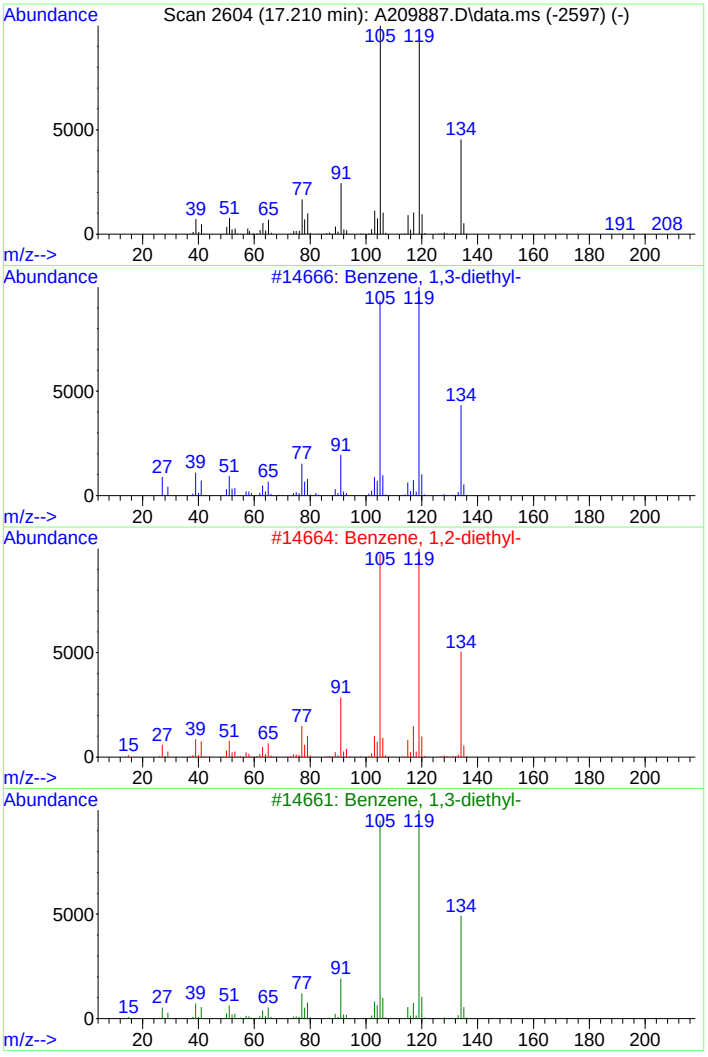
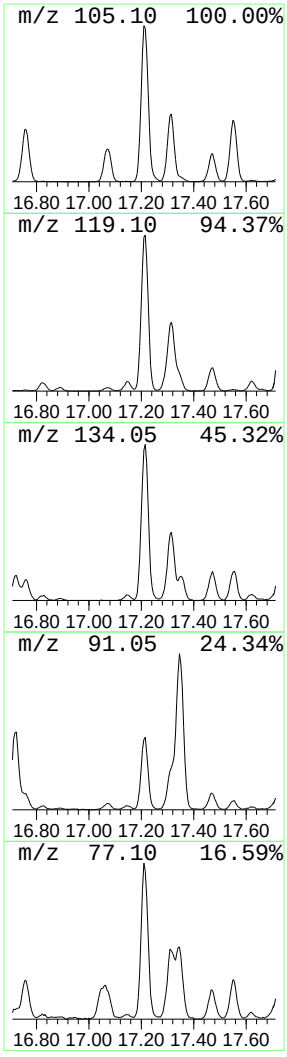
Peak Number 10 C4 alkyl benzene Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.210	40.38 ug/L	952171	1,4-dichlorobenzene-d4	17.048

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	95
2	Benzene, 1,2-diethyl-	134	C10H14	000135-01-3	95
3	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	94
4	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	94
5	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	94





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Operator : CourtneM
Sample : jb80728-5
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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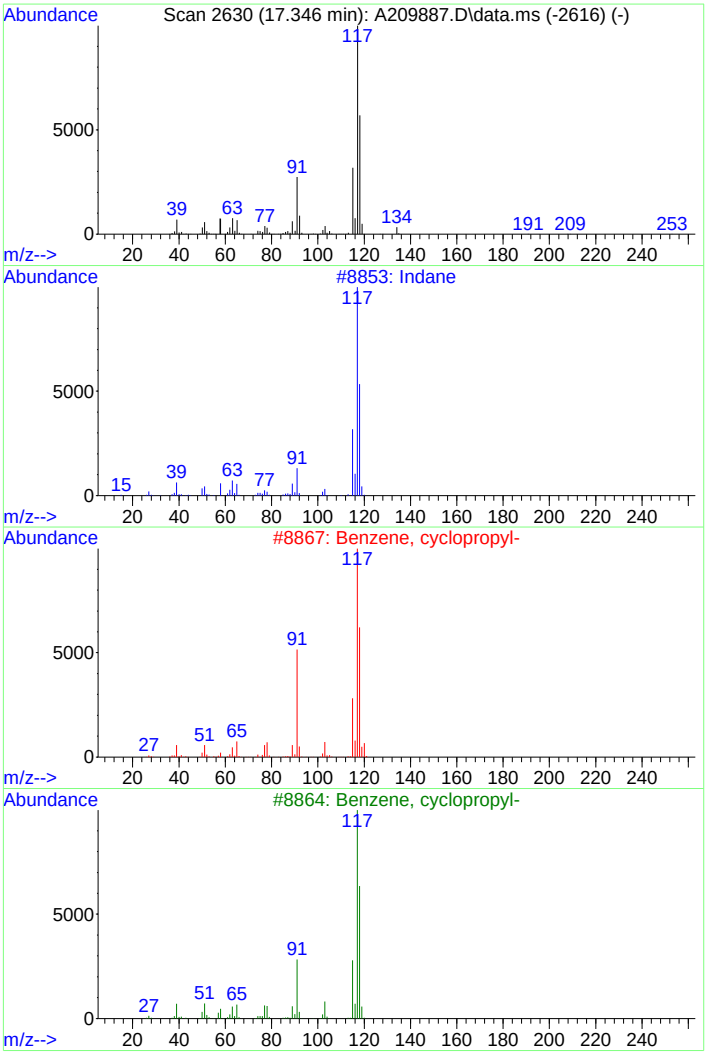
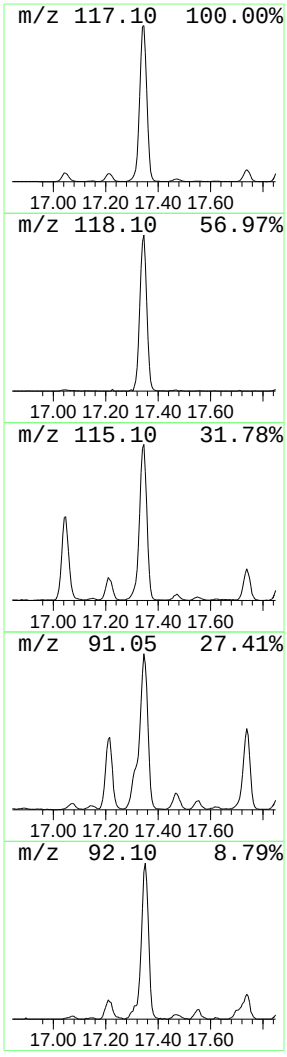
Peak Number 11 Benzene, cyclopropyl- Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.346	79.07 ug/L	1864230	1,4-dichlorobenzene-d4	17.048

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indane	118	C9H10	000496-11-7	81
2	Benzene, cyclopropyl-	118	C9H10	000873-49-4	68
3	Benzene, cyclopropyl-	118	C9H10	000873-49-4	68
4	Benzene, 2-propenyl-	118	C9H10	000300-57-2	64
5	Deltacyclene	118	C9H10	007785-10-6	64





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Sample : jb80728-5
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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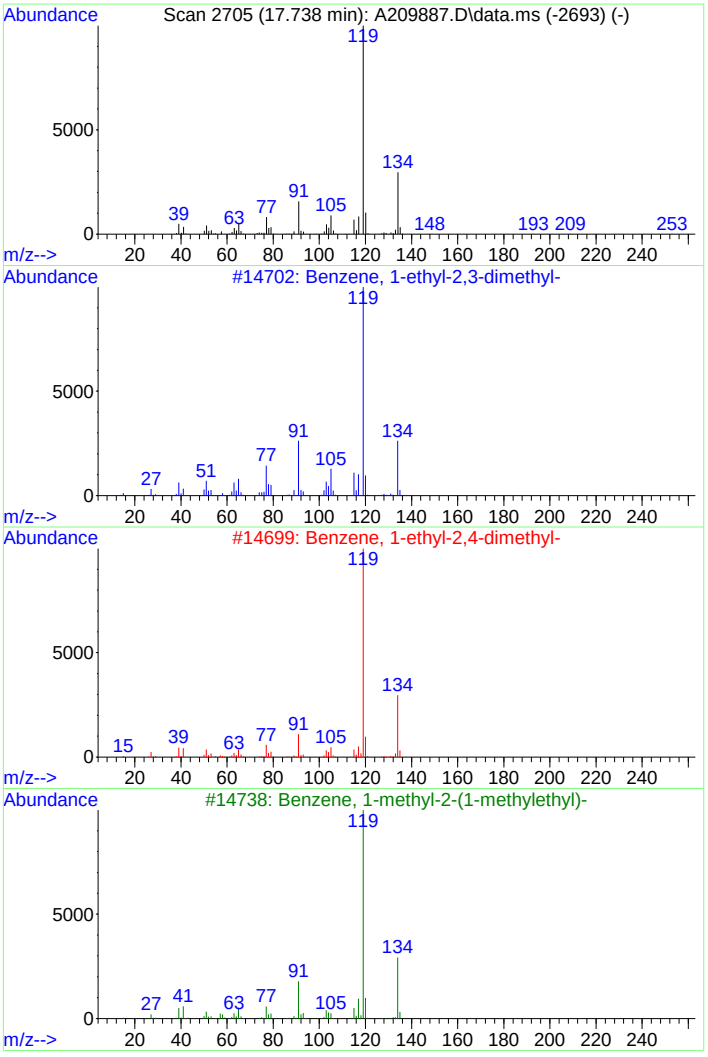
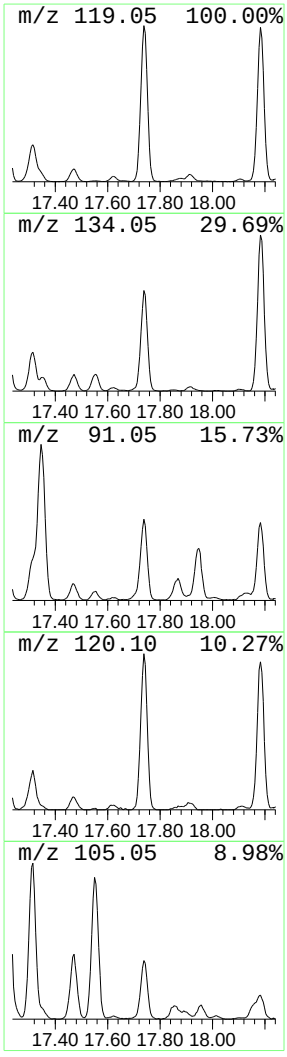
Peak Number 12 C4 alkyl benzene Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.738	43.26 ug/L	1019900	1,4-dichlorobenzene-d4	17.048

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	96
2	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	95
3	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	95
4	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	94
5	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14	002870-04-4	94





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Sample : jb80728-5
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ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
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TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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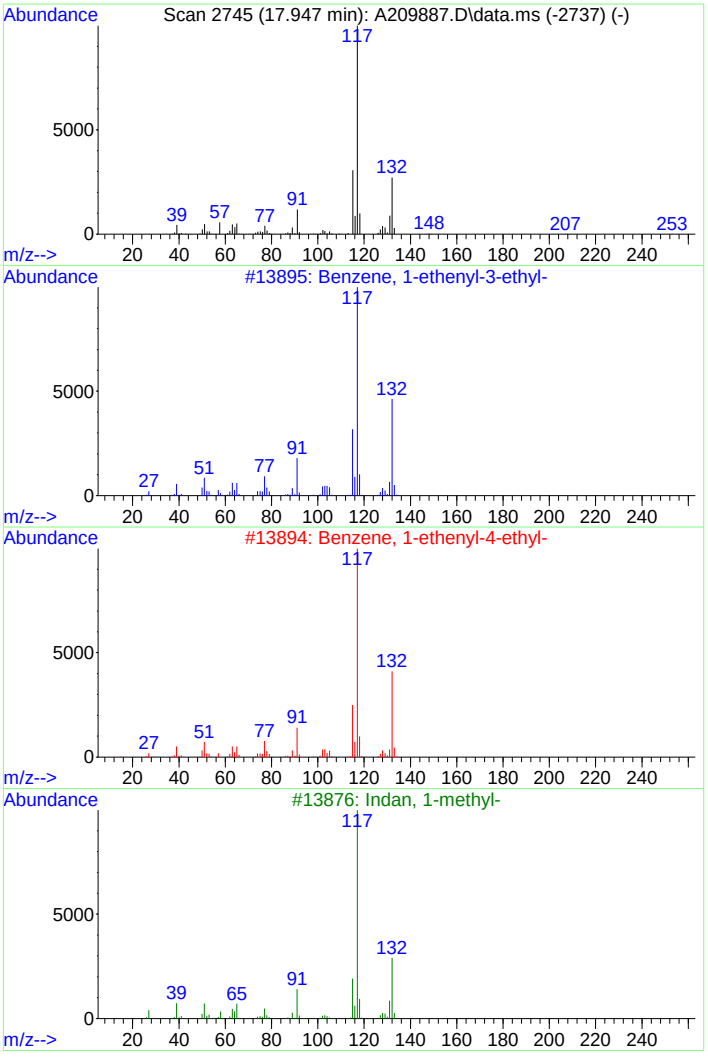
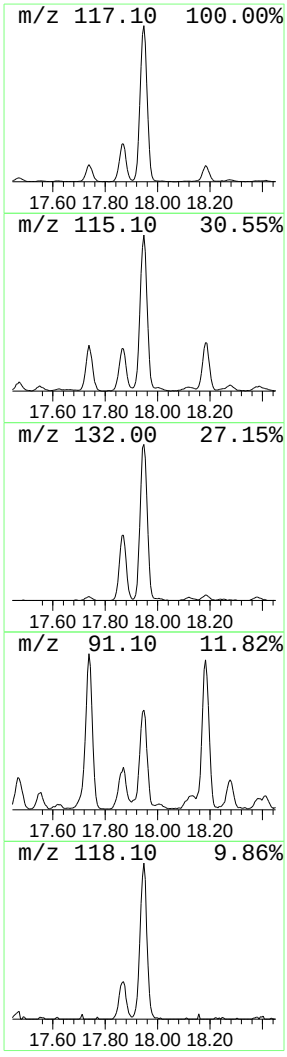
Peak Number 13 1H-Indene-dihydro-methyl- i... Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.947	38.78 ug/L	914441	1,4-dichlorobenzene-d4	17.048

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethenyl-3-ethyl-	132	C10H12	007525-62-4	91
2	Benzene, 1-ethenyl-4-ethyl-	132	C10H12	003454-07-7	91
3	Indan, 1-methyl-	132	C10H12	000767-58-8	90
4	Benzene, 2-butenyl-	132	C10H12	001560-06-1	87
5	1-Phenyl-1-butene	132	C10H12	000824-90-8	87





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Operator : CourtneM
Sample : jb80728-5
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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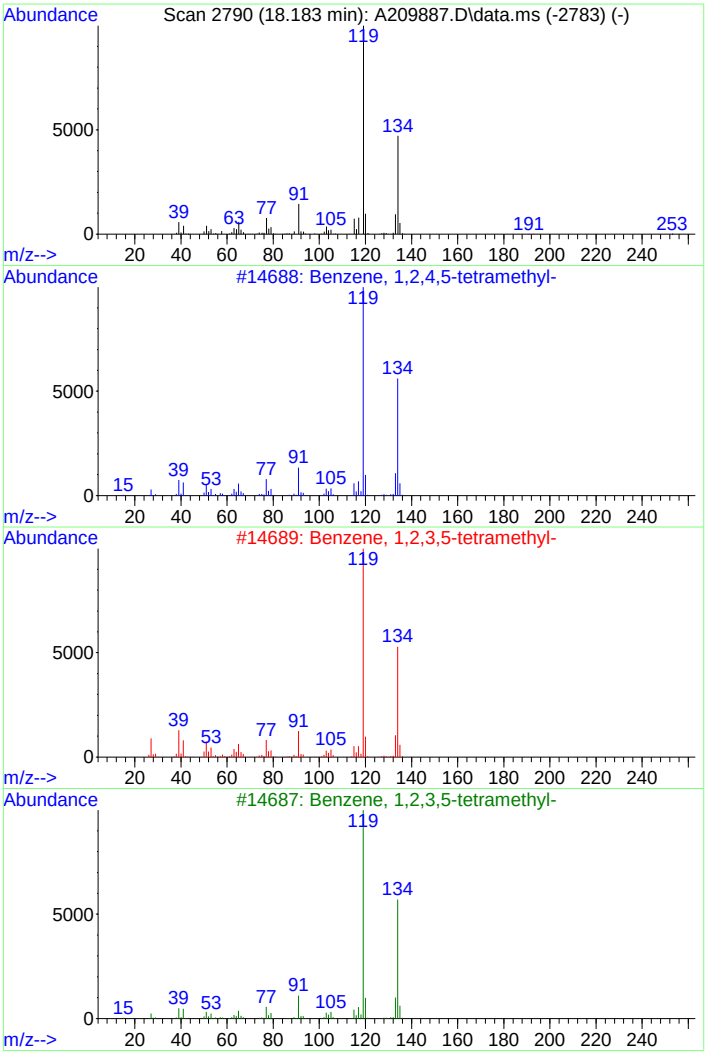
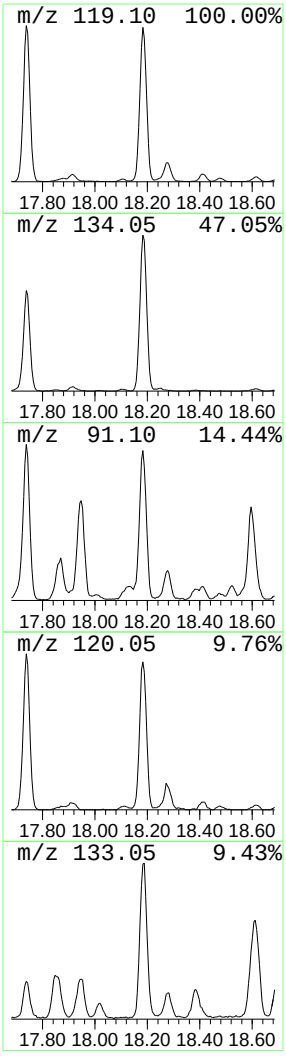
Peak Number 14 C4 alkyl benzene Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.183	44.93 ug/L	1059240	1,4-dichlorobenzene-d4	17.048

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	95
2	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	94
3	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	94
4	Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	94
5	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209887.D
Acq On : 12 Nov 2014 9:18 pm
Operator : CourtneM
Sample : jb80728-5
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

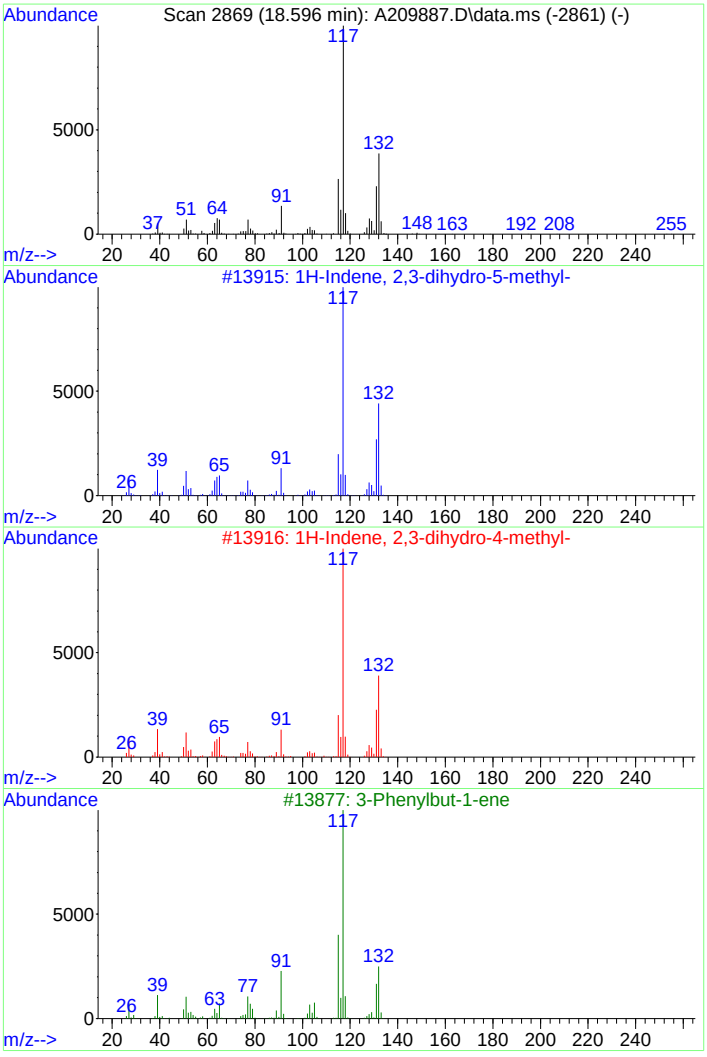
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

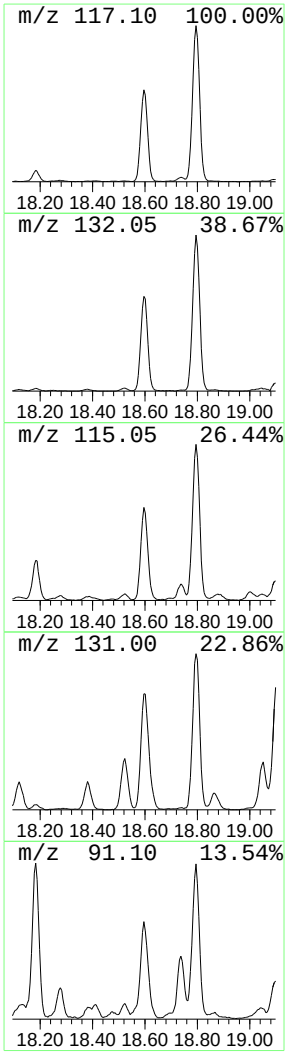
****

Peak Number 15 1H-Indene-dihydro-methyl- i... Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.596	38.17 ug/L	900046	1,4-dichlorobenzene-d4	17.048

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Indene, 2,3-dihydro-5-methyl-	132	C10H12	000874-35-1	95
2	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	95
3	3-Phenylbut-1-ene	132	C10H12	000934-10-1	91
4	1-Phenyl-1-butene	132	C10H12	000824-90-8	87
5	Benzene, 1-ethenyl-4-ethyl-	132	C10H12	003454-07-7	87





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209887.D
Acq On : 12 Nov 2014 9:18 pm
Operator : CourtneM
Sample : jb80728-5
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

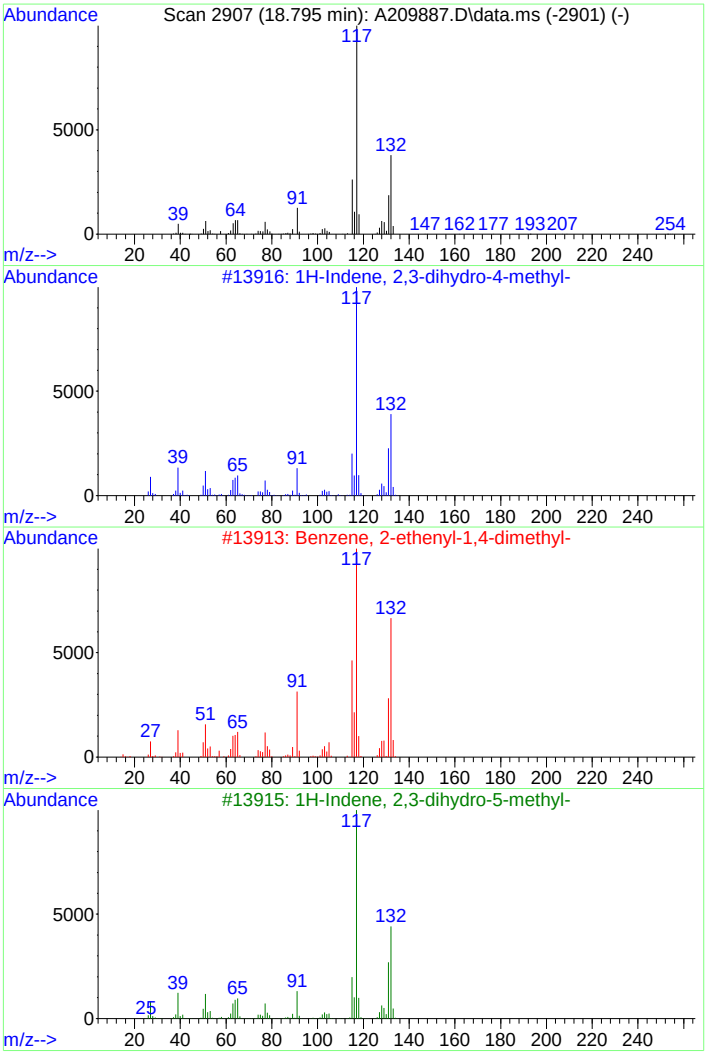
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

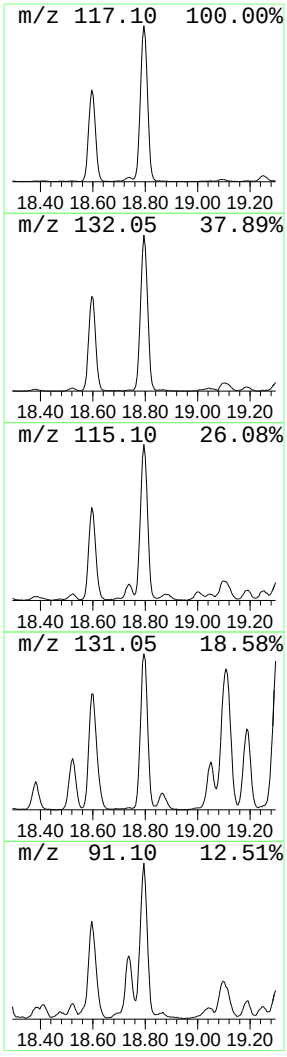
****

Peak Number 16 1H-Indene-dihydro-methyl- i... Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.795	64.72 ug/L	1525830	1,4-dichlorobenzene-d4	17.048

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	94
2	Benzene, 2-ethenyl-1,4-dimethyl-	132	C10H12	002039-89-6	91
3	1H-Indene, 2,3-dihydro-5-methyl-	132	C10H12	000874-35-1	90
4	Benzene, 1-ethenyl-4-ethyl-	132	C10H12	003454-07-7	87
5	1H-Indene, 2,3-dihydro-2-methyl-	132	C10H12	000824-63-5	86





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209887.D
Acq On : 12 Nov 2014 9:18 pm
Operator : CourtneM
Sample : jb80728-5
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
alkane	4.804	100.6	ug/L	2066660	2	10.097	1027210	50.0
alkane	5.813	332.4	ug/L	6828960	2	10.097	1027210	50.0
alkane-Pentane	6.232	76.5	ug/L	1570860	2	10.097	1027210	50.0
alkene	6.776	38.3	ug/L	787592	2	10.097	1027210	50.0
alkane	8.141	88.5	ug/L	1818440	2	10.097	1027210	50.0
alkene	9.407	143.9	ug/L	2957150	2	10.097	1027210	50.0
alkene	12.184	45.9	ug/L	762007	3	11.049	829425	50.0
Benzene, propyl-	15.960	48.4	ug/L	1141720	5	17.048	1178870	50.0
C4 alkyl benzene	17.210	40.4	ug/L	952171	5	17.048	1178870	50.0
Benzene, cyclop...	17.346	79.1	ug/L	1864230	5	17.048	1178870	50.0
C4 alkyl benzene	17.738	43.3	ug/L	1019900	5	17.048	1178870	50.0
1H-Indene-dihyd...	17.947	38.8	ug/L	914441	5	17.048	1178870	50.0
C4 alkyl benzene	18.183	44.9	ug/L	1059240	5	17.048	1178870	50.0
1H-Indene-dihyd...	18.596	38.2	ug/L	900046	5	17.048	1178870	50.0
1H-Indene-dihyd...	18.795	64.7	ug/L	1525830	5	17.048	1178870	50.0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209885.D
Acq On : 12 Nov 2014 8:16 pm
Operator : CourtneM
Sample : jb80728-6
Misc : MS76458,VA7919,w,,,,10
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Nov 13 14:38:39 2014
Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Nov 13 13:59:58 2014
Response via : Initial Calibration

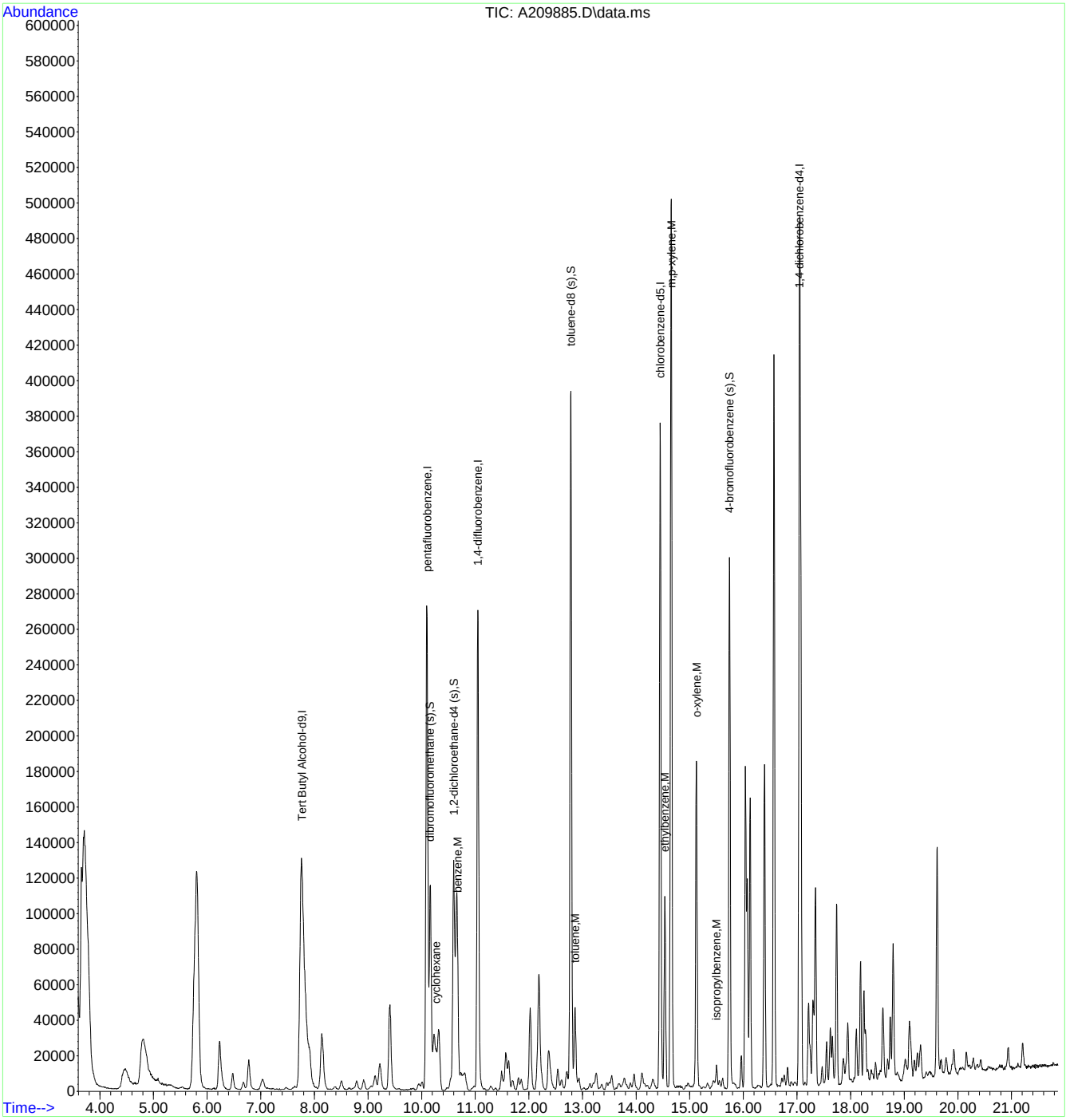
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.768	65	339351	500.00	ug/L	0.00
4) pentafluorobenzene	10.101	168	241088	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.047	114	274707	50.00	ug/L	0.00
83) chlorobenzene-d5	14.447	117	236186	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.046	152	141045	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.158	113	87132	46.84	ug/L	0.00
Spiked Amount 50.000	Range 59 - 130		Recovery = 93.68%			
47) 1,2-dichloroethane-d4 (s)	10.597	65	102446	45.39	ug/L	0.00
Spiked Amount 50.000	Range 65 - 123		Recovery = 90.78%			
75) toluene-d8 (s)	12.784	98	321295	50.61	ug/L	0.00
Spiked Amount 50.000	Range 77 - 125		Recovery = 101.22%			
101) 4-bromofluorobenzene (s)	15.739	95	118907	54.24	ug/L	0.00
Spiked Amount 50.000	Range 71 - 132		Recovery = 108.48%			
Target Compounds						Qvalue
49) cyclohexane	10.268	84	9499	3.13	ug/L	# 1
59) benzene	10.671	78	40804	6.17	ug/L	97
77) toluene	12.862	92	20465	5.01	ug/L	96
93) ethylbenzene	14.536	91	89631	12.42	ug/L	99
94) m,p-xylene	14.656	106	175424	63.95	ug/L	98
95) o-xylene	15.127	106	59907	20.00	ug/L	99
99) isopropylbenzene	15.498	105	9089	1.10	ug/L	100

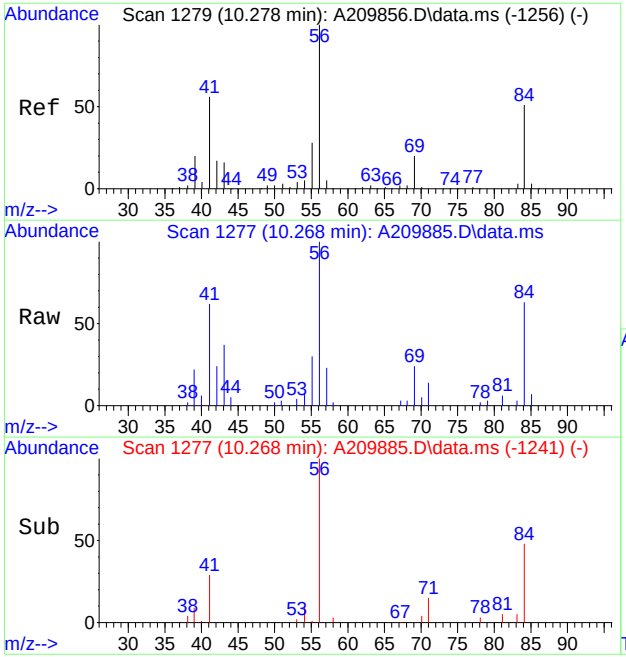
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209885.D
Acq On : 12 Nov 2014 8:16 pm
Operator : CourtneM
Sample : jb80728-6
Misc : MS76458,VA7919,w,,,,10
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Nov 13 14:38:39 2014
Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Nov 13 13:59:58 2014
Response via : Initial Calibration

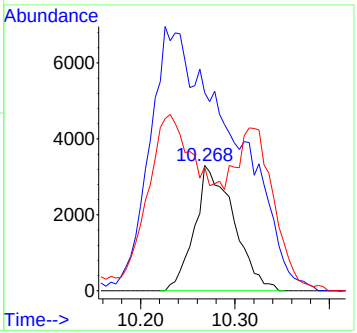


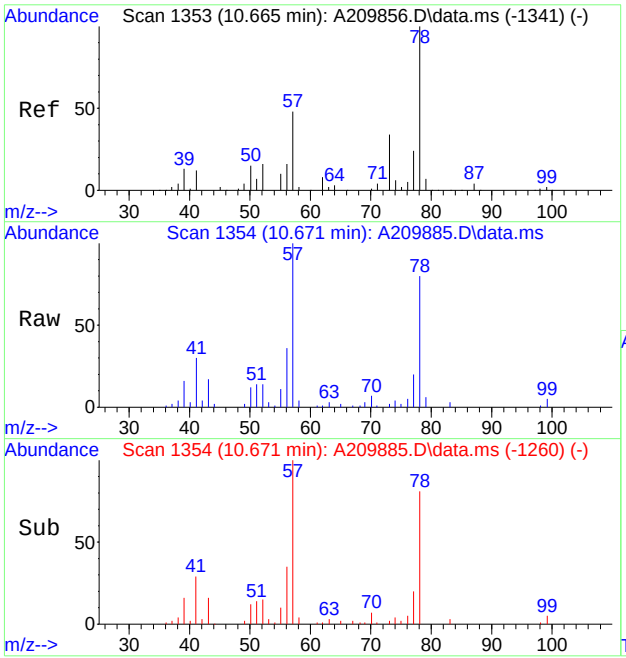


#49
cyclohexane
Concen: 3.13 ug/L
RT: 10.268 min Scan# 1277
Delta R.T. -0.010 min
Lab File: A209885.D
Acq: 12 Nov 2014 8:16 pm

Tgt Ion: 84 Resp: 9499

Ion	Ratio	Lower	Upper
84	100		
56	0.0	157.0	291.6#
41	0.0	88.5	164.3#

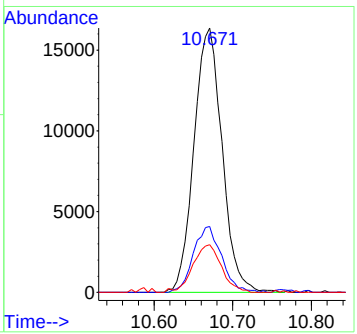


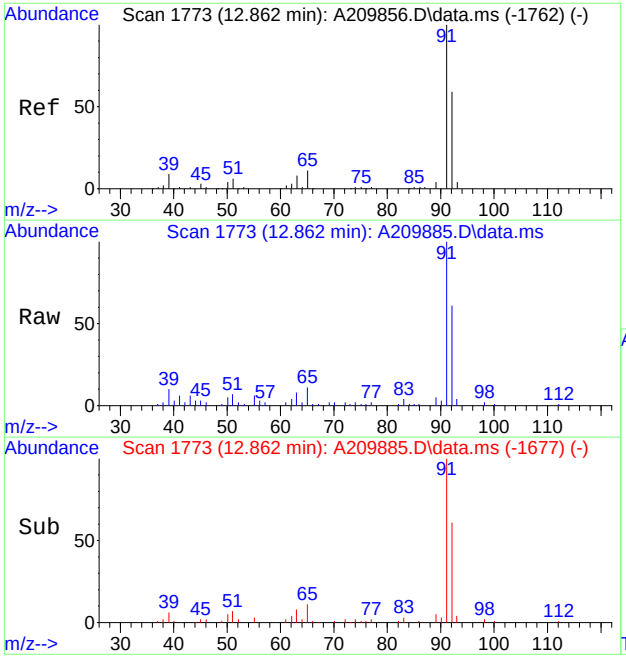


#59
benzene
Concen: 6.17 ug/L
RT: 10.671 min Scan# 1354
Delta R.T. 0.006 min
Lab File: A209885.D
Acq: 12 Nov 2014 8:16 pm

Tgt Ion: 78 Resp: 40804

Ion	Ratio	Lower	Upper
78	100		
77	25.0	0.0	54.5
52	18.0	0.0	45.9

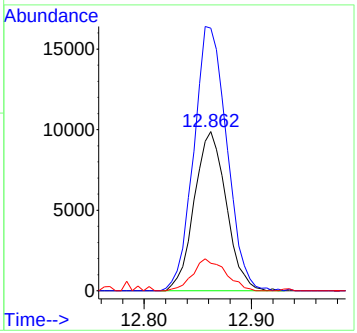


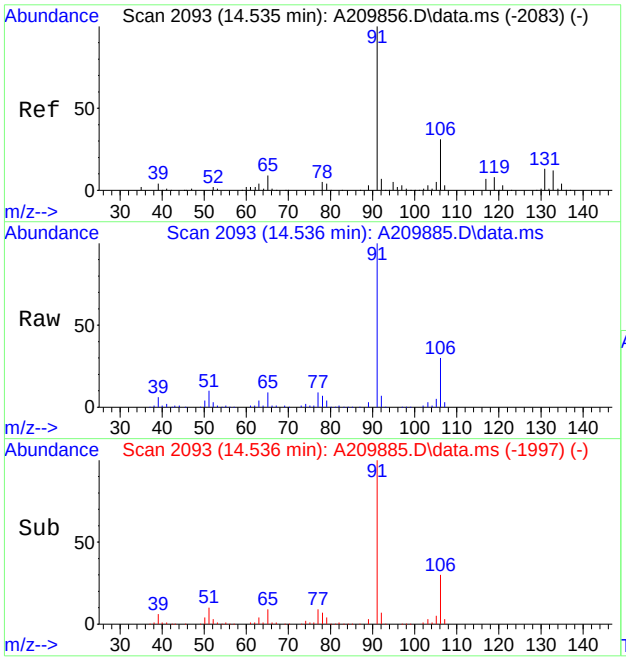


#77
toluene
Concen: 5.01 ug/L
RT: 12.862 min Scan# 1773
Delta R.T. 0.000 min
Lab File: A209885.D
Acq: 12 Nov 2014 8:16 pm

Tgt Ion: 92 Resp: 20465

Ion	Ratio	Lower	Upper
92	100		
91	165.0	139.6	199.6
65	17.3	0.0	49.5

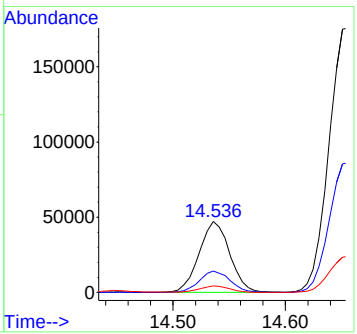


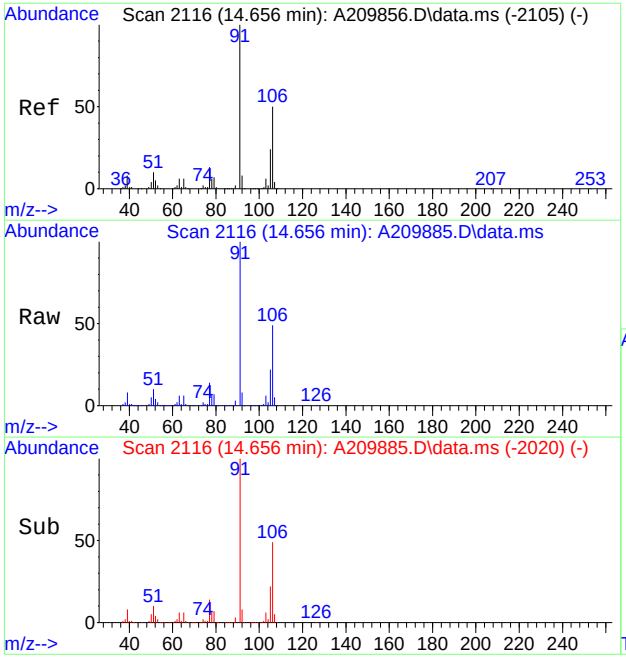


#93
ethylbenzene
Concen: 12.42 ug/L
RT: 14.536 min Scan# 2093
Delta R.T. 0.000 min
Lab File: A209885.D
Acq: 12 Nov 2014 8:16 pm

Tgt Ion: 91 Resp: 89631

Ion	Ratio	Lower	Upper
91	100		
106	30.3	0.8	60.8
77	9.1	0.0	38.5

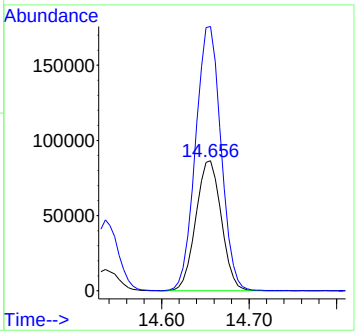


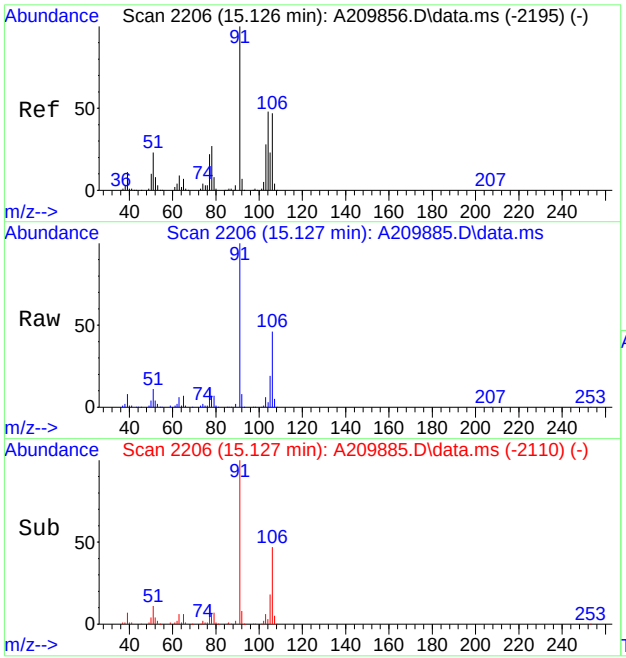


#94
m,p-xylene
Concen: 63.95 ug/L
RT: 14.656 min Scan# 2116
Delta R.T. 0.000 min
Lab File: A209885.D
Acq: 12 Nov 2014 8:16 pm

Tgt Ion:106 Resp: 175424

Ion	Ratio	Lower	Upper
106	100		
91	203.2	169.6	229.6

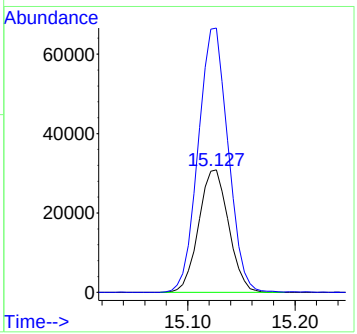


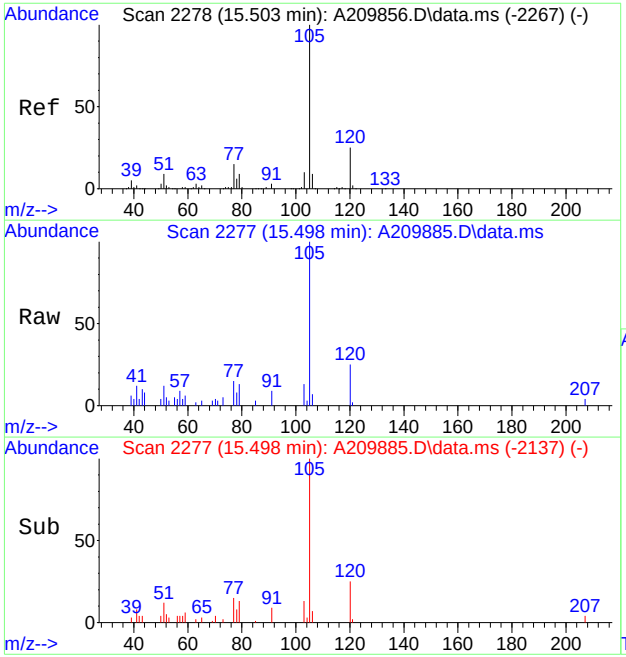


#95
o-xylene
Concen: 20.00 ug/L
RT: 15.127 min Scan# 2206
Delta R.T. 0.000 min
Lab File: A209885.D
Acq: 12 Nov 2014 8:16 pm

Tgt Ion:106 Resp: 59907

Ion	Ratio	Lower	Upper
106	100		
91	215.8	183.9	243.9

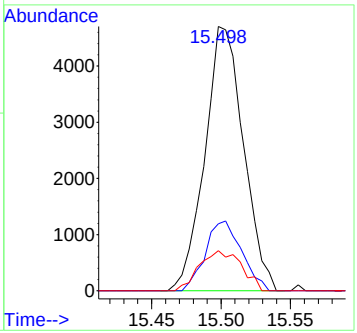




#99
isopropylbenzene
Concen: 1.10 ug/L
RT: 15.498 min Scan# 2277
Delta R.T. -0.005 min
Lab File: A209885.D
Acq: 12 Nov 2014 8:16 pm

Tgt Ion:105 Resp: 9089

Ion	Ratio	Lower	Upper
105	100		
120	25.3	0.0	55.3
77	15.1	0.0	45.1



Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\A\
Data File : A209919.D
Acq On : 13 Nov 2014 2:19 pm
Operator : CourtneM
Sample : jb80728-6
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Nov 14 08:52:26 2014
Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Nov 13 13:59:58 2014
Response via : Initial Calibration

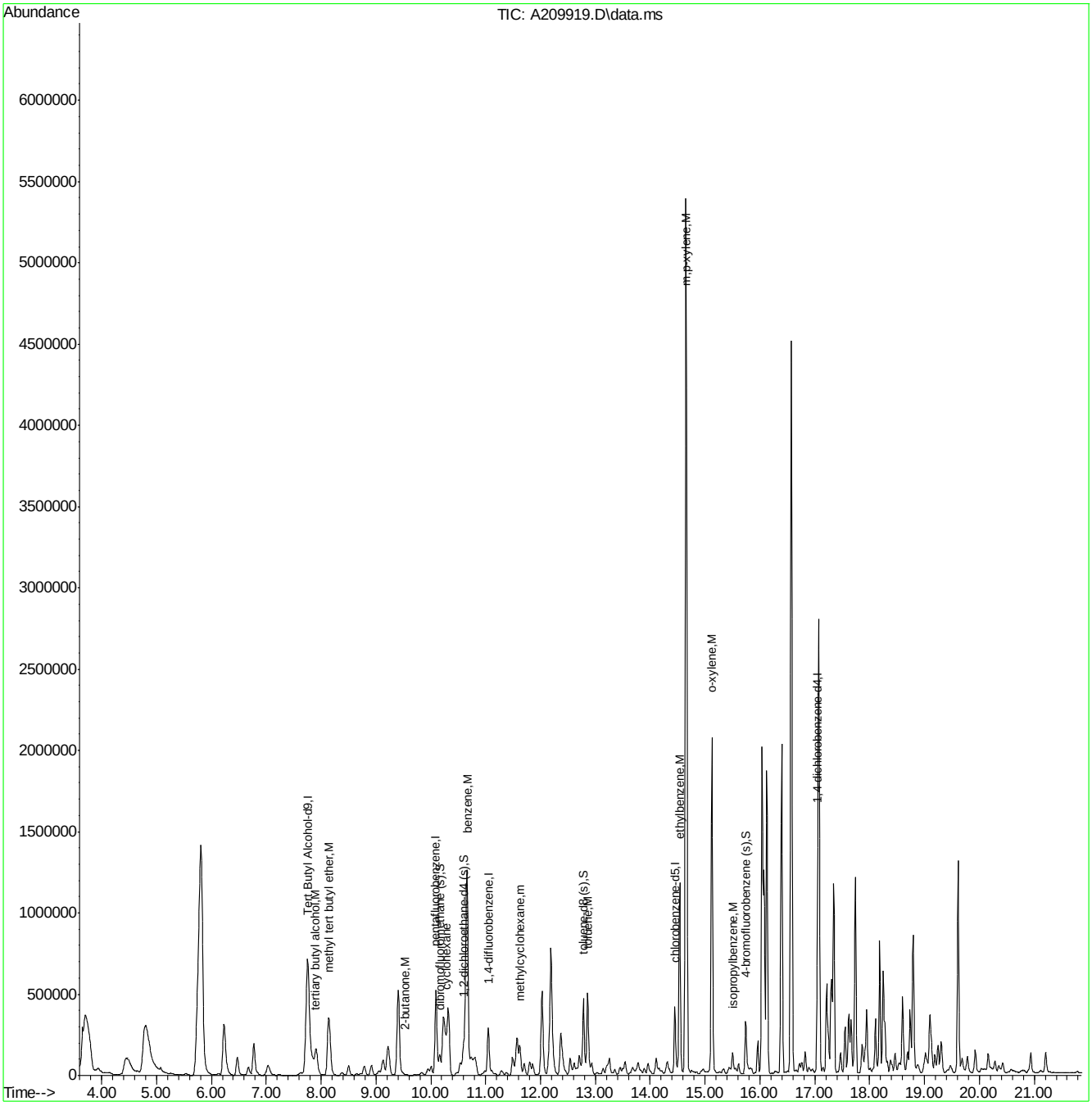
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.760	65	352154	500.00	ug/L	0.00
4) pentafluorobenzene	10.098	168	238952	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.050	114	281384	50.00	ug/L	0.00
83) chlorobenzene-d5	14.449	117	254832	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.049	152	148164	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.160	113	88310	47.90	ug/L	0.00
Spiked Amount 50.000	Range 59 - 130		Recovery = 95.80%			
47) 1,2-dichloroethane-d4 (s)	10.595	65	108035	48.30	ug/L	0.00
Spiked Amount 50.000	Range 65 - 123		Recovery = 96.60%			
75) toluene-d8 (s)	12.781	98	345500	53.13	ug/L	0.00
Spiked Amount 50.000	Range 77 - 125		Recovery = 106.26%			
101) 4-bromofluorobenzene (s)	15.741	95	125516	54.51	ug/L	0.00
Spiked Amount 50.000	Range 71 - 132		Recovery = 109.02%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.880	59	14396	22.35	ug/L #	1
27) methyl tert butyl ether	8.142	73	7467	0.99	ug/L #	1
33) 2-butanone	9.538	72	1834	5.02	ug/L #	1
49) cyclohexane	10.281	84	106659	35.42	ug/L #	1
59) benzene	10.668	78	418672	61.78	ug/L	99
68) methylcyclohexane	11.625	83	100114	34.16	ug/L #	25
77) toluene	12.859	92	222190	53.06	ug/L	97
93) ethylbenzene	14.538	91	974665	125.13	ug/L	99
94) m,p-xylene	14.653	106	1883744	636.43	ug/L	97
95) o-xylene	15.124	106	673316	208.38	ug/L	98
99) isopropylbenzene	15.500	105	95552	10.96	ug/L	98

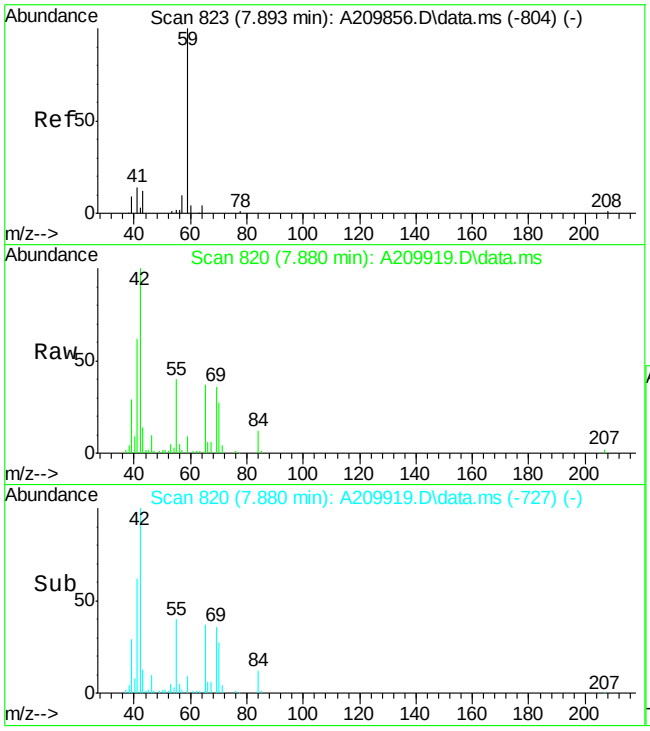
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\A\
Data File : A209919.D
Acq On : 13 Nov 2014 2:19 pm
Operator : CourtneM
Sample : jb80728-6
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Nov 14 08:52:26 2014
Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Nov 13 13:59:58 2014
Response via : Initial Calibration

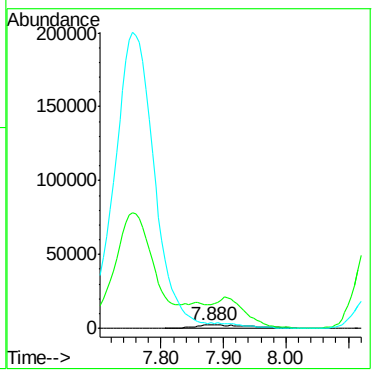


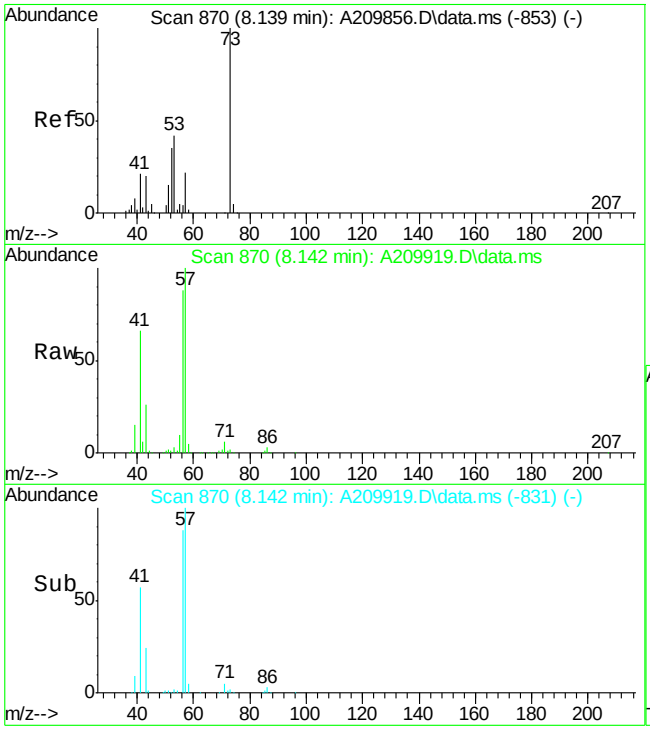


#3
tertiary butyl alcohol
Concen: 22.35 ug/L
RT: 7.880 min Scan# 820
Delta R.T. -0.013 min
Lab File: A209919.D
Acq: 13 Nov 2014 2:19 pm

Tgt Ion: 59 Resp: 14396

Ion	Ratio	Lower	Upper
59	100		
41	245.7	0.0	49.5#
43	0.0	0.0	43.1

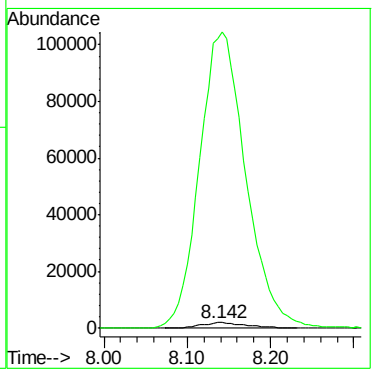


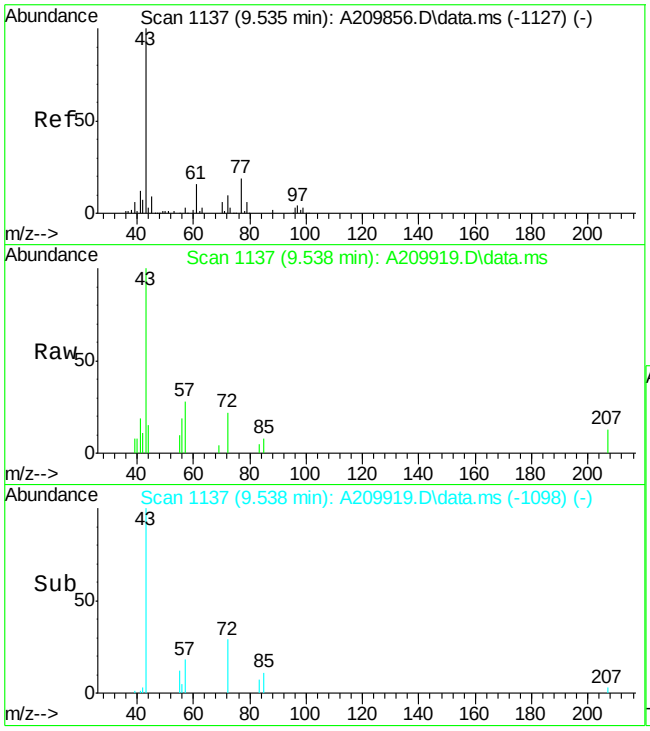


#27
methyl tert butyl ether
Concen: 0.99 ug/L
RT: 8.142 min Scan# 870
Delta R.T. 0.003 min
Lab File: A209919.D
Acq: 13 Nov 2014 2:19 pm

Tgt Ion: 73 Resp: 7467

Ion	Ratio	Lower	Upper
73	100		
57	5415.7	0.0	52.7#

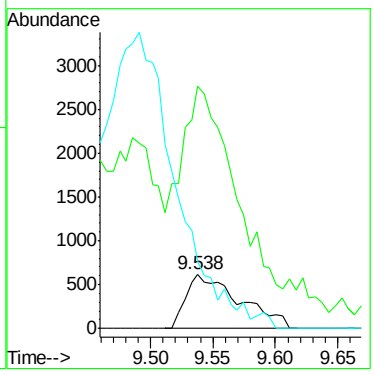


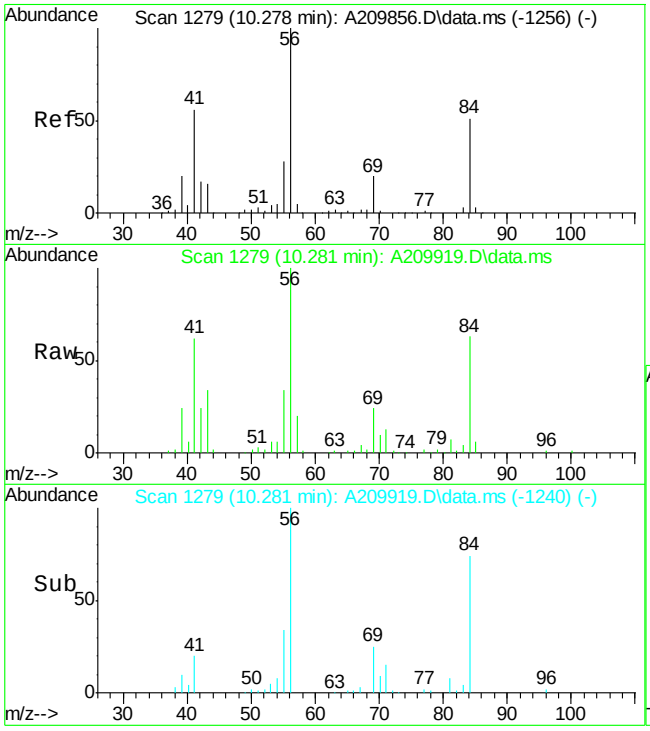


#33
2-butanone
Concen: 5.02 ug/L
RT: 9.538 min Scan# 1137
Delta R.T. 0.003 min
Lab File: A209919.D
Acq: 13 Nov 2014 2:19 pm

Tgt Ion: 72 Resp: 1834

Ion	Ratio	Lower	Upper
72	100		
43	419.7	1081.2	1141.2#
57	0.0	1.6	61.6#

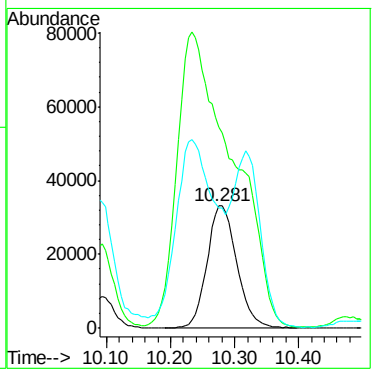


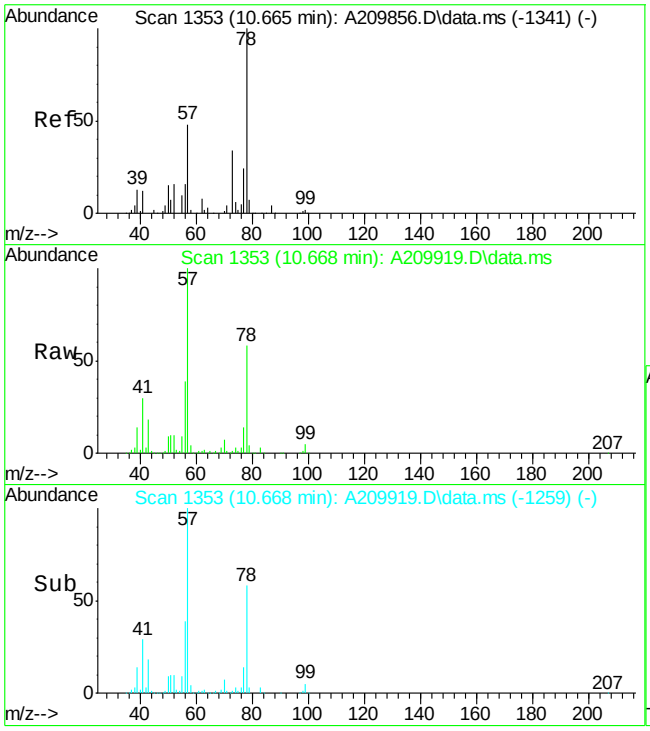


#49
cyclohexane
Concen: 35.42 ug/L
RT: 10.281 min Scan# 1279
Delta R.T. 0.003 min
Lab File: A209919.D
Acq: 13 Nov 2014 2:19 pm

Tgt Ion: 84 Resp: 106659

Ion	Ratio	Lower	Upper
84	100		
56	0.0	157.0	291.6#
41	0.0	88.5	164.3#

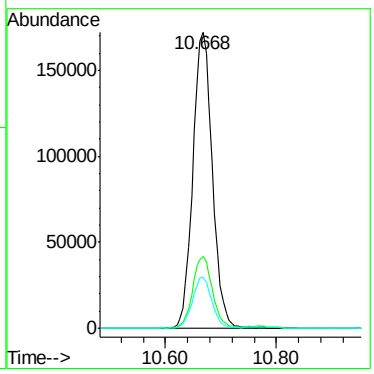


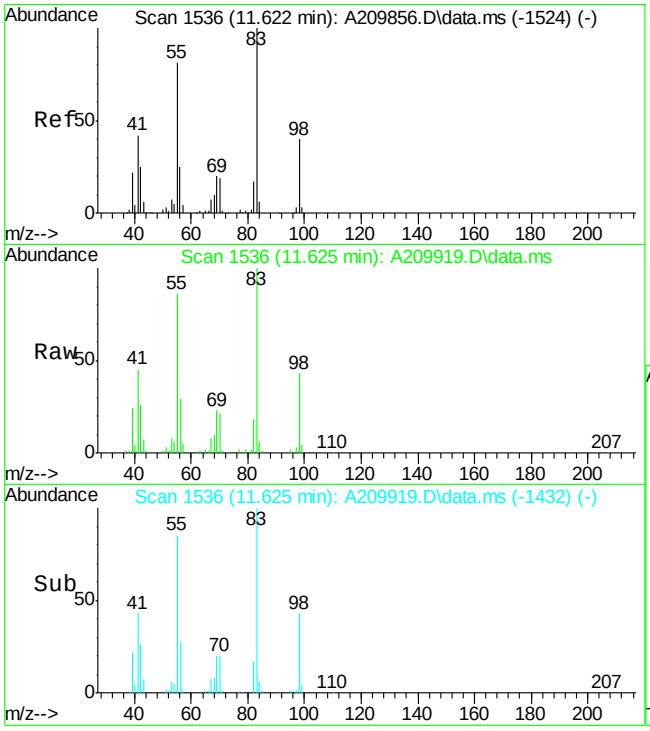


#59
benzene
Concen: 61.78 ug/L
RT: 10.668 min Scan# 1353
Delta R.T. 0.003 min
Lab File: A209919.D
Acq: 13 Nov 2014 2:19 pm

Tgt Ion: 78 Resp: 418672

Ion	Ratio	Lower	Upper
78	100		
77	24.3	0.0	54.5
52	16.9	0.0	45.9

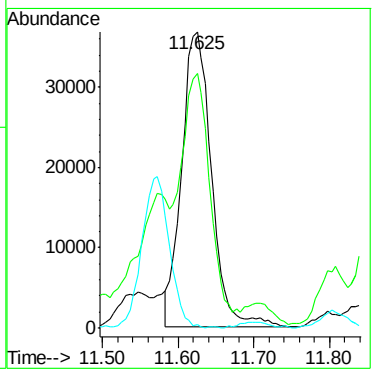


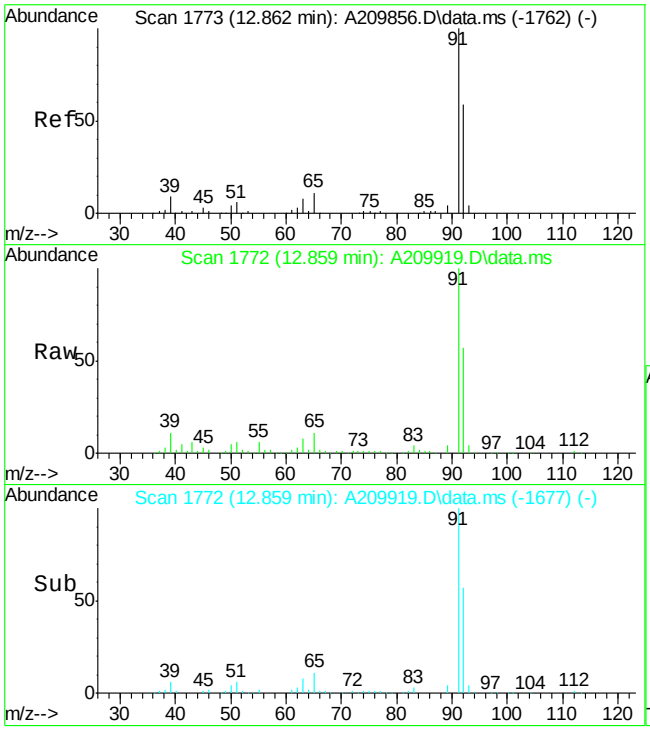


#68
methylcyclohexane
Concen: 34.16 ug/L
RT: 11.625 min Scan# 1536
Delta R.T. 0.003 min
Lab File: A209919.D
Acq: 13 Nov 2014 2:19 pm

Tgt Ion: 83 Resp: 100114

Ion	Ratio	Lower	Upper
83	100		
55	155.6	56.4	116.4#
85	0.1	0.0	30.1

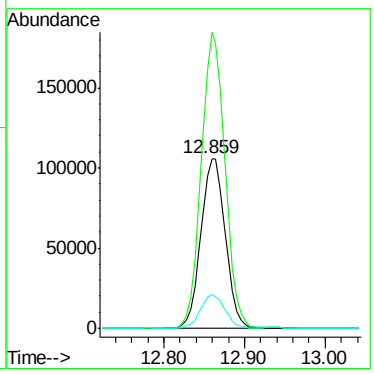


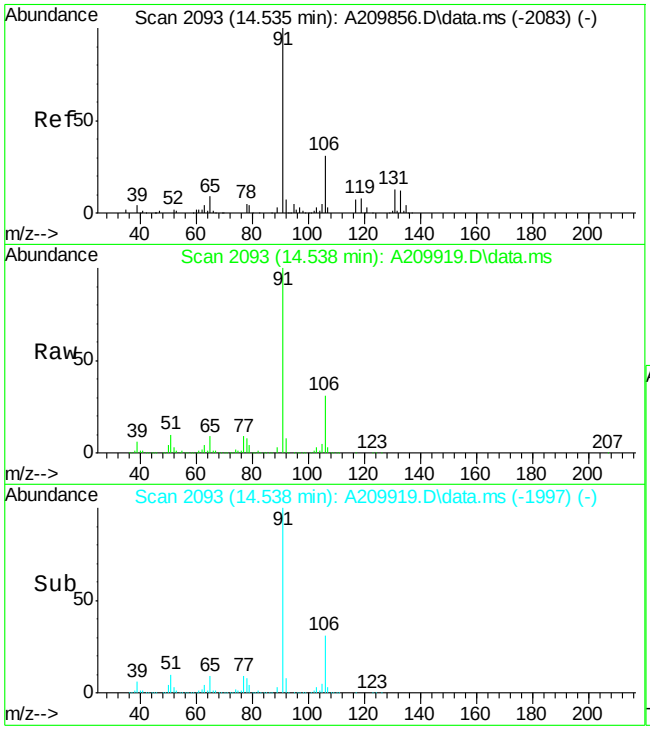


#77
toluene
Concen: 53.06 ug/L
RT: 12.859 min Scan# 1772
Delta R.T. -0.002 min
Lab File: A209919.D
Acq: 13 Nov 2014 2:19 pm

Tgt Ion: 92 Resp: 222190

Ion	Ratio	Lower	Upper
92	100		
91	174.3	139.6	199.6
65	20.0	0.0	49.5

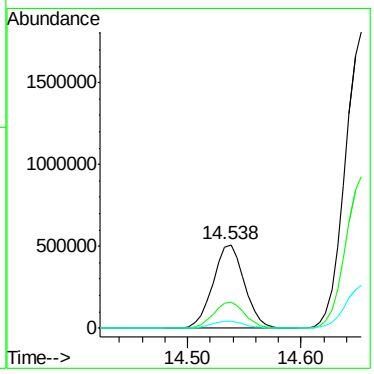


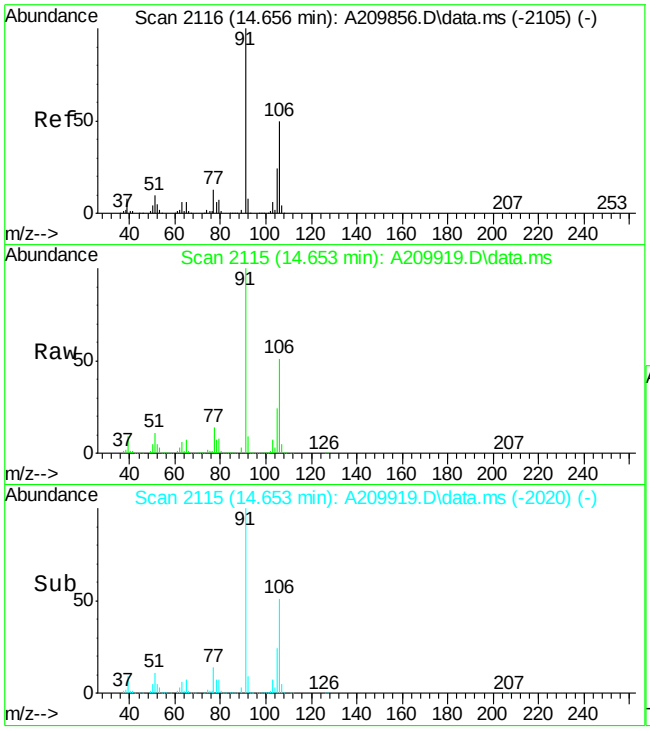


#93
ethylbenzene
Concen: 125.13 ug/L
RT: 14.538 min Scan# 2093
Delta R.T. 0.003 min
Lab File: A209919.D
Acq: 13 Nov 2014 2:19 pm

Tgt Ion: 91 Resp: 974665

Ion	Ratio	Lower	Upper
91	100		
106	31.3	0.8	60.8
77	8.8	0.0	38.5

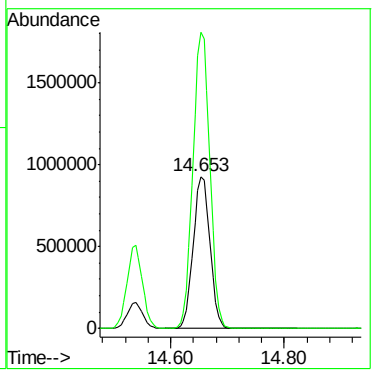


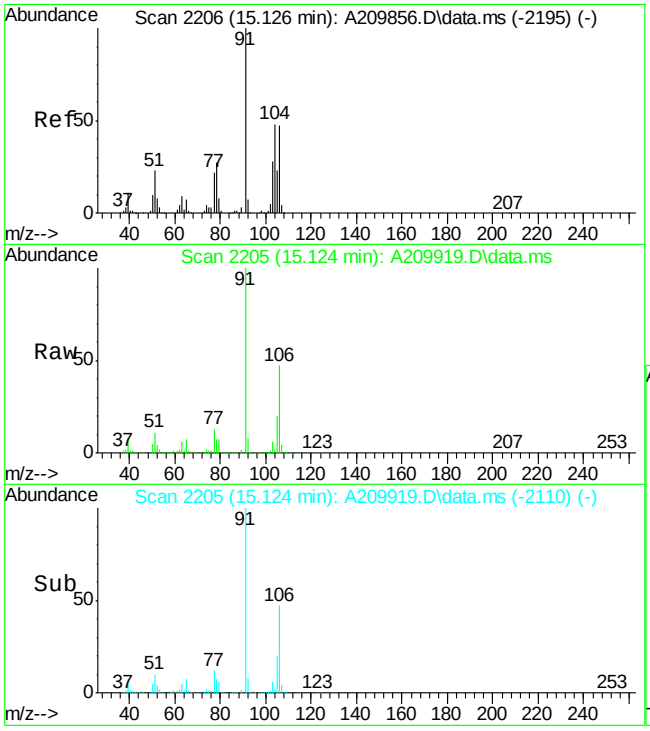


#94
m,p-xylene
Concen: 636.43 ug/L
RT: 14.653 min Scan# 2115
Delta R.T. -0.002 min
Lab File: A209919.D
Acq: 13 Nov 2014 2:19 pm

Tgt Ion:106 Resp: 1883744

Ion	Ratio	Lower	Upper
106	100		
91	195.2	169.6	229.6

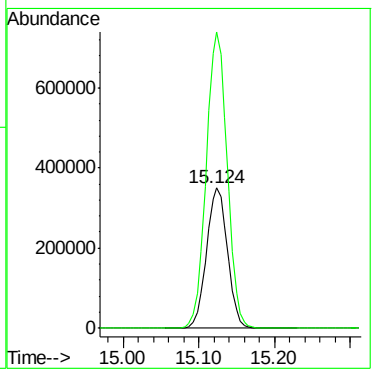


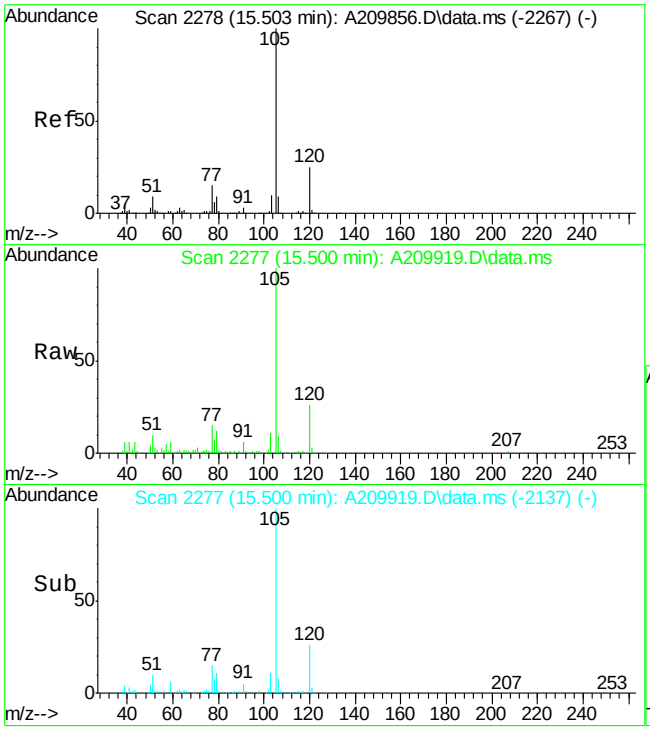


#95
o-xylene
Concen: 208.38 ug/L
RT: 15.124 min Scan# 2205
Delta R.T. -0.002 min
Lab File: A209919.D
Acq: 13 Nov 2014 2:19 pm

Tgt Ion:106 Resp: 673316

Ion	Ratio	Lower	Upper
106	100		
91	211.5	183.9	243.9

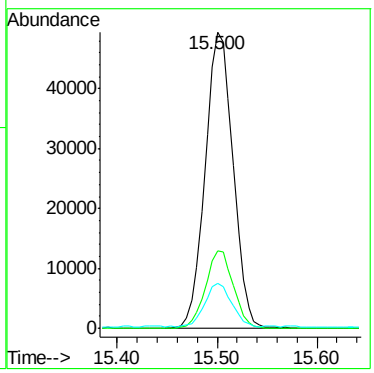




#99
isopropylbenzene
Concen: 10.96 ug/L
RT: 15.500 min Scan# 2277
Delta R.T. -0.002 min
Lab File: A209919.D
Acq: 13 Nov 2014 2:19 pm

Tgt Ion:105 Resp: 95552

Ion	Ratio	Lower	Upper
105	100		
120	26.3	0.0	55.3
77	14.8	0.0	45.1



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209919.D
Acq On : 13 Nov 2014 2:19 pm
Operator : CourtneM
Sample : jb80728-6
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.6 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\MA7918.M
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

Signal : TIC: A209919.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.701	3	21	149	rVB	359173	3406716	31.27%	3.000%
2	4.460	149	166	213	rVV3	97184	894049	8.21%	0.787%
3	4.805	213	232	360	rVB2	305532	3253565	29.86%	2.866%
4	5.809	394	424	477	rBV2	1415834	8009366	73.51%	7.054%
5	6.233	492	505	539	rVB	312364	1190844	10.93%	1.049%
6	6.777	598	609	640	rVB	197063	646726	5.94%	0.570%
7	7.755	779	796	854	rVB2	714992	4158721	38.17%	3.663%
8	8.142	854	870	900	rVB	356726	1381922	12.68%	1.217%
9	9.219	1067	1076	1098	rVB2	174952	616470	5.66%	0.543%
10	9.407	1098	1112	1152	rVB	525403	1693556	15.54%	1.492%
11	10.092	1233	1243	1262	rVV3	516599	1701032	15.61%	1.498%
12	10.317	1262	1286	1306	rVB4	414260	2759231	25.32%	2.430%
13	10.657	1333	1351	1397	rVB3	1264475	5197954	47.71%	4.578%
14	11.050	1417	1426	1460	rVB	293797	835740	7.67%	0.736%
15	11.573	1518	1526	1544	rVV4	217730	1019645	9.36%	0.898%
16	12.028	1600	1613	1628	rBV	512692	1418277	13.02%	1.249%
17	12.190	1628	1644	1668	rVB3	775848	2567663	23.57%	2.261%
18	12.368	1668	1678	1702	rBV5	254597	902984	8.29%	0.795%
19	12.781	1750	1757	1765	rVV	457657	1047595	9.61%	0.923%
20	12.859	1765	1772	1783	rVV	489225	1178567	10.82%	1.038%
21	14.449	2068	2076	2085	rVV	405443	853788	7.84%	0.752%
22	14.538	2085	2093	2105	rVV	1167905	2288498	21.00%	2.016%
23	14.653	2105	2115	2131	rVV	5377305	10895513	100.00%	9.596%
24	15.124	2195	2205	2239	rVV	2061796	4006107	36.77%	3.528%
25	15.741	2315	2323	2357	rBV2	319620	819609	7.52%	0.722%
26	16.039	2371	2380	2391	rBV	2000474	5852514	53.71%	5.154%
27	16.123	2391	2396	2421	rVB	1862809	3532145	32.42%	3.111%
28	16.395	2437	2448	2473	rBV	2028156	3920616	35.98%	3.453%
29	16.573	2473	2482	2505	rVV	4496986	8469944	77.74%	7.460%
30	17.069	2565	2577	2588	rBV2	2786842	5909521	54.24%	5.205%
31	17.216	2597	2605	2615	rVV	544498	1402385	12.87%	1.235%
32	17.300	2615	2621	2625	rVV3	571338	1327145	12.18%	1.169%
33	17.341	2625	2629	2647	rVV	1160367	2176300	19.97%	1.917%
34	17.551	2662	2669	2675	rVV	277582	506357	4.65%	0.446%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209919.D
Acq On : 13 Nov 2014 2:19 pm
Operator : CourtneM
Sample : jb80728-6
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.6 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\MA7918.M
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

35	17.624	2675	2683	2687	rVV3	354898	786220	7.22%	0.692%
36	17.660	2687	2690	2697	rVV	321857	532506	4.89%	0.469%
37	17.739	2697	2705	2720	rVB	1203363	2189200	20.09%	1.928%
38	17.948	2735	2745	2763	rVV2	382337	978964	8.99%	0.862%
39	18.105	2769	2775	2783	rVV	326315	646003	5.93%	0.569%
40	18.183	2783	2790	2796	rVV	810146	1462839	13.43%	1.288%
41	18.246	2796	2802	2822	rVV2	619041	1770129	16.25%	1.559%
42	18.597	2863	2869	2881	rVV3	463988	1044280	9.58%	0.920%
43	18.738	2891	2896	2900	rVV2	383596	706062	6.48%	0.622%
44	18.795	2900	2907	2937	rVB2	851632	2009270	18.44%	1.770%
45	19.015	2937	2949	2958	rBV6	125634	462937	4.25%	0.408%
46	19.093	2958	2964	2977	rVV5	349905	1075275	9.87%	0.947%
47	19.303	2998	3004	3054	rVV	183986	514456	4.72%	0.453%
48	19.611	3054	3063	3073	rVV	1298664	2557300	23.47%	2.252%
49	19.925	3113	3123	3162	rBV2	142504	490937	4.51%	0.432%
50	20.160	3162	3168	3201	rVV2	110020	474420	4.35%	0.418%

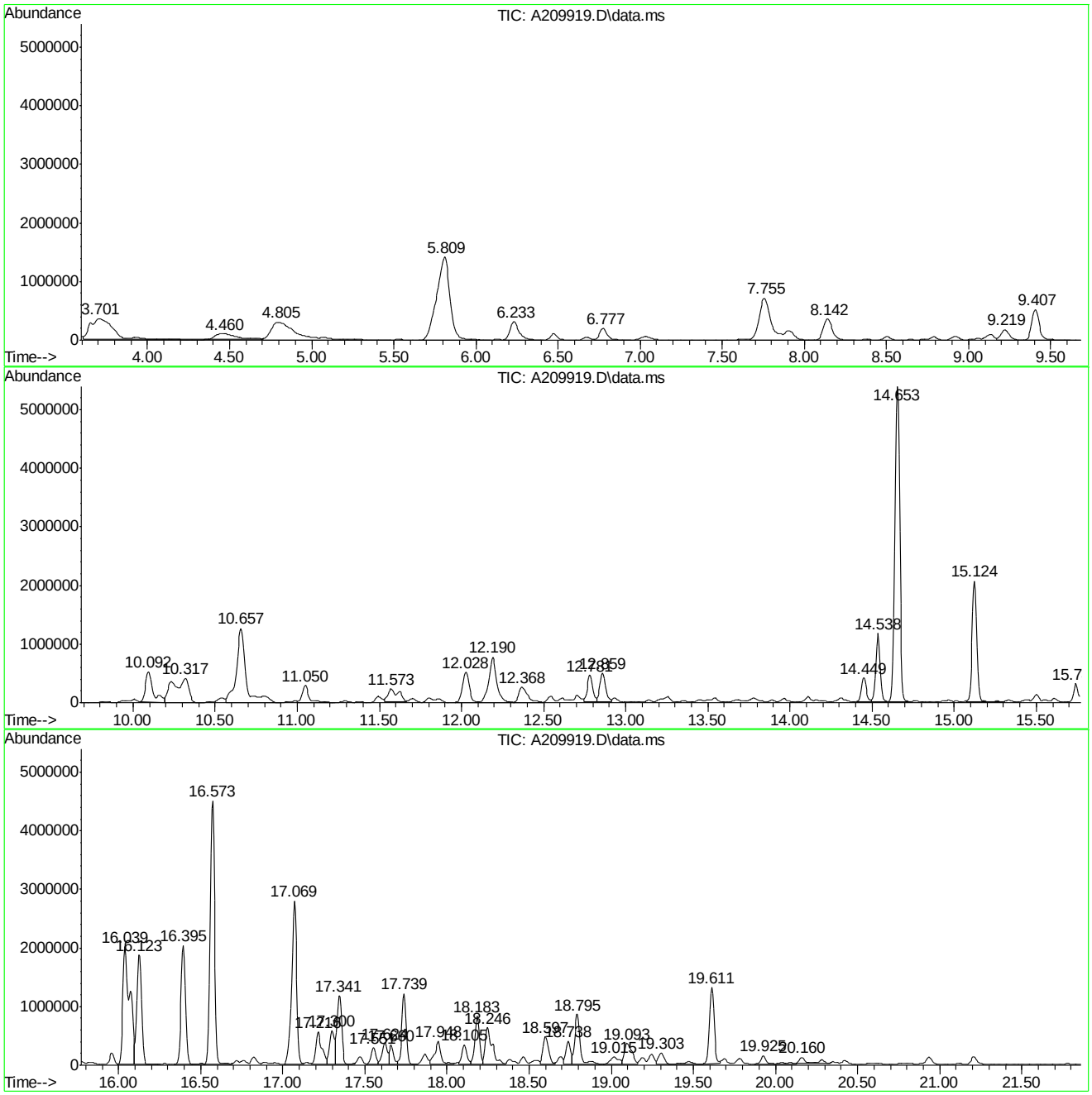
Sum of corrected areas: 113541863

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\A\
Data File : A209919.D
Acq On : 13 Nov 2014 2:19 pm
Operator : CourtneM
Sample : jb80728-6
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209919.D
Acq On : 13 Nov 2014 2:19 pm
Operator : CourtneM
Sample : jb80728-6
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

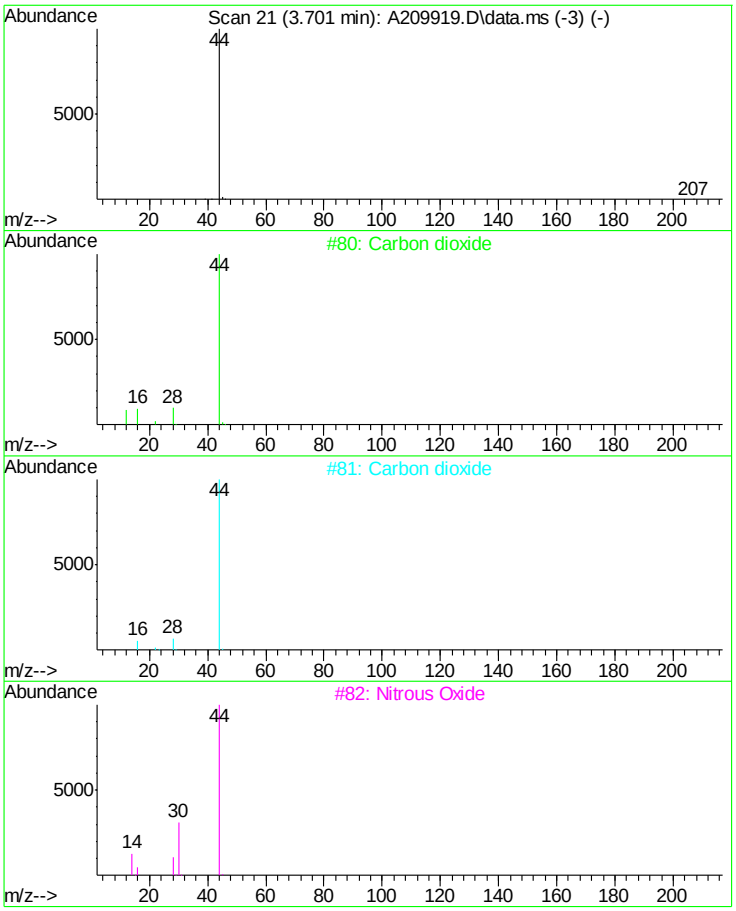
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

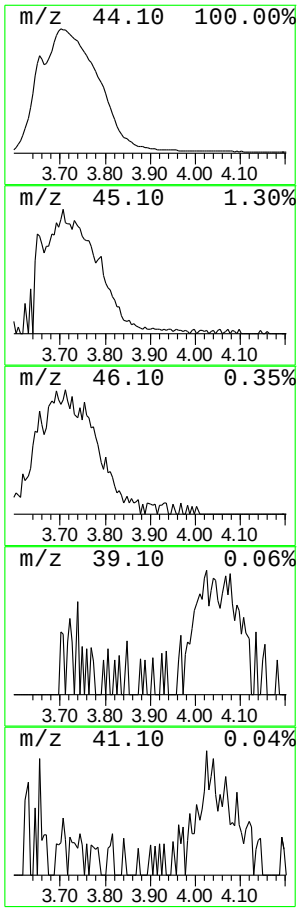
****

Peak Number 1 unknown Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.70	100.14 ug/L	3406720	pentafluorobenzene	10.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	3
3	Nitrous Oxide	44	N2O	010024-97-2	3
4	Nitrous Oxide	44	N2O	010024-97-2	3
5	Ethylene oxide	44	C2H4O	000075-21-8	2





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209919.D
Acq On : 13 Nov 2014 2:19 pm
Operator : CourtneM
Sample : jb80728-6
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

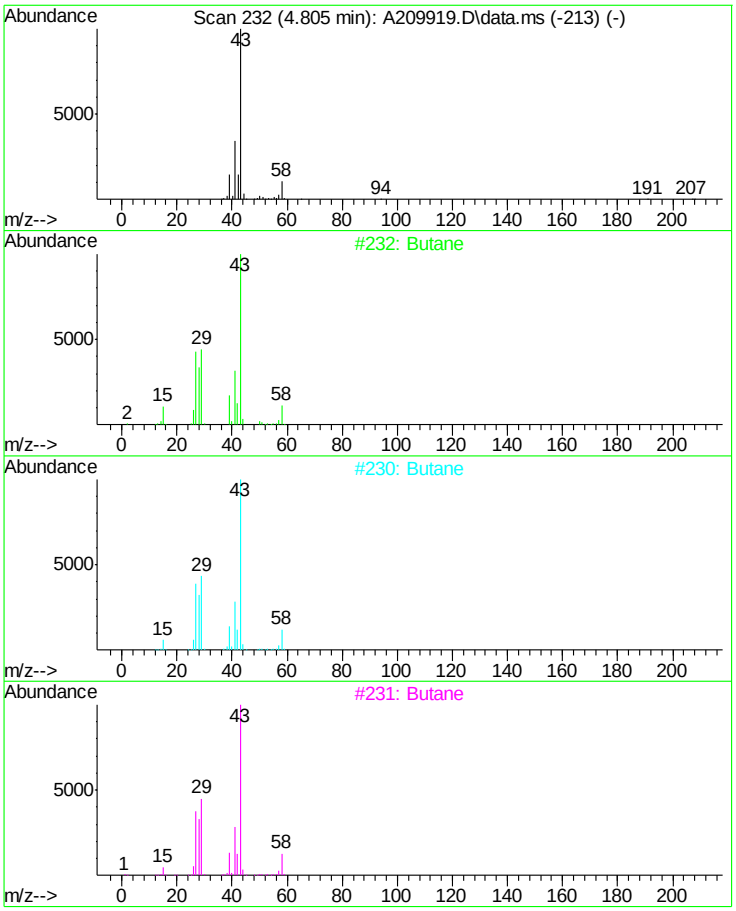
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

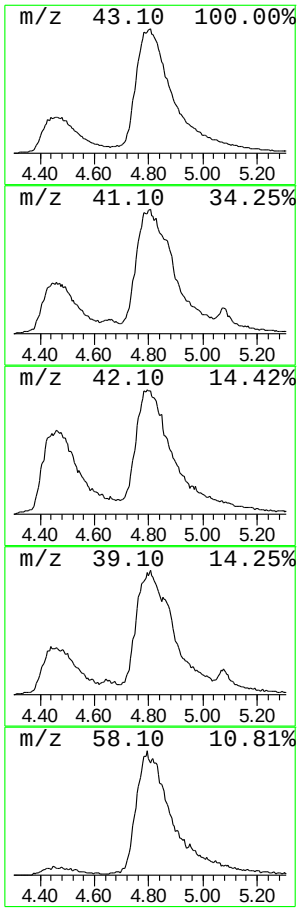
****

Peak Number 2 alkane Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.80	95.64 ug/L	3253570	pentafluorobenzene	10.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	64
2	Butane	58	C4H10	000106-97-8	64
3	Butane	58	C4H10	000106-97-8	64
4	Isobutane	58	C4H10	000075-28-5	9
5	Isopropylsulfonyl chloride	142	C3H7ClO2S	010147-37-2	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209919.D
Acq On : 13 Nov 2014 2:19 pm
Operator : CourtneM
Sample : jb80728-6
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

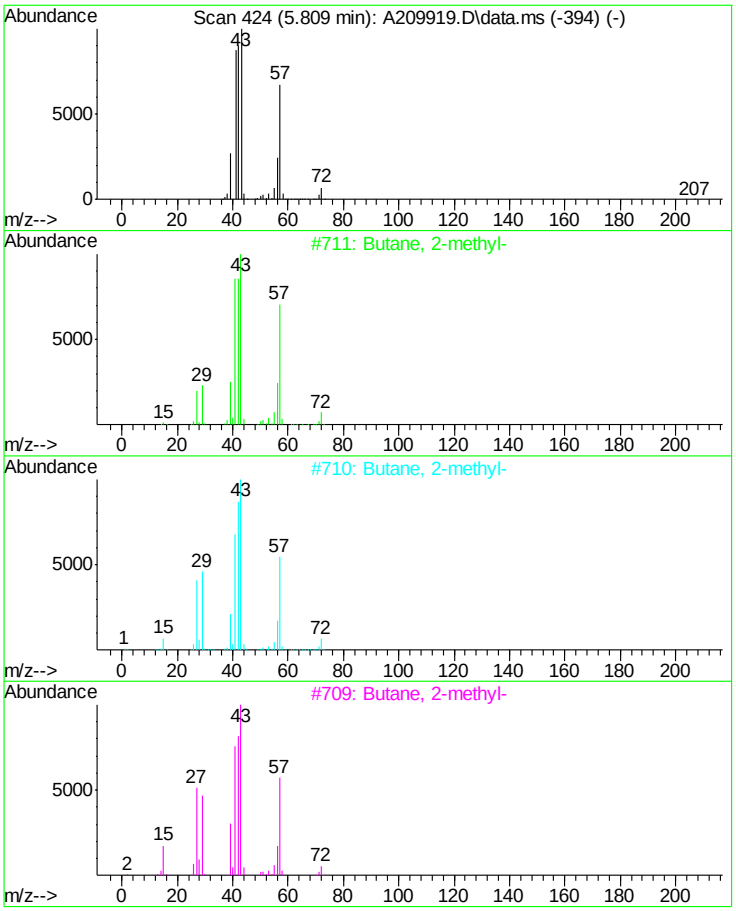
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

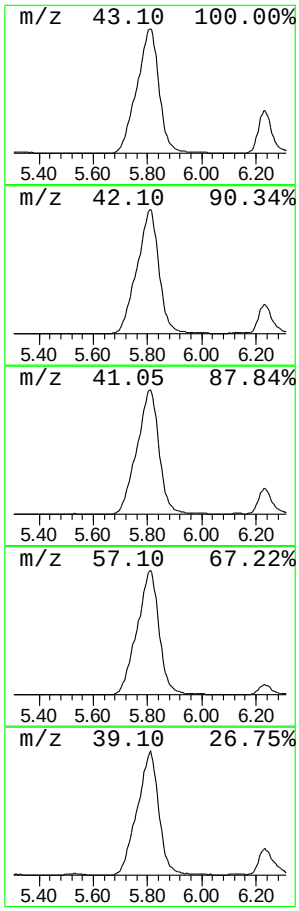
****

Peak Number 3 alkane Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.81	235.43 ug/L	8009370	pentafluorobenzene	10.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	94
2	Butane, 2-methyl-	72	C5H12	000078-78-4	91
3	Butane, 2-methyl-	72	C5H12	000078-78-4	86
4	Pentane	72	C5H12	000109-66-0	33
5	3-Buten-1-ol	72	C4H8O	000627-27-0	28





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209919.D
Acq On : 13 Nov 2014 2:19 pm
Operator : CourtneM
Sample : jb80728-6
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

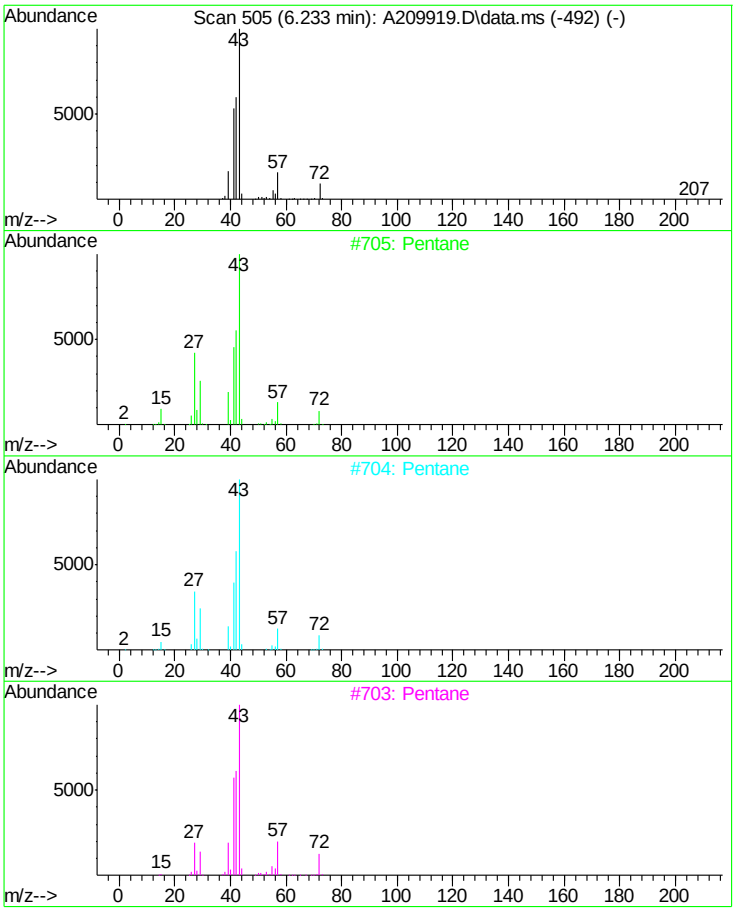
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

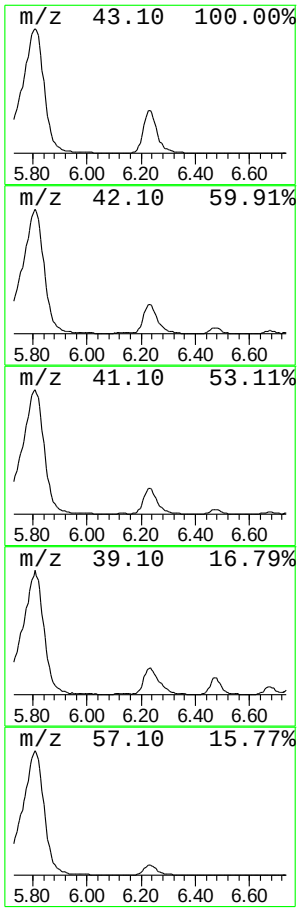
****

Peak Number 4 Pentane Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.23	35.00 ug/L	1190840	pentafluorobenzene	10.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	90
2	Pentane	72	C5H12	000109-66-0	86
3	Pentane	72	C5H12	000109-66-0	80
4	Pentane	72	C5H12	000109-66-0	64
5	Butane, 2-methyl-	72	C5H12	000078-78-4	42





Library Search Compound Report

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Operator : CourtneM
Sample : jb80728-6
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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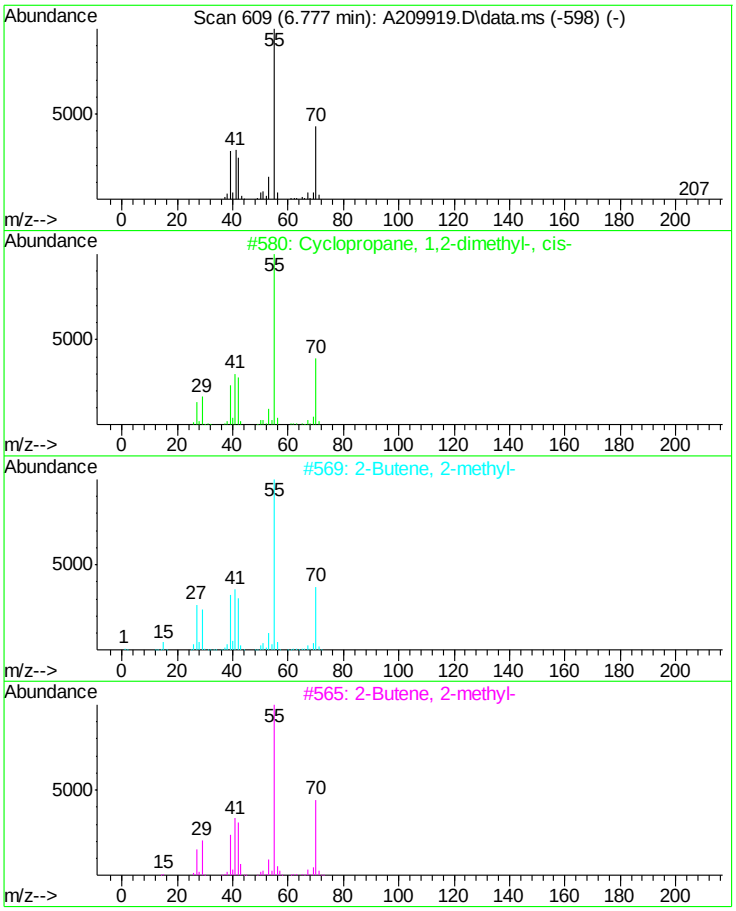
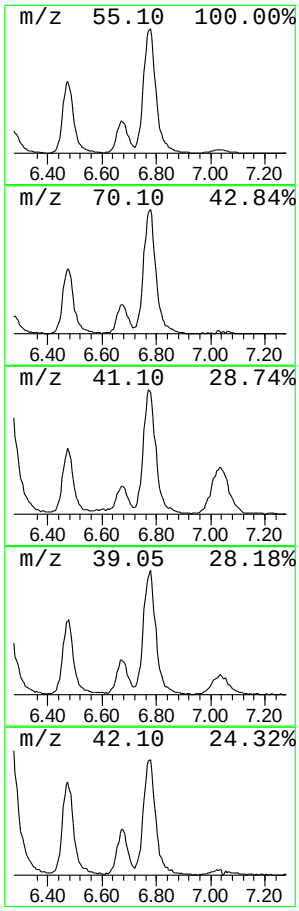
Peak Number 5 alkene Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.78	19.01 ug/L	646726	pentafluorobenzene	10.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopropane, 1,2-dimethyl-, cis-	70	C5H10	000930-18-7	91
2	2-Butene, 2-methyl-	70	C5H10	000513-35-9	90
3	2-Butene, 2-methyl-	70	C5H10	000513-35-9	86
4	2-Methyl-1-butene	70	C5H10	000563-46-2	86
5	Cyclopropane, 1,1-dimethyl-	70	C5H10	001630-94-0	86





Library Search Compound Report

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Operator : CourtneM
Sample : jb80728-6
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

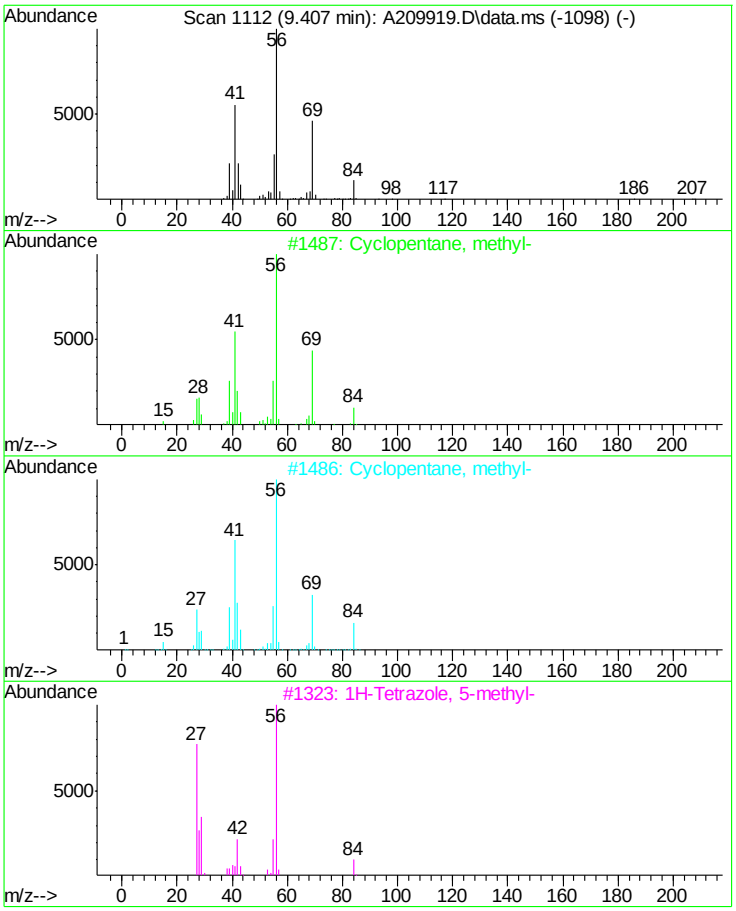
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

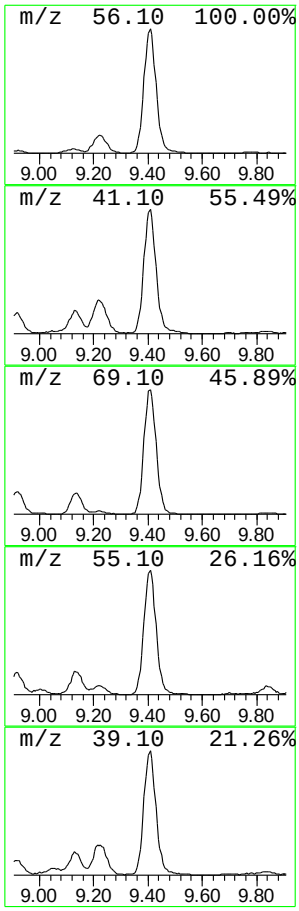
****

Peak Number 6 alkene Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.41	49.78 ug/L	1693560	pentafluorobenzene	10.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	94
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	91
3	1H-Tetrazole, 5-methyl-	84	C2H4N4	004076-36-2	80
4	Cyclobutane, ethyl-	84	C6H12	004806-61-5	80
5	Propane, 2-cyclopropyl-	84	C6H12	003638-35-5	64





Library Search Compound Report

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Operator : CourtneM
Sample : jb80728-6
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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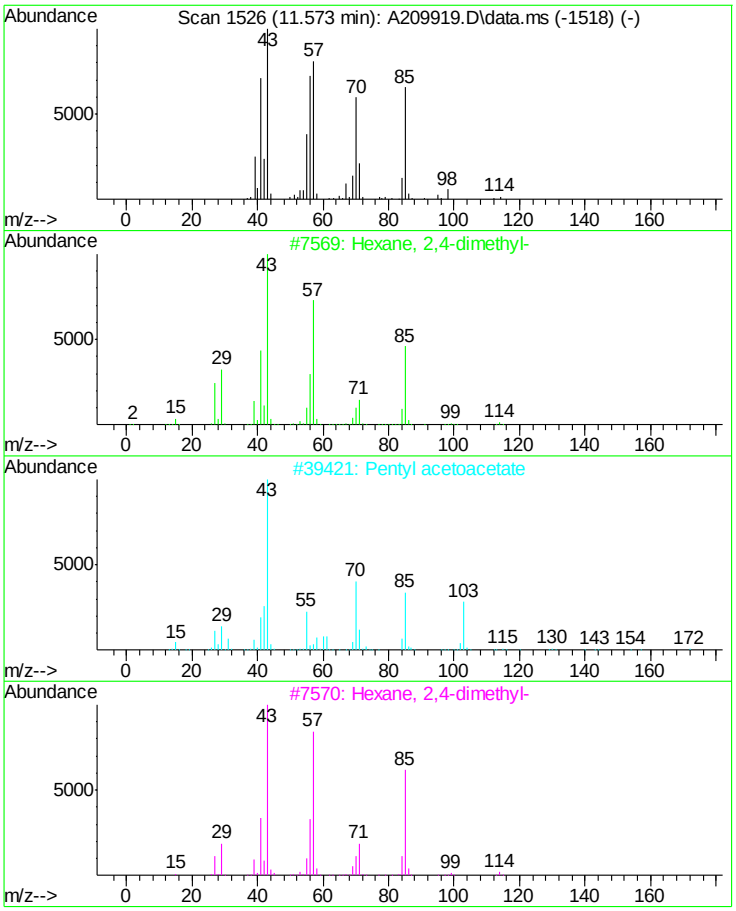
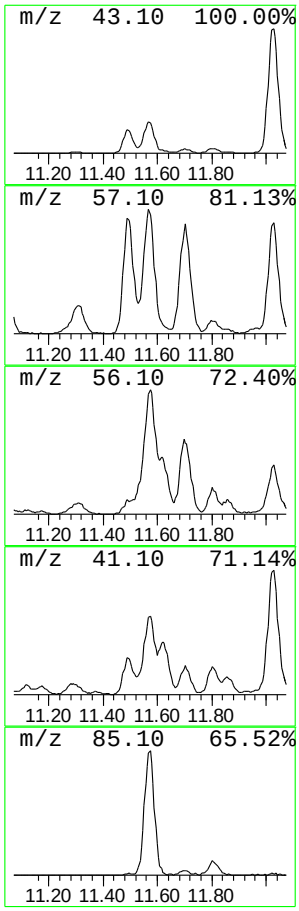
Peak Number 7 alkane Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.57	61.00 ug/L	1019650	1,4-difluorobenzene	11.05

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexane, 2,4-dimethyl-	114	C8H18	000589-43-5	49
2	Pentyl acetoacetate	172	C9H16O3	006624-84-6	47
3	Hexane, 2,4-dimethyl-	114	C8H18	000589-43-5	46
4	Pentane, 3-ethyl-2-methyl-	114	C8H18	000609-26-7	43
5	Butane, 2,2,3-trimethyl-	100	C7H16	000464-06-2	38





Library Search Compound Report

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Operator : CourtneM
Sample : jb80728-6
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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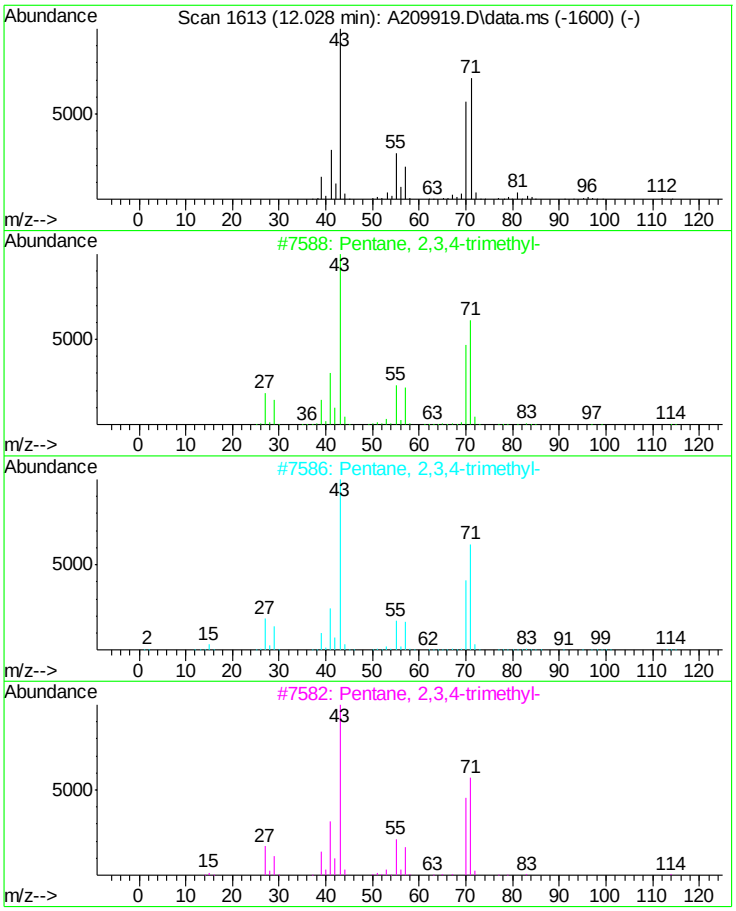
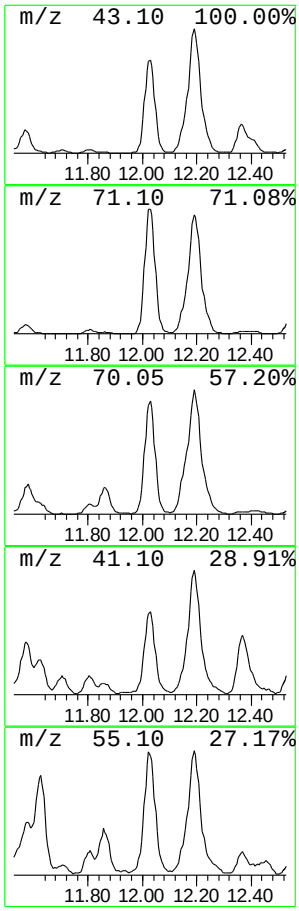
Peak Number 8 alkane Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.03	84.85 ug/L	1418280	1,4-difluorobenzene	11.05

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	86
2	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	86
3	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	78
4	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	78
5	Pentane, 3-ethyl-	100	C7H16	000617-78-7	78





Library Search Compound Report

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Acq On : 13 Nov 2014 2:19 pm
Operator : CourtneM
Sample : jb80728-6
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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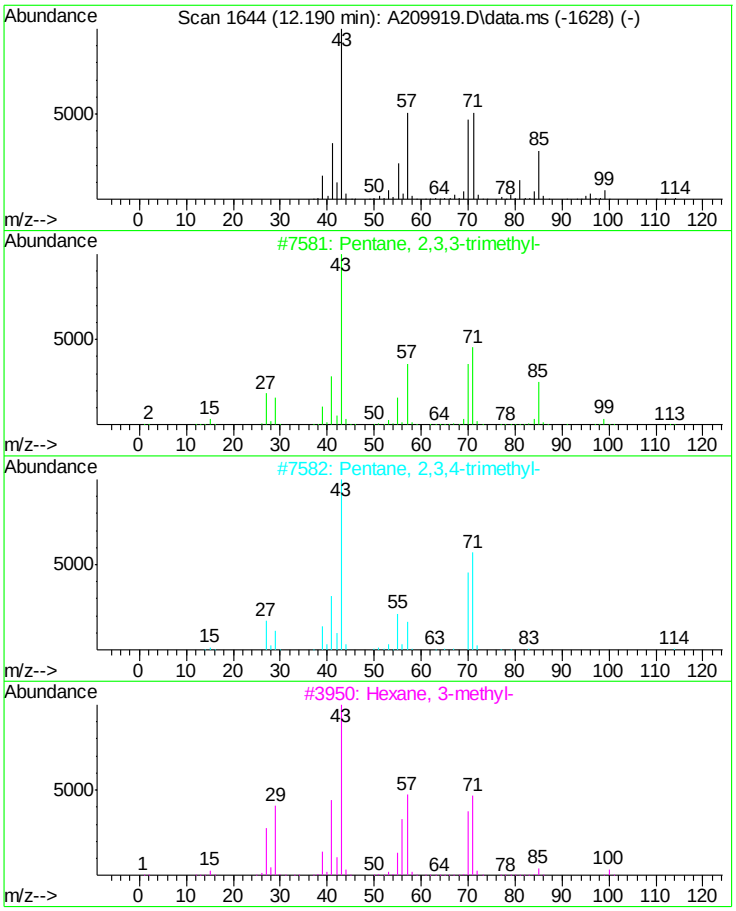
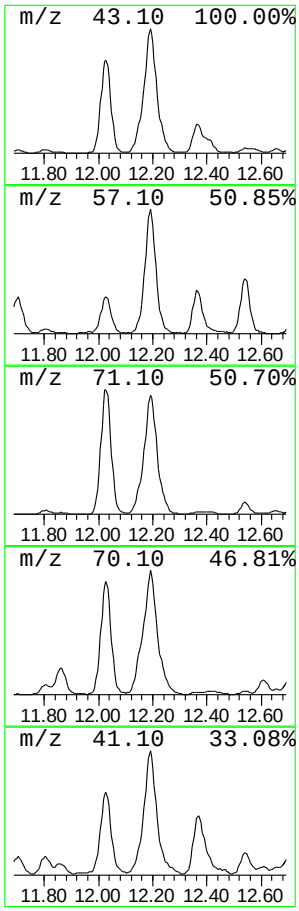
Peak Number 9 alkane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.19	153.62 ug/L	2567660	1,4-difluorobenzene	11.05

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	86
2	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	76
3	Hexane, 3-methyl-	100	C7H16	000589-34-4	59
4	Heptane, 4-methyl-	114	C8H18	000589-53-7	59
5	Hexane, 3-methyl-	100	C7H16	000589-34-4	59





Library Search Compound Report

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Acq On : 13 Nov 2014 2:19 pm
Operator : CourtneM
Sample : jb80728-6
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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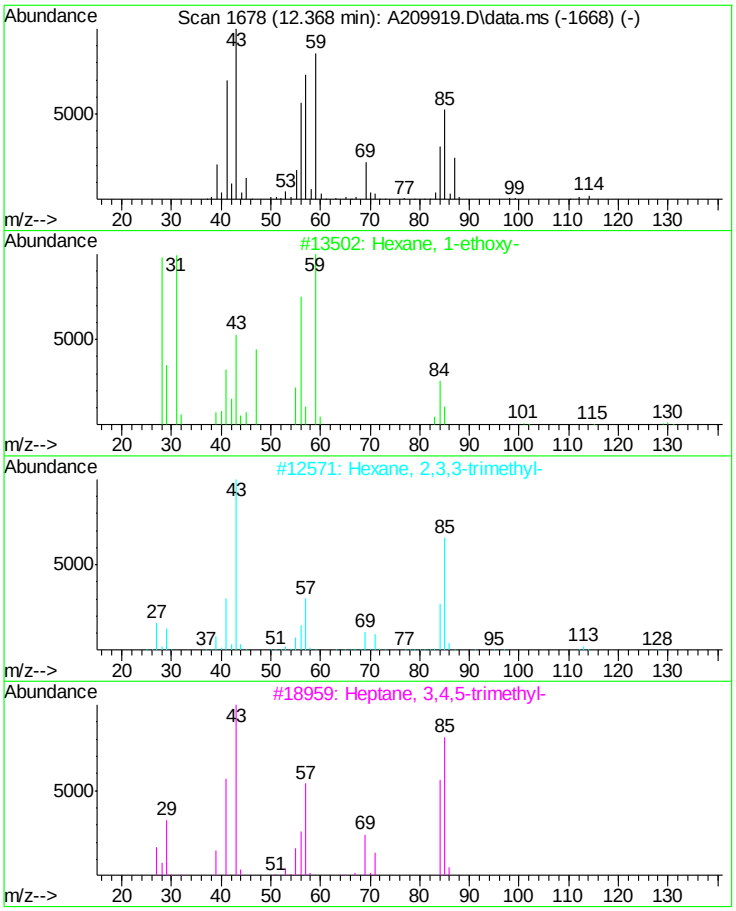
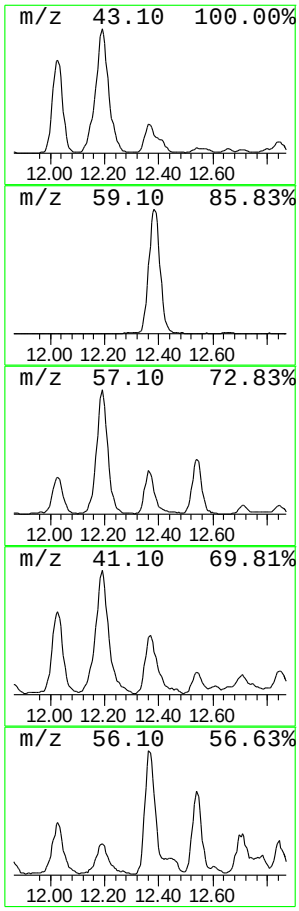
Peak Number 10 alkane Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.37	54.02 ug/L	902984	1,4-difluorobenzene	11.05

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexane, 1-ethoxy-	130	C8H18O	005756-43-4	47
2	Hexane, 2,3,3-trimethyl-	128	C9H20	016747-28-7	35
3	Heptane, 3,4,5-trimethyl-	142	C10H22	020278-89-1	35
4	Furan, tetrahydro-2,5-dimethyl-,...	100	C6H12O	002144-41-4	35
5	Octane, 3,4-dimethyl-	142	C10H22	015869-92-8	35





Library Search Compound Report

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Acq On : 13 Nov 2014 2:19 pm
Operator : CourtneM
Sample : jb80728-6
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

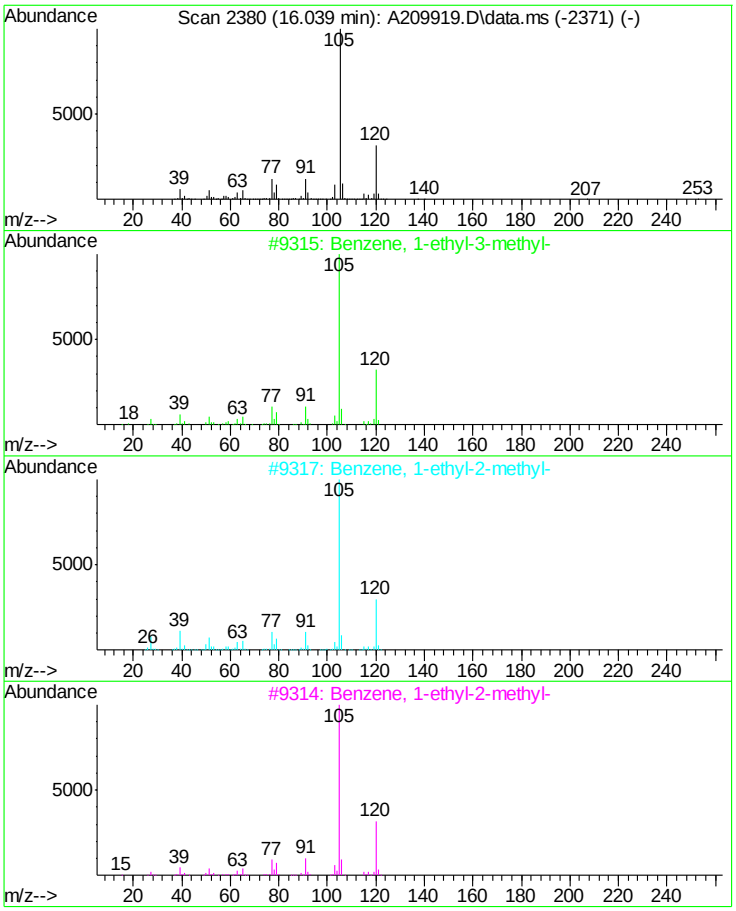
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

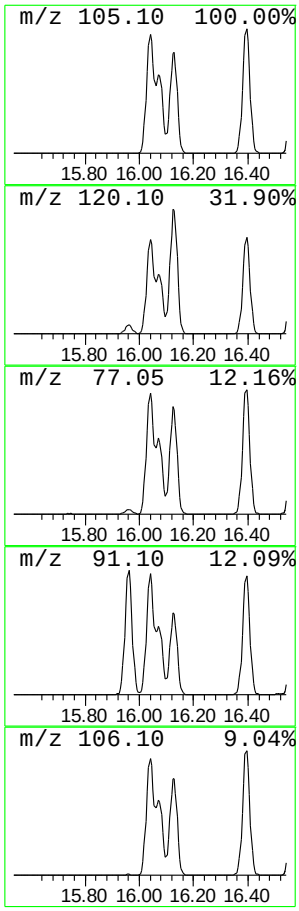
****

Peak Number 11 C3 alkyl benzene Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.04	49.52 ug/L	5852510	1,4-dichlorobenzene-d4	17.05

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	94
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
4	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	94
5	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91





Library Search Compound Report

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Acq On : 13 Nov 2014 2:19 pm
Operator : CourtneM
Sample : jb80728-6
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

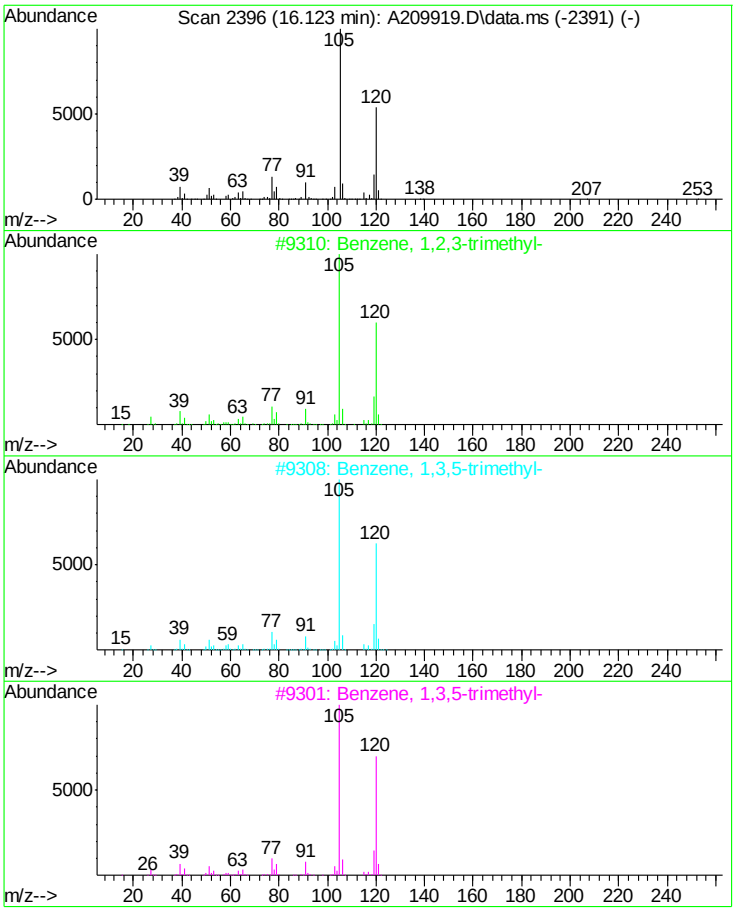
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

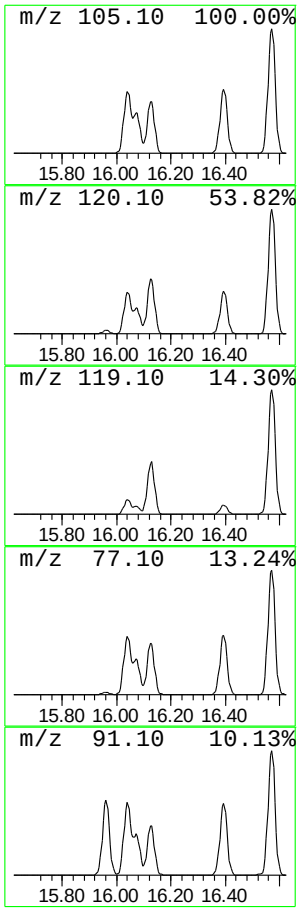
****

Peak Number 12 C3 alkyl benzene Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.12	29.89 ug/L	3532150	1,4-dichlorobenzene-d4	17.05

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
5	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94





Library Search Compound Report

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Acq On : 13 Nov 2014 2:19 pm
Operator : CourtneM
Sample : jb80728-6
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

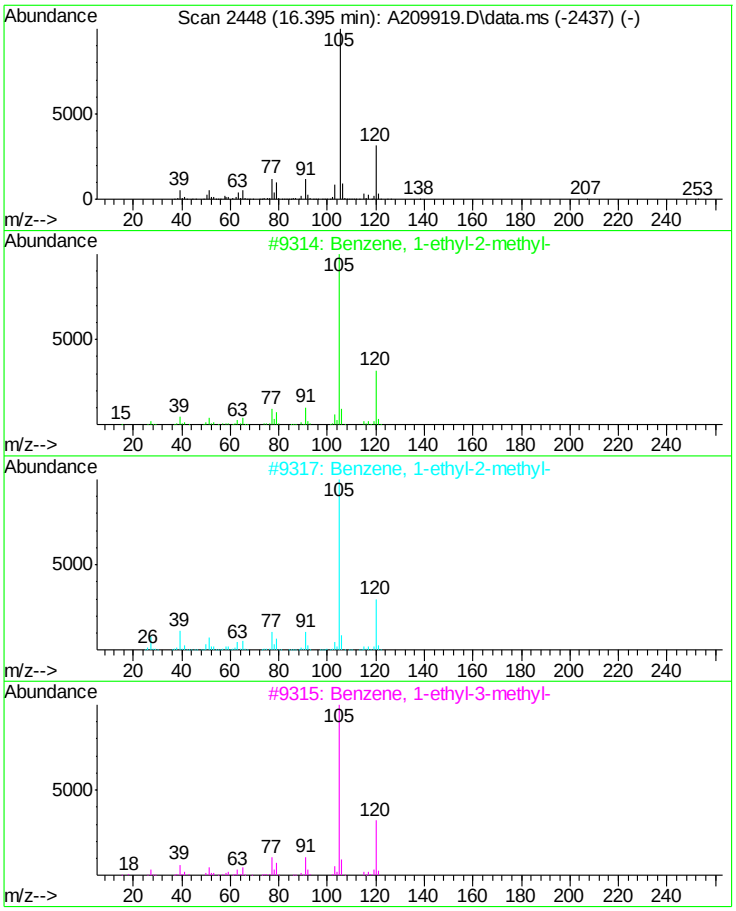
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

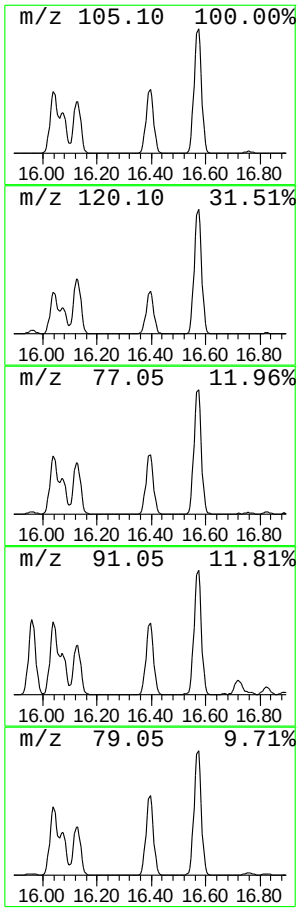
****

Peak Number 13 C3 alkyl benzene Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.40	33.17 ug/L	3920620	1,4-dichlorobenzene-d4	17.05

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
5	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91





Library Search Compound Report

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Sample : jb80728-6
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

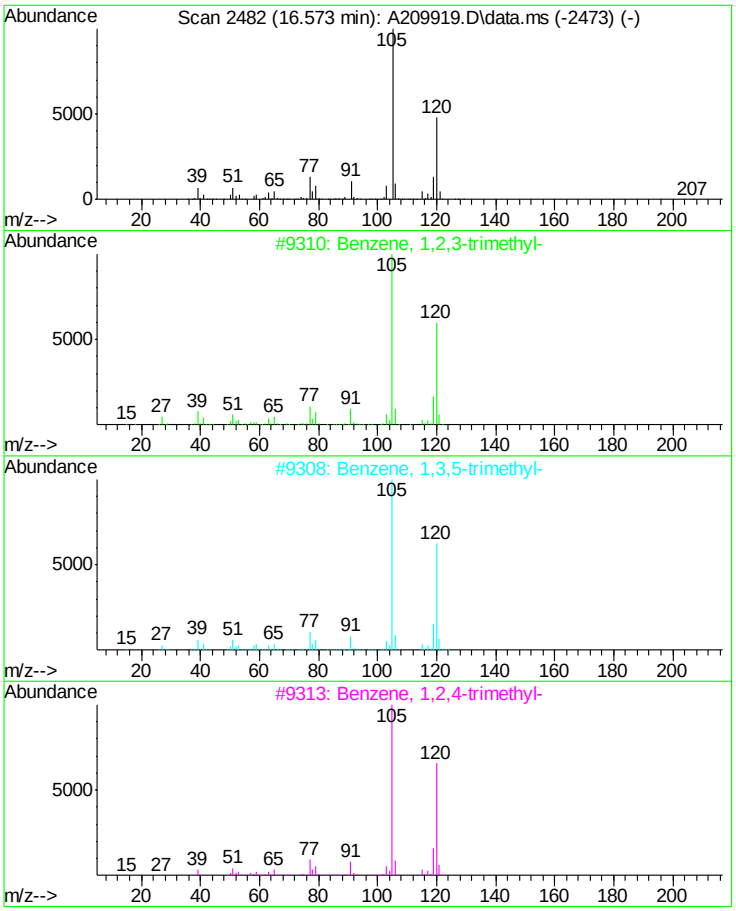
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

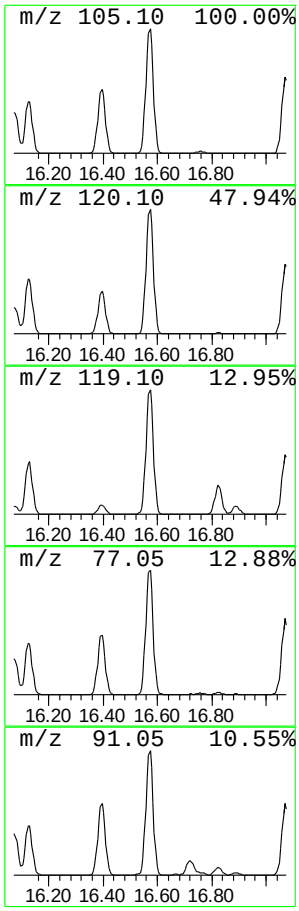
****

Peak Number 14 C3 alkyl benzene Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.57	71.66 ug/L	8469940	1,4-dichlorobenzene-d4	17.05

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
5	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	94





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Misc : MS76458,VA7921,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

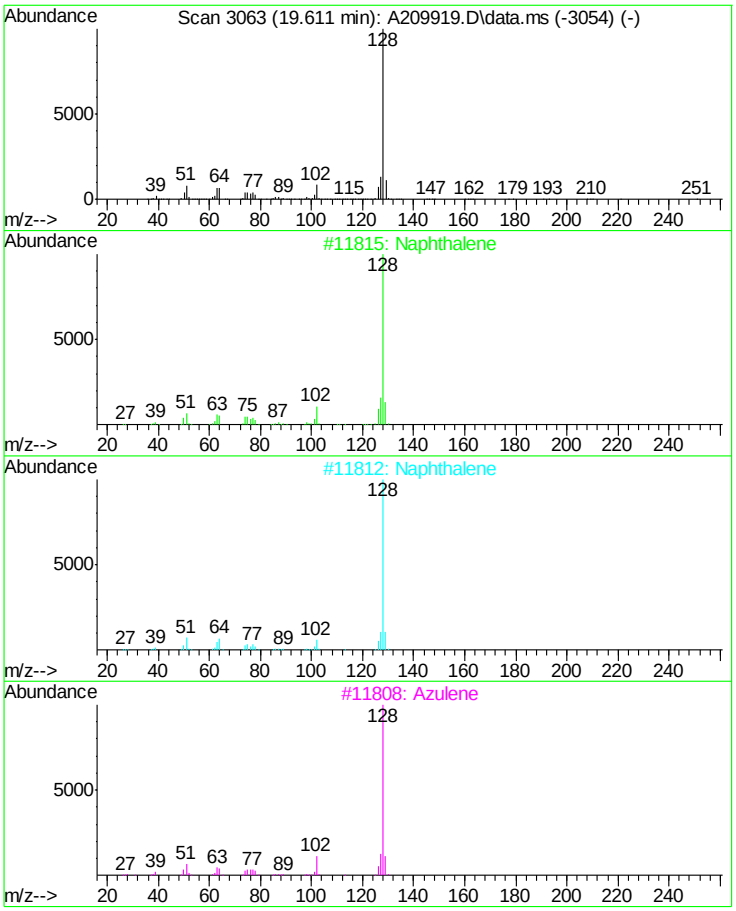
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

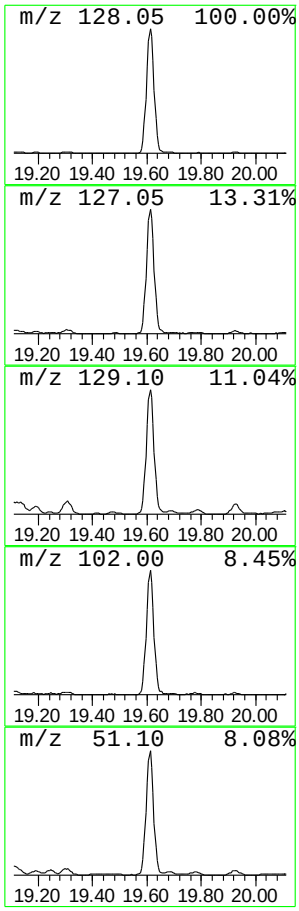
****

Peak Number 15 Naphthalene Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.61	21.64 ug/L	2557300	1,4-dichlorobenzene-d4	17.05

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Naphthalene	128	C10H8	000091-20-3	97
2	Naphthalene	128	C10H8	000091-20-3	94
3	Azulene	128	C10H8	000275-51-4	94
4	Naphthalene	128	C10H8	000091-20-3	94
5	Naphthalene	128	C10H8	000091-20-3	91





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\A\
Data File : A209919.D
Acq On : 13 Nov 2014 2:19 pm
Operator : CourtneM
Sample : jb80728-6
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
unknown	3.70	100.1	ug/L	3406720	2	10.10	1701030	50.0
alkane	4.80	95.6	ug/L	3253570	2	10.10	1701030	50.0
alkane	5.81	235.4	ug/L	8009370	2	10.10	1701030	50.0
Pentane	6.23	35.0	ug/L	1190840	2	10.10	1701030	50.0
alkene	6.78	19.0	ug/L	646726	2	10.10	1701030	50.0
alkene	9.41	49.8	ug/L	1693560	2	10.10	1701030	50.0
alkane	11.57	61.0	ug/L	1019650	3	11.05	835740	50.0
alkane	12.03	84.8	ug/L	1418280	3	11.05	835740	50.0
alkane	12.19	153.6	ug/L	2567660	3	11.05	835740	50.0
alkane	12.37	54.0	ug/L	902984	3	11.05	835740	50.0
C3 alkyl benzene	16.04	49.5	ug/L	5852510	5	17.05	5909520	50.0
C3 alkyl benzene	16.12	29.9	ug/L	3532150	5	17.05	5909520	50.0
C3 alkyl benzene	16.40	33.2	ug/L	3920620	5	17.05	5909520	50.0
C3 alkyl benzene	16.57	71.7	ug/L	8469940	5	17.05	5909520	50.0
Naphthalene	19.61	21.6	ug/L	2557300	5	17.05	5909520	50.0

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209879.D
Acq On : 12 Nov 2014 5:11 pm
Operator : CourtneM
Sample : jb80728-7
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Nov 13 14:33:16 2014
Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Nov 13 13:59:58 2014
Response via : Initial Calibration

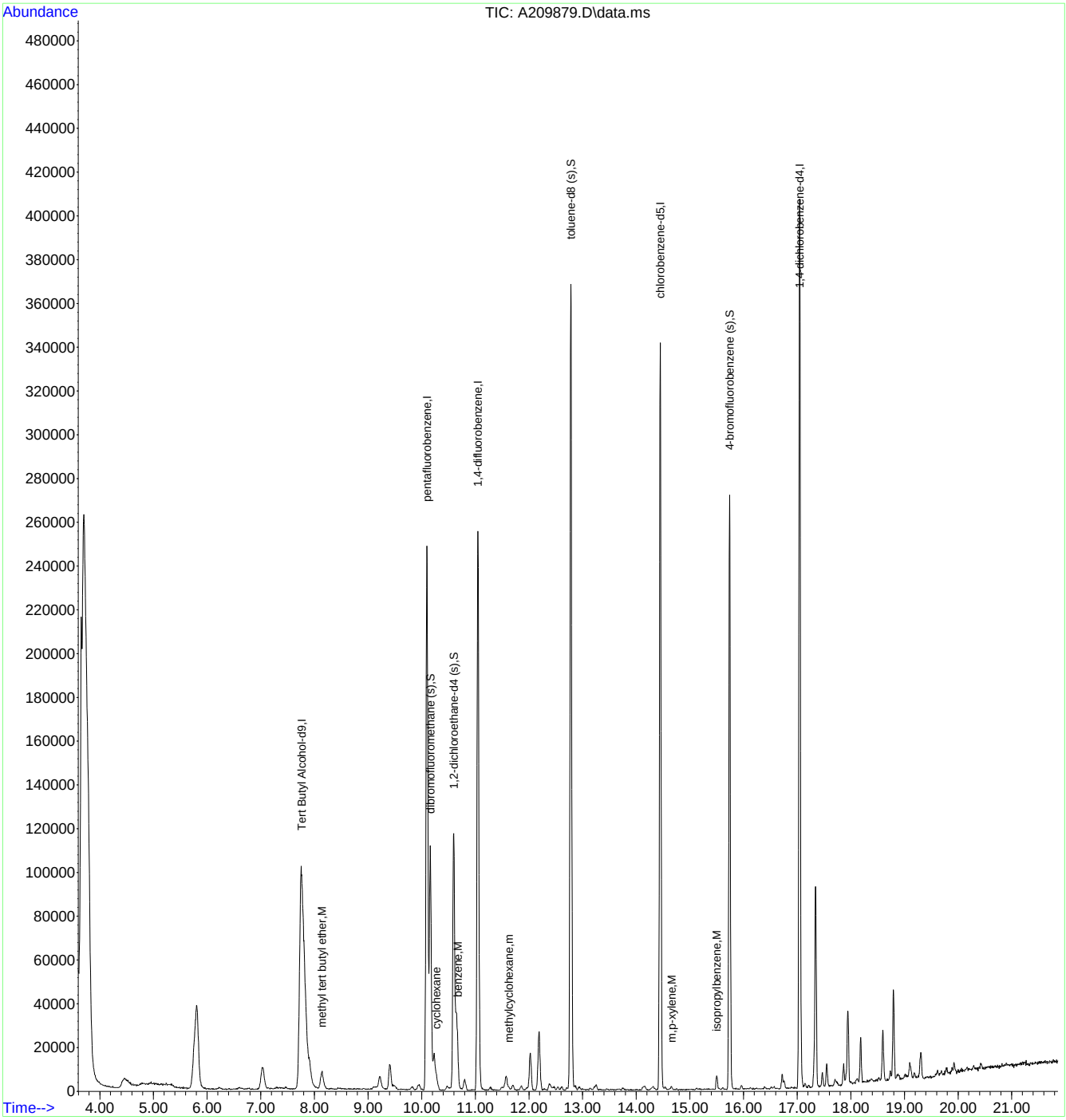
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.764	65	326516	500.00	ug/L	0.00
4) pentafluorobenzene	10.097	168	230230	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.048	114	259034	50.00	ug/L	0.00
83) chlorobenzene-d5	14.448	117	216755	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.047	152	123944	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.164	113	84262	47.43	ug/L	0.00
Spiked Amount 50.000	Range 59 - 130		Recovery = 94.86%			
47) 1,2-dichloroethane-d4 (s)	10.599	65	99193	46.02	ug/L	0.00
Spiked Amount 50.000	Range 65 - 123		Recovery = 92.04%			
75) toluene-d8 (s)	12.780	98	299568	50.04	ug/L	0.00
Spiked Amount 50.000	Range 77 - 125		Recovery = 100.08%			
101) 4-bromofluorobenzene (s)	15.740	95	107299	55.71	ug/L	0.00
Spiked Amount 50.000	Range 71 - 132		Recovery = 111.42%			
Target Compounds						Qvalue
27) methyl tert butyl ether	8.140	73	4431	0.61	ug/L #	1
49) cyclohexane	10.274	84	2654	0.91	ug/L #	1
59) benzene	10.672	78	6985	1.12	ug/L	97
68) methylcyclohexane	11.629	83	1468	0.54	ug/L #	6
94) m,p-xylene	14.662	106	750	0.30	ug/L #	56
99) isopropylbenzene	15.499	105	5600	0.77	ug/L	91

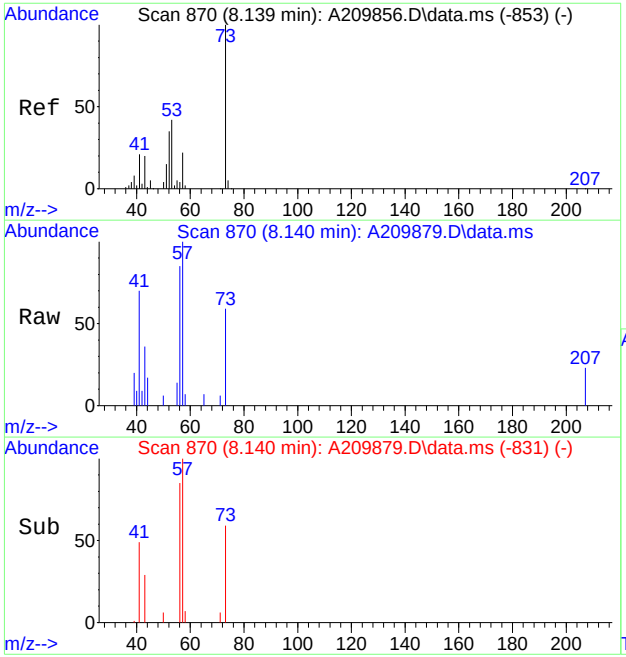
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209879.D
Acq On : 12 Nov 2014 5:11 pm
Operator : CourtneM
Sample : jb80728-7
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Nov 13 14:33:16 2014
Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Nov 13 13:59:58 2014
Response via : Initial Calibration

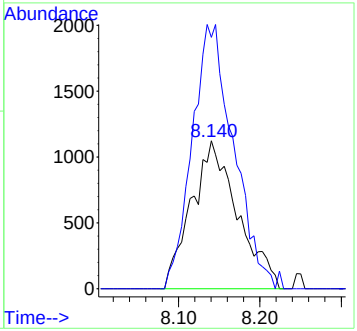


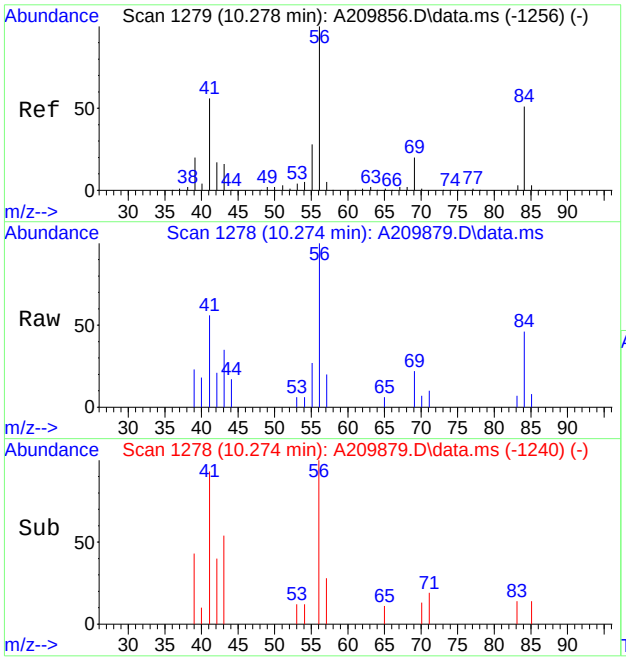


#27
methyl tert butyl ether
Concen: 0.61 ug/L
RT: 8.140 min Scan# 870
Delta R.T. 0.002 min
Lab File: A209879.D
Acq: 12 Nov 2014 5:11 pm

Tgt Ion: 73 Resp: 4431

Ion	Ratio	Lower	Upper
73	100		
57	160.6	0.0	52.7#

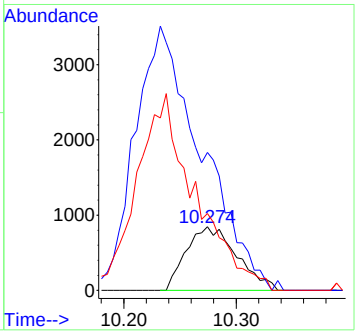


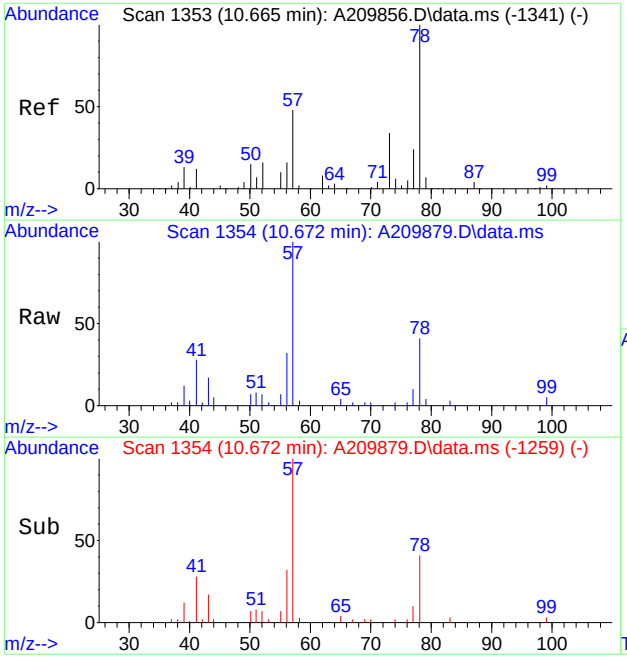


#49
cyclohexane
Concen: 0.91 ug/L
RT: 10.274 min Scan# 1278
Delta R.T. -0.004 min
Lab File: A209879.D
Acq: 12 Nov 2014 5:11 pm

Tgt Ion: 84 Resp: 2654

Ion	Ratio	Lower	Upper
84	100		
56	0.0	157.0	291.6#
41	0.0	88.5	164.3#

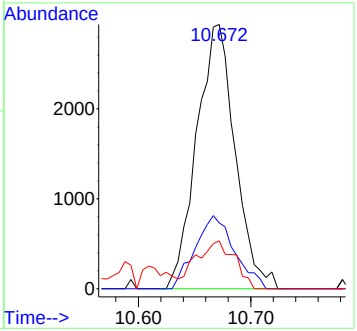


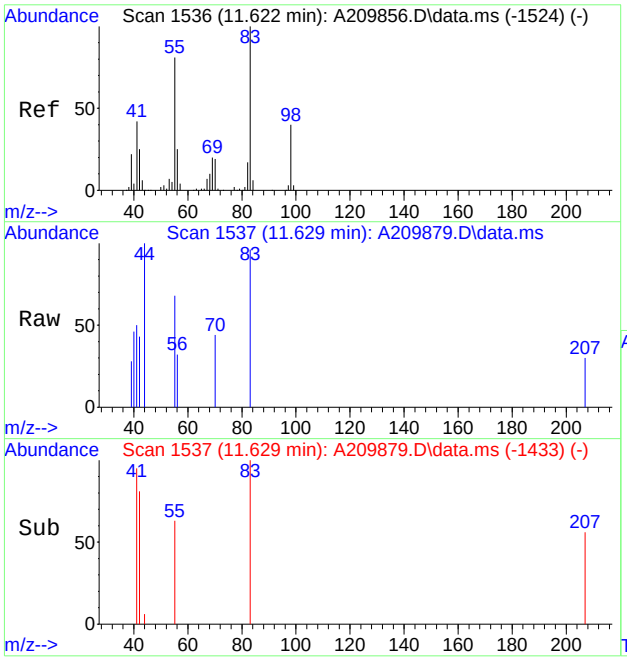


#59
benzene
Concen: 1.12 ug/L
RT: 10.672 min Scan# 1354
Delta R.T. 0.007 min
Lab File: A209879.D
Acq: 12 Nov 2014 5:11 pm

Tgt Ion: 78 Resp: 6985

Ion	Ratio	Lower	Upper
78	100		
77	25.0	0.0	54.5
52	18.2	0.0	45.9

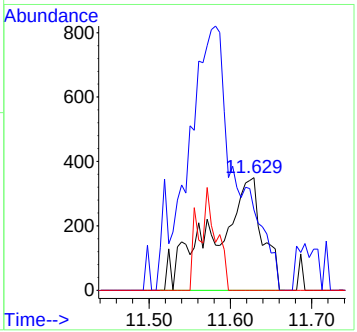


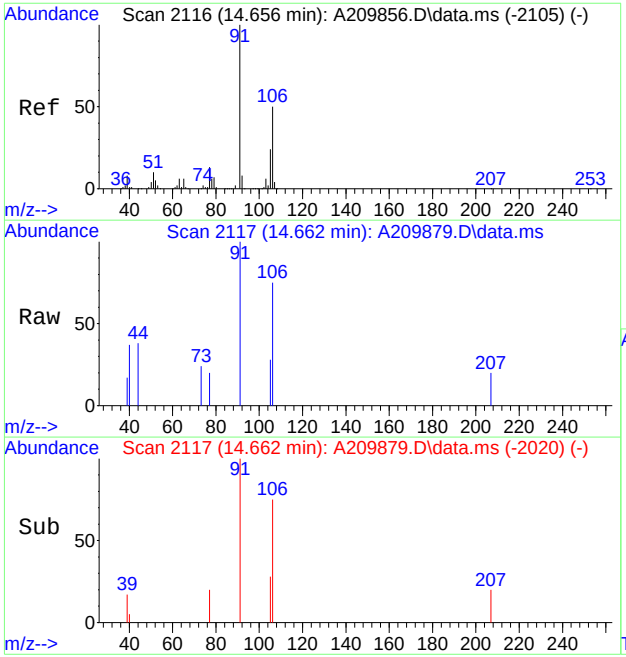


#68
methylcyclohexane
Concen: 0.54 ug/L
RT: 11.629 min Scan# 1537
Delta R.T. 0.007 min
Lab File: A209879.D
Acq: 12 Nov 2014 5:11 pm

Tgt Ion: 83 Resp: 1468

Ion	Ratio	Lower	Upper
83	100		
55	0.0	56.4	116.4#
85	0.0	0.0	30.1

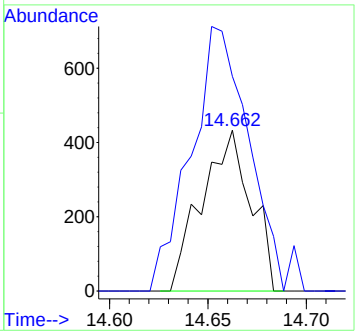


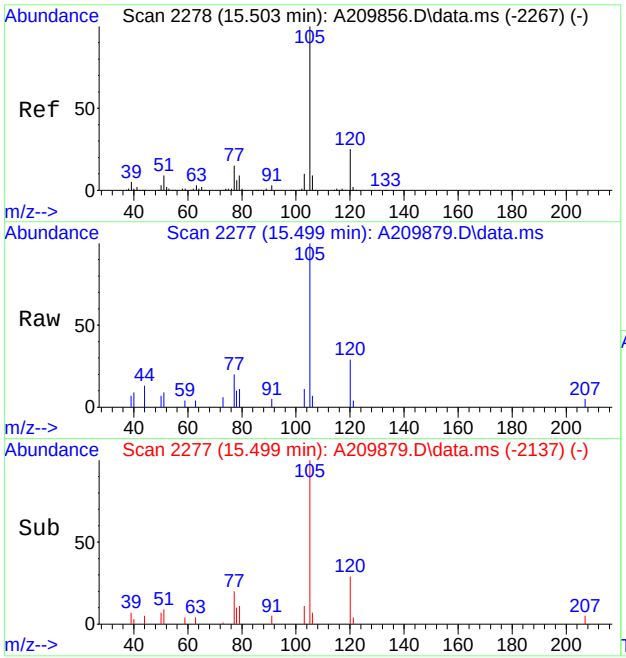


#94
m,p-xylene
Concen: 0.30 ug/L
RT: 14.662 min Scan# 2117
Delta R.T. 0.007 min
Lab File: A209879.D
Acq: 12 Nov 2014 5:11 pm

Tgt Ion:106 Resp: 750

Ion	Ratio	Lower	Upper
106	100		
91	133.5	169.6	229.6#

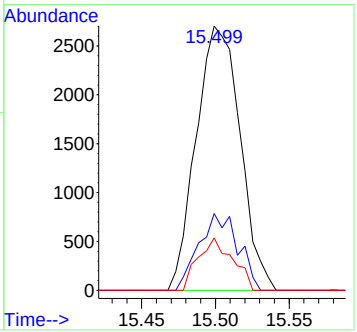




#99
isopropylbenzene
Concen: 0.77 ug/L
RT: 15.499 min Scan# 2277
Delta R.T. -0.004 min
Lab File: A209879.D
Acq: 12 Nov 2014 5:11 pm

Tgt Ion:105 Resp: 5600

Ion	Ratio	Lower	Upper
105	100		
120	29.0	0.0	55.3
77	19.9	0.0	45.1



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209879.D
Acq On : 12 Nov 2014 5:11 pm
Operator : CourtneM
Sample : jb80728-7
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 15 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.6 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\MA7918.M
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

Signal : TIC: A209879.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.700	4	21	374	rVB	262466	2500013	100.00%	26.263%
2	5.803	401	423	458	rVB4	38488	220056	8.80%	2.312%
3	6.221	501	503	523	rVB5	1193	3794	0.15%	0.040%
4	6.561	529	568	570	rBV4	821	4461	0.18%	0.047%
5	6.608	570	577	604	rVB6	973	3911	0.16%	0.041%
6	7.026	645	657	737	rVB6	9712	46134	1.85%	0.485%
7	7.753	780	796	859	rVB4	101412	697268	27.89%	7.325%
8	8.146	859	871	897	rVB4	8404	33869	1.35%	0.356%
9	8.439	897	927	967	rVB6	1036	10012	0.40%	0.105%
10	8.742	972	985	1014	rVB4	659	4203	0.17%	0.044%
11	9.056	1014	1045	1048	rBV5	694	3313	0.13%	0.035%
12	9.218	1048	1076	1102	rBV8	5993	29287	1.17%	0.308%
13	9.401	1102	1111	1141	rVB6	11667	44370	1.77%	0.466%
14	9.819	1173	1191	1202	rVB4	1650	5349	0.21%	0.056%
15	9.955	1208	1217	1233	rVB6	2695	8779	0.35%	0.092%
16	10.097	1233	1244	1290	rVB2	248646	951696	38.07%	9.998%
17	10.478	1308	1317	1329	rBV6	1946	7311	0.29%	0.077%
18	10.599	1329	1340	1374	rVV2	116966	389606	15.58%	4.093%
19	10.803	1374	1379	1388	rVB6	5064	12377	0.50%	0.130%
20	11.048	1416	1426	1451	rVB	255572	590758	23.63%	6.206%
21	11.577	1505	1527	1545	rBV6	6372	25369	1.01%	0.267%
22	11.697	1545	1550	1565	rVB4	2627	8075	0.32%	0.085%
23	11.859	1574	1581	1593	rVB5	1973	4717	0.19%	0.050%
24	12.026	1605	1613	1631	rVB	17030	44284	1.77%	0.465%
25	12.189	1631	1644	1657	rVB2	26818	73474	2.94%	0.772%
26	12.377	1674	1680	1706	rBV7	3067	15047	0.60%	0.158%
27	12.612	1719	1725	1738	rVB5	1775	4317	0.17%	0.045%
28	12.780	1747	1757	1780	rVB	368228	781788	31.27%	8.213%
29	12.936	1780	1787	1795	rBV5	1595	3527	0.14%	0.037%
30	13.140	1821	1826	1837	rBV4	1027	3153	0.13%	0.033%
31	13.250	1837	1847	1857	rVB6	2554	7734	0.31%	0.081%
32	13.742	1937	1941	1969	rBV4	1061	3604	0.14%	0.038%
33	14.160	2008	2021	2032	rVB7	1875	7549	0.30%	0.079%
34	14.317	2039	2051	2065	rVB4	1692	5739	0.23%	0.060%
35	14.448	2067	2076	2124	rVB	341484	671894	26.88%	7.058%
36	15.499	2271	2277	2313	rVB3	6395	17430	0.70%	0.183%
37	15.740	2313	2323	2344	rBV	271867	517377	20.69%	5.435%
38	15.959	2360	2365	2445	rBV6	1744	9463	0.38%	0.099%
39	16.394	2445	2448	2465	rVB6	1350	3562	0.14%	0.037%
40	16.577	2465	2483	2503	rBV8	1430	7654	0.31%	0.080%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209879.D
Acq On : 12 Nov 2014 5:11 pm
Operator : CourtneM
Sample : jb80728-7
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 15 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.6 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\MA7918.M
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

41	16.718	2503	2510	2563	rBV3	6733	25130	1.01%	0.264%
42	17.047	2563	2573	2619	rBV	406634	777906	31.12%	8.172%
43	17.340	2619	2629	2649	rBV	91144	185928	7.44%	1.953%
44	17.471	2649	2654	2664	rBV3	6063	9243	0.37%	0.097%
45	17.549	2664	2669	2725	rBV9	9707	21694	0.87%	0.228%
46	17.868	2725	2730	2740	rBV5	8587	18183	0.73%	0.191%
47	17.942	2740	2744	2785	rVB	31167	43174	1.73%	0.454%
48	18.182	2785	2790	2864	rBV	19129	16815	0.67%	0.177%
49	18.595	2864	2869	2901	rBV3	21119	30115	1.20%	0.316%
50	18.794	2901	2907	3488	rBV7	39134	608765	24.35%	6.395%

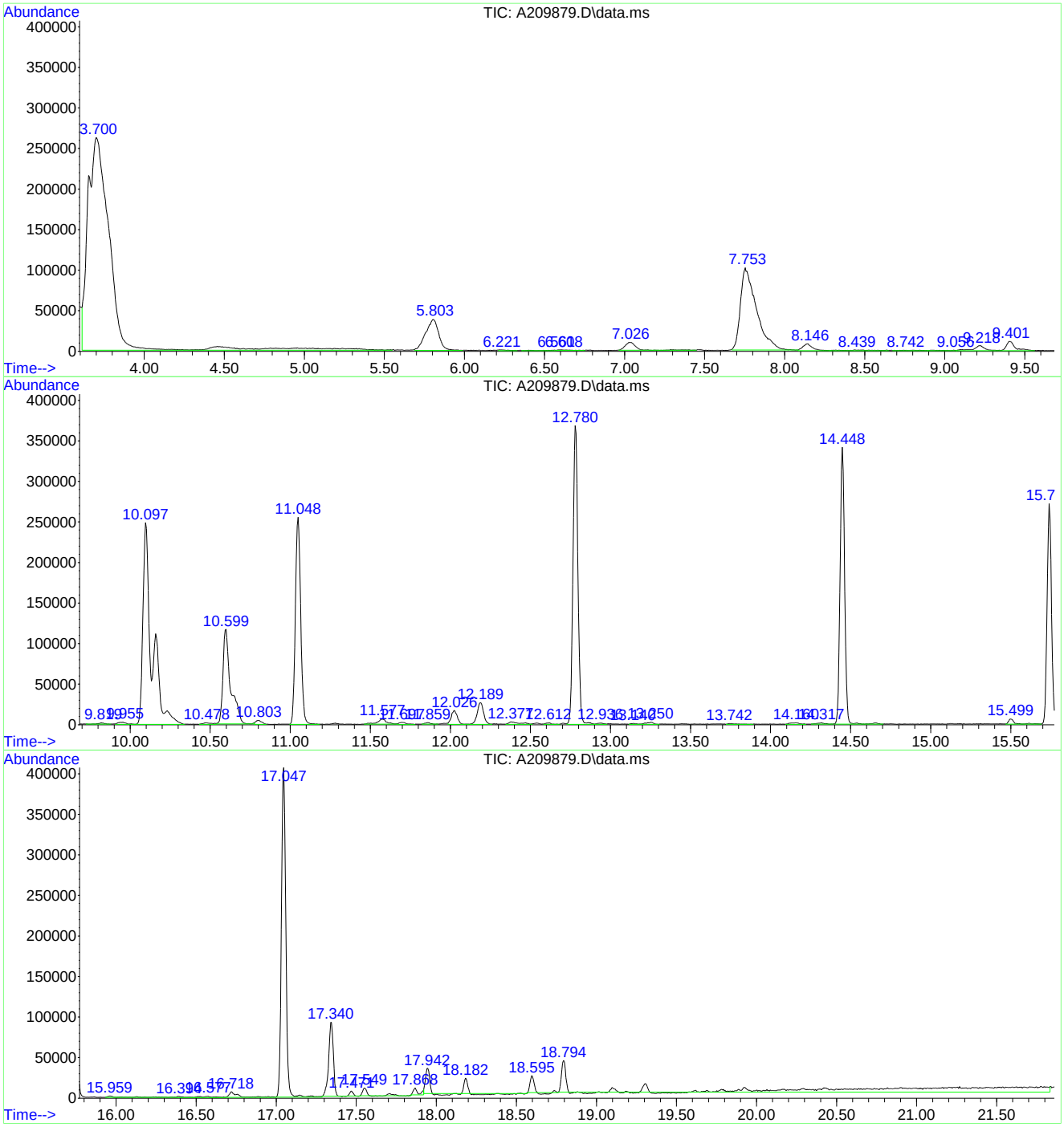
Sum of corrected areas: 9519277

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209879.D
Acq On : 12 Nov 2014 5:11 pm
Operator : CourtneM
Sample : jb80728-7
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209879.D
Acq On : 12 Nov 2014 5:11 pm
Operator : CourtneM
Sample : jb80728-7
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

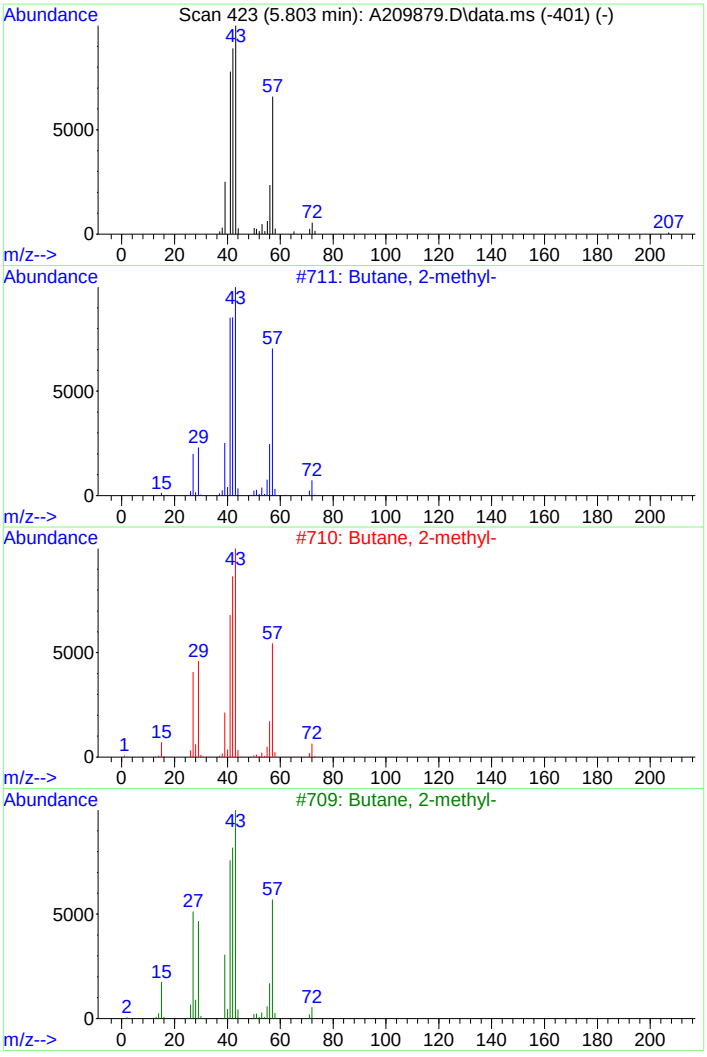
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

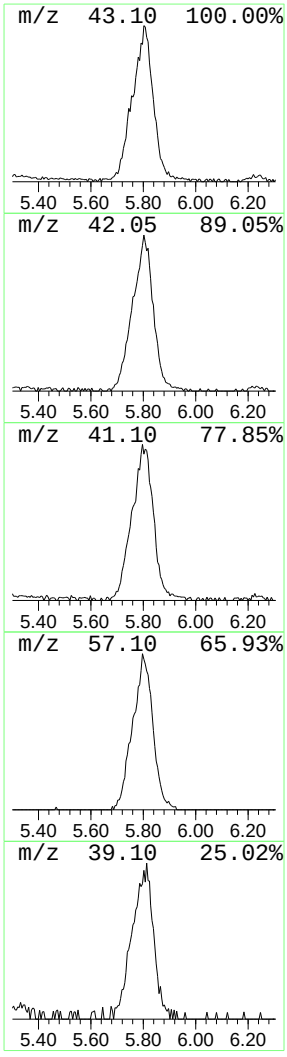
****

Peak Number 2 alkane Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.803	11.56 ug/L	220056	pentafluorobenzene	10.097

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	91
2	Butane, 2-methyl-	72	C5H12	000078-78-4	91
3	Butane, 2-methyl-	72	C5H12	000078-78-4	90
4	3-Buten-1-ol	72	C4H8O	000627-27-0	47
5	Pentane	72	C5H12	000109-66-0	36





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209879.D
Acq On : 12 Nov 2014 5:11 pm
Operator : CourtneM
Sample : jb80728-7
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

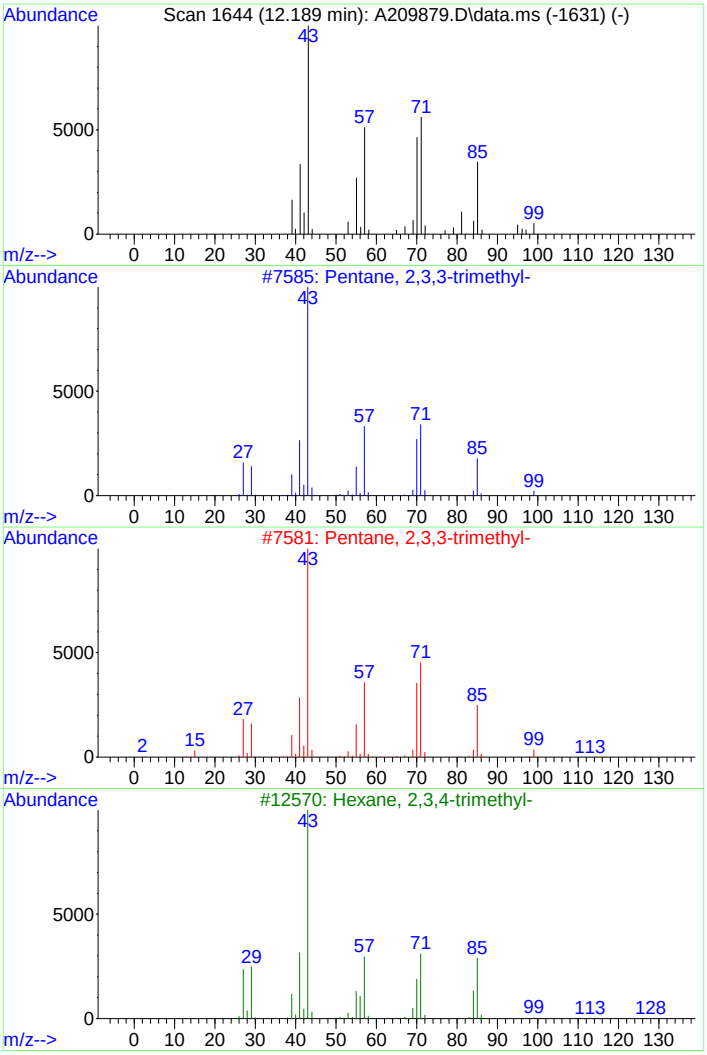
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

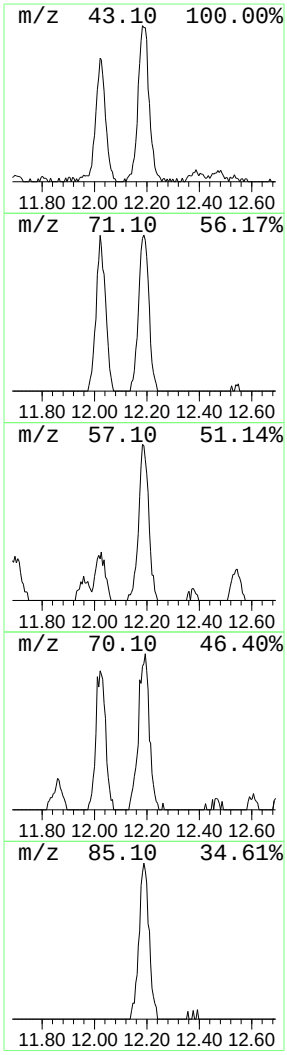
****

Peak Number 3 alkane Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.189	6.22 ug/L	73474	1,4-difluorobenzene	11.048

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	78
2	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	78
3	Hexane, 2,3,4-trimethyl-	128	C9H20	000921-47-1	72
4	Hexane, 2,3,4-trimethyl-	128	C9H20	000921-47-1	72
5	Hexane, 3,3-dimethyl-	114	C8H18	000563-16-6	53





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209879.D
Acq On : 12 Nov 2014 5:11 pm
Operator : CourtneM
Sample : jb80728-7
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

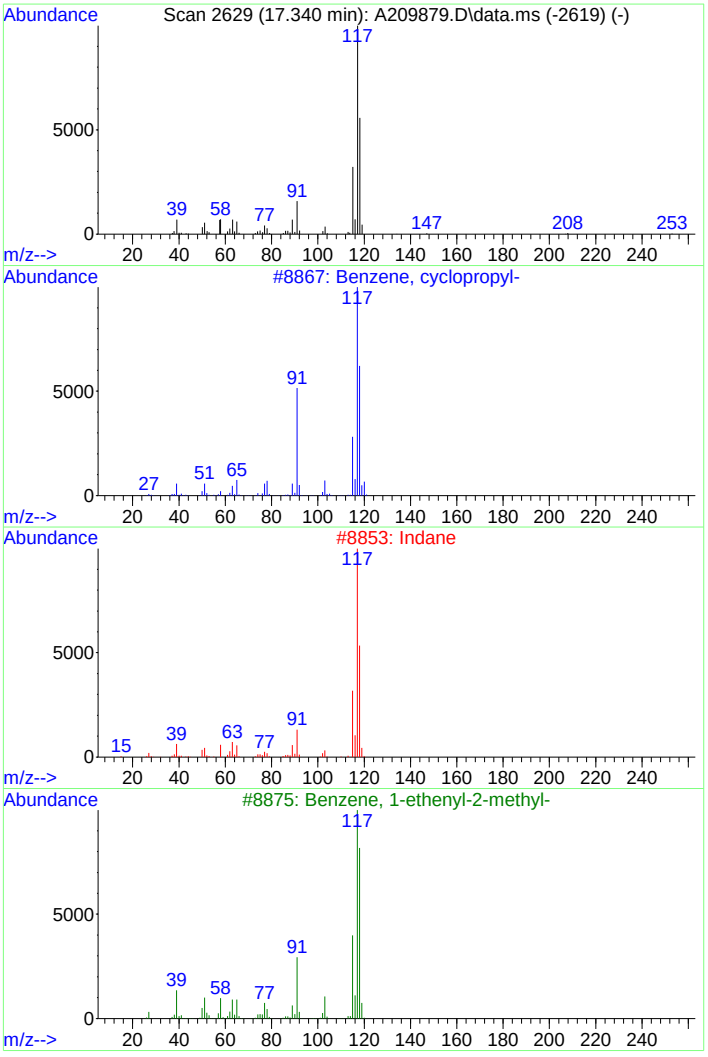
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

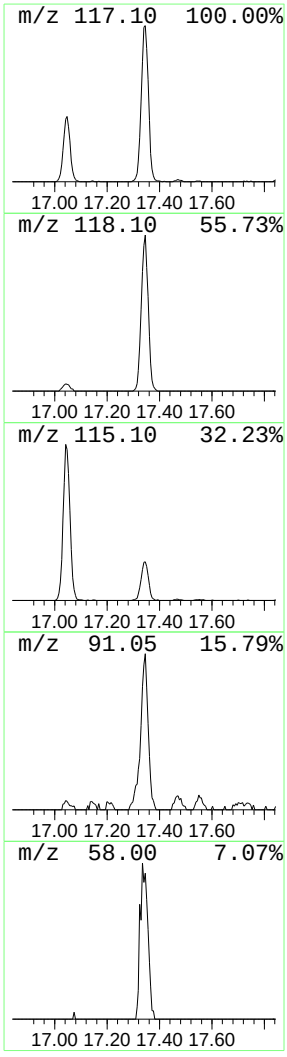
****

Peak Number 4 Indane Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.340	11.95 ug/L	185928	1,4-dichlorobenzene-d4	17.047

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, cyclopropyl-	118	C9H10	000873-49-4	83
2	Indane	118	C9H10	000496-11-7	81
3	Benzene, 1-ethenyl-2-methyl-	118	C9H10	000611-15-4	78
4	Indane	118	C9H10	000496-11-7	74
5	Indane	118	C9H10	000496-11-7	60





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209879.D
Acq On : 12 Nov 2014 5:11 pm
Operator : CourtneM
Sample : jb80728-7
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

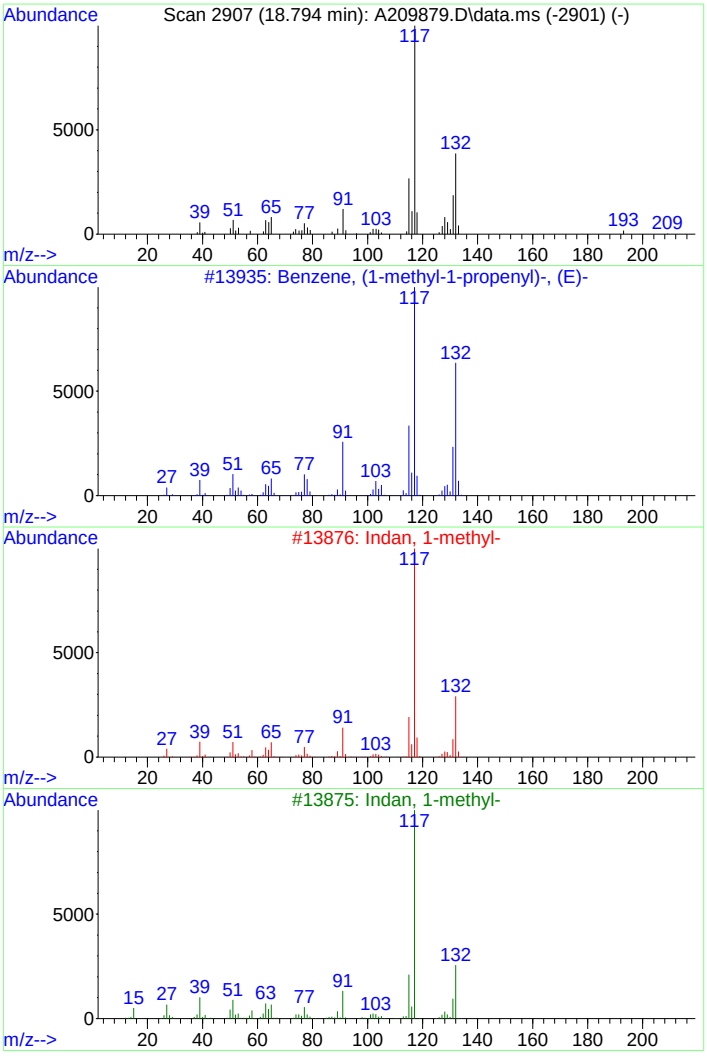
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

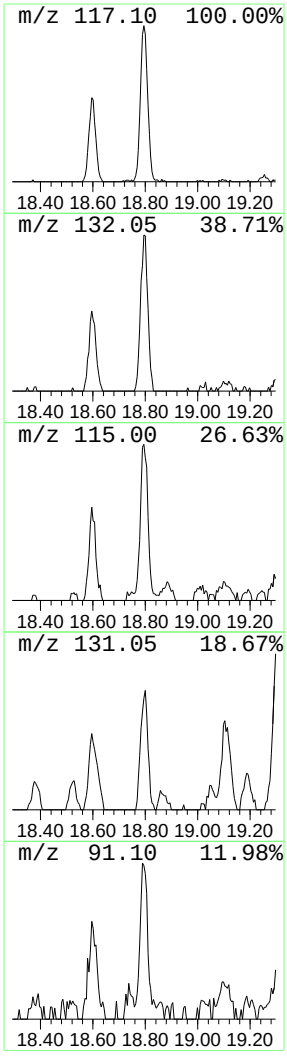
****

Peak Number 5 1H-Indene-dihydro-methyl- i... Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.794	39.13 ug/L	608765	1,4-dichlorobenzene-d4	17.047

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, (1-methyl-1-propenyl)-,...	132	C10H12	000768-00-3	91
2	Indan, 1-methyl-	132	C10H12	000767-58-8	91
3	Indan, 1-methyl-	132	C10H12	000767-58-8	91
4	Benzene, (2-methyl-1-propenyl)-	132	C10H12	000768-49-0	91
5	Benzene, 2-butenyl-	132	C10H12	001560-06-1	91





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209879.D
Acq On : 12 Nov 2014 5:11 pm
Operator : CourtneM
Sample : jb80728-7
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
alkane	5.803	11.6	ug/L	220056	2	10.097	951696	50.0
alkane	12.189	6.2	ug/L	73474	3	11.048	590758	50.0
Indane	17.340	11.9	ug/L	185928	5	17.047	777906	50.0
1H-Indene-dihyd...	18.794	39.1	ug/L	608765	5	17.047	777906	50.0

Manual Integrations APPROVED (compounds with "m" flag)
Mei Chen
11/13/14 16:39

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209888.D
Acq On : 12 Nov 2014 9:49 pm
Operator : CourtneM
Sample : jb80728-8
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Nov 13 14:44:33 2014
Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Nov 13 13:59:58 2014
Response via : Initial Calibration

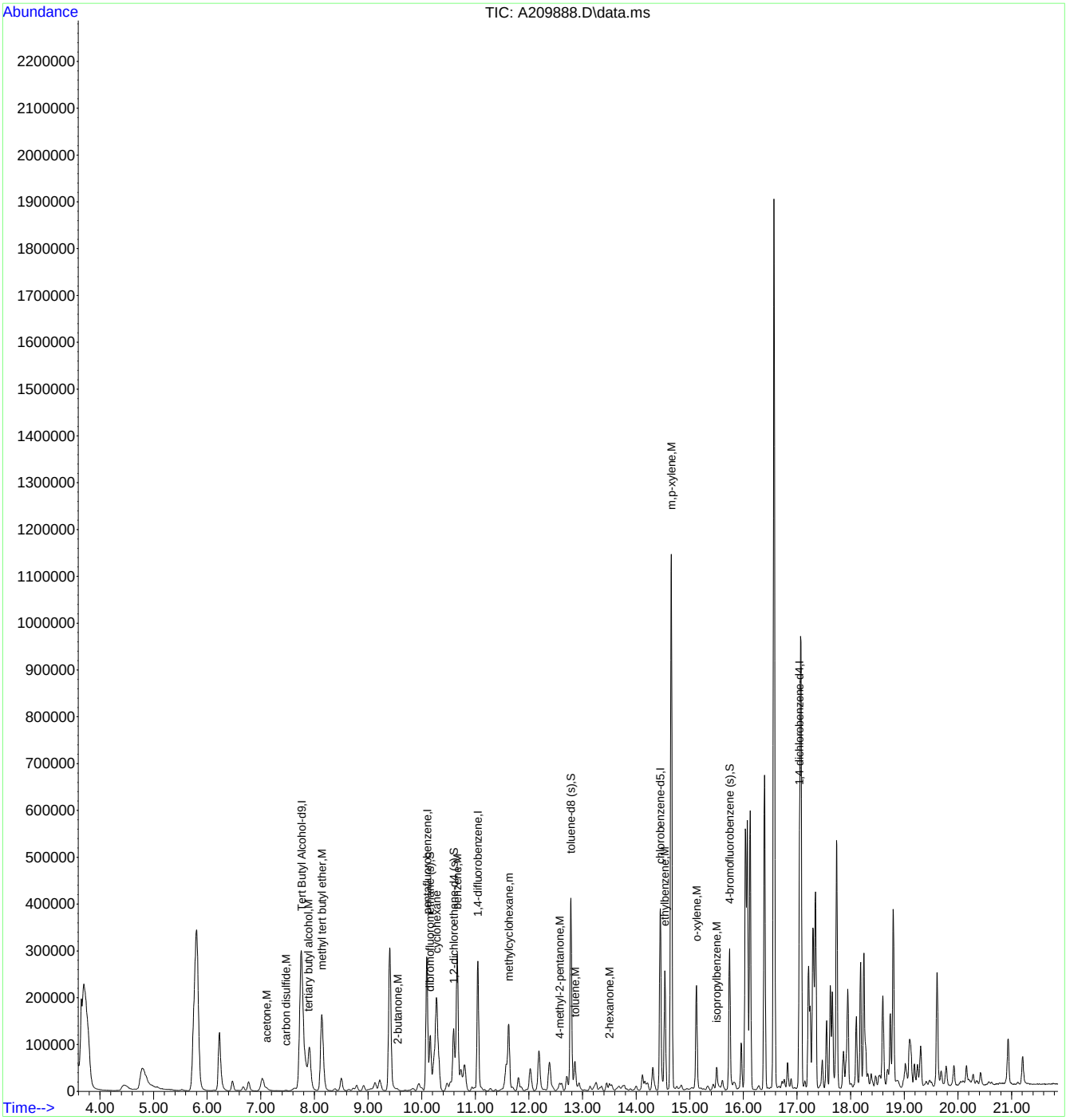
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.762	65	359640	500.00	ug/L	0.00
4) pentafluorobenzene	10.100	168	242340	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.047	114	274652	50.00	ug/L	0.00
83) chlorobenzene-d5	14.451	117	240041	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.046	152	138633	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.157	113	88201	47.17	ug/L	0.00
Spiked Amount 50.000	Range 59 - 130		Recovery = 94.34%			
47) 1,2-dichloroethane-d4 (s)	10.597	65	102658	45.25	ug/L	0.00
Spiked Amount 50.000	Range 65 - 123		Recovery = 90.50%			
75) toluene-d8 (s)	12.783	98	326845	51.50	ug/L	0.00
Spiked Amount 50.000	Range 77 - 125		Recovery = 103.00%			
101) 4-bromofluorobenzene (s)	15.743	95	118800	55.14	ug/L	0.00
Spiked Amount 50.000	Range 71 - 132		Recovery = 110.28%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.888	59	10103	15.36	ug/L #	1
20) acetone	7.108	43	18244m	15.98	ug/L	
24) carbon disulfide	7.469	76	2452	0.39	ug/L	80
27) methyl tert butyl ether	8.139	73	33590	4.40	ug/L #	1
33) 2-butanone	9.551	72	1876	5.06	ug/L #	1
49) cyclohexane	10.278	84	108850	35.64	ug/L	80
59) benzene	10.665	78	234453	35.44	ug/L	99
68) methylcyclohexane	11.627	83	79146	27.67	ug/L #	77
76) 4-methyl-2-pentanone	12.574	58	5588	4.56	ug/L #	31
77) toluene	12.861	92	23238	5.69	ug/L	94
82) 2-hexanone	13.500	58	6783m	6.54	ug/L	
93) ethylbenzene	14.535	91	208639	28.44	ug/L	99
94) m,p-xylene	14.655	106	392321	140.71	ug/L	98
95) o-xylene	15.126	106	70130	23.04	ug/L	97
99) isopropylbenzene	15.503	105	37859	4.64	ug/L	100

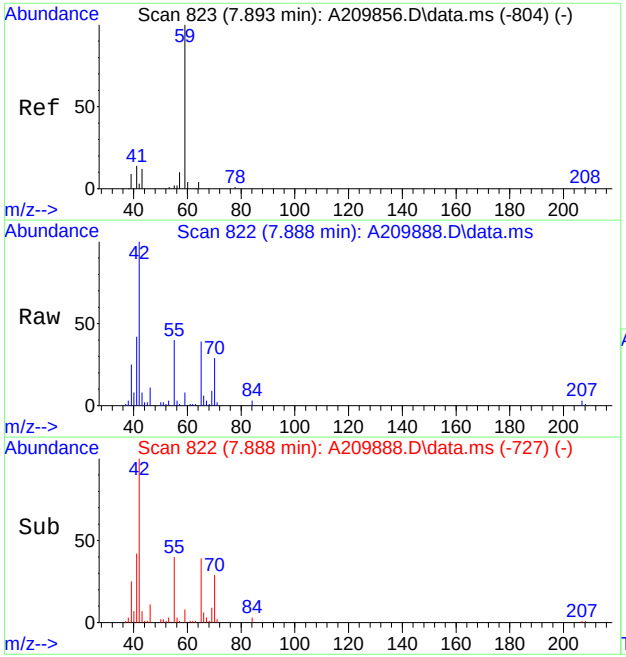
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209888.D
Acq On : 12 Nov 2014 9:49 pm
Operator : CourtneM
Sample : jb80728-8
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Nov 13 14:44:33 2014
Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Nov 13 13:59:58 2014
Response via : Initial Calibration

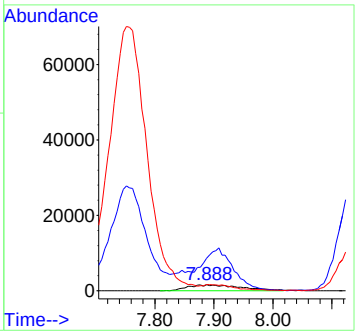


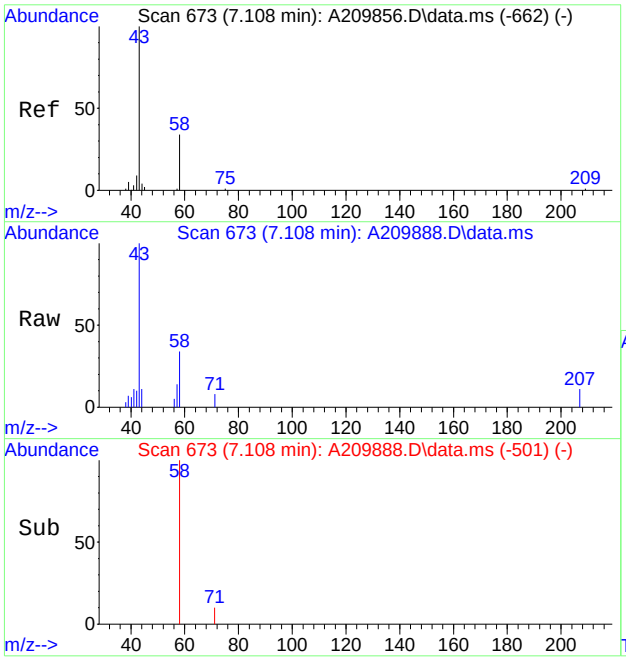


#3
tertiary butyl alcohol
Concen: 15.36 ug/L
RT: 7.888 min Scan# 822
Delta R.T. -0.005 min
Lab File: A209888.D
Acq: 12 Nov 2014 9:49 pm

Tgt Ion: 59 Resp: 10103

Ion	Ratio	Lower	Upper
59	100		
41	357.6	0.0	49.5#
43	0.0	0.0	43.1

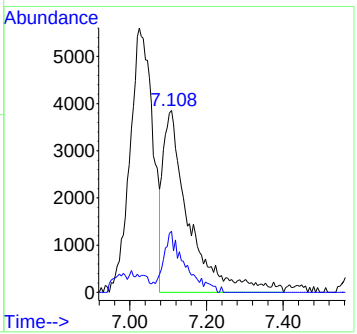


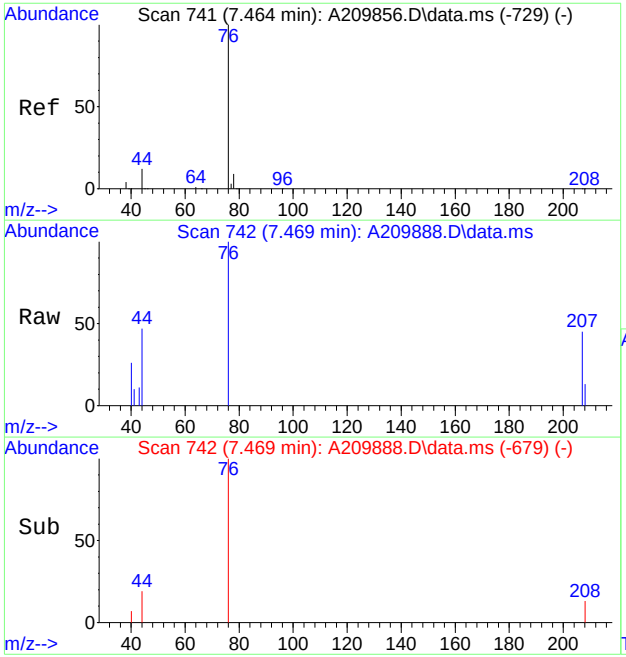


#20
acetone
Concen: 15.98 ug/L m
RT: 7.108 min Scan# 673
Delta R.T. -0.000 min
Lab File: A209888.D
Acq: 12 Nov 2014 9:49 pm

Tgt Ion: 43 Resp: 18244

Ion	Ratio	Lower	Upper
43	100		
58	13.0	1.5	61.5

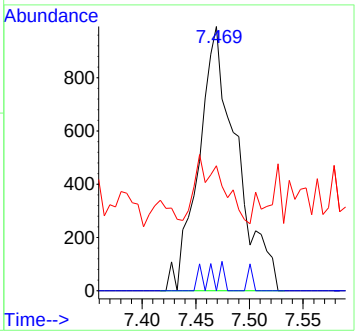


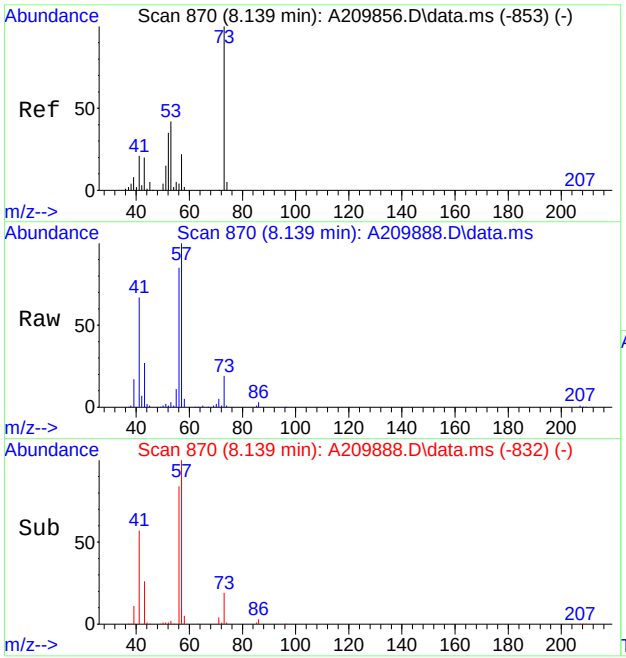


#24
carbon disulfide
Concen: 0.39 ug/L
RT: 7.469 min Scan# 742
Delta R.T. 0.005 min
Lab File: A209888.D
Acq: 12 Nov 2014 9:49 pm

Tgt Ion: 76 Resp: 2452

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	39.0
44	17.4	0.0	41.5

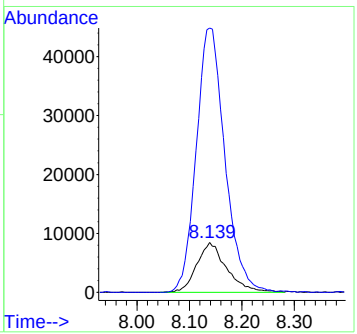


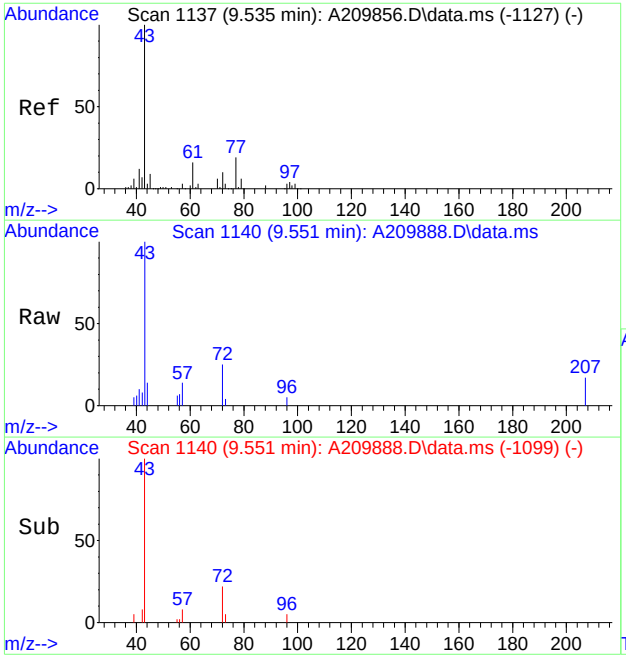


#27
methyl tert butyl ether
Concen: 4.40 ug/L
RT: 8.139 min Scan# 870
Delta R.T. -0.000 min
Lab File: A209888.D
Acq: 12 Nov 2014 9:49 pm

Tgt Ion: 73 Resp: 33590

Ion	Ratio	Lower	Upper
73	100		
57	507.2	0.0	52.7#

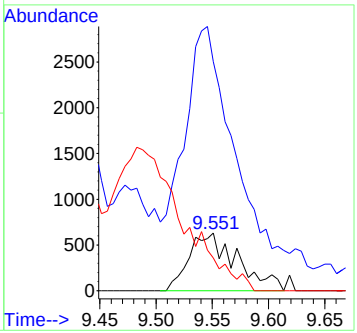


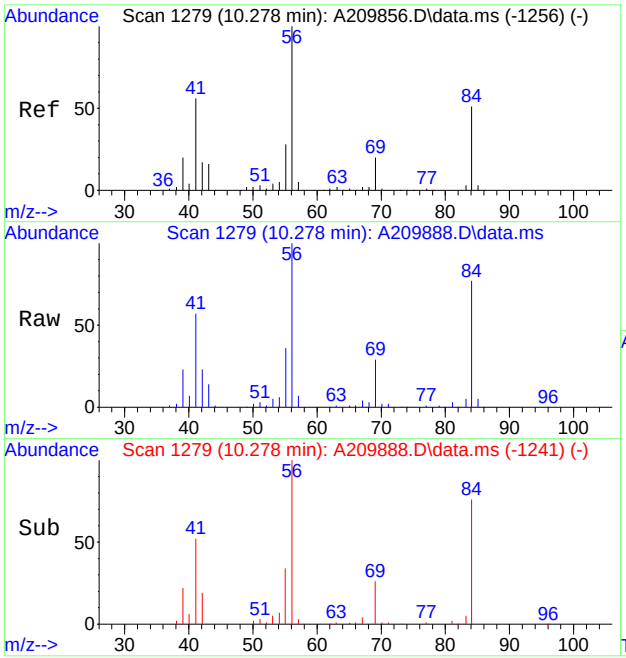


#33
2-butanone
Concen: 5.06 ug/L
RT: 9.551 min Scan# 1140
Delta R.T. 0.016 min
Lab File: A209888.D
Acq: 12 Nov 2014 9:49 pm

Tgt Ion: 72 Resp: 1876

Ion	Ratio	Lower	Upper
72	100		
43	458.2	1081.2	1141.2#
57	0.0	1.6	61.6#

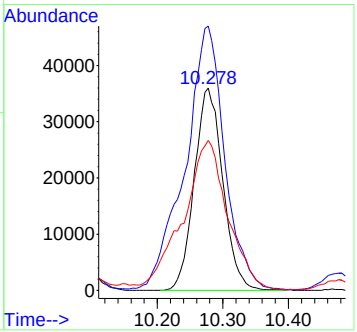


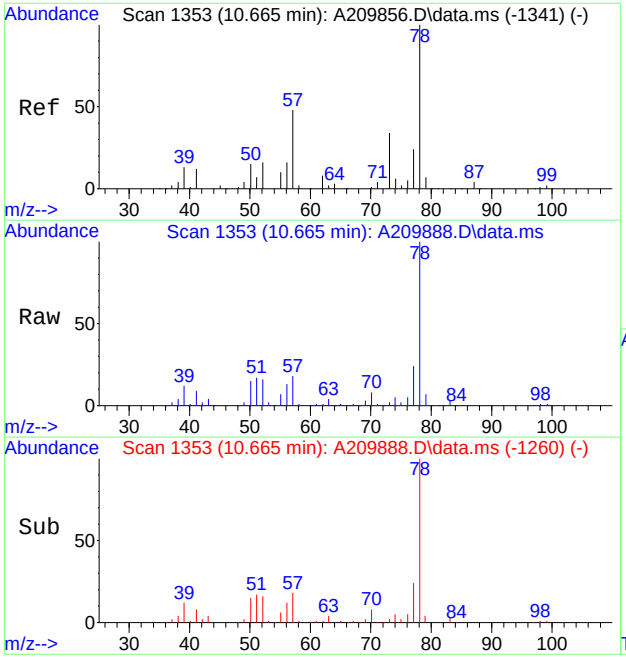


#49
cyclohexane
Concen: 35.64 ug/L
RT: 10.278 min Scan# 1279
Delta R.T. -0.000 min
Lab File: A209888.D
Acq: 12 Nov 2014 9:49 pm

Tgt Ion: 84 Resp: 108850

Ion	Ratio	Lower	Upper
84	100		
56	181.8	157.0	291.6
41	114.7	88.5	164.3

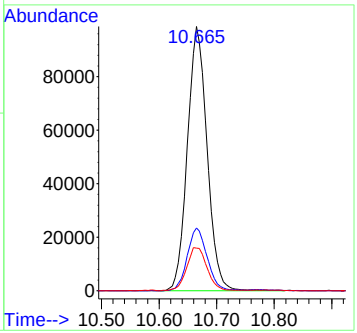


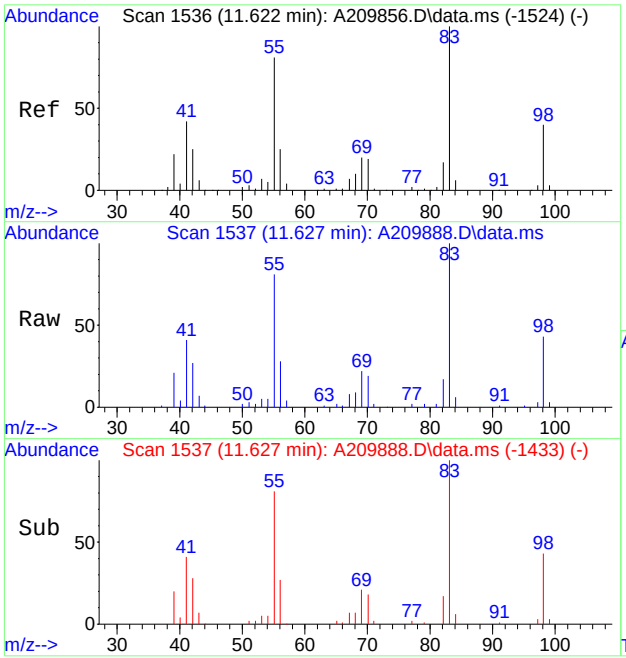


#59
benzene
Concen: 35.44 ug/L
RT: 10.665 min Scan# 1353
Delta R.T. -0.000 min
Lab File: A209888.D
Acq: 12 Nov 2014 9:49 pm

Tgt Ion: 78 Resp: 234453

Ion	Ratio	Lower	Upper
78	100		
77	23.8	0.0	54.5
52	16.1	0.0	45.9

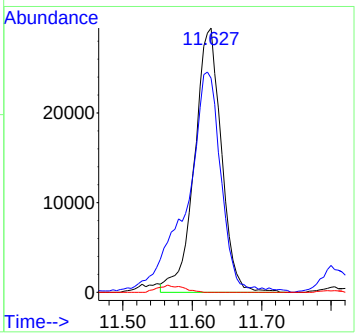


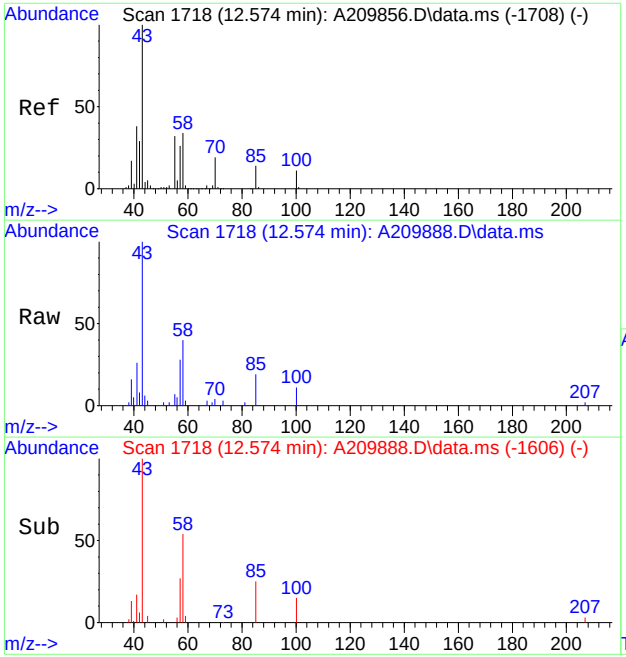


#68
methylcyclohexane
Concen: 27.67 ug/L
RT: 11.627 min Scan# 1537
Delta R.T. 0.005 min
Lab File: A209888.D
Acq: 12 Nov 2014 9:49 pm

Tgt Ion: 83 Resp: 79146

Ion	Ratio	Lower	Upper
83	100		
55	107.9	56.4	116.4
85	0.0	0.0	30.1

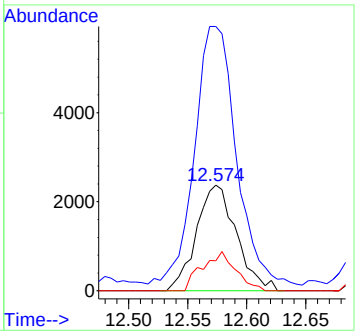


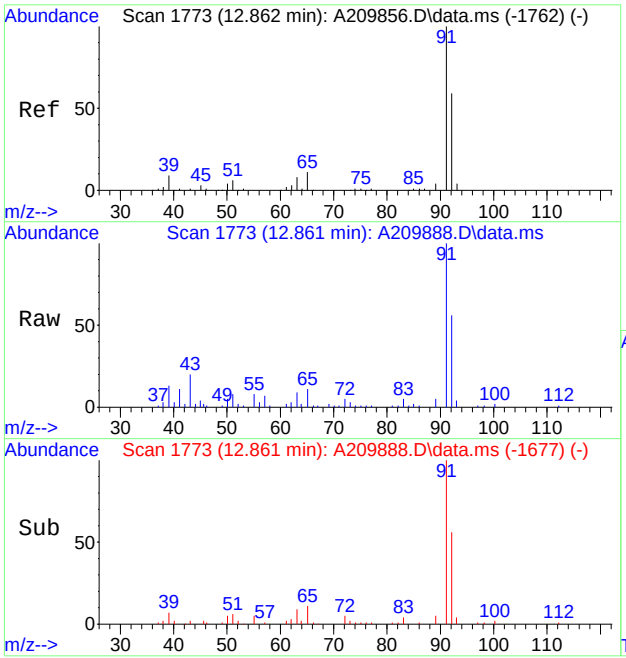


#76
4-methyl-2-pentanone
Concen: 4.56 ug/L
RT: 12.574 min Scan# 1718
Delta R.T. -0.000 min
Lab File: A209888.D
Acq: 12 Nov 2014 9:49 pm

Tgt Ion: 58 Resp: 5588

Ion	Ratio	Lower	Upper
58	100		
43	273.3	437.1	497.1#
100	31.2	1.1	61.1

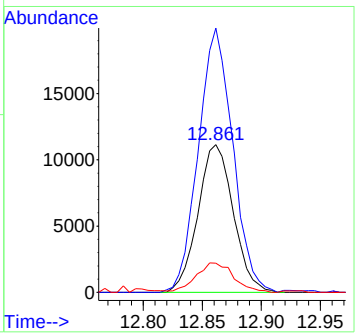


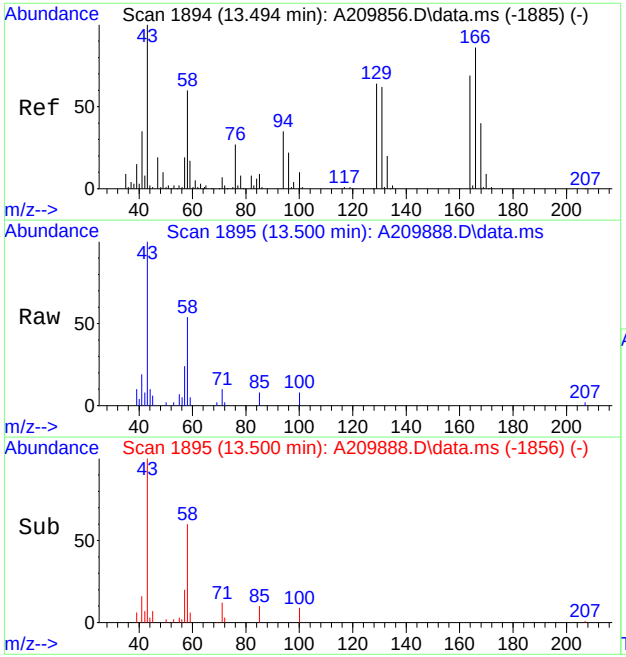


#77
toluene
Concen: 5.69 ug/L
RT: 12.861 min Scan# 1773
Delta R.T. -0.000 min
Lab File: A209888.D
Acq: 12 Nov 2014 9:49 pm

Tgt Ion: 92 Resp: 23238

Ion	Ratio	Lower	Upper
92	100		
91	178.9	139.6	199.6
65	18.8	0.0	49.5

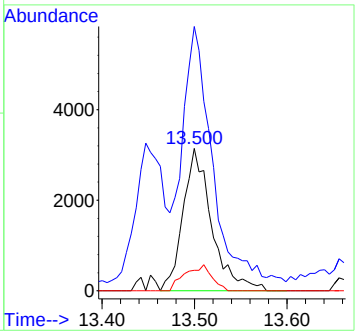


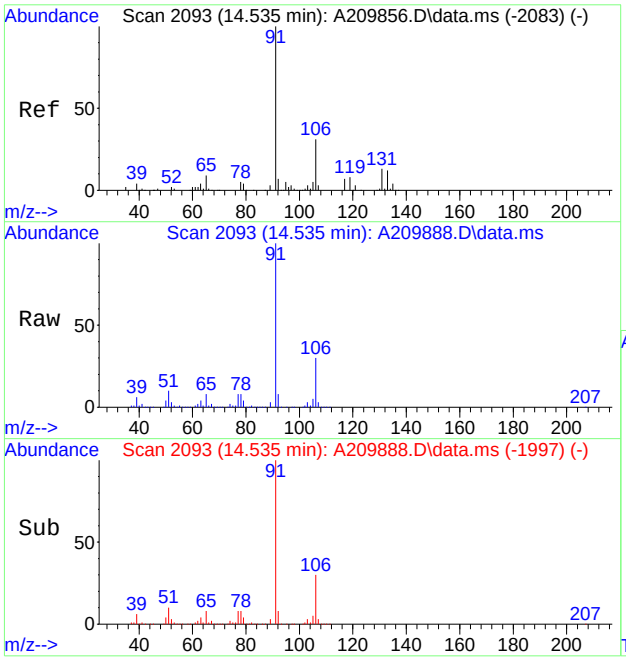


#82
2-hexanone
Concen: 6.54 ug/L m
RT: 13.500 min Scan# 1895
Delta R.T. 0.005 min
Lab File: A209888.D
Acq: 12 Nov 2014 9:49 pm

Tgt Ion: 58 Resp: 6783

Ion	Ratio	Lower	Upper
58	100		
43	185.8	137.0	197.0
100	14.4	0.0	47.1

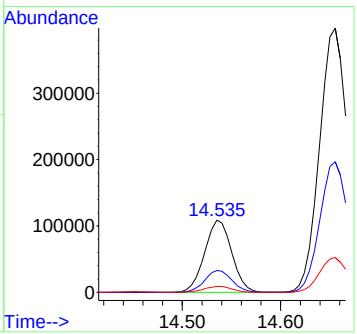


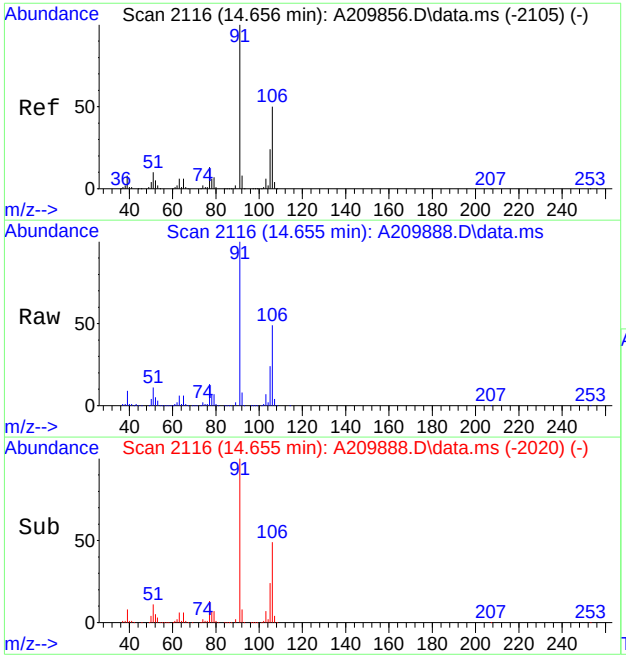


#93
ethylbenzene
Concen: 28.44 ug/L
RT: 14.535 min Scan# 2093
Delta R.T. -0.000 min
Lab File: A209888.D
Acq: 12 Nov 2014 9:49 pm

Tgt Ion: 91 Resp: 208639

Ion	Ratio	Lower	Upper
91	100		
106	30.4	0.8	60.8
77	8.3	0.0	38.5

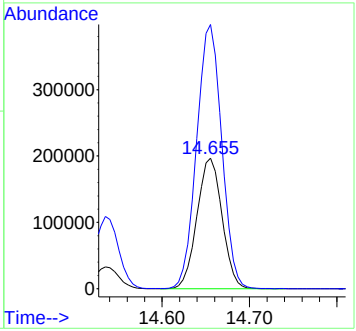


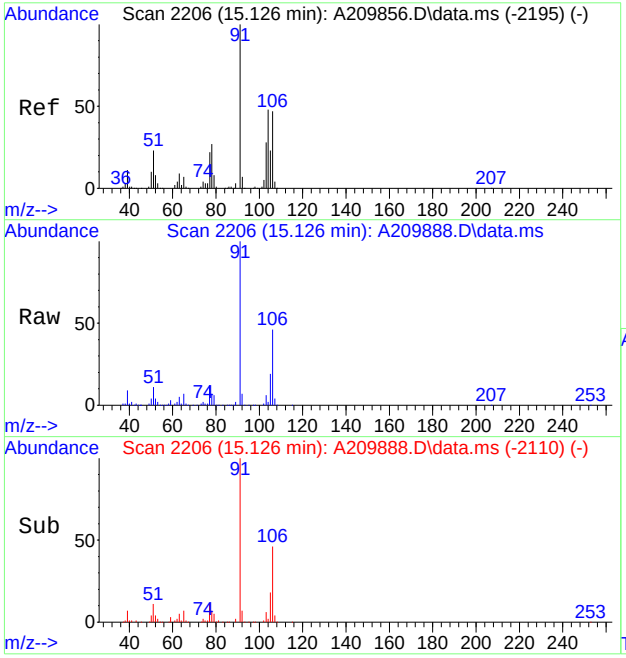


#94
m,p-xylene
Concen: 140.71 ug/L
RT: 14.655 min Scan# 2116
Delta R.T. -0.000 min
Lab File: A209888.D
Acq: 12 Nov 2014 9:49 pm

Tgt Ion:106 Resp: 392321

Ion	Ratio	Lower	Upper
106	100		
91	202.2	169.6	229.6

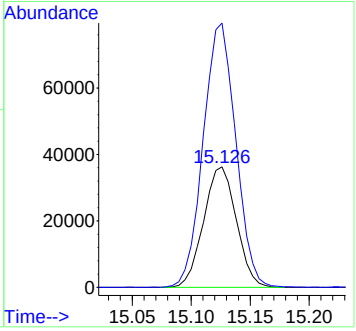


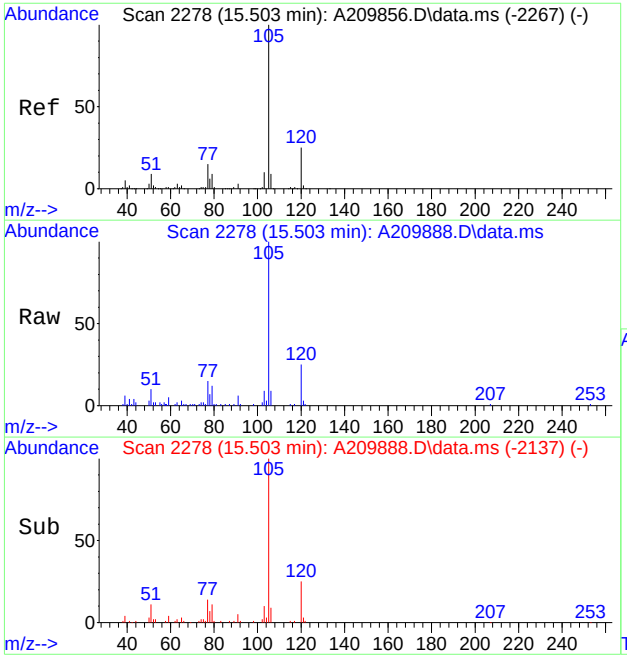


#95
o-xylene
Concen: 23.04 ug/L
RT: 15.126 min Scan# 2206
Delta R.T. -0.000 min
Lab File: A209888.D
Acq: 12 Nov 2014 9:49 pm

Tgt Ion:106 Resp: 70130

Ion	Ratio	Lower	Upper
106	100		
91	219.1	183.9	243.9

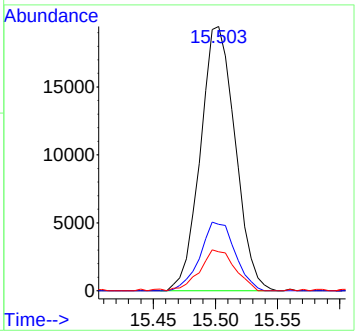




#99
isopropylbenzene
Concen: 4.64 ug/L
RT: 15.503 min Scan# 2278
Delta R.T. -0.000 min
Lab File: A209888.D
Acq: 12 Nov 2014 9:49 pm

Tgt Ion:105 Resp: 37859

Ion	Ratio	Lower	Upper
105	100		
120	25.2	0.0	55.3
77	14.7	0.0	45.1



7.1.16

7

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209888.D
Acq On : 12 Nov 2014 9:49 pm
Operator : CourtneM
Sample : jb80728-8
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 24 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.6 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\MA7918.M
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

Signal : TIC: A209888.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.698	5	21	105	rVB	227618	2056179	59.50%	5.307%
2	4.786	214	229	323	rVV3	47288	494561	14.31%	1.277%
3	5.801	395	423	470	rBV3	343712	1983799	57.40%	5.121%
4	6.230	490	505	541	rVB2	124892	417642	12.08%	1.078%
5	7.752	779	796	855	rVB6	298568	1895650	54.85%	4.893%
6	8.139	855	870	894	rVB	162296	616399	17.84%	1.591%
7	9.404	1099	1112	1152	rVB	305688	978507	28.31%	2.526%
8	10.095	1233	1244	1252	rBV	284984	736257	21.30%	1.900%
9	10.163	1252	1257	1273	rVV2	115166	466696	13.50%	1.205%
10	10.278	1273	1279	1304	rVB3	199568	729771	21.12%	1.884%
11	10.597	1332	1340	1346	rVV2	129178	350744	10.15%	0.905%
12	10.665	1346	1353	1396	rVB2	292096	1088507	31.50%	2.810%
13	11.047	1417	1426	1457	rVB	277340	661098	19.13%	1.706%
14	11.622	1531	1536	1561	rVB2	142445	372003	10.76%	0.960%
15	12.187	1629	1644	1671	rBV2	84933	252464	7.30%	0.652%
16	12.380	1671	1681	1703	rVB2	61003	207653	6.01%	0.536%
17	12.783	1749	1758	1767	rVV	409194	909193	26.31%	2.347%
18	14.117	2003	2013	2040	rBV5	33049	151675	4.39%	0.392%
19	14.451	2066	2077	2086	rBV	388062	796357	23.04%	2.056%
20	14.535	2086	2093	2102	rVB	253803	492447	14.25%	1.271%
21	14.655	2106	2116	2131	rBV	1141855	2269579	65.67%	5.858%
22	15.126	2196	2206	2239	rVB	222449	470491	13.61%	1.214%
23	15.743	2314	2324	2358	rBV	300876	654725	18.94%	1.690%
24	15.958	2358	2365	2372	rBV	95398	172492	4.99%	0.445%
25	16.036	2372	2380	2384	rBV	552527	1108022	32.06%	2.860%
26	16.073	2384	2387	2392	rVV	568412	924779	26.76%	2.387%
27	16.125	2392	2397	2419	rVB	595938	1086266	31.43%	2.804%
28	16.392	2438	2448	2466	rBV	672122	1279911	37.03%	3.304%
29	16.570	2473	2482	2505	rVB	1898992	3456049	100.00%	8.921%
30	17.066	2565	2577	2587	rBV2	963963	2489934	72.05%	6.427%
31	17.213	2597	2605	2615	rBV2	258593	750109	21.70%	1.936%
32	17.297	2615	2621	2626	rVV3	335962	781747	22.62%	2.018%
33	17.344	2626	2630	2649	rVV	412590	731983	21.18%	1.889%
34	17.553	2662	2670	2676	rBV	143776	262431	7.59%	0.677%
35	17.621	2676	2683	2687	rVV	212104	393944	11.40%	1.017%
36	17.657	2687	2690	2698	rVV	198660	340637	9.86%	0.879%
37	17.736	2698	2705	2721	rVB	530005	991060	28.68%	2.558%
38	17.867	2721	2730	2735	rBV4	79679	174074	5.04%	0.449%
39	17.945	2735	2745	2765	rVB2	208472	492740	14.26%	1.272%
40	18.107	2768	2776	2783	rBV	146483	272561	7.89%	0.704%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209888.D
Acq On : 12 Nov 2014 9:49 pm
Operator : CourtneM
Sample : jb80728-8
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 24 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.6 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\MA7918.M
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

41	18.186	2783	2791	2797	rVV	260173	462099	13.37%	1.193%
42	18.249	2797	2803	2824	rVV	279709	667118	19.30%	1.722%
43	18.599	2864	2870	2881	rVB4	189053	397386	11.50%	1.026%
44	18.740	2891	2897	2901	rVV	149492	275521	7.97%	0.711%
45	18.792	2901	2907	2939	rVB	378365	797308	23.07%	2.058%
46	19.017	2939	2950	2959	rBV5	49170	155324	4.49%	0.401%
47	19.101	2959	2966	2977	rVV4	94217	307026	8.88%	0.793%
48	19.305	2999	3005	3055	rVB	82448	203678	5.89%	0.526%
49	19.614	3055	3064	3074	rBV	239377	503201	14.56%	1.299%
50	20.937	3310	3317	3361	rVB	95669	211249	6.11%	0.545%

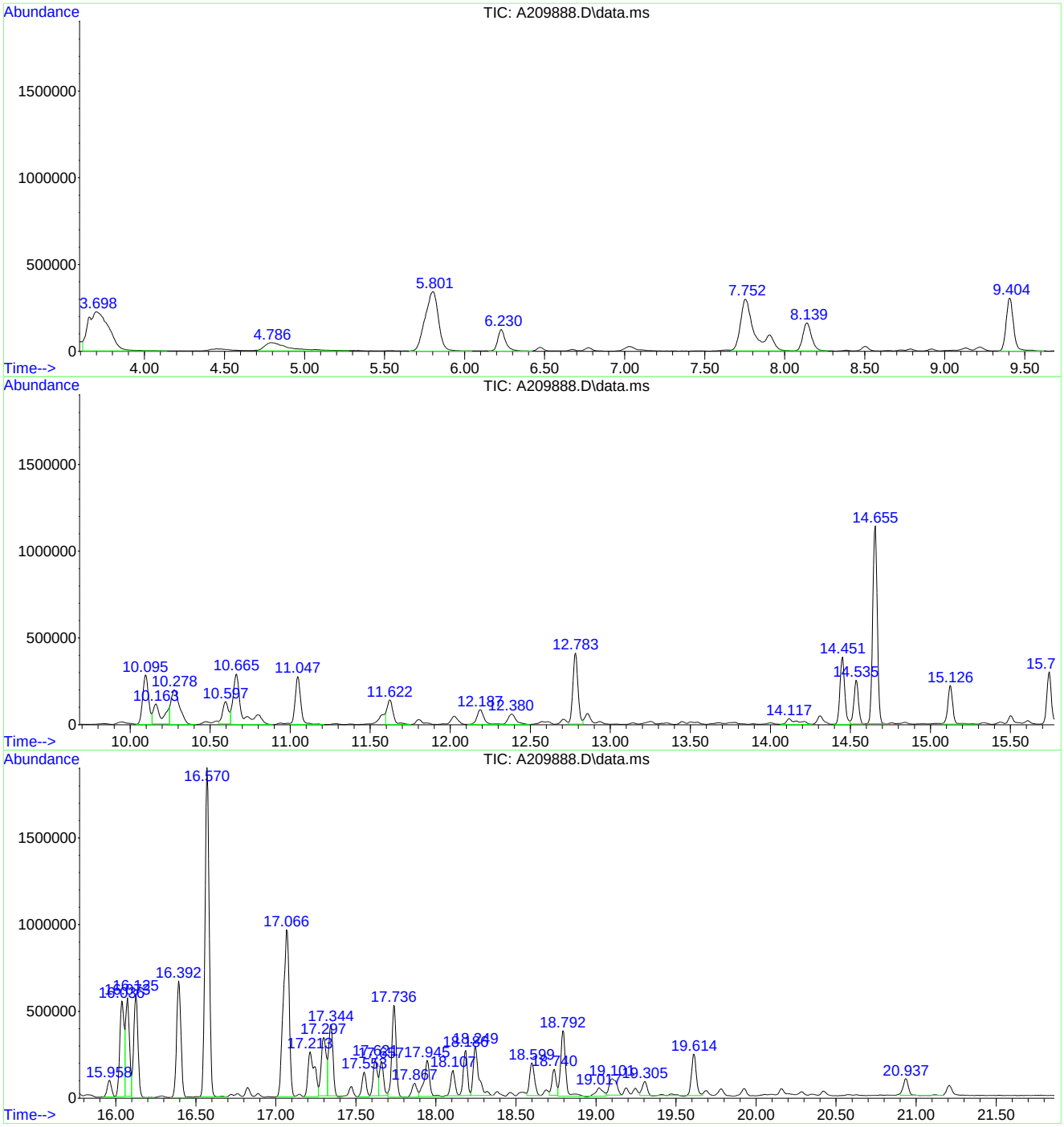
Sum of corrected areas: 38741046

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209888.D
Acq On : 12 Nov 2014 9:49 pm
Operator : CourtneM
Sample : jb80728-8
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209888.D
Acq On : 12 Nov 2014 9:49 pm
Operator : CourtneM
Sample : jb80728-8
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

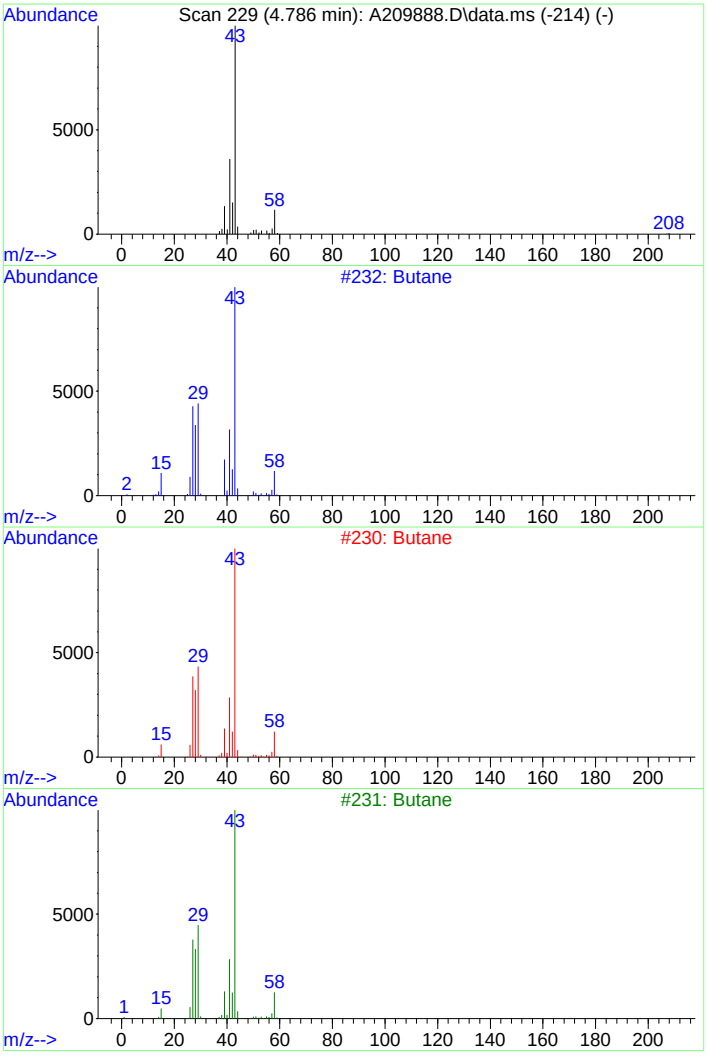
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

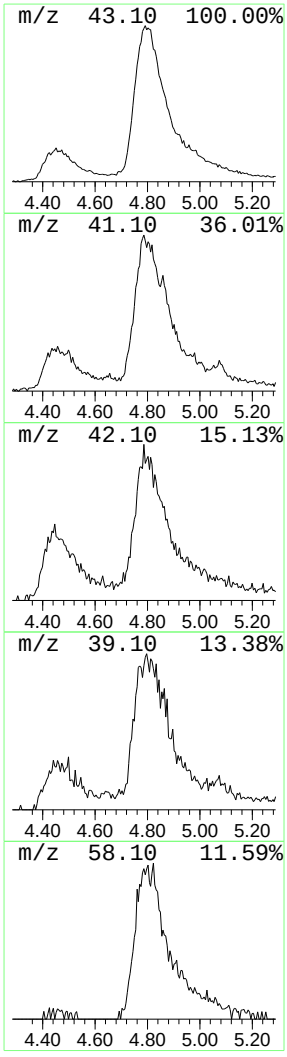
****

Peak Number 2 alkane Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.786	33.59 ug/L	494561	pentafluorobenzene	10.100

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	72
2	Butane	58	C4H10	000106-97-8	64
3	Butane	58	C4H10	000106-97-8	64
4	1-Propen-2-ol, acetate	100	C5H8O2	000108-22-5	56
5	Formic acid, chloro-, (3,4,4-tri...	194	C7H11ClO4	107323-92-2	39





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209888.D
Acq On : 12 Nov 2014 9:49 pm
Operator : CourtneM
Sample : jb80728-8
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

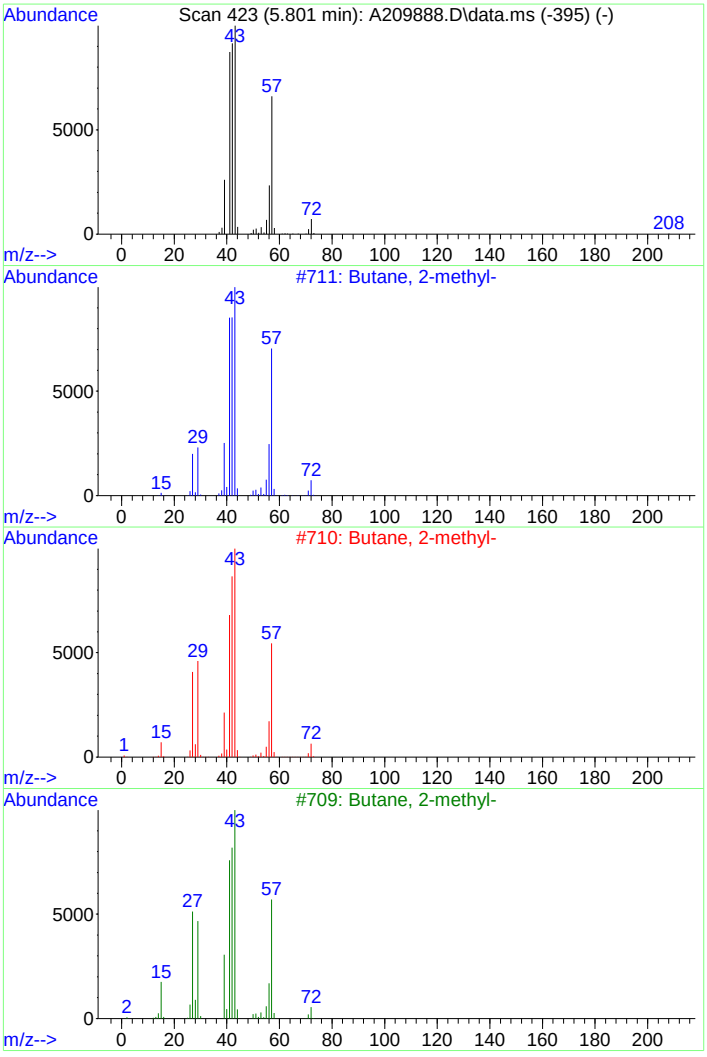
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

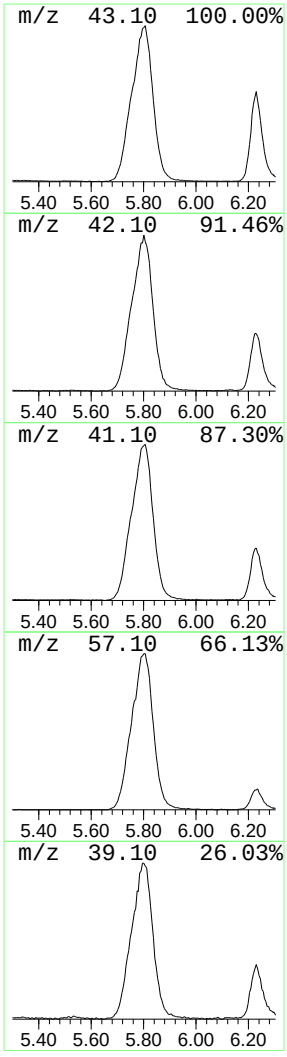
****

Peak Number 3 alkane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.801	134.72 ug/L	1983800	pentafluorobenzene	10.100

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	94
2	Butane, 2-methyl-	72	C5H12	000078-78-4	91
3	Butane, 2-methyl-	72	C5H12	000078-78-4	90
4	3-Buten-1-ol	72	C4H8O	000627-27-0	43
5	Pentane	72	C5H12	000109-66-0	33





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209888.D
Acq On : 12 Nov 2014 9:49 pm
Operator : CourtneM
Sample : jb80728-8
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

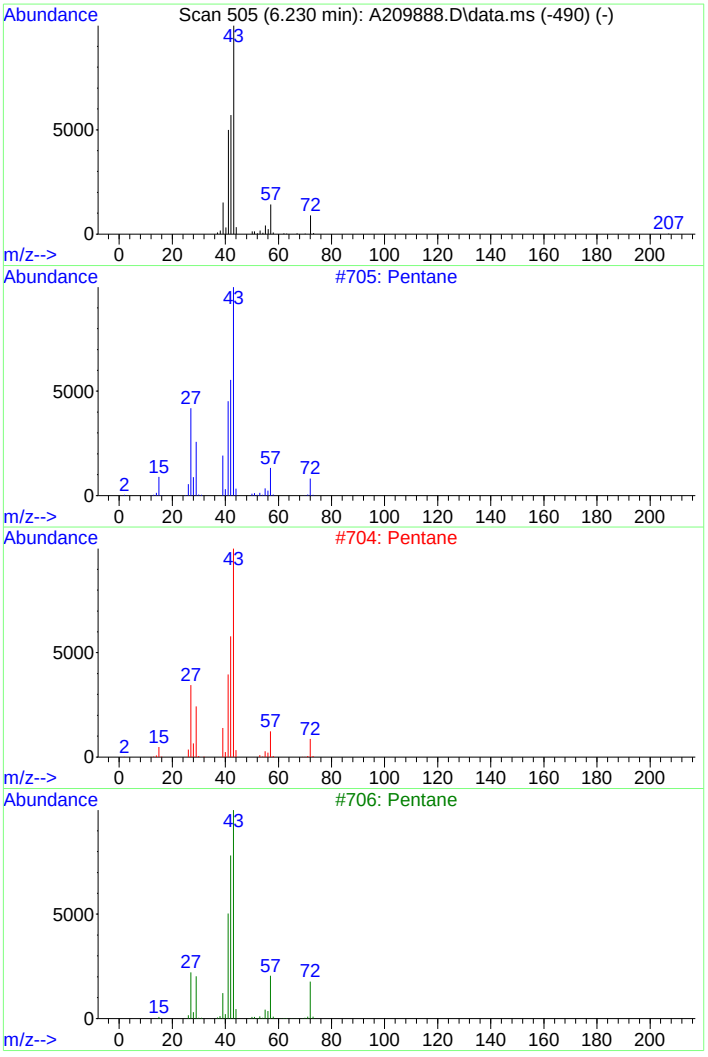
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

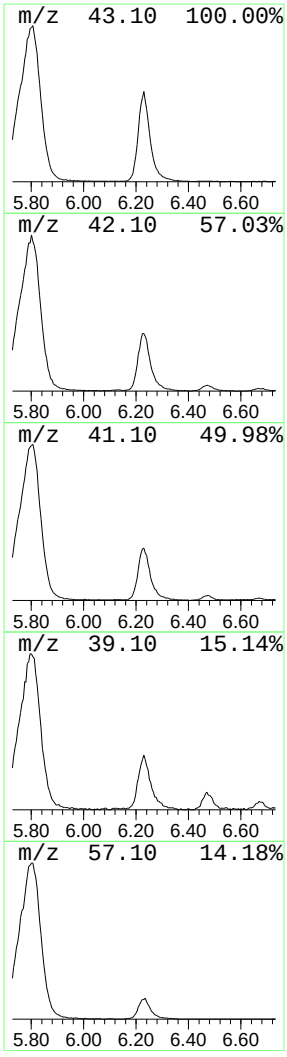
****

Peak Number 4 alkane-Pentane Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.230	28.36 ug/L	417642	pentafluorobenzene	10.100

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	90
2	Pentane	72	C5H12	000109-66-0	86
3	Pentane	72	C5H12	000109-66-0	64
4	Butane, 2-methyl-	72	C5H12	000078-78-4	53
5	Pentane	72	C5H12	000109-66-0	49





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209888.D
Acq On : 12 Nov 2014 9:49 pm
Operator : CourtneM
Sample : jb80728-8
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

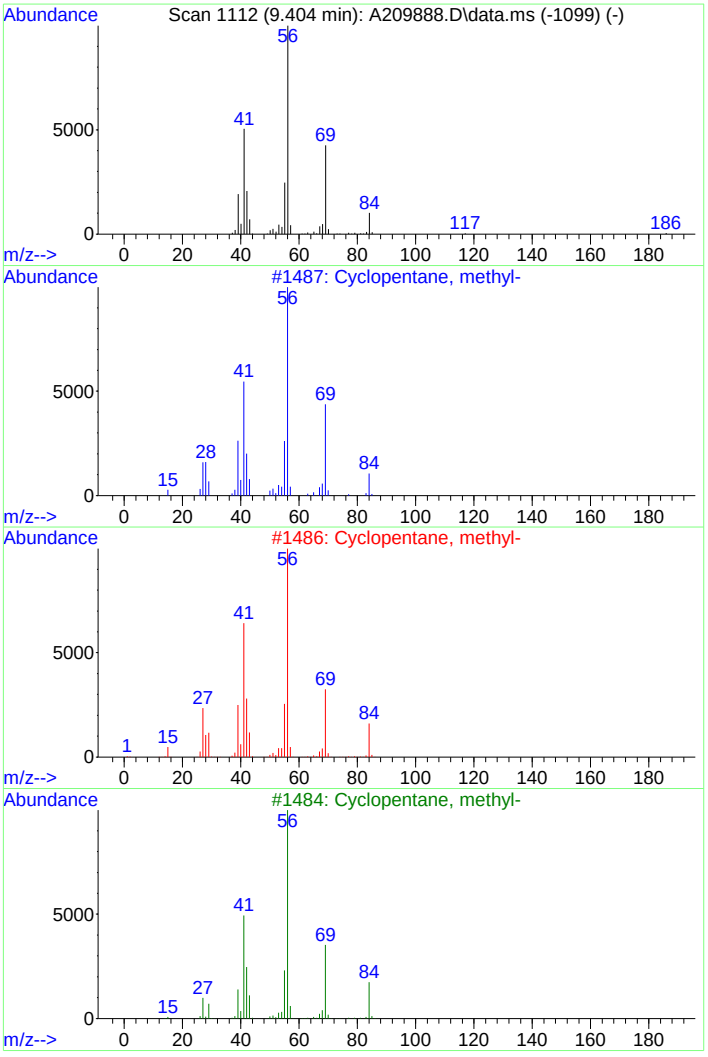
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

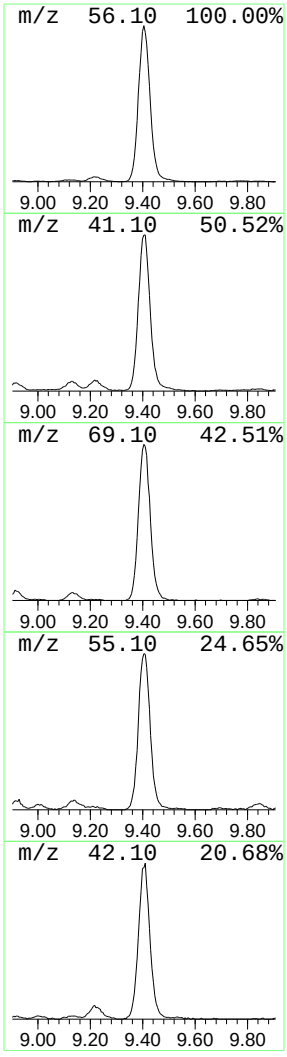
****

Peak Number 5 alkene Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.404	66.45 ug/L	978507	pentafluorobenzene	10.100

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	94
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	91
3	Cyclopentane, methyl-	84	C6H12	000096-37-7	86
4	1H-Tetrazole, 5-methyl-	84	C2H4N4	004076-36-2	80
5	Cyclohexane	84	C6H12	000110-82-7	78





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209888.D
Acq On : 12 Nov 2014 9:49 pm
Operator : CourtneM
Sample : jb80728-8
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

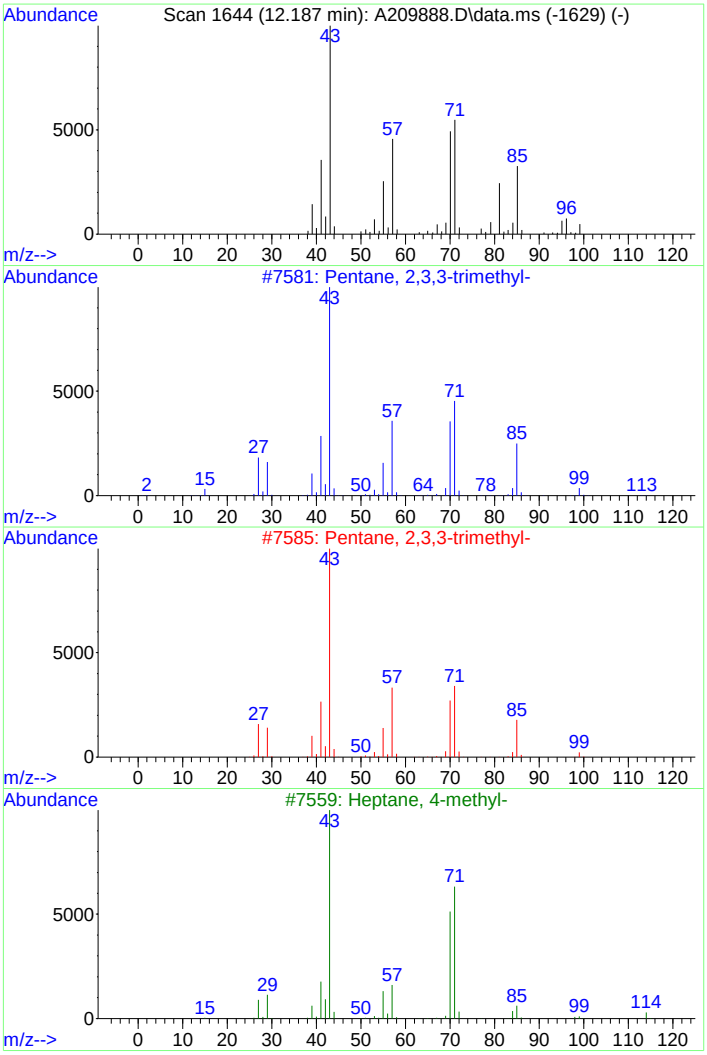
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

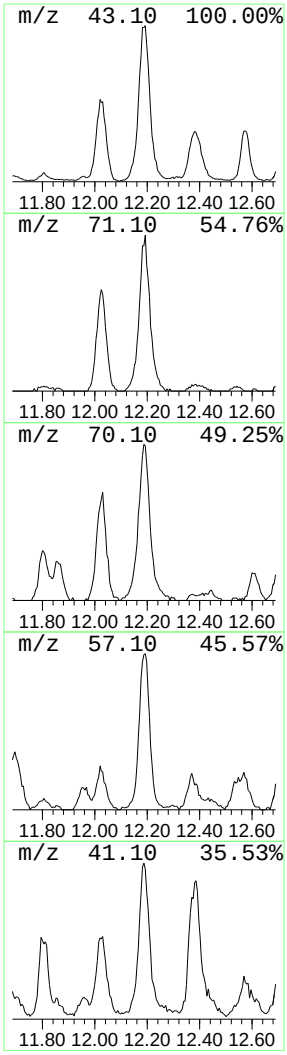
****

Peak Number 6 alkane Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.187	19.09 ug/L	252464	1,4-difluorobenzene	11.047

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	86
2	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	78
3	Heptane, 4-methyl-	114	C8H18	000589-53-7	59
4	Hexane, 2,3,4-trimethyl-	128	C9H20	000921-47-1	56
5	Hexane, 3,3-dimethyl-	114	C8H18	000563-16-6	53





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209888.D
Acq On : 12 Nov 2014 9:49 pm
Operator : CourtneM
Sample : jb80728-8
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

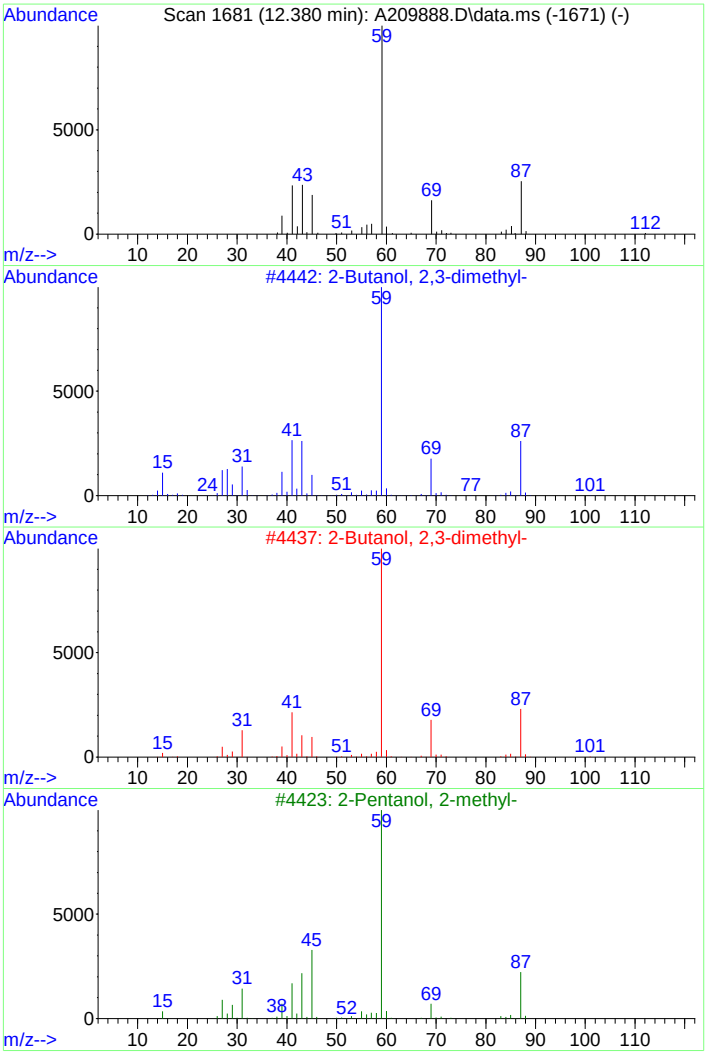
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

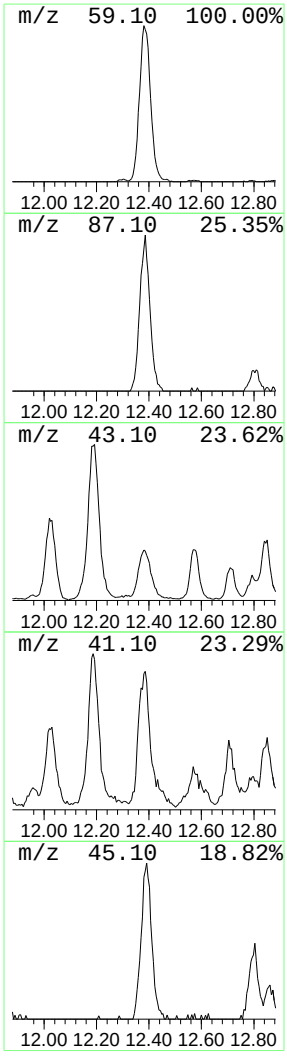
****

Peak Number 7 alcohols Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.380	15.71 ug/L	207653	1,4-difluorobenzene	11.047

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Butanol, 2,3-dimethyl-	102	C6H14O	000594-60-5	83
2	2-Butanol, 2,3-dimethyl-	102	C6H14O	000594-60-5	78
3	2-Pentanol, 2-methyl-	102	C6H14O	000590-36-3	64
4	Propane, 2-ethoxy-2-methyl-	102	C6H14O	000637-92-3	64
5	Butane, 2-methoxy-	88	C5H12O	006795-87-5	45





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209888.D
Acq On : 12 Nov 2014 9:49 pm
Operator : CourtneM
Sample : jb80728-8
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

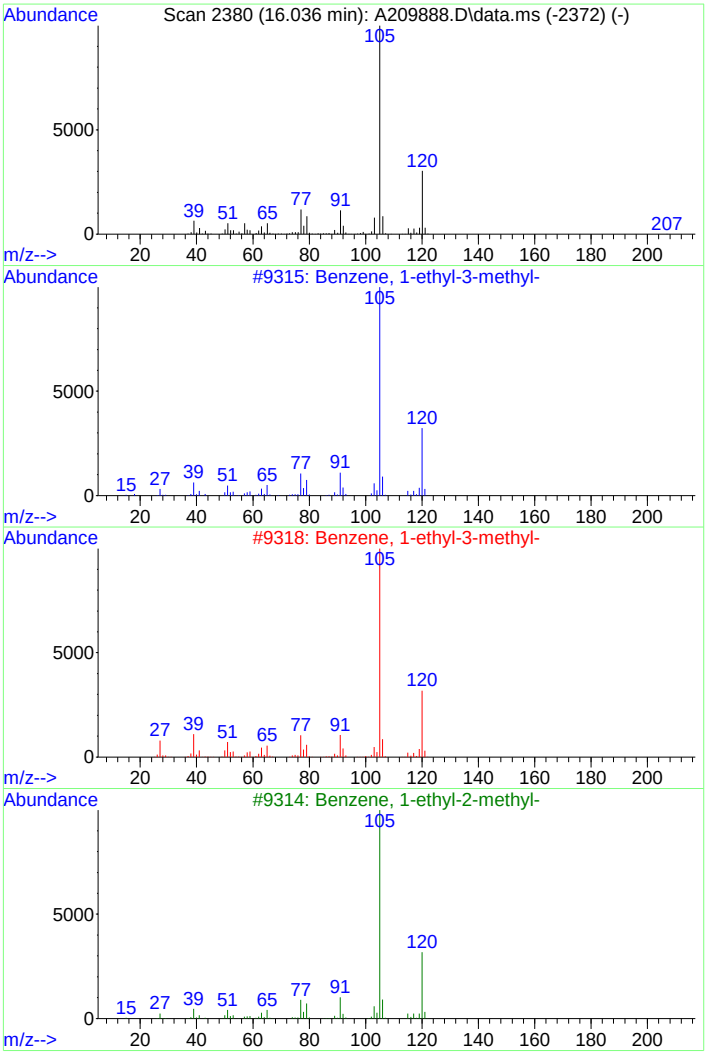
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

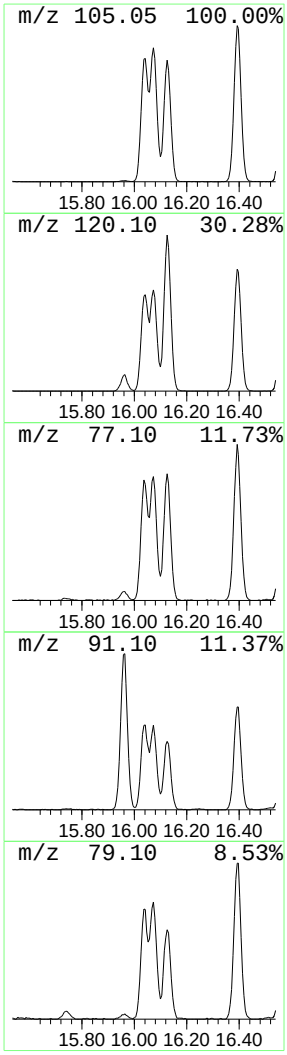
****

Peak Number 8 C3 alkyl benzene Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.036	22.25 ug/L	1108020	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	94
2	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	94
3	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
4	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
5	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209888.D
Acq On : 12 Nov 2014 9:49 pm
Operator : CourtneM
Sample : jb80728-8
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

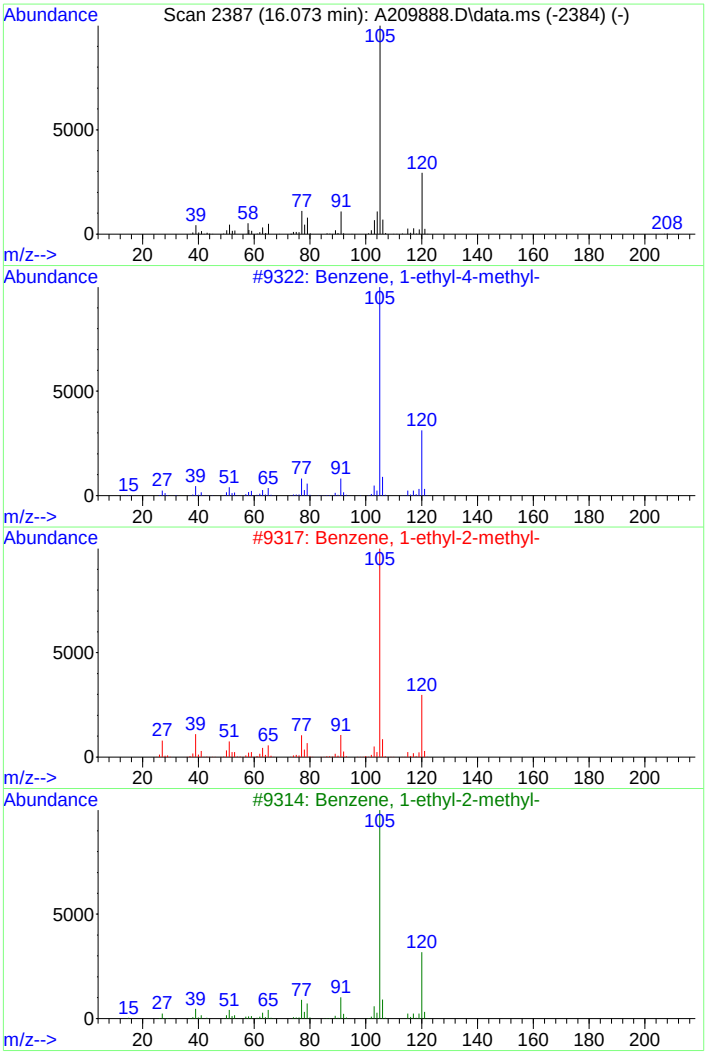
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

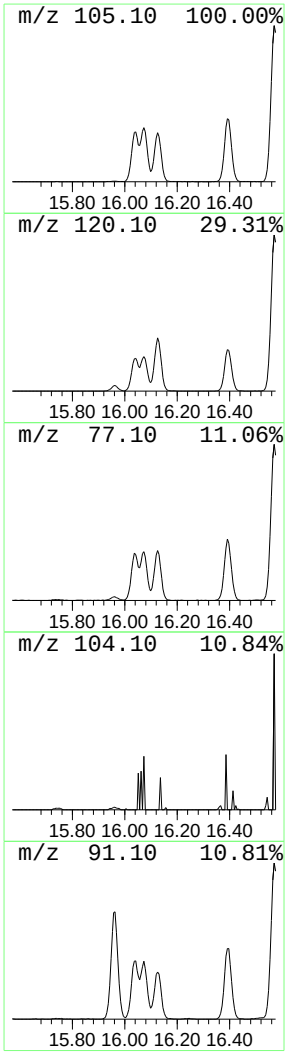
****

Peak Number 9 C3 alkyl benzene Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.073	18.57 ug/L	924779	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	90
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	90
3	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	90
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	83
5	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	83





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209888.D
Acq On : 12 Nov 2014 9:49 pm
Operator : CourtneM
Sample : jb80728-8
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

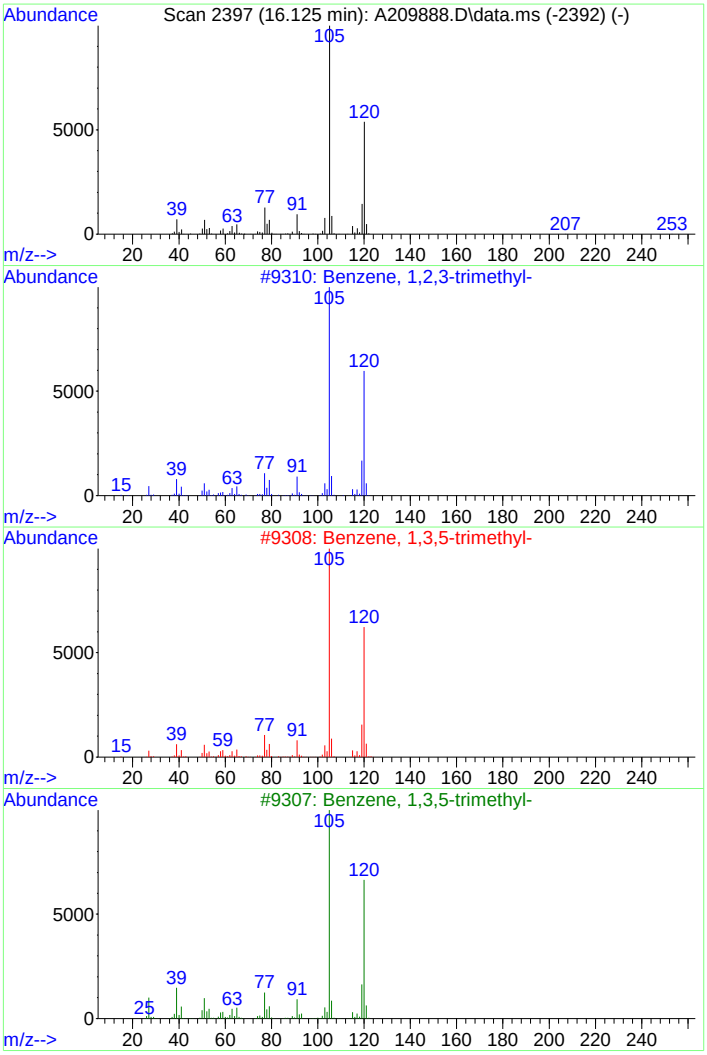
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

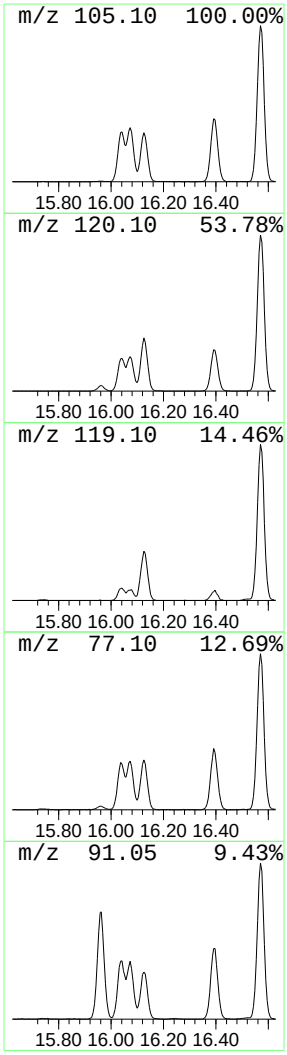
****

Peak Number 10 Benzene, 1,3,5-trimethyl- Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.125	21.81 ug/L	1086270	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209888.D
Acq On : 12 Nov 2014 9:49 pm
Operator : CourtneM
Sample : jb80728-8
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

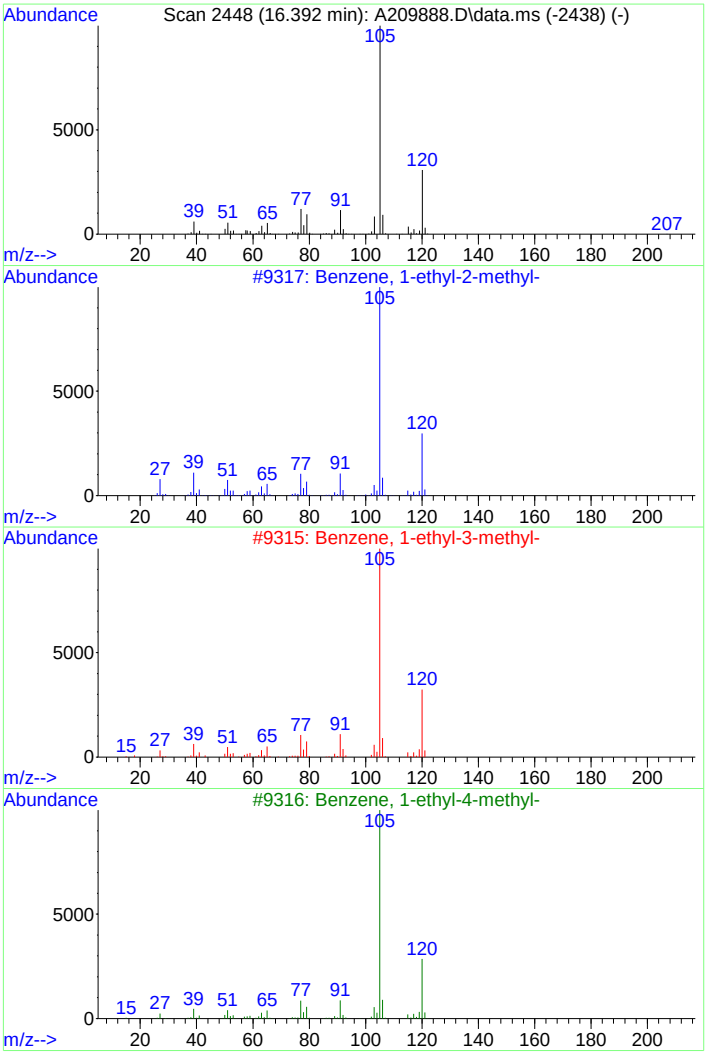
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

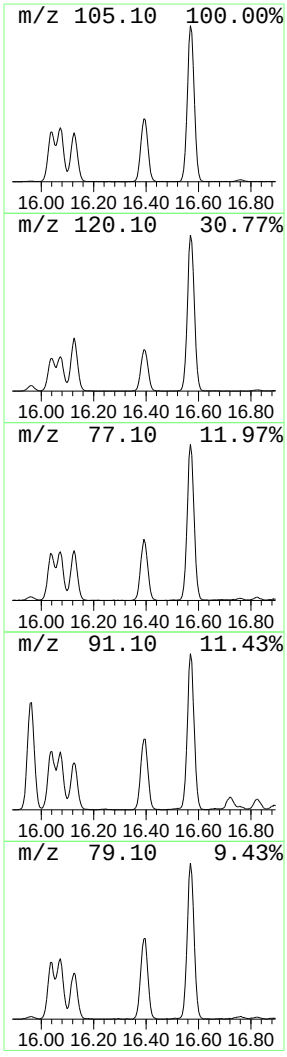
****

Peak Number 11 C3 alkyl benzene Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.392	25.70 ug/L	1279910	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
2	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91
3	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91
4	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209888.D
Acq On : 12 Nov 2014 9:49 pm
Operator : CourtneM
Sample : jb80728-8
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

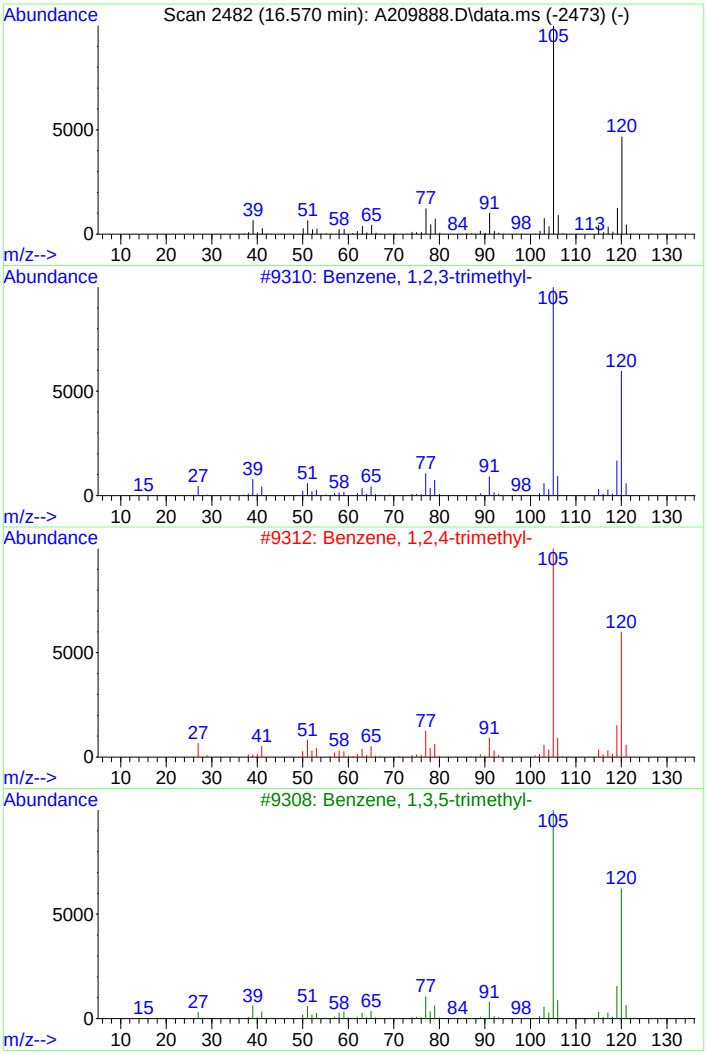
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

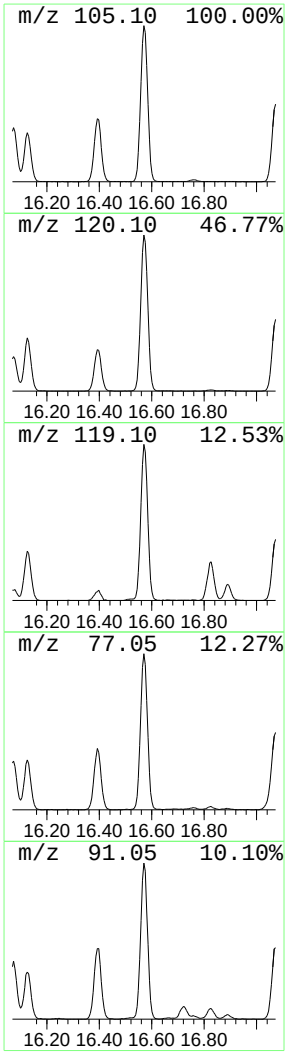
****

Peak Number 12 Benzene, 1,2,4-trimethyl- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.570	69.40 ug/L	3456050	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209888.D
Acq On : 12 Nov 2014 9:49 pm
Operator : CourtneM
Sample : jb80728-8
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

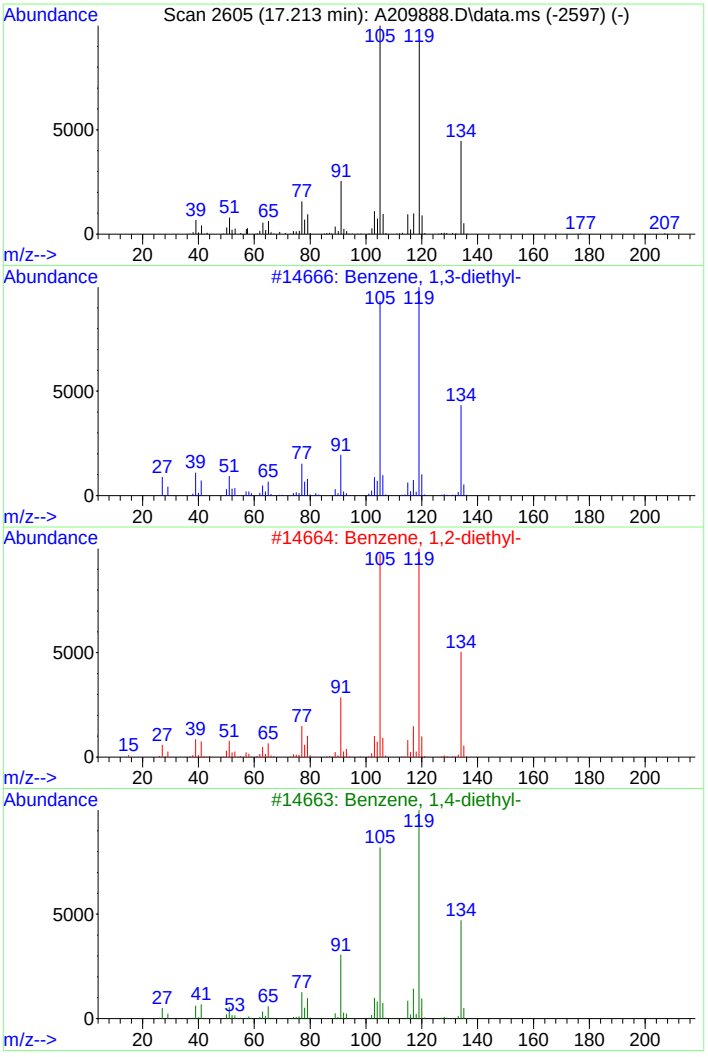
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

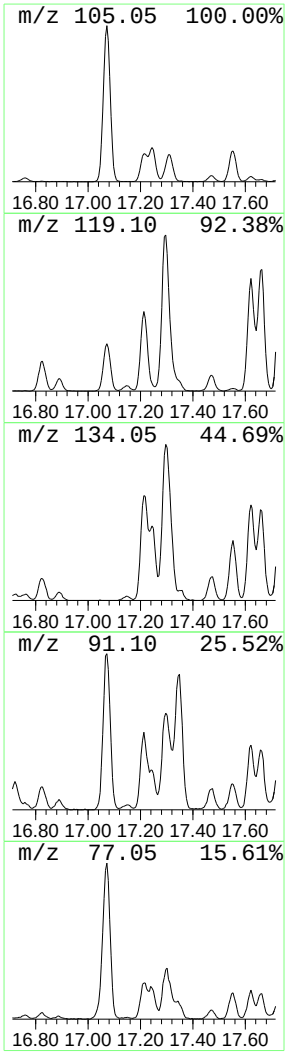
****

Peak Number 13 C4 alkyl benzene Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.213	15.06 ug/L	750109	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	95
2	Benzene, 1,2-diethyl-	134	C10H14	000135-01-3	95
3	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	94
4	Benzene, 1-ethyl-3,5-dimethyl-	134	C10H14	000934-74-7	91
5	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209888.D
Acq On : 12 Nov 2014 9:49 pm
Operator : CourtneM
Sample : jb80728-8
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

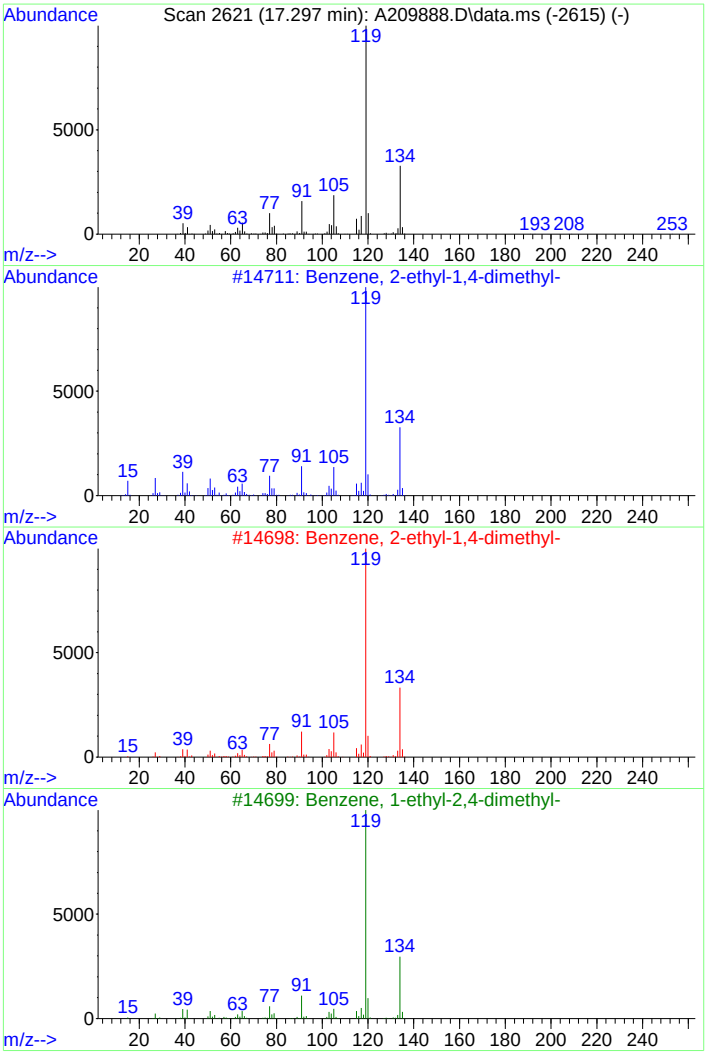
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

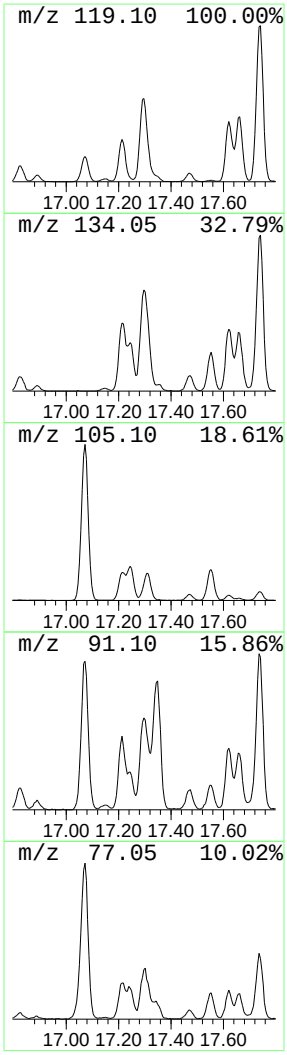
****

Peak Number 14 C4 alkyl benzene Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.297	15.70 ug/L	781747	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	94
2	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	93
3	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	93
4	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	93
5	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	93





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209888.D
Acq On : 12 Nov 2014 9:49 pm
Operator : CourtneM
Sample : jb80728-8
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

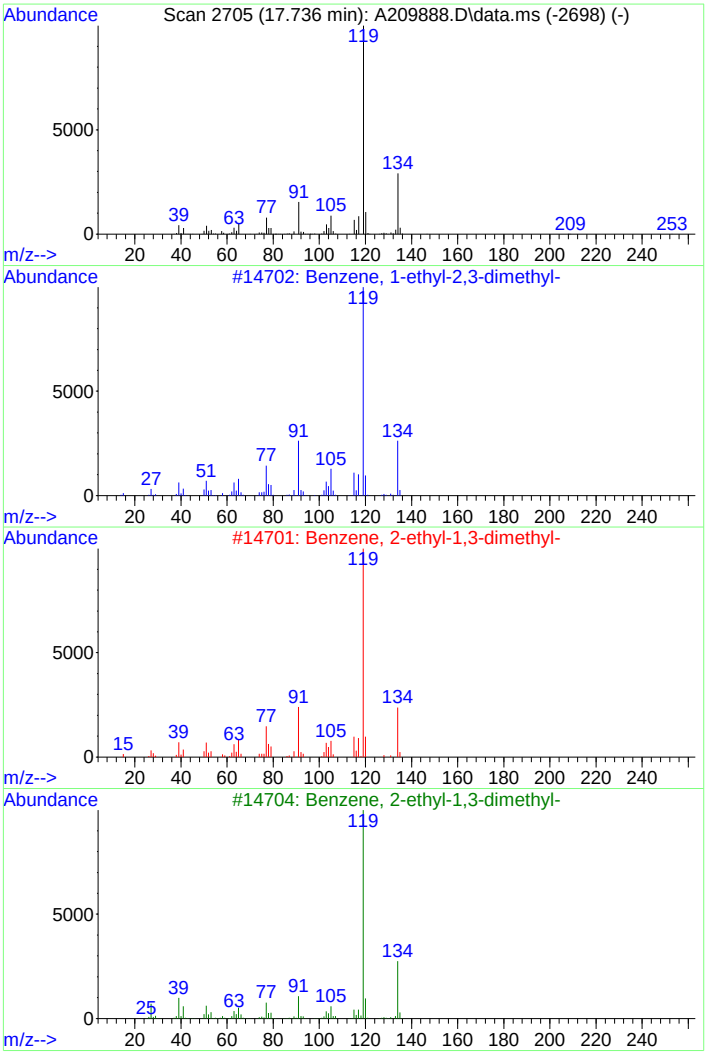
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

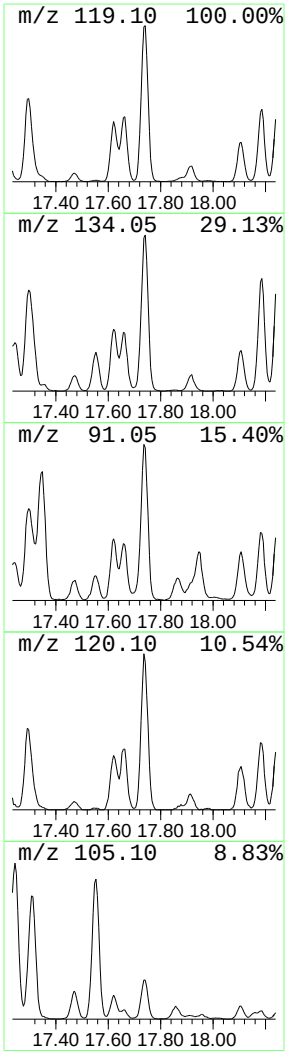
****

Peak Number 15 C4 alkyl benzene Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.736	19.90 ug/L	991060	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	96
2	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14	002870-04-4	95
3	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14	002870-04-4	94
4	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	94
5	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209888.D
Acq On : 12 Nov 2014 9:49 pm
Operator : CourtneM
Sample : jb80728-8
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

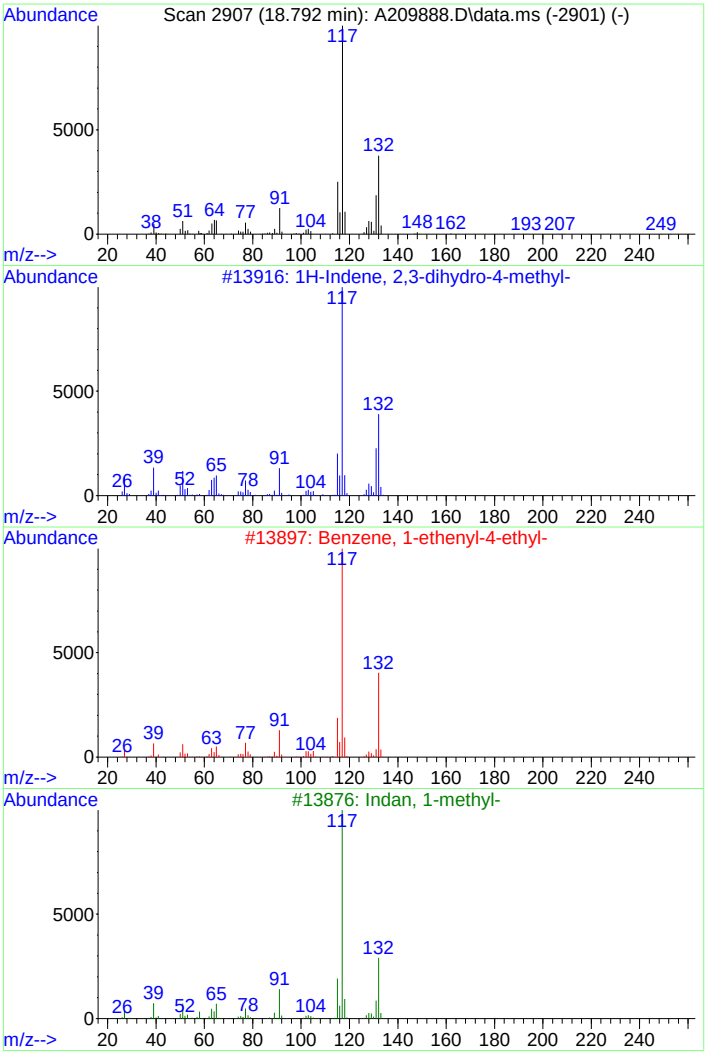
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

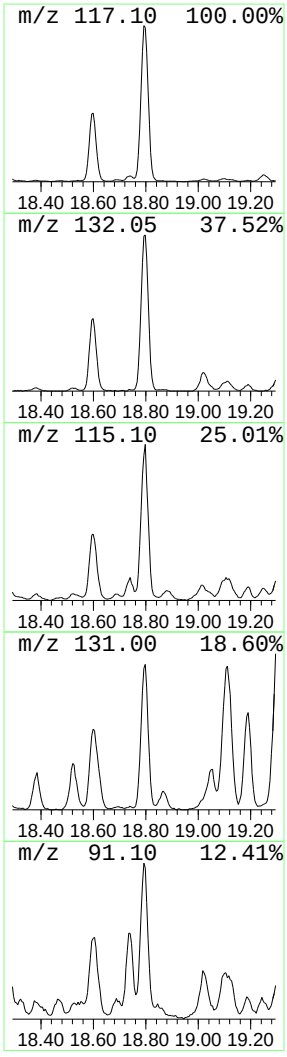
****

Peak Number 16 1H-Indene-dihydro-methyl- i... Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.792	16.01 ug/L	797308	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	94
2	Benzene, 1-ethenyl-4-ethyl-	132	C10H12	003454-07-7	90
3	Indan, 1-methyl-	132	C10H12	000767-58-8	87
4	Benzene, 1-methyl-2-(2-propenyl)-	132	C10H12	001587-04-8	87
5	Benzene, 2-butenyl-	132	C10H12	001560-06-1	87





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209888.D
Acq On : 12 Nov 2014 9:49 pm
Operator : CourtneM
Sample : jb80728-8
Misc : MS76458,VA7919,w,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
alkane	4.786	33.6	ug/L	494561	2	10.100	736257	50.0
alkane	5.801	134.7	ug/L	1983800	2	10.100	736257	50.0
alkane-Pentane	6.230	28.4	ug/L	417642	2	10.100	736257	50.0
alkene	9.404	66.5	ug/L	978507	2	10.100	736257	50.0
alkane	12.187	19.1	ug/L	252464	3	11.047	661098	50.0
alcohols	12.380	15.7	ug/L	207653	3	11.047	661098	50.0
C3 alkyl benzene	16.036	22.3	ug/L	1108020	5	17.046	2489930	50.0
C3 alkyl benzene	16.073	18.6	ug/L	924779	5	17.046	2489930	50.0
Benzene, 1,3,5-...	16.125	21.8	ug/L	1086270	5	17.046	2489930	50.0
C3 alkyl benzene	16.392	25.7	ug/L	1279910	5	17.046	2489930	50.0
Benzene, 1,2,4-...	16.570	69.4	ug/L	3456050	5	17.046	2489930	50.0
C4 alkyl benzene	17.213	15.1	ug/L	750109	5	17.046	2489930	50.0
C4 alkyl benzene	17.297	15.7	ug/L	781747	5	17.046	2489930	50.0
C4 alkyl benzene	17.736	19.9	ug/L	991060	5	17.046	2489930	50.0
1H-Indene-dihyd...	18.792	16.0	ug/L	797308	5	17.046	2489930	50.0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : A209916.D
Acq On : 13 Nov 2014 12:15 pm
Operator : CourtneM
Sample : jb80728-9
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 13 17:38:08 2014
Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 12 09:40:25 2014
Response via : Initial Calibration

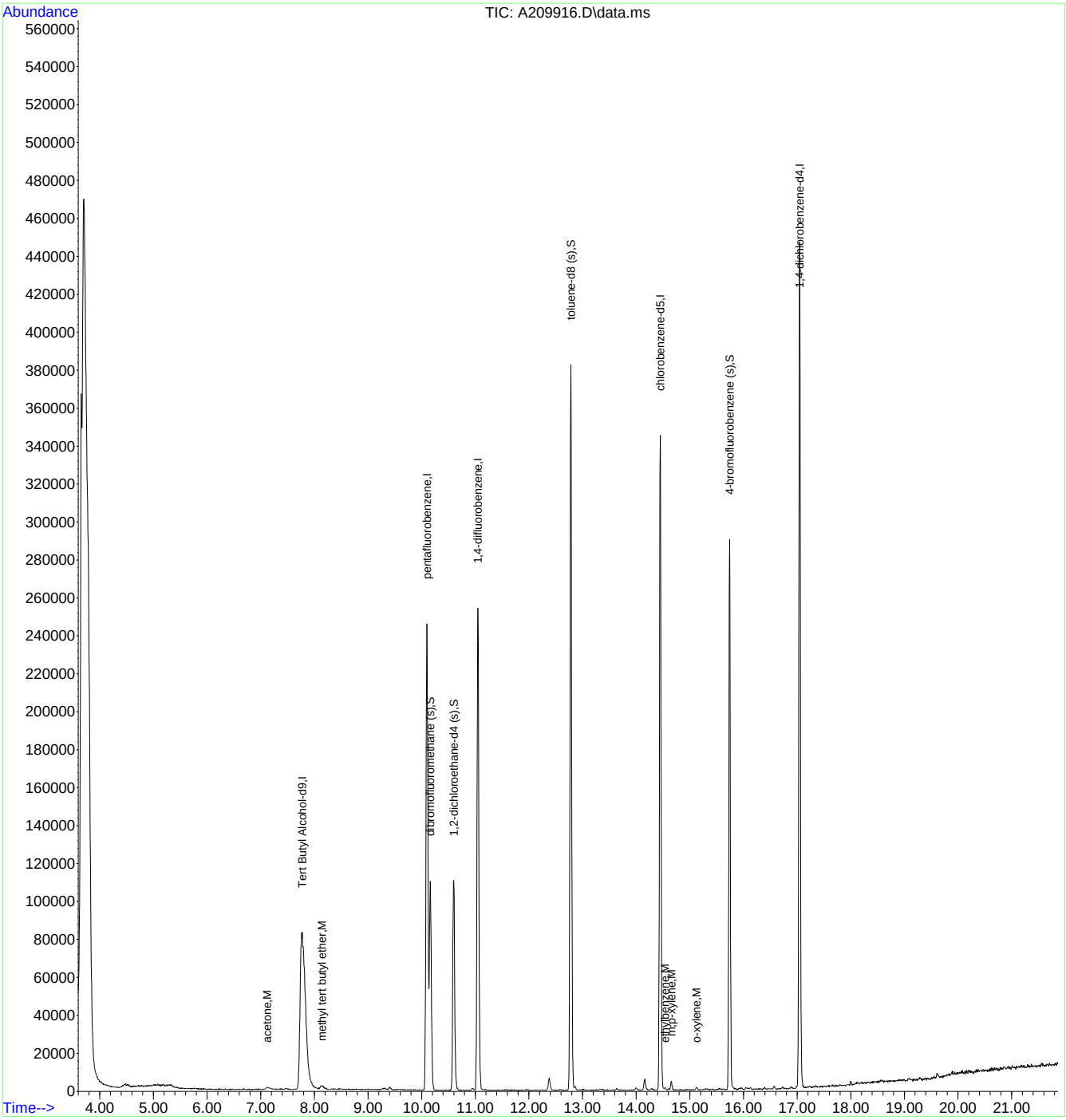
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.775	65	339395	500.00	ug/L	0.00
4) pentafluorobenzene	10.097	168	229182	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.049	114	257909	50.00	ug/L	0.00
83) chlorobenzene-d5	14.449	117	221937	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.048	152	136297	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.160	113	85294	48.23	ug/L	0.00
Spiked Amount 50.000	Range 59 - 130		Recovery = 96.46%			
47) 1,2-dichloroethane-d4 (s)	10.599	65	98278	45.81	ug/L	0.00
Spiked Amount 50.000	Range 65 - 123		Recovery = 91.62%			
75) toluene-d8 (s)	12.780	98	305247	51.22	ug/L	0.00
Spiked Amount 50.000	Range 77 - 125		Recovery = 102.44%			
101) 4-bromofluorobenzene (s)	15.741	95	112912	53.26	ug/L	0.00
Spiked Amount 50.000	Range 71 - 132		Recovery = 106.52%			
Target Compounds						Qvalue
20) acetone	7.121	43	5059	4.68	ug/L	82
27) methyl tert butyl ether	8.146	73	3777	0.52	ug/L	97
93) ethylbenzene	14.538	91	1308	0.19	ug/L	89
94) m,p-xylene	14.653	106	1786	0.69	ug/L	88
95) o-xylene	15.129	106	510	0.18	ug/L #	75

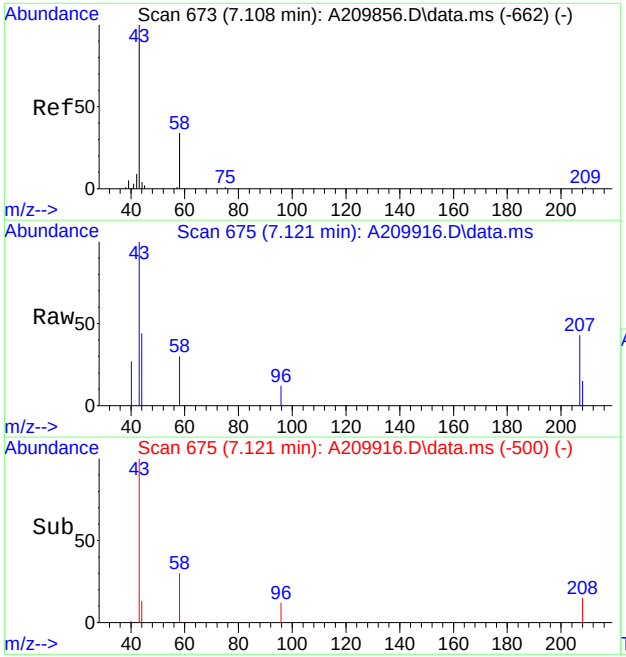
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : A209916.D
Acq On : 13 Nov 2014 12:15 pm
Operator : CourtneM
Sample : jb80728-9
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 13 17:38:08 2014
Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 12 09:40:25 2014
Response via : Initial Calibration

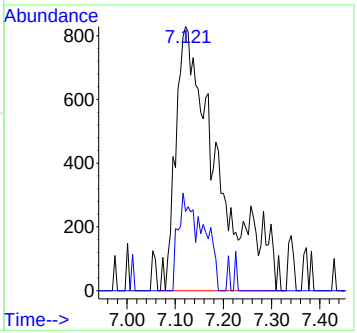


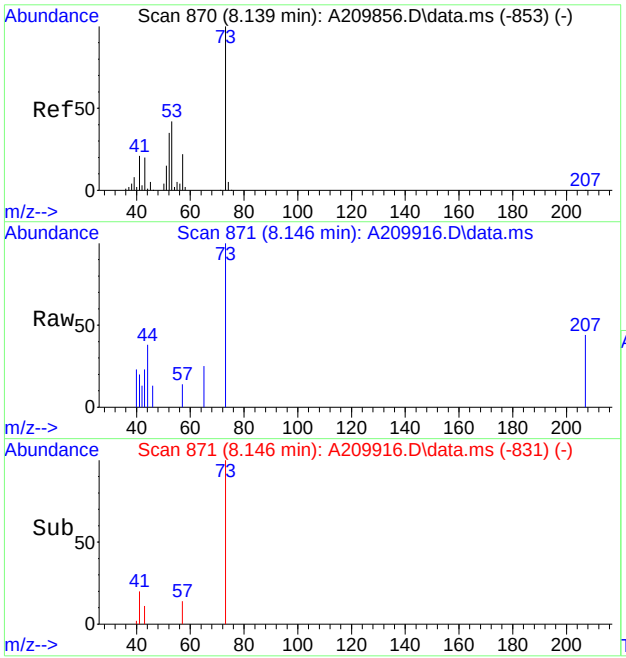


#20
acetone
Concen: 4.68 ug/L
RT: 7.121 min Scan# 675
Delta R.T. 0.013 min
Lab File: A209916.D
Acq: 13 Nov 2014 12:15 pm

Tgt Ion: 43 Resp: 5059

Ion	Ratio	Lower	Upper
43	100		
58	21.5	1.5	61.5

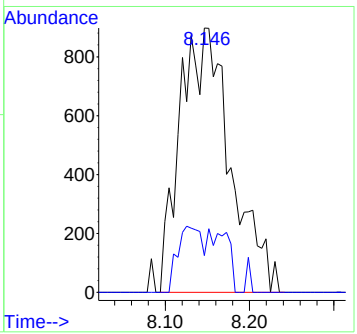


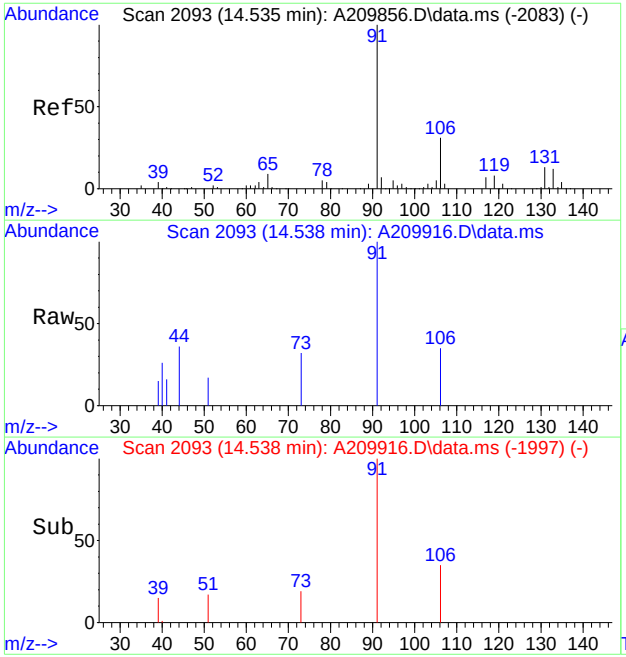


#27
methyl tert butyl ether
Concen: 0.52 ug/L
RT: 8.146 min Scan# 871
Delta R.T. 0.008 min
Lab File: A209916.D
Acq: 13 Nov 2014 12:15 pm

Tgt Ion: 73 Resp: 3777

Ion	Ratio	Lower	Upper
73	100		
57	21.4	0.0	52.7

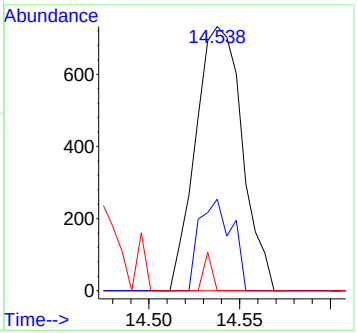


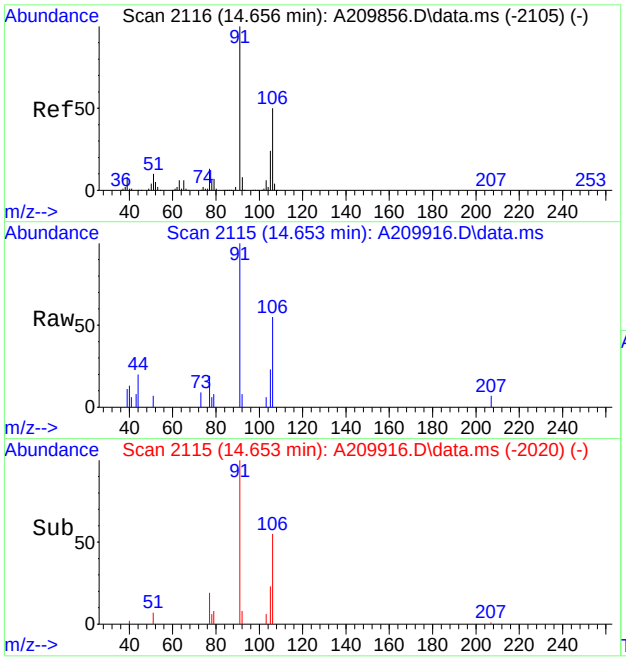


#93
ethylbenzene
Concen: 0.19 ug/L
RT: 14.538 min Scan# 2093
Delta R.T. 0.002 min
Lab File: A209916.D
Acq: 13 Nov 2014 12:15 pm

Tgt Ion: 91 Resp: 1308

Ion	Ratio	Lower	Upper
91	100		
106	34.7	0.8	60.8
77	0.0	0.0	38.5

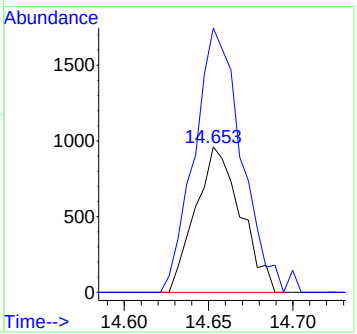


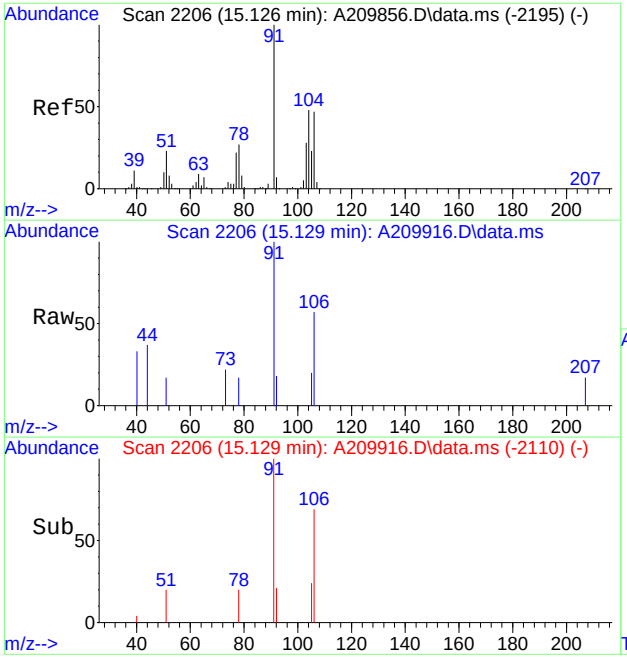


#94
m,p-xylene
Concen: 0.69 ug/L
RT: 14.653 min Scan# 2115
Delta R.T. -0.003 min
Lab File: A209916.D
Acq: 13 Nov 2014 12:15 pm

Tgt Ion:106 Resp: 1786

Ion	Ratio	Lower	Upper
106	100		
91	181.9	169.6	229.6

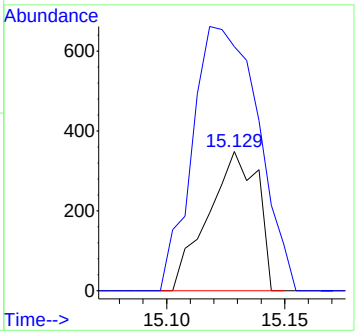




#95
o-xylene
Concen: 0.18 ug/L
RT: 15.129 min Scan# 2206
Delta R.T. 0.002 min
Lab File: A209916.D
Acq: 13 Nov 2014 12:15 pm

Tgt Ion:106 Resp: 510

Ion	Ratio	Lower	Upper
106	100		
91	175.1	183.9	243.9#



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : A209916.D
Acq On : 13 Nov 2014 12:15 pm
Operator : CourtneM
Sample : jb80728-9
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 9 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.6 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\MA7918.M
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

Signal : TIC: A209916.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.701	3	21	438	rVB	469265	4444343	100.00%	39.944%
2	5.934	446	448	471	rBB2	625	1749	0.04%	0.016%
3	6.065	471	473	497	rVB4	679	1887	0.04%	0.017%
4	6.337	523	525	542	rVB2	702	2012	0.05%	0.018%
5	6.682	542	591	605	rBV3	921	7131	0.16%	0.064%
6	6.912	612	635	641	rVB3	656	3168	0.07%	0.028%
7	7.121	641	675	719	rBV5	1568	15403	0.35%	0.138%
8	7.477	719	743	750	rBV5	847	3378	0.08%	0.030%
9	7.535	750	754	781	rBV3	459	1697	0.04%	0.015%
10	7.775	781	800	858	rVB2	82637	581040	13.07%	5.222%
11	8.136	858	869	911	rVB7	2080	11480	0.26%	0.103%
12	8.361	911	912	931	rVB5	649	2086	0.05%	0.019%
13	8.465	931	932	955	rVB4	771	2633	0.06%	0.024%
14	8.643	955	966	979	rVB4	625	2088	0.05%	0.019%
15	8.779	979	992	1032	rBV4	576	3933	0.09%	0.035%
16	8.999	1033	1034	1067	rVB3	705	3369	0.08%	0.030%
17	9.297	1073	1091	1103	rBV4	1055	4339	0.10%	0.039%
18	9.402	1107	1111	1162	rVB5	1658	8057	0.18%	0.072%
19	10.097	1233	1244	1276	rVB2	245940	885885	19.93%	7.962%
20	10.599	1329	1340	1363	rVB	110802	275904	6.21%	2.480%
21	10.945	1398	1406	1416	rBV5	1258	3816	0.09%	0.034%
22	11.049	1416	1426	1450	rVB	253991	582895	13.12%	5.239%
23	11.588	1524	1529	1541	rVB2	563	1372	0.03%	0.012%
24	12.378	1671	1680	1697	rVB4	6536	15896	0.36%	0.143%
25	12.780	1746	1757	1779	rBV	382400	788731	17.75%	7.089%
26	13.361	1854	1868	1870	rBV4	786	2589	0.06%	0.023%
27	13.633	1918	1920	1941	rVB5	1183	3159	0.07%	0.028%
28	13.994	1988	1989	2001	rVB5	1367	2683	0.06%	0.024%
29	14.161	2009	2021	2039	rBV3	5996	15063	0.34%	0.135%
30	14.292	2039	2046	2063	rVB5	1008	3383	0.08%	0.030%
31	14.449	2067	2076	2101	rVB	345173	681882	15.34%	6.128%
32	14.611	2101	2107	2110	rBV5	947	1581	0.04%	0.014%
33	14.653	2110	2115	2128	rVB3	4897	9957	0.22%	0.089%
34	14.815	2144	2146	2157	rVB4	636	1485	0.03%	0.013%
35	14.946	2167	2171	2184	rVB5	599	1731	0.04%	0.016%
36	15.071	2184	2195	2199	rBV4	530	1308	0.03%	0.012%
37	15.123	2199	2205	2216	rVB7	1560	3746	0.08%	0.034%
38	15.291	2216	2237	2239	rBV4	896	2456	0.06%	0.022%
39	15.327	2239	2244	2251	rVB3	822	2142	0.05%	0.019%
40	15.385	2251	2255	2269	rVB3	887	3153	0.07%	0.028%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : A209916.D
Acq On : 13 Nov 2014 12:15 pm
Operator : CourtneM
Sample : jb80728-9
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 9 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.6 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\MA7918.M
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

41	15.741	2312	2323	2352	rBV	290110	545972	12.28%	4.907%
42	16.044	2377	2381	2405	rVB7	1263	6291	0.14%	0.057%
43	16.290	2405	2428	2440	rVB5	745	4449	0.10%	0.040%
44	16.394	2440	2448	2454	rBV4	1370	2849	0.06%	0.026%
45	16.525	2457	2473	2477	rBV6	519	1893	0.04%	0.017%
46	16.567	2477	2481	2493	rBV3	1715	3412	0.08%	0.031%
47	16.734	2493	2513	2525	rVB6	1340	5403	0.12%	0.049%
48	16.891	2535	2543	2559	rBV7	1471	4626	0.10%	0.042%
49	17.048	2564	2573	2752	rBV	445092	831852	18.72%	7.476%
50	21.567	2752	3437	3489	rBV10	11811	1329190	29.91%	11.946%

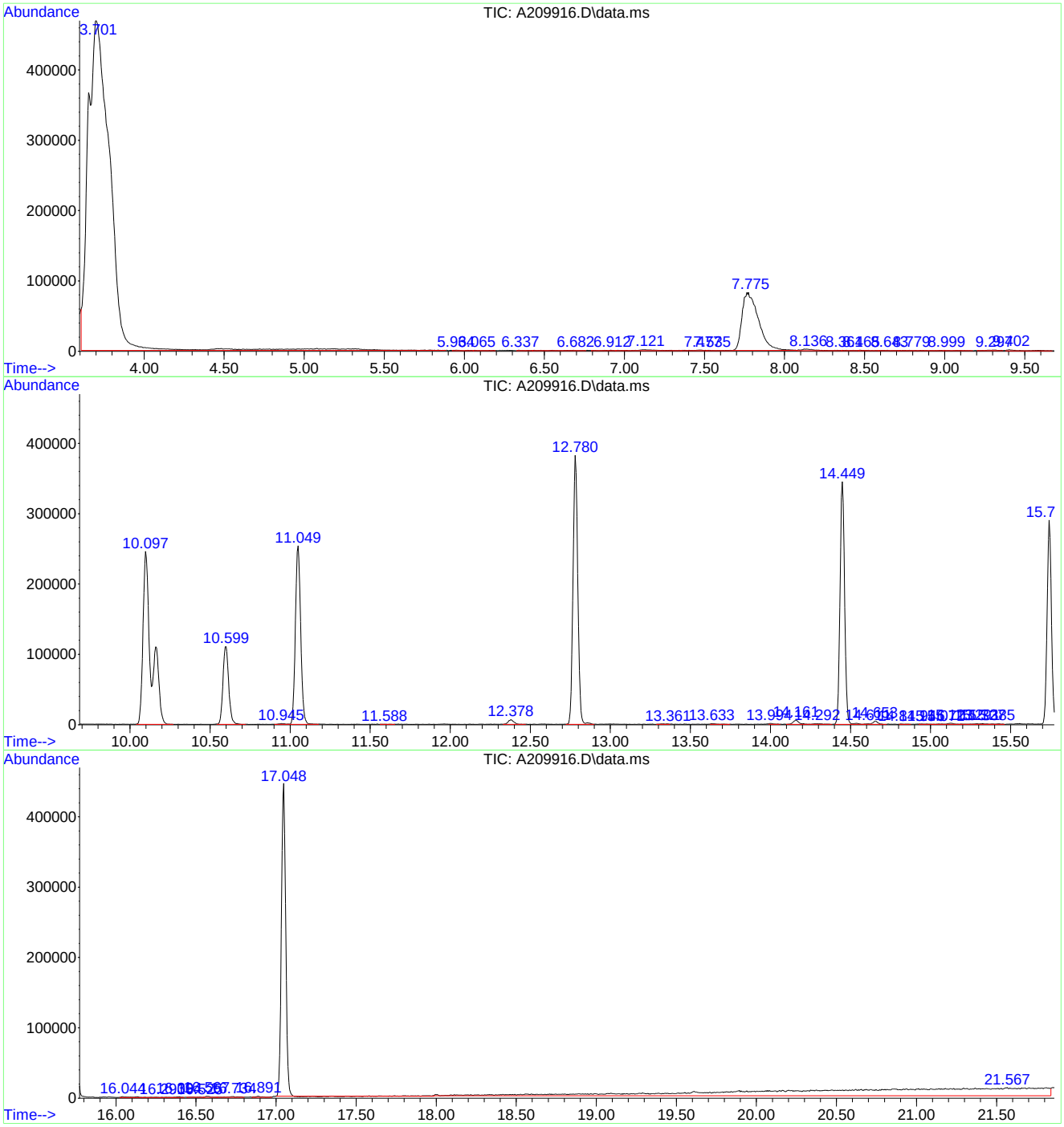
Sum of corrected areas: 11126547

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\
Data File : A209916.D
Acq On : 13 Nov 2014 12:15 pm
Operator : CourtneM
Sample : jb80728-9
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : A209916.D
Acq On : 13 Nov 2014 12:15 pm
Operator : CourtneM
Sample : jb80728-9
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

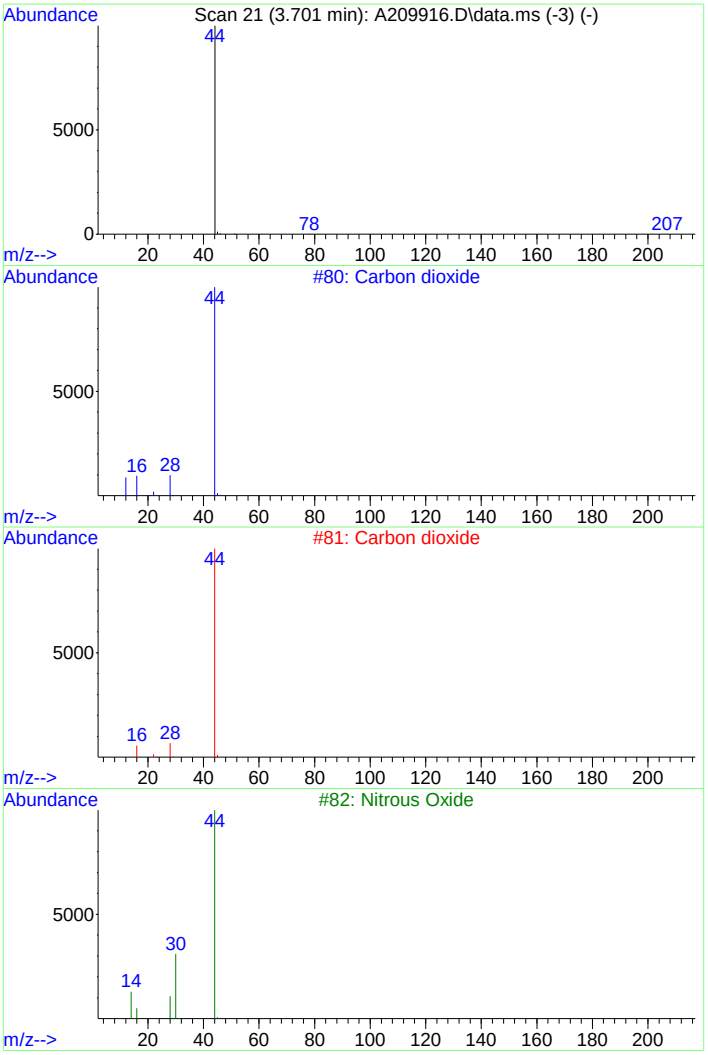
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

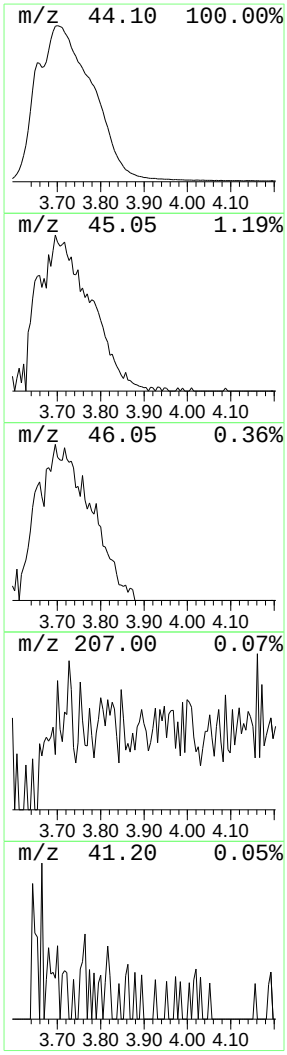
****

Peak Number 1 Carbon dioxide Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.701	250.84 ug/L	4444340	pentafluorobenzene	10.097

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	3
3	Nitrous Oxide	44	N2O	010024-97-2	3
4	Nitrous Oxide	44	N2O	010024-97-2	3
5	Ethylene oxide	44	C2H4O	000075-21-8	2





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\
Data File : A209916.D
Acq On : 13 Nov 2014 12:15 pm
Operator : CourtneM
Sample : jb80728-9
Misc : MS76458,VA7921,w,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Carbon dioxide	3.701	250.8	ug/L	4444340	2	10.097	885885	50.0

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\A\
Data File : A209918.D
Acq On : 13 Nov 2014 1:17 pm
Operator : CourtneM
Sample : jb80728-10
Misc : MS76458,VA7921,w,,,,20
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 14 08:52:01 2014
Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Nov 13 13:59:58 2014
Response via : Initial Calibration

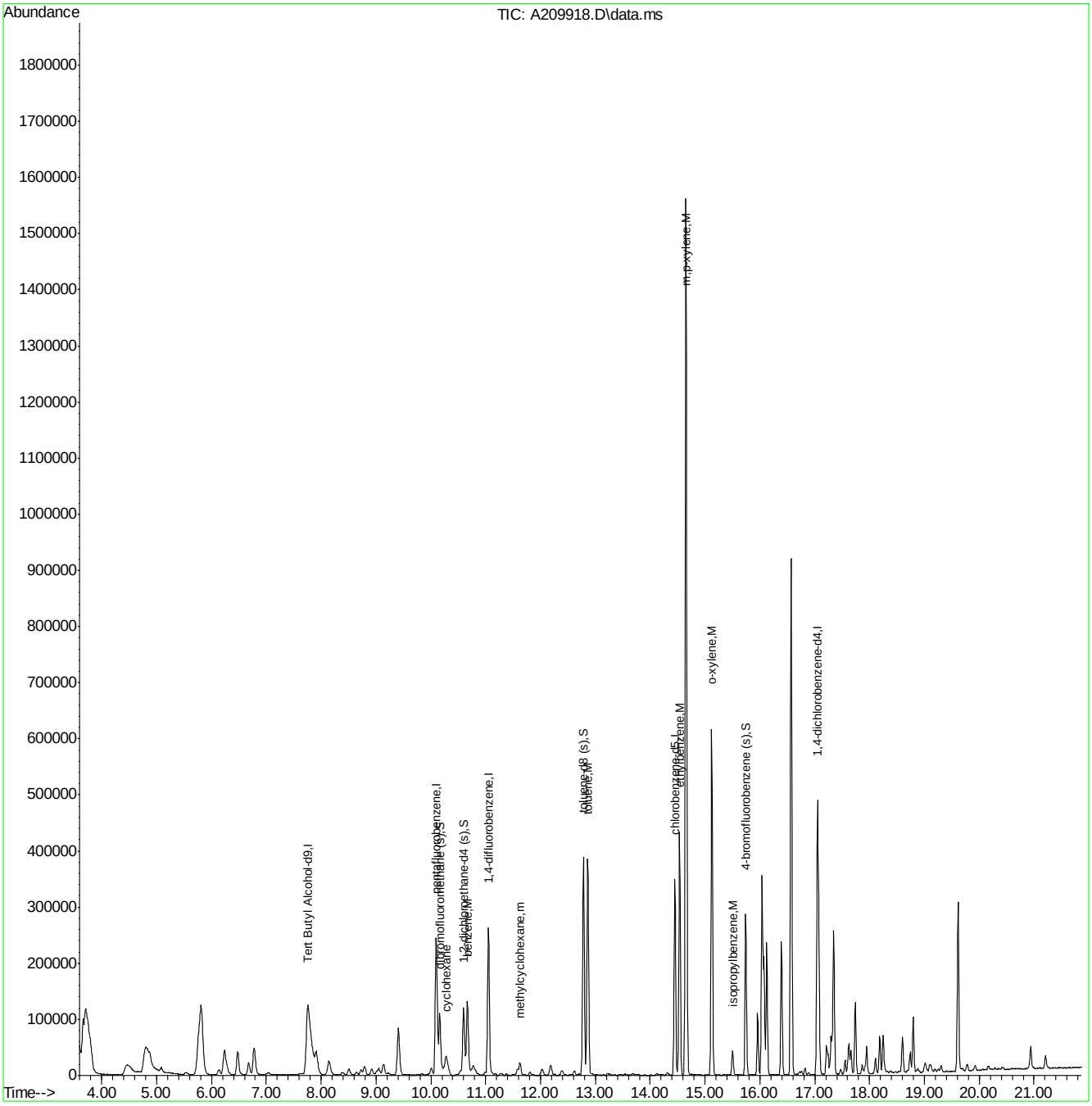
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.767	65	327250	500.00	ug/L	0.00
4) pentafluorobenzene	10.100	168	227015	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.052	114	262494	50.00	ug/L	0.00
83) chlorobenzene-d5	14.451	117	227894	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.046	152	134989	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.163	113	84192	48.06	ug/L	0.00
Spiked Amount 50.000	Range 59 - 130		Recovery = 96.12%			
47) 1,2-dichloroethane-d4 (s)	10.597	65	98798	46.49	ug/L	0.00
Spiked Amount 50.000	Range 65 - 123		Recovery = 92.98%			
75) toluene-d8 (s)	12.783	98	310631	51.21	ug/L	0.00
Spiked Amount 50.000	Range 77 - 125		Recovery = 102.42%			
101) 4-bromofluorobenzene (s)	15.738	95	112250	53.49	ug/L	0.00
Spiked Amount 50.000	Range 71 - 132		Recovery = 106.98%			
Target Compounds						Qvalue
49) cyclohexane	10.278	84	17548	6.13	ug/L	86
59) benzene	10.665	78	132926	21.03	ug/L	97
68) methylcyclohexane	11.627	83	11754	4.30	ug/L #	67
77) toluene	12.861	92	198361	50.78	ug/L	100
93) ethylbenzene	14.535	91	372531	53.48	ug/L	99
94) m,p-xylene	14.650	106	539531	203.83	ug/L	99
95) o-xylene	15.126	106	203301	70.36	ug/L	100
99) isopropylbenzene	15.503	105	34921	4.40	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

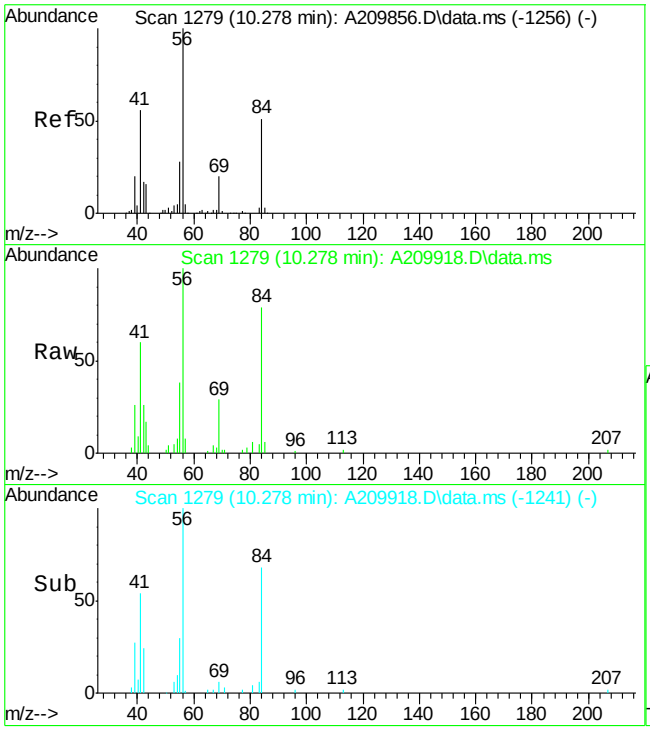
Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\A\
Data File : A209918.D
Acq On : 13 Nov 2014 1:17 pm
Operator : CourtneM
Sample : jb80728-10
Misc : MS76458,VA7921,w,,,,20
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 14 08:52:01 2014
Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Nov 13 13:59:58 2014
Response via : Initial Calibration



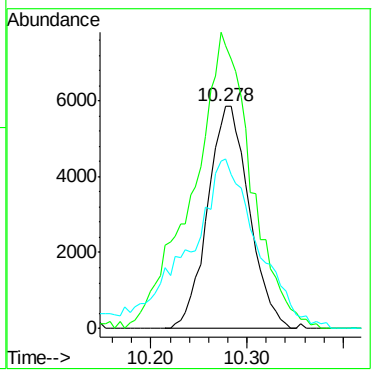
MA7918.M Fri Nov 14 08:52:06 2014 RPT1 Page: 2

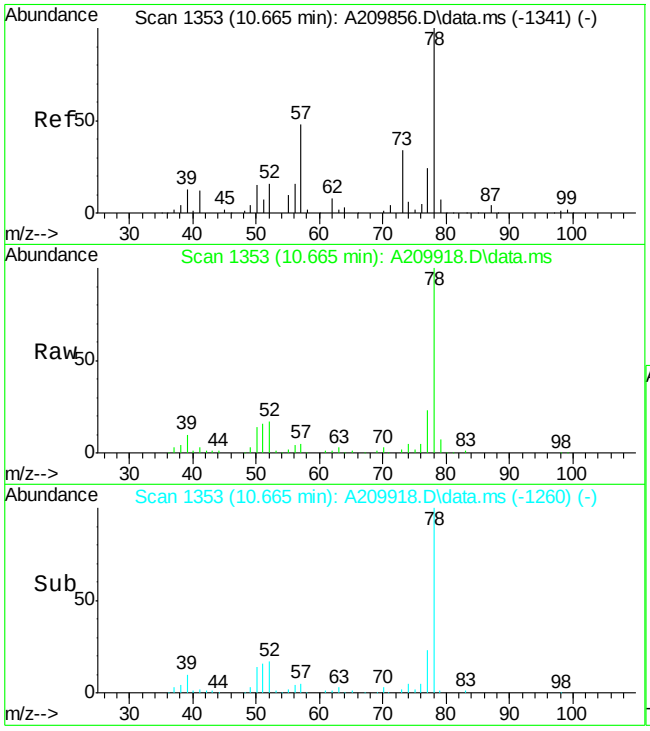


#49
cyclohexane
Concen: 6.13 ug/L
RT: 10.278 min Scan# 1279
Delta R.T. -0.000 min
Lab File: A209918.D
Acq: 13 Nov 2014 1:17 pm

Tgt Ion: 84 Resp: 17548

Ion	Ratio	Lower	Upper
84	100		
56	188.7	157.0	291.6
41	127.0	88.5	164.3

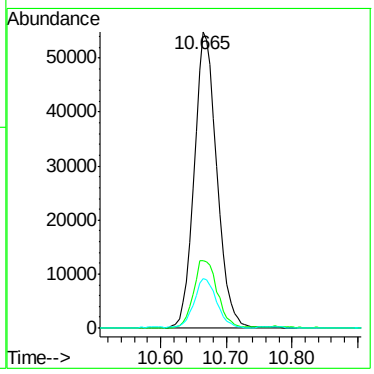


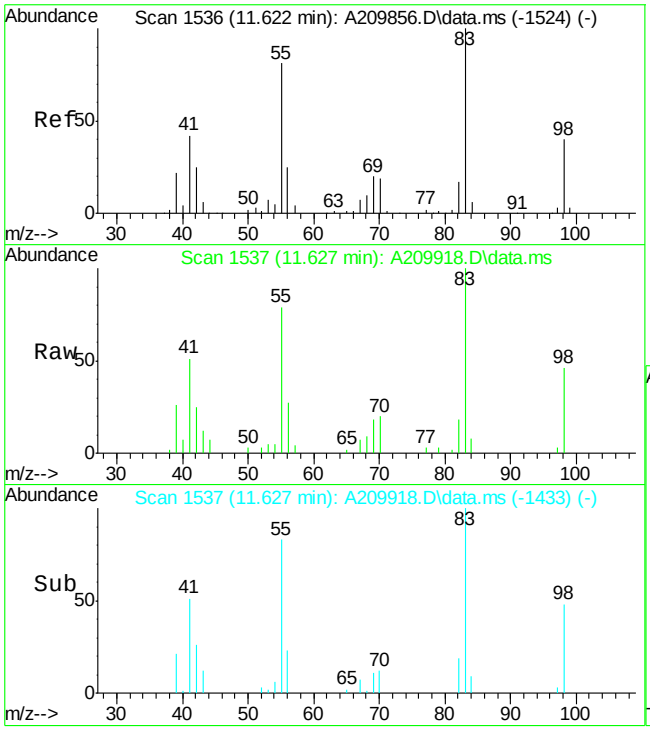


#59
benzene
Concen: 21.03 ug/L
RT: 10.665 min Scan# 1353
Delta R.T. -0.000 min
Lab File: A209918.D
Acq: 13 Nov 2014 1:17 pm

Tgt Ion: 78 Resp: 132926

Ion	Ratio	Lower	Upper
78	100		
77	22.8	0.0	54.5
52	16.6	0.0	45.9

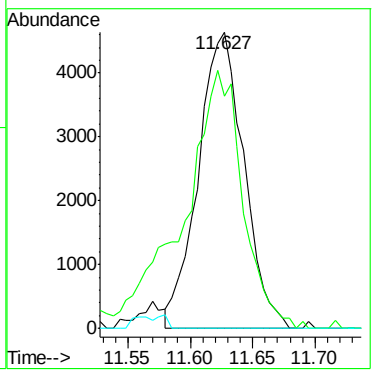


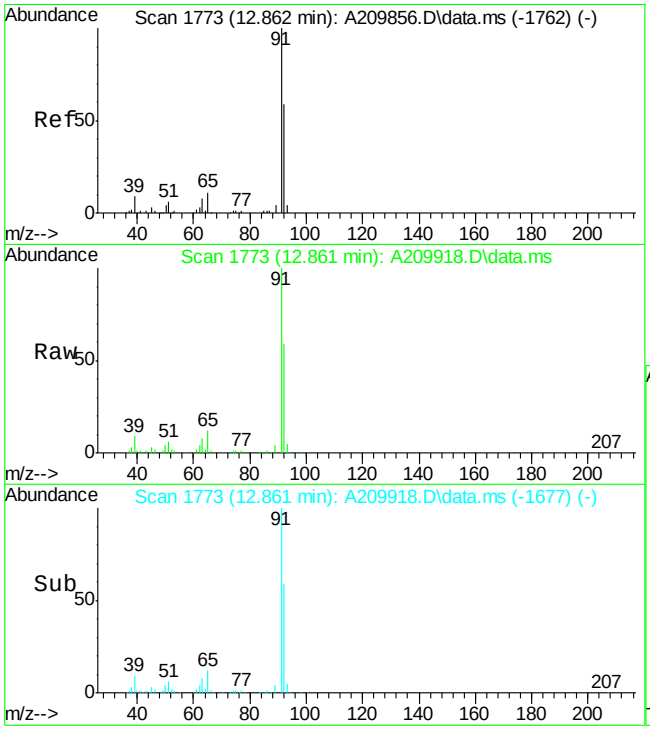


#68
methylcyclohexane
Concen: 4.30 ug/L
RT: 11.627 min Scan# 1537
Delta R.T. 0.005 min
Lab File: A209918.D
Acq: 13 Nov 2014 1:17 pm

Tgt Ion: 83 Resp: 11754

Ion	Ratio	Lower	Upper
83	100		
55	116.5	56.4	116.4#
85	0.0	0.0	30.1

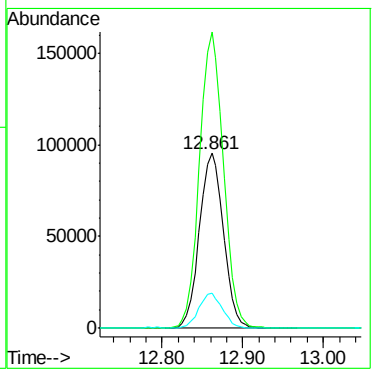


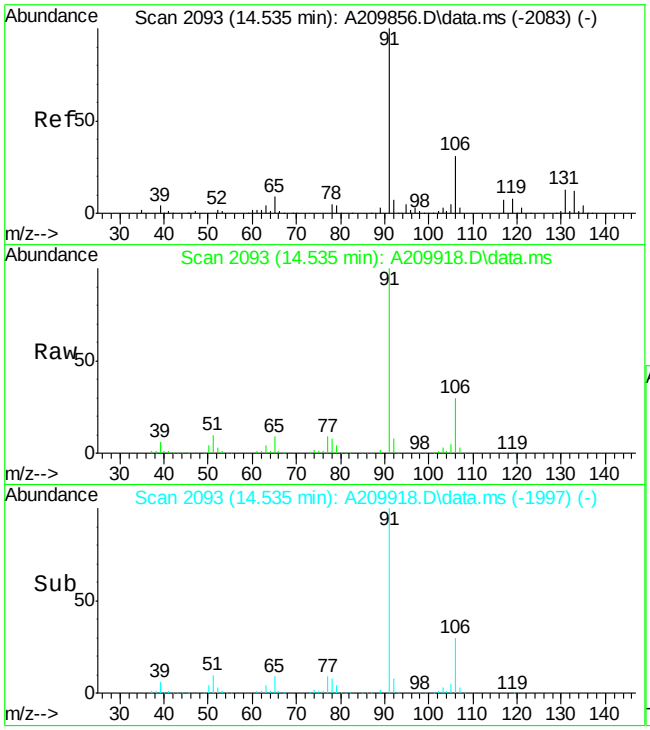


#77
toluene
Concen: 50.78 ug/L
RT: 12.861 min Scan# 1773
Delta R.T. -0.000 min
Lab File: A209918.D
Acq: 13 Nov 2014 1:17 pm

Tgt Ion: 92 Resp: 198361

Ion	Ratio	Lower	Upper
92	100		
91	169.5	139.6	199.6
65	20.2	0.0	49.5

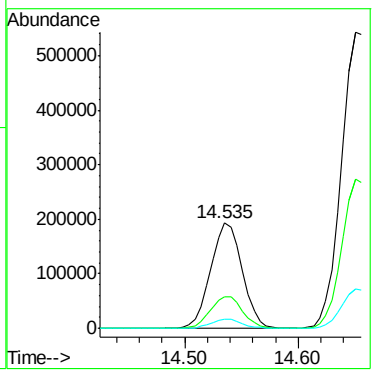


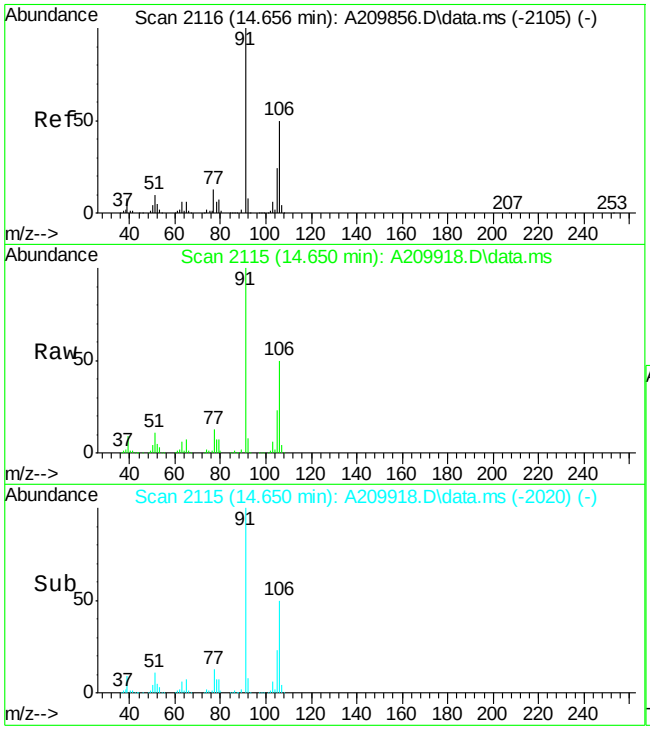


#93
ethylbenzene
Concen: 53.48 ug/L
RT: 14.535 min Scan# 2093
Delta R.T. -0.000 min
Lab File: A209918.D
Acq: 13 Nov 2014 1:17 pm

Tgt Ion: 91 Resp: 372531

Ion	Ratio	Lower	Upper
91	100		
106	30.3	0.8	60.8
77	8.5	0.0	38.5

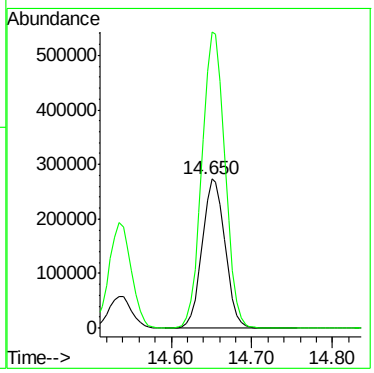


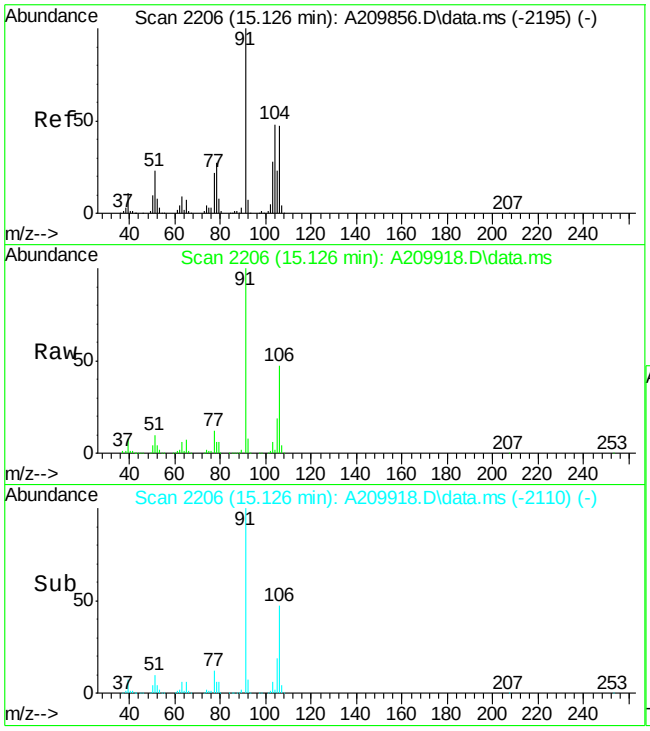


#94
m,p-xylene
Concen: 203.83 ug/L
RT: 14.650 min Scan# 2115
Delta R.T. -0.005 min
Lab File: A209918.D
Acq: 13 Nov 2014 1:17 pm

Tgt Ion:106 Resp: 539531

Ion	Ratio	Lower	Upper
106	100		
91	198.4	169.6	229.6

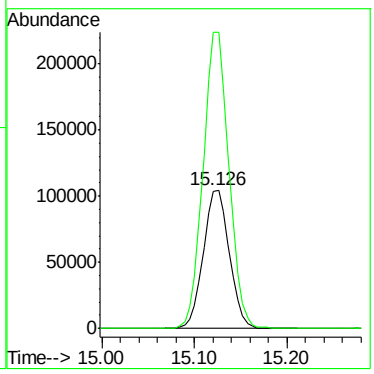


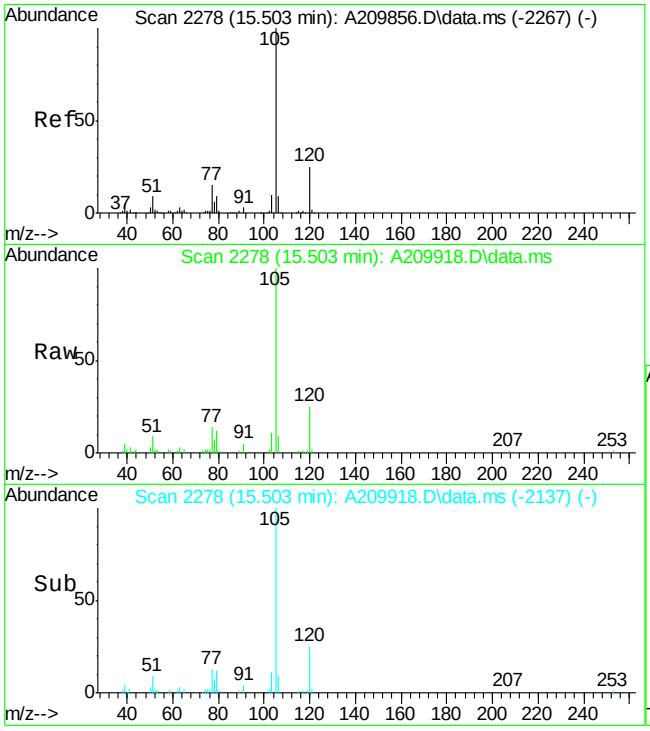


#95
o-xylene
Concen: 70.36 ug/L
RT: 15.126 min Scan# 2206
Delta R.T. -0.000 min
Lab File: A209918.D
Acq: 13 Nov 2014 1:17 pm

Tgt Ion:106 Resp: 203301

Ion	Ratio	Lower	Upper
106	100		
91	213.5	183.9	243.9

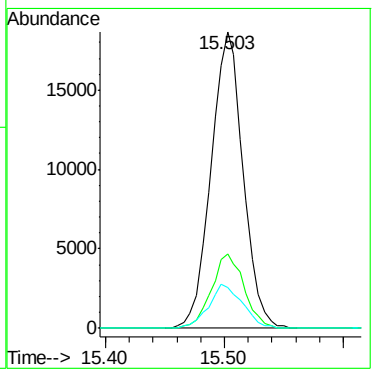




#99
isopropylbenzene
Concen: 4.40 ug/L
RT: 15.503 min Scan# 2278
Delta R.T. -0.000 min
Lab File: A209918.D
Acq: 13 Nov 2014 1:17 pm

Tgt Ion:105 Resp: 34921

Ion	Ratio	Lower	Upper
105	100		
120	25.0	0.0	55.3
77	13.6	0.0	45.1



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209918.D
Acq On : 13 Nov 2014 1:17 pm
Operator : CourtneM
Sample : jb80728-10
Misc : MS76458,VA7921,w,,,,20
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.6 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\MA7918.M
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

Signal : TIC: A209918.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.703	7	22	97	rVB	117319	1034862	33.61%	4.561%
2	4.467	149	168	216	rVV3	17034	177697	5.77%	0.783%
3	4.807	216	233	365	rVV3	49047	577432	18.75%	2.545%
4	5.811	398	425	461	rVB2	124854	718341	23.33%	3.166%
5	6.240	496	507	541	rVB3	44004	179495	5.83%	0.791%
6	6.481	541	553	574	rBV2	41036	121945	3.96%	0.537%
7	6.679	580	591	600	rBV2	21471	60661	1.97%	0.267%
8	6.779	600	610	637	rVB2	48765	157875	5.13%	0.696%
9	7.757	782	797	856	rVB5	124725	926849	30.10%	4.085%
10	8.139	858	870	893	rVB2	25245	97102	3.15%	0.428%
11	9.132	1053	1060	1089	rVB3	19026	71508	2.32%	0.315%
12	9.410	1098	1113	1134	rBV2	84723	257720	8.37%	1.136%
13	10.095	1235	1244	1252	rVV	244094	629747	20.45%	2.776%
14	10.163	1252	1257	1273	rVV	110173	298401	9.69%	1.315%
15	10.278	1273	1279	1300	rVB4	33721	128554	4.18%	0.567%
16	10.597	1332	1340	1347	rBV	111468	251215	8.16%	1.107%
17	10.665	1347	1353	1398	rVB2	131926	423317	13.75%	1.866%
18	11.047	1418	1426	1447	rVB	260845	604790	19.64%	2.666%
19	11.622	1531	1536	1548	rVB3	21633	52066	1.69%	0.229%
20	12.187	1632	1644	1654	rBV4	17809	48331	1.57%	0.213%
21	12.783	1748	1758	1766	rBV	387128	812590	26.39%	3.582%
22	12.861	1766	1773	1795	rVB	385734	805958	26.18%	3.552%
23	14.446	2067	2076	2085	rBV	348611	695915	22.60%	3.067%
24	14.535	2085	2093	2104	rVB	432973	838385	27.23%	3.695%
25	14.650	2104	2115	2131	rBV	1561603	3078940	100.00%	13.571%
26	15.121	2195	2205	2223	rVB	616736	1195873	38.84%	5.271%
27	15.503	2270	2278	2292	rVB2	43649	83922	2.73%	0.370%
28	15.738	2313	2323	2335	rBV	286935	543071	17.64%	2.394%
29	15.958	2357	2365	2373	rBV	109799	204991	6.66%	0.904%
30	16.036	2373	2380	2392	rBV	353971	1018603	33.08%	4.490%
31	16.125	2392	2397	2408	rVB	236999	435834	14.16%	1.921%
32	16.392	2439	2448	2460	rBV	237732	459496	14.92%	2.025%
33	16.570	2472	2482	2497	rBV	920638	1671542	54.29%	7.368%
34	17.051	2564	2574	2598	rBV2	489947	1315347	42.72%	5.798%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209918.D
Acq On : 13 Nov 2014 1:17 pm
Operator : CourtneM
Sample : jb80728-10
Misc : MS76458,VA7921,w,,,,20
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.6 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\MA7918.M
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

35	17.213	2598	2605	2615	rBV3	51508	150689	4.89%	0.664%
36	17.297	2615	2621	2625	rBV3	57685	118905	3.86%	0.524%
37	17.344	2625	2630	2645	rVB	255857	468817	15.23%	2.066%
38	17.621	2675	2683	2688	rBV2	50591	110379	3.58%	0.487%
39	17.657	2688	2690	2698	rVB	39502	54462	1.77%	0.240%
40	17.741	2698	2706	2714	rVB	127829	230655	7.49%	1.017%
41	17.945	2736	2745	2769	rVB2	48618	101250	3.29%	0.446%
42	18.107	2769	2776	2784	rBV	26627	50819	1.65%	0.224%
43	18.186	2784	2791	2797	rBV	64816	114576	3.72%	0.505%
44	18.248	2797	2803	2863	rVB	63759	97763	3.18%	0.431%
45	18.599	2863	2870	2882	rVB	62858	121653	3.95%	0.536%
46	18.740	2891	2897	2901	rBV	32110	54558	1.77%	0.240%
47	18.792	2901	2907	2941	rVB	98108	208000	6.76%	0.917%
48	19.614	3055	3064	3090	rBV	301202	596512	19.37%	2.629%
49	19.776	3090	3095	3311	rBV6	10273	168791	5.48%	0.744%
50	20.937	3311	3317	3364	rVV	37296	61568	2.00%	0.271%

Sum of corrected areas: 22687772

LSC Report - Integrated Chromatogram

```
Data Path : C:\msdchem\1\DATA\A\
Data File : A209918.D
Acq On    : 13 Nov 2014   1:17 pm
Operator  : CourtneM
Sample    : jb80728-10
Misc      : MS76458,VA7921,w,,,,20
ALS Vial  : 11   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title  : SW 846  8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library   : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P
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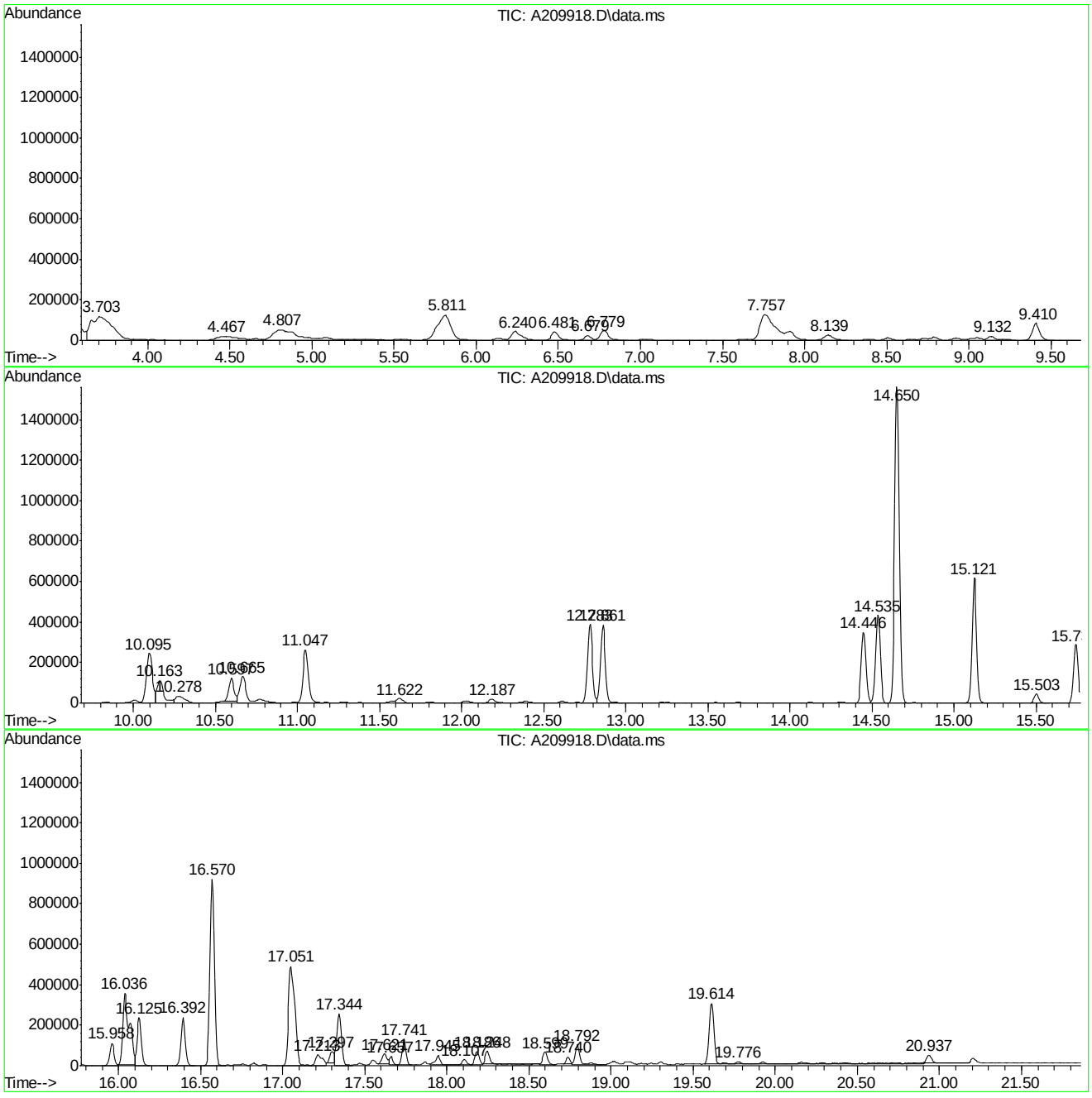


Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209918.D
Acq On : 13 Nov 2014 1:17 pm
Operator : CourtneM
Sample : jb80728-10
Misc : MS76458,VA7921,w,,,,20
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

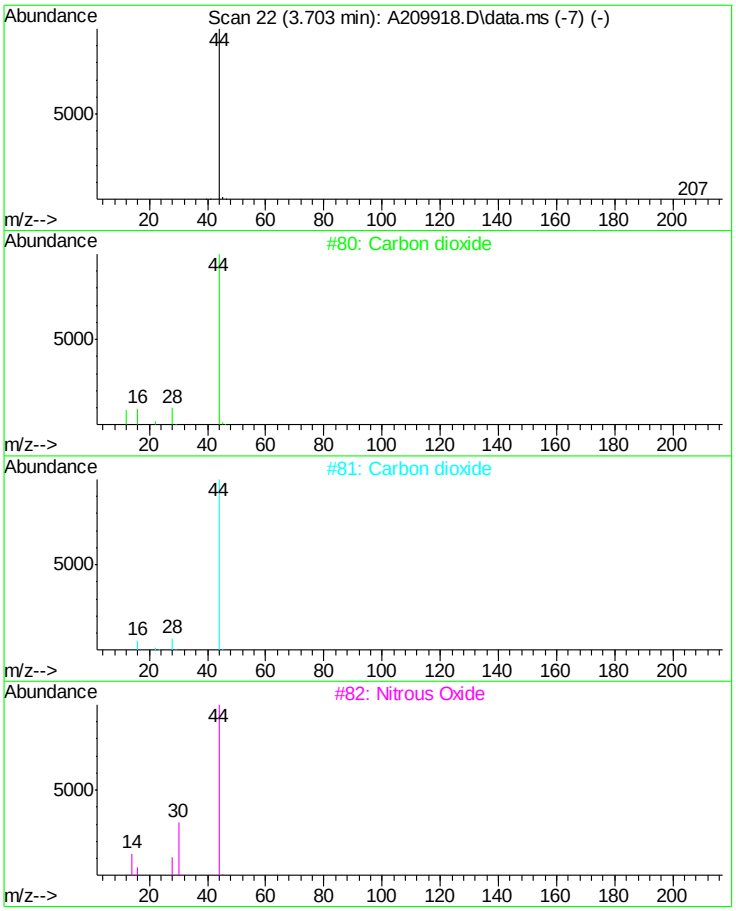
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

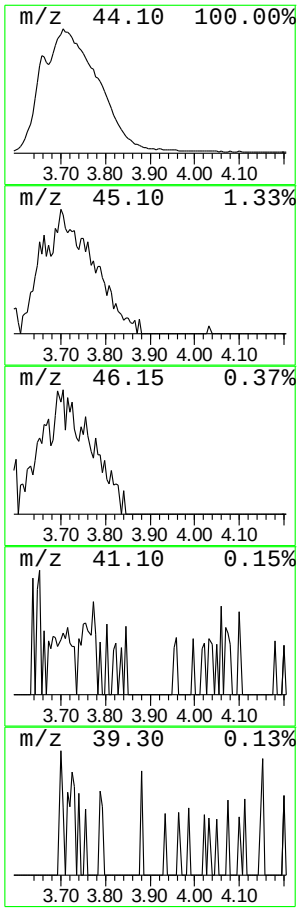
****

Peak Number 1 unknown Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.70	82.16 ug/L	1034860	pentafluorobenzene	10.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	3
3	Nitrous Oxide	44	N2O	010024-97-2	3
4	Nitrous Oxide	44	N2O	010024-97-2	3
5	Ethylene oxide	44	C2H4O	000075-21-8	2





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209918.D
Acq On : 13 Nov 2014 1:17 pm
Operator : CourtneM
Sample : jb80728-10
Misc : MS76458,VA7921,w,,,,20
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

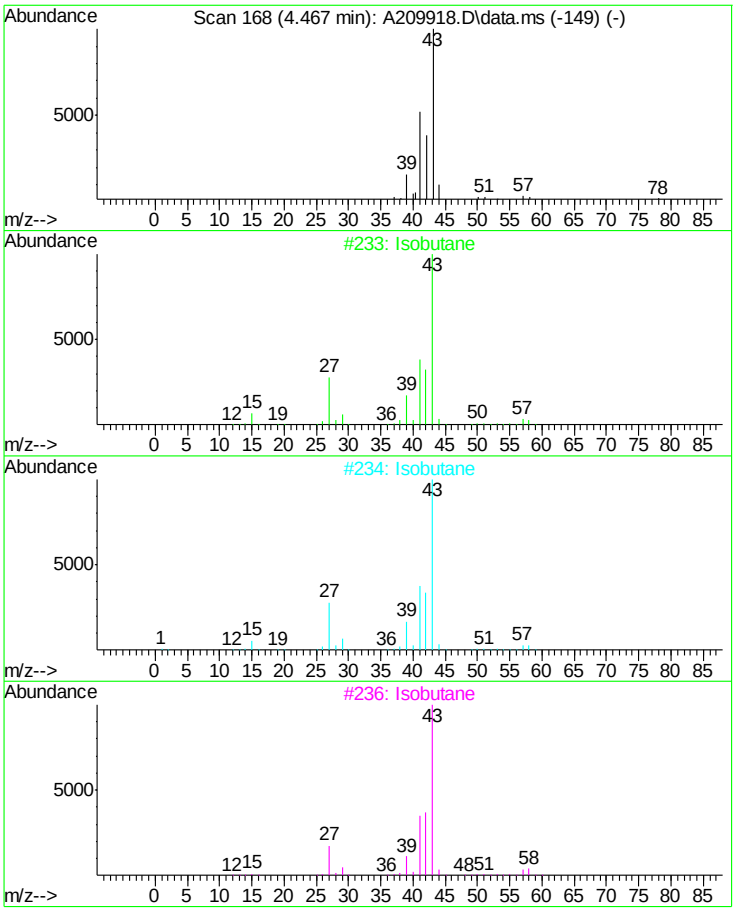
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

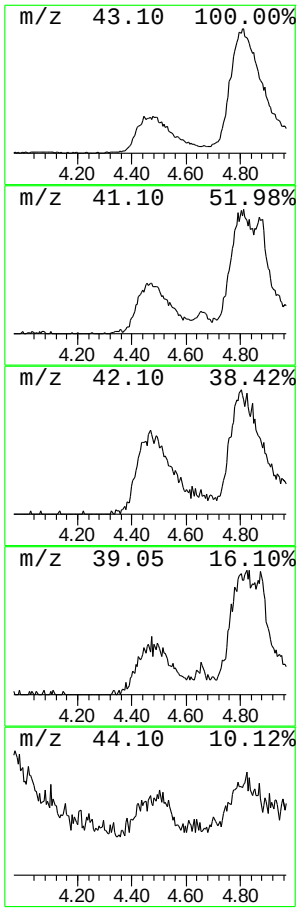
****

Peak Number 2 unknown Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.47	14.11 ug/L	177697	pentafluorobenzene	10.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Isobutane	58	C4H10	000075-28-5	50
2	Isobutane	58	C4H10	000075-28-5	50
3	Isobutane	58	C4H10	000075-28-5	9
4	Isobutane	58	C4H10	000075-28-5	9
5	Isobutylene epoxide	72	C4H8O	000558-30-5	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209918.D
Acq On : 13 Nov 2014 1:17 pm
Operator : CourtneM
Sample : jb80728-10
Misc : MS76458,VA7921,w,,,,20
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

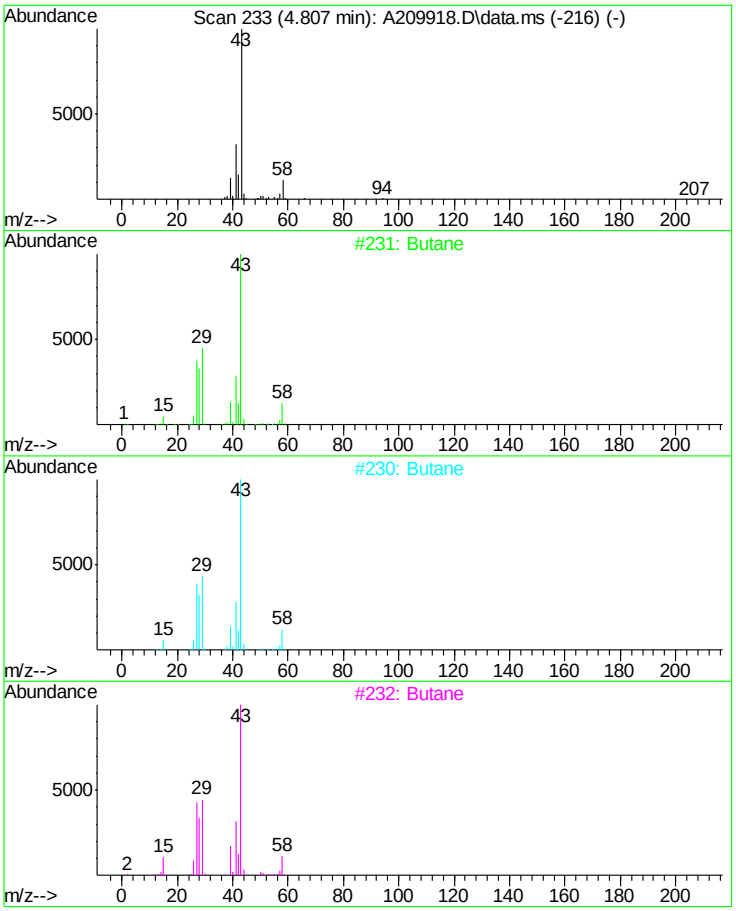
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

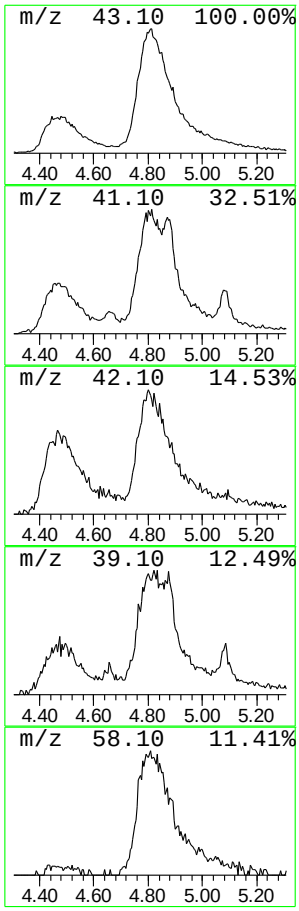
****

Peak Number 3 alkane Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.81	45.85 ug/L	577432	pentafluorobenzene	10.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	59
2	Butane	58	C4H10	000106-97-8	59
3	Butane	58	C4H10	000106-97-8	52
4	Formic acid, chloro-, (3,4,4-tri...	194	C7H11ClO4	107323-92-2	39
5	Isopropylsulfonyl chloride	142	C3H7ClO2S	010147-37-2	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209918.D
Acq On : 13 Nov 2014 1:17 pm
Operator : CourtneM
Sample : jb80728-10
Misc : MS76458,VA7921,w,,,,20
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

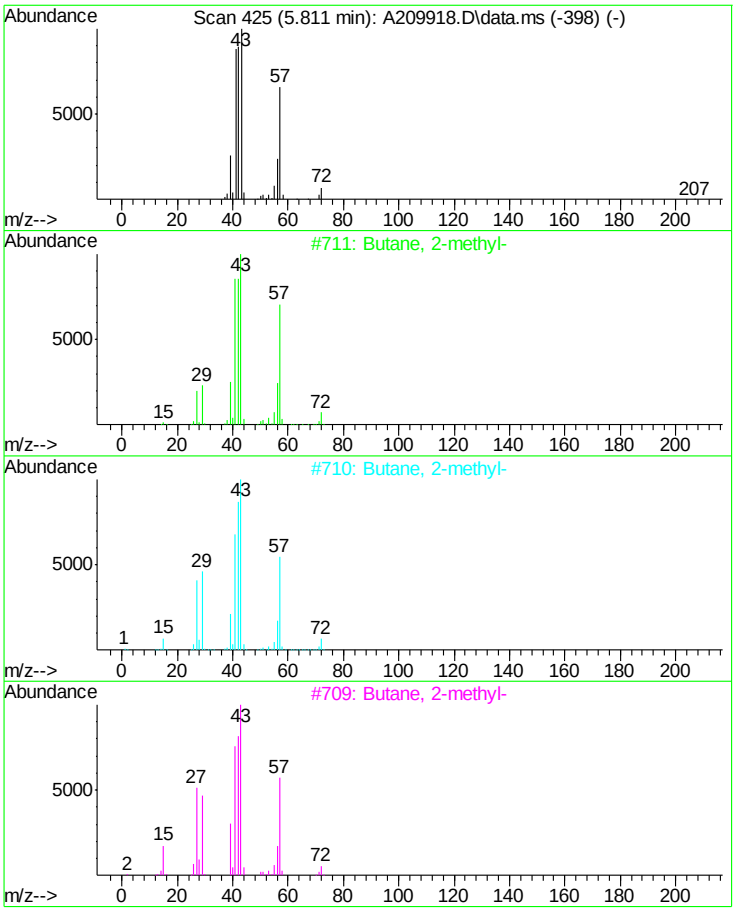
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

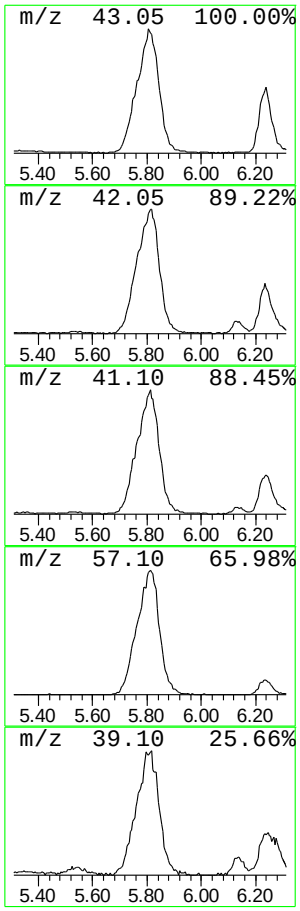
****

Peak Number 4 alkane Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.81	57.03 ug/L	718341	pentafluorobenzene	10.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	94
2	Butane, 2-methyl-	72	C5H12	000078-78-4	91
3	Butane, 2-methyl-	72	C5H12	000078-78-4	86
4	Pentane	72	C5H12	000109-66-0	38
5	2,5-Furandione, dihydro-3-methyl-	114	C5H6O3	004100-80-5	23





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209918.D
Acq On : 13 Nov 2014 1:17 pm
Operator : CourtneM
Sample : jb80728-10
Misc : MS76458,VA7921,w,,,,20
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

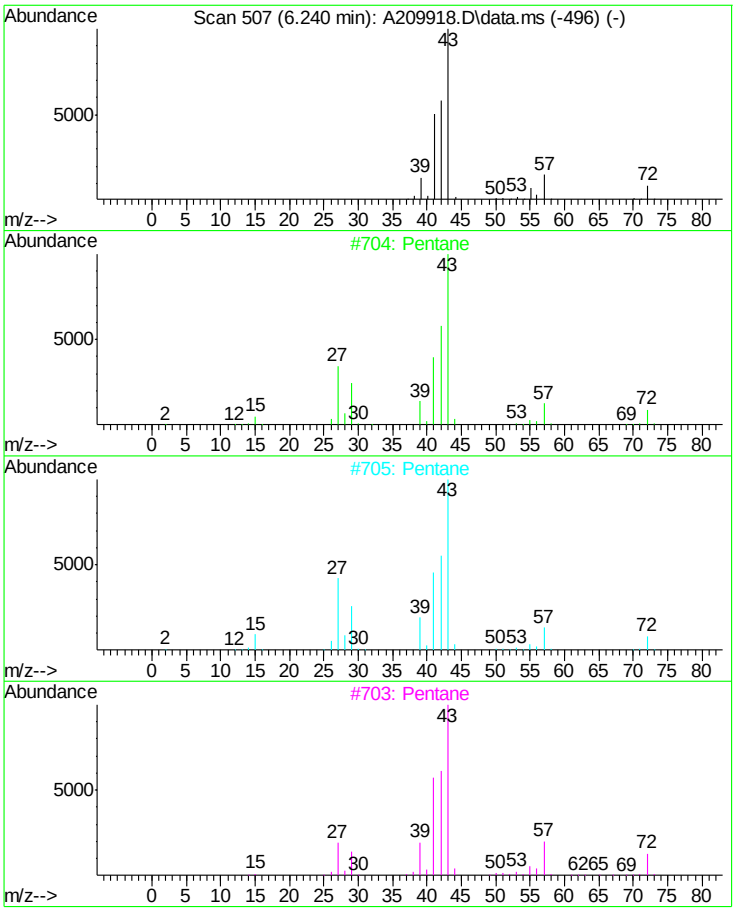
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

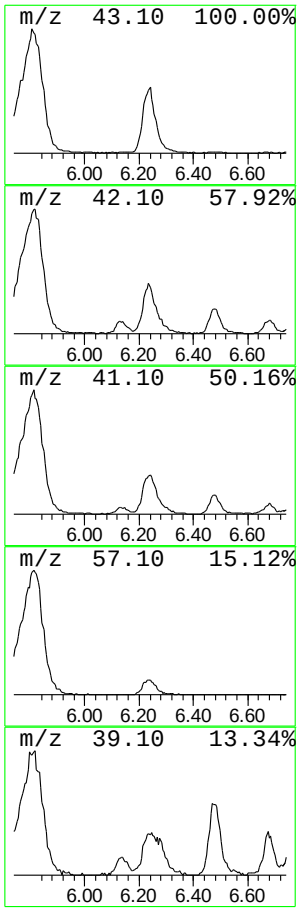
****

Peak Number 5 Pentane Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.24	14.25 ug/L	179495	pentafluorobenzene	10.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	90
2	Pentane	72	C5H12	000109-66-0	86
3	Pentane	72	C5H12	000109-66-0	49
4	Butane, 2-methyl-	72	C5H12	000078-78-4	40
5	Oxirane, ethyl-	72	C4H8O	000106-88-7	38





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209918.D
Acq On : 13 Nov 2014 1:17 pm
Operator : CourtneM
Sample : jb80728-10
Misc : MS76458,VA7921,w,,,,20
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

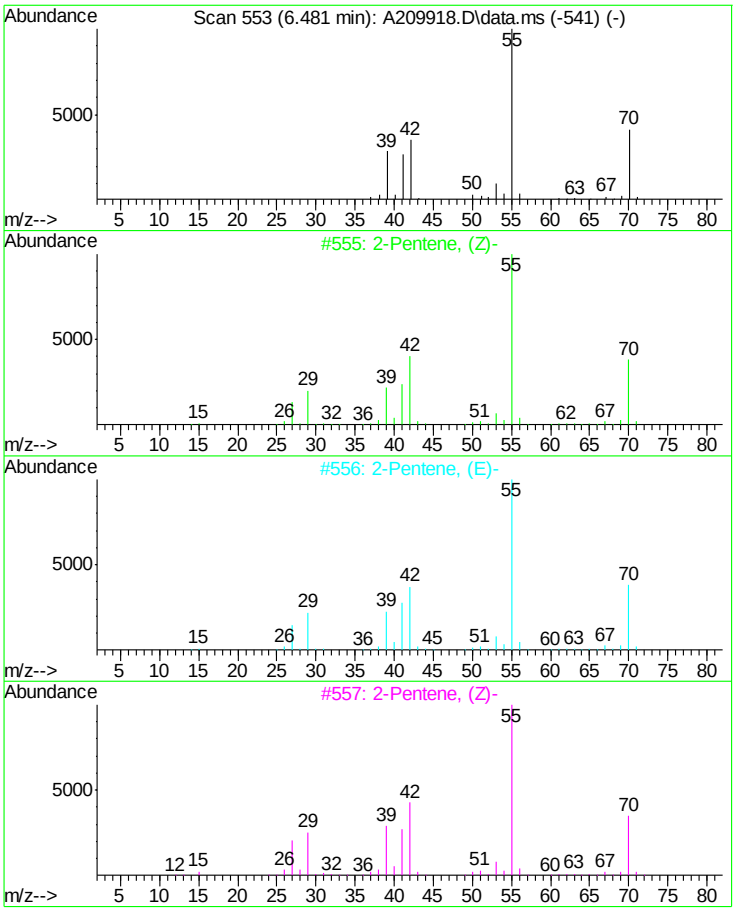
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

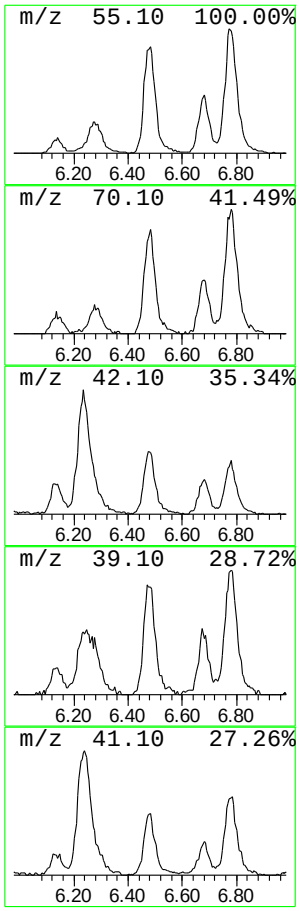
****

Peak Number 6 alkene Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.48	9.68 ug/L	121945	pentafluorobenzene	10.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentene, (Z)-	70	C5H10	000627-20-3	90
2	2-Pentene, (E)-	70	C5H10	000646-04-8	90
3	2-Pentene, (Z)-	70	C5H10	000627-20-3	90
4	2-Methyl-1-butene	70	C5H10	000563-46-2	90
5	2-Methyl-1-butene	70	C5H10	000563-46-2	90





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209918.D
Acq On : 13 Nov 2014 1:17 pm
Operator : CourtneM
Sample : jb80728-10
Misc : MS76458,VA7921,w,,,,20
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

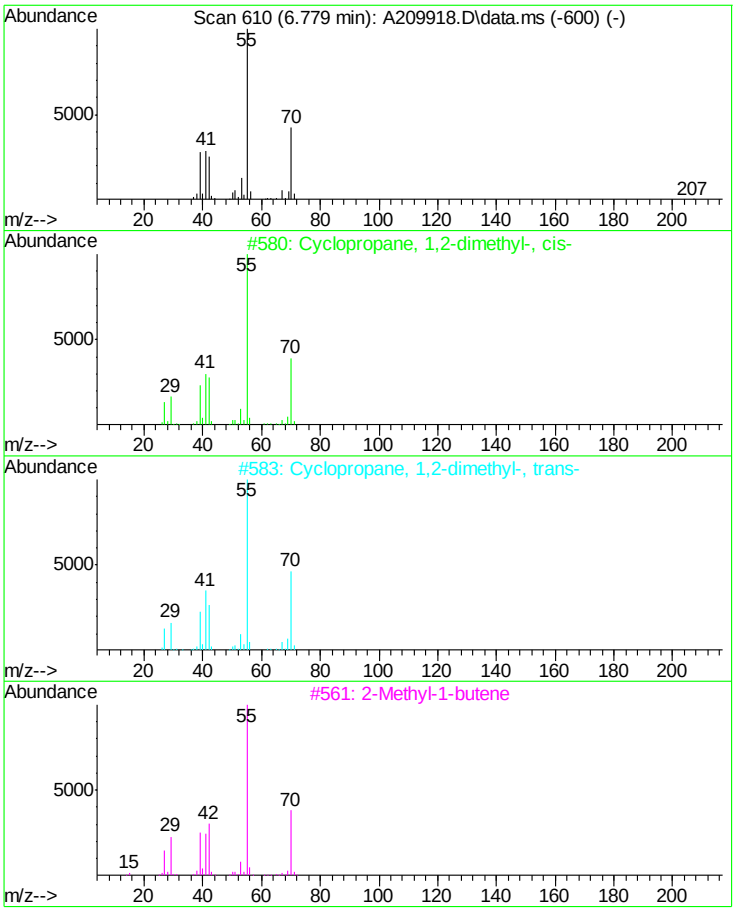
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

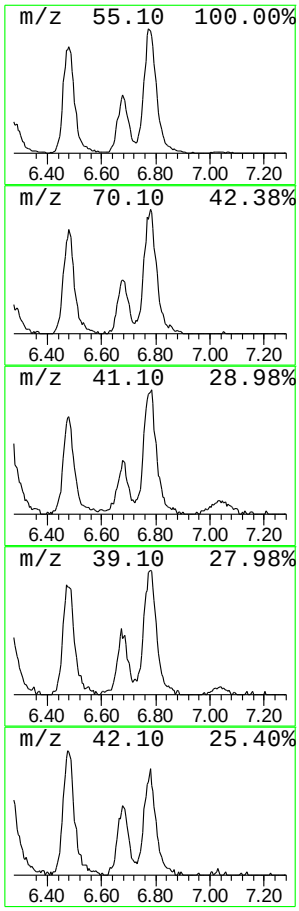
****

Peak Number 7 alkene Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.78	12.53 ug/L	157875	pentafluorobenzene	10.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopropane, 1,2-dimethyl-, cis-	70	C5H10	000930-18-7	91
2	Cyclopropane, 1,2-dimethyl-, trans-	70	C5H10	002402-06-4	91
3	2-Methyl-1-butene	70	C5H10	000563-46-2	87
4	Cyclopropane, 1,2-dimethyl-, trans-	70	C5H10	002402-06-4	87
5	Cyclopropane, 1,1-dimethyl-	70	C5H10	001630-94-0	86





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209918.D
Acq On : 13 Nov 2014 1:17 pm
Operator : CourtneM
Sample : jb80728-10
Misc : MS76458,VA7921,w,,,,20
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

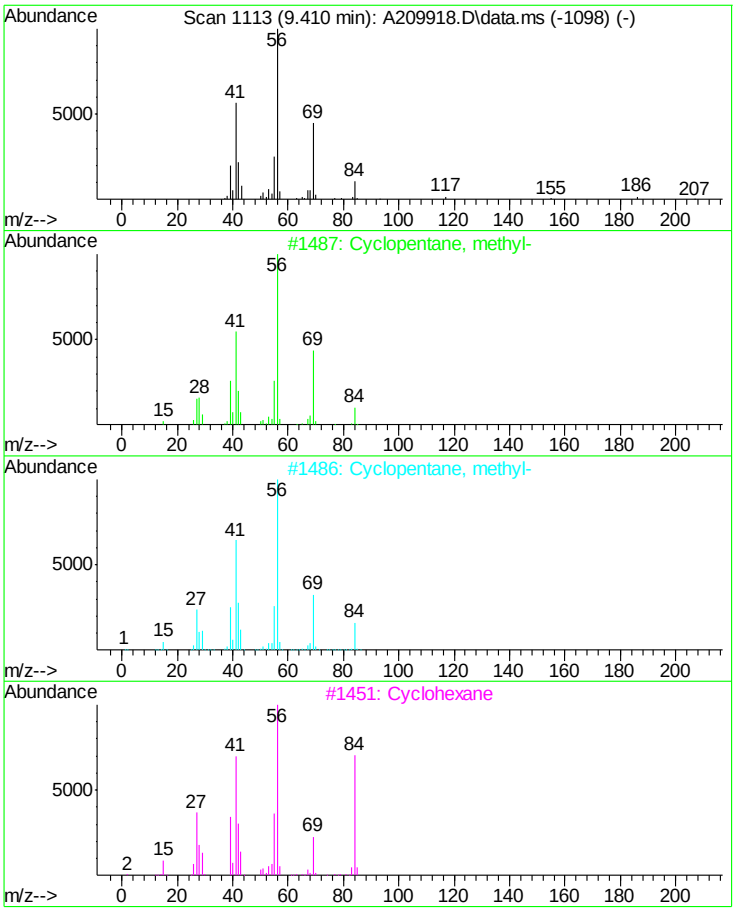
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

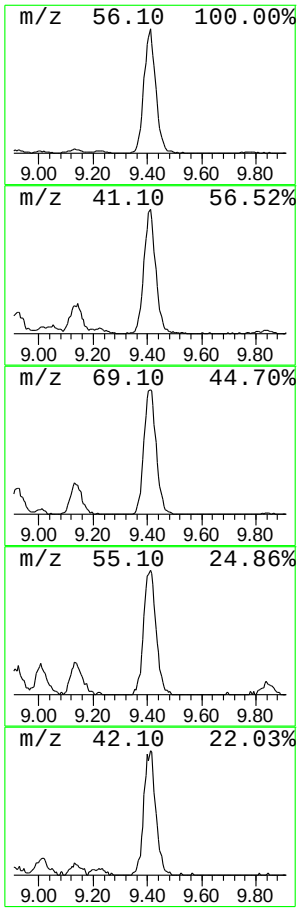
****

Peak Number 8 alkene Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.41	20.46 ug/L	257720	pentafluorobenzene	10.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	94
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	87
3	Cyclohexane	84	C6H12	000110-82-7	78
4	Cyclopentane, methyl-	84	C6H12	000096-37-7	78
5	Propane, 2-cyclopropyl-	84	C6H12	003638-35-5	72





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209918.D
Acq On : 13 Nov 2014 1:17 pm
Operator : CourtneM
Sample : jb80728-10
Misc : MS76458,VA7921,w,,,,20
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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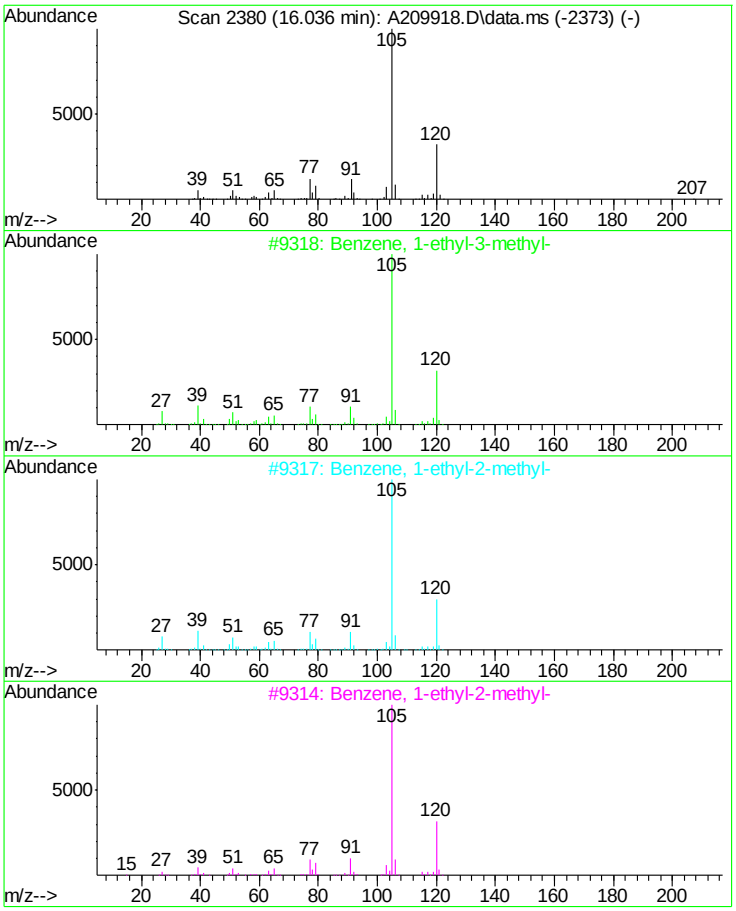
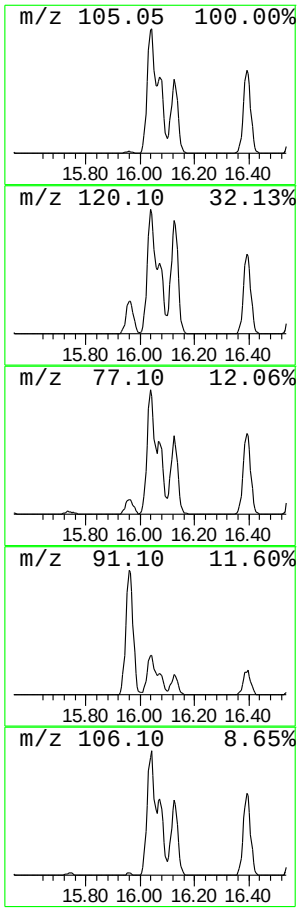
Peak Number 9 C3 alkyl benzene Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.04	38.72 ug/L	1018600	1,4-dichlorobenzene-d4	17.05

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	94
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
4	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	94
5	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209918.D
Acq On : 13 Nov 2014 1:17 pm
Operator : CourtneM
Sample : jb80728-10
Misc : MS76458,VA7921,w,,,,20
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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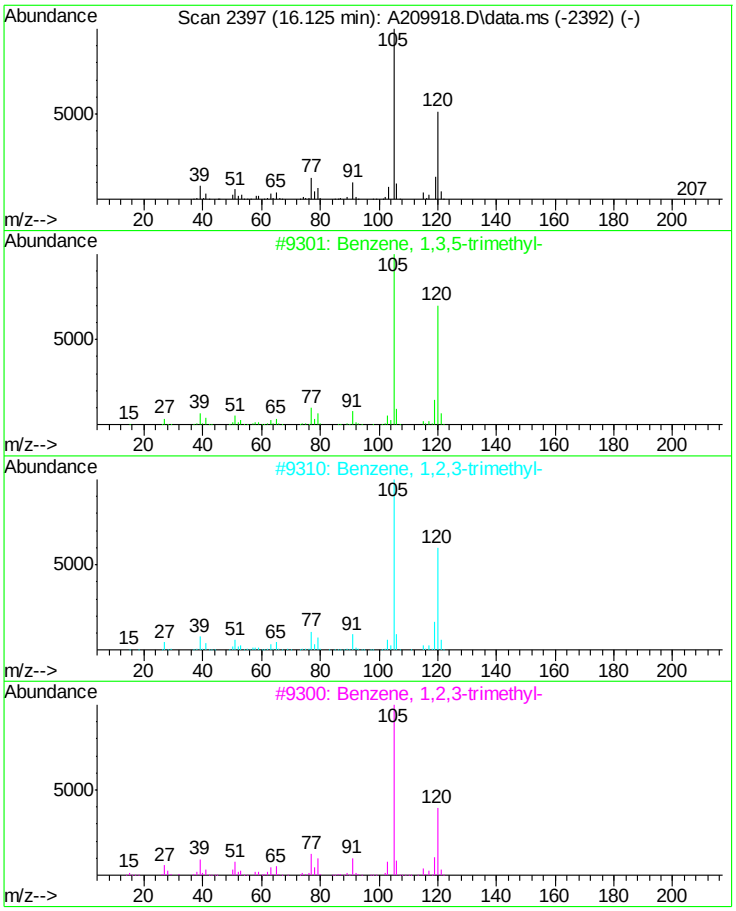
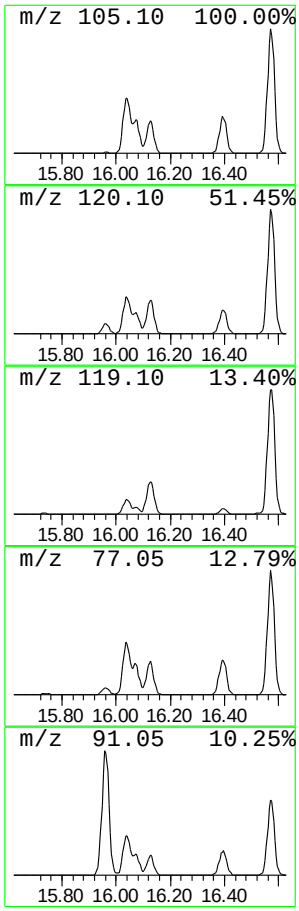
Peak Number 10 C3 alkyl benzene Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.13	16.57 ug/L	435834	1,4-dichlorobenzene-d4	17.05

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
2	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
3	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	94
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
5	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209918.D
Acq On : 13 Nov 2014 1:17 pm
Operator : CourtneM
Sample : jb80728-10
Misc : MS76458,VA7921,w,,,,20
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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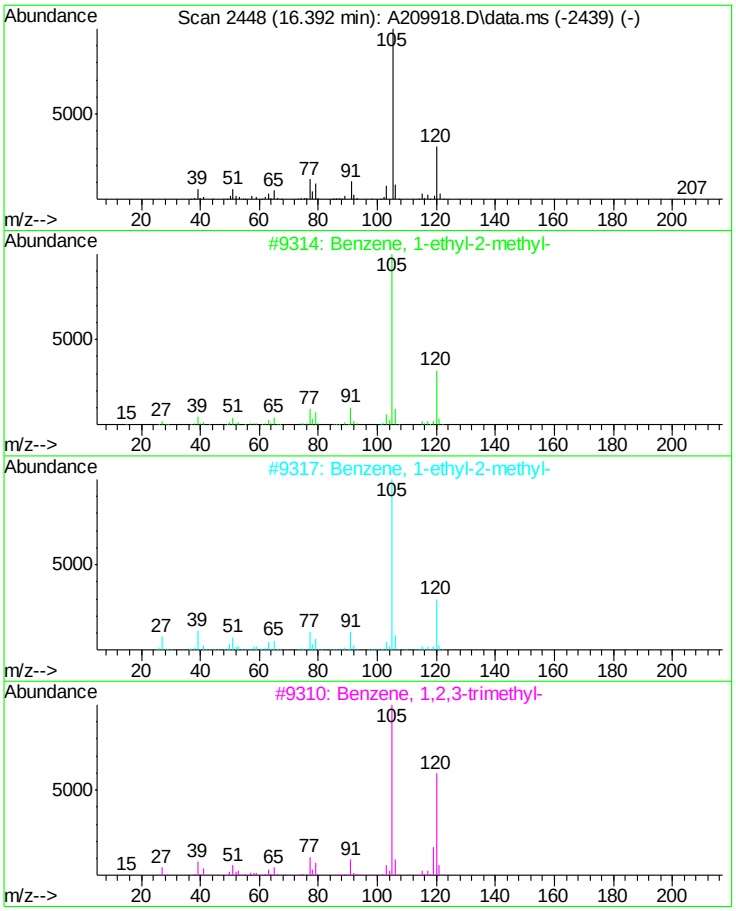
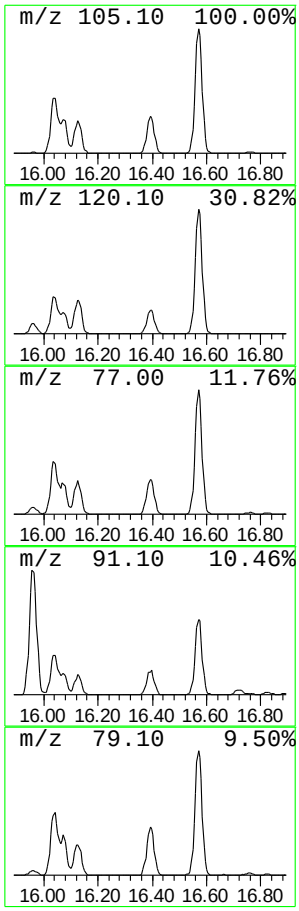
Peak Number 11 C3 alkyl benzene Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.39	17.47 ug/L	459496	1,4-dichlorobenzene-d4	17.05

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	91
4	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91
5	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209918.D
Acq On : 13 Nov 2014 1:17 pm
Operator : CourtneM
Sample : jb80728-10
Misc : MS76458,VA7921,w,,,,20
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

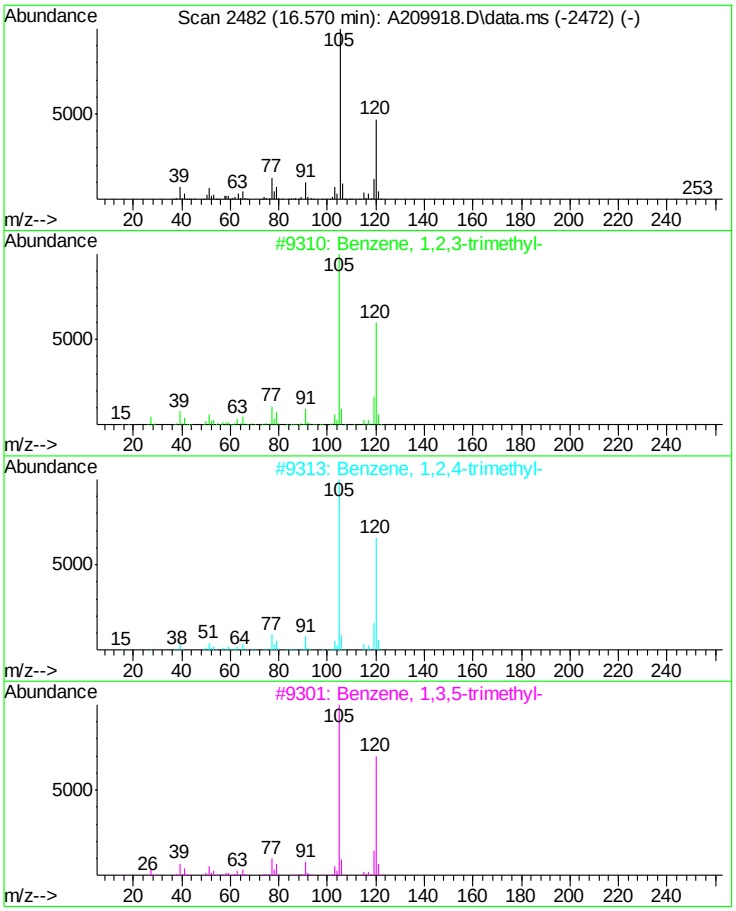
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

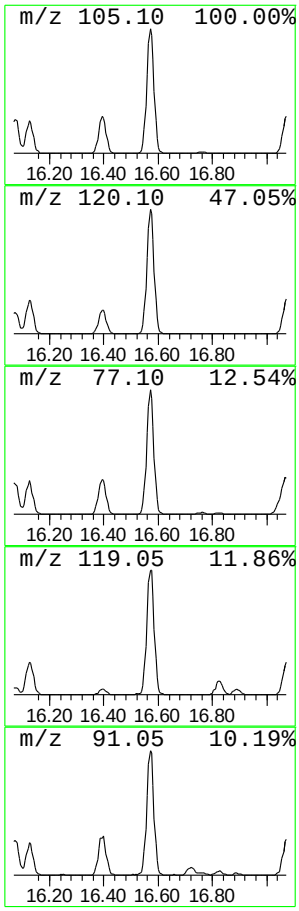
****

Peak Number 12 C3 alkyl benzene Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.57	63.54 ug/L	1671540	1,4-dichlorobenzene-d4	17.05

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
5	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209918.D
Acq On : 13 Nov 2014 1:17 pm
Operator : CourtneM
Sample : jb80728-10
Misc : MS76458,VA7921,w,,,,20
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

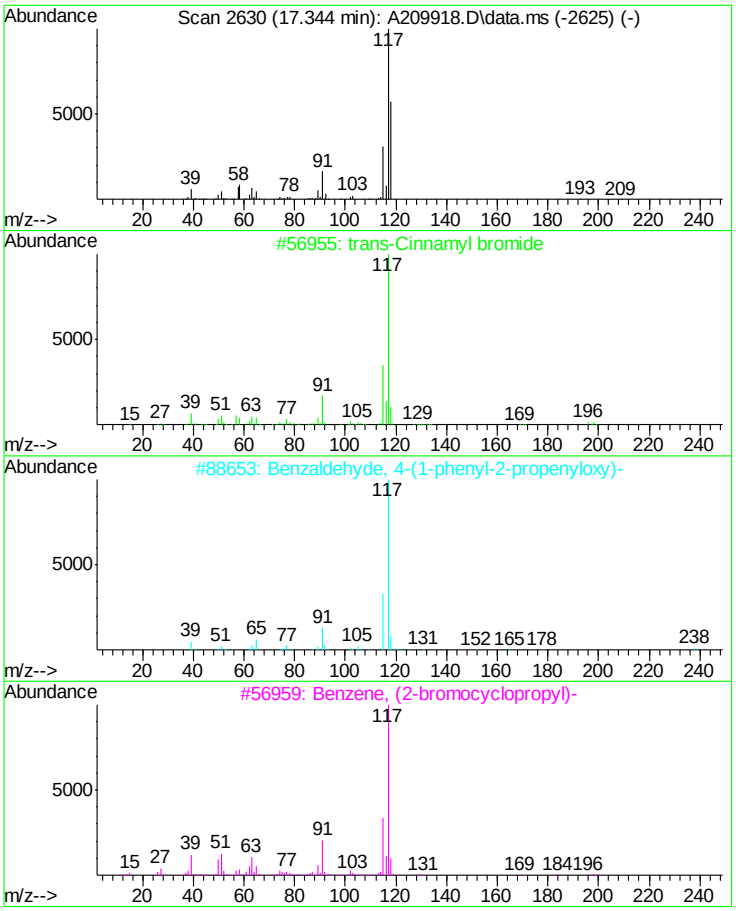
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

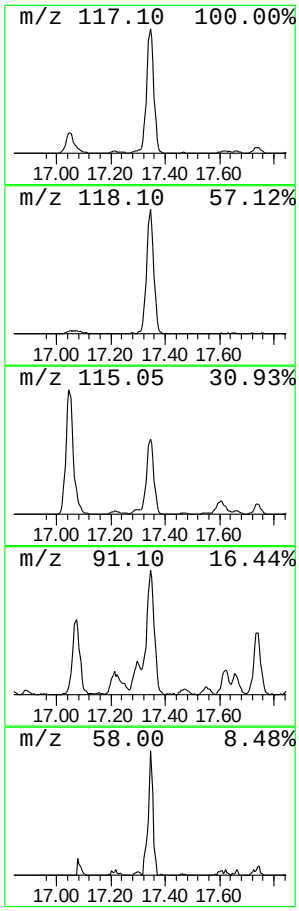
****

Peak Number 13 unknown Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.34	17.82 ug/L	468817	1,4-dichlorobenzene-d4	17.05

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	trans-Cinnamyl bromide	196	C9H9Br	026146-77-0	42
2	Benzaldehyde, 4-(1-phenyl-2-prop...	238	C16H14O2	1000277-56-1	40
3	Benzene, (2-bromocyclopropyl)-	196	C9H9Br	036617-02-4	40
4	Indole	117	C8H7N	000120-72-9	38
5	Benzene, 1,1'-(1,5-hexadiene-1,6...	234	C18H18	004439-45-6	38





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209918.D
Acq On : 13 Nov 2014 1:17 pm
Operator : CourtneM
Sample : jb80728-10
Misc : MS76458,VA7921,w,,,,20
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

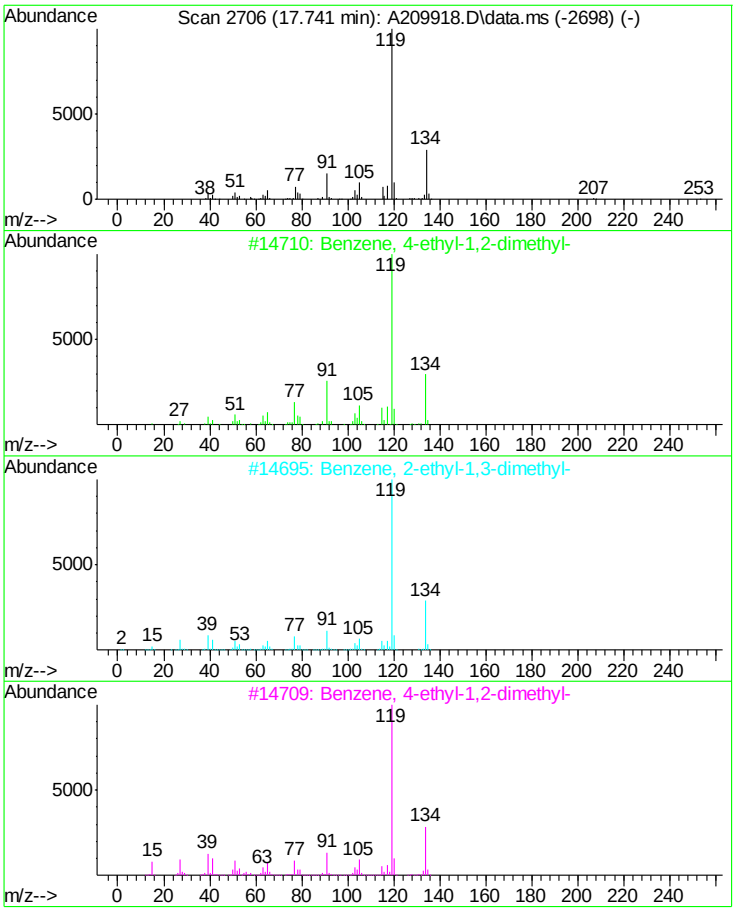
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

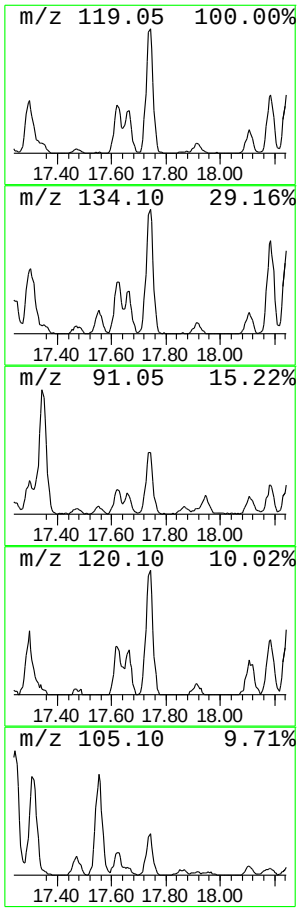
****

Peak Number 14 C4 alkyl benzene Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.74	8.77 ug/L	230655	1,4-dichlorobenzene-d4	17.05

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	96
2	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14	002870-04-4	94
3	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	94
4	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	94
5	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209918.D
Acq On : 13 Nov 2014 1:17 pm
Operator : CourtneM
Sample : jb80728-10
Misc : MS76458,VA7921,w,,,,20
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

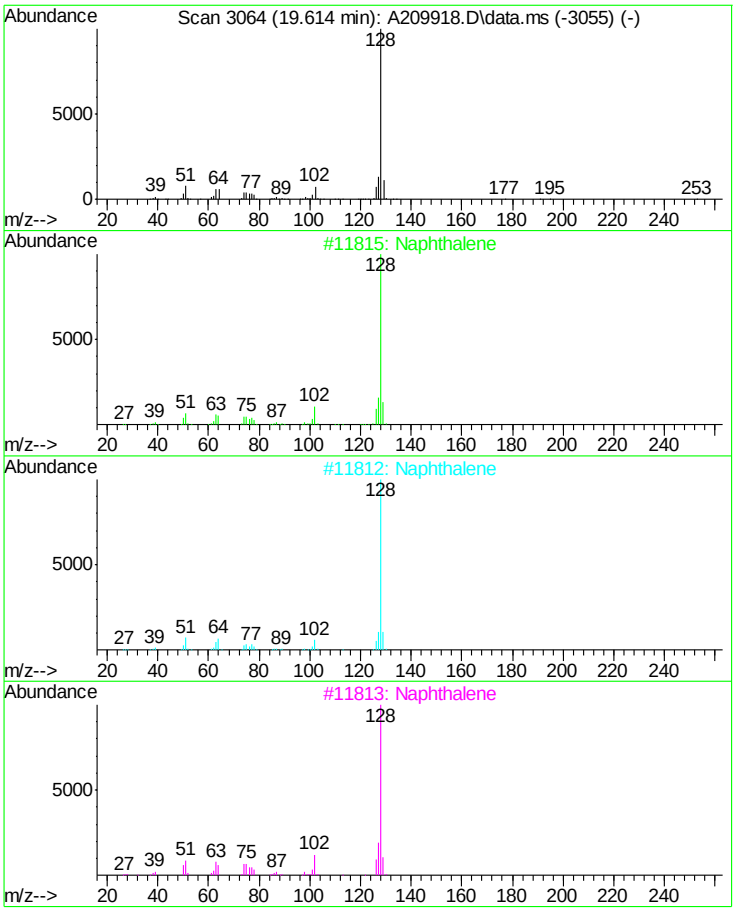
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

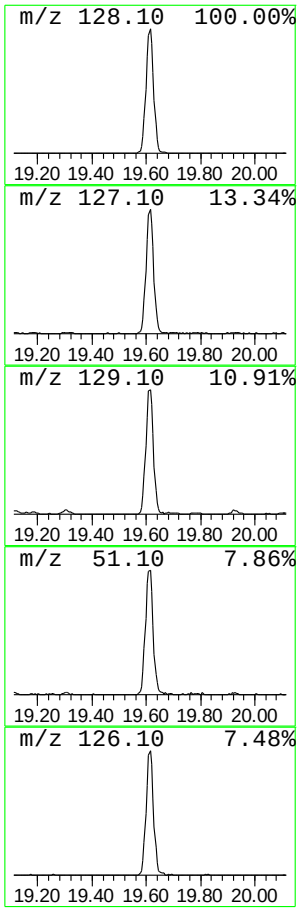
****

Peak Number 15 Naphthalene Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.61	22.68 ug/L	596512	1,4-dichlorobenzene-d4	17.05

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Naphthalene	128	C10H8	000091-20-3	97
2	Naphthalene	128	C10H8	000091-20-3	95
3	Naphthalene	128	C10H8	000091-20-3	94
4	Azulene	128	C10H8	000275-51-4	91
5	Azulene	128	C10H8	000275-51-4	91





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\A\
Data File : A209918.D
Acq On : 13 Nov 2014 1:17 pm
Operator : CourtneM
Sample : jb80728-10
Misc : MS76458,VA7921,w,,,,20
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
unknown	3.70	82.2	ug/L	1034860	2	10.10	629747	50.0
unknown	4.47	14.1	ug/L	177697	2	10.10	629747	50.0
alkane	4.81	45.9	ug/L	577432	2	10.10	629747	50.0
alkane	5.81	57.0	ug/L	718341	2	10.10	629747	50.0
Pentane	6.24	14.3	ug/L	179495	2	10.10	629747	50.0
alkene	6.48	9.7	ug/L	121945	2	10.10	629747	50.0
alkene	6.78	12.5	ug/L	157875	2	10.10	629747	50.0
alkene	9.41	20.5	ug/L	257720	2	10.10	629747	50.0
C3 alkyl benzene	16.04	38.7	ug/L	1018600	5	17.05	1315350	50.0
C3 alkyl benzene	16.13	16.6	ug/L	435834	5	17.05	1315350	50.0
C3 alkyl benzene	16.39	17.5	ug/L	459496	5	17.05	1315350	50.0
C3 alkyl benzene	16.57	63.5	ug/L	1671540	5	17.05	1315350	50.0
unknown	17.34	17.8	ug/L	468817	5	17.05	1315350	50.0
C4 alkyl benzene	17.74	8.8	ug/L	230655	5	17.05	1315350	50.0
Naphthalene	19.61	22.7	ug/L	596512	5	17.05	1315350	50.0

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209890.D
Acq On : 12 Nov 2014 10:51 pm
Operator : CourtneM
Sample : jb80728-11
Misc : MS76458,VA7919,w,,,,5
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Nov 13 14:49:20 2014
Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Nov 13 13:59:58 2014
Response via : Initial Calibration

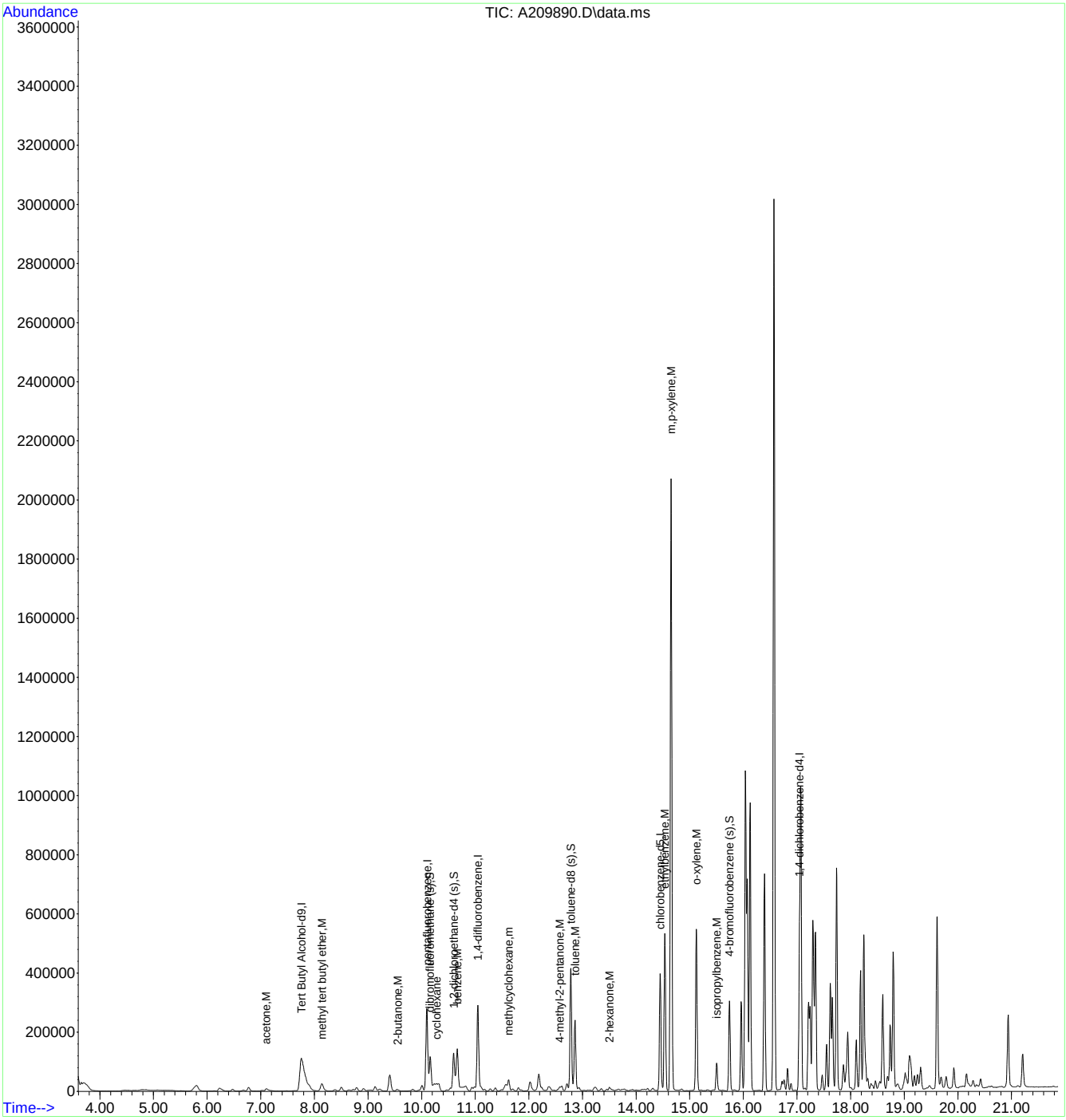
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Tert Butyl Alcohol-d9	7.758	65	348343	500.00	ug/L		0.00
4) pentafluorobenzene	10.101	168	245273	50.00	ug/L		0.00
53) 1,4-difluorobenzene	11.047	114	280075	50.00	ug/L		0.00
83) chlorobenzene-d5	14.447	117	245081	50.00	ug/L		0.00
98) 1,4-dichlorobenzene-d4	17.046	152	138458	50.00	ug/L		0.00
System Monitoring Compounds							
46) dibromofluoromethane (s)	10.158	113	87412	46.19	ug/L		0.00
Spiked Amount 50.000	Range 59 - 130		Recovery = 92.38%				
47) 1,2-dichloroethane-d4 (s)	10.598	65	103308	44.99	ug/L		0.00
Spiked Amount 50.000	Range 65 - 123		Recovery = 89.98%				
75) toluene-d8 (s)	12.784	98	334946	51.75	ug/L		0.00
Spiked Amount 50.000	Range 77 - 125		Recovery = 103.50%				
101) 4-bromofluorobenzene (s)	15.739	95	118998	55.30	ug/L		0.00
Spiked Amount 50.000	Range 71 - 132		Recovery = 110.60%				
Target Compounds							Qvalue
20) acetone	7.099	43	23937	20.71	ug/L		96
27) methyl tert butyl ether	8.139	73	9922	1.28	ug/L	#	1
33) 2-butanone	9.552	72	2958	7.89	ug/L	#	1
49) cyclohexane	10.279	84	12003	3.88	ug/L	#	25
59) benzene	10.666	78	117258	17.38	ug/L		98
68) methylcyclohexane	11.623	83	20461	7.01	ug/L	#	65
76) 4-methyl-2-pentanone	12.575	58	4448	3.56	ug/L	#	28
77) toluene	12.862	92	116491	27.95	ug/L		99
82) 2-hexanone	13.500	58	5800	5.48	ug/L		93
93) ethylbenzene	14.536	91	452376	60.39	ug/L		99
94) m,p-xylene	14.651	106	711826	250.06	ug/L		99
95) o-xylene	15.122	106	175906	56.61	ug/L		99
99) isopropylbenzene	15.503	105	76376	9.37	ug/L		97

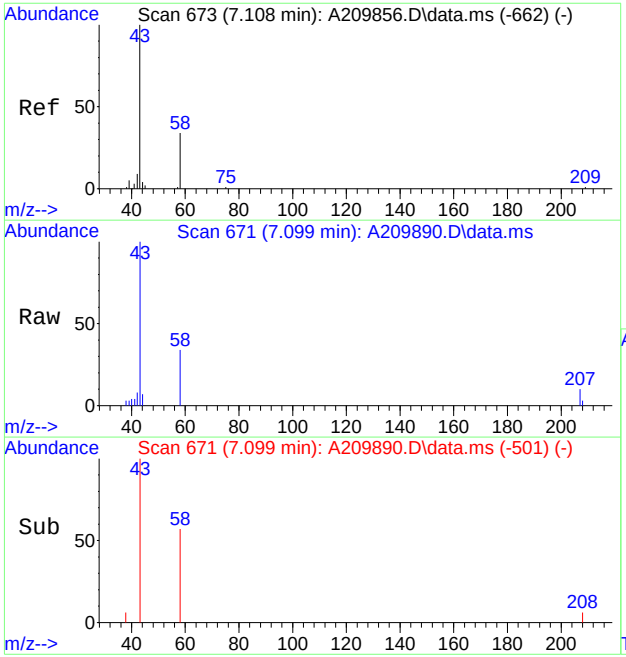
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209890.D
Acq On : 12 Nov 2014 10:51 pm
Operator : CourtneM
Sample : jb80728-11
Misc : MS76458,VA7919,w,,,,5
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Nov 13 14:49:20 2014
Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Nov 13 13:59:58 2014
Response via : Initial Calibration

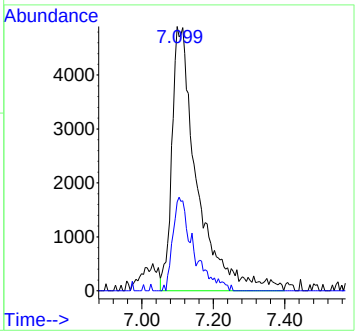


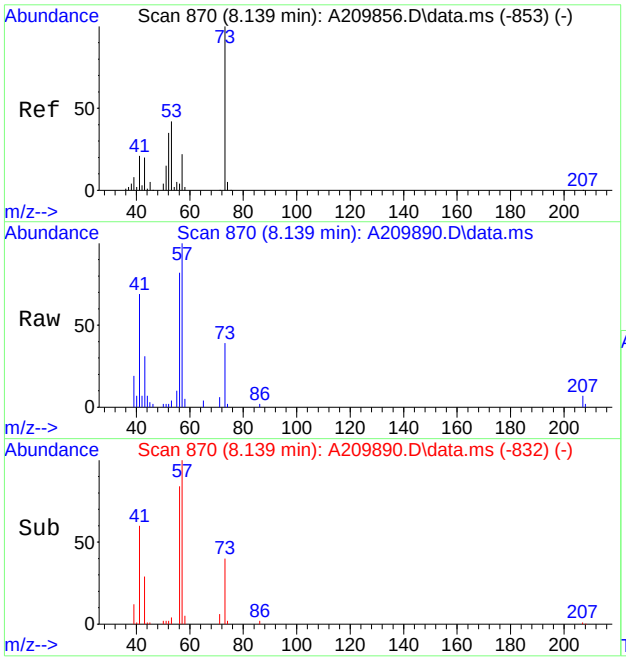


#20
acetone
Concen: 20.71 ug/L
RT: 7.099 min Scan# 671
Delta R.T. -0.010 min
Lab File: A209890.D
Acq: 12 Nov 2014 10:51 pm

Tgt Ion: 43 Resp: 23937

Ion	Ratio	Lower	Upper
43	100		
58	29.4	1.5	61.5

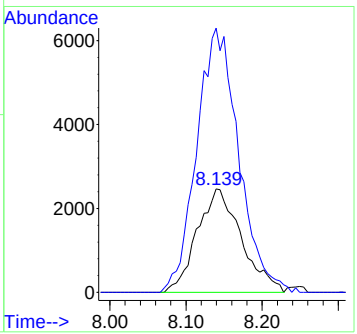


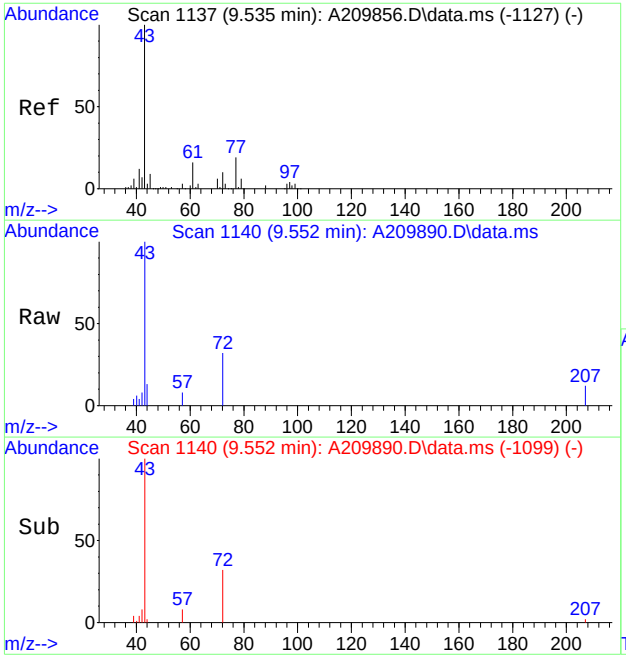


#27
methyl tert butyl ether
Concen: 1.28 ug/L
RT: 8.139 min Scan# 870
Delta R.T. 0.001 min
Lab File: A209890.D
Acq: 12 Nov 2014 10:51 pm

Tgt Ion: 73 Resp: 9922

Ion	Ratio	Lower	Upper
73	100		
57	243.5	0.0	52.7#

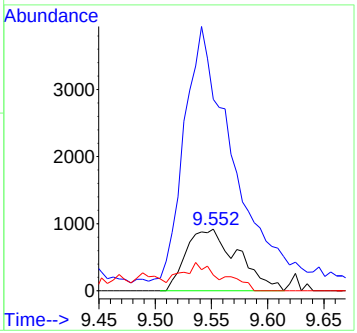


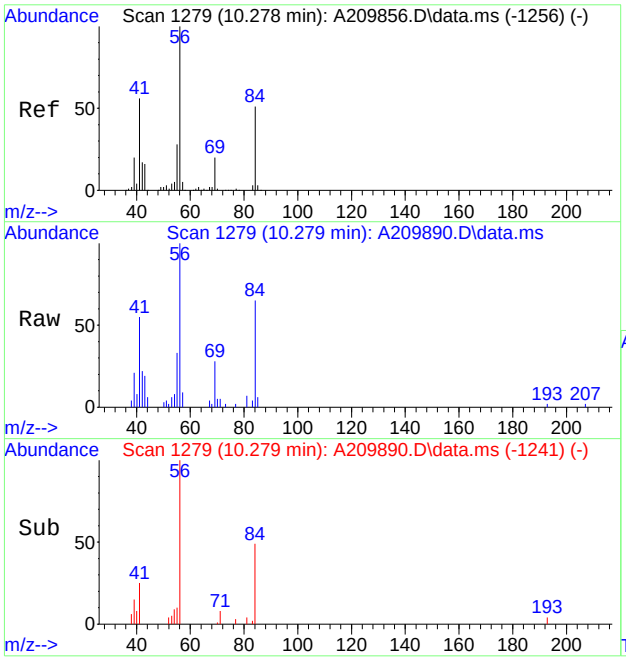


#33
2-butanone
Concen: 7.89 ug/L
RT: 9.552 min Scan# 1140
Delta R.T. 0.016 min
Lab File: A209890.D
Acq: 12 Nov 2014 10:51 pm

Tgt Ion: 72 Resp: 2958

Ion	Ratio	Lower	Upper
72	100		
43	414.4	1081.2	1141.2#
57	35.9	1.6	61.6

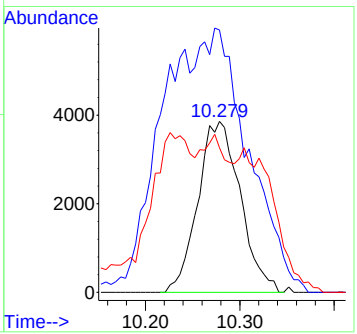


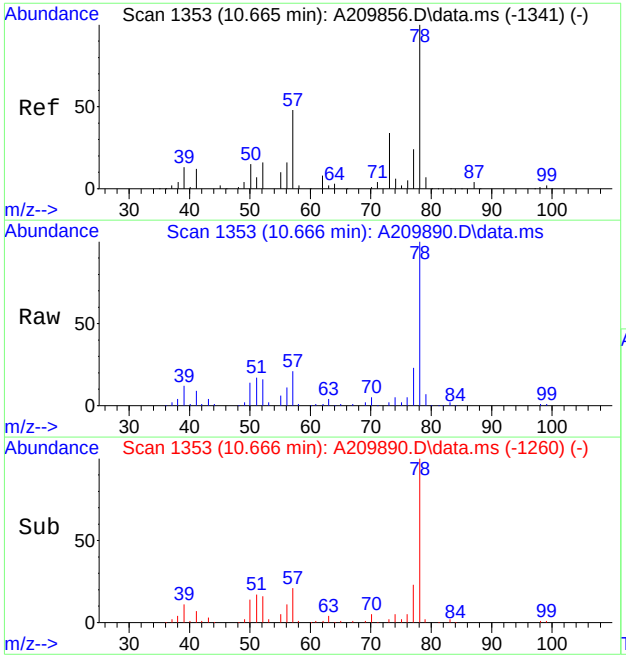


#49
cyclohexane
Concen: 3.88 ug/L
RT: 10.279 min Scan# 1279
Delta R.T. 0.001 min
Lab File: A209890.D
Acq: 12 Nov 2014 10:51 pm

Tgt Ion: 84 Resp: 12003

Ion	Ratio	Lower	Upper
84	100		
56	314.4	157.0	291.6#
41	0.0	88.5	164.3#

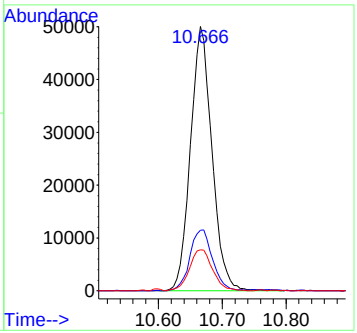


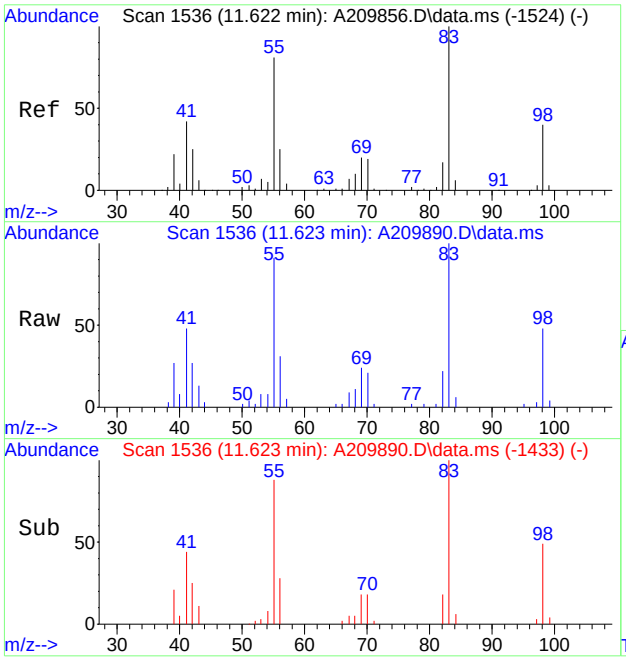


#59
benzene
Concen: 17.38 ug/L
RT: 10.666 min Scan# 1353
Delta R.T. 0.001 min
Lab File: A209890.D
Acq: 12 Nov 2014 10:51 pm

Tgt Ion: 78 Resp: 117258

Ion	Ratio	Lower	Upper
78	100		
77	22.9	0.0	54.5
52	15.3	0.0	45.9

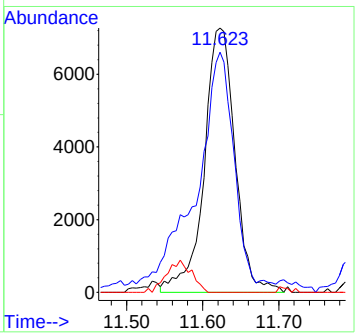


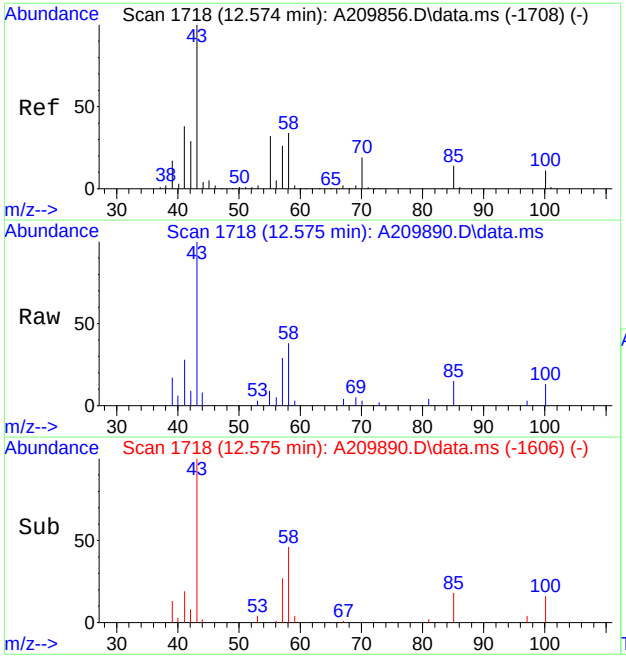


#68
methylcyclohexane
Concen: 7.01 ug/L
RT: 11.623 min Scan# 1536
Delta R.T. 0.001 min
Lab File: A209890.D
Acq: 12 Nov 2014 10:51 pm

Tgt Ion: 83 Resp: 20461

Ion	Ratio	Lower	Upper
83	100		
55	118.4	56.4	116.4#
85	0.0	0.0	30.1

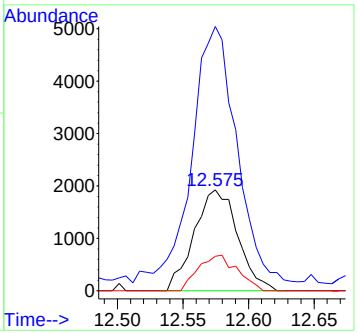


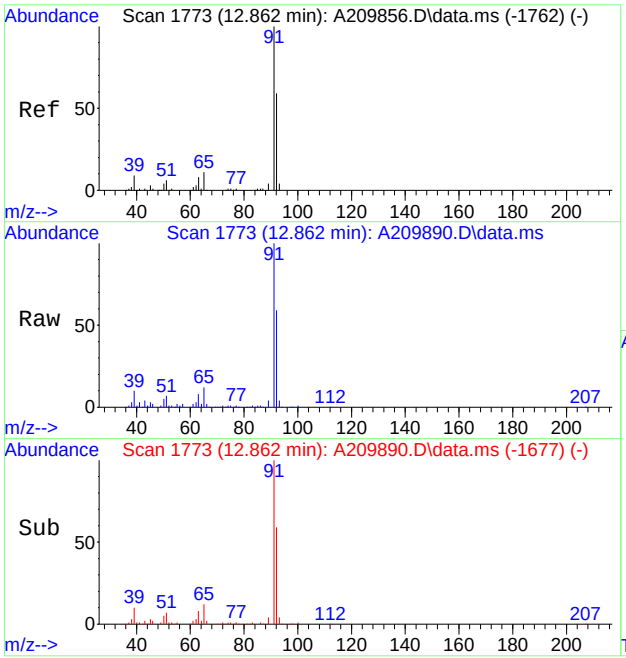


#76
4-methyl-2-pentanone
Concen: 3.56 ug/L
RT: 12.575 min Scan# 1718
Delta R.T. 0.001 min
Lab File: A209890.D
Acq: 12 Nov 2014 10:51 pm

Tgt Ion: 58 Resp: 4448

Ion	Ratio	Lower	Upper
58	100		
43	266.2	437.1	497.1#
100	31.7	1.1	61.1

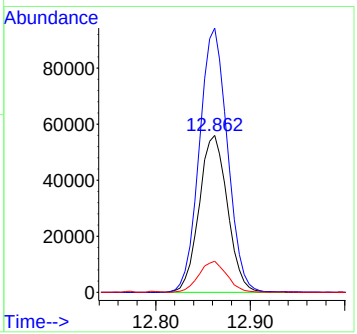


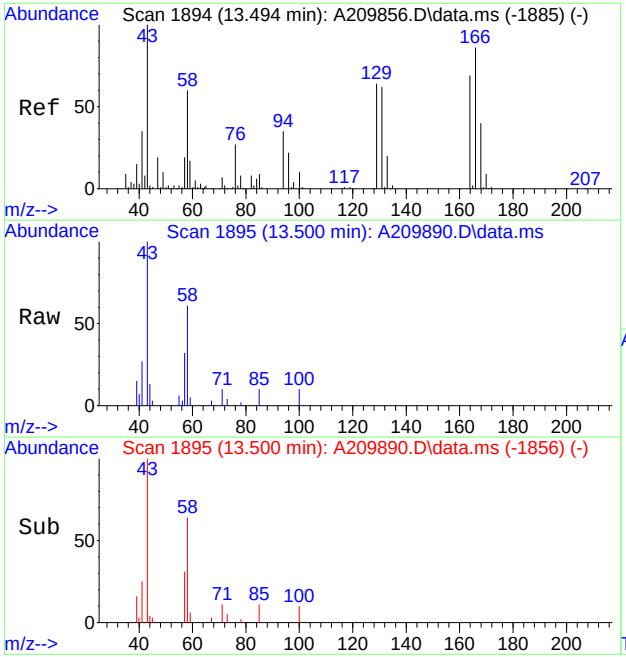


#77
toluene
Concen: 27.95 ug/L
RT: 12.862 min Scan# 1773
Delta R.T. 0.001 min
Lab File: A209890.D
Acq: 12 Nov 2014 10:51 pm

Tgt Ion: 92 Resp: 116491

Ion	Ratio	Lower	Upper
92	100		
91	168.5	139.6	199.6
65	19.7	0.0	49.5

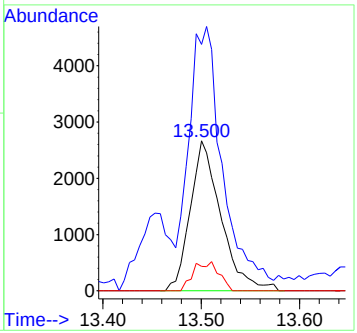


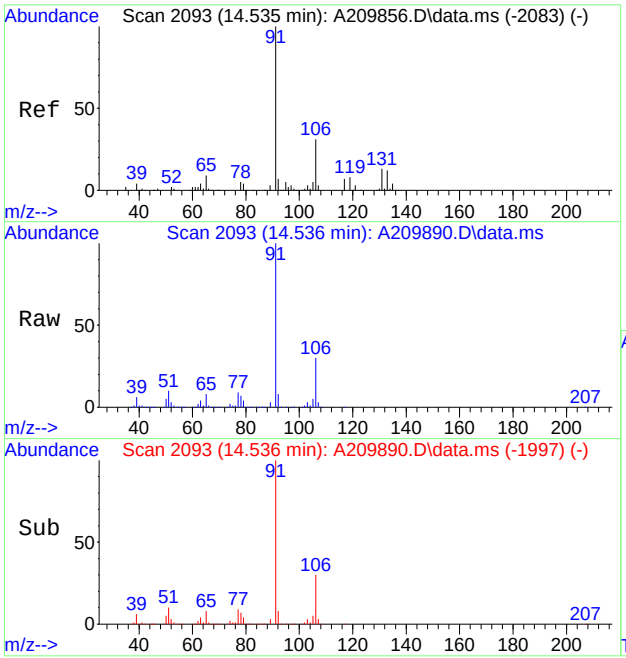


#82
2-hexanone
Concen: 5.48 ug/L
RT: 13.500 min Scan# 1895
Delta R.T. 0.006 min
Lab File: A209890.D
Acq: 12 Nov 2014 10:51 pm

Tgt Ion: 58 Resp: 5800

Ion	Ratio	Lower	Upper
58	100		
43	156.3	137.0	197.0
100	16.3	0.0	47.1

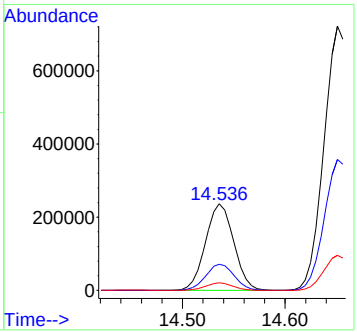


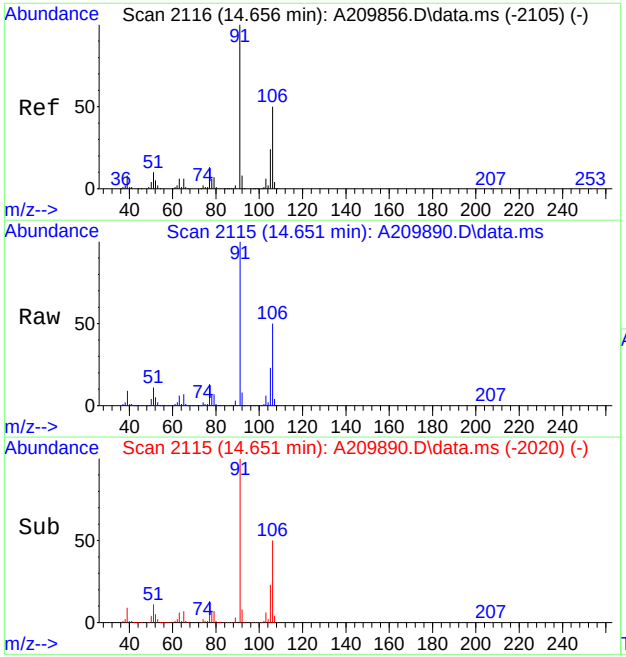


#93
ethylbenzene
Concen: 60.39 ug/L
RT: 14.536 min Scan# 2093
Delta R.T. 0.001 min
Lab File: A209890.D
Acq: 12 Nov 2014 10:51 pm

Tgt Ion: 91 Resp: 452376

Ion	Ratio	Lower	Upper
91	100		
106	30.1	0.8	60.8
77	8.6	0.0	38.5

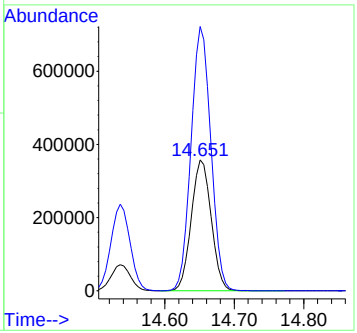


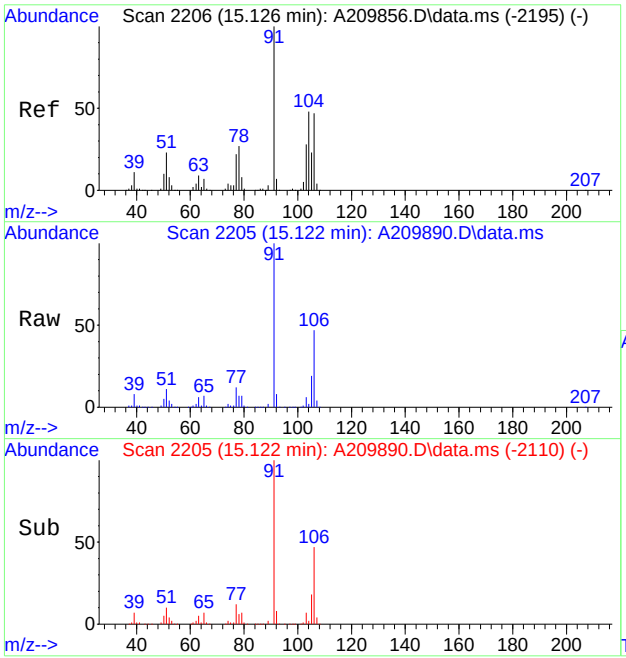


#94
m,p-xylene
Concen: 250.06 ug/L
RT: 14.651 min Scan# 2115
Delta R.T. -0.005 min
Lab File: A209890.D
Acq: 12 Nov 2014 10:51 pm

Tgt Ion:106 Resp: 711826

Ion	Ratio	Lower	Upper
106	100		
91	201.8	169.6	229.6

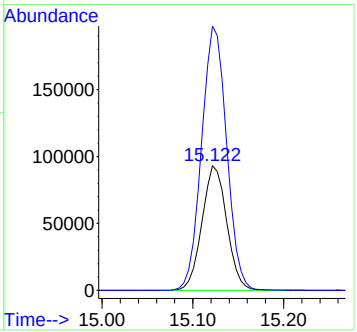


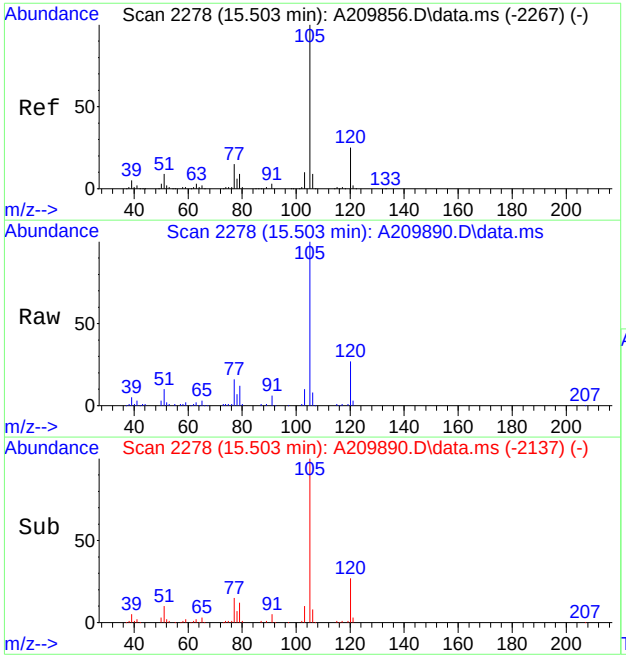


#95
o-xylene
Concen: 56.61 ug/L
RT: 15.122 min Scan# 2205
Delta R.T. -0.005 min
Lab File: A209890.D
Acq: 12 Nov 2014 10:51 pm

Tgt Ion:106 Resp: 175906

Ion	Ratio	Lower	Upper
106	100		
91	211.9	183.9	243.9

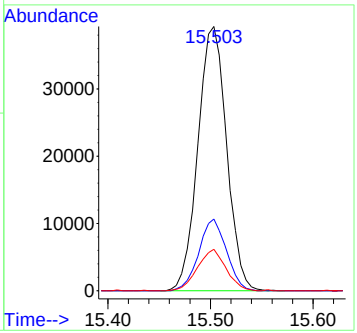




#99
isopropylbenzene
Concen: 9.37 ug/L
RT: 15.503 min Scan# 2278
Delta R.T. 0.001 min
Lab File: A209890.D
Acq: 12 Nov 2014 10:51 pm

Tgt Ion:105 Resp: 76376

Ion	Ratio	Lower	Upper
105	100		
120	27.1	0.0	55.3
77	15.7	0.0	45.1



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209890.D
Acq On : 12 Nov 2014 10:51 pm
Operator : CourtneM
Sample : jb80728-11
Misc : MS76458,VA7919,w,,,,5
ALS Vial : 26 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.6 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\MA7918.M
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

Signal : TIC: A209890.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.652	8	12	60	rVB2	28616	241924	4.35%	0.573%
2	5.807	403	424	449	rVB3	18969	107093	1.93%	0.254%
3	7.758	781	797	856	rVV3	111064	774525	13.93%	1.836%
4	8.139	856	870	898	rVB2	25048	100386	1.80%	0.238%
5	9.405	1099	1112	1132	rBV3	55040	171116	3.08%	0.406%
6	10.095	1234	1244	1252	rBV	276348	704535	12.67%	1.670%
7	10.158	1252	1256	1300	rVB3	116726	474102	8.52%	1.124%
8	10.598	1332	1340	1347	rVV2	125245	322232	5.79%	0.764%
9	10.666	1347	1353	1397	rVB2	142544	480167	8.63%	1.138%
10	11.047	1418	1426	1445	rVB	287435	674985	12.14%	1.600%
11	12.182	1631	1643	1670	rBV4	55242	169574	3.05%	0.402%
12	12.784	1749	1758	1765	rVV	407813	851871	15.32%	2.019%
13	12.862	1765	1773	1798	rVB	238472	553046	9.94%	1.311%
14	14.447	2067	2076	2085	rBV	395095	778510	14.00%	1.845%
15	14.536	2085	2093	2105	rVB	531994	1026719	18.46%	2.433%
16	14.651	2105	2115	2149	rBV	2070235	4101233	73.74%	9.719%
17	15.122	2196	2205	2218	rVB	545830	1035736	18.62%	2.455%
18	15.503	2270	2278	2294	rVB	93808	190167	3.42%	0.451%
19	15.739	2313	2323	2349	rBV	304612	588167	10.58%	1.394%
20	15.958	2354	2365	2372	rBV	302836	569050	10.23%	1.349%
21	16.037	2372	2380	2392	rBV	1074525	3206255	57.65%	7.598%
22	16.126	2392	2397	2439	rVB	974429	1768762	31.80%	4.192%
23	16.393	2439	2448	2460	rVB	734727	1382589	24.86%	3.277%
24	16.570	2472	2482	2495	rVB	3014671	5561586	100.00%	13.180%
25	16.821	2524	2530	2538	rVB	71932	128881	2.32%	0.305%
26	17.067	2564	2577	2589	rBV2	1028079	2622419	47.15%	6.215%
27	17.214	2597	2605	2615	rBV2	297416	1011660	18.19%	2.397%
28	17.297	2615	2621	2626	rVV2	563077	1246991	22.42%	2.955%
29	17.344	2626	2630	2647	rVB3	533995	977683	17.58%	2.317%
30	17.470	2647	2654	2661	rVB2	51764	93803	1.69%	0.222%
31	17.554	2661	2670	2676	rBV	154770	283684	5.10%	0.672%
32	17.622	2676	2683	2687	rBV	350715	659743	11.86%	1.563%
33	17.658	2687	2690	2698	rVV	301710	486874	8.75%	1.154%
34	17.737	2698	2705	2721	rVB	750967	1341906	24.13%	3.180%
35	17.867	2721	2730	2735	rBV4	85380	181263	3.26%	0.430%
36	17.946	2735	2745	2768	rVB2	192131	452688	8.14%	1.073%
37	18.108	2768	2776	2783	rBV	166001	302642	5.44%	0.717%
38	18.186	2783	2791	2796	rBV	394254	691185	12.43%	1.638%
39	18.244	2796	2802	2823	rVB	520415	1128552	20.29%	2.675%
40	18.600	2863	2870	2880	rVB2	318652	634849	11.41%	1.505%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209890.D
Acq On : 12 Nov 2014 10:51 pm
Operator : CourtneM
Sample : jb80728-11
Misc : MS76458,VA7919,w,,,,5
ALS Vial : 26 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.6 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\MA7918.M
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

41	18.736	2890	2896	2901	rVV	206780	374191	6.73%	0.887%
42	18.793	2901	2907	2939	rVB	463163	959744	17.26%	2.274%
43	19.018	2939	2950	2959	rBV5	53848	173971	3.13%	0.412%
44	19.097	2959	2965	2977	rVB4	104908	327188	5.88%	0.775%
45	19.306	2999	3005	3032	rVB2	70256	128036	2.30%	0.303%
46	19.614	3054	3064	3073	rBV	581320	1142924	20.55%	2.709%
47	19.923	3117	3123	3162	rBV	64892	124248	2.23%	0.294%
48	20.158	3162	3168	3189	rBV3	44008	120691	2.17%	0.286%
49	20.938	3308	3317	3361	rVB	243069	506014	9.10%	1.199%
50	21.209	3361	3369	3489	rVB	110971	260448	4.68%	0.617%

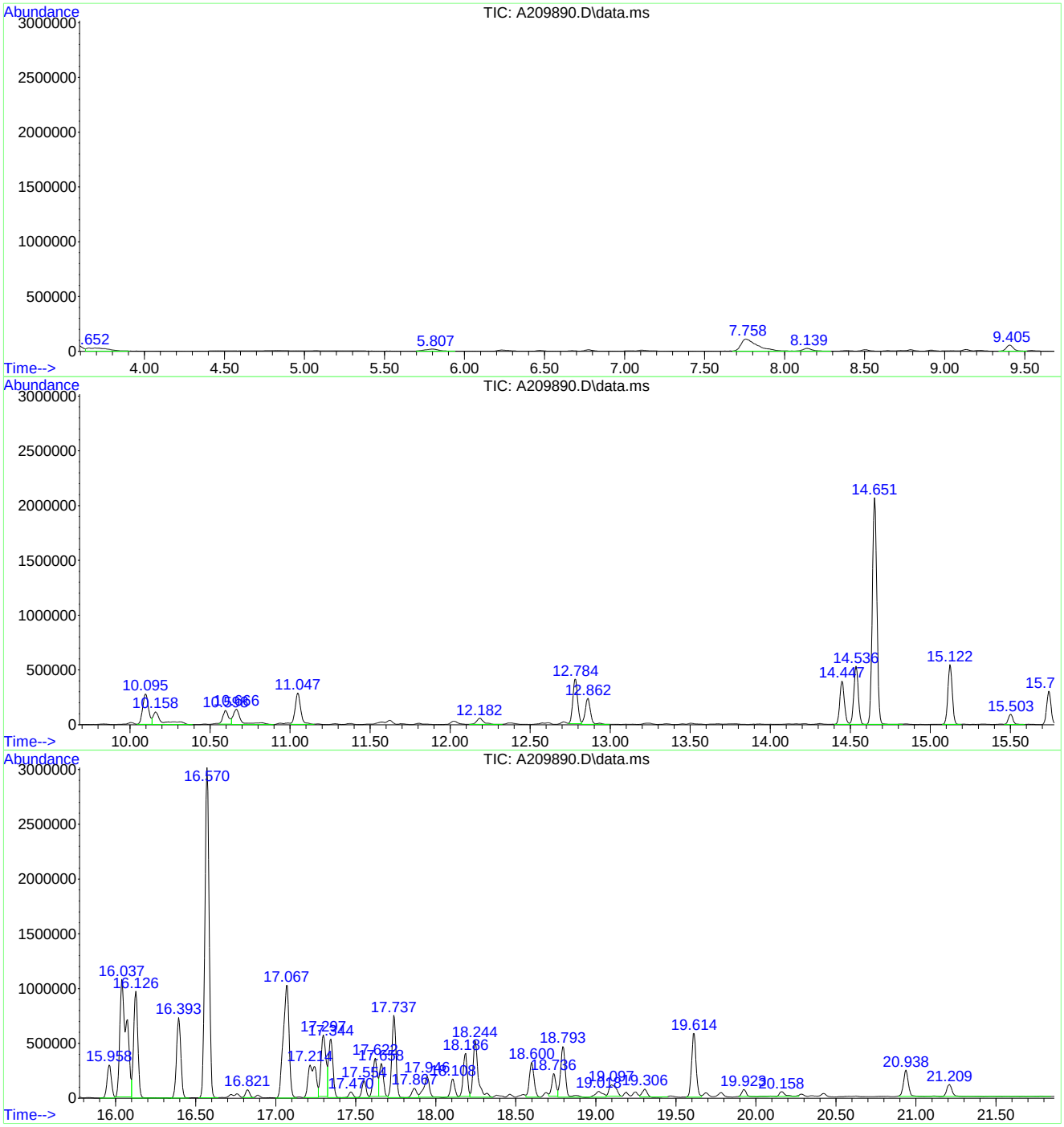
Sum of corrected areas: 42196608

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209890.D
Acq On : 12 Nov 2014 10:51 pm
Operator : CourtneM
Sample : jb80728-11
Misc : MS76458,VA7919,w,,,,5
ALS Vial : 26 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P



Library Search Compound Report

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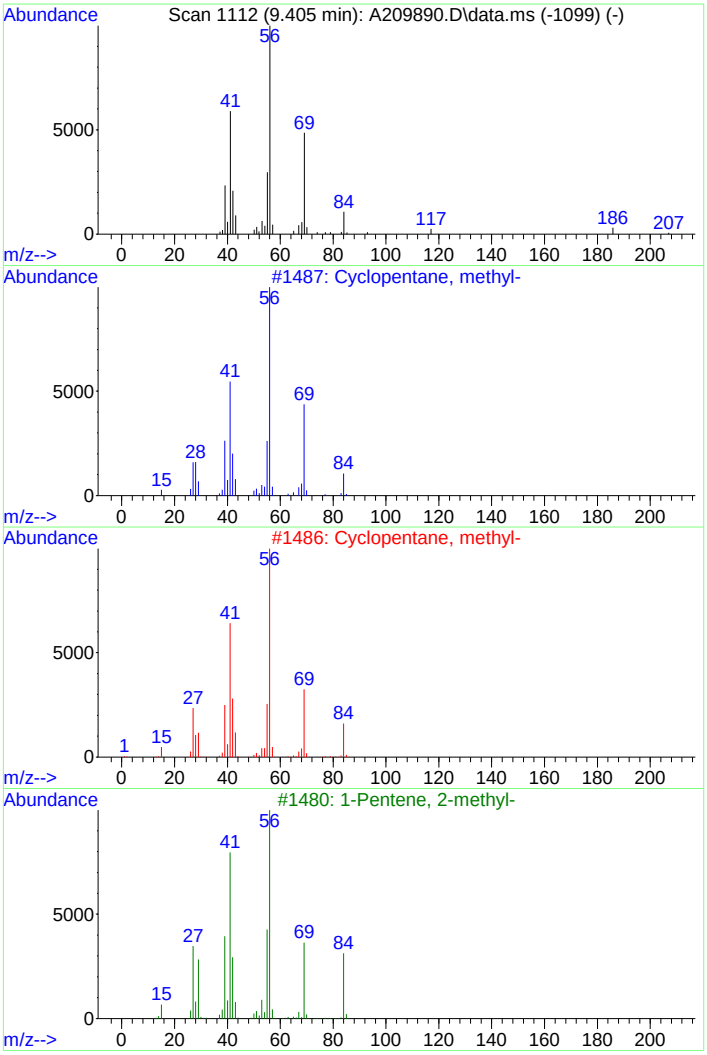
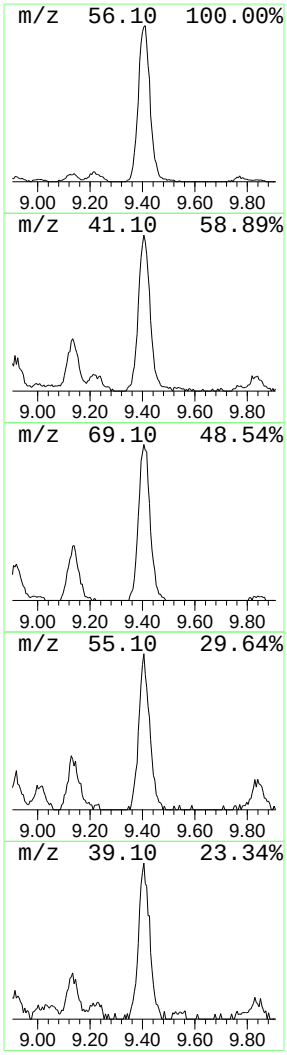
Peak Number 2 alkene Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.405	12.14 ug/L	171116	pentafluorobenzene	10.101

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	94
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	86
3	1-Pentene, 2-methyl-	84	C6H12	000763-29-1	83
4	Cyclopentane, methyl-	84	C6H12	000096-37-7	78
5	Tetramethylene diisocyanate	140	C6H8N2O2	004538-37-8	78





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Sample : jb80728-11
Misc : MS76458,VA7919,w,,,,5
ALS Vial : 26 Sample Multiplier: 1

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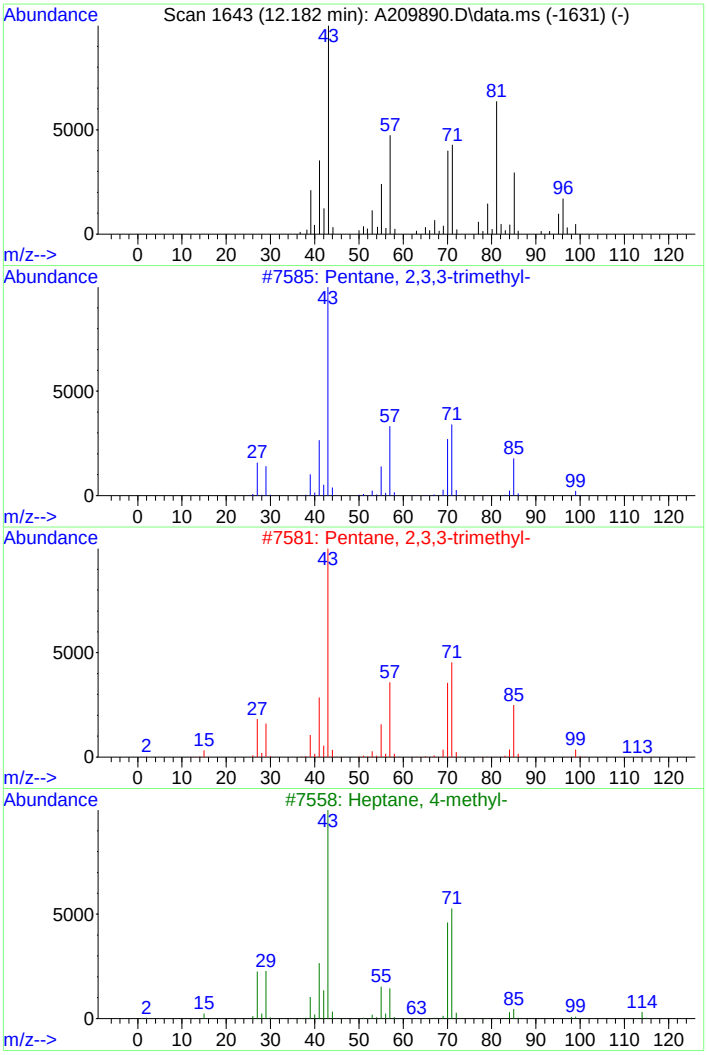
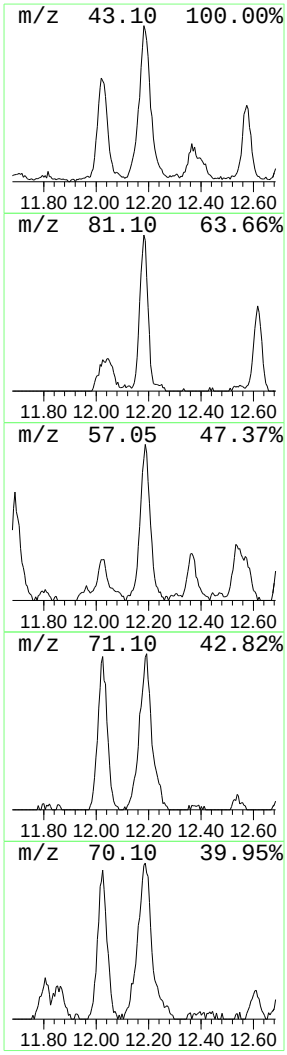
Peak Number 3 alkane Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.182	12.56 ug/L	169574	1,4-difluorobenzene	11.047

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	59
2	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	59
3	Heptane, 4-methyl-	114	C8H18	000589-53-7	47
4	Heptane, 4-methyl-	114	C8H18	000589-53-7	47
5	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	43





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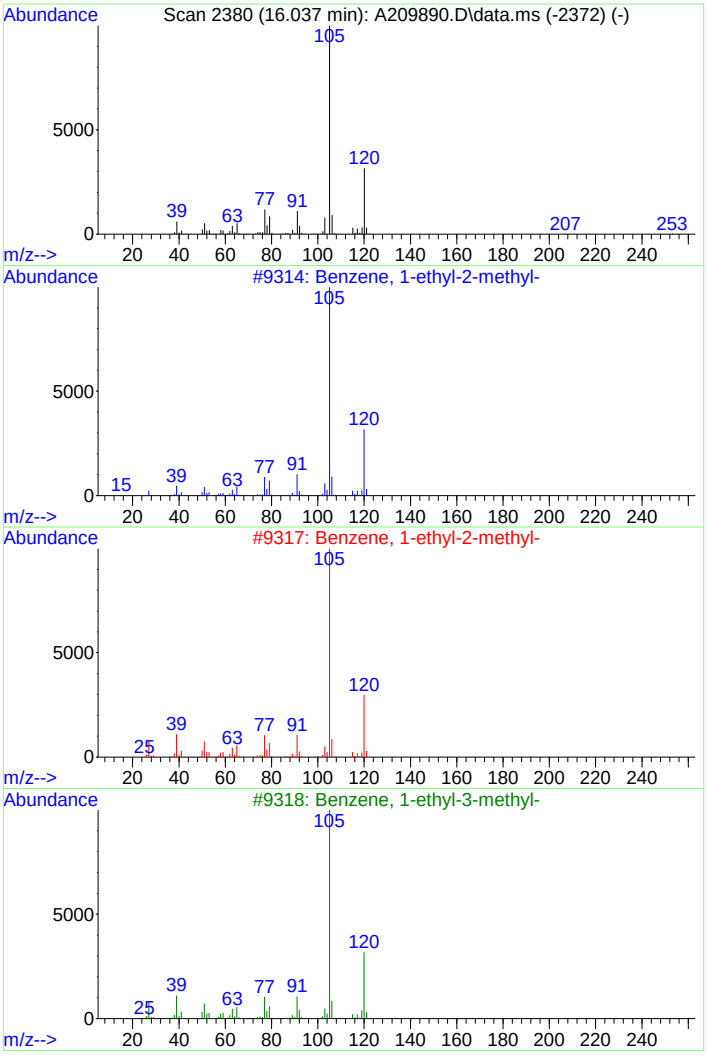
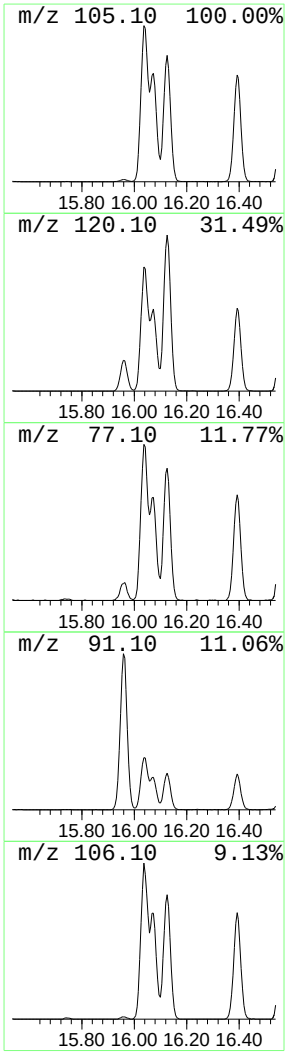
Peak Number 4 C3 alkyl benzene Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.037	61.13 ug/L	3206260	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	94
4	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	94
5	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91





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ALS Vial : 26 Sample Multiplier: 1

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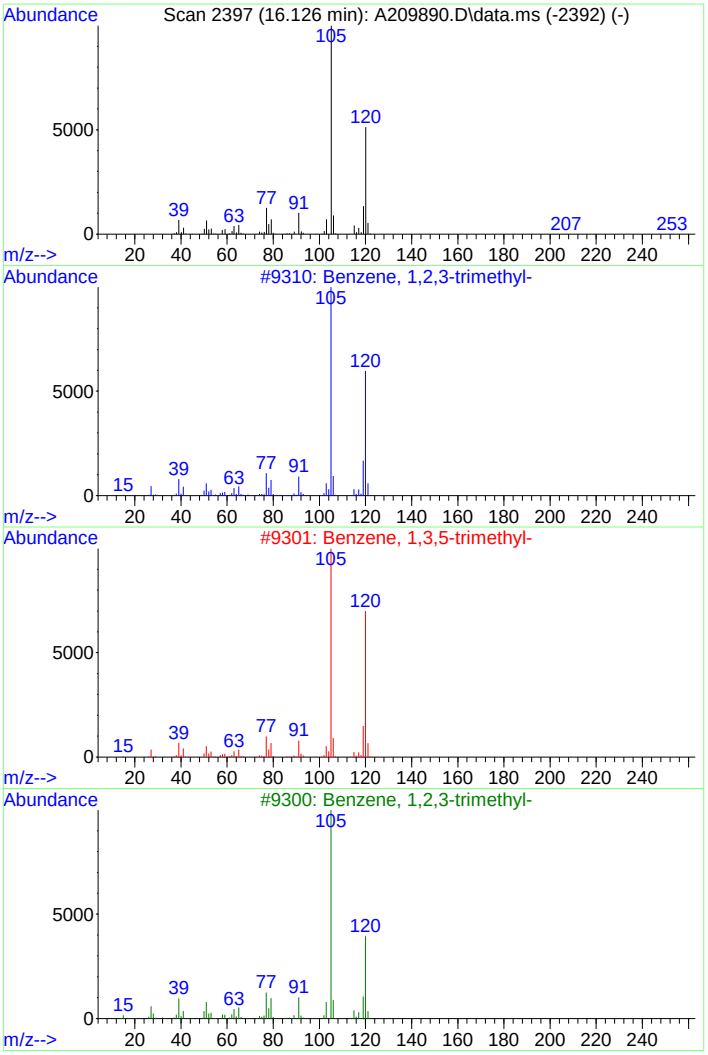
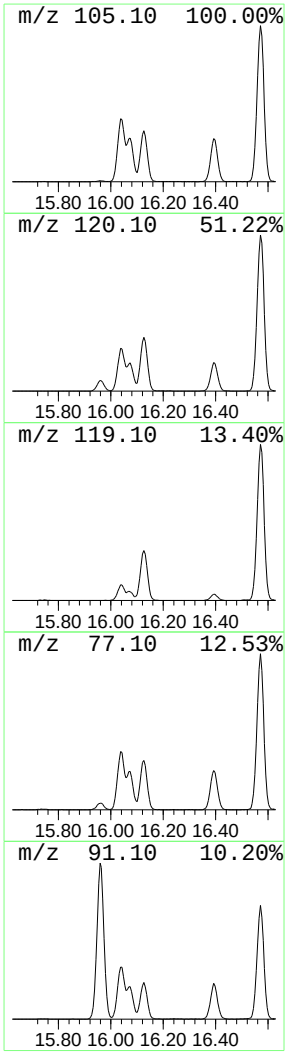
Peak Number 5 Benzene, 1,3,5-trimethyl- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.126	33.72 ug/L	1768760	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
3	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94





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Operator : CourtneM
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Misc : MS76458,VA7919,w,,,,5
ALS Vial : 26 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
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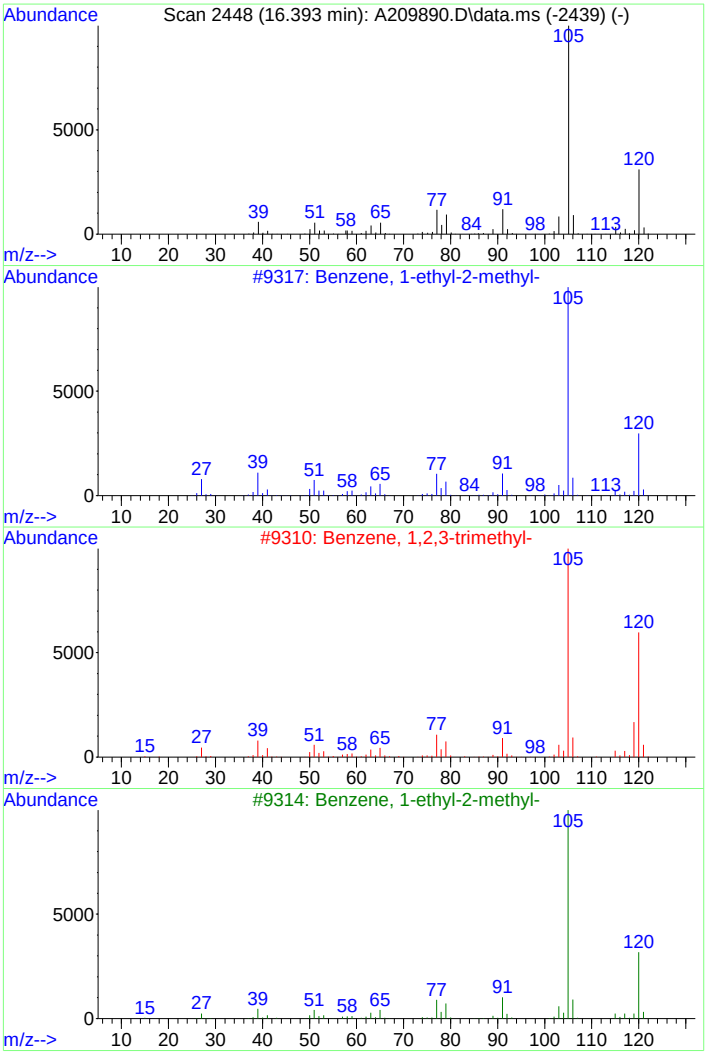
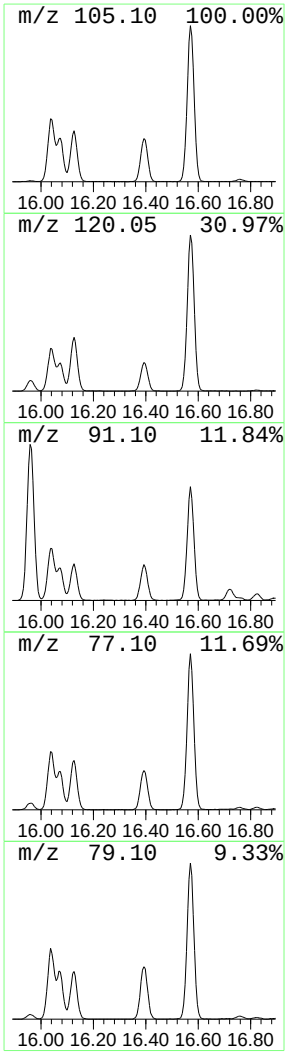
Peak Number 6 C3 alkyl benzene Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.393	26.36 ug/L	1382590	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
2	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	91
3	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	91
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
5	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91





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ALS Vial : 26 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
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TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

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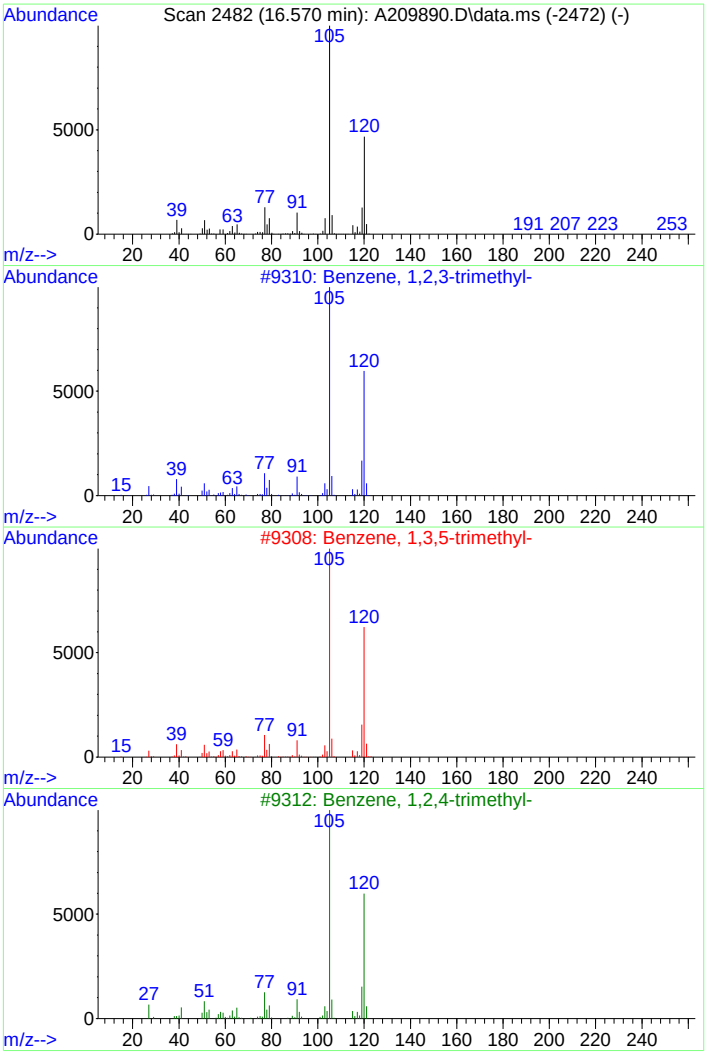
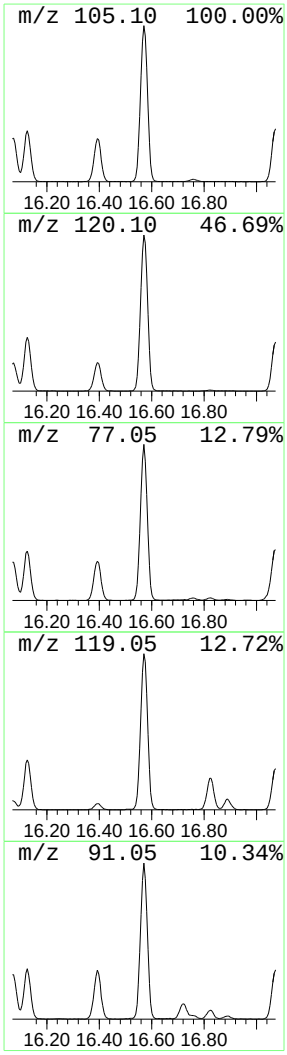
Peak Number 7 Benzene, 1,2,4-trimethyl- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.570	106.04 ug/L	5561590	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
5	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	94





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Operator : CourtneM
Sample : jb80728-11
Misc : MS76458,VA7919,w,,,,5
ALS Vial : 26 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
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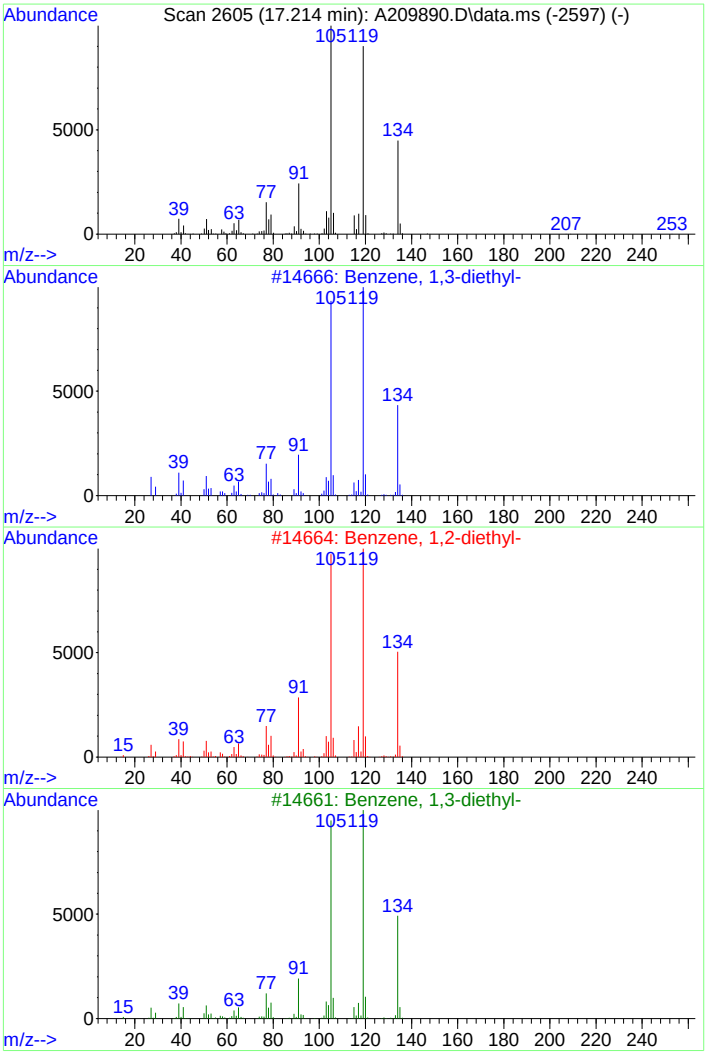
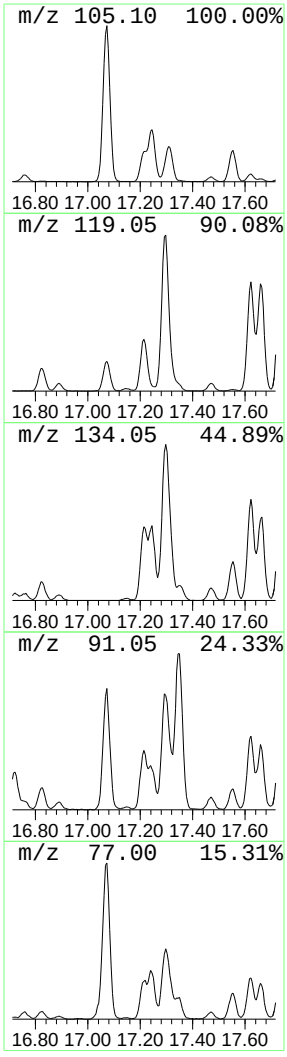
Peak Number 8 C4 alkyl benzene Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.214	19.29 ug/L	1011660	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	95
2	Benzene, 1,2-diethyl-	134	C10H14	000135-01-3	95
3	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	94
4	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	93
5	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	91





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Sample : jb80728-11
Misc : MS76458,VA7919,w,,,,5
ALS Vial : 26 Sample Multiplier: 1

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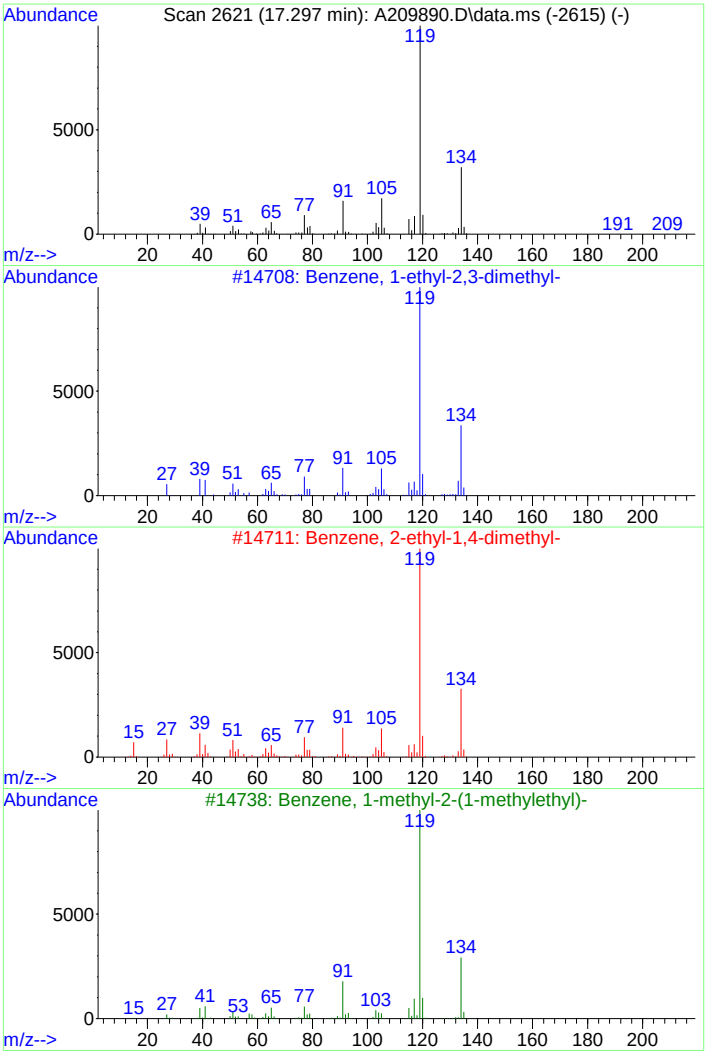
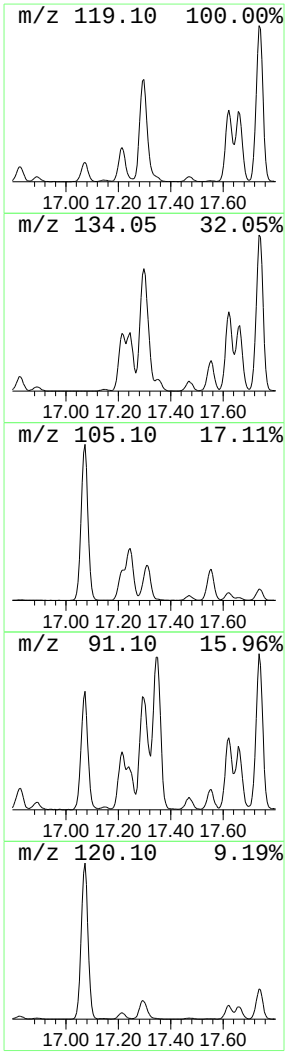
Peak Number 9 C4 alkyl benzene Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.297	23.78 ug/L	1246990	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	94
2	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	94
3	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	93
4	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	93
5	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	93





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Sample : jb80728-11
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TIC Library : C:\DATABASE\NIST08.L
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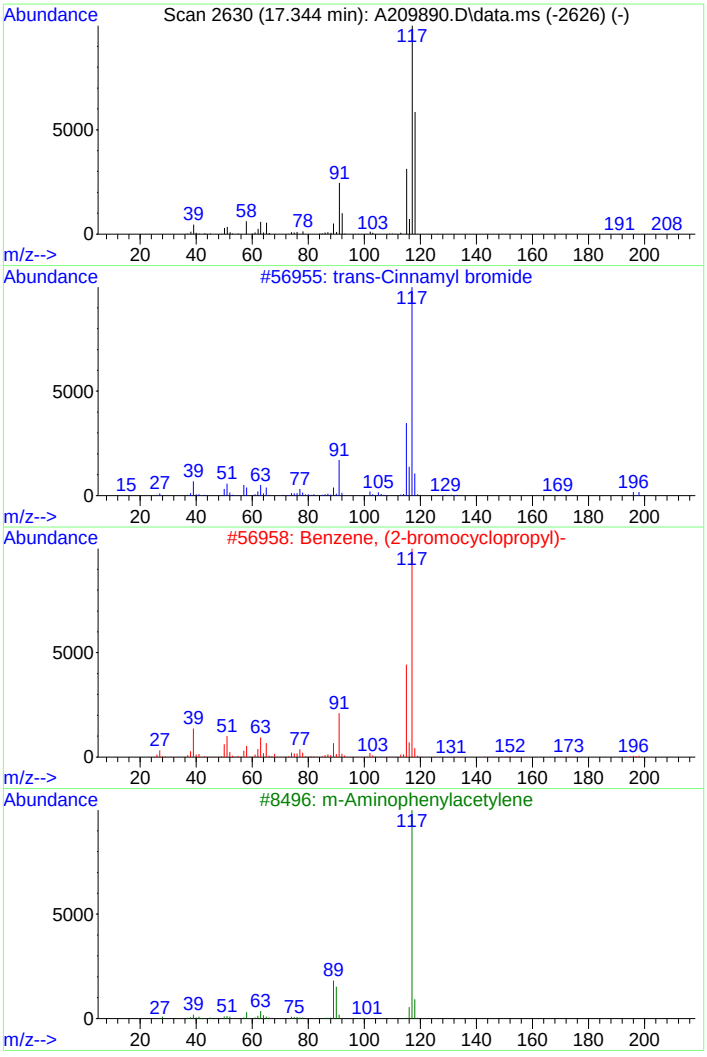
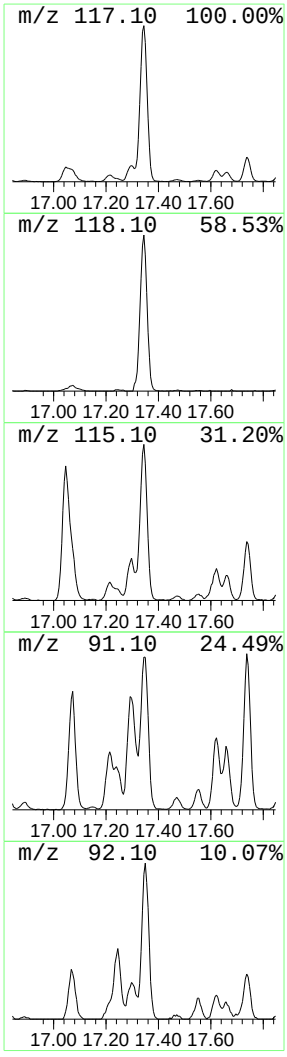
Peak Number 10 unknown Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.344	18.64 ug/L	977683	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	trans-Cinnamyl bromide	196	C9H9Br	026146-77-0	45
2	Benzene, (2-bromocyclopropyl)-	196	C9H9Br	036617-02-4	38
3	m-Aminophenylacetylene	117	C8H7N	054060-30-9	38
4	Benzaldehyde, 4-(1-phenyl-2-prop...	238	C16H14O2	1000277-56-1	36
5	Benzene, (2-bromocyclopropyl)-	196	C9H9Br	036617-02-4	23





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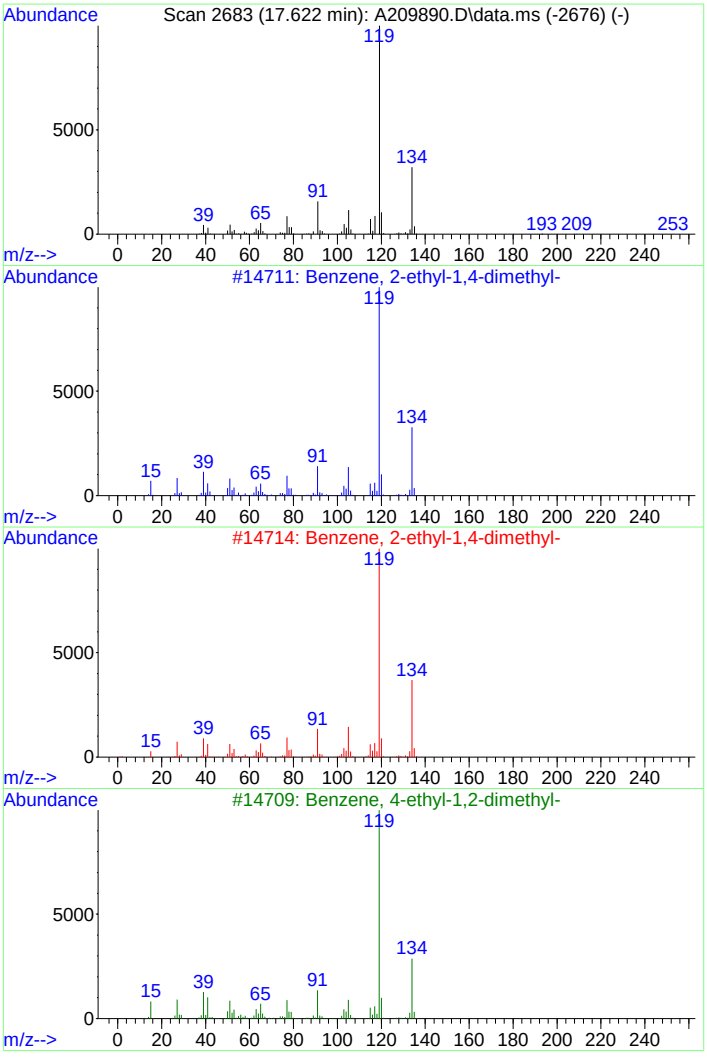
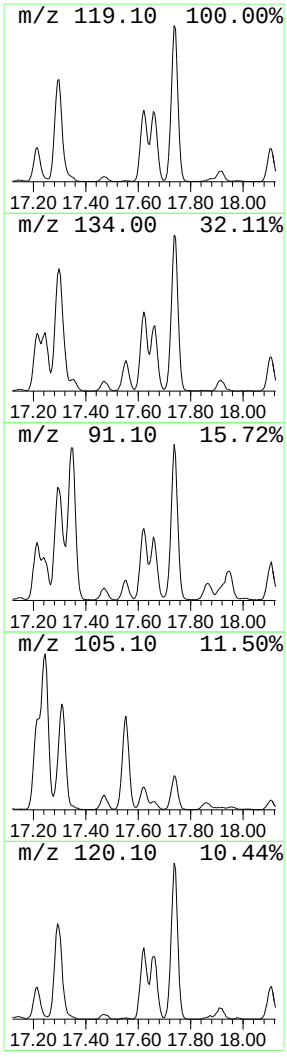
Peak Number 11 C4 alkyl benzene Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.622	12.58 ug/L	659743	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	94
2	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	94
3	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	94
4	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	94
5	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	94





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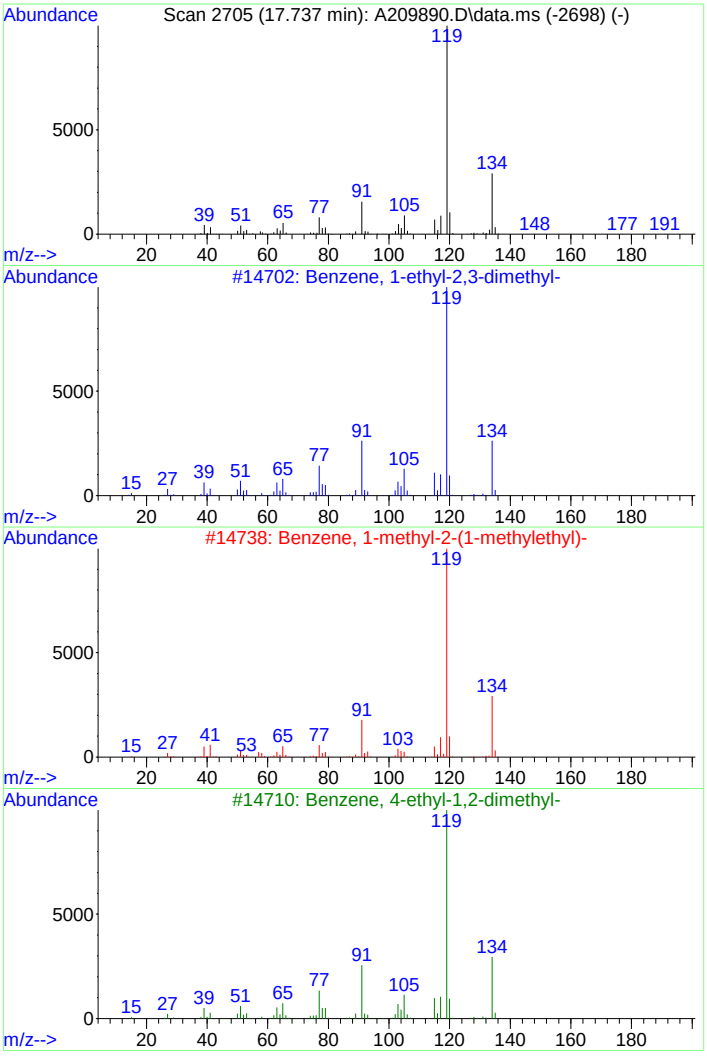
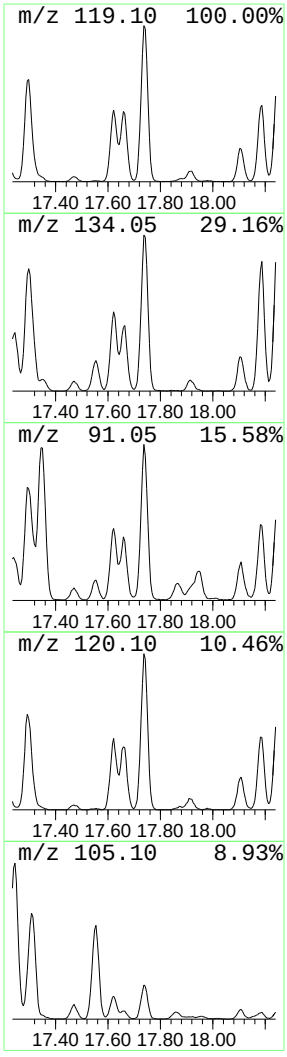
Peak Number 12 C4 alkyl benzene Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.737	25.59 ug/L	1341910	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	96
2	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	95
3	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	95
4	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	95
5	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	94





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ALS Vial : 26 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

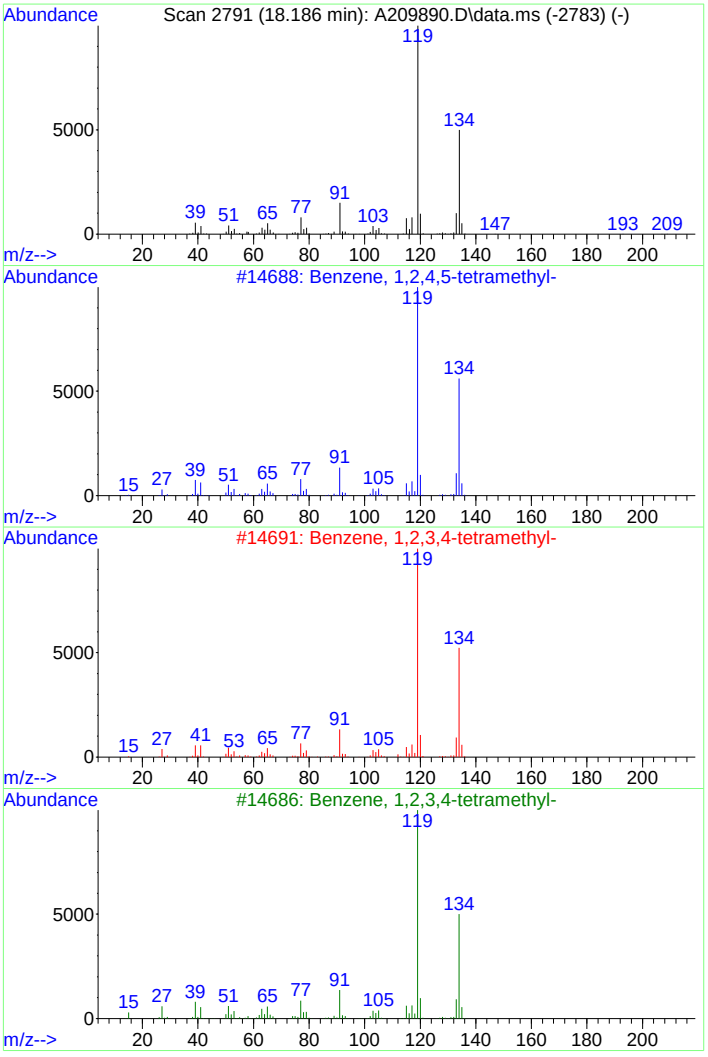
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

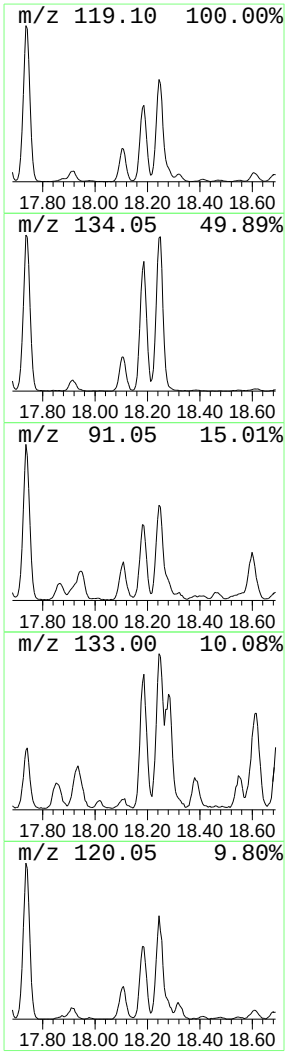
****

Peak Number 13 C4 alkyl benzene Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.186	13.18 ug/L	691185	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	95
2	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	95
3	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	95
4	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	95
5	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209890.D
Acq On : 12 Nov 2014 10:51 pm
Operator : CourtneM
Sample : jb80728-11
Misc : MS76458,VA7919,w,,,,5
ALS Vial : 26 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

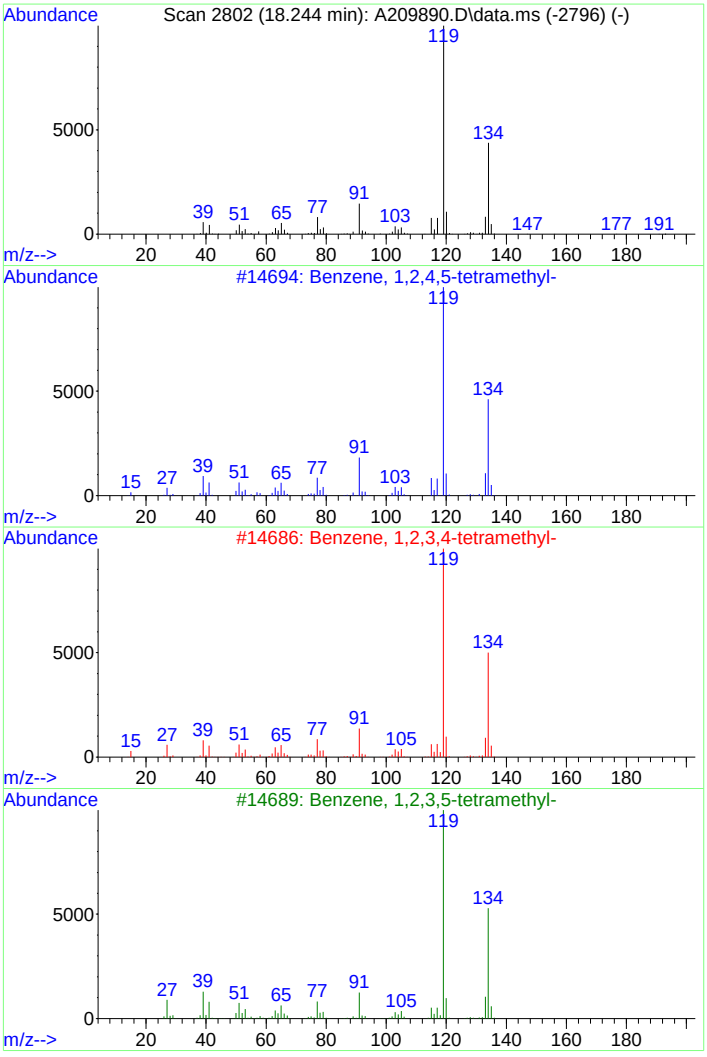
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

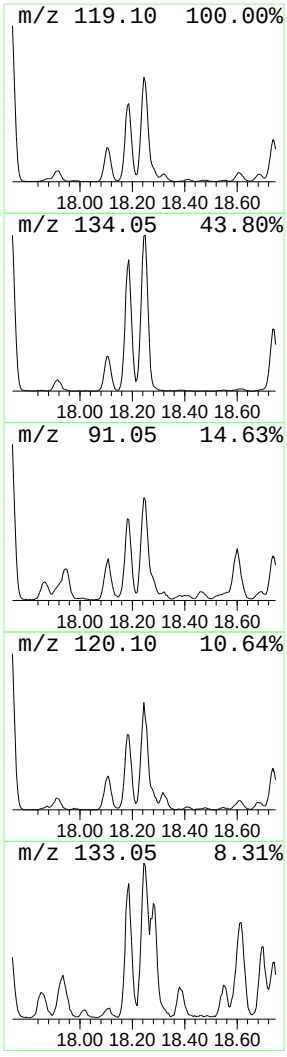
****

Peak Number 14 C4 alkyl benzene Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.244	21.52 ug/L	1128550	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	97
2	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	95
3	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	95
4	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	95
5	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	95





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209890.D
Acq On : 12 Nov 2014 10:51 pm
Operator : CourtneM
Sample : jb80728-11
Misc : MS76458,VA7919,w,,,,5
ALS Vial : 26 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

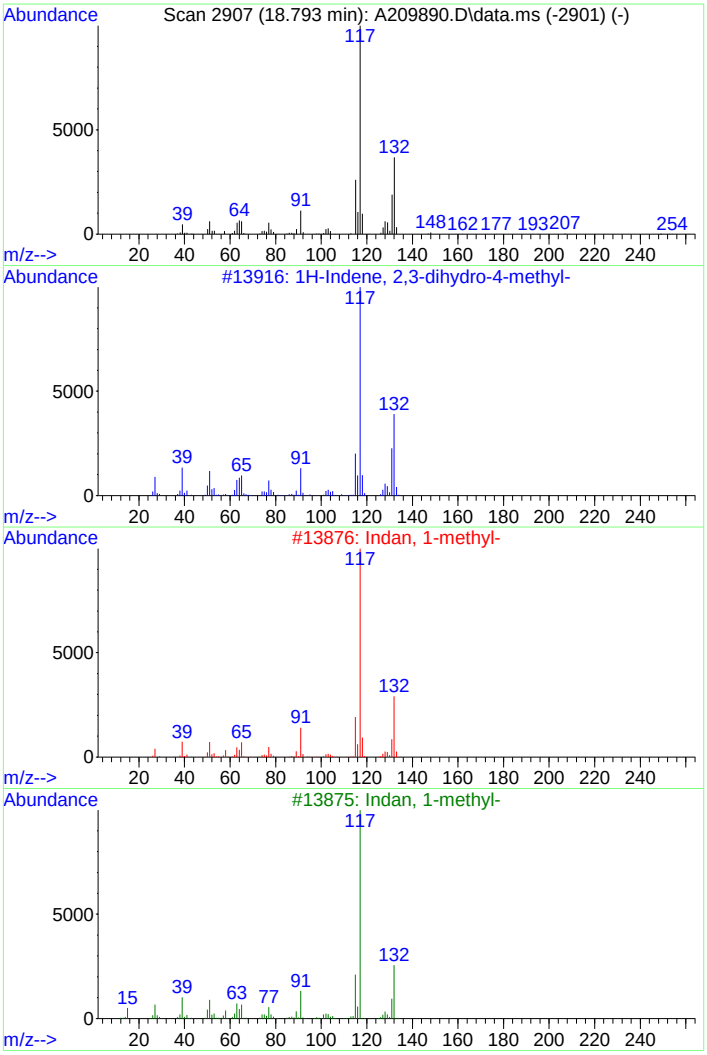
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

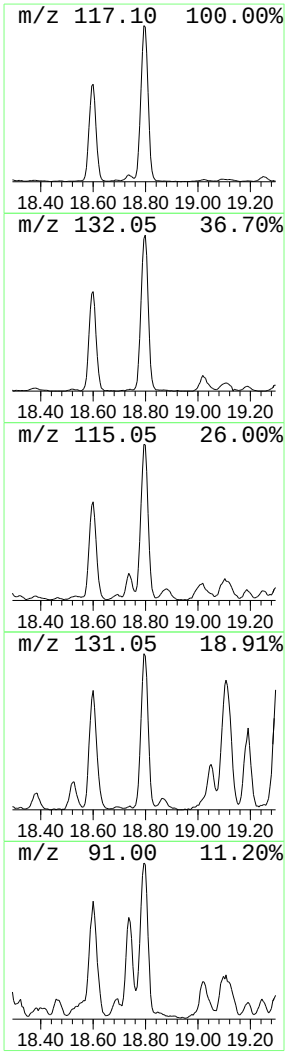
****

Peak Number 15 1H-Indene-dihydro-methyl- i... Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.793	18.30 ug/L	959744	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	94
2	Indan, 1-methyl-	132	C10H12	000767-58-8	91
3	Indan, 1-methyl-	132	C10H12	000767-58-8	90
4	Benzene, (1-methyl-1-propenyl)-,...	132	C10H12	000768-00-3	86
5	Benzene, 1-methyl-2-(2-propenyl)-	132	C10H12	001587-04-8	83





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209890.D
Acq On : 12 Nov 2014 10:51 pm
Operator : CourtneM
Sample : jb80728-11
Misc : MS76458,VA7919,w,,,,5
ALS Vial : 26 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

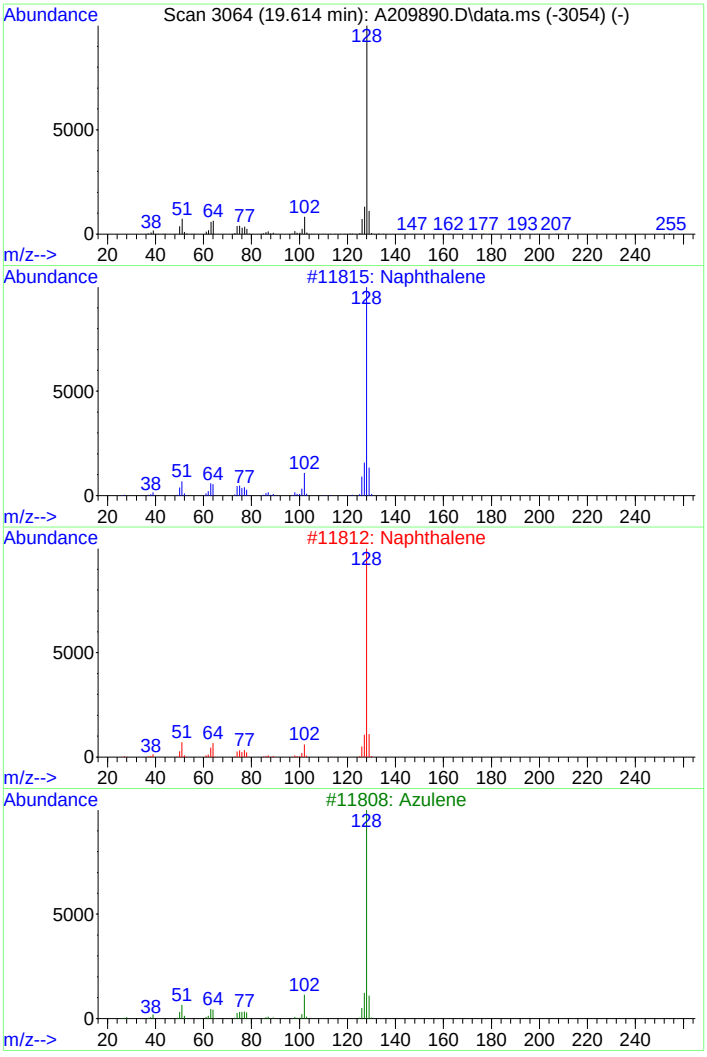
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

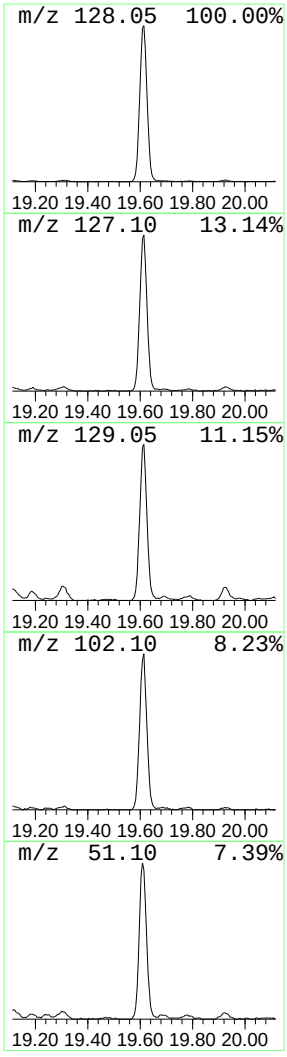
****

Peak Number 16 Naphthalene Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.614	21.79 ug/L	1142920	1,4-dichlorobenzene-d4	17.046

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Naphthalene	128	C10H8	000091-20-3	97
2	Naphthalene	128	C10H8	000091-20-3	95
3	Azulene	128	C10H8	000275-51-4	94
4	Naphthalene	128	C10H8	000091-20-3	94
5	Azulene	128	C10H8	000275-51-4	94





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209890.D
Acq On : 12 Nov 2014 10:51 pm
Operator : CourtneM
Sample : jb80728-11
Misc : MS76458,VA7919,w,,,,5
ALS Vial : 26 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
alkene	9.405	12.1	ug/L	171116	2	10.101	704535	50.0
alkane	12.182	12.6	ug/L	169574	3	11.047	674985	50.0
C3 alkyl benzene	16.037	61.1	ug/L	3206260	5	17.046	2622420	50.0
Benzene, 1,3,5-...	16.126	33.7	ug/L	1768760	5	17.046	2622420	50.0
C3 alkyl benzene	16.393	26.4	ug/L	1382590	5	17.046	2622420	50.0
Benzene, 1,2,4-...	16.570	106.0	ug/L	5561590	5	17.046	2622420	50.0
C4 alkyl benzene	17.214	19.3	ug/L	1011660	5	17.046	2622420	50.0
C4 alkyl benzene	17.297	23.8	ug/L	1246990	5	17.046	2622420	50.0
unknown	17.344	18.6	ug/L	977683	5	17.046	2622420	50.0
C4 alkyl benzene	17.622	12.6	ug/L	659743	5	17.046	2622420	50.0
C4 alkyl benzene	17.737	25.6	ug/L	1341910	5	17.046	2622420	50.0
C4 alkyl benzene	18.186	13.2	ug/L	691185	5	17.046	2622420	50.0
C4 alkyl benzene	18.244	21.5	ug/L	1128550	5	17.046	2622420	50.0
1H-Indene-dihyd...	18.793	18.3	ug/L	959744	5	17.046	2622420	50.0
Naphthalene	19.614	21.8	ug/L	1142920	5	17.046	2622420	50.0

Quantitation Report (LSC Reviewed)

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209873.D
Acq On : 12 Nov 2014 2:05 pm
Operator : CourtneM
Sample : mb
Misc : MS76628,VA7919,w,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 13 14:27:47 2014
Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Nov 13 13:59:58 2014
Response via : Initial Calibration

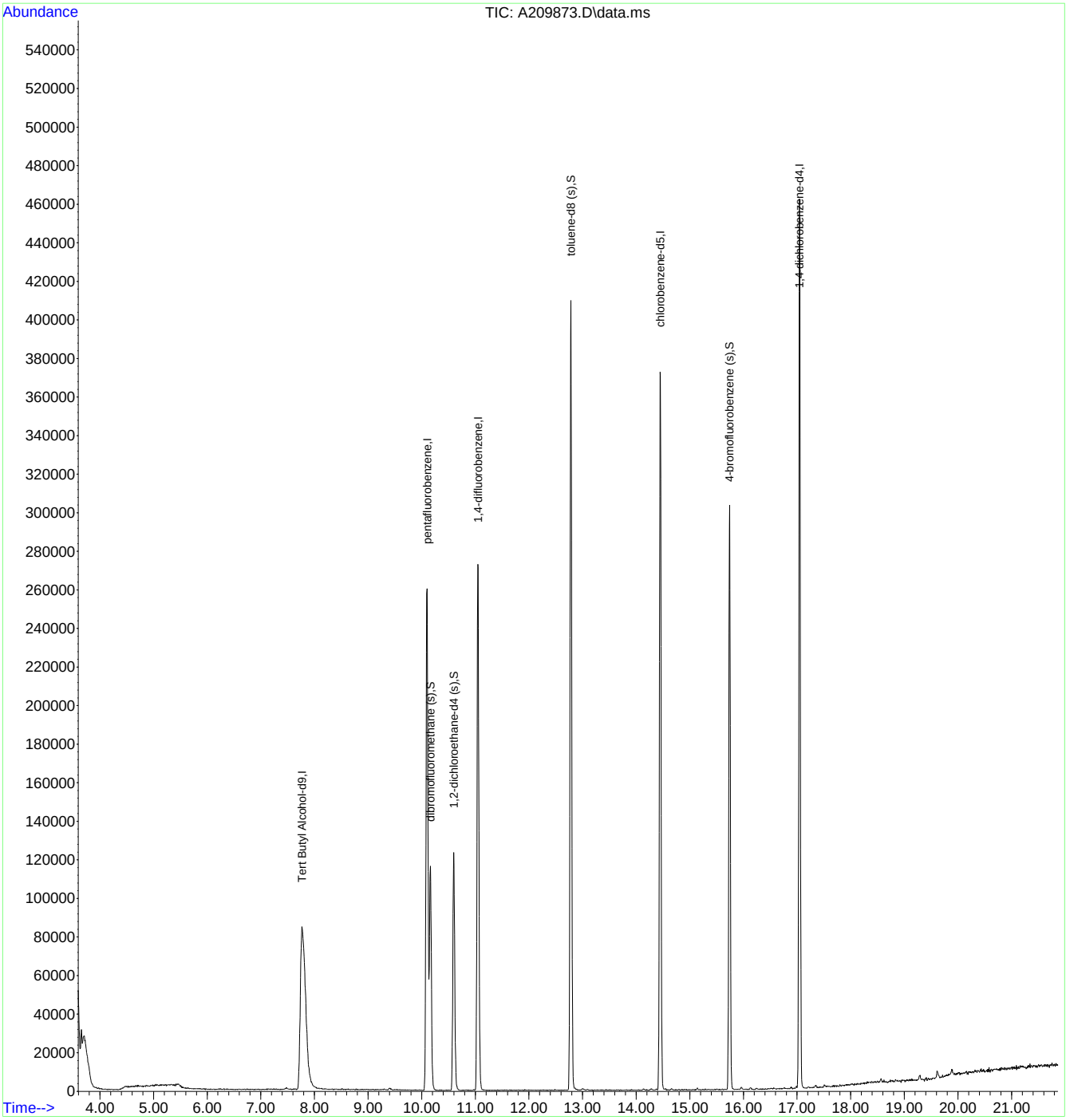
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.767	65	346911	500.00	ug/L	0.00
4) pentafluorobenzene	10.100	168	248686	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.052	114	280694	50.00	ug/L	0.00
83) chlorobenzene-d5	14.446	117	242706	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.045	152	139392	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.163	113	88692	46.22	ug/L	0.00
Spiked Amount 50.000	Range 59 - 130		Recovery = 92.44%			
47) 1,2-dichloroethane-d4 (s)	10.597	65	105918	45.50	ug/L	0.00
Spiked Amount 50.000	Range 65 - 123		Recovery = 91.00%			
75) toluene-d8 (s)	12.783	98	331676	51.13	ug/L	0.00
Spiked Amount 50.000	Range 77 - 125		Recovery = 102.26%			
101) 4-bromofluorobenzene (s)	15.738	95	119626	55.22	ug/L	0.00
Spiked Amount 50.000	Range 71 - 132		Recovery = 110.44%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (LSC Reviewed)

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209873.D
Acq On : 12 Nov 2014 2:05 pm
Operator : CourtneM
Sample : mb
Misc : MS76628,VA7919,w,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 13 14:27:47 2014
Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Nov 13 13:59:58 2014
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209873.D
Acq On : 12 Nov 2014 2:05 pm
Operator : CourtneM
Sample : mb
Misc : MS76628,VA7919,w,,,,1
ALS Vial : 9 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.6 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\MA7918.M
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

Signal : TIC: A209873.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.656	9	13	106	rVB2	31318	254591	10.48%	3.323%
2	5.445	106	355	451	rVV10	3175	170387	7.01%	2.224%
3	6.214	455	502	505	rVV3	653	5798	0.24%	0.076%
4	6.240	505	507	532	rVV3	792	3410	0.14%	0.045%
5	6.381	532	534	551	rVV3	636	2215	0.09%	0.029%
6	6.747	551	604	655	rVV3	672	11101	0.46%	0.145%
7	7.024	655	657	672	rVV4	454	1739	0.07%	0.023%
8	7.124	672	676	723	rVV4	735	7098	0.29%	0.093%
9	7.479	723	744	762	rVV3	1361	7174	0.30%	0.094%
10	7.615	762	770	783	rVV4	801	3052	0.13%	0.040%
11	7.767	783	799	913	rVV3	84775	612463	25.21%	7.993%
12	8.374	913	915	928	rVV3	647	2321	0.10%	0.030%
13	8.520	928	943	955	rVV4	874	3636	0.15%	0.047%
14	8.630	955	964	991	rVV4	689	4289	0.18%	0.056%
15	9.300	995	1092	1105	rVV4	742	11024	0.45%	0.144%
16	9.394	1105	1110	1169	rVB3	1215	7214	0.30%	0.094%
17	9.734	1169	1175	1188	rVB3	479	1418	0.06%	0.019%
18	9.953	1204	1217	1234	rVB3	337	842	0.03%	0.011%
19	10.100	1234	1245	1275	rBV2	260142	944804	38.90%	12.331%
20	10.372	1296	1297	1317	rVB2	447	1084	0.04%	0.014%
21	10.597	1330	1340	1368	rVB	123452	295787	12.18%	3.860%
22	10.822	1375	1383	1391	rBV3	351	903	0.04%	0.012%
23	11.046	1417	1426	1462	rVB	272795	637027	26.23%	8.314%
24	11.271	1466	1469	1478	rBV2	409	792	0.03%	0.010%
25	11.925	1562	1594	1598	rBV3	534	2014	0.08%	0.026%
26	12.035	1608	1615	1631	rBV3	298	1133	0.05%	0.015%
27	12.485	1699	1701	1722	rBV3	642	2050	0.08%	0.027%
28	12.783	1748	1758	1789	rVB	409638	863619	35.55%	11.271%
29	13.002	1789	1800	1831	rBV4	975	4472	0.18%	0.058%
30	13.280	1851	1853	1867	rVB3	358	1007	0.04%	0.013%
31	13.583	1901	1911	1918	rBV2	338	871	0.04%	0.011%
32	13.677	1923	1929	1932	rVB2	485	923	0.04%	0.012%
33	13.803	1938	1953	1955	rBV3	398	1363	0.06%	0.018%
34	13.824	1955	1957	1970	rVB3	526	1270	0.05%	0.017%
35	13.918	1970	1975	1996	rBV4	569	2302	0.09%	0.030%
36	14.038	1996	1998	2014	rBV4	312	828	0.03%	0.011%
37	14.132	2014	2016	2033	rVB4	891	2268	0.09%	0.030%
38	14.378	2039	2063	2067	rBV3	697	2264	0.09%	0.030%
39	14.446	2067	2076	2099	rVB	372435	740119	30.47%	9.659%
40	14.587	2101	2103	2111	rVB3	436	841	0.03%	0.011%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209873.D
Acq On : 12 Nov 2014 2:05 pm
Operator : CourtneM
Sample : mb
Misc : MS76628,VA7919,w,,,,1
ALS Vial : 9 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.6 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\MA7918.M
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

41	14.660	2111	2117	2148	rBV4	930	4410	0.18%	0.058%
42	14.901	2160	2163	2177	rBV5	491	1254	0.05%	0.016%
43	14.985	2177	2179	2189	rVB4	464	890	0.04%	0.012%
44	15.084	2189	2198	2203	rBV4	463	1174	0.05%	0.015%
45	15.142	2203	2209	2226	rBV7	1248	2835	0.12%	0.037%
46	15.288	2235	2237	2314	rBV6	530	4271	0.18%	0.056%
47	15.743	2314	2324	2361	rVB	303020	573273	23.60%	7.482%
48	15.958	2361	2365	2388	rVB7	1283	3664	0.15%	0.048%
49	16.988	2394	2562	2565	rBV6	1758	23858	0.98%	0.311%
50	17.045	2565	2573	3490	rBV3	460780	2429069	100.00%	31.702%

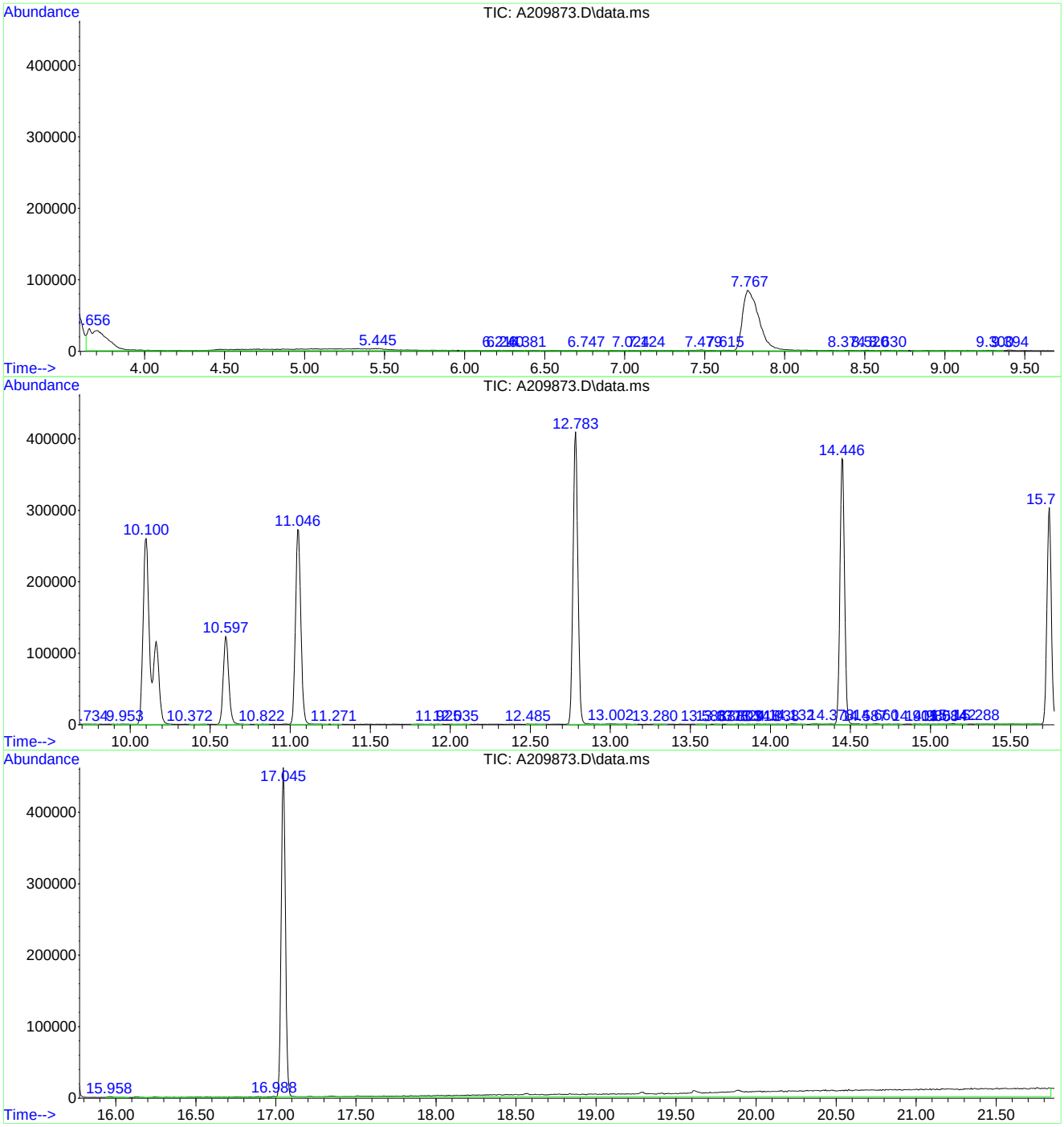
Sum of corrected areas: 7662211

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209873.D
Acq On : 12 Nov 2014 2:05 pm
Operator : CourtneM
Sample : mb
Misc : MS76628,VA7919,w,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P



Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\A\va7919-7920\
Data File : A209873.D
Acq On : 12 Nov 2014 2:05 pm
Operator : CourtneM
Sample : mb
Misc : MS76628,VA7919,w,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	Internal Standard RT	Internal Standard Resp	Internal Standard Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\A\
Data File : A209911.D
Acq On : 13 Nov 2014 9:40 am
Operator : CourtneM
Sample : mb
Misc : MS76628,VA7921,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 13 15:24:49 2014
Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 12 09:40:25 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.770	65	340550	500.00	ug/L	0.00
4) pentafluorobenzene	10.098	168	238941	50.00	ug/L	0.00
53) 1,4-difluorobenzene	11.050	114	274337	50.00	ug/L	0.00
83) chlorobenzene-d5	14.449	117	238472	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.049	152	146978	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.166	113	88790	48.16	ug/L	0.00
Spiked Amount 50.000	Range 59 - 130		Recovery = 96.32%			
47) 1,2-dichloroethane-d4 (s)	10.595	65	102459	45.81	ug/L	0.00
Spiked Amount 50.000	Range 65 - 123		Recovery = 91.62%			
75) toluene-d8 (s)	12.781	98	326191	51.45	ug/L	0.00
Spiked Amount 50.000	Range 77 - 125		Recovery = 102.90%			
101) 4-bromofluorobenzene (s)	15.741	95	119123	52.11	ug/L	0.00
Spiked Amount 50.000	Range 71 - 132		Recovery = 104.22%			

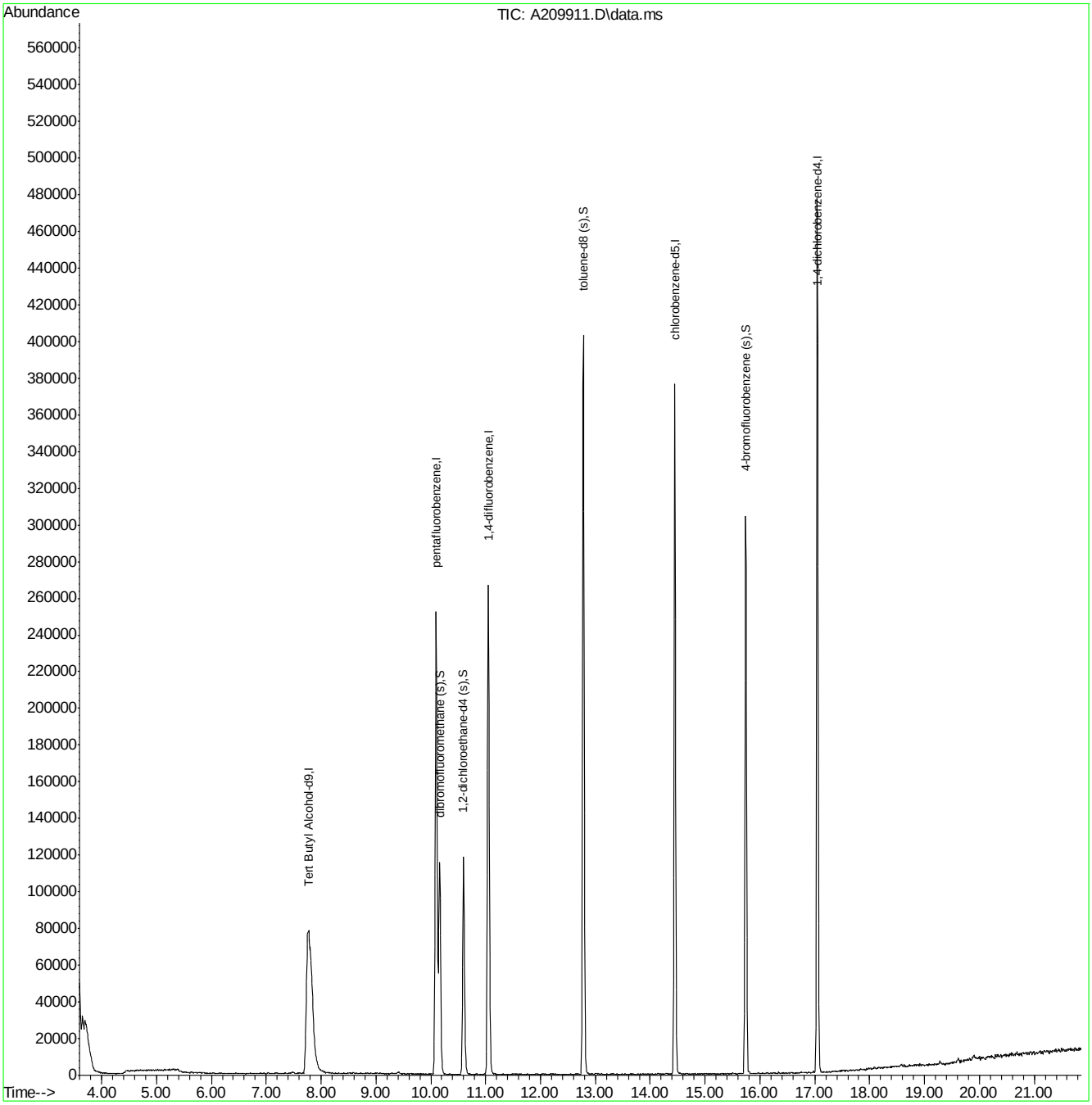
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\A\
Data File : A209911.D
Acq On : 13 Nov 2014 9:40 am
Operator : CourtneM
Sample : mb
Misc : MS76628,VA7921,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 13 15:24:49 2014
Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 12 09:40:25 2014
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209911.D
Acq On : 13 Nov 2014 9:40 am
Operator : CourtneM
Sample : mb
Misc : MS76628,VA7921,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10 Area counts
Start Thrs: 0.1 Max Peaks: 50
Stop Thrs : 0.4 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\MA7918.M
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

Signal : TIC: A209911.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.879	53	55	92	rVB3	1963	8761	0.48%	0.117%
2	4.083	92	94	129	rVB3	582	3513	0.19%	0.047%
3	4.308	129	137	145	rBV3	407	1126	0.06%	0.015%
4	5.396	151	345	398	rBV7	2639	121038	6.64%	1.612%
5	5.678	398	399	412	rVB3	663	1829	0.10%	0.024%
6	5.752	412	413	443	rVB5	816	4158	0.23%	0.055%
7	6.018	463	464	481	rBV3	580	1361	0.07%	0.018%
8	6.175	493	494	579	rVB4	899	9819	0.54%	0.131%
9	6.709	579	596	631	rBV4	656	5436	0.30%	0.072%
10	6.954	638	643	652	rVB2	578	1196	0.07%	0.016%
11	7.038	652	659	715	rBV5	721	7177	0.39%	0.096%
12	7.472	715	742	760	rVB4	967	4434	0.24%	0.059%
13	7.619	760	770	776	rVB4	653	1600	0.09%	0.021%
14	7.776	781	800	906	rVB3	78364	594706	32.65%	7.920%
15	8.377	906	915	921	rBV4	413	1144	0.06%	0.015%
16	8.492	921	937	979	rBV4	603	4328	0.24%	0.058%
17	9.026	979	1039	1065	rVB5	738	9455	0.52%	0.126%
18	9.292	1065	1090	1106	rBV3	592	3341	0.18%	0.044%
19	9.418	1106	1114	1123	rVB4	1051	2496	0.14%	0.033%
20	9.475	1123	1125	1159	rBV3	350	919	0.05%	0.012%
21	10.098	1233	1244	1273	rVB2	251981	919204	50.46%	12.241%
22	10.595	1329	1339	1360	rBV	118804	290455	15.94%	3.868%
23	11.050	1415	1426	1453	rVB	266907	620684	34.07%	8.266%
24	11.881	1576	1585	1590	rBV3	355	1119	0.06%	0.015%
25	12.462	1688	1696	1704	rVB2	367	1255	0.07%	0.017%
26	12.781	1747	1757	1777	rBV	402919	846273	46.46%	11.270%
27	13.006	1795	1800	1814	rVB3	678	2150	0.12%	0.029%
28	13.309	1855	1858	1867	rVB2	390	1033	0.06%	0.014%
29	13.780	1943	1948	1959	rBV3	358	886	0.05%	0.012%
30	14.141	2013	2017	2025	rVB3	448	900	0.05%	0.012%
31	14.287	2042	2045	2052	rVB4	750	1297	0.07%	0.017%
32	14.449	2066	2076	2101	rVB	376145	721747	39.62%	9.612%
33	14.674	2112	2119	2123	rVB5	639	1421	0.08%	0.019%
34	14.831	2144	2149	2154	rBV4	389	845	0.05%	0.011%

MA7918.M Thu Nov 13 15:24:55 2014 RPT1 Page: 1

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209911.D
Acq On : 13 Nov 2014 9:40 am
Operator : CourtneM
Sample : mb
Misc : MS76628,VA7921,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10 Area counts
Start Thrs: 0.1 Max Peaks: 50
Stop Thrs : 0.4 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\MA7918.M
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

35	14.862	2154	2155	2165	rVB2	470	912	0.05%	0.012%
36	14.983	2171	2178	2180	rBV3	621	1057	0.06%	0.014%
37	15.051	2180	2191	2194	rVB4	424	1144	0.06%	0.015%
38	15.401	2255	2258	2267	rBV4	418	888	0.05%	0.012%
39	15.506	2267	2278	2285	rBV5	923	2030	0.11%	0.027%
40	15.657	2293	2307	2314	rBV4	399	1207	0.07%	0.016%
41	15.741	2314	2323	2338	rVB	304201	571847	31.39%	7.616%
42	15.976	2338	2368	2377	rBV6	706	3465	0.19%	0.046%
43	16.118	2377	2395	2396	rBV4	500	1530	0.08%	0.020%
44	16.128	2396	2397	2414	rBV4	424	1262	0.07%	0.017%
45	16.227	2414	2416	2428	rVB4	669	1474	0.08%	0.020%
46	16.343	2428	2438	2439	rBV3	1023	1157	0.06%	0.015%
47	16.416	2439	2452	2455	rBV5	498	1091	0.06%	0.015%
48	16.756	2457	2517	2557	rBV6	945	15384	0.84%	0.205%
49	17.043	2564	2572	2588	rVB	476700	885738	48.62%	11.796%
50	21.808	2588	3483	3489	rBV	13956	1821656	100.00%	24.260%

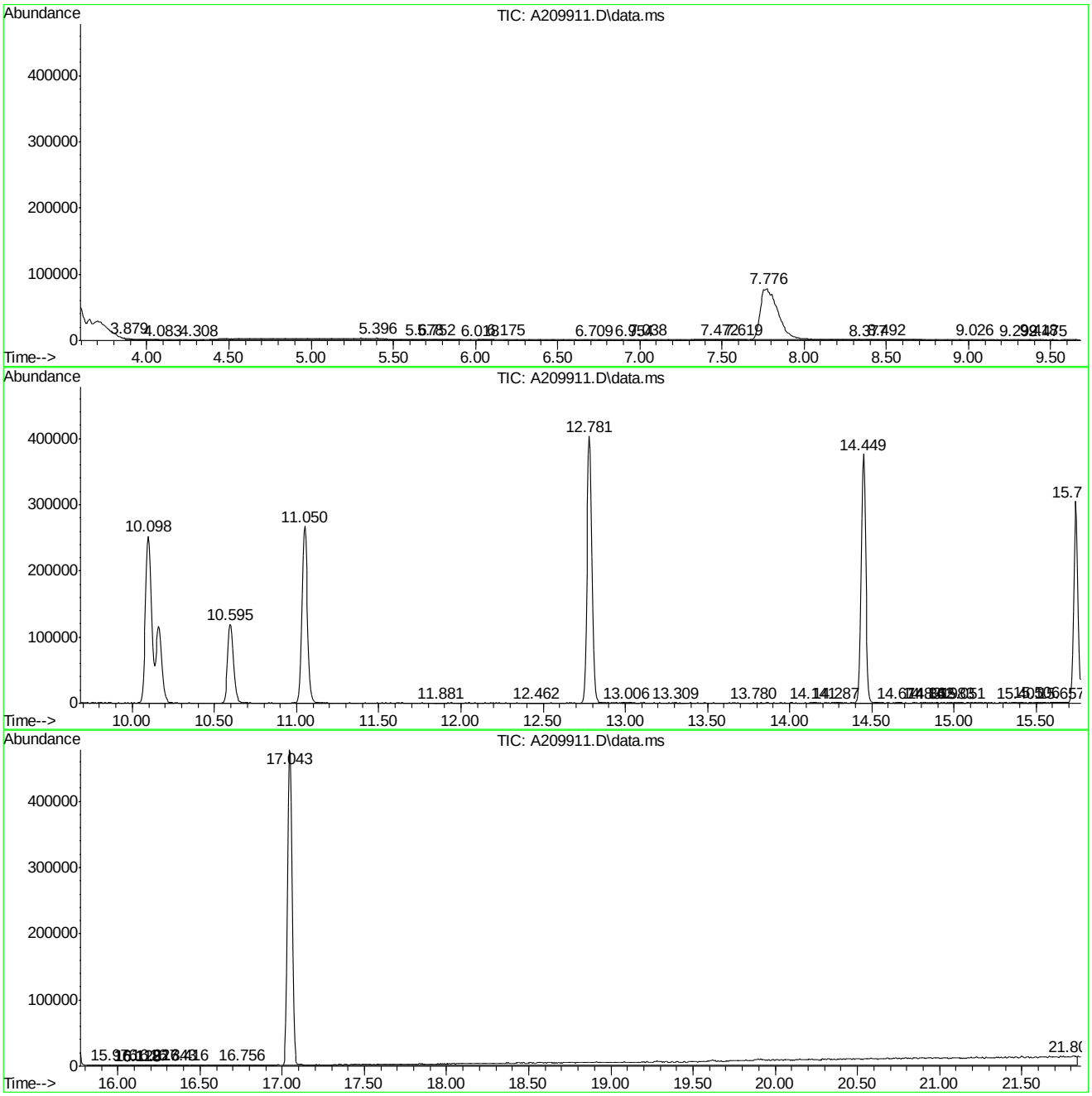
Sum of corrected areas: 7508948

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\A\
Data File : A209911.D
Acq On : 13 Nov 2014 9:40 am
Operator : CourtneM
Sample : mb
Misc : MS76628,VA7921,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209911.D
Acq On : 13 Nov 2014 9:40 am
Operator : CourtneM
Sample : mb
Misc : MS76628,VA7921,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

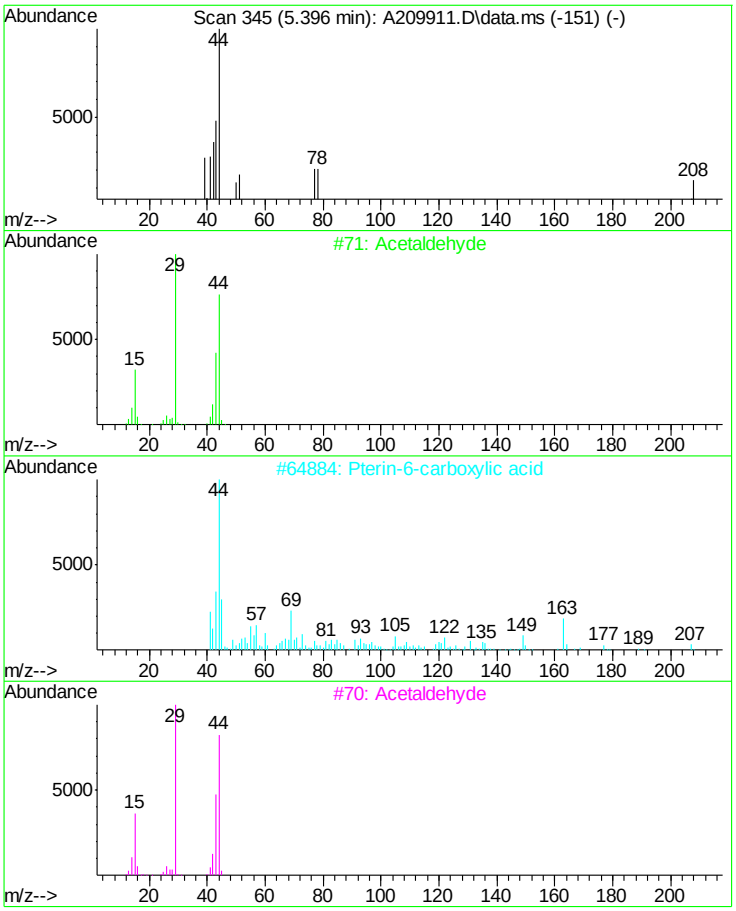
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

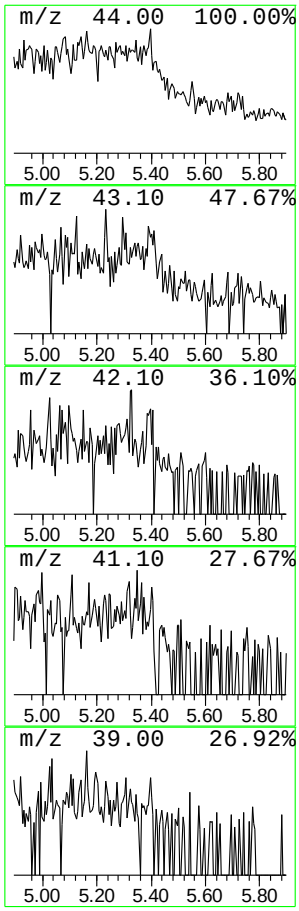
****

Peak Number 1 Acetaldehyde Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.40	6.58 ug/L	121038	pentafluorobenzene	10.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Acetaldehyde	44	C2H4O	000075-07-0	4
2	Pterin-6-carboxylic acid	207	C7H5N5O3	000948-60-7	4
3	Acetaldehyde	44	C2H4O	000075-07-0	4
4	N,N-Dimethyl-dimethylphosphoric ...	121	C4H12NOP	050663-05-3	2
5	Pyridine-3-carboxamide, 1,2-dihy...	182	C8H10N2OS	079927-21-2	2





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\A\
Data File : A209911.D
Acq On : 13 Nov 2014 9:40 am
Operator : CourtneM
Sample : mb
Misc : MS76628,VA7921,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

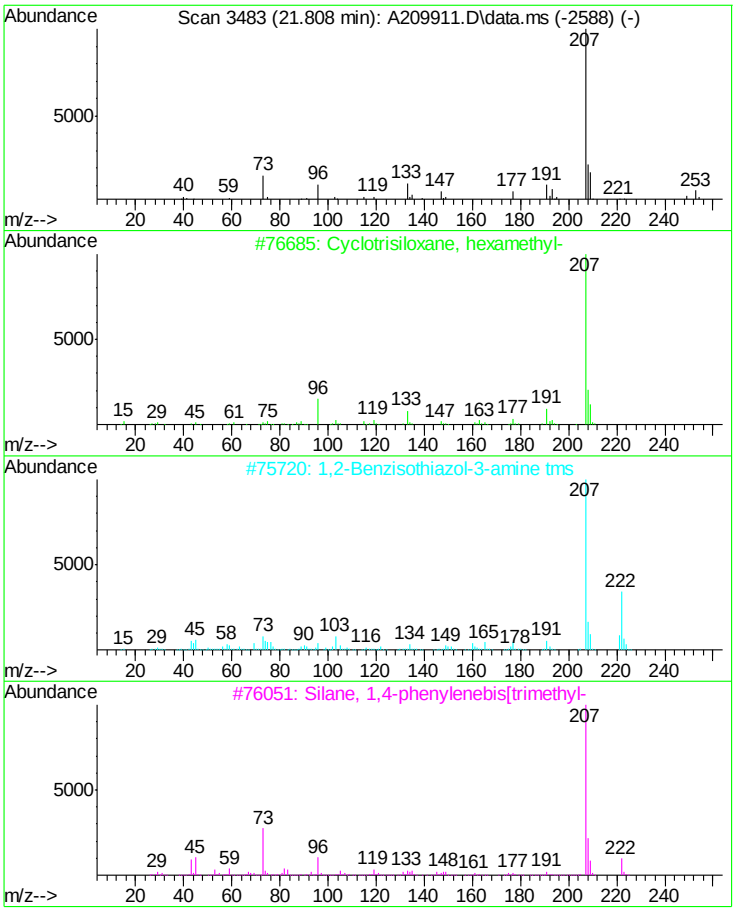
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

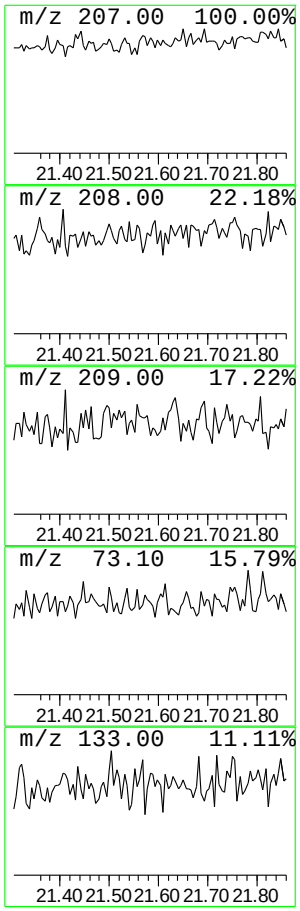
****

Peak Number 2 Cyclotrisiloxane, hexamethyl- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
21.81	102.83 ug/L	1821660	1,4-dichlorobenzene-d4	17.05

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclotrisiloxane, hexamethyl-	222	C6H18O3Si3	000541-05-9	72
2	1,2-Benzisothiazol-3-amine tms	222	C10H14N2SSi	1000332-66-2	64
3	Silane, 1,4-phenylenebis[trimethyl-	222	C12H22Si2	013183-70-5	64
4	Cyclotrisiloxane, hexamethyl-	222	C6H18O3Si3	000541-05-9	59
5	1,1,1,3,5,5,5-Heptamethyltrisilo...	222	C7H22O2Si3	001873-88-7	56





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\A\
Data File : A209911.D
Acq On : 13 Nov 2014 9:40 am
Operator : CourtneM
Sample : mb
Misc : MS76628,VA7921,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA7918.M
Quant Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: RTENOX.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Acetaldehyde	5.40	6.6	ug/L	121038	2	10.10	919204	50.0
Cyclotrisiloxane,...	21.81	102.8	ug/L	1821660	5	17.05	885738	50.0

New Jersey ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: TG Run ID: MA35338
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:23	MA35338-STD1	1		STDA
10:30	MA35338-STD2	1		STDB
10:36	ZZZZZZ	1		
10:41	ZZZZZZ	1		
10:54	MA35338-ICV1	1		
11:01	MA35338-ICV2	1		
11:18	MA35338-ICB1	1		
11:23	MA35338-ICCV1	1		
11:38	MA35338-CCB1	1		
11:50	MA35338-CRI1	1		
11:56	MA35338-CRID1	1		
12:02	MA35338-CRIA1	1		
12:08	MA35338-CRID2	1		
12:16	MA35338-CRI2	1		
12:22	MA35338-ICSA1	1		
12:28	MA35338-ICSAB1	1		
12:34	ZZZZZZ	1		
12:40	ZZZZZZ	1		
12:46	MA35338-CCV1	1		
12:52	MA35338-CCB2	1		
12:58	ZZZZZZ	1		
13:04	MP83021-B1	1		
13:10	MP83021-S1	5		
13:16	MP83021-S2	5		
13:22	JB80273-2F	5		(sample used for QC only; not part of login JB80728)
13:28	MP83021-SD1	25		
13:34	ZZZZZZ	20		
13:40	ZZZZZZ	2		
13:46	ZZZZZZ	20		
13:52	MA35338-CCV2	1		
13:58	MA35338-CCB3	1		
14:04	ZZZZZZ	10		
14:10	ZZZZZZ	20		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: TG Run ID: MA35338
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:16	ZZZZZZ	1		
14:22	ZZZZZZ	20		
14:28	MP83034-MB1	1		
14:34	MP83034-B1	1		
14:40	MP83034-S1	1		
14:46	ZZZZZZ	1		
14:52	ZZZZZZ	1		
14:58	MA35338-CCV3	1		
15:04	MA35338-CCB4	1		
15:10	ZZZZZZ	0		
15:16	ZZZZZZ	1		
15:25	MP83034-S2	1		
15:31	JB80420-16	1		(sample used for QC only; not part of login JB80728)
15:37	MP83034-SD1	5		
15:43	ZZZZZZ	1		
15:50	ZZZZZZ	1		
15:56	ZZZZZZ	1		
16:02	ZZZZZZ	1		
16:08	MA35338-CCV4	1		
16:14	MA35338-CCB5	1		
16:20	ZZZZZZ	1		
16:26	ZZZZZZ	1		
16:32	ZZZZZZ	1		
16:38	ZZZZZZ	1		
16:44	ZZZZZZ	1		
16:50	ZZZZZZ	1		
16:56	ZZZZZZ	1		
17:03	ZZZZZZ	1		
17:09	MA35338-CCV5	1		
17:15	MA35338-CCB6	1		
17:21	ZZZZZZ	1		
17:27	ZZZZZZ	1		
17:33	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: TG Run ID: MA35338
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:40	ZZZZZZ	1		
17:46	ZZZZZZ	1		
17:52	ZZZZZZ	1		
17:58	ZZZZZZ	1		
18:04	ZZZZZZ	1		
18:10	ZZZZZZ	1		
18:16	ZZZZZZ	1		
18:22	ZZZZZZ	1		
18:28	ZZZZZZ	1		
18:34	MA35338-CCV6	1		
18:42	MA35338-CCB7	1		
18:48	MP83046-MB1	1		CCB out
18:54	MP83046-B1	1		CCB out
19:00	MP83046-S1	1		CCB out
19:06	MP83046-S2	1		CCB out
19:12	JB80512-18	1		(sample used for QC only; not part of login JB80728)
19:18	MP83046-SD1	5		CCB out
19:24	ZZZZZZ	1		
19:30	ZZZZZZ	1		
19:36	ZZZZZZ	1		
19:42	MA35338-CCV7	1		
19:48	MA35338-CCB8	1		
19:54	JB80728-11	1		
20:00	ZZZZZZ	1		
20:06	ZZZZZZ	1		
20:12	ZZZZZZ	1		
20:18	MA35338-CCV8	1		
20:26	MA35338-CCB9	1		
20:32	MA35338-CRI3	1		
20:38	MA35338-CRID3	1		
20:44	MA35338-CRIA2	1		
20:50	MA35338-CRID4	1		
20:56	MA35338-ICSA2	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: TG Run ID: MA35338
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
21:03	MA35338-ICSAB2	1		
21:11	MA35338-CCV9	1		
21:19	MA35338-CCB10	1		
21:25	ZZZZZZ	5		
21:31	ZZZZZZ	2		
21:37	ZZZZZZ	10		
21:43	ZZZZZZ	2		
21:49	JB80728-11	3		not needed
---------->	Last reportable sample/prep for job JB80728			
21:55	ZZZZZZ	10		
22:01	ZZZZZZ	2		
22:07	ZZZZZZ	10		
22:16	MA35338-CCV10	1		
22:24	MA35338-CCB11	1		
22:30	ZZZZZZ	2		
22:36	ZZZZZZ	10		
22:42	MP83042-MB1	1		
22:48	MP83042-B1	1		
22:54	MP83042-S1	1		
23:00	MP83042-S2	1		
23:06	JB79990-12	1		(sample used for QC only; not part of login JB80728)
23:12	MP83042-SD1	5		
23:18	MA35338-CCV11	1		
23:28	MA35338-CCB12	1		
23:34	MA35338-CRID5	1		
23:40	MA35338-CRI4	1		
23:46	MA35338-CRIA3	1		
23:52	MA35338-CRID6	1		
23:58	MA35338-CCV12	1		
00:08	MA35338-CCB13	1		
---------->	Last reportable CCB for job JB80728			
00:14	ZZZZZZ	1		
00:20	ZZZZZZ	1		
00:26	ZZZZZZ	1		
00:32	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: TG Run ID: MA35338
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
00:38	ZZZZZZ	1		
00:44	ZZZZZZ	1		
00:50	ZZZZZZ	1		
00:56	ZZZZZZ	1		
01:01	ZZZZZZ	1		
01:07	MA35338-CCV13	1		
01:15	MA35338-CCB14	1		
01:21	ZZZZZZ	1		
01:27	ZZZZZZ	1		
01:33	ZZZZZZ	1		
01:39	ZZZZZZ	1		
01:45	ZZZZZZ	1		
01:51	ZZZZZZ	1		
01:57	ZZZZZZ	1		
02:03	ZZZZZZ	1		
02:09	ZZZZZZ	1		
02:15	MA35338-CCV14	1		
02:23	MA35338-CCB15	1		
02:29	MA35338-CRI5	1		
02:35	MA35338-CRIA4	1		
02:41	MA35338-CCV15	1		
02:49	MA35338-CCB16	1		
02:55	ZZZZZZ	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: TG Run ID: MA35338
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
10:23	MA35338-STD1	2445 R	124220 R	37616 R	5731 R
10:30	MA35338-STD2	2293	115610	36565	5465
10:36	ZZZZZZ	2340	118650	37076	5534
10:41	ZZZZZZ	2438	123760	37545	5725
10:54	MA35338-ICV1	No results reported for the elements associated with this internal standard.			
11:01	MA35338-ICV2	2337	118030	37091	5535
11:18	MA35338-ICB1	2453	123850	37680	5755
11:23	MA35338-ICCV1	2359	117440	36809	5583
11:38	MA35338-CCB1	2434	123750	37909	5763
11:50	MA35338-CRI1	2402	121560	37363	5698
11:56	MA35338-CRID1	No results reported for the elements associated with this internal standard.			
12:02	MA35338-CRIA1	2424	123040	37639	5750
12:08	MA35338-CRID2	2410	124710	38766	5773
12:16	MA35338-CRI2	2384	123950	38807	5720
12:22	MA35338-ICSA1	2113	109810	36301	5123
12:28	MA35338-ICSAB1	2105	109560	35996	5121
12:34	ZZZZZZ	10567 !	428340 !	102910 !	22383 !
12:40	ZZZZZZ	2342	123510	38583	5754
12:46	MA35338-CCV1	2306	118350	37830	5581
12:52	MA35338-CCB2	2390	123200	38399	5747
12:58	ZZZZZZ	2403	125610	39380	5831
13:04	MP83021-B1	2324	120970	38987	5669
13:10	MP83021-S1	2221	109590	36395	5185
13:16	MP83021-S2	2222	109610	36640	5177
13:22	JB80273-2F	2219	108670	36085	5163
13:28	MP83021-SD1	2331	116590	37177	5556
13:34	ZZZZZZ	2335	117040	37052	5588
13:40	ZZZZZZ	2289	116710	37364	5441
13:46	ZZZZZZ	2325	117490	37050	5570
13:52	MA35338-CCV2	2295	116070	36747	5524
13:58	MA35338-CCB3	2368	120930	37119	5678
14:04	ZZZZZZ	2297	115500	37070	5484
14:10	ZZZZZZ	2284	115780	37377	5455

INTERNAL STANDARD SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: TG Run ID: MA35338
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
14:16	ZZZZZZ	2391	122430	38296	5766
14:22	ZZZZZZ	2357	119670	37227	5654
14:28	MP83034-MB1	2370	121880	37596	5689
14:34	MP83034-B1	2319	118950	37949	5637
14:40	MP83034-S1	2221	113740	37205	5359
14:46	ZZZZZZ	999999 !	122280	38195	999999 !
14:52	ZZZZZZ	9420 !	376690 !	87448 !	19952 !
14:58	MA35338-CCV3	2286	116400	36853	5510
15:04	MA35338-CCB4	2381	122160	37479	5720
15:10	ZZZZZZ	8989 !	349700 !	83150 !	19084 !
15:16	ZZZZZZ	8979 !	361380 !	82563 !	19052 !
15:25	MP83034-S2	2220	114040	37310	5365
15:31	JB80420-16	2259	114950	37518	5435
15:37	MP83034-SD1	2345	119090	37462	5651
15:43	ZZZZZZ	2236	112150	36952	5318
15:50	ZZZZZZ	1907	88047	33240	4169
15:56	ZZZZZZ	2298	119150	38219	5505
16:02	ZZZZZZ	2286	116060	37642	5524
16:08	MA35338-CCV4	2291	116220	37111	5541
16:14	MA35338-CCB5	2390	122340	37607	5729
16:20	ZZZZZZ	2213	109350	35846	5212
16:26	ZZZZZZ	2393	122550	39791	5349
16:32	ZZZZZZ	2226	109290	35724	5251
16:38	ZZZZZZ	2204	110010	36096	5208
16:44	ZZZZZZ	10979 !	448950 !	113080 !	23320 !
16:50	ZZZZZZ	11382 !	456710 !	110880 !	24167 !
16:56	ZZZZZZ	11565 !	465320 !	114040 !	24525 !
17:03	ZZZZZZ	2361	129120	37347	5686
17:09	MA35338-CCV5	2247	116980	36913	5450
17:15	MA35338-CCB6	2400	121620	37537	5766
17:21	ZZZZZZ	2406	122250	37483	5784
17:27	ZZZZZZ	2400	122350	37593	5771
17:33	ZZZZZZ	2407	122500	37731	5896

INTERNAL STANDARD SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: TG Run ID: MA35338
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
17:40	ZZZZZZ	2342	115450	37128	5526
17:46	ZZZZZZ	10306 !	424150 !	99732 !	21882 !
17:52	ZZZZZZ	2364	119260	37421	5684
17:58	ZZZZZZ	2392	122280	37287	5747
18:04	ZZZZZZ	2384	121960	37243	5728
18:10	ZZZZZZ	2402	122150	37038	5763
18:16	ZZZZZZ	2407	122470	37354	5875
18:22	ZZZZZZ	2402	122430	37234	5762
18:28	ZZZZZZ	2401	121570	37039	5855
18:34	MA35338-CCV6	2318	116730	36425	5607
18:42	MA35338-CCB7	2397	122420	36968	5786
18:48	MP83046-MB1	2398	121840	36969	5784
18:54	MP83046-B1	2362	119950	37413	5752
19:00	MP83046-S1	2349	119450	37601	5705
19:06	MP83046-S2	2328	119140	37239	5651
19:12	JB80512-18	2370	121040	37701	5745
19:18	MP83046-SD1	2380	120990	37277	5750
19:24	ZZZZZZ	2369	119990	37525	5784
19:30	ZZZZZZ	2408	124130	37554	5841
19:36	ZZZZZZ	2393	121970	37677	5824
19:42	MA35338-CCV7	2294	115970	36483	5560
19:48	MA35338-CCB8	2404	121700	37176	5784
19:54	JB80728-11	2154	107770	35701	5094
20:00	ZZZZZZ	2390	121720	39407	5405
20:06	ZZZZZZ	2247	107740	34706	5309
20:12	ZZZZZZ	2267	112510	37170	5363
20:18	MA35338-CCV8	2302	115390	36475	5556
20:26	MA35338-CCB9	2423	121810	37077	5802
20:32	MA35338-CRI3	2385	119950	37034	5739
20:38	MA35338-CRID3	2412	122160	37089	5778
20:44	MA35338-CRIA2	2422	122410	37164	5804
20:50	MA35338-CRID4	2425	121550	37095	5801
20:56	MA35338-ICSA2	2137	108340	34767	5184

INTERNAL STANDARD SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: TG Run ID: MA35338
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
21:03	MA35338-ICSAB2	2142	108230	34886	5230
21:11	MA35338-CCV9	2340	116890	36576	5637
21:19	MA35338-CCB10	2406	122720	37414	5783
21:25	ZZZZZZ	2222	103130	34944	5025
21:31	ZZZZZZ	2269	112650	35690	5438
21:37	ZZZZZZ	2368	118560	36781	5761
21:43	ZZZZZZ	2286	113060	35750	5461
21:49	JB80728-11	2246	113060	35819	5411
21:55	ZZZZZZ	2382	120680	37204	5746
22:01	ZZZZZZ	2282	113550	35817	5483
22:07	ZZZZZZ	2363	117720	36352	5750
22:16	MA35338-CCV10	2340	117330	36545	5680
22:24	MA35338-CCB11	2420	122190	37079	5852
22:30	ZZZZZZ	2391	123710	38662	5603
22:36	ZZZZZZ	2270	109200	35992	5263
22:42	MP83042-MB1	2389	124730	37190	5779
22:48	MP83042-B1	2357	118860	36597	5742
22:54	MP83042-S1	2283	117010	36729	5607
23:00	MP83042-S2	2314	116940	36740	5738
23:06	JB79990-12	2394	121040	37574	5808
23:12	MP83042-SD1	2415	125580	37808	5824
23:18	MA35338-CCV11	2345	118270	36778	5697
23:28	MA35338-CCB12	2429	123660	37542	5863
23:34	MA35338-CRID5	2412	122790	37491	5832
23:40	MA35338-CRI4	2412	122770	37393	5826
23:46	MA35338-CRIA3	2415	122800	37412	5853
23:52	MA35338-CRID6	2403	122520	37253	5815
23:58	MA35338-CCV12	2327	117810	36895	5662
00:08	MA35338-CCB13	2428	123760	37433	5868
00:14	ZZZZZZ	2403	122680	37879	5822
00:20	ZZZZZZ	2424	122280	37626	5870
00:26	ZZZZZZ	2404	122200	37305	5819
00:32	ZZZZZZ	2404	123490	37691	5836

INTERNAL STANDARD SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: TG Run ID: MA35338
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
00:38	ZZZZZZ	2415	122190	37628	5847
00:44	ZZZZZZ	2402	121710	37923	5836
00:50	ZZZZZZ	2389	122140	37168	5788
00:56	ZZZZZZ	2414	122310	36961	5859
01:01	ZZZZZZ	2392	123090	37479	5845
01:07	MA35338-CCV13	2355	119040	36739	5711
01:15	MA35338-CCB14	2438	123880	37200	5890
01:21	ZZZZZZ	2364	121450	37482	5812
01:27	ZZZZZZ	2393	122780	37874	5798
01:33	ZZZZZZ	2345	120950	37279	5785
01:39	ZZZZZZ	2427	125230	38206	5916
01:45	ZZZZZZ	2379	124220	38341	5977
01:51	ZZZZZZ	2428	125270	38743	5870
01:57	ZZZZZZ	2361	122390	37917	6006
02:03	ZZZZZZ	2388	122620	38933	5748
02:09	ZZZZZZ	2662	136850	42096	5816
02:15	MA35338-CCV14	2359	119300	36580	5742
02:23	MA35338-CCB15	2448	122350	36953	5925
02:29	MA35338-CRI5	2421	123090	36871	5864
02:35	MA35338-CRIA4	2439	123750	36927	5909
02:41	MA35338-CCV15	2365	118200	36618	5745
02:49	MA35338-CCB16	2455	124560	37233	5952
02:55	ZZZZZZ	2414	122880	37061	5995

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35338 Units: ug/l

Time: / Sample ID:			11:18 ICB1		11:38 CCB1		12:52 CCB2		13:58 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	5.9	anr							
Antimony	6.0	1.6	anr							
Arsenic	3.0	.86	anr							
Barium	200	.19								
Beryllium	1.0	.12	anr							
Bismuth	20	2.4								
Boron	100	.88								
Cadmium	3.0	.2	anr							
Calcium	5000	9.6	anr							
Chromium	10	.39	anr							
Cobalt	50	.35								
Copper	10	.82	anr							
Iron	100	2.9	2.0	<100	9.3	<100	18.8	<100	9.1	<100
Lead	3.0	1.6	anr							
Lithium	20	2.9								
Magnesium	5000	15	anr							
Manganese	15	.12								
Molybdenum	20	.33								
Nickel	10	.35	anr							
Palladium	50	1.7								
Potassium	10000	30	anr							
Selenium	10	1.7	anr							
Silicon	200	2.3								
Silver	10	.89	anr							
Sodium	10000	13	anr							
Sulfur	50	6.7								
Strontium	10	.17								
Thallium	2.0	1.7	anr							
Tin	10	1.1								
Titanium	10	.39								
Tungsten	50	1.4								
Vanadium	50	.34								
Zinc	20	1.6	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35338 Units: ug/l

Time:			11:18		11:38		12:52		13:58	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.31								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35338 Units: ug/l

Time:			15:04		16:14		17:15		18:42	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	5.9	anr							
Antimony	6.0	1.6	anr							
Arsenic	3.0	.86	anr							
Barium	200	.19								
Beryllium	1.0	.12	anr							
Bismuth	20	2.4								
Boron	100	.88								
Cadmium	3.0	.2	anr							
Calcium	5000	9.6	anr							
Chromium	10	.39	anr							
Cobalt	50	.35								
Copper	10	.82	anr							
Iron	100	2.9	14.8	<100	22.0	<100*(a)	19.1	<100*(a)	20.9	<100
Lead	3.0	1.6	anr							
Lithium	20	2.9								
Magnesium	5000	15	anr							
Manganese	15	.12								
Molybdenum	20	.33								
Nickel	10	.35	anr							
Palladium	50	1.7								
Potassium	10000	30	anr							
Selenium	10	1.7	anr							
Silicon	200	2.3								
Silver	10	.89	anr							
Sodium	10000	13	anr							
Sulfur	50	6.7								
Strontium	10	.17								
Thallium	2.0	1.7	anr							
Tin	10	1.1								
Titanium	10	.39								
Tungsten	50	1.4								
Vanadium	50	.34								
Zinc	20	1.6	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35338 Units: ug/l

Time:			15:04		16:14		17:15		18:42	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.31								

(*) Outside of QC limits
(anr) Analyte not requested
(a) All reported results <RL or >10x CCB value.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35338 Units: ug/l

Time:			19:48		20:26		21:19		22:24	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	5.9	anr							
Antimony	6.0	1.6	anr							
Arsenic	3.0	.86	anr							
Barium	200	.19								
Beryllium	1.0	.12	anr							
Bismuth	20	2.4								
Boron	100	.88								
Cadmium	3.0	.2	anr							
Calcium	5000	9.6	anr							
Chromium	10	.39	anr							
Cobalt	50	.35								
Copper	10	.82	anr							
Iron	100	2.9	14.3	<100*(a)	17.0	<100*(a)	43.0	<100*(a)	20.9	<100*(a)
Lead	3.0	1.6	anr							
Lithium	20	2.9								
Magnesium	5000	15	anr							
Manganese	15	.12								
Molybdenum	20	.33								
Nickel	10	.35	anr							
Palladium	50	1.7								
Potassium	10000	30	anr							
Selenium	10	1.7	anr							
Silicon	200	2.3								
Silver	10	.89	anr							
Sodium	10000	13	anr							
Sulfur	50	6.7								
Strontium	10	.17								
Thallium	2.0	1.7	anr							
Tin	10	1.1								
Titanium	10	.39								
Tungsten	50	1.4								
Vanadium	50	.34								
Zinc	20	1.6	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35338 Units: ug/l

Time:			19:48		20:26		21:19		22:24	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.31								

(*) Outside of QC limits
(anr) Analyte not requested
(a) All reported results <RL or >10x CCB value.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35338 Units: ug/l

Time:			23:28		00:08	
Sample ID:			CCB12		CCB13	
Metal	RL	IDL	raw	final	raw	final
Aluminum	200	5.9	anr			
Antimony	6.0	1.6	anr			
Arsenic	3.0	.86	anr			
Barium	200	.19				
Beryllium	1.0	.12	anr			
Bismuth	20	2.4				
Boron	100	.88				
Cadmium	3.0	.2	anr			
Calcium	5000	9.6	anr			
Chromium	10	.39	anr			
Cobalt	50	.35				
Copper	10	.82	anr			
Iron	100	2.9	18.6	<100	13.6	<100
Lead	3.0	1.6	anr			
Lithium	20	2.9				
Magnesium	5000	15	anr			
Manganese	15	.12				
Molybdenum	20	.33				
Nickel	10	.35	anr			
Palladium	50	1.7				
Potassium	10000	30	anr			
Selenium	10	1.7	anr			
Silicon	200	2.3				
Silver	10	.89	anr			
Sodium	10000	13	anr			
Sulfur	50	6.7				
Strontium	10	.17				
Thallium	2.0	1.7	anr			
Tin	10	1.1				
Titanium	10	.39				
Tungsten	50	1.4				
Vanadium	50	.34				
Zinc	20	1.6	anr			

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35338 Units: ug/l

Time:			23:28		00:08	
Sample ID:			CCB12		CCB13	
Metal	RL	IDL	raw	final	raw	final
Zirconium	10	.31				

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35338 Units: ug/l

Time:		11:23	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium			
Beryllium	anr		
Bismuth			
Boron			
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt			
Copper	anr		
Iron	40000	40600	101.5
Lead	anr		
Lithium			
Magnesium	anr		
Manganese			
Molybdenum			
Nickel	anr		
Palladium			
Potassium	anr		
Selenium	anr		
Silicon			
Silver	anr		
Sodium	anr		
Sulfur			
Strontium			
Thallium	anr		
Tin			
Titanium			
Tungsten			
Vanadium			
Zinc	anr		

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35338 Units: ug/l

Time:		11:23	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35338 Units: ug/l

Time:		11:01			12:46			13:52	
Sample ID:	ICV	ICV2		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium									
Beryllium	anr								
Bismuth									
Boron									
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt									
Copper	anr								
Iron	40000	40800	102.0	40000	40100	100.3	40000	40600	101.5
Lead	anr								
Lithium									
Magnesium	anr								
Manganese									
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium									
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35338 Units: ug/l

Time:		11:01			12:46			13:52	
Sample ID:	ICV	ICV2		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35338 Units: ug/l

Time:		14:58			16:08			17:09	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium									
Beryllium	anr								
Bismuth									
Boron									
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt									
Copper	anr								
Iron	40000	40800	102.0	40000	40100	100.3	40000	40500	101.3
Lead	anr								
Lithium									
Magnesium	anr								
Manganese									
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium									
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35338 Units: ug/l

Time:		14:58			16:08			17:09	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35338 Units: ug/l

Time:		18:34			19:42			20:18	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium									
Beryllium	anr								
Bismuth									
Boron									
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt									
Copper	anr								
Iron	40000	40700	101.8	40000	41000	102.5	40000	40800	102.0
Lead	anr								
Lithium									
Magnesium	anr								
Manganese									
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium									
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35338 Units: ug/l

Time:		18:34			19:42			20:18	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35338 Units: ug/l

Time:		21:11			22:16			23:18	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium									
Beryllium	anr								
Bismuth									
Boron									
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt									
Copper	anr								
Iron	40000	41100	102.8	40000	40200	100.5	40000	40100	100.3
Lead	anr								
Lithium									
Magnesium	anr								
Manganese									
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium									
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35338 Units: ug/l

Time:		21:11			22:16			23:18	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35338 Units: ug/l

Time:		23:58	
Sample ID:	CCV	CCV12	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium			
Beryllium	anr		
Bismuth			
Boron			
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt			
Copper	anr		
Iron	40000	40300	100.8
Lead	anr		
Lithium			
Magnesium	anr		
Manganese			
Molybdenum			
Nickel	anr		
Palladium			
Potassium	anr		
Selenium	anr		
Silicon			
Silver	anr		
Sodium	anr		
Sulfur			
Strontium			
Thallium	anr		
Tin			
Titanium			
Tungsten			
Vanadium			
Zinc	anr		

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35338 Units: ug/l

Time:		23:58	
Sample ID:	CCV	CCV12	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35338 Units: ug/l

Time:				11:50		12:02		12:08	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0						
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0						
Copper	10		2.0	anr					
Iron	100	500		108	108.0	527	105.4		
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0						
Molybdenum	20								
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50								
Strontium	10								
Thallium	10		2.0	anr					
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0						
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35338 Units: ug/l

Time:				11:50		12:02		12:08	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35338 Units: ug/l

Time:				12:16		20:32		20:38	
Sample ID:	CRI	CRIA	CRID	CRI2		CRI3		CRID3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0						
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0						
Copper	10		2.0	anr					
Iron	100	500		106	106.0	109	109.0		
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0						
Molybdenum	20								
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50								
Strontium	10								
Thallium	10		2.0	anr					
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0						
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35338 Units: ug/l

Time:				12:16		20:32		20:38	
Sample ID:	CRI	CRIA	CRID	CRI2		CRI3		CRID3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35338 Units: ug/l

Time:				20:44		20:50		23:34	
Sample ID:	CRI	CRIA	CRID	CRIA2		CRID4		CRID5	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0						
Beryllium	2.0		1.0						
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0						
Calcium	5000	2000	1000	anr					
Chromium	10		2.0						
Cobalt	50		3.0						
Copper	10		2.0						
Iron	100	500		523	104.6				
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0						
Molybdenum	20								
Nickel	10		4.0						
Palladium	50								
Potassium	5000		2000						
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0						
Sodium	5000		1000						
Sulfur	50								
Strontium	10								
Thallium	10		2.0						
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0						
Zinc	20		10						

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35338 Units: ug/l

Time:				20:44		20:50		23:34	
Sample ID:	CRI	CRIA	CRID	CRIA2		CRID4		CRID5	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35338 Units: ug/l

Time:				23:40		23:46		23:52	
Sample ID:	CRI	CRIA	CRID	CRI4		CRIA3		CRID6	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0						
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0						
Copper	10		2.0	anr					
Iron	100	500		109	109.0	524	104.8		
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0						
Molybdenum	20								
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50								
Strontium	10								
Thallium	10		2.0	anr					
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0						
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35338 Units: ug/l

Time:				23:40		23:46		23:52	
Sample ID:	CRI	CRIA	CRID	CRI4		CRIA3		CRID6	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA35338 Units: ug/l

Time:			12:22		12:28		20:56		21:03	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	509000	101.8	506000	101.2	512000	102.4	501000	100.2
Antimony		1000	0.90		1090	109.0	2.9		1070	107.0
Arsenic		1000	-2.9		1060	106.0	-3.0		1040	104.0
Barium		500	-0.30		515	103.0	-0.40		510	102.0
Beryllium		500	0.0		501	100.2	0.0		492	98.4
Bismuth		500	7.5		610	122.0	7.6		597	119.4
Boron			-0.70		8.5		0.60		9.0	
Cadmium		1000	-1.0		1030	103.0	-1.3		1010	101.0
Calcium	400000	400000	362000	90.5	364000	91.0	367000	91.8	364000	91.0
Chromium		500	0.60		474	94.8	1.2		479	95.8
Cobalt		500	0.10		474	94.8	0.40		464	92.8
Copper		500	-0.60		513	102.6	-0.60		506	101.2
Iron	200000	200000	184000	92.0	186000	93.0	186000	93.0	186000	93.0
Lead		1000	0.20		948	94.8	-0.80		941	94.1
Lithium		500	8.2		559	111.8	9.5		545	109.0
Magnesium	500000	500000	509000	101.8	504000	100.8	512000	102.4	499000	99.8
Manganese		500	-5.3		480	96.0	-6.1		482	96.4
Molybdenum		500	-4.3		516	103.2	-4.7		514	102.8
Nickel		1000	-0.80		959	95.9	-1.2		948	94.8
Palladium		500	4.5		541	108.2	4.0		531	106.2
Potassium			22.8		20.2		3.7		10.2	
Selenium		1000	-1.2		1050	105.0	0.0		1030	103.0
Silicon			-52		-66		-50		-65	
Silver		1000	1.7		1060	106.0	-1.4		1050	105.0
Sodium			10.9		21.8		22.1		28.8	
Sulfur		500	-150*		384	76.8*	-110*		470	94.0
Strontium			-5.1		-5.2		-5.4		-5.3	
Thallium		1000	-1.7		951	95.1	-0.60		912	91.2
Tin			0.60		1.0		0.40		0.80	
Titanium			0.0		-0.20		-0.40		0.20	
Tungsten		500	27.0		534	106.8	27.9		530	106.0
Vanadium		500	0.20		480	96.0	1.4		481	96.2
Zinc		1000	-1.2		947	94.7	-0.90		949	94.9

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA110614M1.ICP Date Analyzed: 11/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA35338 Units: ug/l

Time:			12:22		12:28		20:56		21:03	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	21.2*		487	97.4	20.8*		482	96.4

(*) Outside of QC limits
(anr) Analyte not requested

8.1.6
8

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA35417
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:25	MA35417-STD1	1		STDA
10:32	MA35417-STD2	1		STDB
10:38	ZZZZZZ	1		
10:44	ZZZZZZ	1		
10:50	MA35417-ICV1	1		
11:03	MA35417-ICB1	1		
11:08	MA35417-ICCV1	1		
11:20	MA35417-CCB1	1		
11:25	MA35417-CRI1	1		
11:31	MA35417-CRID1	1		
11:37	MA35417-CRIA1	1		
11:43	MA35417-CRID2	1		
11:49	MA35417-ICSA1	1		
11:55	MA35417-ICSAB1	1		
12:01	MA35417-CCV1	1		
12:07	MA35417-CCB2	1		
12:14	ZZZZZZ	1		
12:20	ZZZZZZ	1		
12:26	MP83229-MB2	5		
12:32	MP83229-B2	5		
12:38	ZZZZZZ	5		
12:44	ZZZZZZ	1		
12:50	ZZZZZZ	1		
12:56	ZZZZZZ	1		
13:02	ZZZZZZ	1		
13:09	MA35417-CCV2	1		
13:14	MA35417-CCB3	1		
13:21	ZZZZZZ	1		
13:27	ZZZZZZ	1		
13:33	ZZZZZZ	1		
13:39	ZZZZZZ	1		
13:45	ZZZZZZ	1		
13:51	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA35417
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:58	ZZZZZZ	1		
14:04	ZZZZZZ	1		
14:10	ZZZZZZ	1		
14:16	MA35417-CCV3	1		
14:22	MA35417-CCB4	1		
14:28	ZZZZZZ	1		
14:34	ZZZZZZ	1		
14:40	MP83193-S3	1		
14:46	MP83193-S4	1		
14:52	MP83225-MB1	1		
14:58	MP83225-B1	1		
15:04	MP83225-S1	1		
15:10	MP83225-S2	1		
15:16	JB80728-8	1		
15:22	MA35417-CCV4	1		
15:28	MA35417-CCB5	1		
15:34	MA35417-CRID3	1		
15:40	MA35417-CRI2	1		
15:47	MA35417-CRIA2	1		
15:53	MA35417-CRID4	1		
15:59	MA35417-ICSA2	1		
16:05	MA35417-ICSAB2	1		
16:11	MA35417-CCV5	1		
16:17	MA35417-CCB6	1		
16:23	MP83225-SD1	5		
16:29	JB80728-1	1		
16:35	JB80728-2	1		
16:41	JB80728-3	1		
16:47	JB80728-4	1		
16:53	JB80728-5	1		
17:00	JB80728-6	1		
17:06	JB80728-7	1		
17:12	JB80728-9	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB80728
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Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA35417
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:18	MA35417-CCV6	1		
17:24	MA35417-CCB7	1		
17:30	JB80728-10	1		
---------->	Last reportable sample/prep for job JB80728			
17:36	MP83250-MB1	1		Batch to reanalyze for Tl, Pb,As, low checks out
17:42	MP83250-B1	1		
17:48	MP83250-S1	1		
17:54	MP83250-S2	1		
18:00	JB80742-1	1		(sample used for QC only; not part of login JB80728)
18:06	MP83250-SD1	5		
18:12	MP83250-S3	1		
18:18	MP83250-S4	1		
18:24	MA35417-CCV7	1		
18:30	MA35417-CCB8	1		
18:36	JB80742-1F	1		(sample used for QC only; not part of login JB80728)
18:42	MP83250-SD2	5		
18:48	ZZZZZZ	1		
18:54	ZZZZZZ	1		
19:00	ZZZZZZ	1		
19:06	ZZZZZZ	1		
19:13	ZZZZZZ	1		
19:19	ZZZZZZ	1		
19:25	ZZZZZZ	1		
19:31	MA35417-CCV8	1		
19:37	MA35417-CCB9	1		
19:43	ZZZZZZ	1		
19:49	ZZZZZZ	1		
19:56	ZZZZZZ	1		
20:02	ZZZZZZ	1		
20:08	ZZZZZZ	1		
20:14	ZZZZZZ	1		
20:20	ZZZZZZ	1		
20:27	ZZZZZZ	1		
20:33	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA35417
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
20:39	MA35417-CCV9	1		
20:45	MA35417-CCB10	1		
20:51	ZZZZZZ	1		
20:57	MP83252-MB1	1		Batch to reanalyze for PB, CRI out
21:04	MP83252-MB2	1		
21:10	MP83252-B1	1		
21:16	MP83252-B2	1		
21:22	MP83252-S1	1		
21:27	MP83252-S2	1		
21:33	JB81172-3	1		(sample used for QC only; not part of login JB80728)
21:39	MP83252-SD1	5		
21:46	MA35417-CCV10	1		
21:51	MA35417-CCB11	1		
21:58	MA35417-CRI3	1		
22:04	MA35417-CRID5	1		
22:10	MA35417-CRIA3	1		
22:16	MA35417-ICSA3	1		
22:22	MA35417-ICSAB3	1		
22:28	MA35417-CCV11	1		
22:34	MA35417-CCB12	1		
---------->	Last reportable CCB for job JB80728			
22:40	ZZZZZZ	1		
22:47	ZZZZZZ	1		
22:53	ZZZZZZ	1		
22:59	ZZZZZZ	1		
23:05	ZZZZZZ	1		
23:12	ZZZZZZ	1		
23:18	ZZZZZZ	1		
23:24	ZZZZZZ	1		
23:30	ZZZZZZ	1		
23:36	MA35417-CCV12	1		
23:42	MA35417-CCB13	1		
23:49	ZZZZZZ	1		
23:55	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA35417
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
00:01	ZZZZZZ	1		
00:07	ZZZZZZ	1		
00:13	ZZZZZZ	1		
00:19	ZZZZZZ	1		
00:26	ZZZZZZ	1		
00:32	ZZZZZZ	1		
00:38	ZZZZZZ	1		
00:44	MA35417-CCV13	1		
00:50	MA35417-CCB14	1		
00:56	ZZZZZZ	1		
01:02	ZZZZZZ	5		
01:09	ZZZZZZ	5		
01:15	ZZZZZZ	5		
01:21	ZZZZZZ	5		
01:27	ZZZZZZ	5		
01:33	ZZZZZZ	25		
01:39	MP83285-MB1	1		CCV out
01:45	MP83285-B1	1		CCV out
01:51	MA35417-CCV14	1		
01:57	MA35417-CCB15	1		
02:03	ZZZZZZ	1		
02:09	ZZZZZZ	1		
02:15	ZZZZZZ	10		
02:21	ZZZZZZ	5		
02:28	ZZZZZZ	10		
02:34	ZZZZZZ	5		
02:40	ZZZZZZ	5		
02:46	ZZZZZZ	5		
02:52	ZZZZZZ	5		
02:59	MA35417-CCV15	1		
03:04	MA35417-CCB16	1		
03:11	MA35417-CRI4	1		
03:17	MA35417-CRID6	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB80728
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Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA35417
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
03:23	MA35417-CRIA4	1		
03:29	MA35417-CCV16	1		
03:35	MA35417-CCB17	1		
03:41	MP83263-MB1	5		NO results reported from this point forward, no ending CRI
03:48	MP83263-B1	5		CCV out
03:54	MP83263-S1	5		CCV out
04:00	MP83263-S2	5		CCV out
04:06	JB81460-1A	5		(sample used for QC only; not part of login JB80728)
04:12	MP83263-SD1	25		CCV out
04:18	ZZZZZZ	5		
04:25	ZZZZZZ	5		
04:31	ZZZZZZ	5		
04:37	MA35417-CCV17	1		
04:43	MA35417-CCB18	1		
04:49	ZZZZZZ	5		
04:55	ZZZZZZ	5		
05:02	ZZZZZZ	5		
05:08	ZZZZZZ	5		
05:14	ZZZZZZ	5		
05:20	ZZZZZZ	5		
05:27	ZZZZZZ	5		
05:33	ZZZZZZ	5		
05:39	MA35417-CCV18	1		
05:45	MA35417-CCB19	1		
05:51	ZZZZZZ	5		
05:57	ZZZZZZ	5		
06:04	ZZZZZZ	5		
06:10	ZZZZZZ	5		
06:16	ZZZZZZ	5		
06:22	ZZZZZZ	5		
06:28	ZZZZZZ	5		
06:35	ZZZZZZ	5		
06:41	MA35417-CCV19	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

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Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA35417
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
06:47	MA35417-CCB20	1		
06:53	ZZZZZZ	1		
06:59	ZZZZZZ	1		
07:05	ZZZZZZ	1		
07:12	ZZZZZZ	1		
07:18	ZZZZZZ	1		
07:24	ZZZZZZ	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA35417
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
10:25	MA35417-STD1	1418 R	48834 R	12825 R	3531 R
10:32	MA35417-STD2	1275	44239	12295	2891
10:38	ZZZZZZ	1309	45249	12450	3033
10:44	ZZZZZZ	1434	48642	12819	3569
10:50	MA35417-ICV1	1314	45104	12493	3050
11:03	MA35417-ICB1	1427	49120	13133	3558
11:08	MA35417-ICCV1	1363	46290	12713	3155
11:20	MA35417-CCB1	1441	48855	12983	3584
11:25	MA35417-CRI1	1347	46766	12647	3340
11:31	MA35417-CRID1	No results reported for the elements associated with this internal standard.			
11:37	MA35417-CRIA1	1352	47990	12805	3376
11:43	MA35417-CRID2	1364	47927	12727	3400
11:49	MA35417-ICSA1	1187	41602	12051	2577
11:55	MA35417-ICSAB1	1185	41283	12041	2579
12:01	MA35417-CCV1	1299	45659	12748	3028
12:07	MA35417-CCB2	1405	47955	12696	3498
12:14	ZZZZZZ	1362	47563	12764	3424
12:20	ZZZZZZ	1253	45384	12763	3026
12:26	MP83229-MB2	1375	48102	13146	3459
12:32	MP83229-B2	1367	47398	12904	3374
12:38	ZZZZZZ	1361	47403	12924	3414
12:44	ZZZZZZ	1328	46772	12727	3333
12:50	ZZZZZZ	1335	47606	12901	3389
12:56	ZZZZZZ	1344	47518	12802	3377
13:02	ZZZZZZ	1372	47570	12873	3446
13:09	MA35417-CCV2	1296	45232	12732	3020
13:14	MA35417-CCB3	1403	47981	12928	3510
13:21	ZZZZZZ	1348	47352	12792	3392
13:27	ZZZZZZ	1353	47574	12835	3385
13:33	ZZZZZZ	1239	43321	12205	2901
13:39	ZZZZZZ	1351	47465	12912	3379
13:45	ZZZZZZ	1355	46504	12773	3390
13:51	ZZZZZZ	1207	42397	11958	2835

INTERNAL STANDARD SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA35417
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
13:58	ZZZZZZ	1394	45424	12925	2987
14:04	ZZZZZZ	1366	47505	12706	3409
14:10	ZZZZZZ	1360	47223	12720	3389
14:16	MA35417-CCV3	1301	45035	12489	3010
14:22	MA35417-CCB4	1400	48156	12794	3484
14:28	ZZZZZZ	1315	46973	12753	3318
14:34	ZZZZZZ	1276	45317	12573	3050
14:40	MP83193-S3	1228	43898	12542	2859
14:46	MP83193-S4	1231	44218	12525	2873
14:52	MP83225-MB1	1392	48866	13169	3502
14:58	MP83225-B1	1337	46509	12883	3171
15:04	MP83225-S1	1299	45366	12763	3016
15:10	MP83225-S2	1280	44951	12608	2979
15:16	JB80728-8	1296	45708	12658	3145
15:22	MA35417-CCV4	1294	45276	12613	3011
15:28	MA35417-CCB5	1383	47831	12791	3448
15:34	MA35417-CRID3	1366	47761	12753	3391
15:40	MA35417-CRI2	1352	47238	12799	3333
15:47	MA35417-CRIA2	1342	47471	12757	3356
15:53	MA35417-CRID4	1366	47849	12880	3398
15:59	MA35417-ICSA2	1193	41696	12048	2588
16:05	MA35417-ICSAB2	1186	41560	12034	2581
16:11	MA35417-CCV5	1304	45340	12543	3024
16:17	MA35417-CCB6	1418	48530	13010	3549
16:23	MP83225-SD1	1342	46815	12626	3319
16:29	JB80728-1	1333	46641	12941	3241
16:35	JB80728-2	1321	45763	12696	3154
16:41	JB80728-3	1249	43648	12351	2920
16:47	JB80728-4	1344	46619	12800	3243
16:53	JB80728-5	1353	46860	12836	3228
17:00	JB80728-6	1346	46902	12797	3196
17:06	JB80728-7	1345	46581	12676	3247
17:12	JB80728-9	1292	44961	12476	3017

INTERNAL STANDARD SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
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File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA35417
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
17:18	MA35417-CCV6	1326	45917	12488	3062
17:24	MA35417-CCB7	1390	48201	12664	3448
17:30	JB80728-10	1353	46791	12848	3154
17:36	MP83250-MB1	1389	48969	13044	3463
17:42	MP83250-B1	1337	46542	12730	3155
17:48	MP83250-S1	1353	46812	12921	3184
17:54	MP83250-S2	1352	47363	12906	3179
18:00	JB80742-1	1410	49114	13025	3470
18:06	MP83250-SD1	1422	49481	12977	3520
18:12	MP83250-S3	1343	47681	13068	3183
18:18	MP83250-S4	1361	47788	13249	3221
18:24	MA35417-CCV7	1347	47209	12893	3117
18:30	MA35417-CCB8	1406	49197	13026	3504
18:36	JB80742-1F	1397	49349	13235	3471
18:42	MP83250-SD2	1418	49629	13259	3534
18:48	ZZZZZZ	1392	48721	13321	3377
18:54	ZZZZZZ	1367	48333	13124	3313
19:00	ZZZZZZ	1225	43626	12265	2821
19:06	ZZZZZZ	1325	47052	12992	3174
19:13	ZZZZZZ	1244	44340	12473	2903
19:19	ZZZZZZ	1314	46575	12751	3166
19:25	ZZZZZZ	1314	46232	12883	3153
19:31	MA35417-CCV8	1331	46629	12718	3080
19:37	MA35417-CCB9	1379	48568	12754	3438
19:43	ZZZZZZ	1154	39565	11687	2471 !
19:49	ZZZZZZ	1335	46301	12840	3115
19:56	ZZZZZZ	1312	45534	12705	2978
20:02	ZZZZZZ	1326	45889	12766	3042
20:08	ZZZZZZ	1091	42253	12372	2689
20:14	ZZZZZZ	1097	42202	12267	2690
20:20	ZZZZZZ	1420	49940	13139	3543
20:27	ZZZZZZ	1055	41201	12247	2600
20:33	ZZZZZZ	1042	40872	12157	2576

INTERNAL STANDARD SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA35417
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
20:39	MA35417-CCV9	1305	46295	12726	3042
20:45	MA35417-CCB10	1355	47946	12860	3399
20:51	ZZZZZZ	1349	47948	12840	3400
20:57	MP83252-MB1	1357	48260	12895	3405
21:04	MP83252-MB2	1354	47986	12892	3412
21:10	MP83252-B1	1302	46447	12857	3112
21:16	MP83252-B2	1323	46926	12729	3145
21:22	MP83252-S1	1260	45262	12744	2937
21:27	MP83252-S2	1257	45729	12699	2918
21:33	JB81172-3	1289	46142	12776	3085
21:39	MP83252-SD1	1374	48638	13082	3383
21:46	MA35417-CCV10	1316	46583	12962	3065
21:51	MA35417-CCB11	1381	48788	12961	3460
21:58	MA35417-CRI3	1367	48135	13039	3383
22:04	MA35417-CRID5	1356	48184	12849	3390
22:10	MA35417-CRIA3	1353	47867	12785	3368
22:16	MA35417-ICSA3	1192	41887	11959	2579
22:22	MA35417-ICSAB3	1182	41579	12049	2570
22:28	MA35417-CCV11	1280	44908	12337	2970
22:34	MA35417-CCB12	1346	47284	12436	3358
22:40	ZZZZZZ	No results reported for the elements associated with this internal standard.			
22:47	ZZZZZZ	1135	40565	11790	2444 !
22:53	ZZZZZZ	1159	40367	11558	2556
22:59	ZZZZZZ	1385	48977	13722	2759
23:05	ZZZZZZ	1102	39338	11503	2378 !
23:12	ZZZZZZ	1201	42058	11770	2750
23:18	ZZZZZZ	No results reported for the elements associated with this internal standard.			
23:24	ZZZZZZ	1318	46314	13040	2713
23:30	ZZZZZZ	1235	43022	12047	2780
23:36	MA35417-CCV12	1267	43931	11981	2922
23:42	MA35417-CCB13	1356	46398	12215	3374
23:49	ZZZZZZ	No results reported for the elements associated with this internal standard.			
23:55	ZZZZZZ	No results reported for the elements associated with this internal standard.			

INTERNAL STANDARD SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA35417
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
00:01	ZZZZZZ	1263	44070	12098	3022
00:07	ZZZZZZ	No results reported for the elements associated with this internal standard.			
00:13	ZZZZZZ	1199	42470	11738	2822
00:19	ZZZZZZ	1182	42707	11722	2754
00:26	ZZZZZZ	1176	41786	11644	2786
00:32	ZZZZZZ	1171	41647	11669	2745
00:38	ZZZZZZ	1191	41502	11620	2726
00:44	MA35417-CCV13	1260	43681	11902	2909
00:50	MA35417-CCB14	1304	46119	12161	3265
00:56	ZZZZZZ	1175	40446	11482	2656
01:02	ZZZZZZ	1332	48396	12014	3330
01:09	ZZZZZZ	1324	45930	12748	3250
01:15	ZZZZZZ	1304	46195	12556	3208
01:21	ZZZZZZ	1341	47171	12709	3288
01:27	ZZZZZZ	1350	47693	12669	3369
01:33	ZZZZZZ	1404	48948	12902	3495
01:39	MP83285-MB1	1402	49882	13248	3536
01:45	MP83285-B1	1391	48704	13433	3293
01:51	MA35417-CCV14	1362	47576	12892	3138
01:57	MA35417-CCB15	1444	50657	13190	3568
02:03	ZZZZZZ	1361	48105	13056	3259
02:09	ZZZZZZ	1398	48725	13277	3344
02:15	ZZZZZZ	1420	49441	13607	3344
02:21	ZZZZZZ	1459	50754	13726	3518
02:28	ZZZZZZ	1560	53695	14360	3769
02:34	ZZZZZZ	1468	50815	13914	3443
02:40	ZZZZZZ	1190	50836	14136	2830
02:46	ZZZZZZ	1207	42433	11778	2864
02:52	ZZZZZZ	1213	42645	11672	2872
02:59	MA35417-CCV15	1269	44336	11942	2922
03:04	MA35417-CCB16	1330	46328	12174	3294
03:11	MA35417-CRI4	1312	45844	12304	3220
03:17	MA35417-CRID6	1314	45922	12150	3253

INTERNAL STANDARD SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA35417
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
03:23	MA35417-CRIA4	1322	46202	12181	3271
03:29	MA35417-CCV16	1267	43816	11869	2911
03:35	MA35417-CCB17	1333	46239	12115	3308
03:41	MP83263-MB1	No results reported for the elements associated with this internal standard.			
03:48	MP83263-B1	No results reported for the elements associated with this internal standard.			
03:54	MP83263-S1	No results reported for the elements associated with this internal standard.			
04:00	MP83263-S2	No results reported for the elements associated with this internal standard.			
04:06	JB81460-1A	No results reported for the elements associated with this internal standard.			
04:12	MP83263-SD1	No results reported for the elements associated with this internal standard.			
04:18	ZZZZZZ	No results reported for the elements associated with this internal standard.			
04:25	ZZZZZZ	No results reported for the elements associated with this internal standard.			
04:31	ZZZZZZ	No results reported for the elements associated with this internal standard.			
04:37	MA35417-CCV17	1261	43357	11833	2891
04:43	MA35417-CCB18	1323	44255	12557	3276
04:49	ZZZZZZ	No results reported for the elements associated with this internal standard.			
04:55	ZZZZZZ	No results reported for the elements associated with this internal standard.			
05:02	ZZZZZZ	No results reported for the elements associated with this internal standard.			
05:08	ZZZZZZ	No results reported for the elements associated with this internal standard.			
05:14	ZZZZZZ	No results reported for the elements associated with this internal standard.			
05:20	ZZZZZZ	No results reported for the elements associated with this internal standard.			
05:27	ZZZZZZ	No results reported for the elements associated with this internal standard.			
05:33	ZZZZZZ	No results reported for the elements associated with this internal standard.			
05:39	MA35417-CCV18	1248	43877	12216	2894
05:45	MA35417-CCB19	1298	45766	12192	3254
05:51	ZZZZZZ	No results reported for the elements associated with this internal standard.			
05:57	ZZZZZZ	No results reported for the elements associated with this internal standard.			
06:04	ZZZZZZ	No results reported for the elements associated with this internal standard.			
06:10	ZZZZZZ	No results reported for the elements associated with this internal standard.			
06:16	ZZZZZZ	No results reported for the elements associated with this internal standard.			
06:22	ZZZZZZ	No results reported for the elements associated with this internal standard.			
06:28	ZZZZZZ	No results reported for the elements associated with this internal standard.			
06:35	ZZZZZZ	No results reported for the elements associated with this internal standard.			
06:41	MA35417-CCV19	1249	44156	12313	2904

INTERNAL STANDARD SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA35417
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
06:47	MA35417-CCB20	1308	45728	12157	3281
06:53	ZZZZZZ	1313	46990	12451	3291
06:59	ZZZZZZ	1304	46342	12395	3276
07:05	ZZZZZZ	1303	46225	12488	3291
07:12	ZZZZZZ	1312	46733	12542	3297
07:18	ZZZZZZ	1301	46259	12457	3270
07:24	ZZZZZZ	1304	45981	12504	3278

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35417 Units: ug/l

Time:			11:03		11:20		12:07		13:14	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	8.1	anr							
Antimony	6.0	1.6	anr							
Arsenic	3.0	.92	anr							
Barium	200	.22	anr							
Beryllium	1.0	.14	anr							
Bismuth	20	1								
Boron	100	1.2								
Cadmium	3.0	.17	anr							
Calcium	5000	14	anr							
Chromium	10	.53	anr							
Cobalt	50	.31	anr							
Copper	10	.61	anr							
Iron	100	3.1	-0.60	<100	0.50	<100	5.8	<100	2.5	<100
Lead	3.0	1.7	anr							
Lithium	20	.78								
Magnesium	5000	33	anr							
Manganese	15	.087	anr							
Molybdenum	20	.28								
Nickel	10	.84	anr							
Palladium	50	1.1								
Potassium	10000	19	anr							
Selenium	10	2.6	anr							
Silicon	200	8.2								
Silver	10	.62	anr							
Sodium	10000	5.8	anr							
Sulfur	50	13								
Strontium	10	.05								
Thallium	2.0	1.5	anr							
Tin	10	.79								
Titanium	10	.58								
Tungsten	50	4.7								
Vanadium	50	.59	anr							
Zinc	20	3.3	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35417 Units: ug/l

Time: / Sample ID:			11:03 ICB1		11:20 CCB1		12:07 CCB2		13:14 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.2								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35417 Units: ug/l

Time:			14:22		15:28		16:17		17:24	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	8.1	anr							
Antimony	6.0	1.6	anr							
Arsenic	3.0	.92	anr							
Barium	200	.22	anr							
Beryllium	1.0	.14	anr							
Bismuth	20	1								
Boron	100	1.2								
Cadmium	3.0	.17	anr							
Calcium	5000	14	anr							
Chromium	10	.53	anr							
Cobalt	50	.31	anr							
Copper	10	.61	anr							
Iron	100	3.1	2.7	<100	1.6	<100	2.2	<100	3.5	<100
Lead	3.0	1.7	anr							
Lithium	20	.78								
Magnesium	5000	33	anr							
Manganese	15	.087	anr							
Molybdenum	20	.28								
Nickel	10	.84	anr							
Palladium	50	1.1								
Potassium	10000	19	anr							
Selenium	10	2.6	anr							
Silicon	200	8.2								
Silver	10	.62	anr							
Sodium	10000	5.8	anr							
Sulfur	50	13								
Strontium	10	.05								
Thallium	2.0	1.5	anr							
Tin	10	.79								
Titanium	10	.58								
Tungsten	50	4.7								
Vanadium	50	.59	anr							
Zinc	20	3.3	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35417 Units: ug/l

Time: / Sample ID:			14:22 CCB4		15:28 CCB5		16:17 CCB6		17:24 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.2								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35417 Units: ug/l

Time:			18:30		19:37		20:45		21:51	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	8.1	anr							
Antimony	6.0	1.6	anr							
Arsenic	3.0	.92	anr							
Barium	200	.22	anr							
Beryllium	1.0	.14	anr							
Bismuth	20	1								
Boron	100	1.2								
Cadmium	3.0	.17	anr							
Calcium	5000	14	anr							
Chromium	10	.53	anr							
Cobalt	50	.31	anr							
Copper	10	.61	anr							
Iron	100	3.1	9.6	<100	4.3	<100	4.1	<100	4.5	<100
Lead	3.0	1.7	anr							
Lithium	20	.78								
Magnesium	5000	33	anr							
Manganese	15	.087	anr							
Molybdenum	20	.28								
Nickel	10	.84	anr							
Palladium	50	1.1								
Potassium	10000	19	anr							
Selenium	10	2.6	anr							
Silicon	200	8.2								
Silver	10	.62	anr							
Sodium	10000	5.8	anr							
Sulfur	50	13								
Strontium	10	.05								
Thallium	2.0	1.5	anr							
Tin	10	.79								
Titanium	10	.58								
Tungsten	50	4.7								
Vanadium	50	.59	anr							
Zinc	20	3.3	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35417 Units: ug/l

Time:			18:30		19:37		20:45		21:51	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.2								

(*) Outside of QC limits
(anr) Analyte not requested

8.2.2
8

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35417 Units: ug/l

Time:			22:34	
Sample ID:			CCB12	
Metal	RL	IDL	raw	final
Aluminum	200	8.1	anr	
Antimony	6.0	1.6	anr	
Arsenic	3.0	.92	anr	
Barium	200	.22	anr	
Beryllium	1.0	.14	anr	
Bismuth	20	1		
Boron	100	1.2		
Cadmium	3.0	.17	anr	
Calcium	5000	14	anr	
Chromium	10	.53	anr	
Cobalt	50	.31	anr	
Copper	10	.61	anr	
Iron	100	3.1	12.7	<100
Lead	3.0	1.7	anr	
Lithium	20	.78		
Magnesium	5000	33	anr	
Manganese	15	.087	anr	
Molybdenum	20	.28		
Nickel	10	.84	anr	
Palladium	50	1.1		
Potassium	10000	19	anr	
Selenium	10	2.6	anr	
Silicon	200	8.2		
Silver	10	.62	anr	
Sodium	10000	5.8	anr	
Sulfur	50	13		
Strontium	10	.05		
Thallium	2.0	1.5	anr	
Tin	10	.79		
Titanium	10	.58		
Tungsten	50	4.7		
Vanadium	50	.59	anr	
Zinc	20	3.3	anr	

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35417 Units: ug/l

Time:			22:34	
Sample ID:			CCB12	
Metal	RL	IDL	raw	final
Zirconium	10	.2		

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35417 Units: ug/l

Time:		11:08	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	anr		
Beryllium	anr		
Bismuth			
Boron			
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	40000	40000	100.0
Lead	anr		
Lithium			
Magnesium	anr		
Manganese	anr		
Molybdenum			
Nickel	anr		
Palladium			
Potassium	anr		
Selenium	anr		
Silicon			
Silver	anr		
Sodium	anr		
Sulfur			
Strontium			
Thallium	anr		
Tin			
Titanium			
Tungsten			
Vanadium	anr		
Zinc	anr		

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35417 Units: ug/l

Time:		11:08	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35417 Units: ug/l

Time:		10:50			12:01			13:09	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron									
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40800	102.0	40000	39800	99.5	40000	39800	99.5
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35417 Units: ug/l

Time:		10:50			12:01			13:09	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35417 Units: ug/l

Time:		14:16			15:22			16:11	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron									
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40500	101.3	40000	40100	100.3	40000	40500	101.3
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35417 Units: ug/l

Time:		14:16			15:22			16:11	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35417 Units: ug/l

Time:		17:18			18:24			19:31	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron									
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40200	100.5	40000	39400	98.5	40000	39900	99.8
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35417 Units: ug/l

Time:		17:18			18:24			19:31	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35417 Units: ug/l

Time:		20:39			21:46			22:28	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron									
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40100	100.3	40000	39300	98.3	40000	41500	103.8
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35417 Units: ug/l

Time:		20:39			21:46			22:28	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35417 Units: ug/l

Time:				11:25		11:37		11:43	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		109	109.0	546	109.2		
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	anr					
Molybdenum	20								
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50								
Strontium	10								
Thallium	10		2.0	anr					
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35417 Units: ug/l

Time:				11:25		11:37		11:43	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10								

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35417 Units: ug/l

Time:				15:34		15:40		15:47	
Sample ID:	CRI	CRIA	CRID	CRID3		CRI2		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0						
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500				104	104.0	556	111.2
Lead	3.0	20	2.5						
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	anr					
Molybdenum	20								
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50								
Strontium	10								
Thallium	10		2.0	anr					
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35417 Units: ug/l

Time:				15:34		15:40		15:47	
Sample ID:	CRI	CRIA	CRID	CRID3		CRI2		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10								

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35417 Units: ug/l

Time:				15:53		21:58		22:04	
Sample ID:	CRI	CRIA	CRID	CRID4		CRI3		CRID5	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0						
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500				106	106.0		
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	anr					
Molybdenum	20								
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0						
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50								
Strontium	10								
Thallium	10		2.0	anr					
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35417 Units: ug/l

Time:				15:53		21:58		22:04	
Sample ID:	CRI	CRIA	CRID	CRID4		CRI3		CRID5	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10								

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35417 Units: ug/l

Time:				22:10	
Sample ID:	CRI	CRIA	CRID	CRIA3	
Metal	True	True	True	Results	% Rec
Aluminum	200	500	100	anr	
Antimony	6.0	20	3.0	anr	
Arsenic	8.0	20	3.0	anr	
Barium	200		4.0		
Beryllium	2.0		1.0		
Bismuth	20				
Boron	100		10		
Cadmium	3.0		1.0		
Calcium	5000	2000	1000	anr	
Chromium	10		2.0		
Cobalt	50		3.0		
Copper	10		2.0		
Iron	100	500		557	111.4
Lead	3.0	20	2.5	anr	
Lithium	20				
Magnesium	5000	2000	100	anr	
Manganese	15		3.0		
Molybdenum	20				
Nickel	10		4.0		
Palladium	50				
Potassium	5000		2000		
Selenium	10	20	5.0	anr	
Silicon	200				
Silver	5.0		1.0		
Sodium	5000		1000		
Sulfur	50				
Strontium	10				
Thallium	10		2.0		
Tin	10				
Titanium	10				
Tungsten	50				
Vanadium	50		2.0		
Zinc	20		10		

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35417 Units: ug/l

Time:				22:10	
Sample ID:	CRI	CRIA	CRID	CRIA3	
Metal	True	True	True	Results	% Rec
Zirconium	10				

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA35417 Units: ug/l

Time:			11:49		11:55		15:59		16:05	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	500000	100.0	497000	99.4	501000	100.2	492000	98.4
Antimony		1000	3.3		1050	105.0	3.5		1060	106.0
Arsenic		1000	0.20		1040	104.0	-1.2		1040	104.0
Barium		500	-1.5		501	100.2	-1.4		496	99.2
Beryllium		500	0.0		503	100.6	-0.10		504	100.8
Bismuth		500	-13		537	107.4	-13		542	108.4
Boron			0.80		-0.60		0.90		-0.20	
Cadmium		1000	0.60		1050	105.0	0.60		1050	105.0
Calcium	400000	400000	387000	96.8	368000	92.0	391000	97.8	371000	92.8
Chromium		500	1.4		490	98.0	2.4		493	98.6
Cobalt		500	1.4		501	100.2	0.70		501	100.2
Copper		500	1.6		535	107.0	1.4		533	106.6
Iron	200000	200000	187000	93.5	179000	89.5	188000	94.0	178000	89.0
Lead		1000	-3.7		955	95.5	5.1		964	96.4
Lithium		500	10.3		552	110.4	9.8		542	108.4
Magnesium	500000	500000	510000	102.0	498000	99.6	514000	102.8	499000	99.8
Manganese		500	2.8		495	99.0	2.9		500	100.0
Molybdenum		500	-2.2		486	97.2	-1.6		486	97.2
Nickel		1000	-1.3		979	97.9	-1.8		979	97.9
Palladium		500	0.30		551	110.2	-1.6		556	111.2
Potassium			143		147		140		144	
Selenium		1000	2.4		1050	105.0	0.0		1060	106.0
Silicon			-6.1		-14		-8.2		-14	
Silver		1000	5.7		1120	112.0	5.8		1120	112.0
Sodium			-19		-14		-17		-18	
Sulfur		500	-11		487	97.4	-11		489	97.8
Strontium			-4.8		-4.5		-4.9		-4.7	
Thallium		1000	-2.1		959	95.9	-1.2		963	96.3
Tin			-2.3		-3.4		-1.4		-4.1	
Titanium			-0.30		-0.50		-0.70		-0.30	
Tungsten		500	5.1		498	99.6	4.8		500	100.0
Vanadium		500	4.3		494	98.8	4.3		497	99.4
Zinc		1000	11.0		964	96.4	9.5		962	96.2

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA35417 Units: ug/l

Time:			11:49		11:55		15:59		16:05	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	2.6		496	99.2	2.3		496	99.2

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA35417 Units: ug/l

Time:			22:16		22:22	
Sample ID:	ICSA	ICSAB	ICSA3		ICSAB3	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	500000	500000	511000	102.2	508000	101.6
Antimony		1000	8.0		1070	107.0
Arsenic		1000	1.2		1070	107.0
Barium		500	-1.6		514	102.8
Beryllium		500	0.0		508	101.6
Bismuth		500	-12		554	110.8
Boron			-0.50		0.10	
Cadmium		1000	0.70		1080	108.0
Calcium	400000	400000	401000	100.3	378000	94.5
Chromium		500	2.1		498	99.6
Cobalt		500	1.5		516	103.2
Copper		500	1.2		545	109.0
Iron	200000	200000	190000	95.0	181000	90.5
Lead		1000	-2.4		968	96.8
Lithium		500	10.8		553	110.6
Magnesium	500000	500000	520000	104.0	504000	100.8
Manganese		500	3.2		504	100.8
Molybdenum		500	-1.7		502	100.4
Nickel		1000	-1.3		1000	100.0
Palladium		500	-2.4		563	112.6
Potassium			142		157	
Selenium		1000	3.4		1080	108.0
Silicon			-6.4		-14	
Silver		1000	7.1		1150	115.0
Sodium			1.8		15.6	
Sulfur		500	-11		504	100.8
Strontium			-5.2		-4.0	
Thallium		1000	0.10		986	98.6
Tin			-3.3		-2.3	
Titanium			-0.80		-0.10	
Tungsten		500	5.8		514	102.8
Vanadium		500	4.2		506	101.2
Zinc		1000	11.7		980	98.0

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD111414M1.ICP Date Analyzed: 11/14/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA35417 Units: ug/l

Time:			22:16		22:22	
Sample ID:	ICSA	ICSAB	ICSA3		ICSAB3	
Metal	True	True	Results	% Rec	Results	% Rec
Zirconium		500	2.6		506	101.2

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83046
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 11/06/14

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	5.9	16		
Antimony	6.0	1.2	3.8		
Arsenic	3.0	.86	2.1		
Barium	200	.19	.51		
Beryllium	1.0	.12	.17		
Bismuth	20	2.1	3.9		
Boron	100	.88	1.5		
Cadmium	3.0	.2	.3		
Calcium	5000	9.6	17		
Chromium	10	.39	.99		
Cobalt	50	.29	.69		
Copper	10	.82	.86		
Iron	100	2.9	9.5	2.9	<100
Lead	3.0	.97	1.5		
Lithium	20	1.7	1.6		
Magnesium	5000	15	46		
Manganese	15	.12	.28		
Molybdenum	20	.33	2.5		
Nickel	10	.35	1.2		
Palladium	50	1.7	2.3		
Potassium	10000	30	41		
Selenium	10	1.7	4.7		
Silicon	200	2.3	7.4		
Silver	10	.74	.91		
Sodium	10000	10	37		
Sulfur	50	3.7	7.2		
Strontium	10	.16	.28		
Thallium	2.0	1.4	1.7		
Tin	10	.8	1.8		
Titanium	10	.39	.83		
Tungsten	50	1.4	8		
Vanadium	50	.34	.91		
Zinc	20	1.6	3.2		

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83046
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 11/06/14

Metal	RL	IDL	MDL	MB raw	final
Zirconium	10	.31	1.2		

Associated samples MP83046: JB80728-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83046
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 11/06/14

Metal	JB80512-18 Original	MS	Spikelot MPSPK	% Rec	QC Limits
Aluminum					
Antimony	anr				
Arsenic	anr				
Barium					
Beryllium	anr				
Bismuth					
Boron					
Cadmium	anr				
Calcium					
Chromium	anr				
Cobalt					
Copper	anr				
Iron	501	26000	25000	102.0	70-130
Lead	anr				
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel	anr				
Palladium					
Potassium					
Selenium	anr				
Silicon					
Silver	anr				
Sodium					
Sulfur					
Strontium					
Thallium	anr				
Tin					
Titanium					
Tungsten					
Vanadium					
Zinc	anr				

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83046
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 11/06/14

Metal	JB80512-18 Original MS	Spikelot MPSPK	% Rec	QC Limits
Zirconium				

Associated samples MP83046: JB80728-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83046 Methods: EPA 200.7
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 11/06/14

Metal	JB80512-18 Original	MSD	Spikelot MPSPK	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	anr					
Arsenic	anr					
Barium						
Beryllium	anr					
Bismuth						
Boron						
Cadmium	anr					
Calcium						
Chromium	anr					
Cobalt						
Copper	anr					
Iron	501	26100	25000	102.4	0.4	16
Lead	anr					
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel	anr					
Palladium						
Potassium						
Selenium	anr					
Silicon						
Silver	anr					
Sodium						
Sulfur						
Strontium						
Thallium	anr					
Tin						
Titanium						
Tungsten						
Vanadium						
Zinc	anr					

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83046 Methods: EPA 200.7
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 11/06/14

Metal	JB80512-18 Original MSD	Spikelot MPSPK	% Rec	MSD RPD	QC Limit
Zirconium					

Associated samples MP83046: JB80728-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83046
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 11/06/14

Metal	BSP Result	Spikelot MPSPK	% Rec	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium				
Beryllium	anr			
Bismuth				
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper	anr			
Iron	24900	25000	99.6	85-115
Lead	anr			
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	anr			
Palladium				
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Sulfur				
Strontium				
Thallium	anr			
Tin				
Titanium				
Tungsten				
Vanadium				
Zinc	anr			

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83046 Methods: EPA 200.7
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 11/06/14

Metal	BSP Result	Spikelot MPSPK	% Rec	QC Limits
Zirconium				

Associated samples MP83046: JB80728-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83046
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 11/06/14

Metal	JB80512-18 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium				
Beryllium	anr			
Bismuth				
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper	anr			
Iron	501	510	1.8	0-10
Lead	anr			
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	anr			
Palladium				
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Sulfur				
Strontium				
Thallium	anr			
Tin				
Titanium				
Tungsten				
Vanadium				
Zinc	anr			

SERIAL DILUTION RESULTS SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83046
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 11/06/14

Metal	JB80512-18 Original SDL 1:5	%DIF	QC Limits
Zirconium			

Associated samples MP83046: JB80728-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83225
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 11/12/14

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	8.1	16		
Antimony	6.0	1.3	3.8		
Arsenic	3.0	.92	2.1		
Barium	200	.22	.51		
Beryllium	1.0	.087	.17		
Bismuth	20	1	3.9		
Boron	100	.69	1.5		
Cadmium	3.0	.17	.3		
Calcium	5000	9.4	17		
Chromium	10	.42	.99		
Cobalt	50	.27	.69		
Copper	10	.43	.86		
Iron	100	3.1	9.5	6.7	<100
Lead	3.0	1.7	1.5		
Lithium	20	.78	1.6		
Magnesium	5000	33	46		
Manganese	15	.038	.28		
Molybdenum	20	.28	2.5		
Nickel	10	.41	1.2		
Palladium	50	1.1	2.3		
Potassium	10000	19	41		
Selenium	10	2	4.7		
Silicon	200	3.1	7.4		
Silver	10	.62	.91		
Sodium	10000	5.8	37		
Sulfur	50	2.8	7.2		
Strontium	10	.05	.28		
Thallium	2.0	1.5	1.7		
Tin	10	.79	1.8		
Titanium	10	.37	.83		
Tungsten	50	4.7	8		
Vanadium	50	.38	.91		
Zinc	20	2.9	3.2		

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83225
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 11/12/14

Metal	RL	IDL	MDL	MB raw	final
Zirconium	10	.2	1.2		

Associated samples MP83225: JB80728-1, JB80728-2, JB80728-3, JB80728-4, JB80728-5, JB80728-6, JB80728-7, JB80728-8, JB80728-9, JB80728-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83225
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 11/12/14

Metal	JB80728-8 Original MS		Spikelot MPSPK	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Bismuth					
Boron					
Cadmium					
Calcium					
Chromium					
Cobalt					
Copper					
Iron	348	22600	25000	89.0	70-130
Lead					
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Palladium					
Potassium					
Selenium					
Silicon					
Silver					
Sodium					
Sulfur					
Strontium					
Thallium					
Tin					
Titanium					
Tungsten					
Vanadium					
Zinc					

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83225
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 11/12/14

Metal	JB80728-8 Original MS	Spikelot MPSPK	% Rec	QC Limits
Zirconium				

Associated samples MP83225: JB80728-1, JB80728-2, JB80728-3, JB80728-4, JB80728-5, JB80728-6, JB80728-7, JB80728-8, JB80728-9, JB80728-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83225 Methods: EPA 200.7
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 11/12/14

Metal	JB80728-8 Original	MSD	Spikelot MPSPK	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Bismuth						
Boron						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron	348	22900	25000	90.2	1.3	16
Lead						
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Palladium						
Potassium						
Selenium						
Silicon						
Silver						
Sodium						
Sulfur						
Strontium						
Thallium						
Tin						
Titanium						
Tungsten						
Vanadium						
Zinc						

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83225 Methods: EPA 200.7
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 11/12/14

Metal	JB80728-8 Original MSD	Spikelot MPSPK	% Rec	MSD RPD	QC Limit
Zirconium					

Associated samples MP83225: JB80728-1, JB80728-2, JB80728-3, JB80728-4, JB80728-5, JB80728-6, JB80728-7, JB80728-8, JB80728-9, JB80728-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83225
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 11/12/14

Metal	BSP Result	Spikelot MPSPK	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Bismuth				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron	26300	25000	105.2	85-115
Lead				
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Palladium				
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Sulfur				
Strontium				
Thallium				
Tin				
Titanium				
Tungsten				
Vanadium				
Zinc				

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83225
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 11/12/14

Metal	BSP Result	Spikelot MPSPK	% Rec	QC Limits
Zirconium				

Associated samples MP83225: JB80728-1, JB80728-2, JB80728-3, JB80728-4, JB80728-5, JB80728-6, JB80728-7, JB80728-8, JB80728-9, JB80728-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83225
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 11/12/14

Metal	JB80728-8 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Bismuth				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron	348	373	7.5	0-10
Lead				
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Palladium				
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Sulfur				
Strontium				
Thallium				
Tin				
Titanium				
Tungsten				
Vanadium				
Zinc				

SERIAL DILUTION RESULTS SUMMARY

Login Number: JB80728
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83225
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 11/12/14

Metal	JB80728-8 Original SDL 1:5	%DIF	QC Limits
Zirconium			

Associated samples MP83225: JB80728-1, JB80728-2, JB80728-3, JB80728-4, JB80728-5, JB80728-6, JB80728-7, JB80728-8, JB80728-9, JB80728-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

New Jersey
ACCUTEST
LABORATORIES

12/09/14

Technical Report for

Atlantic Richfield Company

ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Accutest Job Number: JB82646

Sampling Date: 11/24/14

Report to:

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400 E Corporate Court
South Plainfield, NJ 07080
donnan@envirotrac.com

ATTN: Donna Nicholls

Total number of pages in report: **503**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Kelly Patterson 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, OH VAP (CL0056), AZ (AZ0786), PA, RI, SC, TN, VA, WV, DoD ELAP (L-A-B L2248)

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Accutest Laboratories

Sample Summary

Atlantic Richfield Company

Job No: JB82646

ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JB82646-1	11/24/14	10:40	KM	11/25/14	AQ	Ground Water	MW-1
JB82646-2	11/24/14	10:55	KM	11/25/14	AQ	Ground Water	MW-3
JB82646-3	11/24/14	13:22	KM	11/25/14	AQ	Ground Water	MW-11
JB82646-4	11/24/14	11:13	KM	11/25/14	AQ	Ground Water	MW-19
JB82646-5	11/24/14	13:36	KM	11/25/14	AQ	Ground Water	MW-6
JB82646-6	11/24/14	12:56	KM	11/25/14	AQ	Ground Water	MW-12
JB82646-7	11/24/14	10:24	KM	11/25/14	AQ	Ground Water	MW-2
JB82646-8	11/24/14	12:28	KM	11/25/14	AQ	Ground Water	MW-14
JB82646-9	11/24/14	11:50	KM	11/25/14	AQ	Ground Water	MW-16R
JB82646-10	11/24/14	12:04	KM	11/25/14	AQ	Ground Water	MW-17R
JB82646-11	11/24/14	11:30	KM	11/25/14	AQ	Ground Water	MW-18R

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Atlantic Richfield Company	**Job No**	JB82646
Site:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ	**Report Date**	12/9/2014 6:09:44 PM

On 11/25/2014, 11 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 2.6 C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of JB82646 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix: AQ **Batch ID:** V4V558

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB82646-4MS, JB82646-4MSD were used as the QC samples indicated.

Matrix: AQ **Batch ID:** VU8782

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB82962-1MS, JB82962-1MSD were used as the QC samples indicated.

Matrix: AQ **Batch ID:** VU8783

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB82962-7MS, JB82962-7MSD were used as the QC samples indicated.

Metals By Method EPA 200.7

Matrix: AQ **Batch ID:** MP83638

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB82646-3MS, JB82646-3MSD, JB82646-3SDL were used as the QC samples for metals.

Matrix: AQ **Batch ID:** MP83641

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB82473-10MS, JB82473-10MSD, JB82473-10SDL were used as the QC samples for metals.
- JB82646-11 for Iron: Elevated sample detection limit due to difficult sample matrix.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

Summary of Hits

Job Number: JB82646
Account: Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Collected: 11/24/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB82646-1	**MW-1**					
Methyl Tert Butyl Ether		0.27 J	1.0	0.26	ug/l	SW846 8260B
Iron		2710	100		ug/l	EPA 200.7
JB82646-2	**MW-3**					
Benzene		3.1	0.50	0.21	ug/l	SW846 8260B
Cyclohexane		1.3 J	5.0	0.37	ug/l	SW846 8260B
Isopropylbenzene		0.86 J	1.0	0.26	ug/l	SW846 8260B
Methylcyclohexane		0.65 J	5.0	0.22	ug/l	SW846 8260B
Methyl Tert Butyl Ether		2.0	1.0	0.26	ug/l	SW846 8260B
Total Alkanes		14 J			ug/l	
Iron		748	100		ug/l	EPA 200.7
JB82646-3	**MW-11**					
Acetone		70.2	10	2.6	ug/l	SW846 8260B
Benzene		0.52	0.50	0.21	ug/l	SW846 8260B
2-Butanone (MEK)		21.1	10	2.5	ug/l	SW846 8260B
Carbon disulfide		0.88 J	2.0	0.50	ug/l	SW846 8260B
Cyclohexane		15.7	5.0	0.37	ug/l	SW846 8260B
Ethylbenzene		4.0	1.0	0.40	ug/l	SW846 8260B
2-Hexanone		6.7	5.0	1.7	ug/l	SW846 8260B
Isopropylbenzene		0.78 J	1.0	0.26	ug/l	SW846 8260B
Methylcyclohexane		15.5	5.0	0.22	ug/l	SW846 8260B
4-Methyl-2-pentanone(MIBK)		3.4 J	5.0	1.1	ug/l	SW846 8260B
Tert Butyl Alcohol		25.6	10	4.7	ug/l	SW846 8260B
Toluene		1.6	1.0	0.22	ug/l	SW846 8260B
m,p-Xylene		22.6	1.0	0.45	ug/l	SW846 8260B
o-Xylene		19.1	1.0	0.20	ug/l	SW846 8260B
Xylene (total)		41.7	1.0	0.20	ug/l	SW846 8260B
Total TIC, Volatile		79 J			ug/l	
Total Alkanes		779 J			ug/l	
Iron		589	100		ug/l	EPA 200.7
JB82646-4	**MW-19**					
Iron		12900	100		ug/l	EPA 200.7
JB82646-5	**MW-6**					
Acetone		83.0	10	2.6	ug/l	SW846 8260B
Benzene		10	0.50	0.21	ug/l	SW846 8260B
2-Butanone (MEK)		35.0	10	2.5	ug/l	SW846 8260B

Summary of Hits

Job Number: JB82646
Account: Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Collected: 11/24/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Chloromethane		0.75 J	1.0	0.33	ug/l	SW846 8260B
Cyclohexane		64.7	5.0	0.37	ug/l	SW846 8260B
Ethylbenzene		9.6	1.0	0.40	ug/l	SW846 8260B
Isopropylbenzene		23.6	1.0	0.26	ug/l	SW846 8260B
Methylcyclohexane		54.6	5.0	0.22	ug/l	SW846 8260B
Toluene		23.2	1.0	0.22	ug/l	SW846 8260B
m,p-Xylene		23.0	1.0	0.45	ug/l	SW846 8260B
o-Xylene		0.86 J	1.0	0.20	ug/l	SW846 8260B
Xylene (total)		23.9	1.0	0.20	ug/l	SW846 8260B
Total TIC, Volatile		553 J			ug/l	
Total Alkanes		682 J			ug/l	
Iron		17300	100		ug/l	EPA 200.7
JB82646-6	**MW-12**					
Benzene		77.1	1.0	0.42	ug/l	SW846 8260B
Chloromethane		1.6 J	2.0	0.66	ug/l	SW846 8260B
Cyclohexane		35.2	10	0.74	ug/l	SW846 8260B
Ethylbenzene		151	2.0	0.79	ug/l	SW846 8260B
Isopropylbenzene		18.7	2.0	0.51	ug/l	SW846 8260B
Methylcyclohexane		65.5	10	0.43	ug/l	SW846 8260B
Methyl Tert Butyl Ether		1.3 J	2.0	0.53	ug/l	SW846 8260B
Tert Butyl Alcohol		14.7 J	20	9.3	ug/l	SW846 8260B
Toluene		61.8	2.0	0.44	ug/l	SW846 8260B
m,p-Xylene		566	2.0	0.90	ug/l	SW846 8260B
o-Xylene		161	2.0	0.40	ug/l	SW846 8260B
Xylene (total)		727	2.0	0.40	ug/l	SW846 8260B
Total TIC, Volatile		598 J			ug/l	
Total Alkanes		951 J			ug/l	
Iron		16000	100		ug/l	EPA 200.7
JB82646-7	**MW-2**					
Benzene		0.46 J	0.50	0.21	ug/l	SW846 8260B
Methyl Tert Butyl Ether		0.88 J	1.0	0.26	ug/l	SW846 8260B
Total Alkanes		18.5 J			ug/l	
Iron		596	100		ug/l	EPA 200.7
JB82646-8	**MW-14**					
Acetone		11.9	10	2.6	ug/l	SW846 8260B
Benzene		32.6	0.50	0.21	ug/l	SW846 8260B
2-Butanone (MEK)		4.5 J	10	2.5	ug/l	SW846 8260B
Cyclohexane		56.3	5.0	0.37	ug/l	SW846 8260B
Ethylbenzene		26.2	1.0	0.40	ug/l	SW846 8260B

Summary of Hits

Job Number: JB82646
Account: Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Collected: 11/24/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
2-Hexanone		4.8 J	5.0	1.7	ug/l	SW846 8260B
Isopropylbenzene		3.0	1.0	0.26	ug/l	SW846 8260B
Methylcyclohexane		34.1	5.0	0.22	ug/l	SW846 8260B
Methyl Tert Butyl Ether		4.2	1.0	0.26	ug/l	SW846 8260B
4-Methyl-2-pentanone(MIBK)		3.9 J	5.0	1.1	ug/l	SW846 8260B
Tert Butyl Alcohol		10.7	10	4.7	ug/l	SW846 8260B
Toluene		7.2	1.0	0.22	ug/l	SW846 8260B
m,p-Xylene		195	1.0	0.45	ug/l	SW846 8260B
o-Xylene		34.1	1.0	0.20	ug/l	SW846 8260B
Xylene (total)		229	1.0	0.20	ug/l	SW846 8260B
Total TIC, Volatile		313 J			ug/l	
Total Alkanes		312 J			ug/l	
Iron		526	100		ug/l	EPA 200.7
JB82646-9	**MW-16R**					
Methyl Tert Butyl Ether		0.96 J	1.0	0.26	ug/l	SW846 8260B
Iron		8540	100		ug/l	EPA 200.7
JB82646-10	**MW-17R**					
Acetone		58.1 J	100	26	ug/l	SW846 8260B
Benzene		222	5.0	2.1	ug/l	SW846 8260B
Cyclohexane		132	50	3.7	ug/l	SW846 8260B
Ethylbenzene		1010	10	4.0	ug/l	SW846 8260B
Isopropylbenzene		76.1	10	2.6	ug/l	SW846 8260B
Methylcyclohexane		80.1	50	2.2	ug/l	SW846 8260B
Methyl Tert Butyl Ether		4.1 J	10	2.6	ug/l	SW846 8260B
Toluene		1080	10	2.2	ug/l	SW846 8260B
m,p-Xylene		4560	50	22	ug/l	SW846 8260B
o-Xylene		1720	10	2.0	ug/l	SW846 8260B
Xylene (total)		6280	50	10	ug/l	SW846 8260B
Total TIC, Volatile		3506 J			ug/l	
Total Alkanes		1550 J			ug/l	
Iron		8070	100		ug/l	EPA 200.7
JB82646-11	**MW-18R**					
Iron [a]		2180	200		ug/l	EPA 200.7

(a) Elevated sample detection limit due to difficult sample matrix.

New Jersey ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	JB82646-1	**Date Sampled:**	11/24/14
Matrix:	AQ - Ground Water	**Date Received:**	11/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4V13527.D	1	11/29/14	BM	n/a	n/a	V4V558
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.6	ug/l	
71-43-2	Benzene	ND	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	JB82646-1	**Date Sampled:**	11/24/14
Matrix:	AQ - Ground Water	**Date Received:**	11/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.27	1.0	0.26	ug/l	J
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	ND	1.0	0.45	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		79-120%
17060-07-0	1,2-Dichloroethane-D4	113%		72-123%
2037-26-5	Toluene-D8	97%		78-119%
460-00-4	4-Bromofluorobenzene	102%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	
	Total Alkanes		0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	JB82646-1	**Date Sampled:**	11/24/14
Matrix:	AQ - Ground Water	**Date Received:**	11/25/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	2710	100	ug/l	1	12/03/14	12/05/14	BS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35578
(2) Prep QC Batch: MP83638

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	JB82646-2	**Date Sampled:**	11/24/14
Matrix:	AQ - Ground Water	**Date Received:**	11/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4V13528.D	1	11/29/14	BM	n/a	n/a	V4V558
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.6	ug/l	
71-43-2	Benzene	3.1	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	1.3	5.0	0.37	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	JB82646-2	**Date Sampled:**	11/24/14
Matrix:	AQ - Ground Water	**Date Received:**	11/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	0.86	1.0	0.26	ug/l	J
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	0.65	5.0	0.22	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	2.0	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	ND	1.0	0.45	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		79-120%
17060-07-0	1,2-Dichloroethane-D4	114%		72-123%
2037-26-5	Toluene-D8	99%		78-119%
460-00-4	4-Bromofluorobenzene	103%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	
	Total Alkanes		14	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	JB82646-2	**Date Sampled:**	11/24/14
Matrix:	AQ - Ground Water	**Date Received:**	11/25/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	748	100	ug/l	1	12/03/14	12/05/14	GT	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35586
(2) Prep QC Batch: MP83638

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID: MW-11
Lab Sample ID: JB82646-3 **Date Sampled:** 11/24/14
Matrix: AQ - Ground Water **Date Received:** 11/25/14
Method: SW846 8260B **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U190336.D	1	12/03/14	YXC	n/a	n/a	VU8782
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	70.2	10	2.6	ug/l	
71-43-2	Benzene	0.52	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	21.1	10	2.5	ug/l	
75-15-0	Carbon disulfide	0.88	2.0	0.50	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	15.7	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	4.0	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-11		
Lab Sample ID:	JB82646-3	**Date Sampled:**	11/24/14
Matrix:	AQ - Ground Water	**Date Received:**	11/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	6.7	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	0.78	1.0	0.26	ug/l	J
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	15.5	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.4	5.0	1.1	ug/l	J
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	25.6	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	1.6	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	22.6	1.0	0.45	ug/l	
95-47-6	o-Xylene	19.1	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	41.7	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		79-120%
17060-07-0	1,2-Dichloroethane-D4	102%		72-123%
2037-26-5	Toluene-D8	110%		78-119%
460-00-4	4-Bromofluorobenzene	108%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	alkene	9.45	53	ug/l	J
	C3 alkyl benzene	16.26	12	ug/l	J
	C3 alkyl benzene	16.44	14	ug/l	J
	Total TIC, Volatile		79	ug/l	J
	Total Alkanes		779	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-11		
Lab Sample ID:	JB82646-3	**Date Sampled:**	11/24/14
Matrix:	AQ - Ground Water	**Date Received:**	11/25/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	589	100	ug/l	1	12/03/14	12/05/14	BS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35578
(2) Prep QC Batch: MP83638

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID: MW-19
Lab Sample ID: JB82646-4 **Date Sampled:** 11/24/14
Matrix: AQ - Ground Water **Date Received:** 11/25/14
Method: SW846 8260B **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4V13525.D	1	11/29/14	BM	n/a	n/a	V4V558
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.6	ug/l	
71-43-2	Benzene	ND	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-19		
Lab Sample ID:	JB82646-4	**Date Sampled:**	11/24/14
Matrix:	AQ - Ground Water	**Date Received:**	11/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	ND	1.0	0.45	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		79-120%
17060-07-0	1,2-Dichloroethane-D4	114%		72-123%
2037-26-5	Toluene-D8	98%		78-119%
460-00-4	4-Bromofluorobenzene	102%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	
	Total Alkanes		0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-19		
Lab Sample ID:	JB82646-4	**Date Sampled:**	11/24/14
Matrix:	AQ - Ground Water	**Date Received:**	11/25/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	12900	100	ug/l	1	12/03/14	12/05/14	GT	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35586
(2) Prep QC Batch: MP83638

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID: MW-6
Lab Sample ID: JB82646-5 **Date Sampled:** 11/24/14
Matrix: AQ - Ground Water **Date Received:** 11/25/14
Method: SW846 8260B **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U190335.D	1	12/03/14	YXC	n/a	n/a	VU8782
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	83.0	10	2.6	ug/l	
71-43-2	Benzene	10	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	35.0	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	0.75	1.0	0.33	ug/l	J
110-82-7	Cyclohexane	64.7	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	9.6	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-6		
Lab Sample ID:	JB82646-5	**Date Sampled:**	11/24/14
Matrix:	AQ - Ground Water	**Date Received:**	11/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	23.6	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	54.6	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	23.2	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	23.0	1.0	0.45	ug/l	
95-47-6	o-Xylene	0.86	1.0	0.20	ug/l	J
1330-20-7	Xylene (total)	23.9	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		79-120%
17060-07-0	1,2-Dichloroethane-D4	103%		72-123%
2037-26-5	Toluene-D8	111%		78-119%
460-00-4	4-Bromofluorobenzene	108%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	alkene	6.96	43	ug/l	J
	alkene	8.04	46	ug/l	J
	alkene	9.45	160	ug/l	J
103-65-1	Benzene, propyl-	15.83	61	ug/l	JN
	C4 alkyl benzene	17.07	42	ug/l	J
496-11-7	Indane	17.21	74	ug/l	JN
	C4 alkyl benzene	17.60	45	ug/l	J
	C4 alkyl benzene	18.04	37	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-6		
Lab Sample ID:	JB82646-5	**Date Sampled:**	11/24/14
Matrix:	AQ - Ground Water	**Date Received:**	11/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	1H-Indene-dihydro-methyl- isomer	18.67	45	ug/l	J
	Total TIC, Volatile		553	ug/l	J
	Total Alkanes		682	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-6		
Lab Sample ID:	JB82646-5	**Date Sampled:**	11/24/14
Matrix:	AQ - Ground Water	**Date Received:**	11/25/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	17300	100	ug/l	1	12/03/14	12/05/14	GT	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35586
(2) Prep QC Batch: MP83638

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID: MW-12
Lab Sample ID: JB82646-6 **Date Sampled:** 11/24/14
Matrix: AQ - Ground Water **Date Received:** 11/25/14
Method: SW846 8260B **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U190338.D	2	12/03/14	YXC	n/a	n/a	VU8782
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20	5.3	ug/l	
71-43-2	Benzene	77.1	1.0	0.42	ug/l	
74-97-5	Bromochloromethane	ND	2.0	0.97	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	0.56	ug/l	
75-25-2	Bromoform	ND	2.0	0.62	ug/l	
74-83-9	Bromomethane	ND	4.0	0.77	ug/l	
78-93-3	2-Butanone (MEK)	ND	20	5.0	ug/l	
75-15-0	Carbon disulfide	ND	4.0	0.99	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	0.47	ug/l	
108-90-7	Chlorobenzene	ND	2.0	0.54	ug/l	
75-00-3	Chloroethane	ND	2.0	1.1	ug/l	
67-66-3	Chloroform	ND	2.0	0.41	ug/l	
74-87-3	Chloromethane	1.6	2.0	0.66	ug/l	J
110-82-7	Cyclohexane	35.2	10	0.74	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	4.0	2.3	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.45	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2.0	0.51	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2.0	0.47	ug/l	
75-71-8	Dichlorodifluoromethane	ND	4.0	1.5	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	0.70	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	2.0	0.99	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	2.0	0.65	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2.0	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.87	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.57	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.63	ug/l	
123-91-1	1,4-Dioxane	ND	250	100	ug/l	
100-41-4	Ethylbenzene	151	2.0	0.79	ug/l	
76-13-1	Freon 113	ND	10	0.89	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-12		
Lab Sample ID:	JB82646-6	**Date Sampled:**	11/24/14
Matrix:	AQ - Ground Water	**Date Received:**	11/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	10	3.5	ug/l	
98-82-8	Isopropylbenzene	18.7	2.0	0.51	ug/l	
79-20-9	Methyl Acetate	ND	10	6.2	ug/l	
108-87-2	Methylcyclohexane	65.5	10	0.43	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.3	2.0	0.53	ug/l	J
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	10	2.1	ug/l	
75-09-2	Methylene chloride	ND	4.0	1.6	ug/l	
100-42-5	Styrene	ND	2.0	0.51	ug/l	
75-65-0	Tert Butyl Alcohol	14.7	20	9.3	ug/l	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	0.79	ug/l	
127-18-4	Tetrachloroethene	ND	2.0	0.70	ug/l	
108-88-3	Toluene	61.8	2.0	0.44	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.53	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.64	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.55	ug/l	
79-01-6	Trichloroethene	ND	2.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	0.56	ug/l	
75-01-4	Vinyl chloride	ND	2.0	0.35	ug/l	
	m,p-Xylene	566	2.0	0.90	ug/l	
95-47-6	o-Xylene	161	2.0	0.40	ug/l	
1330-20-7	Xylene (total)	727	2.0	0.40	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		79-120%
17060-07-0	1,2-Dichloroethane-D4	102%		72-123%
2037-26-5	Toluene-D8	110%		78-119%
460-00-4	4-Bromofluorobenzene	107%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	alkene	9.45	70	ug/l	J
	C3 alkyl benzene	15.91	73	ug/l	J
	C3 alkyl benzene	15.99	61	ug/l	J
	C3 alkyl benzene	16.44	190	ug/l	J
	C4 alkyl benzene	17.07	60	ug/l	J
	C4 alkyl benzene	17.16	67	ug/l	J
	C4 alkyl benzene	17.59	77	ug/l	J
	Total TIC, Volatile		598	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-12		
Lab Sample ID:	JB82646-6	**Date Sampled:**	11/24/14
Matrix:	AQ - Ground Water	**Date Received:**	11/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total Alkanes		951	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-12		
Lab Sample ID:	JB82646-6	**Date Sampled:**	11/24/14
Matrix:	AQ - Ground Water	**Date Received:**	11/25/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	16000	100	ug/l	1	12/03/14	12/05/14	GT	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35586
(2) Prep QC Batch: MP83638

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID: MW-2
Lab Sample ID: JB82646-7 **Date Sampled:** 11/24/14
Matrix: AQ - Ground Water **Date Received:** 11/25/14
Method: SW846 8260B **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4V13529.D	1	11/29/14	BM	n/a	n/a	V4V558
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.6	ug/l	
71-43-2	Benzene	0.46	0.50	0.21	ug/l	J
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-2		
Lab Sample ID:	JB82646-7	**Date Sampled:**	11/24/14
Matrix:	AQ - Ground Water	**Date Received:**	11/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.88	1.0	0.26	ug/l	J
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	ND	1.0	0.45	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		79-120%
17060-07-0	1,2-Dichloroethane-D4	115%		72-123%
2037-26-5	Toluene-D8	97%		78-119%
460-00-4	4-Bromofluorobenzene	104%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	
	Total Alkanes		18.5	ug/l	J

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-2		
Lab Sample ID:	JB82646-7	**Date Sampled:**	11/24/14
Matrix:	AQ - Ground Water	**Date Received:**	11/25/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	596	100	ug/l	1	12/03/14	12/05/14	GT	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35586
(2) Prep QC Batch: MP83638

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID: MW-14
Lab Sample ID: JB82646-8 **Date Sampled:** 11/24/14
Matrix: AQ - Ground Water **Date Received:** 11/25/14
Method: SW846 8260B **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U190337.D	1	12/03/14	YXC	n/a	n/a	VU8782
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	11.9	10	2.6	ug/l	
71-43-2	Benzene	32.6	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	4.5	10	2.5	ug/l	J
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	56.3	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	26.2	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	JB82646-8	**Date Sampled:**	11/24/14
Matrix:	AQ - Ground Water	**Date Received:**	11/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	4.8	5.0	1.7	ug/l	J
98-82-8	Isopropylbenzene	3.0	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	34.1	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	4.2	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	3.9	5.0	1.1	ug/l	J
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	10.7	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	7.2	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	195	1.0	0.45	ug/l	
95-47-6	o-Xylene	34.1	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	229	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		79-120%
17060-07-0	1,2-Dichloroethane-D4	102%		72-123%
2037-26-5	Toluene-D8	110%		78-119%
460-00-4	4-Bromofluorobenzene	109%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	alkene	9.45	96	ug/l	J
	alkene	10.77	18	ug/l	J
	C3 alkyl benzene	15.91	18	ug/l	J
	C3 alkyl benzene	15.94	22	ug/l	J
	C3 alkyl benzene	15.99	24	ug/l	J
	C3 alkyl benzene	16.27	31	ug/l	J
	C3 alkyl benzene	16.44	62	ug/l	J
496-11-7	Indane	17.21	15	ug/l	JN

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J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	JB82646-8	**Date Sampled:**	11/24/14
Matrix:	AQ - Ground Water	**Date Received:**	11/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	alkene	8.04	27	ug/l	J
	Total TIC, Volatile		313	ug/l	J
	Total Alkanes		312	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	JB82646-8	**Date Sampled:**	11/24/14
Matrix:	AQ - Ground Water	**Date Received:**	11/25/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	526	100	ug/l	1	12/03/14	12/05/14	GT	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35586
(2) Prep QC Batch: MP83638

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-16R		
Lab Sample ID:	JB82646-9	**Date Sampled:**	11/24/14
Matrix:	AQ - Ground Water	**Date Received:**	11/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4V13526.D	1	11/29/14	BM	n/a	n/a	V4V558
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.6	ug/l	
71-43-2	Benzene	ND	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-16R		
Lab Sample ID:	JB82646-9	**Date Sampled:**	11/24/14
Matrix:	AQ - Ground Water	**Date Received:**	11/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.96	1.0	0.26	ug/l	J
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	ND	1.0	0.45	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		79-120%
17060-07-0	1,2-Dichloroethane-D4	115%		72-123%
2037-26-5	Toluene-D8	100%		78-119%
460-00-4	4-Bromofluorobenzene	102%		74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	
	Total Alkanes		0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-16R		
Lab Sample ID:	JB82646-9	**Date Sampled:**	11/24/14
Matrix:	AQ - Ground Water	**Date Received:**	11/25/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	8540	100	ug/l	1	12/03/14	12/04/14	GT	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35575
(2) Prep QC Batch: MP83641

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-17R		
Lab Sample ID:	JB82646-10	**Date Sampled:**	11/24/14
Matrix:	AQ - Ground Water	**Date Received:**	11/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U190371.D	10	12/04/14	YXC	n/a	n/a	VU8783
Run #2	4V13537.D	50	11/29/14	BM	n/a	n/a	V4V558

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	58.1	100	26	ug/l	J
71-43-2	Benzene	222	5.0	2.1	ug/l	
74-97-5	Bromochloromethane	ND	10	4.9	ug/l	
75-27-4	Bromodichloromethane	ND	10	2.8	ug/l	
75-25-2	Bromoform	ND	10	3.1	ug/l	
74-83-9	Bromomethane	ND	20	3.9	ug/l	
78-93-3	2-Butanone (MEK)	ND	100	25	ug/l	
75-15-0	Carbon disulfide	ND	20	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	10	2.4	ug/l	
108-90-7	Chlorobenzene	ND	10	2.7	ug/l	
75-00-3	Chloroethane	ND	10	5.6	ug/l	
67-66-3	Chloroform	ND	10	2.0	ug/l	
74-87-3	Chloromethane	ND	10	3.3	ug/l	
110-82-7	Cyclohexane	132	50	3.7	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	20	12	ug/l	
124-48-1	Dibromochloromethane	ND	10	2.5	ug/l	
106-93-4	1,2-Dibromoethane	ND	10	2.3	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	10	1.6	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	10	2.6	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	10	2.4	ug/l	
75-71-8	Dichlorodifluoromethane	ND	20	7.3	ug/l	
75-34-3	1,1-Dichloroethane	ND	10	3.5	ug/l	
107-06-2	1,2-Dichloroethane	ND	10	3.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	10	5.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	10	3.3	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	10	5.1	ug/l	
78-87-5	1,2-Dichloropropane	ND	10	4.3	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	10	2.8	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	10	3.2	ug/l	
123-91-1	1,4-Dioxane	ND	1300	510	ug/l	
100-41-4	Ethylbenzene	1010	10	4.0	ug/l	
76-13-1	Freon 113	ND	50	4.5	ug/l	

ND = Not detected MDL = Method Detection Limit
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E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-17R
Lab Sample ID: JB82646-10 **Date Sampled:** 11/24/14
Matrix: AQ - Ground Water **Date Received:** 11/25/14
Method: SW846 8260B **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	50	17	ug/l	
98-82-8	Isopropylbenzene	76.1	10	2.6	ug/l	
79-20-9	Methyl Acetate	ND	50	31	ug/l	
108-87-2	Methylcyclohexane	80.1	50	2.2	ug/l	
1634-04-4	Methyl Tert Butyl Ether	4.1	10	2.6	ug/l	J
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	50	11	ug/l	
75-09-2	Methylene chloride	ND	20	8.1	ug/l	
100-42-5	Styrene	ND	10	2.6	ug/l	
75-65-0	Tert Butyl Alcohol	ND	100	47	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	10	3.9	ug/l	
127-18-4	Tetrachloroethene	ND	10	3.5	ug/l	
108-88-3	Toluene	1080	10	2.2	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	10	2.6	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	10	2.2	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	10	3.2	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	10	2.8	ug/l	
79-01-6	Trichloroethene	ND	10	2.5	ug/l	
75-69-4	Trichlorofluoromethane	ND	20	2.8	ug/l	
75-01-4	Vinyl chloride	ND	10	1.7	ug/l	
	m,p-Xylene	4560 [a]	50	22	ug/l	
95-47-6	o-Xylene	1720	10	2.0	ug/l	
1330-20-7	Xylene (total)	6280 [a]	50	10	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%	103%	79-120%
17060-07-0	1,2-Dichloroethane-D4	102%	112%	72-123%
2037-26-5	Toluene-D8	112%	100%	78-119%
460-00-4	4-Bromofluorobenzene	108%	100%	74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	alkene	6.67	260	ug/l	J
	alkene	9.44	400	ug/l	J
103-65-1	Benzene, propyl-	15.83	110	ug/l	JN
	C3 alkyl benzene	15.90	750	ug/l	J
	C3 alkyl benzene	15.99	260	ug/l	J
	C3 alkyl benzene	16.26	270	ug/l	J
	C3 alkyl benzene	16.44	1000	ug/l	J
496-11-7	Indane	17.21	230	ug/l	JN

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-17R		
Lab Sample ID:	JB82646-10	**Date Sampled:**	11/24/14
Matrix:	AQ - Ground Water	**Date Received:**	11/25/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	C4 alkyl benzene	17.59	96	ug/l	J
91-20-3	Naphthalene	19.50	130	ug/l	JN
	Total TIC, Volatile		3506	ug/l	J
	Total Alkanes		1550	ug/l	J

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-17R		
Lab Sample ID:	JB82646-10	**Date Sampled:**	11/24/14
Matrix:	AQ - Ground Water	**Date Received:**	11/25/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	8070	100	ug/l	1	12/03/14	12/04/14	GT	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35575
(2) Prep QC Batch: MP83641

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-18R		
Lab Sample ID:	JB82646-11	**Date Sampled:**	11/24/14
Matrix:	AQ - Ground Water	**Date Received:**	11/25/14
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron [a]	2180	200	ug/l	1	12/03/14	12/04/14	GT	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA35575
(2) Prep QC Batch: MP83641

(a) Elevated sample detection limit due to difficult sample matrix.

RL = Reporting Limit

New Jersey ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

ACCUTEST Laboratories
Mid Atlantic
2235 Route 130, Dayton, NJ 08810
Tel. (732) 329-0200 Fax: (732) 329-3499/3480

Chain Of Custody Record

10/04

☐ SCIENCE & ENGINEERING
☐ TECHNICAL SERVICES
☑ BILL CONSULTANT

Accutest Job #
Accutest Quote #

DATE: November 2014
PAGE: 1 of 1

CONSULTANT: EnviroTrac Ltd.
ADDRESS: 400 E Corporate Court
CITY: South Plainfield, NJ 07080
TELEPHONE: (908) 757-1900 FAX: (908) 757-0017 E-MAIL: christineh@envirotrac.com

SITE ADDRESS (Street and City): 945 Pleasant Vally Way, West Orange
PROJECT NAME: BP 84849
PROJECT CONTACT (Report to): Christine Hahn
CONSULTANT PROJECT NO.
LAB JOB NUMBER (SDG): JB82646

TURNAROUND TIME (BUSINESS DAYS): ☑ STANDARD ☐ 7 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS
DATA DELIVERABLES (CHECK ONE) ☐ COMMA ☐ COMMB ☑ NJ REDT2 ☐ FULL T1 ☐ OTHER

SPECIAL INSTRUCTIONS OR NOTES :

REQUESTED ANALYSIS if more than one method is listed, circle one

LAB Sample #	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VO+10, MTBE,TBA via 8260	Total Iron 200.7	Container PID Readings or Laboratory Notes
1	MW-1	11/24/14	1040	GW	3	1				4	X	X	
2	MW-3		1055	GW	3	1				4	X	X	A1
3	MW-11		1322	GW	3	1				4	X	X	V448
4	MW-19		1113	GW	3	1				4	X	X	
5	MW-6		1336	GW	3	1				4	X	X	
6	MW-12		1256	GW	3	1				4	X	X	
7	MW-2		1024	GW	3	1				4	X	X	
8	MW-14		1228	GW	3	1				4	X	X	
9	MW-16R		1150	GW	3	1				4	X	X	
10	MW-17R		1204	GW	3	1				4	X	X	
11	MW-18R		1130	GW	3	1				4	X	X	

ALL SAMPLES RECEIVED PRESERVED AS APPLICABLE

		Date	Time
Relinquished by: (Sampler Signature)	Received by: (Signature)	11/25/14	10:35
Relinquished by: (Signature)	Received by: (Signature)	11/25	1035
Relinquished by: (Signature)	Received by: (Signature)		

02.6 CT SAMPLE RECEIVED @ LAB ☐ NICE? ☐ NO SAMPLE TEMP UPON RECEIPT: _____ Degrees C

JB82646: Chain of Custody
Page 1 of 3

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JB82646 **Client:** **Project:**

Date / Time Received: 11/25/2014 10:35:00 AM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (2.6/2.5); 0

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Accutest Laboratories
V:732.329.0200
2235 US Highway 130
F: 732.329.3499
Dayton, New Jersey
www/accutest.com

JB82646: Chain of Custody
Page 2 of 3

ACCUTEST LABORATORIES

Job Change Order: JB82646

Requested Date:	12/8/2014	**Received Date:**	11/25/2014
Account Name:	Atlantic Richfield Company	**Due Date:**	12/9/2014
Project Description:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, W	**Deliverable:**	REDT2
CSR:	mayurp	**TAT (Days):**	14

Sample #: JB82646-11

Dept:

Change:
Please no out VOA data

MW-18R

Above Changes Per: Christine **Date/Time:** 12/8/2014 12:37:00 PM

To Client: This Change Order is confirmation of the revisions, previously discussed with the Accutest Client Service Representative.

JB82646: Chain of Custody
Page 3 of 3

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ACCUTEST LABORATORIES
JB82646

Internal Sample Tracking Chronicle

Atlantic Richfield Company

Job No: JB82646

ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JB82646-1 MW-1	Collected: 24-NOV-14 10:40 By: KM		Received: 25-NOV-14 By: AL			
JB82646-1	SW846 8260B	29-NOV-14 14:55	BM			V8260TCL11+
JB82646-1	EPA 200.7	05-DEC-14 06:09	BS	03-DEC-14	KP	FE
JB82646-2 MW-3	Collected: 24-NOV-14 10:55 By: KM		Received: 25-NOV-14 By: AL			
JB82646-2	SW846 8260B	29-NOV-14 15:21	BM			V8260TCL11+
JB82646-2	EPA 200.7	05-DEC-14 20:14	GT	03-DEC-14	KP	FE
JB82646-3 MW-11	Collected: 24-NOV-14 13:22 By: KM		Received: 25-NOV-14 By: AL			
JB82646-3	SW846 8260B	03-DEC-14 19:50	YXC			V8260TCL11+
JB82646-3	EPA 200.7	05-DEC-14 05:57	BS	03-DEC-14	KP	FE
JB82646-4 MW-19	Collected: 24-NOV-14 11:13 By: KM		Received: 25-NOV-14 By: AL			
JB82646-4	SW846 8260B	29-NOV-14 14:02	BM			V8260TCL11+
JB82646-4	EPA 200.7	05-DEC-14 20:32	GT	03-DEC-14	KP	FE
JB82646-5 MW-6	Collected: 24-NOV-14 13:36 By: KM		Received: 25-NOV-14 By: AL			
JB82646-5	SW846 8260B	03-DEC-14 19:21	YXC			V8260TCL11+
JB82646-5	EPA 200.7	05-DEC-14 20:38	GT	03-DEC-14	KP	FE
JB82646-6 MW-12	Collected: 24-NOV-14 12:56 By: KM		Received: 25-NOV-14 By: AL			
JB82646-6	SW846 8260B	03-DEC-14 20:49	YXC			V8260TCL11+
JB82646-6	EPA 200.7	05-DEC-14 20:45	GT	03-DEC-14	KP	FE
JB82646-7 MW-2	Collected: 24-NOV-14 10:24 By: KM		Received: 25-NOV-14 By: AL			
JB82646-7	SW846 8260B	29-NOV-14 15:48	BM			V8260TCL11+

Internal Sample Tracking Chronicle

Atlantic Richfield Company

Job No: JB82646

ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JB82646-7	EPA 200.7	05-DEC-14 20:50	GT	03-DEC-14	KP	FE
JB82646-8 MW-14	Collected: 24-NOV-14 12:28 By: KM		Received: 25-NOV-14 By: AL			
JB82646-8	SW846 8260B	03-DEC-14 20:20	YXC			V8260TCL11+
JB82646-8	EPA 200.7	05-DEC-14 20:57	GT	03-DEC-14	KP	FE
JB82646-9 MW-16R	Collected: 24-NOV-14 11:50 By: KM		Received: 25-NOV-14 By: AL			
JB82646-9	SW846 8260B	29-NOV-14 14:28	BM			V8260TCL11+
JB82646-9	EPA 200.7	04-DEC-14 22:30	GT	03-DEC-14	KP	FE
JB82646-10 MW-17R	Collected: 24-NOV-14 12:04 By: KM		Received: 25-NOV-14 By: AL			
JB82646-10	SW846 8260B	29-NOV-14 19:19	BM			V8260TCL11+
JB82646-10	SW846 8260B	04-DEC-14 15:00	YXC			V8260TCL11+
JB82646-10	EPA 200.7	04-DEC-14 22:37	GT	03-DEC-14	KP	FE
JB82646-11 MW-18R	Collected: 24-NOV-14 11:30 By: KM		Received: 25-NOV-14 By: AL			
JB82646-11	EPA 200.7	04-DEC-14 22:43	GT	03-DEC-14	KP	FE

Accutest Internal Chain of Custody

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Received: 11/25/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB82646-1.1	Secured Storage	Alfredo Crespo	12/03/14 07:25	Retrieve from Storage
JB82646-1.1	Alfredo Crespo	Secured Staging Area	12/03/14 07:25	Return to Storage
JB82646-1.1	Secured Staging Area	Khushboo Patel	12/03/14 07:27	Retrieve from Storage
JB82646-1.1	Khushboo Patel	Secured Storage	12/03/14 13:39	Return to Storage
JB82646-1.1.1	Khushboo Patel	Metals Digestion	12/03/14 12:10	Digestate from JB82646-1.1
JB82646-1.1.1	Metals Digestion	Khushboo Patel	12/03/14 12:10	Digestate from JB82646-1.1
JB82646-1.1.1	Khushboo Patel	Metals Digestate Storage	12/03/14 12:10	Return to Storage
JB82646-1.1.1	Metals Digestate Storage	Bryan Stokes-Cawley	12/04/14 14:06	Retrieve from Storage
JB82646-1.1.1	Bryan Stokes-Cawley	Metals Digestate Storage	12/04/14 14:06	Return to Storage
JB82646-1.2	Secured Storage	Benjamin Mendez	11/26/14 16:12	Retrieve from Storage
JB82646-1.2	Benjamin Mendez	GCMS4V	11/26/14 16:12	Load on Instrument
JB82646-1.2	GCMS4V	Benjamin Mendez	12/01/14 09:36	Unload from Instrument
JB82646-1.2	Benjamin Mendez	Secured Storage	12/01/14 09:36	Return to Storage
JB82646-2.1	Secured Storage	Alfredo Crespo	12/03/14 07:25	Retrieve from Storage
JB82646-2.1	Alfredo Crespo	Secured Staging Area	12/03/14 07:25	Return to Storage
JB82646-2.1	Secured Staging Area	Khushboo Patel	12/03/14 07:27	Retrieve from Storage
JB82646-2.1	Khushboo Patel	Secured Storage	12/03/14 13:39	Return to Storage
JB82646-2.1.1	Khushboo Patel	Metals Digestion	12/03/14 12:10	Digestate from JB82646-2.1
JB82646-2.1.1	Metals Digestion	Khushboo Patel	12/03/14 12:10	Digestate from JB82646-2.1
JB82646-2.1.1	Khushboo Patel	Metals Digestate Storage	12/03/14 12:10	Return to Storage
JB82646-2.1.1	Metals Digestate Storage	Bryan Stokes-Cawley	12/04/14 14:06	Retrieve from Storage
JB82646-2.1.1	Bryan Stokes-Cawley	Metals Digestate Storage	12/04/14 14:06	Return to Storage
JB82646-2.2	Secured Storage	Benjamin Mendez	11/26/14 16:12	Retrieve from Storage
JB82646-2.2	Benjamin Mendez	GCMS4V	11/26/14 16:12	Load on Instrument
JB82646-2.2	GCMS4V	Benjamin Mendez	12/01/14 09:36	Unload from Instrument
JB82646-2.2	Benjamin Mendez	Secured Storage	12/01/14 09:36	Return to Storage
JB82646-3.1	Secured Storage	Alfredo Crespo	12/03/14 07:25	Retrieve from Storage
JB82646-3.1	Alfredo Crespo	Secured Staging Area	12/03/14 07:25	Return to Storage
JB82646-3.1	Secured Staging Area	Khushboo Patel	12/03/14 07:27	Retrieve from Storage
JB82646-3.1	Khushboo Patel	Secured Storage	12/03/14 13:39	Return to Storage
JB82646-3.1.1	Khushboo Patel	Metals Digestion	12/03/14 12:10	Digestate from JB82646-3.1
JB82646-3.1.1	Metals Digestion	Khushboo Patel	12/03/14 12:10	Digestate from JB82646-3.1
JB82646-3.1.1	Khushboo Patel	Metals Digestate Storage	12/03/14 12:10	Return to Storage
JB82646-3.1.1	Metals Digestate Storage	Bryan Stokes-Cawley	12/04/14 14:06	Retrieve from Storage
JB82646-3.1.1	Bryan Stokes-Cawley	Metals Digestate Storage	12/04/14 14:06	Return to Storage
JB82646-3.2	Secured Storage	Benjamin Mendez	11/26/14 16:12	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Received: 11/25/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB82646-3.2	Benjamin Mendez	GCMS4V	11/26/14 16:12	Load on Instrument
JB82646-3.2	GCMS4V	Benjamin Mendez	12/01/14 09:36	Unload from Instrument
JB82646-3.2	Benjamin Mendez	Secured Storage	12/01/14 09:36	Return to Storage
JB82646-3.3	Secured Storage	Yunxia Chen	12/03/14 15:09	Retrieve from Storage
JB82646-3.3	Yunxia Chen	GCMSU	12/03/14 15:09	Load on Instrument
JB82646-3.3	GCMSU	Yunxia Chen	12/04/14 10:58	Unload from Instrument
JB82646-3.3	Yunxia Chen	Secured Storage	12/04/14 10:58	Return to Storage
JB82646-4.1	Secured Storage	Alfredo Crespo	12/03/14 07:25	Retrieve from Storage
JB82646-4.1	Alfredo Crespo	Secured Staging Area	12/03/14 07:25	Return to Storage
JB82646-4.1	Secured Staging Area	Khushboo Patel	12/03/14 07:27	Retrieve from Storage
JB82646-4.1	Khushboo Patel	Secured Storage	12/03/14 13:39	Return to Storage
JB82646-4.1.1	Khushboo Patel	Metals Digestion	12/03/14 12:10	Digestate from JB82646-4.1
JB82646-4.1.1	Metals Digestion	Khushboo Patel	12/03/14 12:10	Digestate from JB82646-4.1
JB82646-4.1.1	Khushboo Patel	Metals Digestate Storage	12/03/14 12:10	Return to Storage
JB82646-4.1.1	Metals Digestate Storage	Bryan Stokes-Cawley	12/04/14 14:06	Retrieve from Storage
JB82646-4.1.1	Bryan Stokes-Cawley	Metals Digestate Storage	12/04/14 14:06	Return to Storage
JB82646-4.2	Secured Storage	Benjamin Mendez	11/26/14 16:12	Retrieve from Storage
JB82646-4.2	Benjamin Mendez	GCMS4V	11/26/14 16:12	Load on Instrument
JB82646-4.2	GCMS4V	Benjamin Mendez	12/01/14 09:36	Unload from Instrument
JB82646-4.2	Benjamin Mendez	Secured Storage	12/01/14 09:36	Return to Storage
JB82646-5.1	Secured Storage	Alfredo Crespo	12/03/14 07:25	Retrieve from Storage
JB82646-5.1	Alfredo Crespo	Secured Staging Area	12/03/14 07:25	Return to Storage
JB82646-5.1	Secured Staging Area	Khushboo Patel	12/03/14 07:27	Retrieve from Storage
JB82646-5.1	Khushboo Patel	Secured Storage	12/03/14 13:39	Return to Storage
JB82646-5.1.1	Khushboo Patel	Metals Digestion	12/03/14 12:10	Digestate from JB82646-5.1
JB82646-5.1.1	Metals Digestion	Khushboo Patel	12/03/14 12:10	Digestate from JB82646-5.1
JB82646-5.1.1	Khushboo Patel	Metals Digestate Storage	12/03/14 12:10	Return to Storage
JB82646-5.1.1	Metals Digestate Storage	Bryan Stokes-Cawley	12/04/14 14:06	Retrieve from Storage
JB82646-5.1.1	Bryan Stokes-Cawley	Metals Digestate Storage	12/04/14 14:06	Return to Storage
JB82646-5.2	Secured Storage	Yunxia Chen	12/03/14 15:09	Retrieve from Storage
JB82646-5.2	Yunxia Chen	GCMSU	12/03/14 15:09	Load on Instrument
JB82646-5.2	GCMSU	Yunxia Chen	12/04/14 10:58	Unload from Instrument
JB82646-5.2	Yunxia Chen	Secured Storage	12/04/14 10:58	Return to Storage
JB82646-5.3	Secured Storage	Benjamin Mendez	11/26/14 16:12	Retrieve from Storage
JB82646-5.3	Benjamin Mendez	GCMS4V	11/26/14 16:12	Load on Instrument
JB82646-5.3	GCMS4V	Benjamin Mendez	12/01/14 09:36	Unload from Instrument

Accutest Internal Chain of Custody

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Received: 11/25/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB82646-5.3	Benjamin Mendez	Secured Storage	12/01/14 09:36	Return to Storage
JB82646-6.1	Secured Storage	Alfredo Crespo	12/03/14 07:25	Retrieve from Storage
JB82646-6.1	Alfredo Crespo	Secured Staging Area	12/03/14 07:25	Return to Storage
JB82646-6.1	Secured Staging Area	Khushboo Patel	12/03/14 07:27	Retrieve from Storage
JB82646-6.1	Khushboo Patel	Secured Storage	12/03/14 13:39	Return to Storage
JB82646-6.1.1	Khushboo Patel	Metals Digestion	12/03/14 12:10	Digestate from JB82646-6.1
JB82646-6.1.1	Metals Digestion	Khushboo Patel	12/03/14 12:10	Digestate from JB82646-6.1
JB82646-6.1.1	Khushboo Patel	Metals Digestate Storage	12/03/14 12:10	Return to Storage
JB82646-6.1.1	Metals Digestate Storage	Bryan Stokes-Cawley	12/04/14 14:06	Retrieve from Storage
JB82646-6.1.1	Bryan Stokes-Cawley	Metals Digestate Storage	12/04/14 14:06	Return to Storage
JB82646-6.2	Secured Storage	Yunxia Chen	12/03/14 15:09	Retrieve from Storage
JB82646-6.2	Yunxia Chen	GCMSU	12/03/14 15:09	Load on Instrument
JB82646-6.2	GCMSU	Nicole Horvath	12/03/14 15:41	Unload from Instrument
JB82646-6.2	Nicole Horvath	VOA Prep Storage	12/03/14 15:41	Return to Storage
JB82646-6.2	VOA Prep Storage	Nicole Horvath	12/04/14 10:10	Retrieve from Storage
JB82646-6.2	Nicole Horvath	Secured Storage	12/04/14 10:10	Return to Storage
JB82646-6.3	Secured Storage	Benjamin Mendez	11/26/14 16:12	Retrieve from Storage
JB82646-6.3	Benjamin Mendez	GCMS4V	11/26/14 16:12	Load on Instrument
JB82646-6.3	GCMS4V	Benjamin Mendez	12/01/14 09:36	Unload from Instrument
JB82646-6.3	Benjamin Mendez	Secured Storage	12/01/14 09:36	Return to Storage
JB82646-7.1	Secured Storage	Alfredo Crespo	12/03/14 07:25	Retrieve from Storage
JB82646-7.1	Alfredo Crespo	Secured Staging Area	12/03/14 07:25	Return to Storage
JB82646-7.1	Secured Staging Area	Khushboo Patel	12/03/14 07:27	Retrieve from Storage
JB82646-7.1	Khushboo Patel	Secured Storage	12/03/14 13:39	Return to Storage
JB82646-7.1.1	Khushboo Patel	Metals Digestion	12/03/14 12:10	Digestate from JB82646-7.1
JB82646-7.1.1	Metals Digestion	Khushboo Patel	12/03/14 12:10	Digestate from JB82646-7.1
JB82646-7.1.1	Khushboo Patel	Metals Digestate Storage	12/03/14 12:10	Return to Storage
JB82646-7.1.1	Metals Digestate Storage	Bryan Stokes-Cawley	12/04/14 14:06	Retrieve from Storage
JB82646-7.1.1	Bryan Stokes-Cawley	Metals Digestate Storage	12/04/14 14:06	Return to Storage
JB82646-7.3	Secured Storage	Benjamin Mendez	11/26/14 16:12	Retrieve from Storage
JB82646-7.3	Benjamin Mendez	GCMS4V	11/26/14 16:12	Load on Instrument
JB82646-7.3	GCMS4V	Benjamin Mendez	12/01/14 09:36	Unload from Instrument
JB82646-7.3	Benjamin Mendez	Secured Storage	12/01/14 09:36	Return to Storage
JB82646-8.1	Secured Storage	Alfredo Crespo	12/03/14 07:25	Retrieve from Storage
JB82646-8.1	Alfredo Crespo	Secured Staging Area	12/03/14 07:25	Return to Storage
JB82646-8.1	Secured Staging Area	Khushboo Patel	12/03/14 07:27	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Received: 11/25/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB82646-8.1	Khushboo Patel	Secured Storage	12/03/14 13:39	Return to Storage
JB82646-8.1.1	Khushboo Patel	Metals Digestion	12/03/14 12:10	Digestate from JB82646-8.1
JB82646-8.1.1	Metals Digestion	Khushboo Patel	12/03/14 12:10	Digestate from JB82646-8.1
JB82646-8.1.1	Khushboo Patel	Metals Digestate Storage	12/03/14 12:10	Return to Storage
JB82646-8.1.1	Metals Digestate Storage	Bryan Stokes-Cawley	12/04/14 14:06	Retrieve from Storage
JB82646-8.1.1	Bryan Stokes-Cawley	Metals Digestate Storage	12/04/14 14:06	Return to Storage
JB82646-8.2	Secured Storage	Yunxia Chen	12/03/14 15:09	Retrieve from Storage
JB82646-8.2	Yunxia Chen	GCMSU	12/03/14 15:09	Load on Instrument
JB82646-8.2	GCMSU	Yunxia Chen	12/04/14 10:58	Unload from Instrument
JB82646-8.2	Yunxia Chen	Secured Storage	12/04/14 10:58	Return to Storage
JB82646-8.3	Secured Storage	Benjamin Mendez	11/26/14 16:12	Retrieve from Storage
JB82646-8.3	Benjamin Mendez	GCMS4V	11/26/14 16:12	Load on Instrument
JB82646-8.3	GCMS4V	Benjamin Mendez	12/01/14 09:36	Unload from Instrument
JB82646-8.3	Benjamin Mendez	Secured Storage	12/01/14 09:36	Return to Storage
JB82646-9.1	Secured Storage	Alfredo Crespo	12/03/14 07:25	Retrieve from Storage
JB82646-9.1	Alfredo Crespo	Secured Staging Area	12/03/14 07:25	Return to Storage
JB82646-9.1	Secured Staging Area	Khushboo Patel	12/03/14 07:27	Retrieve from Storage
JB82646-9.1	Khushboo Patel	Secured Storage	12/03/14 13:39	Return to Storage
JB82646-9.1.1	Khushboo Patel	Metals Digestion	12/03/14 12:13	Digestate from JB82646-9.1
JB82646-9.1.1	Metals Digestion	Khushboo Patel	12/03/14 12:14	Digestate from JB82646-9.1
JB82646-9.1.1	Khushboo Patel	Metals Digestate Storage	12/03/14 12:14	Return to Storage
JB82646-9.2	Secured Storage	Benjamin Mendez	11/26/14 16:12	Retrieve from Storage
JB82646-9.2	Benjamin Mendez	GCMS4V	11/26/14 16:12	Load on Instrument
JB82646-9.2	GCMS4V	Benjamin Mendez	12/01/14 09:36	Unload from Instrument
JB82646-9.2	Benjamin Mendez	Secured Storage	12/01/14 09:36	Return to Storage
JB82646-10.1	Secured Storage	Alfredo Crespo	12/03/14 07:25	Retrieve from Storage
JB82646-10.1	Alfredo Crespo	Secured Staging Area	12/03/14 07:25	Return to Storage
JB82646-10.1	Secured Staging Area	Khushboo Patel	12/03/14 07:27	Retrieve from Storage
JB82646-10.1	Khushboo Patel	Secured Storage	12/03/14 13:39	Return to Storage
JB82646-10.1.1	Khushboo Patel	Metals Digestion	12/03/14 12:13	Digestate from JB82646-10.1
JB82646-10.1.1	Metals Digestion	Khushboo Patel	12/03/14 12:14	Digestate from JB82646-10.1
JB82646-10.1.1	Khushboo Patel	Metals Digestate Storage	12/03/14 12:14	Return to Storage
JB82646-10.2	Secured Storage	Yunxia Chen	12/03/14 15:09	Retrieve from Storage
JB82646-10.2	Yunxia Chen	GCMSU	12/03/14 15:09	Load on Instrument
JB82646-10.2	GCMSU	Yunxia Chen	12/04/14 10:58	Unload from Instrument

Accutest Internal Chain of Custody

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Received: 11/25/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB82646-10.2	Yunxia Chen	Secured Storage	12/04/14 10:58	Return to Storage
JB82646-10.2	Secured Storage	Nicole Horvath	12/04/14 11:49	Retrieve from Storage
JB82646-10.2	Nicole Horvath	VOA Prep Storage	12/05/14 07:38	Return to Storage
JB82646-10.2	VOA Prep Storage	Nicole Horvath	12/05/14 09:15	Retrieve from Storage
JB82646-10.2	Nicole Horvath	Secured Storage	12/05/14 09:16	Return to Storage
JB82646-10.3	Secured Storage	Benjamin Mendez	11/26/14 16:12	Retrieve from Storage
JB82646-10.3	Benjamin Mendez	GCMS4V	11/26/14 16:12	Load on Instrument
JB82646-10.3	GCMS4V	Benjamin Mendez	12/01/14 09:36	Unload from Instrument
JB82646-10.3	Benjamin Mendez	Secured Storage	12/01/14 09:36	Return to Storage
JB82646-11.1	Secured Storage	Alfredo Crespo	12/03/14 07:25	Retrieve from Storage
JB82646-11.1	Alfredo Crespo	Secured Staging Area	12/03/14 07:25	Return to Storage
JB82646-11.1	Secured Staging Area	Khushboo Patel	12/03/14 07:27	Retrieve from Storage
JB82646-11.1	Khushboo Patel	Secured Storage	12/03/14 13:39	Return to Storage
JB82646-11.1.1	Khushboo Patel	Metals Digestion	12/03/14 12:13	Digestate from JB82646-11.1
JB82646-11.1.1	Metals Digestion	Khushboo Patel	12/03/14 12:14	Digestate from JB82646-11.1
JB82646-11.1.1	Khushboo Patel	Metals Digestate Storage	12/03/14 12:14	Return to Storage
JB82646-11.2	Secured Storage	Benjamin Mendez	11/26/14 16:12	Retrieve from Storage
JB82646-11.2	Benjamin Mendez	GCMS4V	11/26/14 16:12	Load on Instrument
JB82646-11.2	GCMS4V	Benjamin Mendez	12/01/14 09:36	Unload from Instrument
JB82646-11.2	Benjamin Mendez	Secured Storage	12/01/14 09:36	Return to Storage
JB82646-11.3	Secured Storage	Yunxia Chen	12/03/14 15:09	Retrieve from Storage
JB82646-11.3	Yunxia Chen	GCMSU	12/03/14 15:09	Load on Instrument
JB82646-11.3	GCMSU	Yunxia Chen	12/04/14 10:58	Unload from Instrument
JB82646-11.3	Yunxia Chen	Secured Storage	12/04/14 10:58	Return to Storage
JB82646-11.3	Secured Storage	Nicole Horvath	12/04/14 11:49	Retrieve from Storage
JB82646-11.3	Nicole Horvath	VOA Prep Storage	12/05/14 07:38	Return to Storage
JB82646-11.3	VOA Prep Storage	Nicole Horvath	12/05/14 09:16	Retrieve from Storage
JB82646-11.3	Nicole Horvath	Secured Storage	12/05/14 09:16	Return to Storage

New Jersey ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4V558-MB	4V13518.D	1	11/29/14	BM	n/a	n/a	V4V558

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB82646-1, JB82646-2, JB82646-4, JB82646-7, JB82646-9, JB82646-10

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.6	ug/l	
71-43-2	Benzene	ND	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	

Method Blank Summary

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4V558-MB	4V13518.D	1	11/29/14	BM	n/a	n/a	V4V558

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB82646-1, JB82646-2, JB82646-4, JB82646-7, JB82646-9, JB82646-10

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	ND	1.0	0.45	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	103%	79-120%
17060-07-0	1,2-Dichloroethane-D4	113%	72-123%
2037-26-5	Toluene-D8	99%	78-119%
460-00-4	4-Bromofluorobenzene	103%	74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU8782-MB	U190321.D	1	12/03/14	YXC	n/a	n/a	VU8782

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB82646-3, JB82646-5, JB82646-6, JB82646-8

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.6	ug/l	
71-43-2	Benzene	ND	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	

Method Blank Summary

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU8782-MB	U190321.D	1	12/03/14	YXC	n/a	n/a	VU8782

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB82646-3, JB82646-5, JB82646-6, JB82646-8

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
	m,p-Xylene	ND	1.0	0.45	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	103%	79-120%
17060-07-0	1,2-Dichloroethane-D4	101%	72-123%
2037-26-5	Toluene-D8	111%	78-119%
460-00-4	4-Bromofluorobenzene	108%	74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU8783-MB2	U190362.D	1	12/04/14	YXC	n/a	n/a	VU8783

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB82646-10

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.6	ug/l	
71-43-2	Benzene	ND	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	

Method Blank Summary

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU8783-MB2	U190362.D	1	12/04/14	YXC	n/a	n/a	VU8783

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB82646-10

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	104%	79-120%
17060-07-0	1,2-Dichloroethane-D4	102%	72-123%
2037-26-5	Toluene-D8	110%	78-119%
460-00-4	4-Bromofluorobenzene	108%	74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU8783-MB	U190342.D	1	12/03/14	YXC	n/a	n/a	VU8783

The QC reported here applies to the following samples: **Method:** SW846 8260B

VU8783-BS

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.6	ug/l	
71-43-2	Benzene	ND	0.50	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.28	ug/l	
75-25-2	Bromoform	ND	1.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.24	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.33	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.37	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.25	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.26	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.73	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.28	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	51	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
76-13-1	Freon 113	ND	5.0	0.45	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.26	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	

Method Blank Summary

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU8783-MB	U190342.D	1	12/03/14	YXC	n/a	n/a	VU8783

The QC reported here applies to the following samples: **Method:** SW846 8260B

VU8783-BS

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.1	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.81	ug/l	
100-42-5	Styrene	ND	1.0	0.26	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	4.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.26	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.28	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.17	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	103%	79-120%
17060-07-0	1,2-Dichloroethane-D4	100%	72-123%
2037-26-5	Toluene-D8	111%	78-119%
460-00-4	4-Bromofluorobenzene	110%	74-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4V558-BS	4V13519.D	1	11/29/14	BM	n/a	n/a	V4V558

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB82646-1, JB82646-2, JB82646-4, JB82646-7, JB82646-9, JB82646-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	53.9	108	52-152
71-43-2	Benzene	50	48.5	97	80-121
74-97-5	Bromochloromethane	50	48.4	97	82-125
75-27-4	Bromodichloromethane	50	52.0	104	83-127
75-25-2	Bromoform	50	46.7	93	74-131
74-83-9	Bromomethane	50	50.9	102	45-155
78-93-3	2-Butanone (MEK)	50	58.9	118	67-136
75-15-0	Carbon disulfide	50	45.7	91	69-129
56-23-5	Carbon tetrachloride	50	49.4	99	77-138
108-90-7	Chlorobenzene	50	46.4	93	82-119
75-00-3	Chloroethane	50	58.6	117	61-151
67-66-3	Chloroform	50	50.2	100	79-124
74-87-3	Chloromethane	50	53.8	108	48-148
110-82-7	Cyclohexane	50	43.5	87	72-129
96-12-8	1,2-Dibromo-3-chloropropane	50	49.6	99	66-137
124-48-1	Dibromochloromethane	50	49.5	99	81-127
106-93-4	1,2-Dibromoethane	50	48.3	97	79-122
95-50-1	1,2-Dichlorobenzene	50	44.8	90	81-121
541-73-1	1,3-Dichlorobenzene	50	43.9	88	81-119
106-46-7	1,4-Dichlorobenzene	50	44.2	88	80-116
75-71-8	Dichlorodifluoromethane	50	50.3	101	33-161
75-34-3	1,1-Dichloroethane	50	53.7	107	78-129
107-06-2	1,2-Dichloroethane	50	56.2	112	75-133
75-35-4	1,1-Dichloroethene	50	50.2	100	74-128
156-59-2	cis-1,2-Dichloroethene	50	53.8	108	78-123
156-60-5	trans-1,2-Dichloroethene	50	52.5	105	75-122
78-87-5	1,2-Dichloropropane	50	53.9	108	80-124
10061-01-5	cis-1,3-Dichloropropene	50	52.0	104	75-114
10061-02-6	trans-1,3-Dichloropropene	50	49.6	99	78-123
123-91-1	1,4-Dioxane	1250	1090	87	57-154
100-41-4	Ethylbenzene	50	47.2	94	82-120
76-13-1	Freon 113	50	44.9	90	65-150
591-78-6	2-Hexanone	50	52.9	106	65-135
98-82-8	Isopropylbenzene	50	49.0	98	80-124
79-20-9	Methyl Acetate	50	49.1	98	53-137
108-87-2	Methylcyclohexane	50	44.4	89	62-142

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4V558-BS	4V13519.D	1	11/29/14	BM	n/a	n/a	V4V558

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB82646-1, JB82646-2, JB82646-4, JB82646-7, JB82646-9, JB82646-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	100	100	100	74-123
108-10-1	4-Methyl-2-pentanone(MIBK)	50	57.2	114	68-135
75-09-2	Methylene chloride	50	48.6	97	75-121
100-42-5	Styrene	50	46.6	93	81-123
75-65-0	Tert Butyl Alcohol	250	245	98	70-132
79-34-5	1,1,2,2-Tetrachloroethane	50	48.1	96	71-123
127-18-4	Tetrachloroethene	50	46.1	92	69-141
108-88-3	Toluene	50	48.0	96	80-122
87-61-6	1,2,3-Trichlorobenzene	50	42.2	84	71-138
120-82-1	1,2,4-Trichlorobenzene	50	43.1	86	77-132
71-55-6	1,1,1-Trichloroethane	50	52.1	104	80-132
79-00-5	1,1,2-Trichloroethane	50	51.4	103	80-127
79-01-6	Trichloroethene	50	49.1	98	82-126
75-69-4	Trichlorofluoromethane	50	49.7	99	63-141
75-01-4	Vinyl chloride	50	50.5	101	53-135
	m,p-Xylene	100	94.4	94	81-121
95-47-6	o-Xylene	50	47.7	95	82-121
1330-20-7	Xylene (total)	150	142	95	82-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	105%	79-120%
17060-07-0	1,2-Dichloroethane-D4	115%	72-123%
2037-26-5	Toluene-D8	99%	78-119%
460-00-4	4-Bromofluorobenzene	99%	74-119%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU8782-BS	U190322.D	1	12/03/14	YXC	n/a	n/a	VU8782

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB82646-3, JB82646-5, JB82646-6, JB82646-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	44.3	89	52-152
71-43-2	Benzene	50	47.4	95	80-121
74-97-5	Bromochloromethane	50	47.8	96	82-125
75-27-4	Bromodichloromethane	50	49.3	99	83-127
75-25-2	Bromoform	50	53.3	107	74-131
74-83-9	Bromomethane	50	54.1	108	45-155
78-93-3	2-Butanone (MEK)	50	50.5	101	67-136
75-15-0	Carbon disulfide	50	46.1	92	69-129
56-23-5	Carbon tetrachloride	50	50.6	101	77-138
108-90-7	Chlorobenzene	50	49.2	98	82-119
75-00-3	Chloroethane	50	56.8	114	61-151
67-66-3	Chloroform	50	44.2	88	79-124
74-87-3	Chloromethane	50	46.7	93	48-148
110-82-7	Cyclohexane	50	50.2	100	72-129
96-12-8	1,2-Dibromo-3-chloropropane	50	53.9	108	66-137
124-48-1	Dibromochloromethane	50	50.9	102	81-127
106-93-4	1,2-Dibromoethane	50	52.4	105	79-122
95-50-1	1,2-Dichlorobenzene	50	49.2	98	81-121
541-73-1	1,3-Dichlorobenzene	50	48.5	97	81-119
106-46-7	1,4-Dichlorobenzene	50	48.7	97	80-116
75-71-8	Dichlorodifluoromethane	50	44.4	89	33-161
75-34-3	1,1-Dichloroethane	50	45.4	91	78-129
107-06-2	1,2-Dichloroethane	50	50.0	100	75-133
75-35-4	1,1-Dichloroethene	50	47.3	95	74-128
156-59-2	cis-1,2-Dichloroethene	50	43.3	87	78-123
156-60-5	trans-1,2-Dichloroethene	50	43.2	86	75-122
78-87-5	1,2-Dichloropropane	50	47.9	96	80-124
10061-01-5	cis-1,3-Dichloropropene	50	49.7	99	75-114
10061-02-6	trans-1,3-Dichloropropene	50	49.5	99	78-123
123-91-1	1,4-Dioxane	1250	1240	99	57-154
100-41-4	Ethylbenzene	50	48.3	97	82-120
76-13-1	Freon 113	50	52.1	104	65-150
591-78-6	2-Hexanone	50	51.9	104	65-135
98-82-8	Isopropylbenzene	50	48.1	96	80-124
79-20-9	Methyl Acetate	50	42.5	85	53-137
108-87-2	Methylcyclohexane	50	52.0	104	62-142

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU8782-BS	U190322.D	1	12/03/14	YXC	n/a	n/a	VU8782

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB82646-3, JB82646-5, JB82646-6, JB82646-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	100	93.0	93	74-123
108-10-1	4-Methyl-2-pentanone(MIBK)	50	52.9	106	68-135
75-09-2	Methylene chloride	50	46.0	92	75-121
100-42-5	Styrene	50	50.6	101	81-123
75-65-0	Tert Butyl Alcohol	250	247	99	70-132
79-34-5	1,1,2,2-Tetrachloroethane	50	50.5	101	71-123
127-18-4	Tetrachloroethene	50	50.9	102	69-141
108-88-3	Toluene	50	49.3	99	80-122
87-61-6	1,2,3-Trichlorobenzene	50	49.4	99	71-138
120-82-1	1,2,4-Trichlorobenzene	50	48.8	98	77-132
71-55-6	1,1,1-Trichloroethane	50	47.1	94	80-132
79-00-5	1,1,2-Trichloroethane	50	50.4	101	80-127
79-01-6	Trichloroethene	50	48.9	98	82-126
75-69-4	Trichlorofluoromethane	50	52.1	104	63-141
75-01-4	Vinyl chloride	50	49.9	100	53-135
	m,p-Xylene	100	99.7	100	81-121
95-47-6	o-Xylene	50	49.5	99	82-121
1330-20-7	Xylene (total)	150	149	99	82-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	104%	79-120%
17060-07-0	1,2-Dichloroethane-D4	101%	72-123%
2037-26-5	Toluene-D8	112%	78-119%
460-00-4	4-Bromofluorobenzene	106%	74-119%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU8783-BS	U190343.D	1	12/03/14	YXC	n/a	n/a	VU8783

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB82646-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	50.5	101	52-152
71-43-2	Benzene	50	47.9	96	80-121
74-97-5	Bromochloromethane	50	48.5	97	82-125
75-27-4	Bromodichloromethane	50	49.4	99	83-127
75-25-2	Bromoform	50	50.8	102	74-131
74-83-9	Bromomethane	50	53.6	107	45-155
78-93-3	2-Butanone (MEK)	50	49.7	99	67-136
75-15-0	Carbon disulfide	50	46.1	92	69-129
56-23-5	Carbon tetrachloride	50	50.2	100	77-138
108-90-7	Chlorobenzene	50	49.5	99	82-119
75-00-3	Chloroethane	50	57.2	114	61-151
67-66-3	Chloroform	50	44.7	89	79-124
74-87-3	Chloromethane	50	47.0	94	48-148
110-82-7	Cyclohexane	50	49.7	99	72-129
96-12-8	1,2-Dibromo-3-chloropropane	50	54.5	109	66-137
124-48-1	Dibromochloromethane	50	50.7	101	81-127
106-93-4	1,2-Dibromoethane	50	52.6	105	79-122
95-50-1	1,2-Dichlorobenzene	50	50.2	100	81-121
541-73-1	1,3-Dichlorobenzene	50	49.2	98	81-119
106-46-7	1,4-Dichlorobenzene	50	49.0	98	80-116
75-71-8	Dichlorodifluoromethane	50	42.7	85	33-161
75-34-3	1,1-Dichloroethane	50	46.6	93	78-129
107-06-2	1,2-Dichloroethane	50	50.0	100	75-133
75-35-4	1,1-Dichloroethene	50	47.6	95	74-128
156-59-2	cis-1,2-Dichloroethene	50	43.8	88	78-123
156-60-5	trans-1,2-Dichloroethene	50	43.7	87	75-122
78-87-5	1,2-Dichloropropane	50	48.2	96	80-124
10061-01-5	cis-1,3-Dichloropropene	50	48.1	96	75-114
10061-02-6	trans-1,3-Dichloropropene	50	47.7	95	78-123
123-91-1	1,4-Dioxane	1250	1260	101	57-154
100-41-4	Ethylbenzene	50	48.8	98	82-120
76-13-1	Freon 113	50	50.0	100	65-150
591-78-6	2-Hexanone	50	52.8	106	65-135
98-82-8	Isopropylbenzene	50	49.0	98	80-124
79-20-9	Methyl Acetate	50	43.2	86	53-137
108-87-2	Methylcyclohexane	50	49.9	100	62-142

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU8783-BS	U190343.D	1	12/03/14	YXC	n/a	n/a	VU8783

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB82646-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	100	93.3	93	74-123
108-10-1	4-Methyl-2-pentanone(MIBK)	50	52.7	105	68-135
75-09-2	Methylene chloride	50	46.8	94	75-121
100-42-5	Styrene	50	50.9	102	81-123
75-65-0	Tert Butyl Alcohol	250	248	99	70-132
79-34-5	1,1,2,2-Tetrachloroethane	50	51.3	103	71-123
127-18-4	Tetrachloroethene	50	52.0	104	69-141
108-88-3	Toluene	50	49.4	99	80-122
87-61-6	1,2,3-Trichlorobenzene	50	50.6	101	71-138
120-82-1	1,2,4-Trichlorobenzene	50	49.6	99	77-132
71-55-6	1,1,1-Trichloroethane	50	47.1	94	80-132
79-00-5	1,1,2-Trichloroethane	50	50.4	101	80-127
79-01-6	Trichloroethene	50	49.5	99	82-126
75-69-4	Trichlorofluoromethane	50	50.9	102	63-141
75-01-4	Vinyl chloride	50	49.8	100	53-135
95-47-6	o-Xylene	50	49.9	100	82-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	104%	79-120%
17060-07-0	1,2-Dichloroethane-D4	101%	72-123%
2037-26-5	Toluene-D8	111%	78-119%
460-00-4	4-Bromofluorobenzene	108%	74-119%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB82646-4MS	4V13530.D	1	11/29/14	BM	n/a	n/a	V4V558
JB82646-4MSD	4V13531.D	1	11/29/14	BM	n/a	n/a	V4V558
JB82646-4	4V13525.D	1	11/29/14	BM	n/a	n/a	V4V558

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB82646-1, JB82646-2, JB82646-4, JB82646-7, JB82646-9, JB82646-10

CAS No.	Compound	JB82646-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50	53.7	107	50	50.3	101	7	44-160/20
71-43-2	Benzene	ND		50	42.5	85	50	39.3	79	8	50-136/12
74-97-5	Bromochloromethane	ND		50	45.0	90	50	42.3	85	6	74-131/11
75-27-4	Bromodichloromethane	ND		50	50.5	101	50	47.9	96	5	74-132/11
75-25-2	Bromoform	ND		50	48.7	97	50	46.0	92	6	68-136/12
74-83-9	Bromomethane	ND		50	53.7	107	50	50.3	101	7	37-157/21
78-93-3	2-Butanone (MEK)	ND		50	56.2	112	50	53.0	106	6	60-145/15
75-15-0	Carbon disulfide	ND		50	28.8	58	50	26.0	52	10	37-143/17
56-23-5	Carbon tetrachloride	ND		50	42.3	85	50	39.3	79	7	46-152/17
108-90-7	Chlorobenzene	ND		50	44.5	89	50	41.4	83	7	70-127/12
75-00-3	Chloroethane	ND		50	60.1	120	50	54.5	109	10	44-147/16
67-66-3	Chloroform	ND		50	46.2	92	50	42.7	85	8	67-129/12
74-87-3	Chloromethane	ND		50	59.5	119	50	54.6	109	9	40-149/19
110-82-7	Cyclohexane	ND		50	35.4	71	50	32.1	64	10	31-153/21
96-12-8	1,2-Dibromo-3-chloropropane	ND		50	53.1	106	50	50.9	102	4	61-144/14
124-48-1	Dibromochloromethane	ND		50	48.8	98	50	46.4	93	5	74-131/10
106-93-4	1,2-Dibromoethane	ND		50	47.8	96	50	45.6	91	5	74-129/10
95-50-1	1,2-Dichlorobenzene	ND		50	46.1	92	50	44.0	88	5	73-126/11
541-73-1	1,3-Dichlorobenzene	ND		50	45.2	90	50	42.4	85	6	71-124/12
106-46-7	1,4-Dichlorobenzene	ND		50	45.2	90	50	42.3	85	7	71-123/12
75-71-8	Dichlorodifluoromethane	ND		50	57.3	115	50	52.3	105	9	20-161/25
75-34-3	1,1-Dichloroethane	ND		50	45.1	90	50	41.9	84	7	61-134/12
107-06-2	1,2-Dichloroethane	ND		50	53.6	107	50	50.9	102	5	68-137/11
75-35-4	1,1-Dichloroethene	ND		50	37.4	75	50	33.5	67	11	40-143/17
156-59-2	cis-1,2-Dichloroethene	ND		50	49.1	98	50	45.3	91	8	59-133/12
156-60-5	trans-1,2-Dichloroethene	ND		50	42.8	86	50	39.0	78	9	55-132/14
78-87-5	1,2-Dichloropropane	ND		50	49.9	100	50	46.7	93	7	70-128/11
10061-01-5	cis-1,3-Dichloropropene	ND		50	48.8	98	50	47.6	95	2	73-127/11
10061-02-6	trans-1,3-Dichloropropene	ND		50	50.1	100	50	48.2	96	4	72-128/11
123-91-1	1,4-Dioxane	ND		1250	1280	102	1250	1280	102	0	49-161/26
100-41-4	Ethylbenzene	ND		50	44.3	89	50	40.9	82	8	49-137/13
76-13-1	Freon 113	ND		50	49.9	100	50	45.8	92	9	32-161/23
591-78-6	2-Hexanone	ND		50	55.8	112	50	53.7	107	4	59-145/14
98-82-8	Isopropylbenzene	ND		50	45.3	91	50	42.8	86	6	57-136/14
79-20-9	Methyl Acetate	ND		50	59.1	118	50	56.6	113	4	46-148/15
108-87-2	Methylcyclohexane	ND		50	50.5	101	50	46.8	94	8	30-155/21

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB82646-4MS	4V13530.D	1	11/29/14	BM	n/a	n/a	V4V558
JB82646-4MSD	4V13531.D	1	11/29/14	BM	n/a	n/a	V4V558
JB82646-4	4V13525.D	1	11/29/14	BM	n/a	n/a	V4V558

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB82646-1, JB82646-2, JB82646-4, JB82646-7, JB82646-9, JB82646-10

CAS No.	Compound	JB82646-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	ND		50	46.0	92	50	44.0	88	4	64-134/11
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		50	58.2	116	50	55.2	110	5	63-144/13
75-09-2	Methylene chloride	ND		50	41.6	83	50	38.2	76	9	64-128/11
100-42-5	Styrene	ND		50	46.2	92	50	42.4	85	9	67-130/12
75-65-0	Tert Butyl Alcohol	ND		250	304	122	250	308	123	1	64-154/16
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	51.9	104	50	50.4	101	3	68-131/11
127-18-4	Tetrachloroethene	ND		50	40.9	82	50	37.7	75	8	48-143/15
108-88-3	Toluene	ND		50	43.7	87	50	40.9	82	7	54-137/13
87-61-6	1,2,3-Trichlorobenzene	ND		50	43.0	86	50	41.4	83	4	62-143/13
120-82-1	1,2,4-Trichlorobenzene	ND		50	43.7	87	50	41.3	83	6	66-138/12
71-55-6	1,1,1-Trichloroethane	ND		50	43.8	88	50	40.8	82	7	52-145/16
79-00-5	1,1,2-Trichloroethane	ND		50	51.2	102	50	49.6	99	3	73-130/10
79-01-6	Trichloroethene	ND		50	44.1	88	50	41.0	82	7	54-141/13
75-69-4	Trichlorofluoromethane	ND		50	56.8	114	50	52.2	104	8	33-159/25
75-01-4	Vinyl chloride	ND		50	55.3	111	50	51.2	102	8	36-149/19
	m,p-Xylene	ND		100	87.1	87	100	81.5	82	7	50-137/12
95-47-6	o-Xylene	ND		50	45.5	91	50	43.1	86	5	60-134/12
1330-20-7	Xylene (total)	ND		150	133	89	150	125	83	6	53-136/12

CAS No.	Surrogate Recoveries	MS	MSD	JB82646-4	Limits
1868-53-7	Dibromofluoromethane	106%	104%	105%	79-120%
17060-07-0	1,2-Dichloroethane-D4	116%	112%	114%	72-123%
2037-26-5	Toluene-D8	98%	98%	98%	78-119%
460-00-4	4-Bromofluorobenzene	101%	103%	102%	74-119%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB82962-1MS	U190329.D	1	12/03/14	YXC	n/a	n/a	VU8782
JB82962-1MSD	U190330.D	1	12/03/14	YXC	n/a	n/a	VU8782
JB82962-1	U190325.D	1	12/03/14	YXC	n/a	n/a	VU8782

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB82646-3, JB82646-5, JB82646-6, JB82646-8

CAS No.	Compound	JB82962-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50	45.5	91	50	46.6	93	2	44-160/20
71-43-2	Benzene	ND		50	39.4	79	50	40.8	82	3	50-136/12
74-97-5	Bromochloromethane	ND		50	43.1	86	50	44.3	89	3	74-131/11
75-27-4	Bromodichloromethane	ND		50	44.6	89	50	45.4	91	2	74-132/11
75-25-2	Bromoform	ND		50	51.5	103	50	51.3	103	0	68-136/12
74-83-9	Bromomethane	ND		50	45.6	91	50	46.3	93	2	37-157/21
78-93-3	2-Butanone (MEK)	ND		50	45.8	92	50	46.1	92	1	60-145/15
75-15-0	Carbon disulfide	ND		50	35.1	70	50	36.4	73	4	37-143/17
56-23-5	Carbon tetrachloride	ND		50	40.6	81	50	41.7	83	3	46-152/17
108-90-7	Chlorobenzene	ND		50	43.2	86	50	44.2	88	2	70-127/12
75-00-3	Chloroethane	ND		50	42.7	85	50	43.8	88	3	44-147/16
67-66-3	Chloroform	ND		50	37.8	76	50	38.9	78	3	67-129/12
74-87-3	Chloromethane	ND		50	41.9	84	50	43.5	87	4	40-149/19
110-82-7	Cyclohexane	ND		50	40.2	80	50	42.0	84	4	31-153/21
96-12-8	1,2-Dibromo-3-chloropropane	ND		50	54.5	109	50	54.3	109	0	61-144/14
124-48-1	Dibromochloromethane	ND		50	48.2	96	50	48.7	97	1	74-131/10
106-93-4	1,2-Dibromoethane	ND		50	49.4	99	50	49.7	99	1	74-129/10
95-50-1	1,2-Dichlorobenzene	ND		50	45.7	91	50	46.6	93	2	73-126/11
541-73-1	1,3-Dichlorobenzene	ND		50	44.2	88	50	45.3	91	2	71-124/12
106-46-7	1,4-Dichlorobenzene	ND		50	44.0	88	50	45.6	91	4	71-123/12
75-71-8	Dichlorodifluoromethane	ND		50	41.3	83	50	44.8	90	8	20-161/25
75-34-3	1,1-Dichloroethane	ND		50	37.5	75	50	39.0	78	4	61-134/12
107-06-2	1,2-Dichloroethane	ND		50	45.7	91	50	46.1	92	1	68-137/11
75-35-4	1,1-Dichloroethene	ND		50	36.6	73	50	38.7	77	6	40-143/17
156-59-2	cis-1,2-Dichloroethene	ND		50	37.2	74	50	38.4	77	3	59-133/12
156-60-5	trans-1,2-Dichloroethene	ND		50	35.3	71	50	36.8	74	4	55-132/14
78-87-5	1,2-Dichloropropane	ND		50	41.4	83	50	42.3	85	2	70-128/11
10061-01-5	cis-1,3-Dichloropropene	ND		50	44.7	89	50	45.0	90	1	73-127/11
10061-02-6	trans-1,3-Dichloropropene	ND		50	46.8	94	50	47.1	94	1	72-128/11
123-91-1	1,4-Dioxane	ND		1250	1330	106	1250	1380	110	4	49-161/26
100-41-4	Ethylbenzene	ND		50	41.3	83	50	42.9	86	4	49-137/13
76-13-1	Freon 113	ND		50	40.9	82	50	42.9	86	5	32-161/23
591-78-6	2-Hexanone	ND		50	50.9	102	50	50.5	101	1	59-145/14
98-82-8	Isopropylbenzene	ND		50	41.0	82	50	42.6	85	4	57-136/14
79-20-9	Methyl Acetate	ND		50	45.7	91	50	46.5	93	2	46-148/15
108-87-2	Methylcyclohexane	ND		50	41.9	84	50	44.1	88	5	30-155/21

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB82962-1MS	U190329.D	1	12/03/14	YXC	n/a	n/a	VU8782
JB82962-1MSD	U190330.D	1	12/03/14	YXC	n/a	n/a	VU8782
JB82962-1	U190325.D	1	12/03/14	YXC	n/a	n/a	VU8782

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB82646-3, JB82646-5, JB82646-6, JB82646-8

CAS No.	Compound	JB82962-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	ND		50	42.9	86	50	43.3	87	1	64-134/11
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		50	50.5	101	50	50.2	100	1	63-144/13
75-09-2	Methylene chloride	ND		50	39.7	79	50	40.5	81	2	64-128/11
100-42-5	Styrene	ND		50	44.4	89	50	45.4	91	2	67-130/12
75-65-0	Tert Butyl Alcohol	ND		250	266	106	250	270	108	1	64-154/16
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	51.7	103	50	52.1	104	1	68-131/11
127-18-4	Tetrachloroethene	ND		50	42.3	85	50	44.1	88	4	48-143/15
108-88-3	Toluene	ND		50	41.7	83	50	42.8	86	3	54-137/13
87-61-6	1,2,3-Trichlorobenzene	ND		50	47.9	96	50	48.6	97	1	62-143/13
120-82-1	1,2,4-Trichlorobenzene	ND		50	45.5	91	50	46.3	93	2	66-138/12
71-55-6	1,1,1-Trichloroethane	ND		50	37.7	75	50	39.4	79	4	52-145/16
79-00-5	1,1,2-Trichloroethane	ND		50	47.5	95	50	48.0	96	1	73-130/10
79-01-6	Trichloroethene	ND		50	40.7	81	50	42.5	85	4	54-141/13
75-69-4	Trichlorofluoromethane	ND		50	43.1	86	50	45.5	91	5	33-159/25
75-01-4	Vinyl chloride	ND		50	42.1	84	50	44.2	88	5	36-149/19
	m,p-Xylene	ND		100	85.3	85	100	88.4	88	4	50-137/12
95-47-6	o-Xylene	ND		50	43.2	86	50	45.1	90	4	60-134/12
1330-20-7	Xylene (total)	ND		150	129	86	150	133	89	3	53-136/12

CAS No.	Surrogate Recoveries	MS	MSD	JB82962-1	Limits
1868-53-7	Dibromofluoromethane	103%	104%	103%	79-120%
17060-07-0	1,2-Dichloroethane-D4	102%	102%	101%	72-123%
2037-26-5	Toluene-D8	111%	111%	110%	78-119%
460-00-4	4-Bromofluorobenzene	107%	106%	107%	74-119%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB82962-7MS	U190372.D	1	12/04/14	YXC	n/a	n/a	VU8783
JB82962-7MSD	U190373.D	1	12/04/14	YXC	n/a	n/a	VU8783
JB82962-7	U190357.D	1	12/04/14	YXC	n/a	n/a	VU8783

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB82646-10

CAS No.	Compound	JB82962-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50	48.5	97	50	50.3	101	4	44-160/20
71-43-2	Benzene	ND		50	42.5	85	50	43.2	86	2	50-136/12
74-97-5	Bromochloromethane	ND		50	47.5	95	50	47.8	96	1	74-131/11
75-27-4	Bromodichloromethane	ND		50	48.5	97	50	49.1	98	1	74-132/11
75-25-2	Bromoform	ND		50	52.6	105	50	52.7	105	0	68-136/12
74-83-9	Bromomethane	ND		50	49.4	99	50	48.9	98	1	37-157/21
78-93-3	2-Butanone (MEK)	ND		50	50.4	101	50	50.3	101	0	60-145/15
75-15-0	Carbon disulfide	ND		50	37.1	74	50	36.2	72	2	37-143/17
56-23-5	Carbon tetrachloride	ND		50	42.2	84	50	40.9	82	3	46-152/17
108-90-7	Chlorobenzene	ND		50	46.2	92	50	47.3	95	2	70-127/12
75-00-3	Chloroethane	ND		50	46.4	93	50	45.8	92	1	44-147/16
67-66-3	Chloroform	ND		50	41.5	83	50	41.9	84	1	67-129/12
74-87-3	Chloromethane	ND		50	44.9	90	50	45.0	90	0	40-149/19
110-82-7	Cyclohexane	ND		50	42.2	84	50	39.9	80	6	31-153/21
96-12-8	1,2-Dibromo-3-chloropropane	ND		50	56.3	113	50	56.4	113	0	61-144/14
124-48-1	Dibromochloromethane	ND		50	51.3	103	50	51.8	104	1	74-131/10
106-93-4	1,2-Dibromoethane	ND		50	53.4	107	50	54.0	108	1	74-129/10
95-50-1	1,2-Dichlorobenzene	ND		50	48.5	97	50	49.6	99	2	73-126/11
541-73-1	1,3-Dichlorobenzene	ND		50	46.8	94	50	48.1	96	3	71-124/12
106-46-7	1,4-Dichlorobenzene	ND		50	46.9	94	50	48.2	96	3	71-123/12
75-71-8	Dichlorodifluoromethane	ND		50	43.6	87	50	41.5	83	5	20-161/25
75-34-3	1,1-Dichloroethane	ND		50	41.4	83	50	41.7	83	1	61-134/12
107-06-2	1,2-Dichloroethane	0.59	J	50	50.0	99	50	50.6	100	1	68-137/11
75-35-4	1,1-Dichloroethene	ND		50	39.1	78	50	37.5	75	4	40-143/17
156-59-2	cis-1,2-Dichloroethene	ND		50	40.4	81	50	41.1	82	2	59-133/12
156-60-5	trans-1,2-Dichloroethene	ND		50	38.2	76	50	37.8	76	1	55-132/14
78-87-5	1,2-Dichloropropane	ND		50	45.2	90	50	46.5	93	3	70-128/11
10061-01-5	cis-1,3-Dichloropropene	ND		50	48.1	96	50	48.8	98	1	73-127/11
10061-02-6	trans-1,3-Dichloropropene	ND		50	50.0	100	50	51.0	102	2	72-128/11
123-91-1	1,4-Dioxane	ND		1250	1410	113	1250	1500	120	6	49-161/26
100-41-4	Ethylbenzene	ND		50	44.1	88	50	44.8	90	2	49-137/13
76-13-1	Freon 113	ND		50	41.5	83	50	39.4	79	5	32-161/23
591-78-6	2-Hexanone	ND		50	53.5	107	50	55.2	110	3	59-145/14
98-82-8	Isopropylbenzene	ND		50	43.8	88	50	43.8	88	0	57-136/14
79-20-9	Methyl Acetate	ND		50	49.9	100	50	50.1	100	0	46-148/15
108-87-2	Methylcyclohexane	ND		50	41.5	83	50	40.2	80	3	30-155/21

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB82962-7MS	U190372.D	1	12/04/14	YXC	n/a	n/a	VU8783
JB82962-7MSD	U190373.D	1	12/04/14	YXC	n/a	n/a	VU8783
JB82962-7	U190357.D	1	12/04/14	YXC	n/a	n/a	VU8783

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB82646-10

CAS No.	Compound	JB82962-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	27.7		50	72.5	90	50	72.1	89	1	64-134/11
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		50	53.8	108	50	54.1	108	1	63-144/13
75-09-2	Methylene chloride	ND		50	44.1	88	50	44.1	88	0	64-128/11
100-42-5	Styrene	ND		50	47.9	96	50	48.8	98	2	67-130/12
75-65-0	Tert Butyl Alcohol	ND		250	283	113	250	286	114	1	64-154/16
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	55.9	112	50	56.3	113	1	68-131/11
127-18-4	Tetrachloroethene	ND		50	43.8	88	50	43.5	87	1	48-143/15
108-88-3	Toluene	ND		50	44.6	89	50	45.3	91	2	54-137/13
87-61-6	1,2,3-Trichlorobenzene	ND		50	48.3	97	50	50.3	101	4	62-143/13
120-82-1	1,2,4-Trichlorobenzene	ND		50	45.9	92	50	48.1	96	5	66-138/12
71-55-6	1,1,1-Trichloroethane	ND		50	40.3	81	50	39.5	79	2	52-145/16
79-00-5	1,1,2-Trichloroethane	ND		50	51.6	103	50	52.0	104	1	73-130/10
79-01-6	Trichloroethene	ND		50	43.2	86	50	43.7	87	1	54-141/13
75-69-4	Trichlorofluoromethane	ND		50	45.5	91	50	43.2	86	5	33-159/25
75-01-4	Vinyl chloride	ND		50	44.5	89	50	43.1	86	3	36-149/19
95-47-6	o-Xylene	ND		50	46.7	93	50	47.3	95	1	60-134/12

CAS No.	Surrogate Recoveries	MS	MSD	JB82962-7	Limits
1868-53-7	Dibromofluoromethane	104%	104%	104%	79-120%
17060-07-0	1,2-Dichloroethane-D4	103%	102%	103%	72-123%
2037-26-5	Toluene-D8	112%	112%	111%	78-119%
460-00-4	4-Bromofluorobenzene	109%	108%	109%	74-119%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample: V4V541-BFB
Lab File ID: 4V13061.D
Instrument ID: GCMS4V
Injection Date: 11/12/14
Injection Time: 10:11

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	10276	17.0		Pass
75	30.0 - 60.0% of mass 95	26472	43.8		Pass
95	Base peak, 100% relative abundance	60464	100.0		Pass
96	5.0 - 9.0% of mass 95	4039	6.68		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	53043	87.7		Pass
175	5.0 - 9.0% of mass 174	4266	7.06	(8.04) [a]	Pass
176	95.0 - 101.0% of mass 174	51395	85.0	(96.9) [a]	Pass
177	5.0 - 9.0% of mass 176	3431	5.67	(6.68) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V4V541-IC541	4V13062.D	11/12/14	10:40	00:29	Initial cal 0.2
V4V541-IC541	4V13063.D	11/12/14	11:07	00:56	Initial cal 0.5
V4V541-IC541	4V13064.D	11/12/14	11:33	01:22	Initial cal 1.0
V4V541-IC541	4V13065.D	11/12/14	11:59	01:48	Initial cal 2.0
V4V541-IC541	4V13066.D	11/12/14	12:26	02:15	Initial cal 5.0
V4V541-IC541	4V13067.D	11/12/14	12:52	02:41	Initial cal 10
V4V541-IC541	4V13068.D	11/12/14	13:18	03:07	Initial cal 20
V4V541-ICC541	4V13069.D	11/12/14	13:45	03:34	Initial cal 50
V4V541-IC541	4V13070.D	11/12/14	14:11	04:00	Initial cal 100
V4V541-IC541	4V13071.D	11/12/14	14:37	04:26	Initial cal 200
V4V541-ICV541	4V13074.D	11/12/14	15:57	05:46	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample: V4V558-BFB
Lab File ID: 4V13515.D
Instrument ID: GCMS4V
Injection Date: 11/29/14
Injection Time: 08:27

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	11383	18.7		Pass
75	30.0 - 60.0% of mass 95	27824	45.6		Pass
95	Base peak, 100% relative abundance	60955	100.0		Pass
96	5.0 - 9.0% of mass 95	4142	6.80		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	49352	81.0		Pass
175	5.0 - 9.0% of mass 174	3826	6.28	(7.75) [a]	Pass
176	95.0 - 101.0% of mass 174	48264	79.2	(97.8) [a]	Pass
177	5.0 - 9.0% of mass 176	3256	5.34	(6.75) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V4V558-CC541	4V13516A.D	11/29/14	09:43	01:16	Continuing cal 20
V4V558-MB	4V13518.D	11/29/14	10:48	02:21	Method Blank
V4V558-BS	4V13519.D	11/29/14	11:23	02:56	Blank Spike
ZZZZZZ	4V13521.D	11/29/14	12:16	03:49	(unrelated sample)
JB82646-4	4V13525.D	11/29/14	14:02	05:35	MW-19
JB82646-9	4V13526.D	11/29/14	14:28	06:01	MW-16R
JB82646-1	4V13527.D	11/29/14	14:55	06:28	MW-1
JB82646-2	4V13528.D	11/29/14	15:21	06:54	MW-3
JB82646-7	4V13529.D	11/29/14	15:48	07:21	MW-2
JB82646-4MS	4V13530.D	11/29/14	16:14	07:47	Matrix Spike
JB82646-4MSD	4V13531.D	11/29/14	16:41	08:14	Matrix Spike Duplicate
JB82646-10	4V13537.D	11/29/14	19:19	10:52	MW-17R

Instrument Performance Check (BFB)

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample: VU8763-BFB
Lab File ID: U189926.D
Instrument ID: GCMSU
Injection Date: 11/19/14
Injection Time: 10:22

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	19010	18.3		Pass
75	30.0 - 60.0% of mass 95	47488	45.7		Pass
95	Base peak, 100% relative abundance	103941	100.0		Pass
96	5.0 - 9.0% of mass 95	6783	6.53		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	96461	92.8		Pass
175	5.0 - 9.0% of mass 174	7175	6.90	(7.44) [a]	Pass
176	95.0 - 101.0% of mass 174	94570	91.0	(98.0) [a]	Pass
177	5.0 - 9.0% of mass 176	6324	6.08	(6.69) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VU8763-IC8763	U189927.D	11/19/14	10:52	00:30	Initial cal 0.2
VU8763-IC8763	U189928.D	11/19/14	11:22	01:00	Initial cal 0.5
VU8763-IC8763	U189929.D	11/19/14	11:51	01:29	Initial cal 1
VU8763-IC8763	U189930.D	11/19/14	12:20	01:58	Initial cal 2
VU8763-IC8763	U189931.D	11/19/14	12:49	02:27	Initial cal 5
VU8763-IC8763	U189932.D	11/19/14	13:19	02:57	Initial cal 10
VU8763-IC8763	U189933.D	11/19/14	13:48	03:26	Initial cal 20
VU8763-ICC8763	U189934.D	11/19/14	14:17	03:55	Initial cal 50
VU8763-IC8763	U189935.D	11/19/14	14:46	04:24	Initial cal 100
VU8763-IC8763	U189936.D	11/19/14	15:16	04:54	Initial cal 200
VU8763-ICV8763	U189939.D	11/19/14	16:43	06:21	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample: VU8782-BFB
Lab File ID: U190315A.D
Instrument ID: GCMSU
Injection Date: 12/03/14
Injection Time: 09:19

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	15902	17.1		Pass
75	30.0 - 60.0% of mass 95	41725	44.9		Pass
95	Base peak, 100% relative abundance	92923	100.0		Pass
96	5.0 - 9.0% of mass 95	6170	6.64		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	91880	98.9		Pass
175	5.0 - 9.0% of mass 174	7107	7.65	(7.74) [a]	Pass
176	95.0 - 101.0% of mass 174	89728	96.6	(97.7) [a]	Pass
177	5.0 - 9.0% of mass 176	5904	6.35	(6.58) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VU8782-CC8763	U190316.D	12/03/14	09:53	00:34	Continuing cal 20
VU8781-MB2	U190318.D	12/03/14	10:54	01:35	Method Blank
ZZZZZZ	U190319.D	12/03/14	11:23	02:04	(unrelated sample)
ZZZZZZ	U190320.D	12/03/14	11:53	02:34	(unrelated sample)
VU8782-MB	U190321.D	12/03/14	12:22	03:03	Method Blank
VU8782-BS	U190322.D	12/03/14	12:51	03:32	Blank Spike
ZZZZZZ	U190324.D	12/03/14	13:59	04:40	(unrelated sample)
JB82962-1	U190325.D	12/03/14	14:27	05:08	(used for QC only; not part of job JB82646)
ZZZZZZ	U190326.D	12/03/14	14:57	05:38	(unrelated sample)
ZZZZZZ	U190327.D	12/03/14	15:26	06:07	(unrelated sample)
ZZZZZZ	U190328.D	12/03/14	15:56	06:37	(unrelated sample)
JB82962-1MS	U190329.D	12/03/14	16:25	07:06	Matrix Spike
JB82962-1MSD	U190330.D	12/03/14	16:55	07:36	Matrix Spike Duplicate
ZZZZZZ	U190331.D	12/03/14	17:24	08:05	(unrelated sample)
ZZZZZZ	U190332.D	12/03/14	17:54	08:35	(unrelated sample)
ZZZZZZ	U190333.D	12/03/14	18:23	09:04	(unrelated sample)
ZZZZZZ	U190334.D	12/03/14	18:52	09:33	(unrelated sample)
JB82646-5	U190335.D	12/03/14	19:21	10:02	MW-6
JB82646-3	U190336.D	12/03/14	19:50	10:31	MW-11
JB82646-8	U190337.D	12/03/14	20:20	11:01	MW-14
JB82646-6	U190338.D	12/03/14	20:49	11:30	MW-12

Instrument Performance Check (BFB)

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample: VU8783-BFB
Lab File ID: U190339.D
Instrument ID: GCMSU
Injection Date: 12/03/14
Injection Time: 21:18

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	16833	17.4		Pass
75	30.0 - 60.0% of mass 95	44115	45.5		Pass
95	Base peak, 100% relative abundance	97016	100.0		Pass
96	5.0 - 9.0% of mass 95	6502	6.70		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	94651	97.6		Pass
175	5.0 - 9.0% of mass 174	7351	7.58	(7.77) [a]	Pass
176	95.0 - 101.0% of mass 174	92885	95.7	(98.1) [a]	Pass
177	5.0 - 9.0% of mass 176	6022	6.21	(6.48) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VU8783-CC8763	U190340.D	12/03/14	21:47	00:29	Continuing cal 50
VU8783-MB	U190342.D	12/03/14	22:45	01:27	Method Blank
VU8783-BS	U190343.D	12/03/14	23:14	01:56	Blank Spike
ZZZZZZ	U190345.D	12/04/14	00:11	02:53	(unrelated sample)
ZZZZZZ	U190346.D	12/04/14	00:40	03:22	(unrelated sample)
ZZZZZZ	U190347.D	12/04/14	01:10	03:52	(unrelated sample)
ZZZZZZ	U190348.D	12/04/14	01:38	04:20	(unrelated sample)
ZZZZZZ	U190349.D	12/04/14	02:07	04:49	(unrelated sample)
ZZZZZZ	U190350.D	12/04/14	02:36	05:18	(unrelated sample)
ZZZZZZ	U190351.D	12/04/14	03:05	05:47	(unrelated sample)
ZZZZZZ	U190352.D	12/04/14	03:34	06:16	(unrelated sample)
ZZZZZZ	U190353.D	12/04/14	04:03	06:45	(unrelated sample)
ZZZZZZ	U190354.D	12/04/14	04:33	07:15	(unrelated sample)
ZZZZZZ	U190355.D	12/04/14	05:02	07:44	(unrelated sample)
ZZZZZZ	U190356.D	12/04/14	05:31	08:13	(unrelated sample)
JB82962-7	U190357.D	12/04/14	06:00	08:42	(used for QC only; not part of job JB82646)
ZZZZZZ	U190358.D	12/04/14	06:29	09:11	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample: VU8783-BFB2
Lab File ID: U190359.D
Instrument ID: GCMSU
Injection Date: 12/04/14
Injection Time: 08:34

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	16993	17.8		Pass
75	30.0 - 60.0% of mass 95	42853	45.0		Pass
95	Base peak, 100% relative abundance	95219	100.0		Pass
96	5.0 - 9.0% of mass 95	6198	6.51		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	92936	97.6		Pass
175	5.0 - 9.0% of mass 174	7041	7.39	(7.58) [a]	Pass
176	95.0 - 101.0% of mass 174	90395	94.9	(97.3) [a]	Pass
177	5.0 - 9.0% of mass 176	6041	6.34	(6.68) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VU8783-CC8763	U190360.D	12/04/14	09:31	00:57	Continuing cal 20
VU8783-MB2	U190362.D	12/04/14	10:33	01:59	Method Blank
ZZZZZZ	U190363.D	12/04/14	11:06	02:32	(unrelated sample)
ZZZZZZ	U190365.D	12/04/14	12:04	03:30	(unrelated sample)
ZZZZZZ	U190366.D	12/04/14	12:33	03:59	(unrelated sample)
ZZZZZZ	U190367.D	12/04/14	13:02	04:28	(unrelated sample)
ZZZZZZ	U190368.D	12/04/14	13:32	04:58	(unrelated sample)
JB82646-10	U190371.D	12/04/14	15:00	06:26	MW-17R
JB82962-7MS	U190372.D	12/04/14	15:29	06:55	Matrix Spike
JB82962-7MSD	U190373.D	12/04/14	15:58	07:24	Matrix Spike Duplicate
VU8784-MB	U190375.D	12/04/14	16:56	08:22	Method Blank
ZZZZZZ	U190375A.D	12/04/14	17:25	08:51	(unrelated sample)
VU8784-BS	U190376.D	12/04/14	17:54	09:20	Blank Spike
ZZZZZZ	U190377.D	12/04/14	18:23	09:49	(unrelated sample)
ZZZZZZ	U190378.D	12/04/14	18:52	10:18	(unrelated sample)
ZZZZZZ	U190379.D	12/04/14	19:22	10:48	(unrelated sample)
ZZZZZZ	U190380.D	12/04/14	19:51	11:17	(unrelated sample)
ZZZZZZ	U190381.D	12/04/14	20:20	11:46	(unrelated sample)

Volatile Internal Standard Area Summary

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Check Std: V4V558-CC541 **Injection Date:** 11/29/14
Lab File ID: 4V13516A.D **Injection Time:** 09:43
Instrument ID: GCMS4V **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	163796	7.43	190745	9.90	228661	10.86	195081	14.07	111078	16.43
Upper Limit [a]	327592	7.93	381490	10.40	457322	11.36	390162	14.57	222156	16.93
Lower Limit [b]	81898	6.93	95373	9.40	114331	10.36	97541	13.57	55539	15.93

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V4V558-MB	157074	7.43	183573	9.91	219887	10.87	195555	14.08	112693	16.43
V4V558-BS	166322	7.43	195257	9.90	235998	10.86	197888	14.07	114992	16.43
ZZZZZZ	157329	7.42	183197	9.90	218651	10.87	192478	14.08	112202	16.43
JB82646-4	161338	7.43	187447	9.90	222197	10.87	189107	14.08	110839	16.43
JB82646-9	154039	7.43	178558	9.90	213472	10.87	183163	14.08	107169	16.43
JB82646-1	152635	7.42	178659	9.90	214926	10.87	177950	14.08	103645	16.43
JB82646-2	156592	7.43	185901	9.90	220778	10.87	193583	14.08	109292	16.43
JB82646-7	152525	7.42	179234	9.90	215119	10.87	184486	14.08	106469	16.43
JB82646-4MS	167852	7.44	191477	9.90	228992	10.87	193350	14.08	112531	16.43
JB82646-4MSD	163346	7.44	193039	9.91	229896	10.87	196006	14.08	110907	16.43
JB82646-10	156246	7.42	186028	9.90	221502	10.87	190806	14.08	115825	16.43

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Check Std: VU8782-CC8763 **Injection Date:** 12/03/14
Lab File ID: U190316.D **Injection Time:** 09:53
Instrument ID: GCMSU **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	105095	7.90	388442	10.10	421464	11.02	392870	14.34	223315	16.92
Upper Limit [a]	210190	8.40	776884	10.60	842928	11.52	785740	14.84	446630	17.42
Lower Limit [b]	52548	7.40	194221	9.60	210732	10.52	196435	13.84	111658	16.42

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VU8781-MB2	113748	7.92	403524	10.10	437466	11.02	403987	14.35	222124	16.92
ZZZZZZ	109946	7.92	399746	10.10	433416	11.02	398706	14.34	220959	16.92
ZZZZZZ	102136	7.90	395807	10.10	432448	11.02	395860	14.34	219437	16.92
VU8782-MB	117629	7.90	404745	10.10	436278	11.02	402840	14.35	220197	16.92
VU8782-BS	107030	7.91	386461	10.10	419044	11.02	392961	14.34	225163	16.92
ZZZZZZ	113752	7.91	399103	10.10	433119	11.02	399991	14.35	221302	16.92
JB82962-1	104706	7.91	399300	10.10	430752	11.02	393686	14.35	218282	16.92
ZZZZZZ	108267	7.91	393606	10.10	426979	11.02	395055	14.35	216753	16.92
ZZZZZZ	114190	7.91	389526	10.10	421889	11.02	389297	14.35	217092	16.92
ZZZZZZ	111058	7.92	388614	10.10	423066	11.02	388330	14.35	214710	16.92
JB82962-1MS	107080	7.90	385111	10.10	415324	11.03	388543	14.34	218972	16.92
JB82962-1MSD	111927	7.91	387528	10.10	420570	11.02	389991	14.35	221373	16.92
ZZZZZZ	116464	7.90	394884	10.10	429942	11.02	398048	14.35	218645	16.92
ZZZZZZ	106358	7.91	391756	10.10	424940	11.02	388447	14.35	212751	16.92
ZZZZZZ	105490	7.90	401213	10.10	430595	11.02	394398	14.35	217140	16.92
ZZZZZZ	108350	7.90	394382	10.10	426535	11.02	394135	14.35	223444	16.92
JB82646-5	135005	7.90	400638	10.10	434559	11.02	406287	14.35	225323	16.92
JB82646-3	125256	7.90	406511	10.10	441098	11.02	409118	14.35	226673	16.92
JB82646-8	109548	7.90	407561	10.10	444649	11.02	411515	14.35	226304	16.92
JB82646-6	114740	7.91	412728	10.10	442149	11.02	407537	14.34	226140	16.92

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Check Std: VU8783-CC8763 **Injection Date:** 12/03/14
Lab File ID: U190340.D **Injection Time:** 21:47
Instrument ID: GCMSU **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	110565	7.90	399505	10.09	434274	11.02	403216	14.34	228392	16.92
Upper Limit [a]	221130	8.40	799010	10.59	868548	11.52	806432	14.84	456784	17.42
Lower Limit [b]	55283	7.40	199753	9.59	217137	10.52	201608	13.84	114196	16.42

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VU8783-MB	115471	7.90	409210	10.10	443160	11.02	410206	14.35	224327	16.92
VU8783-BS	108755	7.90	395584	10.10	428350	11.02	399785	14.35	223295	16.92
ZZZZZZ	113644	7.90	397961	10.09	432367	11.02	400264	14.35	221992	16.92
ZZZZZZ	112518	7.90	399394	10.09	434096	11.02	399174	14.34	221247	16.92
ZZZZZZ	103285	7.90	397781	10.09	432148	11.02	394686	14.35	218656	16.92
ZZZZZZ	100283	7.90	395530	10.10	423964	11.02	392378	14.34	222411	16.92
ZZZZZZ	107823	7.90	399494	10.10	429423	11.02	401523	14.34	219031	16.92
ZZZZZZ	107173	7.90	401544	10.10	433140	11.02	397397	14.34	219462	16.92
ZZZZZZ	109911	7.90	399827	10.10	432361	11.02	401960	14.35	224162	16.92
ZZZZZZ	113364	7.90	403151	10.10	436313	11.02	403505	14.35	223519	16.92
ZZZZZZ	108979	7.90	404123	10.10	440057	11.02	404755	14.34	223345	16.92
ZZZZZZ	108982	7.90	399700	10.10	435434	11.02	400796	14.35	221462	16.92
ZZZZZZ	110129	7.90	394939	10.09	429642	11.02	399024	14.34	220434	16.92
ZZZZZZ	106775	7.90	397046	10.10	428059	11.02	393717	14.35	218038	16.92
JB82962-7	109263	7.90	392892	10.10	428233	11.02	395399	14.34	217053	16.92
ZZZZZZ	109297	7.90	393413	10.09	425961	11.02	393882	14.35	215450	16.92

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Check Std:	VU8783-CC8763	**Injection Date:**	12/04/14
Lab File ID:	U190360.D	**Injection Time:**	09:31
Instrument ID:	GCMSU	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	129042	7.91	384141	10.10	413742	11.02	386151	14.34	218722	16.91
Upper Limit [a]	258084	8.41	768282	10.60	827484	11.52	772302	14.84	437444	17.41
Lower Limit [b]	64521	7.41	192071	9.60	206871	10.52	193076	13.84	109361	16.41

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VU8783-MB2	105010	7.90	389853	10.09	429562	11.01	394064	14.34	218308	16.92
ZZZZZZ	76423	7.92	374149	10.09	402164	11.01	374129	14.34	213458	16.92
ZZZZZZ	102021	7.91	391840	10.10	422704	11.02	393485	14.34	216306	16.92
ZZZZZZ	95836	7.90	390861	10.10	421384	11.02	389325	14.35	215159	16.92
ZZZZZZ	105312	7.90	387084	10.09	417881	11.02	389113	14.35	216315	16.92
ZZZZZZ	123364	7.89	388378	10.10	423407	11.02	390679	14.34	217095	16.92
JB82646-10	117260	7.89	399427	10.10	433096	11.02	402917	14.34	221849	16.92
JB82962-7MS	111176	7.91	393517	10.10	429983	11.02	401915	14.34	222669	16.92
JB82962-7MSD	109922	7.91	395457	10.10	428814	11.02	398635	14.34	223833	16.92
VU8784-MB	110845	7.90	400893	10.10	436103	11.02	405106	14.35	221726	16.92
ZZZZZZ	107214	7.91	400143	10.10	430871	11.02	401879	14.34	219035	16.92
VU8784-BS	101407	7.90	385962	10.09	422411	11.02	392593	14.34	223129	16.92
ZZZZZZ	111315	7.90	395058	10.10	426829	11.02	398963	14.34	222524	16.92
ZZZZZZ	110257	7.91	397557	10.10	430706	11.02	397596	14.34	219660	16.92
ZZZZZZ	110862	7.91	389783	10.10	423621	11.02	391446	14.34	219522	16.92
ZZZZZZ	105460	7.90	386606	10.10	418309	11.02	387611	14.34	217070	16.92
ZZZZZZ	105461	7.90	383564	10.10	418004	11.02	388562	14.34	217960	16.92

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: JB82646
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Method: SW846 8260B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JB82646-1	4V13527.D	103	113	97	102
JB82646-2	4V13528.D	104	114	99	103
JB82646-3	U190336.D	103	102	110	108
JB82646-4	4V13525.D	105	114	98	102
JB82646-5	U190335.D	103	103	111	108
JB82646-6	U190338.D	102	102	110	107
JB82646-7	4V13529.D	105	115	97	104
JB82646-8	U190337.D	104	102	110	109
JB82646-9	4V13526.D	103	115	100	102
JB82646-10	U190371.D	103	102	112	108
JB82646-10	4V13537.D	103	112	100	100
JB82646-4MS	4V13530.D	106	116	98	101
JB82646-4MSD	4V13531.D	104	112	98	103
JB82962-1MS	U190329.D	103	102	111	107
JB82962-1MSD	U190330.D	104	102	111	106
JB82962-7MS	U190372.D	104	103	112	109
JB82962-7MSD	U190373.D	104	102	112	108
V4V558-BS	4V13519.D	105	115	99	99
V4V558-MB	4V13518.D	103	113	99	103
VU8782-BS	U190322.D	104	101	112	106
VU8782-MB	U190321.D	103	101	111	108
VU8783-BS	U190343.D	104	101	111	108
VU8783-MB2	U190362.D	104	102	110	108
VU8783-MB	U190342.D	103	100	111	110

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	79-120%
S2 = 1,2-Dichloroethane-D4	72-123%
S3 = Toluene-D8	78-119%
S4 = 4-Bromofluorobenzene	74-119%

Initial Calibration Summary

Job Number: JB82646 **Sample:** V4V541-ICC541
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4V13069.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Response Factor Report GCMS4V

Method : C:\msdchem\1\METHODS\M4V541.M (RTE Integrator)
Title : sw846 8260b
Last Update : Fri Nov 14 17:45:50 2014
Response via : Initial Calibration

Calibration Files
0.2 =4V13062.D 0.5 =4V13063.D 5 =4V13066.D 50 =4V13069.D
100 =4V13070.D 1 =4V13064.D 200 =4V13071.D 20 =4V13068.D
2 =4V13065.D 10 =4V13067.D = =

Compound	0.2	0.5	5	50	100	1	200	20	2	10	Avg	%RSD
1) I Tert Butyl Alcohol-d9 ----------ISTD----------												
2) 1,4-dioxane	0.065	0.076	0.072		0.073	0.071		0.070			0.071	5.38
3) tertiary butyl alcohol	0.999	1.032	0.973	0.924	0.964	0.994	1.003	0.951			0.980	3.47
4) I pentafluorobenzene ----------ISTD----------												
5) Freon 143a											0.000	-1.00
6) chlorodifluoromethane	0.532	0.556	0.586	0.582	0.592	0.590	0.547	0.598	0.507		0.566	5.59
7) dichlorodifluoromethane	0.675	0.726	0.735	0.543	0.703	0.645	0.658	0.634			0.665	9.26
8) freon 142b											0.000	-1.00
9) chloromethane	0.875	0.728	0.757	0.773	0.838	0.787	0.697	0.729	0.724		0.768	7.55
10) vinyl chloride	0.722	0.727	0.752	0.754	0.769	0.764	0.678	0.696	0.700		0.729	4.48
11) bromomethane	0.510	0.480	0.456		0.428	0.474	0.521	0.494			0.480	6.62
12) chloroethane	0.326	0.300	0.299	0.304	0.232	0.296	0.296	0.305			0.295	9.13
13) trichlorofluoromethane	0.790	0.834	0.857		0.844	0.748	0.767	0.741			0.797	5.98
14) ethyl ether	0.212	0.220	0.224	0.197	0.216	0.214	0.199	0.206			0.211	4.56
15) freon 141b											0.000	-1.00
16) 2-chloropropane	0.865	0.787	0.798		0.793	0.761		0.705			0.785	6.69
17) acrolein	0.105	0.096		0.099		0.094	0.099	0.093			0.098	4.65
18) 1,1-dichloroethene	0.740	0.861	0.801	0.825	0.808	0.824	0.759	0.832	0.687		0.793	6.83
19) acetone			0.045	0.045		0.043	0.043		0.040		0.043	4.86
20) allyl chloride	0.233	0.215	0.218	0.190	0.213	0.204	0.217	0.208			0.212	5.84
21) acetonitrile	0.047	0.049	0.048		0.046	0.048		0.045			0.047	2.95
22) iodomethane	0.920	1.121	1.084	1.093	1.073	1.090	1.053	1.083	0.974		1.055	6.17
23) iso-butyl alcohol												

Initial Calibration Summary

Job Number: JB82646 **Sample:** V4V541-ICC541
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4V13069.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

```
                0.021 0.020 0.019 0.024 0.020 0.020 0.022 0.019  0.021    8.33
24)  carbon disulfide
           2.221 2.048 1.912 2.015 2.086 1.979 1.854 2.010 1.697  1.980    7.50
25)  methylene chloride
           0.521 0.588 0.558 0.573 0.667 0.566 0.543 0.554 0.520  0.566    7.83
26)  1-chloropropane
                0.264 0.217 0.220       0.228 0.209       0.206  0.224    9.52
27)  methyl acetate
                0.068 0.080 0.081       0.079 0.078       0.069  0.076    7.70
28)  methyl tert butyl ether
      1.560 1.544 1.588 1.528 1.524 1.670 1.468 1.513 1.558 1.490  1.544    3.64
29)  trans-1,2-dichloroethene
           0.579 0.725 0.689 0.705 0.709 0.687 0.666 0.683 0.615  0.673    7.02
30)  di-isopropyl ether
      1.709 1.598 1.550 1.529 1.534 1.677 1.531 1.483 1.582 1.445  1.564    5.20
31)  ethyl tert-butyl ether
           1.499 1.515 1.543 1.533 1.586 1.546 1.497 1.479 1.467  1.518    2.46
32)  2-butanone
                      0.050 0.052       0.052 0.045       0.043  0.048    8.50
33)  1,1-dichloroethane
           0.788 0.895 0.867 0.872 0.895 0.863 0.823 0.835 0.777  0.846    5.11
34)  chloroprene
           0.459 0.533 0.533 0.560 0.558 0.565 0.495 0.526 0.471  0.522    7.44
35)  acrylonitrile
           0.156 0.180 0.181 0.184 0.174 0.175 0.178 0.166 0.174  0.174    4.84
36)  vinyl acetate
                      0.061 0.063       0.064 0.055       0.048  0.058   11.49
37)  ethyl acetate
                0.057 0.059 0.059       0.058 0.061       0.064  0.060    4.31
38)  2,2-dichloropropane
      0.774 0.920 0.803 0.745 0.737 0.864 0.709 0.736 0.849 0.691  0.783    9.50
39)  cis-1,2-dichloroethene
           0.760 0.849 0.835 0.845 0.839 0.831 0.800 0.841 0.760  0.818    4.36
40)  propionitrile
           0.053 0.067 0.069 0.070 0.065 0.067 0.067 0.061 0.064  0.065    7.90
41)  methyl acrylate
                0.464 0.475 0.472 0.519 0.466 0.455 0.477 0.461  0.474    4.17
42)  bromochloromethane
                0.274 0.270 0.276 0.237 0.273 0.258 0.247 0.248  0.261    5.75
43)  tetrahydrofuran
                0.185 0.171 0.174 0.175 0.167 0.169 0.160 0.168  0.171    4.29
44)  chloroform
      1.038 0.874 0.858 0.830 0.859 0.885 0.851 0.795 0.826 0.752  0.857    8.71
45)  dibromofluoromethane (s)
                0.524 0.472 0.472       0.498 0.448       0.472  0.481    5.51
46)  1,2-dichloroethane-d4 (s)
                0.485 0.423 0.419       0.437 0.400       0.440  0.434    6.63
47)  freon 113
                0.407 0.406 0.415 0.387 0.410 0.387 0.402 0.351  0.396    5.25
48)  methacrylonitrile
                0.279 0.269 0.346       0.345 0.257       0.340  0.306   13.64
49)  1,1,1-trichloroethane
           0.667 0.799 0.788 0.800 0.842 0.794 0.739 0.809 0.680  0.769    7.84
50)  tert-amyl methyl ether
      1.895 1.690 1.511 1.529 1.535 1.679 1.524 1.477 1.528 1.435  1.580    8.64

51) I   1,4-difluorobenzene   ----------------ISTD---------------------
52)  epichlorohydrin
                0.035 0.036 0.034 0.041 0.033 0.036 0.036 0.034  0.036    6.91
53)  n-butyl alcohol
```

```
           0.009 0.012 0.013 0.012 0.013 0.012 0.013 0.013 0.012  0.012    9.20
54)  cyclohexane
           0.529 0.630 0.577 0.580 0.566 0.563 0.551 0.614 0.485  0.566    7.60
55)  carbon tetrachloride
           0.586 0.642 0.628 0.620 0.644 0.604 0.593 0.640 0.544  0.611    5.42
56)  1,1-dichloropropene
           0.492 0.478 0.471 0.481 0.460 0.479 0.433 0.465 0.402  0.462    6.12
57)  hexane
           0.413 0.391 0.373 0.398 0.420 0.381 0.351 0.418 0.326  0.386    8.28
58)  benzene
     1.472 1.318 1.386 1.380 1.373 1.419 1.358 1.276 1.353 1.219  1.355    5.27
59)  isooctane
           1.410 1.317 1.311 1.449 1.300 1.375 1.262 1.298 1.151  1.319    6.60
60)  heptane
                 0.200 0.184 0.203 0.205 0.193 0.183 0.208 0.168  0.193    7.18
61)  isopropyl acetate
                 0.937 0.922 0.914 1.117 0.877 0.882 0.941 0.877  0.933    8.42
62)  1,2-dichloroethane
           0.322 0.434 0.449 0.442 0.418 0.427 0.422 0.425 0.408  0.416    9.02
63)  trichloroethene
           0.302 0.351 0.345 0.346 0.338 0.351 0.327 0.340 0.305  0.334    5.59
64)  ethyl acrylate
                                                                  0.000   -1.00
65)  2-nitropropane
           0.694 0.633 0.620 0.596 0.739 0.576 0.609 0.645 0.593  0.634    8.27
66)  2-chloroethyl vinyl ether
           0.141 0.159 0.162 0.155 0.173 0.152 0.158 0.155 0.150  0.156    5.53
67)  methyl methacrylate
                 0.214 0.223 0.214 0.198 0.205 0.220 0.212 0.212  0.212    3.77
68)  1,2-dichloropropane
           0.279 0.336 0.343 0.339 0.339 0.337 0.325 0.332 0.310  0.327    6.25
69)  methylcyclohexane
           0.575 0.582 0.580 0.608 0.612 0.595 0.548 0.608 0.508  0.580    5.79
70)  dibromomethane
           0.186 0.242 0.242 0.236 0.249 0.230 0.234 0.238 0.226  0.231    7.95
71)  bromodichloromethane
           0.403 0.477 0.478 0.470 0.498 0.472 0.451 0.455 0.427  0.459    6.37
72)  cis-1,3-dichloropropene
           0.483 0.531 0.534 0.521 0.572 0.508 0.509 0.522 0.481  0.518    5.40
73)  toluene-d8 (s)
                 1.336 1.059 0.988       1.030 1.024       1.135  1.095   11.67
74)  4-methyl-2-pentanone
                 0.143 0.148 0.145 0.124 0.143 0.148 0.120 0.141  0.139    7.98
75)  toluene
      0.744 0.680 0.721 0.715 0.711 0.711 0.697 0.684 0.718 0.634  0.702    4.30
76)  3-methyl-1-butanol
                 0.011 0.012 0.011 0.012 0.011 0.012 0.012 0.011  0.012    2.56
77)  trans-1,3-dichloropropene
           0.551 0.495 0.493 0.480 0.528 0.452 0.481 0.493 0.457  0.492    6.38
78)  ethyl methacrylate
           0.344 0.408 0.406 0.391 0.430 0.369 0.399 0.376 0.378  0.389    6.52
79)  1,1,2-trichloroethane
           0.201 0.269 0.262 0.253 0.270 0.242 0.248 0.245 0.237  0.247    8.49
80)  2-hexanone
                 0.132 0.135 0.129 0.132 0.121 0.134 0.121 0.135  0.130    4.41

81) I   chlorobenzene-d5      ----------------ISTD---------------------
82)  tetrachloroethene
           0.329 0.392 0.388 0.391 0.411 0.408 0.360 0.400 0.339  0.380    7.87
83)  1,3-dichloropropane
```

Initial Calibration Summary

Job Number: JB82646 **Sample:** V4V541-ICC541
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4V13069.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

```
            0.489 0.547 0.540 0.522 0.545 0.515 0.516 0.523 0.515  0.524    3.52
 84)  butyl acetate
                  0.254 0.257 0.243 0.252 0.244 0.249 0.269 0.252  0.252    3.25
 85)  dibromochloromethane
            0.381 0.477 0.481 0.472 0.470 0.479 0.448 0.474 0.440  0.458    7.02
 86)  1,2-dibromoethane
                  0.408 0.411 0.399 0.420 0.396 0.395 0.403 0.388  0.403    2.53
 87)  chlorobenzene
             1.063 0.957 1.000 1.005 0.987 1.114 0.995 0.948 1.017 0.905  0.999    5.86
 88)  1,1,1,2-tetrachloroethane
            0.390 0.452 0.471 0.466 0.454 0.491 0.428 0.457 0.418  0.447    6.82
 89)  ethylbenzene
             1.979 1.682 1.741 1.709 1.670 1.892 1.702 1.637 1.780 1.534  1.733    7.33
 90)  m,p-xylene
             0.668 0.614 0.648 0.639 0.625 0.705 0.636 0.613 0.666 0.584  0.640    5.34
 91)  o-xylene
            0.598 0.684 0.685 0.675 0.710 0.699 0.644 0.684 0.614  0.666    5.78
 92)  styrene
             1.068 1.019 1.089 1.114 1.070 1.178 1.070 1.031 1.103 1.004  1.075    4.76
 93)  bromoform
            0.298 0.361 0.378 0.367 0.368 0.361 0.350 0.372 0.348  0.356    6.66

 94) I   1,4-dichlorobenzene-d ----------------ISTD---------------------
 95)  isopropylbenzene
             3.377 2.911 3.054 3.112 3.131 3.399 3.212 2.950 3.072 2.718  3.094    6.70
 96)  4-bromofluorobenzene (s)
                  1.061 0.895 0.818       0.842 0.857       0.916  0.898    9.71
 97)  bromobenzene
             0.828 0.763 0.845 0.848 0.793 0.924 0.789 0.813 0.847 0.750  0.820    6.17
 98)  cyclohexanone   ** Compound failed for this initial calibration
                  0.072 0.056 0.036       0.054 0.062       0.070  0.058   22.89
          ----- Quadratic regression -----                Coefficient =  0.9849
               Response Ratio = 0.11991 + 0.02043 *A + 0.00076 *A^2

 99)  1,1,2,2-tetrachloroethane
            1.037 1.054 1.058 1.026 1.154 0.992 1.044 1.055 0.977  1.044    4.81
100)  trans-1,4-dichloro-2-butene
                  0.229 0.245 0.235 0.245 0.226 0.236 0.219 0.230  0.233    3.78
101)  1,2,3-trichloropropane
                  0.221 0.235 0.216 0.227 0.209 0.231 0.221 0.219  0.222    3.85
102)  n-propylbenzene
            3.715 3.630 3.566 3.431 4.110 3.449 3.458 3.691 3.181  3.581    7.17
103)  2-chlorotoluene
            0.707 0.787 0.755 0.748 0.893 0.751 0.745 0.766 0.681  0.759    7.79
104)  4-chlorotoluene
             2.723 2.333 2.322 2.263 2.148 2.651 2.109 2.161 2.312 2.015  2.304    9.87
105)  1,3,5-trimethylbenzene
             2.990 2.469 2.695 2.679 2.705 2.983 2.824 2.592 2.584 2.364  2.689    7.54
106)  tert-butylbenzene
             2.303 2.042 2.038 2.202 2.293 2.191 2.488 2.024 2.077 1.836  2.149    8.59
107)  pentachloroethane
                  0.574 0.649 0.645 0.608 0.686 0.587 0.584 0.546  0.610    7.62
108)  1,2,4-trimethylbenzene
            2.567 2.715 2.685 2.657 3.120 2.732 2.644 2.744 2.406  2.697    7.04
109)  sec-butylbenzene
             4.020 3.525 3.584 3.578 3.681 3.898 3.869 3.447 3.588 3.154  3.634    6.87
110)  1,3-dichlorobenzene
             1.851 1.624 1.650 1.618 1.558 1.830 1.568 1.549 1.627 1.503  1.638    7.08
111)  p-isopropyltoluene
            3.100 3.011 2.949 2.990 3.313 3.119 2.881 3.075 2.620  3.006    6.32
```

Initial Calibration Summary

Job Number: JB82646 **Sample:** V4V541-ICC541
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4V13069.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

```
112)  1,4-dichlorobenzene
             1.752 1.720 1.648 1.576 1.979 1.600 1.590 1.759 1.495  1.680    8.49
113)  indane
                                                                     0.000   -1.00
114)  1,2-dichlorobenzene
       1.858 1.670 1.711 1.689 1.605 1.838 1.639 1.623 1.696 1.564  1.689    5.62
115)  n-butylbenzene
             1.552 1.643 1.573 1.563 1.798 1.586 1.547 1.698 1.435  1.599    6.46
116)  1,2-dibromo-3-chloropropane
                   0.246 0.222 0.218       0.220 0.227 0.287 0.230  0.236   10.36
117)  1,3,5-trichlorobenzene
             1.602 1.519 1.524 1.513 1.758 1.613 1.477 1.579 1.400  1.554    6.50
118)  1,2,4-trichlorobenzene
             1.600 1.398 1.467 1.445 1.627 1.541 1.400 1.481 1.359  1.480    6.26
119)  hexachlorobutadiene
                   0.655 0.590 0.645       0.716 0.591 0.666 0.545  0.630    9.14
120)  naphthalene
             4.128 3.631 3.860 3.758 4.013 3.870 3.766 3.771 3.551  3.817    4.66
121)  1,2,3-trichlorobenzene
             1.588 1.397 1.458 1.414 1.547 1.475 1.416 1.449 1.303  1.450    5.77
122)  hexachloroethane
                   0.646 0.692 0.749       0.836 0.622 0.667 0.588  0.686   12.22
123)  Benzyl chloride
                   1.938 1.821 1.707       1.704 1.812 1.977 1.778  1.820    5.80
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           M4V541.M          Fri Nov 14 17:46:54 2014   RPT1
```

Initial Calibration Verification

Job Number: JB82646 **Sample:** V4V541-ICV541
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4V13074.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\4V13074.D Vial: 14
Acq On : 12 Nov 2014 3:57 pm Operator: BenM
Sample : ICV541-50 Inst : GCMS4V
Misc : MS76468,V4V541,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\METHODS\M4V541.M (RTE Integrator)
Title : sw846 8260b
Last Update : Fri Nov 14 17:45:50 2014
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	100	0.00	7.44
2		1,4-dioxane	0.071	0.073	-2.8	96	-0.01	11.62
3	M	tertiary butyl alcohol	0.980	0.972	0.8	94	0.00	7.57
4	I	pentafluorobenzene	1.000	1.000	0.0	102	0.00	9.91
5		Freon 143a		----------NA----------				
6		chlorodifluoromethane	0.566	0.457	19.3	79	0.00	3.64
7		dichlorodifluoromethane	0.665	0.682	-2.6	96	0.00	3.63
8		freon 142b		----------NA----------				
9		chloromethane	0.768	0.706	8.1	95	-0.01	3.95
10		vinyl chloride	0.729	0.704	3.4	95	0.00	4.23
11		bromomethane	0.480	0.461	4.0	98	0.00	4.92
12		chloroethane	0.295	0.309	-4.7	105	-0.01	5.10
13		trichlorofluoromethane	0.797	0.824	-3.4	101	0.00	5.64
14		ethyl ether	0.211	0.222	-5.2	103	0.00	6.09
15		freon 141b		----------NA----------				
16		2-chloropropane	0.785	0.853	-8.7	110	0.00	6.31
17		acrolein	0.098	0.114	-16.3	121	0.00	6.42
18		1,1-dichloroethene	0.793	0.812	-2.4	103	0.00	6.56
19		acetone	0.043	0.042	2.3	96	0.00	6.68
20		allyl chloride	0.212	0.238	-12.3	113	0.00	7.19
21		acetonitrile	0.047	0.046	2.1	96	0.00	7.22
22		iodomethane	1.055	1.073	-1.7	101	0.00	6.88
23		iso-butyl alcohol	0.021	0.018	14.3	93	0.00	10.27
24		carbon disulfide	1.980	1.904	3.8	101	0.00	6.99
25		methylene chloride	0.566	0.544	3.9	99	0.00	7.42
26		1-chloropropane	0.224	0.212	5.4	100	0.00	7.43
27		methyl acetate	0.076	0.068	10.5	86	0.00	7.20
28		methyl tert butyl ether	1.544	1.434	7.1	96	0.00	7.77
29		trans-1,2-dichloroethene	0.673	0.673	0.0	100	0.00	7.83
30		di-isopropyl ether	1.564	1.471	5.9	98	0.00	8.46
31		ethyl tert-butyl ether	1.518	1.447	4.7	96	0.00	8.99
32		2-butanone	0.048	0.051	-6.2	103	0.00	9.32
33	M	1,1-dichloroethane	0.846	0.855	-1.1	101	0.00	8.50
34		chloroprene	0.522	0.571	-9.4	109	0.00	8.60
35		acrylonitrile	0.174	0.159	8.6	89	0.00	7.85
36		vinyl acetate	0.058	0.063	-8.6	107	0.00	8.50
37		ethyl acetate	0.060	0.062	-3.3	107	-0.01	9.33
38		2,2-dichloropropane	0.783	0.767	2.0	105	0.00	9.31
39		cis-1,2-dichloroethene	0.818	0.820	-0.2	100	0.00	9.33
40		propionitrile	0.065	0.067	-3.1	99	0.00	9.46
41		methyl acrylate	0.474	0.461	2.7	99	0.00	9.41

Initial Calibration Verification

Job Number: JB82646 **Sample:** V4V541-ICV541
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4V13074.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

42		bromochloromethane	0.261	0.261	0.0	98	0.00	9.67
43		tetrahydrofuran	0.171	0.165	3.5	99	0.00	9.70
44		chloroform	0.857	0.821	4.2	101	0.00	9.75
45	S	dibromofluoromethane (s)	0.481	0.462	4.0	100	0.00	9.97
46	S	1,2-dichloroethane-d4 (s)	0.434	0.419	3.5	101	0.00	10.41
47		freon 113	0.396	0.386	2.5	97	0.00	6.53
48		methacrylonitrile	0.306	0.261	14.7	99	0.00	9.64
49		1,1,1-trichloroethane	0.769	0.788	-2.5	102	0.00	9.98
50		tert-amyl methyl ether	1.580	1.426	9.7	95	0.00	10.49
51	I	1,4-difluorobenzene	1.000	1.000	0.0	103	0.00	10.87
52		epichlorohydrin	0.036	0.032	11.1	91	0.00	12.19
53		n-butyl alcohol	0.012	0.012	0.0	97	0.00	11.06
54	M	cyclohexane	0.566	0.569	-0.5	101	0.00	10.02
55		carbon tetrachloride	0.611	0.634	-3.8	104	0.00	10.18
56		1,1-dichloropropene	0.462	0.483	-4.5	105	0.00	10.17
57		hexane	0.386	0.354	8.3	97	0.00	8.14
58	M	benzene	1.355	1.345	0.7	100	0.00	10.45
59	m	isooctane	1.319	1.312	0.5	103	0.00	10.42
60		heptane	0.193	0.184	4.7	103	0.00	10.62
61		isopropyl acetate	0.933	0.954	-2.3	106	0.00	10.41
62		1,2-dichloroethane	0.416	0.429	-3.1	98	0.00	10.51
63		trichloroethene	0.334	0.342	-2.4	102	0.00	11.20
64		ethyl acrylate		----------NA----------				
65		2-nitropropane	0.634	0.597	5.8	99	0.00	12.05
66		2-chloroethyl vinyl ether	0.156	0.154	1.3	98	0.00	12.05
67		methyl methacrylate	0.212	0.221	-4.2	102	0.00	11.51
68		1,2-dichloropropane	0.327	0.339	-3.7	101	0.00	11.50
69		methylcyclohexane	0.580	0.608	-4.8	108	0.00	11.40
70		dibromomethane	0.231	0.236	-2.2	100	0.00	11.67
71		bromodichloromethane	0.459	0.458	0.2	98	0.00	11.80
72		cis-1,3-dichloropropene	0.518	0.534	-3.1	103	0.00	12.26
73	S	toluene-d8 (s)	1.095	1.058	3.4	103	0.00	12.53
74		4-methyl-2-pentanone	0.139	0.146	-5.0	101	0.00	12.37
75		toluene	0.702	0.709	-1.0	102	0.00	12.60
76		3-methyl-1-butanol	0.012	0.011	8.3	96	0.00	12.41
77		trans-1,3-dichloropropene	0.492	0.479	2.6	100	0.00	12.84
78		ethyl methacrylate	0.389	0.394	-1.3	99	0.00	12.82
79		1,1,2-trichloroethane	0.247	0.253	-2.4	99	0.00	13.05
80		2-hexanone	0.130	0.130	0.0	99	0.00	13.23
81	I	chlorobenzene-d5	1.000	1.000	0.0	103	0.00	14.08
82		tetrachloroethene	0.380	0.396	-4.2	105	0.00	13.18
83		1,3-dichloropropane	0.524	0.525	-0.2	100	0.00	13.24
84		butyl acetate	0.252	0.248	1.6	99	0.00	13.30
85		dibromochloromethane	0.458	0.471	-2.8	101	0.00	13.50
86		1,2-dibromoethane	0.403	0.400	0.7	100	0.00	13.65
87		chlorobenzene	0.999	0.992	0.7	101	0.00	14.11
88		1,1,1,2-tetrachloroethane	0.447	0.462	-3.4	101	0.00	14.18
89		ethylbenzene	1.733	1.683	2.9	101	0.00	14.16
90		m,p-xylene	0.640	0.634	0.9	102	0.00	14.27
91		o-xylene	0.666	0.671	-0.8	100	0.00	14.71
92		styrene	1.075	1.083	-0.7	100	0.00	14.72
93		bromoform	0.356	0.361	-1.4	98	0.00	15.01
94	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	102	0.00	16.43
95		isopropylbenzene	3.094	3.163	-2.2	103	0.00	15.05
96	S	4-bromofluorobenzene (s)	0.898	0.874	2.7	99	0.00	15.27
97		bromobenzene	0.820	0.829	-1.1	100	0.00	15.47

Initial Calibration Verification

Job Number: JB82646 **Sample:** V4V541-ICV541
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4V13074.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

		True	Calc.	% Drift			
98	cyclohexanone	500.000	991.365	-98.3#	150	0.00	15.26

		AvgRF	CCRF	% Dev			
99	1,1,2,2-tetrachloroethane	1.044	0.983	5.8	95	0.00	15.40
100	trans-1,4-dichloro-2-bute	0.233	0.244	-4.7	101	0.00	15.44
101	1,2,3-trichloropropane	0.222	0.220	0.9	95	0.00	15.48
102	n-propylbenzene	3.581	3.750	-4.7	107	0.00	15.47
103	2-chlorotoluene	0.759	0.757	0.3	102	0.00	15.62
104	4-chlorotoluene	2.304	2.175	5.6	98	0.00	15.72
105	1,3,5-trimethylbenzene	2.689	2.703	-0.5	103	0.00	15.62
106	tert-butylbenzene	2.149	2.264	-5.4	105	0.00	15.96
107	pentachloroethane	0.610	0.628	-3.0	99	0.00	16.06
108	1,2,4-trimethylbenzene	2.697	2.781	-3.1	105	0.00	16.01
109	sec-butylbenzene	3.634	3.717	-2.3	106	0.00	16.17
110	1,3-dichlorobenzene	1.638	1.577	3.7	99	0.00	16.37
111	p-isopropyltoluene	3.006	3.072	-2.2	106	0.00	16.29
112	1,4-dichlorobenzene	1.680	1.592	5.2	98	0.00	16.45
113	indane		----------NA----------				
114	1,2-dichlorobenzene	1.689	1.663	1.5	100	0.00	16.83
115	n-butylbenzene	1.599	1.652	-3.3	107	0.00	16.69
116	1,2-dibromo-3-chloropropa	0.236	0.223	5.5	102	0.00	17.58
117	1,3,5-trichlorobenzene	1.554	1.506	3.1	101	0.00	17.73
118	1,2,4-trichlorobenzene	1.480	1.477	0.2	103	0.00	18.30
119	hexachlorobutadiene	0.630	0.649	-3.0	112	0.00	18.39
120	naphthalene	3.817	3.767	1.3	99	0.00	18.55
121	1,2,3-trichlorobenzene	1.450	1.439	0.8	101	0.00	18.76
122	hexachloroethane	0.686	0.707	-3.1	104	0.00	17.07
123	Benzyl chloride	1.820	1.974	-8.5	110	0.00	16.58

(#) = Out of Range SPCC's out = 0 CCC's out = 0
4V13069.D M4V541.M Fri Nov 14 17:46:26 2014 RPT1

Continuing Calibration Summary

Job Number: JB82646 **Sample:** V4V558-CC541
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4V13516A.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\4V13516a.D Vial: 2
Acq On : 29 Nov 2014 9:43 am Operator: BenM
Sample : cc541-20 Inst : GCMS4V
Misc : MS77390,V4V558,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4V541.M (RTE Integrator)
Title : sw846 8260b
Last Update : Fri Nov 14 17:30:26 2014
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	113	0.00	7.43
2		1,4-dioxane	0.071	0.072	-1.4	115	0.00	11.62
3	M	tertiary butyl alcohol	0.980	1.113	-13.6	127	-0.01	7.55
4	I	pentafluorobenzene	1.000	1.000	0.0	104	-0.01	9.90
5		Freon 143a		----------NA----------				
6		chlorodifluoromethane	0.566	0.645	-14.0	122	0.00	3.65
7		dichlorodifluoromethane	0.665	0.750	-12.8	121	0.00	3.63
8		freon 142b		----------NA----------				
9		chloromethane	0.768	0.803	-4.6	120	0.00	3.96
10		vinyl chloride	0.729	0.734	-0.7	112	0.00	4.24
11		bromomethane	0.480	0.476	0.8	104	0.00	4.92
12		chloroethane	0.295	0.292	1.0	102	-0.01	5.10
13		trichlorofluoromethane	0.797	0.801	-0.5	111	-0.02	5.63
14		ethyl ether	0.211	0.230	-9.0	112	-0.02	6.08
15		freon 141b		----------NA----------				
16		2-chloropropane	0.785	0.939	-19.6	128	0.00	6.31
17		acrolein	0.098	0.109	-11.2	121	-0.01	6.41
18		1,1-dichloroethene	0.793	0.899	-13.4	123	0.00	6.56
19		acetone	0.043	0.072	-67.4#	173	0.00	6.68
20		allyl chloride	0.212	0.242	-14.2	123	-0.01	7.18
21		acetonitrile	0.047	0.061	-29.8#	131	0.00	7.21
22		iodomethane	1.055	1.057	-0.2	104	-0.02	6.87
23		iso-butyl alcohol	0.021	0.025	-19.0	130	0.00	10.27
24		carbon disulfide	1.980	2.085	-5.3	117	-0.02	6.98
25		methylene chloride	0.566	0.599	-5.8	114	-0.02	7.41
26		1-chloropropane	0.224	0.249	-11.2	124	0.00	7.43
27		methyl acetate	0.076	0.083	-9.2	110	0.00	7.19
28		methyl tert butyl ether	1.544	1.732	-12.2	119	0.00	7.77
29		trans-1,2-dichloroethene	0.673	0.773	-14.9	120	-0.02	7.82
30		di-isopropyl ether	1.564	1.864	-19.2	130	-0.01	8.45
31		ethyl tert-butyl ether	1.518	1.800	-18.6	125	-0.01	8.98
32		2-butanone	0.046	0.064	-39.1#	149	0.00	9.32
33	M	1,1-dichloroethane	0.846	0.958	-13.2	121	-0.02	8.49
34		chloroprene	0.522	0.598	-14.6	125	-0.01	8.59
35		acrylonitrile	0.174	0.209	-20.1#	122	-0.01	7.84
36		vinyl acetate	0.055	0.062	-12.7	118	0.00	8.49
37		ethyl acetate	0.060	0.070	-16.7	120	-0.02	9.32
38		2,2-dichloropropane	0.783	0.914	-16.7	129	-0.01	9.31
39		cis-1,2-dichloroethene	0.818	0.948	-15.9	123	-0.01	9.32
40		propionitrile	0.065	0.080	-23.1#	123	-0.01	9.45
41		methyl acrylate	0.474	0.541	-14.1	123	-0.01	9.41

Continuing Calibration Summary

Job Number: JB82646 **Sample:** V4V558-CC541
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4V13516A.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

42		bromochloromethane	0.261	0.273	-4.6	110	-0.01	9.67
43		tetrahydrofuran	0.171	0.208	-21.6#	128	-0.01	9.69
44		chloroform	0.857	0.919	-7.2	120	-0.01	9.74
45	S	dibromofluoromethane (s)	0.481	0.486	-1.0	113	-0.01	9.96
46	S	1,2-dichloroethane-d4 (s)	0.434	0.485	-11.8	126	-0.01	10.40
47		freon 113	0.396	0.427	-7.8	115	-0.01	6.52
48		methacrylonitrile	0.306	0.321	-4.9	129	-0.01	9.63
49		1,1,1-trichloroethane	0.769	0.888	-15.5	125	0.00	9.97
50		tert-amyl methyl ether	1.580	1.728	-9.4	121	-0.01	10.49
51	I	1,4-difluorobenzene	1.000	1.000	0.0	107	-0.01	10.86
52		epichlorohydrin	0.036	0.043	-19.4	126	0.00	12.18
53		n-butyl alcohol	0.012	0.015	-25.0#	124	0.00	11.05
54	M	cyclohexane	0.566	0.625	-10.4	121	-0.01	10.02
55		carbon tetrachloride	0.611	0.682	-11.6	123	-0.01	10.18
56		1,1-dichloropropene	0.462	0.489	-5.8	120	0.00	10.16
57		hexane	0.386	0.435	-12.7	132	-0.01	8.13
58	M	benzene	1.355	1.421	-4.9	119	-0.01	10.44
59	m	isooctane	1.319	1.516	-14.9	128	-0.01	10.42
60		heptane	0.193	0.230	-19.2	135	-0.01	10.61
61		isopropyl acetate	0.933	1.125	-20.6#	136	-0.01	10.41
62		1,2-dichloroethane	0.416	0.509	-22.4#	129	-0.01	10.50
63		trichloroethene	0.334	0.360	-7.8	117	0.00	11.20
64		ethyl acrylate		----------NA----------				
65		2-nitropropane	0.634	0.973	-53.5#	170	-0.01	12.04
66		2-chloroethyl vinyl ether	0.156	0.248	-59.0#	167	-0.01	12.04
67		methyl methacrylate	0.212	0.235	-10.8	114	0.00	11.51
68		1,2-dichloropropane	0.327	0.374	-14.4	123	-0.01	11.49
69		methylcyclohexane	0.580	0.636	-9.7	124	-0.01	11.39
70		dibromomethane	0.231	0.260	-12.6	119	-0.01	11.65
71		bromodichloromethane	0.459	0.521	-13.5	123	0.00	11.80
72		cis-1,3-dichloropropene	0.518	0.584	-12.7	122	-0.01	12.25
73	S	toluene-d8 (s)	1.095	1.083	1.1	113	0.00	12.52
74		4-methyl-2-pentanone	0.139	0.172	-23.7#	123	0.00	12.36
75		toluene	0.702	0.745	-6.1	116	-0.01	12.59
76		3-methyl-1-butanol	0.012	0.013	-8.3	119	0.00	12.40
77		trans-1,3-dichloropropene	0.492	0.564	-14.6	125	-0.01	12.83
78		ethyl methacrylate	0.389	0.444	-14.1	119	0.00	12.81
79		1,1,2-trichloroethane	0.247	0.286	-15.8	123	0.00	13.05
80		2-hexanone	0.130	0.175	-34.6#	139	0.00	13.23
81	I	chlorobenzene-d5	1.000	1.000	0.0	104	0.00	14.07
82		tetrachloroethene	0.380	0.386	-1.6	112	0.00	13.18
83		1,3-dichloropropane	0.524	0.596	-13.7	121	-0.01	13.23
84		butyl acetate	0.252	0.312	-23.8#	130	0.00	13.29
85		dibromochloromethane	0.458	0.499	-9.0	116	-0.01	13.49
86		1,2-dibromoethane	0.403	0.440	-9.2	116	-0.01	13.64
87		chlorobenzene	0.999	1.044	-4.5	115	0.00	14.10
88		1,1,1,2-tetrachloroethane	0.447	0.492	-10.1	120	-0.01	14.17
89		ethylbenzene	1.733	1.835	-5.9	117	0.00	14.16
90		m,p-xylene	0.640	0.653	-2.0	111	0.00	14.27
91		o-xylene	0.666	0.718	-7.8	116	0.00	14.70
92		styrene	1.075	1.138	-5.9	115	0.00	14.72
93		bromoform	0.356	0.378	-6.2	113	-0.01	15.00
94	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	102	0.00	16.43
95		isopropylbenzene	3.094	3.382	-9.3	117	0.00	15.05
96	S	4-bromofluorobenzene (s)	0.898	0.927	-3.2	110	0.00	15.27
97		bromobenzene	0.820	0.873	-6.5	109	0.00	15.46
98		cyclohexanone	0.058	0.183	-215.5#	301#	0.00	15.26

Continuing Calibration Summary

Job Number: JB82646 **Sample:** V4V558-CC541
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4V13516A.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

99	1,1,2,2-tetrachloroethane	1.044	1.210	-15.9	118	0.00	15.40
100	trans-1,4-dichloro-2-bute	0.233	0.312	-33.9#	135	0.00	15.44
101	1,2,3-trichloropropane	0.222	0.266	-19.8	117	0.00	15.47
102	n-propylbenzene	3.581	4.063	-13.5	119	0.00	15.46
103	2-chlorotoluene	0.759	0.820	-8.0	112	0.00	15.61
104	4-chlorotoluene	2.304	2.540	-10.2	119	0.00	15.71
105	1,3,5-trimethylbenzene	2.689	2.918	-8.5	114	0.00	15.61
106	tert-butylbenzene	2.149	2.274	-5.8	114	0.00	15.96
107	pentachloroethane	0.610	0.638	-4.6	111	0.00	16.06
108	1,2,4-trimethylbenzene	2.697	2.964	-9.9	114	0.00	16.01
109	sec-butylbenzene	3.634	3.903	-7.4	115	0.00	16.17
110	1,3-dichlorobenzene	1.638	1.712	-4.5	112	0.00	16.37
111	p-isopropyltoluene	3.006	3.221	-7.2	114	0.00	16.28
112	1,4-dichlorobenzene	1.680	1.745	-3.9	112	0.00	16.45
113	indane		----------NA----------				
114	1,2-dichlorobenzene	1.689	1.799	-6.5	113	0.00	16.83
115	n-butylbenzene	1.599	1.787	-11.8	117	0.00	16.69
116	1,2-dibromo-3-chloropropa	0.236	0.276	-16.9	123	0.00	17.58
117	1,3,5-trichlorobenzene	1.554	1.590	-2.3	109	0.00	17.72
118	1,2,4-trichlorobenzene	1.480	1.499	-1.3	109	0.00	18.30
119	hexachlorobutadiene	0.630	0.642	-1.9	110	0.00	18.38
120	naphthalene	3.817	4.015	-5.2	108	0.00	18.55
121	1,2,3-trichlorobenzene	1.450	1.477	-1.9	106	0.00	18.76
122	hexachloroethane	0.686	0.716	-4.4	117	0.00	17.06
123	Benzyl chloride	1.820	2.356	-29.5#	132	0.00	16.57

(#) = Out of Range SPCC's out = 0 CCC's out = 0
4V13068.D M4V541.M Mon Dec 01 11:16:27 2014 RPT1

Initial Calibration Summary

Job Number: JB82646 **Sample:** VU8763-ICC8763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** U189934.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Response Factor Report MSU

Method : C:\MSDCHEM\1\METHODS\MU8763.M (RTE Integrator)
Title : SW-846 8260B, ZB624 60m x 250um x 1.40um
Last Update : Thu Nov 20 10:49:23 2014
Response via : Initial Calibration

Calibration Files
5 =u189931.D 2 =u189930.D 20 =u189933.D 50 =u189934.D
100 =u189935.D 1 =u189929.D 200 =u189936.D 10 =u189932.D
0.5 =u189928.D 0.2 =u189927.D = =

Compound	5	2	20	50	100	1	200	10	0.5	0.2	Avg	%RSD
1) I Tert Butyl Alcohol-d9	----------ISTD----------											
2) tertiary butyl alcohol	1.095	1.135	1.144	1.102	1.089		1.023	1.084			1.096	3.61
3) Ethanol	0.102	0.101	0.115	0.114	0.107	0.099	0.088	0.112			0.105	8.68
4) 1,4-dioxane	0.094	0.096	0.103	0.096	0.095		0.087	0.093			0.095	4.72
5) I pentafluorobenzene	----------ISTD----------											
6) freon 115											0.000	-1.00
7) freon 23											0.000	-1.00
8) freon 143A											0.000	-1.00
9) freon 152A											0.000	-1.00
10) chlorotrifluoroethene											0.000	-1.00
11) chlorodifluoromethane ***Compound failed for this calibration.	0.315	0.287	0.363	0.340	0.338	0.300	0.336	0.314	0.263		0.317	9.69
12) dichlorodifluoromethane	0.359	0.278	0.411	0.430	0.397		0.406	0.303			0.369	15.75
----- Linear regression ----- Coefficient = 0.9994												
Response Ratio = -0.00409 + 0.40701 *A												
13) freon 142B											0.000	-1.00
14) freon 114											0.000	-1.00
15) chloromethane	0.514	0.464	0.559	0.567	0.550	0.549	0.534	0.454			0.524	8.24
16) vinyl chloride	0.425	0.388	0.484	0.502	0.485	0.450	0.480	0.382			0.450	10.30
17) acetaldehyde											0.000	-1.00
18) bromomethane	0.270	0.241	0.290	0.284	0.267	0.295	0.219	0.241			0.263	10.28
19) chloroethane	0.222	0.188	0.238	0.238	0.228	0.213	0.215	0.194	0.238		0.219	8.63
20) trichlorofluoromethane	0.430	0.338	0.474	0.484	0.447	0.371	0.453	0.360	0.421		0.420	12.38
21) pentane												

Initial Calibration Summary

Job Number: JB82646 **Sample:** VU8763-ICC8763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** U189934.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

											0.000	-1.00
22)	freon 123A											
											0.000	-1.00
23)	ethyl ether											
	0.193	0.192	0.198	0.197	0.197	0.154	0.192	0.173			0.187	8.26
24)	2-CHLOROPROPANE											
	0.684	0.699	0.695	0.669	0.664	0.704	0.650	0.589	0.619	0.661	0.663	5.52
25)	freon 141B											
											0.000	-1.00
26)	freon 123											
											0.000	-1.00
27)	acrolein											
	0.068	0.063	0.063	0.063		0.063		0.056			0.063	6.09
28)	1,1-dichloroethene											
	0.321	0.327	0.317	0.316	0.310	0.321	0.307	0.266	0.274		0.307	7.03
29)	acetone											
	0.029		0.030	0.028	0.028		0.025	0.027			0.028	6.20
30)	allyl chloride											
	0.062	0.059	0.060	0.061	0.061		0.059	0.056			0.060	3.00
31)	acetonitrile											
	0.031	0.034	0.030	0.029	0.028		0.027	0.029			0.030	7.63
32)	iodomethane											
	0.562	0.537	0.571	0.574	0.577	0.501	0.572	0.483			0.547	6.71
33)	carbon disulfide											
	1.166	1.148	1.163	1.155	1.142	1.117	1.128	0.976	1.066		1.118	5.48
34)	1-CHLOROPROPANE											
	0.034		0.032	0.032	0.031		0.030	0.027			0.031	8.05
35)	methylene chloride											
	0.375	0.366	0.374	0.370	0.371	0.365	0.361	0.324	0.321	0.380	0.361	5.78
36)	methyl acetate											
	0.265	0.264	0.273	0.274	0.265	0.243	0.259	0.262	0.266		0.263	3.51
37)	methyl tert butyl ether											
	0.974	0.942	0.962	0.964	0.962	0.914	0.928	0.848	0.901	0.983	0.938	4.38
38)	trans-1,2-dichloroethene											
	0.373	0.386	0.364	0.355	0.355	0.391	0.348	0.311	0.414	0.378	0.368	7.63
39)	di-isopropyl ether											
	1.313	1.274	1.378	1.351	1.330	1.294	1.308	1.288	1.161	1.533	1.323	7.08
40)	ethyl tert-butyl ether											
	1.109	1.096	1.173	1.174	1.167	1.092	1.153	1.107	1.025	1.145	1.124	4.20
41)	2-butanone											
	0.033		0.038	0.035	0.035		0.034	0.032			0.035	5.36
42)	1,1-dichloroethane											
	0.708	0.673	0.698	0.678	0.669	0.644	0.652	0.601	0.599	0.594	0.652	6.38
43)	chloroprene											
	0.465	0.428	0.501	0.494	0.490	0.440	0.489	0.454			0.470	5.79
44)	acrylonitrile											
	0.121	0.119	0.122	0.119	0.119	0.106	0.113	0.107			0.116	5.44
45)	vinyl acetate											
	0.051		0.055	0.056	0.055		0.055	0.054			0.054	3.00
46)	ethyl acetate											
	0.043		0.049	0.047	0.046		0.045	0.045			0.046	4.49
47)	2,2-dichloropropane											
	0.509	0.510	0.509	0.495	0.485	0.507	0.468	0.438	0.484	0.532	0.494	5.39
48)	cis-1,2-dichloroethene											
	0.408	0.405	0.408	0.393	0.391	0.393	0.385	0.344	0.416	0.490	0.403	9.01
49)	methyl acrylate											
	0.044		0.047	0.046	0.047		0.045	0.042			0.045	4.45
50)	propionitrile											
	0.048	0.043	0.047	0.045	0.044	0.039	0.042	0.041	0.037	0.038	0.042	8.67
51)	bromochloromethane											

	0.183	0.178	0.185	0.182	0.183	0.145	0.181	0.158			0.174	8.38
52)	tetrahydrofuran											
	0.124	0.119	0.120	0.116	0.115	0.120	0.109	0.107			0.116	4.90
53)	chloroform											
	0.624	0.616	0.627	0.612	0.606	0.601	0.593	0.538	0.597	0.665	0.608	5.27
54)	tert-butyl Formate											
	0.262	0.267	0.285	0.294	0.296	0.243	0.294	0.264			0.276	6.94
55)	iso-butyl alcohol											
	0.015	0.015	0.016	0.015	0.014	0.013	0.014	0.015			0.015	5.51
56)	dibromofluoromethane (s)											
	0.273		0.300	0.305	0.307		0.304	0.280			0.295	5.02
57)	1,2-dichloroethane-d4 (s)											
	0.311		0.328	0.335	0.332		0.322	0.321			0.325	2.67
58)	freon 113											
	0.223		0.248	0.258	0.242		0.243	0.211			0.238	7.22
59)	methacrylonitrile											
	0.223	0.213	0.216	0.211	0.210	0.202	0.202	0.193			0.209	4.52
60)	1,1,1-trichloroethane											
	0.498	0.483	0.511	0.507	0.501	0.479	0.492	0.426	0.430	0.496	0.482	6.29
61)	tert amyl alcohol											
											0.000	-1.00
62)	tert-amyl methyl ether											
	0.224	0.217	0.237	0.236	0.237	0.194	0.233	0.217			0.225	6.68
63)	iso-octane											
	1.275	1.053	1.399	1.410	1.297	0.993	1.261	1.229	1.087	1.321	1.233	11.61
64)	I 1,4-difluorobenzene	----------ISTD----------										
65)	Di-isobutylene											
											0.000	-1.00
66)	epichlorohydrin											
	0.025	0.025	0.027	0.026	0.026	0.023	0.026	0.025			0.025	5.14
67)	n-butyl alcohol											
	0.008	0.008	0.008	0.008	0.008	0.006	0.007	0.008			0.008	7.03
68)	Cyclohexane											
	0.446	0.422	0.472	0.473	0.441	0.357	0.432	0.377			0.428	9.77
69)	carbon tetrachloride											
	0.380	0.374	0.400	0.394	0.385	0.333	0.378	0.333			0.372	6.96
70)	1,1-dichloropropene											
	0.443	0.443	0.457	0.446	0.436	0.417	0.426	0.377	0.388	0.420	0.425	6.10
71)	hexane											
	0.430		0.463	0.467	0.421		0.417	0.412			0.435	5.50
72)	benzene											
	1.381	1.373	1.392	1.345	1.330	1.308	1.278	1.184	1.182	1.437	1.321	6.45
73)	heptane											
	0.239		0.263	0.264	0.242		0.239	0.231			0.246	5.66
74)	isopropyl acetate											
	0.582	0.580	0.594	0.576	0.575	0.542	0.565	0.556	0.513		0.565	4.38
75)	1,2-dichloroethane											
	0.390	0.371	0.384	0.379	0.376	0.342	0.364	0.334	0.314	0.302	0.356	8.66
76)	ethyl acrylate											
											0.000	-1.00
77)	tert amyl ethyl ether											
											0.000	-1.00
78)	trichloroethene											
	0.329	0.334	0.330	0.327	0.325	0.313	0.320	0.280	0.257	0.261	0.307	9.69
79)	methylcyclohexane											
	0.464	0.405	0.528	0.534	0.495		0.495	0.461			0.483	9.17
80)	2-nitropropane											
	0.108	0.108	0.109	0.106	0.105	0.100	0.101	0.098			0.104	4.04
81)	2-chloroethyl vinyl ether											

Initial Calibration Summary

Job Number: JB82646 **Sample:** VU8763-ICC8763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** U189934.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	0.187	0.186	0.203	0.200	0.197	0.180	0.189	0.189	0.168	0.198	0.190	5.49
82)	methyl methacrylate											
	0.070	0.058	0.072	0.075	0.074		0.074	0.061			0.069	9.81
83)	1,2-dichloropropane											
	0.371	0.358	0.367	0.357	0.354	0.334	0.344	0.315	0.305		0.345	6.59
84)	propyl acetate											
	0.055	0.057	0.054	0.053	0.051	0.057	0.050	0.052			0.054	4.87
85)	dibromomethane											
	0.178	0.173	0.178	0.178	0.179	0.151	0.174	0.155			0.171	6.58
86)	bromodichloromethane											
	0.420	0.411	0.427	0.429	0.429	0.379	0.425	0.362	0.323	0.353	0.396	9.79
87)	cis-1,3-dichloropropene											
	0.566	0.546	0.571	0.563	0.564	0.506	0.555	0.492	0.478	0.488	0.533	6.98
88)	toluene-d8 (s)											
	1.014		1.113	1.134	1.121		1.111	1.029			1.087	4.76
89)	4-methyl-2-pentanone											
	0.114	0.109	0.117	0.113	0.112		0.107	0.100			0.111	5.04
90)	toluene											
	0.848	0.846	0.845	0.837	0.837	0.781	0.822	0.723	0.705		0.805	6.92
91)	3-methyl-1-butanol											
	0.012	0.012	0.014	0.014	0.013	0.010	0.012	0.012			0.012	9.31
92)	trans-1,3-dichloropropene											
	0.497	0.475	0.497	0.494	0.494	0.431	0.480	0.428	0.409	0.457	0.466	7.08
93)	ethyl methacrylate											
	0.379	0.351	0.391	0.391	0.393	0.329	0.381	0.338			0.369	7.02
94)	1,1,2-trichloroethane											
	0.232	0.226	0.238	0.236	0.237	0.209	0.232	0.210			0.227	5.13
95)	2-hexanone											
	0.114	0.097	0.115	0.110	0.108		0.103	0.100			0.107	6.69
96)	I chlorobenzene-d5	----------ISTD----------										
97)	cyclohexanone ***Compound failed for this calibration.											
	0.028	0.028	0.030	0.026	0.027	0.028	0.021	0.024			0.027	10.39
98)	tetrachloroethene											
	0.320	0.312	0.325	0.315	0.319	0.304	0.315	0.274	0.248		0.304	8.46
99)	1,3-dichloropropane											
	0.522	0.505	0.514	0.505	0.504	0.473	0.488	0.458	0.427	0.485	0.488	5.92
100)	butyl acetate											
	0.211	0.216	0.228	0.221	0.215	0.203	0.211	0.218			0.215	3.45
101)	dibromochloromethane											
	0.338	0.325	0.353	0.353	0.357	0.288	0.354	0.301			0.334	7.97
102)	1,2-dibromoethane											
	0.288	0.278	0.293	0.288	0.291	0.241	0.285	0.253			0.277	7.04
103)	3,3-dimethyl-1-Butanol											
	0.029	0.029	0.033	0.034	0.031	0.026	0.029	0.030			0.030	8.58
104)	n-butyl ether											
	1.780	1.729	1.806	1.766	1.752	1.616	1.685	1.543	1.452	1.671	1.680	6.75
105)	chlorobenzene											
	1.023	1.007	1.010	0.993	0.995	0.944	0.976	0.871	0.876	1.003	0.970	5.68
106)	1,1,1,2-tetrachloroethane											
	0.357	0.348	0.360	0.362	0.362	0.341	0.357	0.310	0.292		0.343	7.40
107)	ethylbenzene											
	1.771	1.736	1.781	1.728	1.724	1.667	1.683	1.506	1.460	1.829	1.688	7.01
108)	m,p-xylene											
	0.679	0.652	0.678	0.664	0.664	0.624	0.638	0.585	0.558	0.649	0.639	6.24
109)	o-xylene											
	0.667	0.652	0.670	0.662	0.659	0.628	0.637	0.575	0.529	0.613	0.629	7.30
110)	styrene											
	1.092	1.053	1.137	1.140	1.145	0.991	1.108	0.962			1.078	6.53

Initial Calibration Summary

Job Number: JB82646 **Sample:** VU8763-ICC8763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** U189934.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

```
111)  bromoform
       0.240 0.219 0.245 0.251 0.257 0.198 0.254 0.208              0.234    9.68

112) I   1,4-dichlorobenzene-d ----------------ISTD--------------------
113)  isopropylbenzene
       3.137 3.013 3.090 3.056 3.026 2.910 2.969 2.647 2.700 3.141  2.969    5.77
114)  4-bromofluorobenzene (s)
       0.761       0.803 0.815 0.809       0.802 0.772              0.794    2.77
115)  bromobenzene
       0.834 0.811 0.827 0.822 0.823 0.747 0.810 0.713 0.682 0.773  0.784    6.81
116)  1,1,2,2-tetrachloroethane
       0.719 0.692 0.723 0.711 0.703 0.662 0.680 0.632 0.616 0.519  0.666    9.45
117)  trans-1,4-dichloro-2-butene
       0.224 0.195 0.212 0.213 0.209 0.175 0.202 0.184              0.202    8.06
118)  1,2,3-trichloropropane
       0.180 0.172 0.176 0.173 0.170 0.133 0.161 0.154              0.165    9.30
119)  n-propylbenzene
       3.697 3.577 3.637 3.586 3.524 3.377 3.382 3.093 3.155 3.838  3.487    6.75
120)  2-chlorotoluene
       0.779 0.733 0.766 0.744 0.745 0.717 0.727 0.646 0.649 0.616  0.712    7.81
121)  4-chlorotoluene
       2.316 2.303 2.276 2.267 2.246 2.174 2.191 1.982 2.029 2.506  2.229    6.67
122)  p-Ethyltoluene
                                                                    0.000   -1.00
123)  1,3,5-trimethylbenzene
       2.626 2.529 2.603 2.570 2.548 2.391 2.471 2.208 2.145 2.537  2.463    6.71
124)  tert-butylbenzene
       2.310 2.190 2.266 2.216 2.212 2.107 2.167 1.916 1.994 2.186  2.156    5.59
125)  pentachloroethane
       0.472 0.438 0.471 0.479 0.481 0.409 0.484 0.408 0.364        0.445    9.63
126)  1,2,4-trimethylbenzene
       2.581 2.474 2.577 2.533 2.534 2.345 2.467 2.212 2.198 2.538  2.446    5.89
127)  1,2,3-trimethylbenzene
                                                                    0.000   -1.00
128)  sec-butylbenzene
       3.391 3.303 3.439 3.344 3.301 3.144 3.227 2.876 2.915 3.447  3.239    6.27
129)  1,3-dichlorobenzene
       1.610 1.556 1.609 1.576 1.592 1.476 1.561 1.385 1.377 1.551  1.529    5.69
130)  p-isopropyltoluene
       2.852 2.765 2.913 2.844 2.805 2.653 2.743 2.461 2.550 2.977  2.756    5.84
131)  1,4-dichlorobenzene
       1.644 1.578 1.611 1.586 1.599 1.513 1.576 1.396 1.367 1.726  1.560    6.97
132)  benzyl chloride
       1.283 1.314 1.339 1.330 1.303 1.285 1.278 1.260 1.361        1.306    2.51
133)  1,2-dichlorobenzene
       1.478 1.445 1.484 1.460 1.469 1.358 1.431 1.288 1.264 1.481  1.416    5.83
134)  p-Diethylbenzene
                                                                    0.000   -1.00
135)  n-butylbenzene
       1.453 1.391 1.475 1.444 1.425 1.328 1.381 1.253 1.266 1.496  1.391    6.09
136)  1,2,4,5-Tetramethylbenzene
                                                                    0.000   -1.00
137)  1,2-dibromo-3-chloropropane
       0.131 0.118 0.135 0.134 0.133       0.130 0.116              0.128    6.26
138)  1,3,5-trichlorobenzene
       1.298 1.243 1.299 1.276 1.293 1.179 1.276 1.114 1.168 1.338  1.248    5.73
139)  1,2,4-trichlorobenzene
       1.069 1.019 1.067 1.072 1.086 0.946 1.073 0.920 0.917 1.182  1.035    8.19
140)  hexachlorobutadiene
       0.652 0.606 0.653 0.634 0.631 0.581 0.627 0.549 0.561        0.610    6.34
```

Initial Calibration Summary

Job Number: JB82646 **Sample:** VU8763-ICC8763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** U189934.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

```
141)  naphthalene
       1.948 1.862 1.975 1.954 1.948 1.684 1.880 1.700 1.647        1.844    7.11
142)  INDANE
                                                                    0.000   -1.00
143)  1,2,3-trichlorobenzene
       0.883 0.850 0.887 0.890 0.905 0.829 0.874 0.757 0.753        0.848    6.75
144)  hexachloroethane
       0.504 0.469 0.521 0.514 0.523 0.403 0.518 0.434              0.486    9.35
145)  MMT
                                                                    0.000   -1.00
146)  Bis(chloromethyl)ether
                                                                    0.000   -1.00
147)  Ethylenimine
                                                                    0.000   -1.00
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          MU8763.M          Thu Nov 20 11:01:13 2014   U_CORE
```

Initial Calibration Verification

Job Number: JB82646 **Sample:** VU8763-ICV8763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** U189939.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\u189939.D Vial: 14
Acq On : 19 Nov 2014 4:43 pm Operator: shannont
Sample : icv8763-50 Inst : MSU
Misc : ms77056,vu8763,5.0,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MU8763.M (RTE Integrator)
Title : SW-846 8260B, ZB624 60m x 250um x 1.40um
Last Update : Thu Nov 20 10:49:23 2014
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	101	0.00	7.91
2	M	tertiary butyl alcohol	1.096	1.047	4.5	96	0.00	8.02
3		Ethanol	0.105	0.107	-1.9	95	0.00	6.66
4	m	1,4-dioxane	0.095	0.087	8.4	91	0.00	11.76
5	I	pentafluorobenzene	1.000	1.000	0.0	102	0.00	10.10
6	M	freon 115		----------NA----------				
7	M	freon 23		----------NA----------				
8	M	freon 143A		----------NA----------				
9	M	freon 152A		----------NA----------				
10	M	chlorotrifluoroethene		----------NA----------				
11	M	chlorodifluoromethane	0.317	0.250	21.1#	75	-0.01	4.40
		----------	True	Calc.	% Drift	----------		
12	M	dichlorodifluoromethane	50.000	48.241	3.5	93	0.00	4.38
		----------	AvgRF	CCRF	% Dev	----------		
13	M	freon 142B		----------NA----------				
14	M	freon 114		----------NA----------				
15	M	chloromethane	0.524	0.548	-4.6	99	0.00	4.75
16	M	vinyl chloride	0.450	0.476	-5.8	97	0.00	5.02
17	M	acetaldehyde		----------NA----------				
18	M	bromomethane	0.263	0.275	-4.6	99	0.00	5.71
19	M	chloroethane	0.219	0.230	-5.0	99	0.00	5.90
20	M	trichlorofluoromethane	0.420	0.455	-8.3	96	-0.02	6.35
21	M	pentane		----------NA----------				
22	M	freon 123A		----------NA----------				
23	M	ethyl ether	0.187	0.209	-11.8	109	0.00	6.77
24		2-CHLOROPROPANE	0.663	0.728	-9.8	111	0.00	7.00
25	M	freon 141B		----------NA----------				
26	M	freon 123		----------NA----------				
27	M	acrolein	0.063	0.063	0.0	101	0.00	7.07
28	M	1,1-dichloroethene	0.307	0.318	-3.6	103	0.00	7.22
29	M	acetone	0.028	0.029	-3.6	107	0.00	7.30
30	M	allyl chloride	0.060	0.068	-13.3	115	0.00	7.76
31	M	acetonitrile	0.030	0.028	6.7	98	0.00	7.76
32	M	iodomethane	0.547	0.591	-8.0	105	0.00	7.52
33	M	carbon disulfide	1.118	1.168	-4.5	103	0.00	7.64
34		1-CHLOROPROPANE	0.031	0.031	0.0	100	0.00	7.98
35	M	methylene chloride	0.361	0.375	-3.9	104	0.00	7.96
36	M	methyl acetate	0.263	0.223	15.2	83	0.00	7.73
37	M	methyl tert butyl ether	0.938	0.915	2.5	97	0.00	8.25

Initial Calibration Verification

Job Number: JB82646 **Sample:** VU8763-ICV8763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** U189939.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

38	M	trans-1,2-dichloroethene	0.368	0.352	4.3	102	0.00	8.31
39	M	di-isopropyl ether	1.323	1.241	6.2	94	0.00	8.82
40	M	ethyl tert-butyl ether	1.124	1.066	5.2	93	0.00	9.28
41	M	2-butanone	0.035	0.036	-2.9	104	0.00	9.58
42	M	1,1-dichloroethane	0.652	0.687	-5.4	104	0.00	8.89
43	M	chloroprene	0.470	0.490	-4.3	101	0.00	8.98
44	M	acrylonitrile	0.116	0.111	4.3	96	0.00	8.30
45	M	vinyl acetate	0.054	0.056	-3.7	103	0.00	8.85
46	M	ethyl acetate	0.046	0.044	4.3	97	0.00	9.57
47	M	2,2-dichloropropane	0.494	0.470	4.9	97	0.00	9.61
48	M	cis-1,2-dichloroethene	0.403	0.394	2.2	103	0.00	9.62
49	M	methyl acrylate	0.045	0.047	-4.4	104	0.00	9.66
50	M	propionitrile	0.042	0.045	-7.1	103	0.00	9.71
51	M	bromochloromethane	0.174	0.183	-5.2	103	0.00	9.93
52	M	tetrahydrofuran	0.116	0.117	-0.9	103	0.00	9.96
53	M	chloroform	0.608	0.615	-1.2	103	0.00	9.98
54		tert-butyl Formate	0.276	0.276	0.0	96	0.00	10.00
55	M	iso-butyl alcohol	0.015	0.013	13.3	89	0.00	10.40
56	S	dibromofluoromethane (s)	0.295	0.303	-2.7	102	0.00	10.18
57	S	1,2-dichloroethane-d4 (s)	0.325	0.330	-1.5	101	0.00	10.60
58	M	freon 113	0.238	0.210	11.8	83	0.00	7.18
59	M	methacrylonitrile	0.209	0.211	-1.0	103	0.00	9.88
60	M	1,1,1-trichloroethane	0.482	0.497	-3.1	101	0.00	10.22
61	M	tert amyl alcohol		----------NA----------				
62	M	tert-amyl methyl ether	0.225	0.218	3.1	94	0.00	10.67
63		iso-octane	1.233	1.096	11.1	80	0.00	10.62
64	I	1,4-difluorobenzene	1.000	1.000	0.0	102	0.00	11.02
65	M	Di-isobutylene		----------NA----------				
66	M	epichlorohydrin	0.025	0.023	8.0	89	0.00	12.32
67	M	n-butyl alcohol	0.008	0.008	0.0	95	0.00	11.14
68	M	Cyclohexane	0.428	0.445	-4.0	96	0.00	10.28
69	M	carbon tetrachloride	0.372	0.392	-5.4	102	0.00	10.41
70	M	1,1-dichloropropene	0.425	0.451	-6.1	103	0.00	10.39
71	M	hexane	0.435	0.441	-1.4	97	0.00	8.57
72	M	benzene	1.321	1.366	-3.4	104	0.00	10.66
73	M	heptane	0.246	0.204	17.1	79	0.00	10.78
74	M	isopropyl acetate	0.565	0.572	-1.2	102	0.00	10.55
75	M	1,2-dichloroethane	0.356	0.378	-6.2	102	0.00	10.69
76	M	ethyl acrylate		----------NA----------				
77		tert amyl ethyl ether		----------NA----------				
78	M	trichloroethene	0.307	0.323	-5.2	101	0.00	11.37
79	M	methylcyclohexane	0.483	0.473	2.1	91	0.00	11.57
80	M	2-nitropropane	0.104	0.104	0.0	101	0.00	12.18
81	M	2-chloroethyl vinyl ether	0.190	0.186	2.1	95	0.00	12.17
82	M	methyl methacrylate	0.069	0.078	-13.0	106	0.00	11.62
83	M	1,2-dichloropropane	0.345	0.362	-4.9	104	0.00	11.65
84	M	propyl acetate	0.054	0.051	5.6	98	0.00	11.65
85	M	dibromomethane	0.171	0.179	-4.7	103	0.00	11.82
86	M	bromodichloromethane	0.396	0.423	-6.8	101	0.00	11.94
87	M	cis-1,3-dichloropropene	0.533	0.561	-5.3	102	0.00	12.41
88	S	toluene-d8 (s)	1.087	1.126	-3.6	102	0.00	12.70
89	M	4-methyl-2-pentanone	0.111	0.116	-4.5	105	0.00	12.50
90	M	toluene	0.805	0.836	-3.9	102	0.00	12.78
91	M	3-methyl-1-butanol	0.012	0.013	-8.3	94	0.00	12.51
92	M	trans-1,3-dichloropropene	0.466	0.483	-3.6	100	0.00	13.00
93	M	ethyl methacrylate	0.369	0.397	-7.6	104	0.00	12.96
94	M	1,1,2-trichloroethane	0.227	0.236	-4.0	103	0.00	13.24
95	M	2-hexanone	0.107	0.112	-4.7	104	0.00	13.40

Initial Calibration Verification

Job Number: JB82646 **Sample:** VU8763-ICV8763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** U189939.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

96	I	chlorobenzene-d5	1.000	1.000	0.0	101	0.00	14.35
97	M	cyclohexanone	0.027	0.019	29.6#	76	0.00	15.61
98	M	tetrachloroethene	0.304	0.324	-6.6	104	0.00	13.40
99	M	1,3-dichloropropane	0.488	0.514	-5.3	103	0.00	13.43
100	M	butyl acetate	0.215	0.211	1.9	97	0.00	13.46
101	M	dibromochloromethane	0.334	0.352	-5.4	101	0.00	13.72
102	M	1,2-dibromoethane	0.277	0.292	-5.4	103	0.00	13.89
103		3,3-dimethyl-1-Butanol	0.030	0.032	-6.7	96	0.00	13.58
104		n-butyl ether	1.680	1.625	3.3	93	0.00	14.23
105	M	chlorobenzene	0.970	1.005	-3.6	103	0.00	14.38
106	M	1,1,1,2-tetrachloroethane	0.343	0.356	-3.8	100	0.00	14.44
107	M	ethylbenzene	1.688	1.718	-1.8	101	0.00	14.42
108	M	m,p-xylene	0.639	0.666	-4.2	102	0.00	14.53
109	M	o-xylene	0.629	0.657	-4.5	101	0.00	15.01
110	M	styrene	1.078	1.148	-6.5	102	0.00	15.02
111	M	bromoform	0.234	0.250	-6.8	101	0.00	15.34
112	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	103	0.00	16.92
113	M	isopropylbenzene	2.969	2.962	0.2	99	0.00	15.38
114	S	4-bromofluorobenzene (s)	0.794	0.812	-2.3	102	0.00	15.62
115	M	bromobenzene	0.784	0.823	-5.0	103	0.00	15.85
116	M	1,1,2,2-tetrachloroethane	0.666	0.678	-1.8	98	0.00	15.74
117	M	trans-1,4-dichloro-2-bute	0.202	0.204	-1.0	98	0.00	15.78
118	M	1,2,3-trichloropropane	0.165	0.169	-2.4	100	0.00	15.83
119	M	n-propylbenzene	3.487	3.674	-5.4	105	0.00	15.83
120	M	2-chlorotoluene	0.712	0.739	-3.8	102	0.00	16.01
121	M	4-chlorotoluene	2.229	2.212	0.8	100	0.00	16.12
122		p-Ethyltoluene		----------NA----------				
123	M	1,3,5-trimethylbenzene	2.463	2.519	-2.3	101	0.00	15.99
124	M	tert-butylbenzene	2.156	2.198	-1.9	102	0.00	16.39
125	M	pentachloroethane	0.445	0.470	-5.6	101	0.00	16.50
126	M	1,2,4-trimethylbenzene	2.446	2.633	-7.6	107	0.00	16.44
127		1,2,3-trimethylbenzene		----------NA----------				
128	M	sec-butylbenzene	3.239	3.278	-1.2	101	0.00	16.63
129	M	1,3-dichlorobenzene	1.529	1.547	-1.2	101	0.00	16.86
130	M	p-isopropyltoluene	2.756	2.855	-3.6	103	0.00	16.75
131	M	1,4-dichlorobenzene	1.560	1.588	-1.8	103	0.00	16.95
132	M	benzyl chloride	1.306	1.229	5.9	95	0.00	17.08
133	M	1,2-dichlorobenzene	1.416	1.459	-3.0	103	0.00	17.39
134		p-Diethylbenzene		----------NA----------				
135	M	n-butylbenzene	1.391	1.454	-4.5	103	0.00	17.21
136		1,2,4,5-Tetramethylbenzen		----------NA----------				
137	M	1,2-dibromo-3-chloropropa	0.128	0.136	-6.3	104	0.00	18.26
138		1,3,5-trichlorobenzene	1.248	1.263	-1.2	102	0.00	18.43
139	M	1,2,4-trichlorobenzene	1.035	1.080	-4.3	103	0.00	19.18
140	M	hexachlorobutadiene	0.610	0.637	-4.4	103	0.00	19.28
141	M	naphthalene	1.844	1.948	-5.6	102	0.00	19.51
142		INDANE		----------NA----------				
143	M	1,2,3-trichlorobenzene	0.848	0.892	-5.2	103	0.00	19.78
144	M	hexachloroethane	0.486	0.525	-8.0	105	0.00	17.67
145	M	MMT		----------NA----------				
146	M	Bis(chloromethyl)ether		----------NA----------				
147	M	Ethylenimine		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
u189934.D MU8763.M Thu Nov 20 11:01:27 2014 U_CORE

Continuing Calibration Summary

Job Number: JB82646 **Sample:** VU8782-CC8763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** U190316.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\U ...81cont-8782\u190316.D Vial: 2
Acq On : 3 Dec 2014 9:53 am Operator: yunxiac
Sample : cc8763-20 Inst : MSU
Misc : ms77638,vu8782,5.0,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MU8763.M (RTE Integrator)
Title : SW-846 8260B, ZB624 60m x 250um x 1.40um
Last Update : Thu Nov 20 10:49:23 2014
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	97	0.00	7.90
2	M	tertiary butyl alcohol	1.096	1.093	0.3	92	0.00	8.02
3		Ethanol	0.105	0.097	7.6	81	0.02	6.67
4	m	1,4-dioxane	0.095	0.099	-4.2	93	0.00	11.76
5	I	pentafluorobenzene	1.000	1.000	0.0	101	0.00	10.10
6	M	freon 115		----------NA----------				
7	M	freon 23		----------NA----------				
8	M	freon 143A		----------NA----------				
9	M	freon 152A		----------NA----------				
10	M	chlorotrifluoroethene		----------NA----------				
11	M	chlorodifluoromethane	0.317	0.309	2.5	86	0.00	4.42
		----------	True	Calc.	% Drift	----------		
12	M	dichlorodifluoromethane	20.000	22.085	-10.4	108	0.00	4.39
		----------	AvgRF	CCRF	% Dev	----------		
13	M	freon 142B		----------NA----------				
14	M	freon 114		----------NA----------				
15	M	chloromethane	0.524	0.572	-9.2	103	0.00	4.75
16	M	vinyl chloride	0.450	0.505	-12.2	105	0.00	5.02
17	M	acetaldehyde		----------NA----------				
18	M	bromomethane	0.263	0.311	-18.3	108	0.01	5.73
19	M	chloroethane	0.219	0.244	-11.4	103	0.01	5.91
20	M	trichlorofluoromethane	0.420	0.471	-12.1	100	-0.02	6.36
21	M	pentane		----------NA----------				
22	M	freon 123A		----------NA----------				
23	M	ethyl ether	0.187	0.170	9.1	86	0.00	6.77
24		2-CHLOROPROPANE	0.663	0.578	12.8	84	0.00	7.00
25	M	freon 141B		----------NA----------				
26	M	freon 123		----------NA----------				
27	M	acrolein	0.063	0.053	15.9	84	0.00	7.08
28	M	1,1-dichloroethene	0.307	0.287	6.5	91	0.00	7.23
29	M	acetone	0.028	0.027	3.6	89	0.00	7.29
30	M	allyl chloride	0.060	0.054	10.0	90	0.00	7.75
31	M	acetonitrile	0.030	0.027	10.0	91	0.01	7.76
32	M	iodomethane	0.547	0.528	3.5	93	0.00	7.53
33	M	carbon disulfide	1.118	1.017	9.0	88	0.00	7.65
34		1-CHLOROPROPANE	0.031	0.027	12.9	84	0.00	7.97
35	M	methylene chloride	0.361	0.336	6.9	90	0.00	7.96
36	M	methyl acetate	0.263	0.244	7.2	90	0.00	7.73
37	M	methyl tert butyl ether	0.938	0.849	9.5	89	0.00	8.25

Continuing Calibration Summary

Job Number: JB82646 **Sample:** VU8782-CC8763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** U190316.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

38	M	trans-1,2-dichloroethene	0.368	0.325	11.7	90	0.00	8.32
39	M	di-isopropyl ether	1.323	1.177	11.0	86	0.00	8.82
40	M	ethyl tert-butyl ether	1.124	1.042	7.3	89	0.00	9.29
41	M	2-butanone	0.035	0.032	8.6	85	0.00	9.57
42	M	1,1-dichloroethane	0.652	0.600	8.0	86	0.00	8.89
43	M	chloroprene	0.470	0.431	8.3	87	0.00	8.98
44	M	acrylonitrile	0.116	0.108	6.9	89	0.00	8.30
45	M	vinyl acetate	0.054	0.051	5.6	94	0.00	8.85
46	M	ethyl acetate	0.046	0.044	4.3	91	0.00	9.57
47	M	2,2-dichloropropane	0.494	0.467	5.5	92	0.00	9.61
48	M	cis-1,2-dichloroethene	0.403	0.355	11.9	88	0.00	9.61
49	M	methyl acrylate	0.045	0.042	6.7	89	0.00	9.66
50	M	propionitrile	0.042	0.041	2.4	89	0.00	9.70
51	M	bromochloromethane	0.174	0.170	2.3	92	0.00	9.93
52	M	tetrahydrofuran	0.116	0.102	12.1	85	0.00	9.96
53	M	chloroform	0.608	0.545	10.4	87	0.00	9.98
54		tert-butyl Formate	0.276	0.204	26.1#	72	0.00	10.00
55	M	iso-butyl alcohol	0.015	0.014	6.7	88	0.00	10.39
56	S	dibromofluoromethane (s)	0.295	0.307	-4.1	103	0.00	10.18
57	S	1,2-dichloroethane-d4 (s)	0.325	0.325	0.0	100	0.00	10.60
58	M	freon 113	0.238	0.238	0.0	97	0.01	7.18
59	M	methacrylonitrile	0.209	0.188	10.0	88	0.00	9.87
60	M	1,1,1-trichloroethane	0.482	0.450	6.6	89	0.00	10.22
61	M	tert amyl alcohol		----------NA----------				
62	M	tert-amyl methyl ether	0.225	0.212	5.8	90	0.00	10.67
63		iso-octane	1.233	1.139	7.6	82	0.00	10.62
64	I	1,4-difluorobenzene	1.000	1.000	0.0	97	0.00	11.02
65	M	Di-isobutylene		----------NA----------				
66	M	epichlorohydrin	0.025	0.026	-4.0	94	0.00	12.32
67	M	n-butyl alcohol	0.008	0.008	0.0	90	0.00	11.14
68	M	Cyclohexane	0.428	0.428	0.0	88	0.00	10.28
69	M	carbon tetrachloride	0.372	0.372	0.0	90	0.00	10.41
70	M	1,1-dichloropropene	0.425	0.408	4.0	87	0.00	10.39
71	M	hexane	0.435	0.389	10.6	82	0.00	8.58
72	M	benzene	1.321	1.248	5.5	87	0.00	10.66
73	M	heptane	0.246	0.226	8.1	83	0.00	10.78
74	M	isopropyl acetate	0.565	0.549	2.8	90	0.00	10.56
75	M	1,2-dichloroethane	0.356	0.352	1.1	89	0.00	10.69
76	M	ethyl acrylate		----------NA----------				
77		tert amyl ethyl ether		----------NA----------				
78	M	trichloroethene	0.307	0.301	2.0	89	0.00	11.36
79	M	methylcyclohexane	0.483	0.484	-0.2	89	0.00	11.57
80	M	2-nitropropane	0.104	0.099	4.8	88	0.00	12.18
81	M	2-chloroethyl vinyl ether	0.190	0.179	5.8	86	0.00	12.17
82	M	methyl methacrylate	0.069	0.071	-2.9	96	0.00	11.62
83	M	1,2-dichloropropane	0.345	0.329	4.6	87	0.00	11.64
84	M	propyl acetate	0.054	0.055	-1.9	97	0.00	11.65
85	M	dibromomethane	0.171	0.169	1.2	92	0.00	11.82
86	M	bromodichloromethane	0.396	0.389	1.8	88	0.00	11.94
87	M	cis-1,3-dichloropropene	0.533	0.520	2.4	89	0.00	12.41
88	S	toluene-d8 (s)	1.087	1.206	-10.9	105	0.00	12.70
89	M	4-methyl-2-pentanone	0.111	0.109	1.8	90	0.00	12.50
90	M	toluene	0.805	0.797	1.0	92	0.00	12.78
91	M	3-methyl-1-butanol	0.012	0.013	-8.3	91	0.00	12.51
92	M	trans-1,3-dichloropropene	0.466	0.461	1.1	90	0.00	13.00
93	M	ethyl methacrylate	0.369	0.368	0.3	91	0.00	12.96
94	M	1,1,2-trichloroethane	0.227	0.227	0.0	93	0.00	13.23
95	M	2-hexanone	0.107	0.103	3.7	87	0.00	13.40

Continuing Calibration Summary

Job Number: JB82646 **Sample:** VU8782-CC8763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** U190316.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

96	I	chlorobenzene-d5	1.000	1.000	0.0	97	0.00	14.34
97	M	cyclohexanone	0.027	0.028	-3.7	89	0.00	15.61
98	M	tetrachloroethene	0.304	0.314	-3.3	94	0.00	13.40
99	M	1,3-dichloropropane	0.488	0.486	0.4	92	0.00	13.43
100	M	butyl acetate	0.215	0.215	0.0	92	0.00	13.46
101	M	dibromochloromethane	0.334	0.338	-1.2	93	0.00	13.72
102	M	1,2-dibromoethane	0.277	0.282	-1.8	94	0.00	13.89
103		3,3-dimethyl-1-Butanol	0.030	0.031	-3.3	92	0.00	13.58
104		n-butyl ether	1.680	1.605	4.5	87	0.00	14.23
105	M	chlorobenzene	0.970	0.966	0.4	93	0.00	14.38
106	M	1,1,1,2-tetrachloroethane	0.343	0.346	-0.9	94	0.00	14.44
107	M	ethylbenzene	1.688	1.663	1.5	91	0.00	14.42
108	M	m,p-xylene	0.639	0.651	-1.9	93	0.00	14.53
109	M	o-xylene	0.629	0.638	-1.4	93	0.00	15.00
110	M	styrene	1.078	1.075	0.3	92	0.00	15.02
111	M	bromoform	0.234	0.238	-1.7	95	0.00	15.34
112	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	98	0.00	16.92
113	M	isopropylbenzene	2.969	2.888	2.7	92	0.00	15.37
114	S	4-bromofluorobenzene (s)	0.794	0.837	-5.4	102	0.00	15.62
115	M	bromobenzene	0.784	0.803	-2.4	96	0.00	15.85
116	M	1,1,2,2-tetrachloroethane	0.666	0.698	-4.8	95	0.00	15.74
117	M	trans-1,4-dichloro-2-bute	0.202	0.184	8.9	85	0.00	15.78
118	M	1,2,3-trichloropropane	0.165	0.173	-4.8	97	0.00	15.83
119	M	n-propylbenzene	3.487	3.373	3.3	91	0.00	15.83
120	M	2-chlorotoluene	0.712	0.720	-1.1	92	0.00	16.01
121	M	4-chlorotoluene	2.229	2.139	4.0	92	0.00	16.12
122		p-Ethyltoluene		----------NA----------				
123	M	1,3,5-trimethylbenzene	2.463	2.432	1.3	92	0.00	15.99
124	M	tert-butylbenzene	2.156	2.129	1.3	92	0.00	16.38
125	M	pentachloroethane	0.445	0.475	-6.7	99	0.00	16.50
126	M	1,2,4-trimethylbenzene	2.446	2.426	0.8	93	0.00	16.44
127		1,2,3-trimethylbenzene		----------NA----------				
128	M	sec-butylbenzene	3.239	3.195	1.4	91	0.00	16.62
129	M	1,3-dichlorobenzene	1.529	1.547	-1.2	94	0.00	16.86
130	M	p-isopropyltoluene	2.756	2.738	0.7	92	0.00	16.75
131	M	1,4-dichlorobenzene	1.560	1.570	-0.6	96	0.00	16.95
132	M	benzyl chloride	1.306	1.389	-6.4	102	0.00	17.08
133	M	1,2-dichlorobenzene	1.416	1.433	-1.2	95	0.00	17.39
134		p-Diethylbenzene		----------NA----------				
135	M	n-butylbenzene	1.391	1.371	1.4	91	0.00	17.21
136		1,2,4,5-Tetramethylbenzen		----------NA----------				
137	M	1,2-dibromo-3-chloropropa	0.128	0.136	-6.3	99	0.00	18.25
138		1,3,5-trichlorobenzene	1.248	1.246	0.2	94	0.00	18.43
139	M	1,2,4-trichlorobenzene	1.035	1.041	-0.6	96	0.00	19.18
140	M	hexachlorobutadiene	0.610	0.609	0.2	92	0.00	19.28
141	M	naphthalene	1.844	1.944	-5.4	97	0.00	19.50
142		INDANE		----------NA----------				
143	M	1,2,3-trichlorobenzene	0.848	0.869	-2.5	96	0.00	19.78
144	M	hexachloroethane	0.486	0.494	-1.6	93	0.00	17.67
145	M	MMT		----------NA----------				
146	M	Bis(chloromethyl)ether		----------NA----------				
147	M	Ethylenimine		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
u189933.D MU8763.M Wed Dec 03 16:55:11 2014 ACC-VOA-DP

Continuing Calibration Summary

Job Number: JB82646 **Sample:** VU8783-CC8763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** U190340.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\U ...81cont-8782\u190340.D Vial: 26
Acq On : 3 Dec 2014 9:47 pm Operator: yunxiac
Sample : CC8763-50 Inst : MSU
Misc : ms77650,vu8783,5.0,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MU8763.M (RTE Integrator)
Title : SW-846 8260B, ZB624 60m x 250um x 1.40um
Last Update : Thu Nov 20 10:49:23 2014
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	103	0.00	7.90
2	M	tertiary butyl alcohol	1.096	1.136	-3.6	106	0.00	8.02
3		Ethanol	0.105	0.105	0.0	94	0.00	6.66
4	m	1,4-dioxane	0.095	0.105	-10.5	113	0.00	11.76
5	I	pentafluorobenzene	1.000	1.000	0.0	105	0.00	10.09
6	M	freon 115		----------NA----------				
7	M	freon 23		----------NA----------				
8	M	freon 143A		----------NA----------				
9	M	freon 152A		----------NA----------				
10	M	chlorotrifluoroethene		----------NA----------				
11	M	chlorodifluoromethane	0.317	0.327	-3.2	101	0.00	4.41
		----------	True	Calc.	% Drift	----------		
12	M	dichlorodifluoromethane	50.000	54.290	-8.6	107	0.00	4.38
		----------	AvgRF	CCRF	% Dev	----------		
13	M	freon 142B		----------NA----------				
14	M	freon 114		----------NA----------				
15	M	chloromethane	0.524	0.541	-3.2	100	0.00	4.76
16	M	vinyl chloride	0.450	0.483	-7.3	101	0.00	5.02
17	M	acetaldehyde		----------NA----------				
18	M	bromomethane	0.263	0.287	-9.1	106	0.00	5.72
19	M	chloroethane	0.219	0.232	-5.9	102	0.00	5.90
20	M	trichlorofluoromethane	0.420	0.456	-8.6	99	-0.02	6.36
21	M	pentane		----------NA----------				
22	M	freon 123A		----------NA----------				
23	M	ethyl ether	0.187	0.194	-3.7	103	0.00	6.77
24		2-CHLOROPROPANE	0.663	0.619	6.6	97	0.00	6.99
25	M	freon 141B		----------NA----------				
26	M	freon 123		----------NA----------				
27	M	acrolein	0.063	0.061	3.2	100	0.00	7.07
28	M	1,1-dichloroethene	0.307	0.314	-2.3	104	0.00	7.22
29	M	acetone	0.028	0.029	-3.6	108	0.00	7.29
30	M	allyl chloride	0.060	0.056	6.7	98	0.00	7.76
31	M	acetonitrile	0.030	0.028	6.7	104	0.00	7.76
32	M	iodomethane	0.547	0.574	-4.9	105	0.00	7.52
33	M	carbon disulfide	1.118	1.097	1.9	100	0.00	7.64
34		1-CHLOROPROPANE	0.031	0.029	6.5	96	0.00	7.98
35	M	methylene chloride	0.361	0.358	0.8	102	0.00	7.96
36	M	methyl acetate	0.263	0.275	-4.6	105	0.00	7.74
37	M	methyl tert butyl ether	0.938	0.945	-0.7	103	0.00	8.25

Continuing Calibration Summary

Job Number: JB82646 **Sample:** VU8783-CC8763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** U190340.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

38	M	trans-1,2-dichloroethene	0.368	0.350	4.9	103	0.00	8.31
39	M	di-isopropyl ether	1.323	1.233	6.8	96	0.00	8.82
40	M	ethyl tert-butyl ether	1.124	1.092	2.8	97	0.00	9.28
41	M	2-butanone	0.035	0.036	-2.9	108	0.00	9.58
42	M	1,1-dichloroethane	0.652	0.634	2.8	98	0.00	8.89
43	M	chloroprene	0.470	0.462	1.7	98	0.00	8.98
44	M	acrylonitrile	0.116	0.122	-5.2	107	0.00	8.30
45	M	vinyl acetate	0.054	0.054	0.0	101	0.00	8.85
46	M	ethyl acetate	0.046	0.047	-2.2	106	0.00	9.57
47	M	2,2-dichloropropane	0.494	0.445	9.9	94	0.00	9.61
48	M	cis-1,2-dichloroethene	0.403	0.382	5.2	102	0.00	9.61
49	M	methyl acrylate	0.045	0.049	-8.9	110	0.00	9.66
50	M	propionitrile	0.042	0.047	-11.9	108	0.00	9.71
51	M	bromochloromethane	0.174	0.184	-5.7	106	0.00	9.93
52	M	tetrahydrofuran	0.116	0.112	3.4	101	0.00	9.96
53	M	chloroform	0.608	0.576	5.3	99	0.00	9.97
54		tert-butyl Formate	0.276	0.248	10.1	89	0.00	10.00
55	M	iso-butyl alcohol	0.015	0.015	0.0	104	0.00	10.40
56	S	dibromofluoromethane (s)	0.295	0.307	-4.1	105	0.00	10.18
57	S	1,2-dichloroethane-d4 (s)	0.325	0.330	-1.5	103	0.00	10.60
58	M	freon 113	0.238	0.255	-7.1	104	0.00	7.18
59	M	methacrylonitrile	0.209	0.213	-1.9	106	0.00	9.87
60	M	1,1,1-trichloroethane	0.482	0.482	0.0	100	0.00	10.22
61	M	tert amyl alcohol		----------NA----------				
62	M	tert-amyl methyl ether	0.225	0.230	-2.2	102	0.00	10.66
63		iso-octane	1.233	1.264	-2.5	94	0.00	10.62
64	I	1,4-difluorobenzene	1.000	1.000	0.0	101	0.00	11.02
65	M	Di-isobutylene		----------NA----------				
66	M	epichlorohydrin	0.025	0.028	-12.0	108	0.00	12.32
67	M	n-butyl alcohol	0.008	0.008	0.0	104	0.00	11.14
68	M	Cyclohexane	0.428	0.471	-10.0	101	0.00	10.28
69	M	carbon tetrachloride	0.372	0.396	-6.5	101	0.00	10.41
70	M	1,1-dichloropropene	0.425	0.435	-2.4	98	0.00	10.39
71	M	hexane	0.435	0.439	-0.9	95	0.00	8.57
72	M	benzene	1.321	1.336	-1.1	100	0.00	10.66
73	M	heptane	0.246	0.253	-2.8	97	0.00	10.78
74	M	isopropyl acetate	0.565	0.604	-6.9	106	0.00	10.55
75	M	1,2-dichloroethane	0.356	0.384	-7.9	102	0.00	10.69
76	M	ethyl acrylate		----------NA----------				
77		tert amyl ethyl ether		----------NA----------				
78	M	trichloroethene	0.307	0.328	-6.8	101	0.00	11.36
79	M	methylcyclohexane	0.483	0.535	-10.8	101	0.00	11.57
80	M	2-nitropropane	0.104	0.110	-5.8	105	0.00	12.17
81	M	2-chloroethyl vinyl ether	0.190	0.194	-2.1	98	0.00	12.16
82	M	methyl methacrylate	0.069	0.082	-18.8	111	0.00	11.62
83	M	1,2-dichloropropane	0.345	0.353	-2.3	100	0.00	11.65
84	M	propyl acetate	0.054	0.057	-5.6	107	0.00	11.65
85	M	dibromomethane	0.171	0.187	-9.4	106	0.00	11.82
86	M	bromodichloromethane	0.396	0.421	-6.3	99	0.00	11.94
87	M	cis-1,3-dichloropropene	0.533	0.558	-4.7	100	0.00	12.41
88	S	toluene-d8 (s)	1.087	1.211	-11.4	108	0.00	12.70
89	M	4-methyl-2-pentanone	0.111	0.122	-9.9	109	0.00	12.49
90	M	toluene	0.805	0.853	-6.0	103	0.00	12.78
91	M	3-methyl-1-butanol	0.012	0.013	-8.3	98	0.00	12.51
92	M	trans-1,3-dichloropropene	0.466	0.495	-6.2	101	0.00	13.00
93	M	ethyl methacrylate	0.369	0.418	-13.3	108	0.00	12.96
94	M	1,1,2-trichloroethane	0.227	0.249	-9.7	107	0.00	13.24
95	M	2-hexanone	0.107	0.118	-10.3	108	0.00	13.40

Continuing Calibration Summary

Job Number: JB82646 **Sample:** VU8783-CC8763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** U190340.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

96	I	chlorobenzene-d5	1.000	1.000	0.0	100	0.00	14.34
97	M	cyclohexanone	0.027	0.013	51.9#	51	0.00	15.60
98	M	tetrachloroethene	0.304	0.337	-10.9	107	0.00	13.40
99	M	1,3-dichloropropane	0.488	0.531	-8.8	105	0.00	13.43
100	M	butyl acetate	0.215	0.234	-8.8	106	0.00	13.46
101	M	dibromochloromethane	0.334	0.368	-10.2	104	0.00	13.72
102	M	1,2-dibromoethane	0.277	0.318	-14.8	110	0.00	13.89
103		3,3-dimethyl-1-Butanol	0.030	0.032	-6.7	96	0.00	13.58
104		n-butyl ether	1.680	1.728	-2.9	98	0.00	14.23
105	M	chlorobenzene	0.970	1.030	-6.2	103	0.00	14.38
106	M	1,1,1,2-tetrachloroethane	0.343	0.373	-8.7	103	0.00	14.44
107	M	ethylbenzene	1.688	1.779	-5.4	103	0.00	14.42
108	M	m,p-xylene	0.639	0.687	-7.5	103	0.00	14.53
109	M	o-xylene	0.629	0.678	-7.8	102	0.00	15.00
110	M	styrene	1.078	1.179	-9.4	103	0.00	15.02
111	M	bromoform	0.234	0.262	-12.0	104	0.00	15.34
112	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	100	0.00	16.92
113	M	isopropylbenzene	2.969	3.085	-3.9	101	0.00	15.37
114	S	4-bromofluorobenzene (s)	0.794	0.845	-6.4	104	0.00	15.62
115	M	bromobenzene	0.784	0.862	-9.9	105	0.00	15.85
116	M	1,1,2,2-tetrachloroethane	0.666	0.762	-14.4	107	0.00	15.74
117	M	trans-1,4-dichloro-2-bute	0.202	0.180	10.9	85	0.00	15.78
118	M	1,2,3-trichloropropane	0.165	0.188	-13.9	109	0.00	15.83
119	M	n-propylbenzene	3.487	3.580	-2.7	100	0.00	15.83
120	M	2-chlorotoluene	0.712	0.760	-6.7	102	0.00	16.01
121	M	4-chlorotoluene	2.229	2.247	-0.8	99	0.00	16.12
122		p-Ethyltoluene		----------NA----------				
123	M	1,3,5-trimethylbenzene	2.463	2.575	-4.5	100	0.00	15.99
124	M	tert-butylbenzene	2.156	2.240	-3.9	101	0.00	16.38
125	M	pentachloroethane	0.445	0.499	-12.1	104	0.00	16.50
126	M	1,2,4-trimethylbenzene	2.446	2.579	-5.4	102	0.00	16.44
127		1,2,3-trimethylbenzene		----------NA----------				
128	M	sec-butylbenzene	3.239	3.363	-3.8	101	0.00	16.62
129	M	1,3-dichlorobenzene	1.529	1.629	-6.5	104	0.00	16.85
130	M	p-isopropyltoluene	2.756	2.873	-4.2	101	0.00	16.75
131	M	1,4-dichlorobenzene	1.560	1.647	-5.6	104	0.00	16.94
132	M	benzyl chloride	1.306	1.315	-0.7	99	0.00	17.08
133	M	1,2-dichlorobenzene	1.416	1.530	-8.1	105	0.00	17.39
134		p-Diethylbenzene		----------NA----------				
135	M	n-butylbenzene	1.391	1.428	-2.7	99	0.00	17.21
136		1,2,4,5-Tetramethylbenzen		----------NA----------				
137	M	1,2-dibromo-3-chloropropa	0.128	0.150	-17.2	113	0.00	18.25
138		1,3,5-trichlorobenzene	1.248	1.292	-3.5	101	0.00	18.43
139	M	1,2,4-trichlorobenzene	1.035	1.096	-5.9	102	0.00	19.18
140	M	hexachlorobutadiene	0.610	0.623	-2.1	98	0.00	19.28
141	M	naphthalene	1.844	2.116	-14.8	108	0.00	19.50
142		INDANE		----------NA----------				
143	M	1,2,3-trichlorobenzene	0.848	0.924	-9.0	104	0.00	19.78
144	M	hexachloroethane	0.486	0.529	-8.8	103	0.00	17.66
145	M	MMT		----------NA----------				
146	M	Bis(chloromethyl)ether		----------NA----------				
147	M	Ethylenimine		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
u189934.D MU8763.M Thu Dec 04 11:01:42 2014 ACC-VOA-DP

Continuing Calibration Summary

Job Number: JB82646 **Sample:** VU8783-CC8763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** U190360.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\U core\vu8783\u190360.D Vial: 2
Acq On : 4 Dec 2014 9:31 am Operator: yunxiac
Sample : cc8763-20 Inst : MSU
Misc : ms77844,vu8783,5.0,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MU8763.M (RTE Integrator)
Title : SW-846 8260B, ZB624 60m x 250um x 1.40um
Last Update : Thu Nov 20 10:49:23 2014
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	119	0.00	7.91
2	M	tertiary butyl alcohol	1.096	0.973	11.2	101	0.00	8.02
3		Ethanol	0.105	0.097	7.6	100	0.02	6.67
4	m	1,4-dioxane	0.095	0.093	2.1	108	0.00	11.76
5	I	pentafluorobenzene	1.000	1.000	0.0	99	0.00	10.10
6	M	freon 115		----------NA----------				
7	M	freon 23		----------NA----------				
8	M	freon 143A		----------NA----------				
9	M	freon 152A		----------NA----------				
10	M	chlorotrifluoroethene		----------NA----------				
11	M	chlorodifluoromethane	0.317	0.332	-4.7	91	0.00	4.41
		----------	True	Calc.	% Drift	----------		
12	M	dichlorodifluoromethane	20.000	22.073	-10.4	106	0.00	4.39
		----------	AvgRF	CCRF	% Dev	----------		
13	M	freon 142B		----------NA----------				
14	M	freon 114		----------NA----------				
15	M	chloromethane	0.524	0.563	-7.4	100	0.00	4.75
16	M	vinyl chloride	0.450	0.493	-9.6	101	0.00	5.02
17	M	acetaldehyde		----------NA----------				
18	M	bromomethane	0.263	0.304	-15.6	104	0.00	5.73
19	M	chloroethane	0.219	0.246	-12.3	103	0.01	5.91
20	M	trichlorofluoromethane	0.420	0.471	-12.1	99	-0.01	6.36
21	M	pentane		----------NA----------				
22	M	freon 123A		----------NA----------				
23	M	ethyl ether	0.187	0.187	0.0	94	0.00	6.77
24		2-CHLOROPROPANE	0.663	0.634	4.4	91	0.00	7.00
25	M	freon 141B		----------NA----------				
26	M	freon 123		----------NA----------				
27	M	acrolein	0.063	0.061	3.2	96	0.00	7.08
28	M	1,1-dichloroethene	0.307	0.304	1.0	95	0.00	7.22
29	M	acetone	0.028	0.028	0.0	91	0.00	7.28
30	M	allyl chloride	0.060	0.059	1.7	97	0.00	7.76
31	M	acetonitrile	0.030	0.029	3.3	98	0.00	7.76
32	M	iodomethane	0.547	0.574	-4.9	100	0.00	7.52
33	M	carbon disulfide	1.118	1.111	0.6	95	0.00	7.65
34		1-CHLOROPROPANE	0.031	0.029	6.5	90	0.00	7.98
35	M	methylene chloride	0.361	0.360	0.3	96	0.00	7.96
36	M	methyl acetate	0.263	0.274	-4.2	100	0.00	7.73
37	M	methyl tert butyl ether	0.938	0.925	1.4	96	0.00	8.25

Continuing Calibration Summary

Job Number: JB82646 **Sample:** VU8783-CC8763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** U190360.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

38	M	trans-1,2-dichloroethene	0.368	0.350	4.9	96	0.00	8.31
39	M	di-isopropyl ether	1.323	1.235	6.7	89	0.00	8.82
40	M	ethyl tert-butyl ether	1.124	1.077	4.2	91	0.00	9.28
41	M	2-butanone	0.035	0.036	-2.9	95	0.00	9.57
42	M	1,1-dichloroethane	0.652	0.643	1.4	92	0.00	8.88
43	M	chloroprene	0.470	0.457	2.8	91	0.00	8.98
44	M	acrylonitrile	0.116	0.118	-1.7	96	0.00	8.29
45	M	vinyl acetate	0.054	0.052	3.7	94	0.00	8.85
46	M	ethyl acetate	0.046	0.046	0.0	92	0.00	9.57
47	M	2,2-dichloropropane	0.494	0.504	-2.0	98	0.00	9.62
48	M	cis-1,2-dichloroethene	0.403	0.377	6.5	92	0.00	9.62
49	M	methyl acrylate	0.045	0.046	-2.2	97	0.00	9.66
50	M	propionitrile	0.042	0.046	-9.5	97	0.00	9.70
51	M	bromochloromethane	0.174	0.182	-4.6	98	0.00	9.93
52	M	tetrahydrofuran	0.116	0.112	3.4	93	0.00	9.96
53	M	chloroform	0.608	0.582	4.3	92	0.00	9.98
54		tert-butyl Formate	0.276	0.227	17.8	79	0.00	10.00
55	M	iso-butyl alcohol	0.015	0.015	0.0	95	0.00	10.40
56	S	dibromofluoromethane (s)	0.295	0.309	-4.7	102	0.00	10.18
57	S	1,2-dichloroethane-d4 (s)	0.325	0.330	-1.5	100	0.00	10.60
58	M	freon 113	0.238	0.245	-2.9	98	0.00	7.17
59	M	methacrylonitrile	0.209	0.205	1.9	94	0.00	9.87
60	M	1,1,1-trichloroethane	0.482	0.483	-0.2	94	0.00	10.22
61	M	tert amyl alcohol		----------NA----------				
62	M	tert-amyl methyl ether	0.225	0.225	0.0	94	0.00	10.67
63		iso-octane	1.233	1.220	1.1	87	0.00	10.61
64	I	1,4-difluorobenzene	1.000	1.000	0.0	95	0.00	11.02
65	M	Di-isobutylene		----------NA----------				
66	M	epichlorohydrin	0.025	0.028	-12.0	99	0.00	12.32
67	M	n-butyl alcohol	0.008	0.009	-12.5	99	0.00	11.14
68	M	Cyclohexane	0.428	0.459	-7.2	93	0.00	10.28
69	M	carbon tetrachloride	0.372	0.399	-7.3	95	0.00	10.42
70	M	1,1-dichloropropene	0.425	0.439	-3.3	91	0.00	10.39
71	M	hexane	0.435	0.440	-1.1	91	0.00	8.58
72	M	benzene	1.321	1.355	-2.6	93	0.00	10.66
73	M	heptane	0.246	0.247	-0.4	89	0.00	10.78
74	M	isopropyl acetate	0.565	0.593	-5.0	95	0.00	10.55
75	M	1,2-dichloroethane	0.356	0.385	-8.1	96	0.00	10.69
76	M	ethyl acrylate		----------NA----------				
77		tert amyl ethyl ether		----------NA----------				
78	M	trichloroethene	0.307	0.323	-5.2	94	0.00	11.36
79	M	methylcyclohexane	0.483	0.513	-6.2	93	0.00	11.57
80	M	2-nitropropane	0.104	0.107	-2.9	93	0.00	12.17
81	M	2-chloroethyl vinyl ether	0.190	0.187	1.6	87	0.00	12.17
82	M	methyl methacrylate	0.069	0.075	-8.7	99	0.00	11.62
83	M	1,2-dichloropropane	0.345	0.357	-3.5	93	0.00	11.64
84	M	propyl acetate	0.054	0.056	-3.7	98	0.00	11.65
85	M	dibromomethane	0.171	0.184	-7.6	98	0.00	11.82
86	M	bromodichloromethane	0.396	0.421	-6.3	94	0.00	11.94
87	M	cis-1,3-dichloropropene	0.533	0.565	-6.0	94	0.00	12.40
88	S	toluene-d8 (s)	1.087	1.215	-11.8	104	0.00	12.70
89	M	4-methyl-2-pentanone	0.111	0.116	-4.5	94	0.00	12.50
90	M	toluene	0.805	0.859	-6.7	97	0.00	12.78
91	M	3-methyl-1-butanol	0.012	0.014	-16.7	98	0.00	12.51
92	M	trans-1,3-dichloropropene	0.466	0.503	-7.9	96	0.00	13.00
93	M	ethyl methacrylate	0.369	0.400	-8.4	98	0.00	12.96
94	M	1,1,2-trichloroethane	0.227	0.244	-7.5	98	0.00	13.23
95	M	2-hexanone	0.107	0.116	-8.4	96	0.00	13.40

Continuing Calibration Summary

Job Number: JB82646 **Sample:** VU8783-CC8763
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** U190360.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

96	I	chlorobenzene-d5	1.000	1.000	0.0	96	0.00	14.34
97	M	cyclohexanone	0.027	0.017	37.0#	54	0.00	15.60
98	M	tetrachloroethene	0.304	0.333	-9.5	98	0.00	13.40
99	M	1,3-dichloropropane	0.488	0.525	-7.6	98	0.00	13.43
100	M	butyl acetate	0.215	0.227	-5.6	95	0.00	13.46
101	M	dibromochloromethane	0.334	0.359	-7.5	97	0.00	13.72
102	M	1,2-dibromoethane	0.277	0.305	-10.1	99	0.00	13.89
103		3,3-dimethyl-1-Butanol	0.030	0.034	-13.3	98	0.00	13.58
104		n-butyl ether	1.680	1.721	-2.4	91	0.00	14.23
105	M	chlorobenzene	0.970	1.023	-5.5	97	0.00	14.38
106	M	1,1,1,2-tetrachloroethane	0.343	0.364	-6.1	97	0.00	14.44
107	M	ethylbenzene	1.688	1.771	-4.9	95	0.00	14.42
108	M	m,p-xylene	0.639	0.688	-7.7	97	0.00	14.54
109	M	o-xylene	0.629	0.673	-7.0	96	0.00	15.00
110	M	styrene	1.078	1.145	-6.2	96	0.00	15.02
111	M	bromoform	0.234	0.255	-9.0	100	0.00	15.34
112	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	96	0.00	16.91
113	M	isopropylbenzene	2.969	3.073	-3.5	96	0.00	15.37
114	S	4-bromofluorobenzene (s)	0.794	0.839	-5.7	101	0.00	15.62
115	M	bromobenzene	0.784	0.844	-7.7	98	0.00	15.84
116	M	1,1,2,2-tetrachloroethane	0.666	0.736	-10.5	98	0.00	15.74
117	M	trans-1,4-dichloro-2-bute	0.202	0.202	0.0	92	0.00	15.79
118	M	1,2,3-trichloropropane	0.165	0.185	-12.1	101	0.00	15.83
119	M	n-propylbenzene	3.487	3.576	-2.6	95	0.00	15.83
120	M	2-chlorotoluene	0.712	0.753	-5.8	95	0.00	16.01
121	M	4-chlorotoluene	2.229	2.246	-0.8	95	0.00	16.12
122		p-Ethyltoluene		----------NA----------				
123	M	1,3,5-trimethylbenzene	2.463	2.547	-3.4	94	0.00	15.99
124	M	tert-butylbenzene	2.156	2.201	-2.1	93	0.00	16.39
125	M	pentachloroethane	0.445	0.496	-11.5	101	0.00	16.50
126	M	1,2,4-trimethylbenzene	2.446	2.537	-3.7	95	0.00	16.43
127		1,2,3-trimethylbenzene		----------NA----------				
128	M	sec-butylbenzene	3.239	3.315	-2.3	93	0.00	16.62
129	M	1,3-dichlorobenzene	1.529	1.598	-4.5	96	0.00	16.85
130	M	p-isopropyltoluene	2.756	2.857	-3.7	94	0.00	16.75
131	M	1,4-dichlorobenzene	1.560	1.626	-4.2	97	0.00	16.95
132	M	benzyl chloride	1.306	1.483	-13.6	107	0.00	17.08
133	M	1,2-dichlorobenzene	1.416	1.489	-5.2	97	0.00	17.38
134		p-Diethylbenzene		----------NA----------				
135	M	n-butylbenzene	1.391	1.417	-1.9	93	0.00	17.21
136		1,2,4,5-Tetramethylbenzen		----------NA----------				
137	M	1,2-dibromo-3-chloropropa	0.128	0.139	-8.6	99	0.00	18.25
138		1,3,5-trichlorobenzene	1.248	1.276	-2.2	95	0.00	18.43
139	M	1,2,4-trichlorobenzene	1.035	1.040	-0.5	94	0.00	19.17
140	M	hexachlorobutadiene	0.610	0.621	-1.8	92	0.00	19.28
141	M	naphthalene	1.844	1.952	-5.9	95	0.00	19.50
142		INDANE		----------NA----------				
143	M	1,2,3-trichlorobenzene	0.848	0.866	-2.1	94	0.00	19.78
144	M	hexachloroethane	0.486	0.513	-5.6	95	0.00	17.66
145	M	MMT		----------NA----------				
146	M	Bis(chloromethyl)ether		----------NA----------				
147	M	Ethylenimine		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
u189933.D MU8763.M Thu Dec 04 16:29:06 2014 ACC-VOA-DP

New Jersey ACCUTEST LABORATORIES

GC/MS Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 4V13527.D
Acq On : 29 Nov 2014 2:55 pm
Operator : BenM
Sample : jb82646-1
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Dec 01 11:23:21 2014
Quant Method : C:\MSDCHEM\1\METHODS\M4V541.M
Quant Title : sw846 8260b
QLast Update : Fri Nov 14 17:30:26 2014
Response via : Initial Calibration

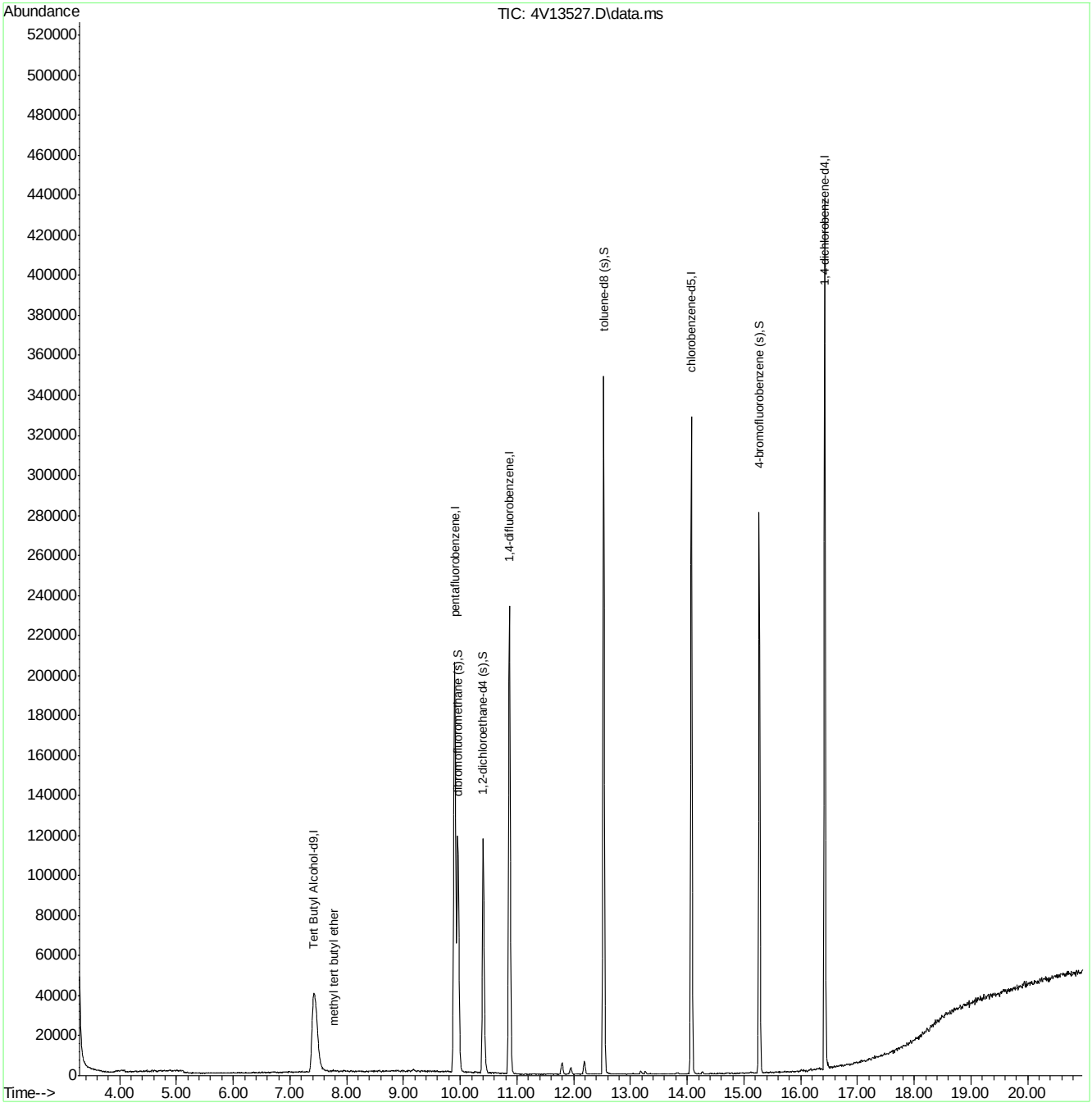
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.418	65	152635	500.00	ug/L	-0.02
4) pentafluorobenzene	9.904	168	178659	50.00	ug/L	0.00
51) 1,4-difluorobenzene	10.868	114	214926	50.00	ug/L	0.00
81) chlorobenzene-d5	14.077	117	177950	50.00	ug/L	0.00
94) 1,4-dichlorobenzene-d4	16.426	152	103645	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	9.961	113	88534	51.53	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 103.06%			
46) 1,2-dichloroethane-d4 (s)	10.402	65	87655	56.54	ug/L	-0.01
Spiked Amount 50.000	Range 72 - 123		Recovery = 113.08%			
73) toluene-d8 (s)	12.525	98	229299	48.70	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 97.40%			
96) 4-bromofluorobenzene (s)	15.267	95	95223	51.15	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 102.30%			
Target Compounds						Qvalue
28) methyl tert butyl ether	7.775	73	1465	0.27	ug/L	55

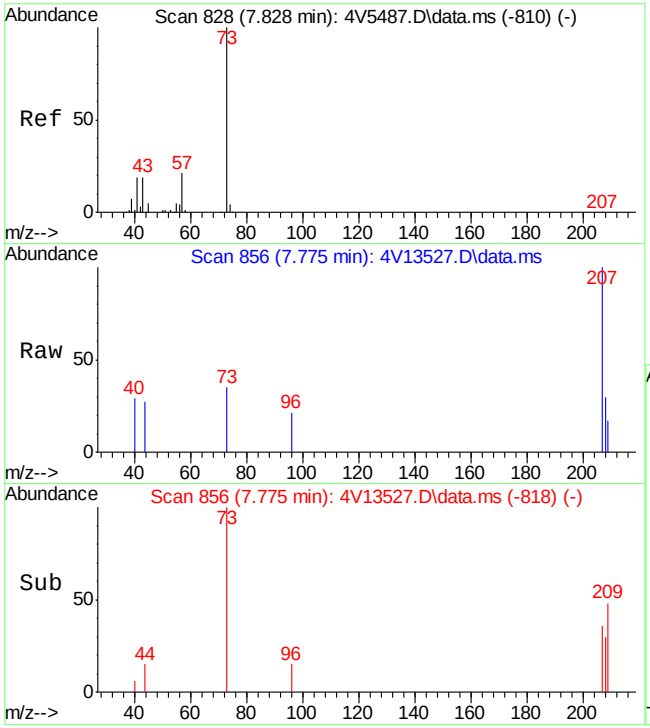
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 4V13527.D
Acq On : 29 Nov 2014 2:55 pm
Operator : BenM
Sample : jb82646-1
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Dec 01 11:23:21 2014
Quant Method : C:\MSDCHEM\1\METHODS\M4V541.M
Quant Title : sw846 8260b
QLast Update : Fri Nov 14 17:30:26 2014
Response via : Initial Calibration

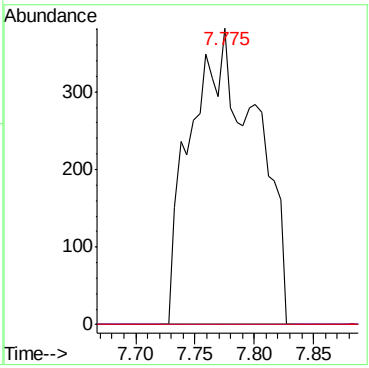




#28
methyl tert butyl ether
Concen: 0.27 ug/L
RT: 7.775 min Scan# 856
Delta R.T. 0.000 min
Lab File: 4V13527.D
Acq: 29 Nov 2014 2:55 pm

Tgt Ion: 73 Resp: 1465

Ion	Ratio	Lower	Upper
73	100		
57	0.0	0.0	52.6
43	0.0	0.0	49.1



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : 4V13527.D
Acq On : 29 Nov 2014 2:55 pm
Operator : BenM
Sample : jb82646-1
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4V541.M
Title : sw846 8260b

Signal : TIC: 4V13527.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.016	137	139	143	rBV3	563	778	0.12%	0.019%
2	4.162	165	167	169	rBV2	553	400	0.06%	0.010%
3	4.278	184	189	191	rBV3	503	824	0.13%	0.020%
4	4.540	237	239	241	rBV3	662	480	0.07%	0.012%
5	4.561	241	243	249	rVV5	686	985	0.15%	0.024%
6	4.603	249	251	252	rBV2	581	419	0.06%	0.010%
7	4.682	264	266	268	rBV3	672	661	0.10%	0.016%
8	5.279	378	380	383	rBV3	542	421	0.06%	0.010%
9	5.893	492	497	498	rVB2	347	365	0.06%	0.009%
10	5.956	507	509	511	rBV2	337	262	0.04%	0.006%
11	6.081	531	533	535	rBV2	506	296	0.05%	0.007%
12	6.307	573	576	578	rVB3	349	275	0.04%	0.007%
13	6.333	578	581	583	rBV3	457	472	0.07%	0.011%
14	6.354	583	585	589	rVV3	455	481	0.07%	0.012%
15	6.454	601	604	609	rVB4	330	383	0.06%	0.009%
16	6.517	609	616	620	rBV4	392	854	0.13%	0.020%
17	6.658	641	643	645	rBV3	310	265	0.04%	0.006%
18	6.690	646	649	651	rVV3	343	349	0.05%	0.008%
19	6.821	672	674	676	rBV2	489	301	0.05%	0.007%
20	6.973	702	703	710	rBV4	599	1130	0.17%	0.027%
21	7.182	742	743	746	rBV2	379	416	0.06%	0.010%
22	7.293	761	764	766	rBV2	794	527	0.08%	0.013%
23	7.418	772	788	826	rBV3	39675	261107	40.28%	6.266%
24	7.707	841	843	846	rVB2	753	487	0.08%	0.012%
25	7.738	846	849	852	rBV3	852	1017	0.16%	0.024%
26	7.880	874	876	879	rBV2	294	323	0.05%	0.008%
27	8.399	971	975	979	rBV4	679	1276	0.20%	0.031%
28	9.170	1119	1122	1132	rVB7	830	1874	0.29%	0.045%
29	9.426	1169	1171	1176	rBV3	904	1101	0.17%	0.026%
30	9.463	1176	1178	1183	rVV3	651	928	0.14%	0.022%
31	9.904	1251	1262	1268	rBV	205092	503662	77.70%	12.087%
32	9.956	1268	1272	1287	rVB2	118000	276800	42.70%	6.643%
33	10.113	1300	1302	1306	rBV3	428	558	0.09%	0.013%
34	10.145	1306	1308	1311	rBV	416	450	0.07%	0.011%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : 4V13527.D
Acq On : 29 Nov 2014 2:55 pm
Operator : BenM
Sample : jb82646-1
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4V541.M
Title : sw846 8260b

35	10.244	1324	1327	1328	rVB2	710	454	0.07%	0.011%
36	10.260	1328	1330	1334	rBV3	892	1032	0.16%	0.025%
37	10.328	1340	1343	1344	rBV2	520	342	0.05%	0.008%
38	10.402	1347	1357	1375	rVB2	117239	277082	42.75%	6.650%
39	10.533	1380	1382	1384	rVB	550	425	0.07%	0.010%
40	10.559	1384	1387	1390	rBV3	477	508	0.08%	0.012%
41	10.606	1394	1396	1400	rBV2	398	331	0.05%	0.008%
42	10.706	1413	1415	1419	rVB3	534	425	0.07%	0.010%
43	10.868	1433	1446	1463	rBV	233945	492864	76.04%	11.828%
44	11.015	1471	1474	1478	rVV3	264	358	0.06%	0.009%
45	11.130	1492	1496	1500	rBV3	345	612	0.09%	0.015%
46	11.267	1520	1522	1525	rBV2	246	300	0.05%	0.007%
47	11.309	1527	1530	1535	rVB3	326	457	0.07%	0.011%
48	11.356	1535	1539	1540	rBV	305	266	0.04%	0.006%
49	11.398	1542	1547	1551	rVB2	268	388	0.06%	0.009%
50	11.471	1560	1561	1565	rBV	338	299	0.05%	0.007%
51	11.513	1567	1569	1570	rBV2	301	261	0.04%	0.006%
52	11.629	1587	1591	1594	rVB2	270	411	0.06%	0.010%
53	11.681	1597	1601	1606	rVV3	309	539	0.08%	0.013%
54	11.718	1606	1608	1611	rVB	372	335	0.05%	0.008%
55	11.744	1611	1613	1615	rBV	344	367	0.06%	0.009%
56	11.796	1615	1623	1636	rVB3	5729	13466	2.08%	0.323%
57	11.948	1645	1652	1659	rVB3	3445	7417	1.14%	0.178%
58	12.032	1664	1668	1670	rBV2	399	531	0.08%	0.013%
59	12.127	1684	1686	1689	rBV2	335	339	0.05%	0.008%
60	12.184	1689	1697	1709	rVB	6680	14724	2.27%	0.353%
61	12.410	1734	1740	1742	rBV3	206	298	0.05%	0.007%
62	12.525	1747	1762	1774	rBV	349004	604704	93.29%	14.512%
63	12.751	1804	1805	1811	rBV3	173	280	0.04%	0.007%
64	12.908	1834	1835	1840	rVB2	286	319	0.05%	0.008%
65	12.960	1840	1845	1849	rBV3	348	512	0.08%	0.012%
66	12.997	1849	1852	1855	rBV2	216	281	0.04%	0.007%
67	13.044	1855	1861	1870	rVB4	588	1056	0.16%	0.025%
68	13.186	1878	1888	1894	rBV3	1476	3080	0.48%	0.074%
69	13.259	1896	1902	1909	rVB2	1566	2729	0.42%	0.065%
70	13.348	1914	1919	1926	rVB3	334	442	0.07%	0.011%
71	13.762	1992	1998	2000	rBV3	204	314	0.05%	0.008%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : 4V13527.D
Acq On : 29 Nov 2014 2:55 pm
Operator : BenM
Sample : jb82646-1
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4V541.M
Title : sw846 8260b

72	13.810	2000	2007	2009	rBV3	613	977	0.15%	0.023%
73	14.077	2049	2058	2076	rVB	328687	555725	85.73%	13.337%
74	14.266	2090	2094	2102	rBV5	1160	2220	0.34%	0.053%
75	14.318	2103	2104	2110	rVV3	201	282	0.04%	0.007%
76	14.439	2124	2127	2132	rVV2	362	405	0.06%	0.010%
77	14.481	2132	2135	2138	rVB2	369	374	0.06%	0.009%
78	14.533	2140	2145	2148	rBV3	447	799	0.12%	0.019%
79	14.559	2149	2150	2155	rVB3	426	421	0.06%	0.010%
80	14.601	2155	2158	2161	rBV	523	463	0.07%	0.011%
81	14.675	2169	2172	2173	rVB	396	293	0.05%	0.007%
82	14.701	2174	2177	2183	rVV5	482	878	0.14%	0.021%
83	14.785	2187	2193	2197	rVV3	338	526	0.08%	0.013%
84	14.884	2207	2212	2214	rBV5	323	368	0.06%	0.009%
85	15.016	2235	2237	2240	rBV2	312	348	0.05%	0.008%
86	15.037	2240	2241	2244	rBV2	346	291	0.04%	0.007%
87	15.110	2251	2255	2256	rBV3	495	467	0.07%	0.011%
88	15.199	2270	2272	2277	rBV4	424	607	0.09%	0.015%
89	15.267	2278	2285	2298	rBV	280424	450096	69.44%	10.802%
90	15.414	2311	2313	2316	rBB3	350	357	0.06%	0.009%
91	15.461	2316	2322	2327	rBV5	704	1570	0.24%	0.038%
92	15.535	2334	2336	2341	rBV3	525	883	0.14%	0.021%
93	15.624	2351	2353	2357	rBV3	954	705	0.11%	0.017%
94	15.718	2370	2371	2375	rBV3	732	594	0.09%	0.014%
95	15.860	2392	2398	2401	rBV3	676	1183	0.18%	0.028%
96	16.012	2423	2427	2432	rVV3	1203	1636	0.25%	0.039%
97	16.054	2432	2435	2440	rVB5	923	1015	0.16%	0.024%
98	16.180	2446	2459	2462	rBV4	1608	4257	0.66%	0.102%
99	16.300	2476	2482	2483	rBV6	956	1518	0.23%	0.036%
100	16.426	2497	2506	2514	rBV	435513	648190	100.00%	15.556%

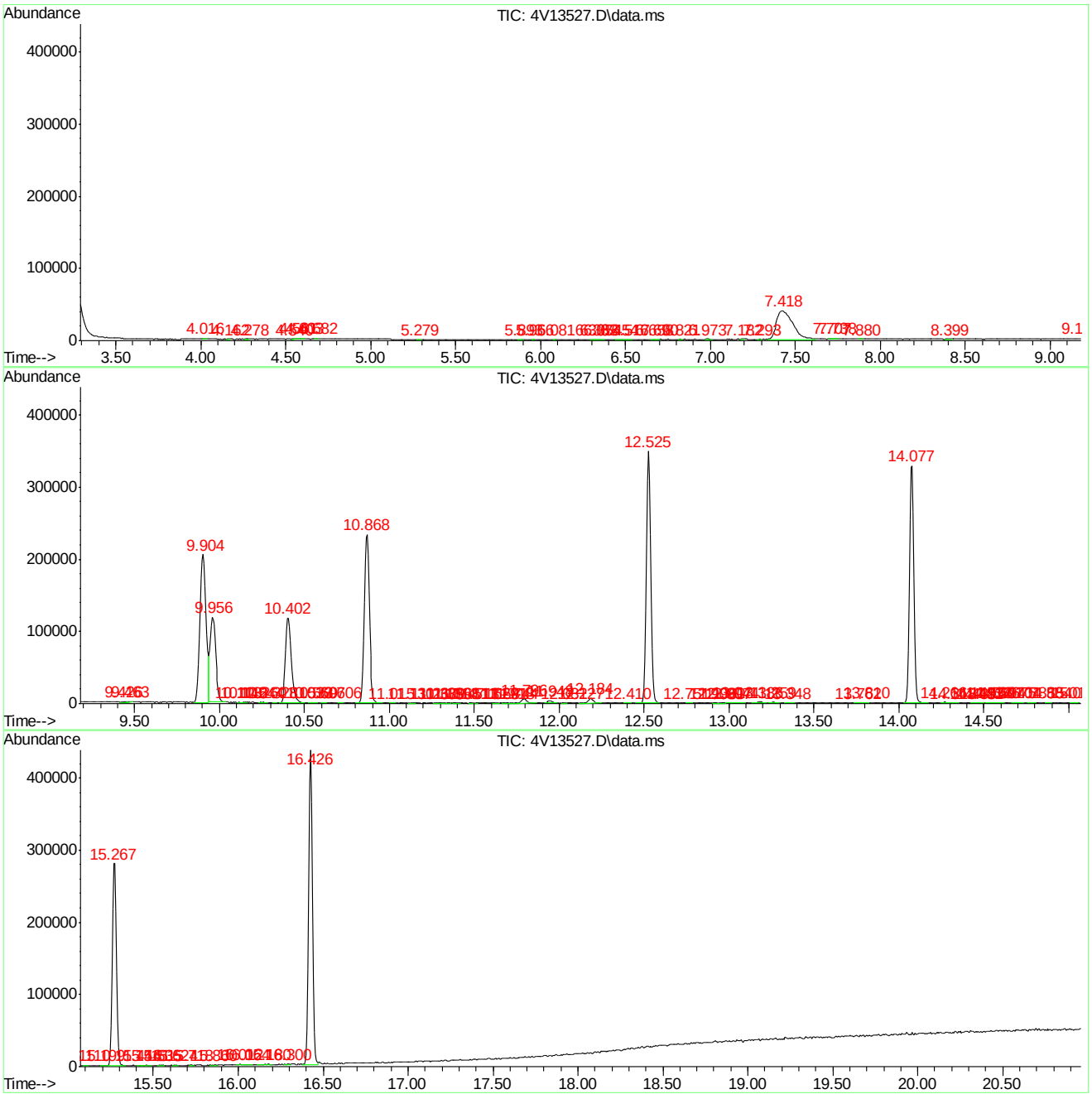
Sum of corrected areas: 4166923

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\
Data File : 4V13527.D
Acq On : 29 Nov 2014 2:55 pm
Operator : BenM
Sample : jb82646-1
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4V541.M
Quant Title : sw846 8260b

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p



Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\
Data File : 4V13527.D
Acq On : 29 Nov 2014 2:55 pm
Operator : BenM
Sample : jb82646-1
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4V541.M
Quant Title : sw846 8260b

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	Internal Standard RT	Internal Standard Resp	Internal Standard Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 4V13528.D
Acq On : 29 Nov 2014 3:21 pm
Operator : BenM
Sample : jb82646-2
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Dec 01 11:24:42 2014
Quant Method : C:\MSDCHEM\1\METHODS\M4V541.M
Quant Title : sw846 8260b
QLast Update : Fri Nov 14 17:30:26 2014
Response via : Initial Calibration

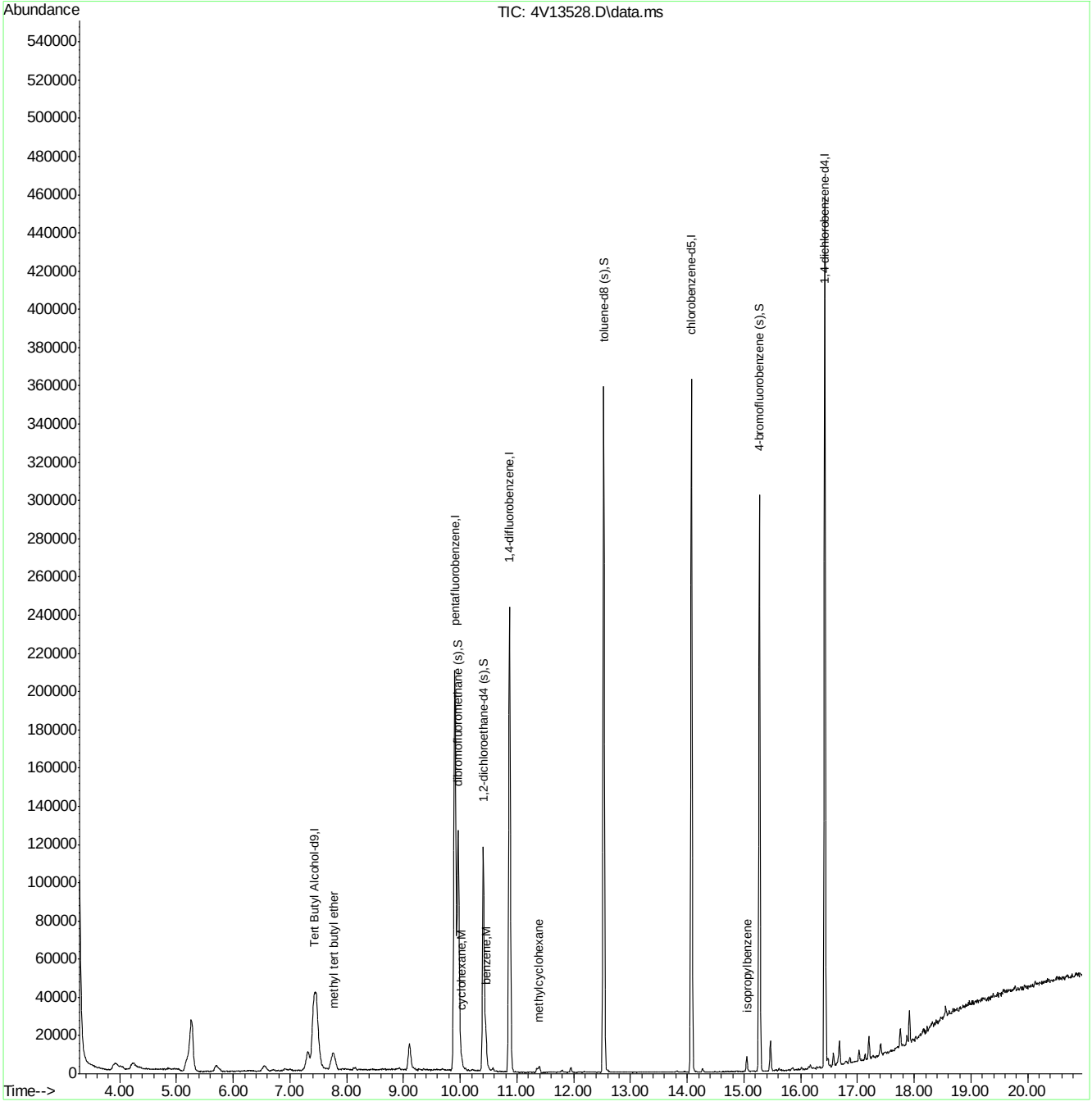
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.434	65	156592	500.00	ug/L	0.00
4) pentafluorobenzene	9.903	168	185901	50.00	ug/L	0.00
51) 1,4-difluorobenzene	10.868	114	220778	50.00	ug/L	0.00
81) chlorobenzene-d5	14.077	117	193583	50.00	ug/L	0.00
94) 1,4-dichlorobenzene-d4	16.426	152	109292	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	9.961	113	93392	52.24	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 104.48%			
46) 1,2-dichloroethane-d4 (s)	10.407	65	92247	57.18	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 114.36%			
73) toluene-d8 (s)	12.525	98	239665	49.55	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 99.10%			
96) 4-bromofluorobenzene (s)	15.272	95	100950	51.43	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 102.86%			
Target Compounds						Qvalue
28) methyl tert butyl ether	7.769	73	11309	1.97	ug/L #	37
54) cyclohexane	10.019	84	3205	1.28	ug/L #	18
58) benzene	10.454	78	18274	3.05	ug/L	98
69) methylcyclohexane	11.387	83	1655	0.65	ug/L	92
95) isopropylbenzene	15.052	105	5796	0.86	ug/L	96

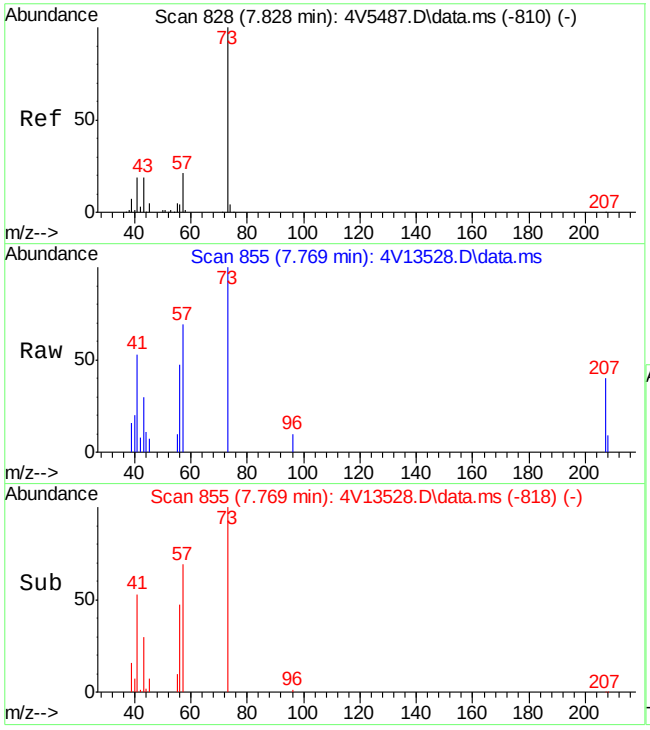
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 4V13528.D
Acq On : 29 Nov 2014 3:21 pm
Operator : BenM
Sample : jb82646-2
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Dec 01 11:24:42 2014
Quant Method : C:\MSDCHEM\1\METHODS\M4V541.M
Quant Title : sw846 8260b
QLast Update : Fri Nov 14 17:30:26 2014
Response via : Initial Calibration

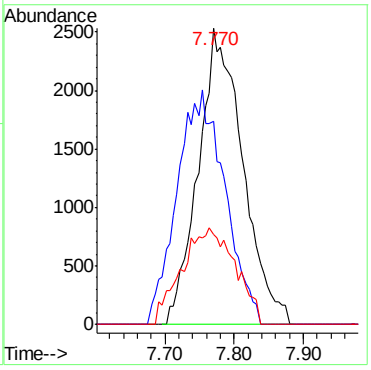


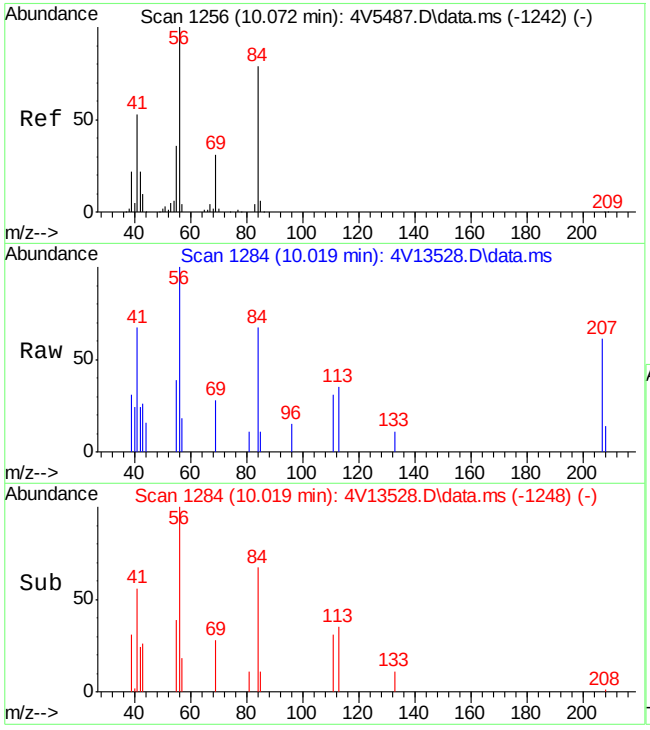


#28
methyl tert butyl ether
Concen: 1.97 ug/L
RT: 7.769 min Scan# 855
Delta R.T. -0.005 min
Lab File: 4V13528.D
Acq: 29 Nov 2014 3:21 pm

Tgt Ion: 73 Resp: 11309

Ion	Ratio	Lower	Upper
73	100		
57	68.7	0.0	52.6#
43	30.3	0.0	49.1

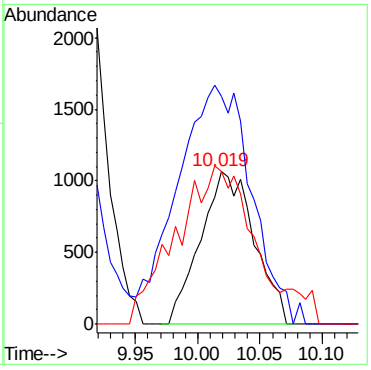


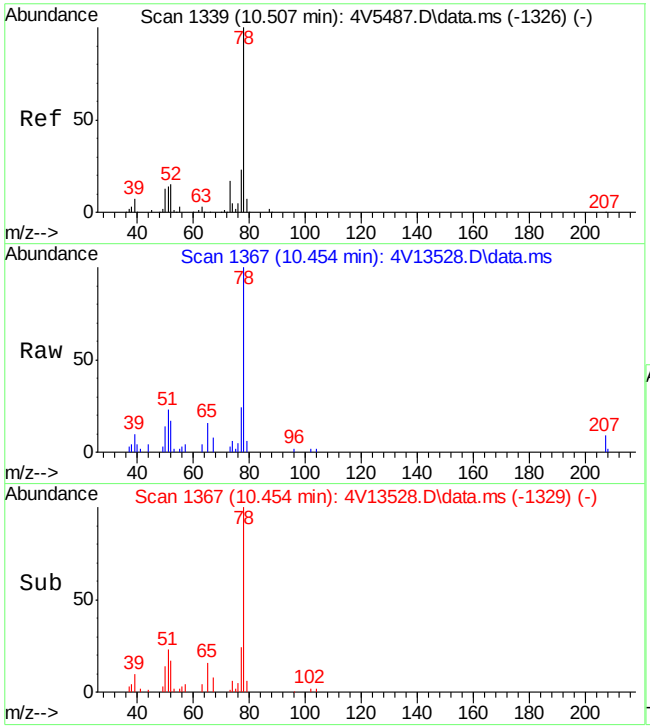


#54
cyclohexane
Concen: 1.28 ug/L
RT: 10.019 min Scan# 1284
Delta R.T. -0.010 min
Lab File: 4V13528.D
Acq: 29 Nov 2014 3:21 pm

Tgt Ion: 84 Resp: 3205

Ion	Ratio	Lower	Upper
84	100		
56	215.5	102.4	162.4#
41	154.4	39.2	99.2#

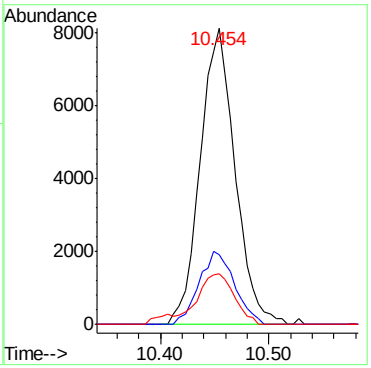


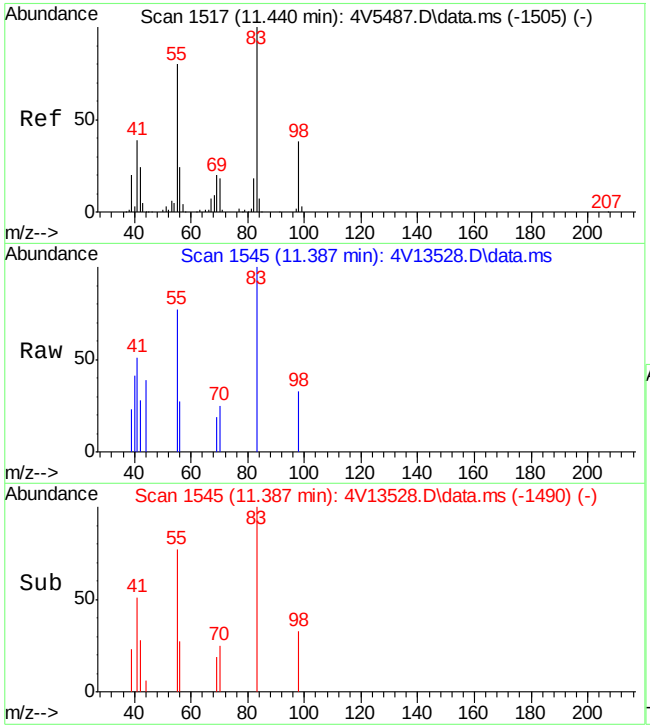


#58
benzene
Concen: 3.05 ug/L
RT: 10.454 min Scan# 1367
Delta R.T. 0.000 min
Lab File: 4V13528.D
Acq: 29 Nov 2014 3:21 pm

Tgt Ion: 78 Resp: 18274

Ion	Ratio	Lower	Upper
78	100		
77	23.7	0.0	53.3
52	17.0	0.0	45.5

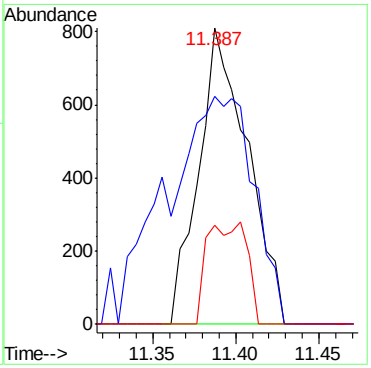


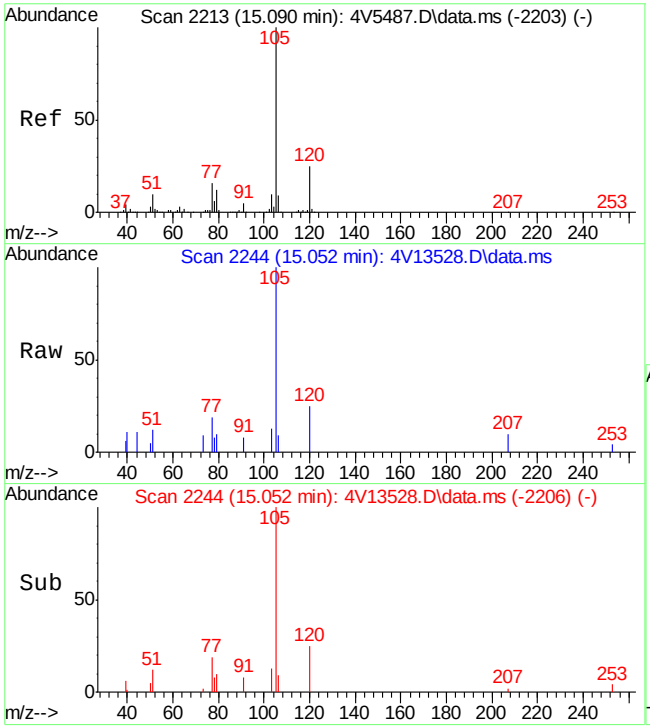


#69
methylcyclohexane
Concen: 0.65 ug/L
RT: 11.387 min Scan# 1545
Delta R.T. -0.010 min
Lab File: 4V13528.D
Acq: 29 Nov 2014 3:21 pm

Tgt Ion: 83 Resp: 1655

Ion	Ratio	Lower	Upper
83	100		
55	76.9	52.6	112.6
98	33.3	10.5	70.5

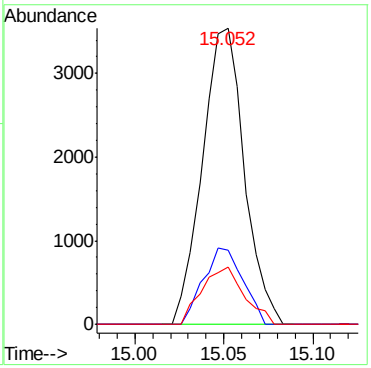




#95
isopropylbenzene
Concen: 0.86 ug/L
RT: 15.052 min Scan# 2244
Delta R.T. 0.000 min
Lab File: 4V13528.D
Acq: 29 Nov 2014 3:21 pm

Tgt Ion:105 Resp: 5796

Ion	Ratio	Lower	Upper
105	100		
120	25.0	0.0	55.5
77	19.3	0.0	45.2



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : 4V13528.D
Acq On : 29 Nov 2014 3:21 pm
Operator : BenM
Sample : jb82646-2
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4V541.M
Title : sw846 8260b

Signal : TIC: 4V13528.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.921	104	121	128	rBV3	3423	16274	2.37%	0.328%
2	4.241	165	182	187	rBV5	3336	14443	2.10%	0.291%
3	4.466	222	225	229	rVB4	492	554	0.08%	0.011%
4	4.760	277	281	282	rVB3	603	626	0.09%	0.013%
5	4.786	284	286	289	rVB3	832	622	0.09%	0.013%
6	4.828	291	294	297	rBV3	602	633	0.09%	0.013%
7	4.891	305	306	310	rBV3	589	539	0.08%	0.011%
8	5.006	324	328	331	rBV5	608	983	0.14%	0.020%
9	5.038	333	334	340	rVB3	1136	963	0.14%	0.019%
10	5.258	345	376	400	rVB3	27016	144761	21.04%	2.917%
11	5.709	442	462	480	rBV5	3285	17654	2.57%	0.356%
12	6.008	518	519	524	rBV2	505	550	0.08%	0.011%
13	6.548	608	622	640	rBV6	3076	14411	2.09%	0.290%
14	6.705	648	652	655	rBV3	573	670	0.10%	0.013%
15	6.794	666	669	671	rBV2	624	516	0.07%	0.010%
16	6.836	674	677	681	rBV3	420	604	0.09%	0.012%
17	6.910	681	691	695	rBV3	1257	3009	0.44%	0.061%
18	7.161	732	739	741	rBV3	373	721	0.10%	0.015%
19	7.313	749	768	776	rVV3	9961	45571	6.62%	0.918%
20	7.434	776	791	826	rVB3	40526	284430	41.34%	5.731%
21	7.770	837	855	872	rVB5	8763	46873	6.81%	0.944%
22	7.869	872	874	881	rVB3	531	838	0.12%	0.017%
23	7.922	881	884	887	rBV3	668	841	0.12%	0.017%
24	8.116	919	921	924	rBV4	1308	1621	0.24%	0.033%
25	8.205	935	938	942	rBV2	637	771	0.11%	0.016%
26	8.304	955	957	959	rVB	675	521	0.08%	0.010%
27	8.456	979	986	990	rBV5	739	1436	0.21%	0.029%
28	8.514	995	997	999	rBV2	769	620	0.09%	0.012%
29	8.598	1010	1013	1016	rVB3	500	574	0.08%	0.012%
30	8.792	1048	1050	1052	rVB2	933	668	0.10%	0.013%
31	8.808	1052	1053	1056	rBV2	715	650	0.09%	0.013%
32	8.928	1067	1076	1082	rVB7	1359	3915	0.57%	0.079%
33	9.101	1098	1109	1127	rBV3	13749	46804	6.80%	0.943%
34	9.201	1127	1128	1133	rVB2	692	604	0.09%	0.012%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : 4V13528.D
Acq On : 29 Nov 2014 3:21 pm
Operator : BenM
Sample : jb82646-2
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4V541.M
Title : sw846 8260b

35	9.269	1139	1141	1144	rBV3	1075	1219	0.18%	0.025%
36	9.353	1152	1157	1161	rVB4	816	1256	0.18%	0.025%
37	9.473	1178	1180	1182	rVB2	830	683	0.10%	0.014%
38	9.489	1182	1183	1188	rBV4	727	789	0.11%	0.016%
39	9.531	1188	1191	1194	rBV3	653	709	0.10%	0.014%
40	9.683	1218	1220	1226	rVB3	721	910	0.13%	0.018%
41	9.825	1244	1247	1250	rVB3	730	878	0.13%	0.018%
42	9.903	1250	1262	1268	rVV	209614	518814	75.40%	10.453%
43	9.961	1269	1273	1295	rVV2	125768	310163	45.08%	6.249%
44	10.082	1295	1296	1303	rVV3	1446	2088	0.30%	0.042%
45	10.150	1305	1309	1311	rVV2	639	847	0.12%	0.017%
46	10.218	1315	1322	1324	rBV4	814	1134	0.16%	0.023%
47	10.244	1324	1327	1330	rVV3	637	743	0.11%	0.015%
48	10.307	1338	1339	1343	rBV3	643	715	0.10%	0.014%
49	10.407	1347	1358	1383	rBV3	117524	311439	45.26%	6.275%
50	10.575	1383	1390	1397	rVV3	1794	3812	0.55%	0.077%
51	10.784	1426	1430	1434	rVB3	335	550	0.08%	0.011%
52	10.868	1434	1446	1462	rBV	243125	507609	73.78%	10.227%
53	11.188	1497	1507	1509	rBV3	423	857	0.12%	0.017%
54	11.356	1529	1539	1540	rBV3	2350	4048	0.59%	0.082%
55	11.392	1540	1546	1556	rVB4	3138	8181	1.19%	0.165%
56	11.791	1613	1622	1629	rVV4	1515	3366	0.49%	0.068%
57	11.953	1641	1653	1663	rVB6	2680	5872	0.85%	0.118%
58	12.189	1690	1698	1700	rBV4	491	853	0.12%	0.017%
59	12.525	1751	1762	1773	rBV	358943	630640	91.66%	12.706%
60	12.598	1773	1776	1784	rVV5	1393	2548	0.37%	0.051%
61	13.065	1860	1865	1874	rVB2	430	1047	0.15%	0.021%
62	13.815	2003	2008	2019	rVB4	593	1598	0.23%	0.032%
63	13.967	2035	2037	2045	rVV2	402	785	0.11%	0.016%
64	14.077	2049	2058	2072	rBV	362754	605076	87.94%	12.191%
65	14.271	2088	2095	2102	rBV3	2022	3384	0.49%	0.068%
66	14.486	2132	2136	2141	rVB4	432	536	0.08%	0.011%
67	14.622	2157	2162	2164	rBV3	437	559	0.08%	0.011%
68	14.717	2174	2180	2184	rBV4	530	1021	0.15%	0.021%
69	15.052	2238	2244	2253	rBV	7955	12956	1.88%	0.261%
70	15.157	2262	2264	2272	rVB5	451	937	0.14%	0.019%
71	15.272	2275	2286	2299	rBV	301629	475816	69.15%	9.587%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : 4V13528.D
Acq On : 29 Nov 2014 3:21 pm
Operator : BenM
Sample : jb82646-2
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4V541.M
Title : sw846 8260b

72	15.466	2315	2323	2335	rVV	15903	25818	3.75%	0.520%
73	15.571	2340	2343	2346	rVB4	679	675	0.10%	0.014%
74	15.618	2346	2352	2357	rBV4	1497	2274	0.33%	0.046%
75	15.786	2381	2384	2389	rVB3	654	803	0.12%	0.016%
76	15.860	2389	2398	2405	rBV5	1790	3812	0.55%	0.077%
77	15.922	2405	2410	2414	rBV5	621	747	0.11%	0.015%
78	15.959	2414	2417	2419	rBV4	952	659	0.10%	0.013%
79	16.012	2422	2427	2432	rVB5	1552	2136	0.31%	0.043%
80	16.137	2444	2451	2453	rBV2	1463	1773	0.26%	0.036%
81	16.174	2453	2458	2463	rVB5	1817	2766	0.40%	0.056%
82	16.284	2476	2479	2482	rBV4	1440	1507	0.22%	0.030%
83	16.426	2497	2506	2514	rBV	455975	688047	100.00%	13.863%
84	16.573	2529	2534	2540	rBV	7227	11665	1.70%	0.235%
85	16.615	2540	2542	2543	rBV2	1206	727	0.11%	0.015%
86	16.683	2544	2555	2562	rVV3	12538	24405	3.55%	0.492%
87	16.798	2572	2577	2584	rBV9	1694	2960	0.43%	0.060%
88	16.866	2584	2590	2594	rBV2	3363	5748	0.84%	0.116%
89	17.029	2615	2621	2632	rBV2	5690	9922	1.44%	0.200%
90	17.102	2632	2635	2637	rBV4	750	846	0.12%	0.017%
91	17.134	2637	2641	2645	rBV5	3689	4797	0.70%	0.097%
92	17.202	2648	2654	2660	rBV	12183	18598	2.70%	0.375%
93	17.275	2665	2668	2673	rVV6	1359	1804	0.26%	0.036%
94	17.411	2688	2694	2702	rBV3	6279	10702	1.56%	0.216%
95	17.663	2740	2742	2744	rBV3	1523	1169	0.17%	0.024%
96	17.758	2754	2760	2765	rBV	10109	15574	2.26%	0.314%
97	17.873	2778	2782	2786	rBV4	5037	6901	1.00%	0.139%
98	17.915	2786	2790	2797	rVB	17212	26907	3.91%	0.542%
99	18.224	2847	2849	2853	rVB5	2817	3278	0.48%	0.066%
100	18.554	2909	2912	2918	rVB3	5096	6523	0.95%	0.131%

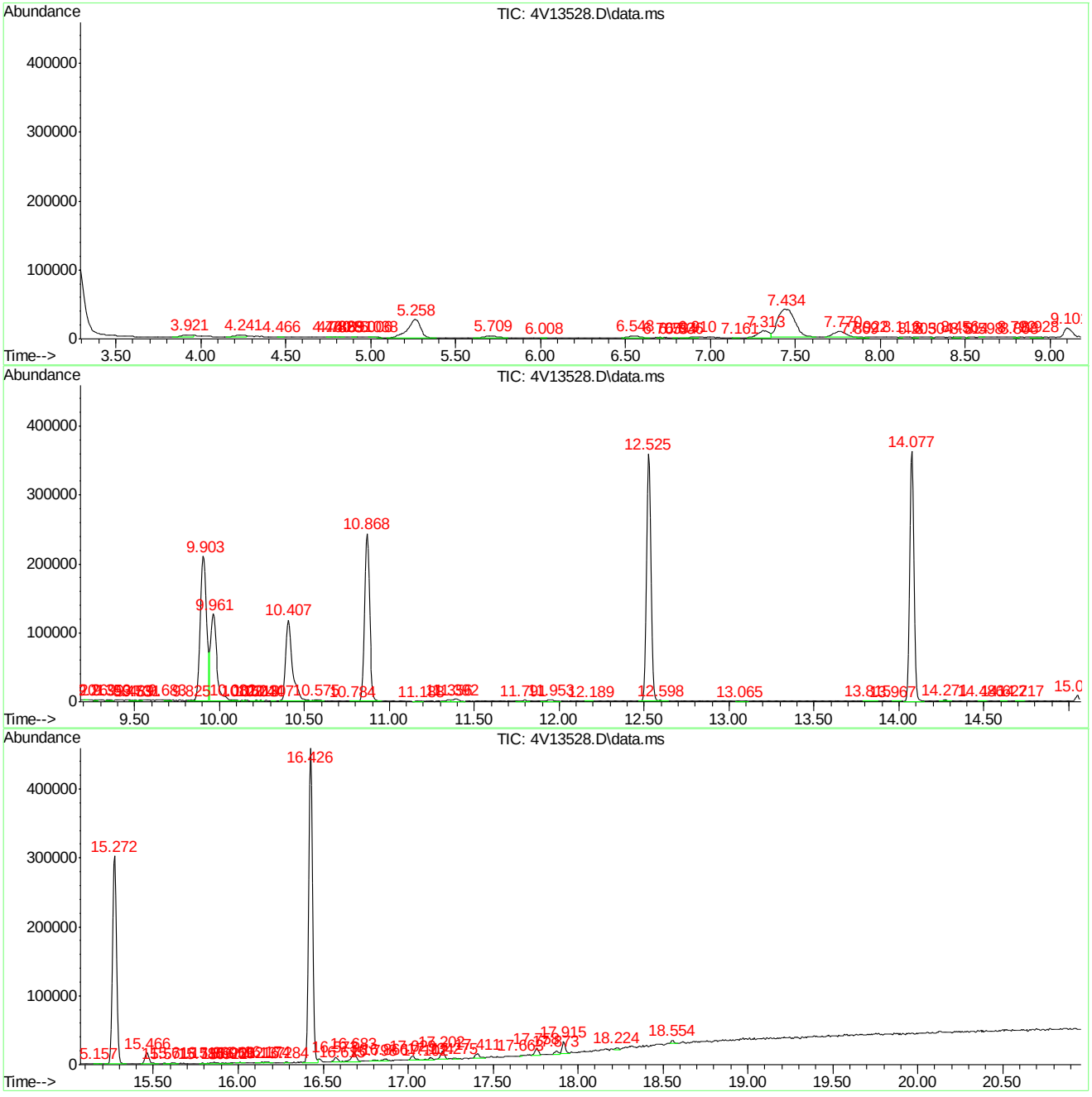
Sum of corrected areas: 4963251

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\
Data File : 4V13528.D
Acq On : 29 Nov 2014 3:21 pm
Operator : BenM
Sample : jb82646-2
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4V541.M
Quant Title : sw846 8260b

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
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Acq On : 29 Nov 2014 3:21 pm
Operator : BenM
Sample : jb82646-2
Misc : MS77650,V4V558,5,,,,1
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Quant Title : sw846 8260b

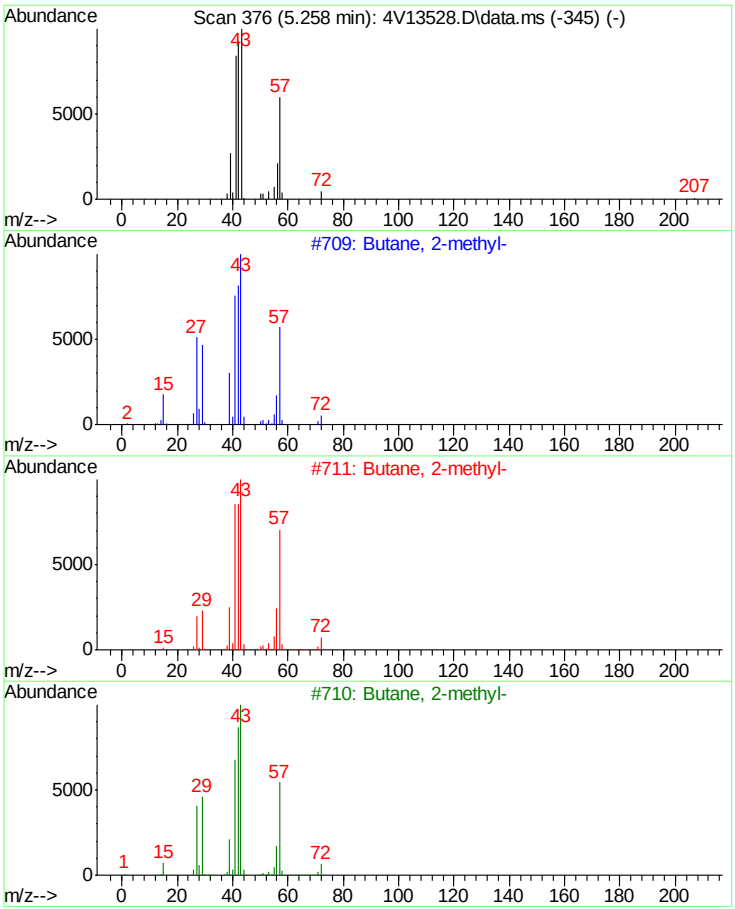
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p

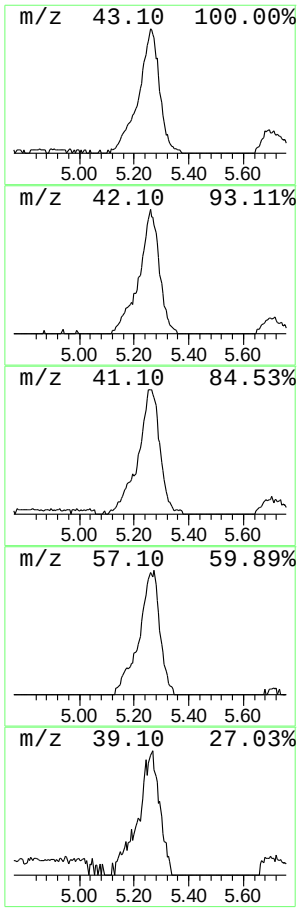
****

Peak Number 1 Butane, 2-methyl- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.258	13.95 ug/L	144761	pentafluorobenzene	9.903

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	90
2	Butane, 2-methyl-	72	C5H12	000078-78-4	83
3	Butane, 2-methyl-	72	C5H12	000078-78-4	72
4	2-Pentene, 2-methoxy-	100	C6H12O	061142-47-0	37
5	1-Propene, 2-methyl-	56	C4H8	000115-11-7	9





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\
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Misc : MS77650,V4V558,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

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Quant Title : sw846 8260b

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Butane, 2-methyl-	5.258	14.0	ug/L	144761	2	9.903	518814	50.0

Quantitation Report (LSC Reviewed)

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190336.D
Acq On : 3 Dec 2014 7:50 pm
Operator : yunxiac
Sample : JB82646-3
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Dec 05 08:52:04 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um
QLast Update : Thu Nov 20 10:49:23 2014
Response via : Initial Calibration

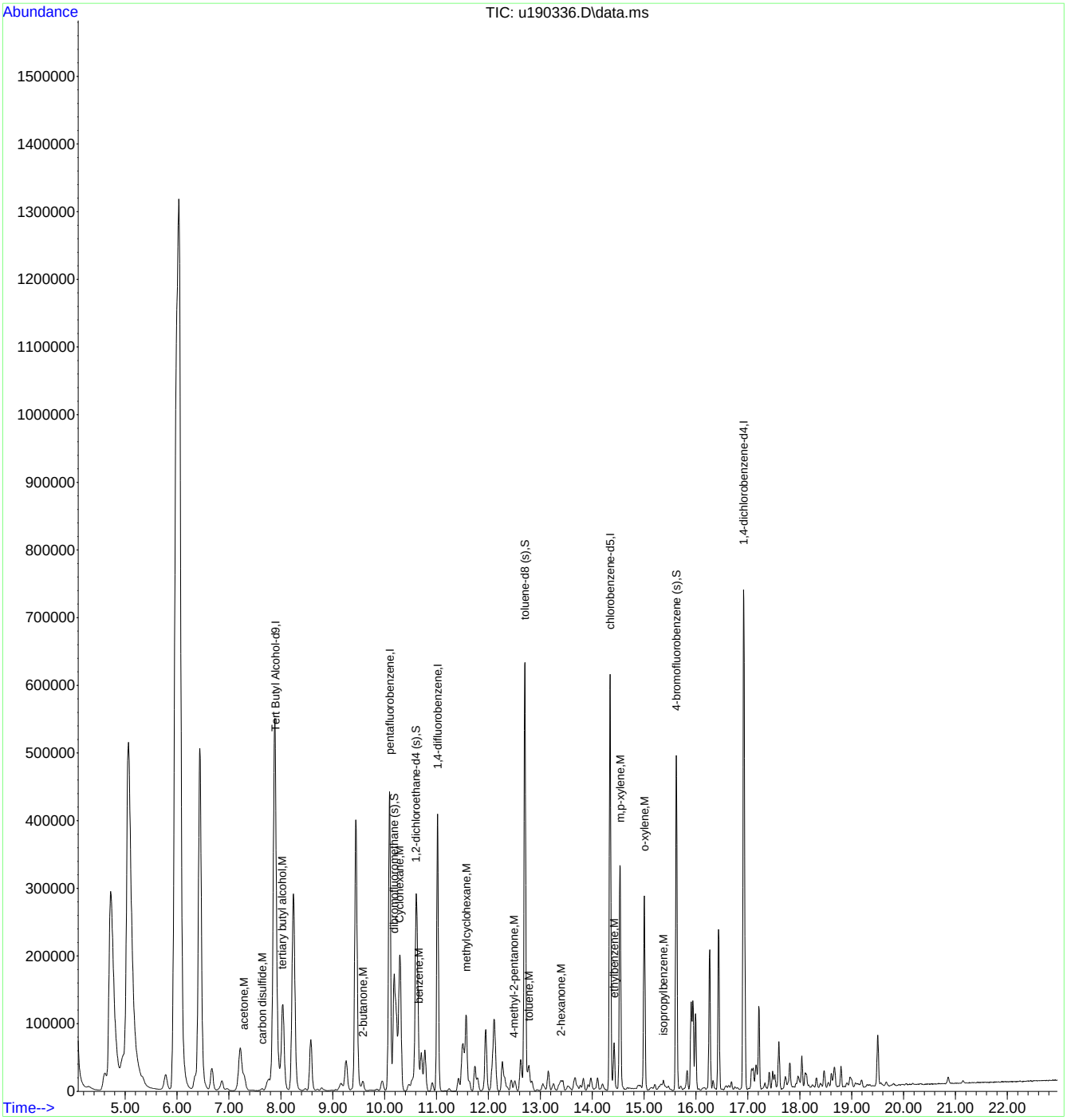
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.899	65	125256	500.00	ug/L	0.00
5) pentafluorobenzene	10.100	168	406511	50.00	ug/L	0.00
64) 1,4-difluorobenzene	11.020	114	441098	50.00	ug/L	0.00
96) chlorobenzene-d5	14.345	117	409118	50.00	ug/L	0.00
112) 1,4-dichlorobenzene-d4	16.917	152	226673	50.00	ug/L	0.00
System Monitoring Compounds						
56) dibromofluoromethane (s)	10.178	113	123290	51.45	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 102.90%			
57) 1,2-dichloroethane-d4 (s)	10.602	65	134152	50.81	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 101.62%			
88) toluene-d8 (s)	12.698	98	529445	55.21	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 110.42%			
114) 4-bromofluorobenzene (s)	15.621	95	194766	54.13	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 108.26%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	8.024	59	7023	25.58	ug/L #	1
29) acetone	7.287	58	15794	70.15	ug/L #	1
33) carbon disulfide	7.637	76	8028	0.88	ug/L	93
41) 2-butanone	9.582	72	5924	21.10	ug/L #	1
68) Cyclohexane	10.283	84	59252	15.71	ug/L #	81
72) benzene	10.659	78	6014	0.52	ug/L	92
79) methylcyclohexane	11.574	83	66209	15.53	ug/L	92
89) 4-methyl-2-pentanone	12.494	58	3338	3.42	ug/L #	57
90) toluene	12.777	92	11602	1.63	ug/L	98
95) 2-hexanone	13.399	58	6332	6.73	ug/L	98
107) ethylbenzene	14.423	91	55142	3.99	ug/L	99
108) m,p-xylene	14.538	106	118020	22.57	ug/L	97
109) o-xylene	15.004	106	98359	19.10	ug/L	96
113) isopropylbenzene	15.370	105	10515	0.78	ug/L	96

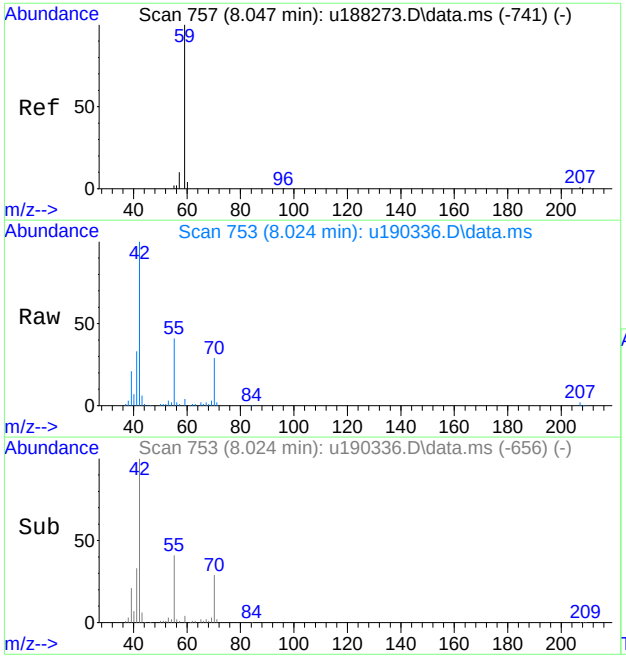
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (LSC Reviewed)

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190336.D
Acq On : 3 Dec 2014 7:50 pm
Operator : yunxiac
Sample : JB82646-3
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Dec 05 08:52:04 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um
QLast Update : Thu Nov 20 10:49:23 2014
Response via : Initial Calibration

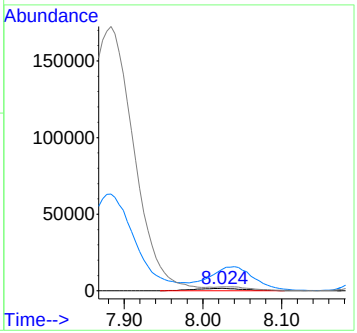


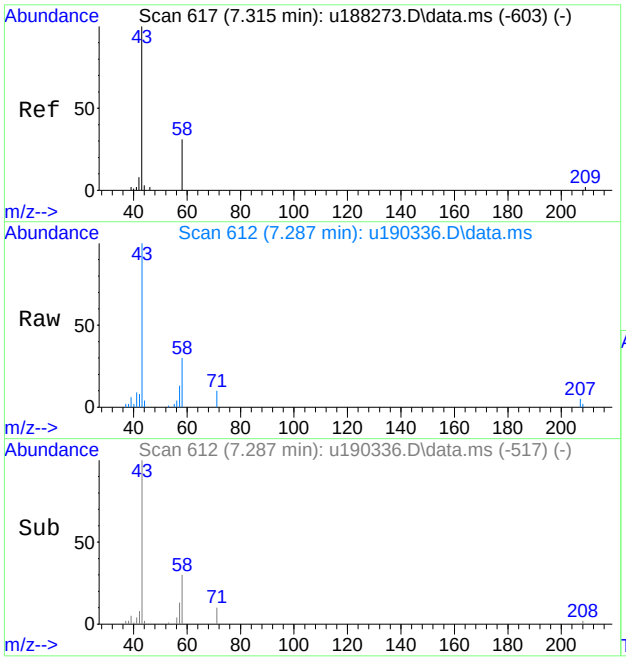


#2
tertiary butyl alcohol
Concen: 25.58 ug/L
RT: 8.024 min Scan# 753
Delta R.T. 0.005 min
Lab File: u190336.D
Acq: 3 Dec 2014 7:50 pm

Tgt Ion: 59 Resp: 7023

Ion	Ratio	Lower	Upper
59	100		
41	541.3	9.1	69.1#
43	0.0	0.0	51.3

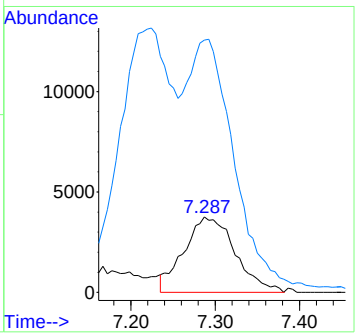


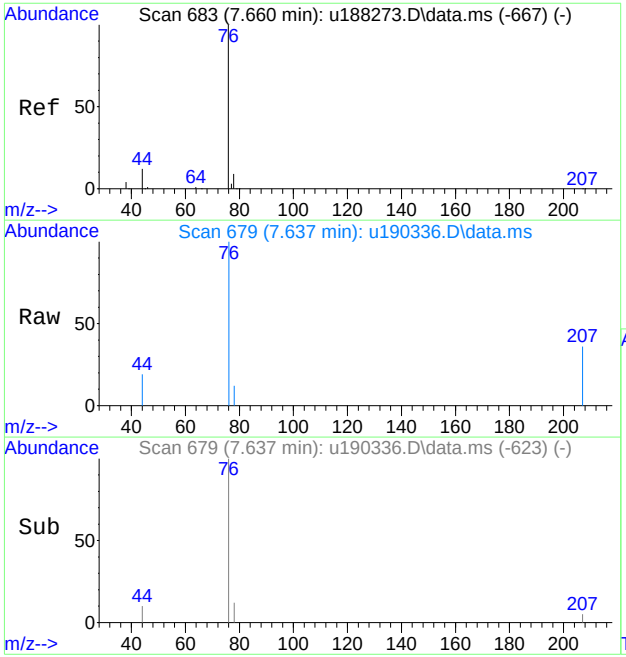


#29
acetone
Concen: 70.15 ug/L
RT: 7.287 min Scan# 612
Delta R.T. -0.006 min
Lab File: u190336.D
Acq: 3 Dec 2014 7:50 pm

Tgt Ion: 58 Resp: 15794

Ion	Ratio	Lower	Upper
58	100		
43	0.0	294.1	354.1#

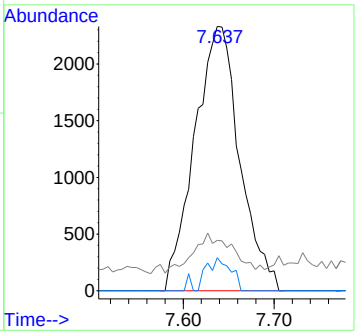


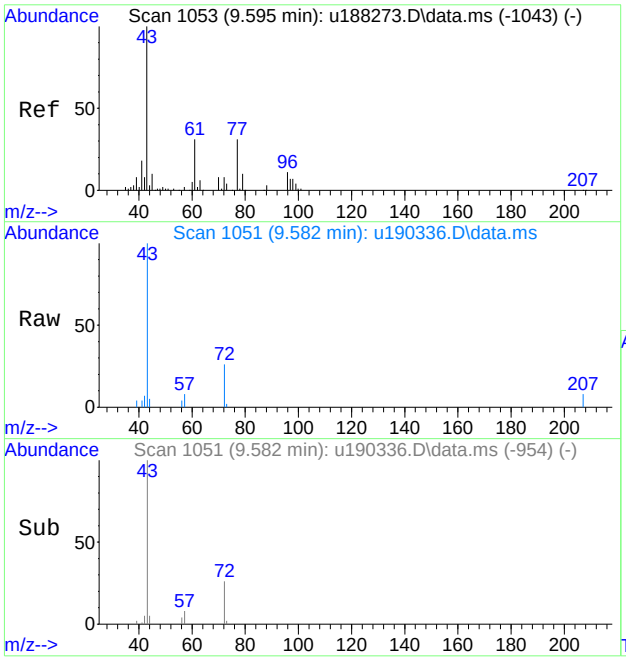


#33
carbon disulfide
Concen: 0.88 ug/L
RT: 7.637 min Scan# 679
Delta R.T. -0.006 min
Lab File: u190336.D
Acq: 3 Dec 2014 7:50 pm

Tgt Ion: 76 Resp: 8028

Ion	Ratio	Lower	Upper
76	100		
78	12.5	0.0	39.1
44	9.3	0.0	41.3

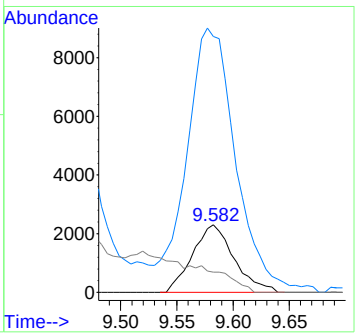


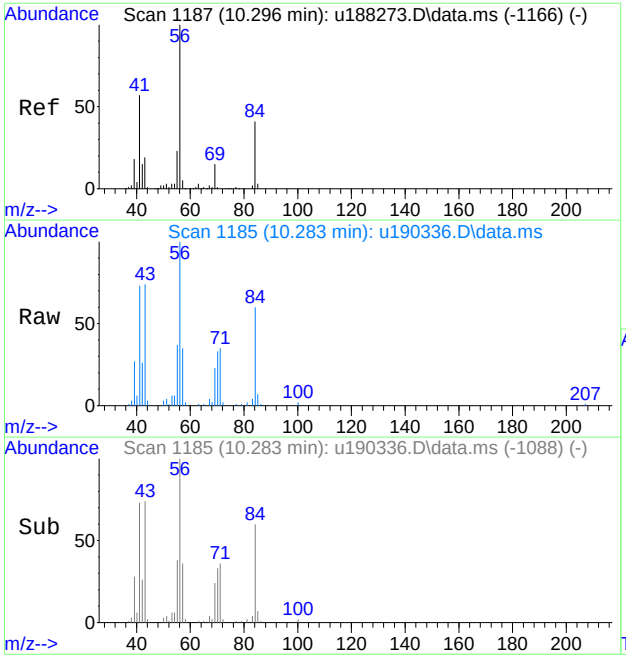


#41
2-butanone
Concen: 21.10 ug/L
RT: 9.582 min Scan# 1051
Delta R.T. 0.005 min
Lab File: u190336.D
Acq: 3 Dec 2014 7:50 pm

Tgt Ion: 72 Resp: 5924

Ion	Ratio	Lower	Upper
72	100		
43	463.1	1306.1	1366.1#
57	0.0	0.0	30.0

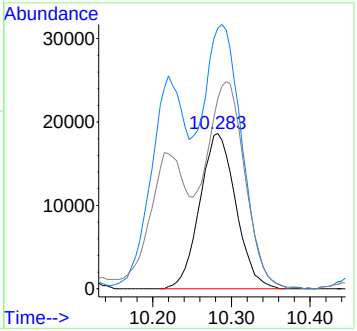


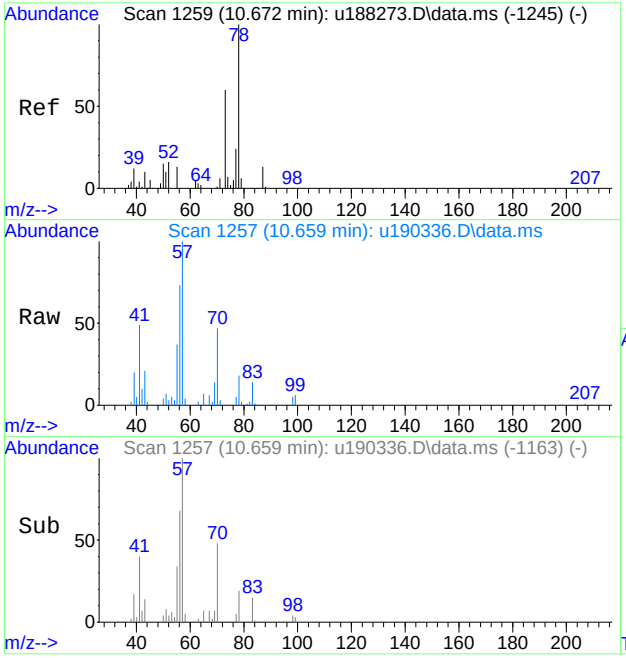


#68
Cyclohexane
Concen: 15.71 ug/L
RT: 10.283 min Scan# 1185
Delta R.T. 0.005 min
Lab File: u190336.D
Acq: 3 Dec 2014 7:50 pm

Tgt Ion: 84 Resp: 59252

Ion	Ratio	Lower	Upper
84	100		
56	167.8	183.5	243.5#
41	122.4	95.8	155.8

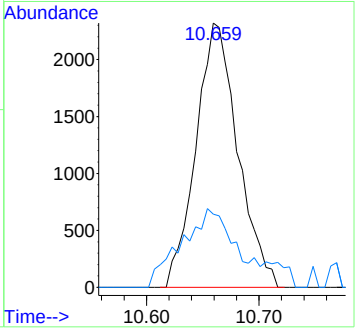


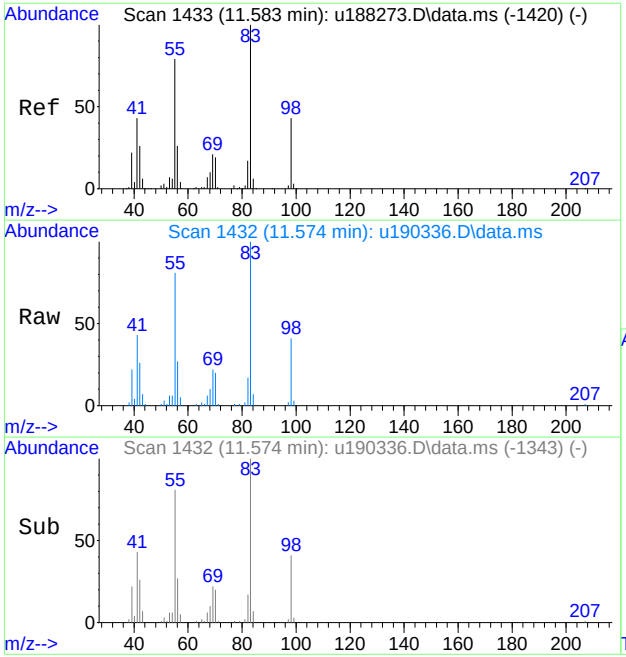


#72
benzene
Concen: 0.52 ug/L
RT: 10.659 min Scan# 1257
Delta R.T. -0.000 min
Lab File: u190336.D
Acq: 3 Dec 2014 7:50 pm

Tgt Ion: 78 Resp: 6014

Ion	Ratio	Lower	Upper
78	100		
77	20.2	0.0	54.0

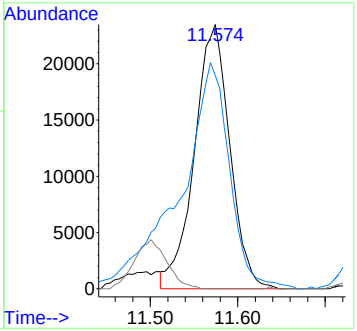


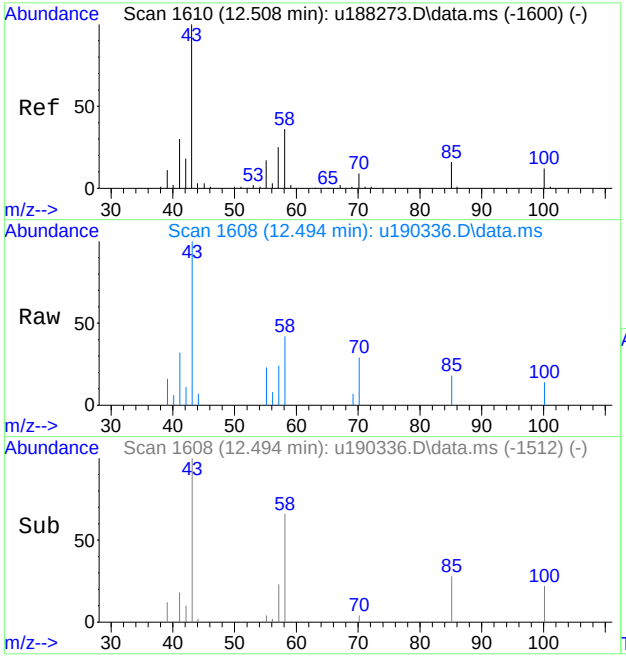


#79
methylcyclohexane
Concen: 15.53 ug/L
RT: 11.574 min Scan# 1432
Delta R.T. 0.005 min
Lab File: u190336.D
Acq: 3 Dec 2014 7:50 pm

Tgt Ion: 83 Resp: 66209

Ion	Ratio	Lower	Upper
83	100		
55	79.1	56.2	116.2
85	0.0	0.0	50.2

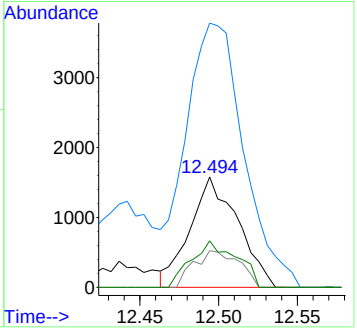


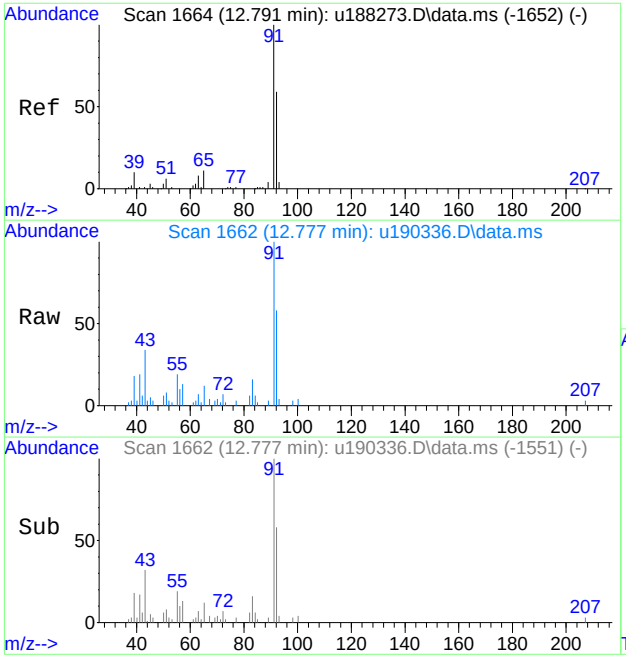


#89
4-methyl-2-pentanone
Concen: 3.42 ug/L
RT: 12.494 min Scan# 1608
Delta R.T. -0.000 min
Lab File: u190336.D
Acq: 3 Dec 2014 7:50 pm

Tgt Ion: 58 Resp: 3338

Ion	Ratio	Lower	Upper
58	100		
43	290.5	379.8	419.8#
100	0.0	10.0	50.0#
85	40.2	18.0	58.0

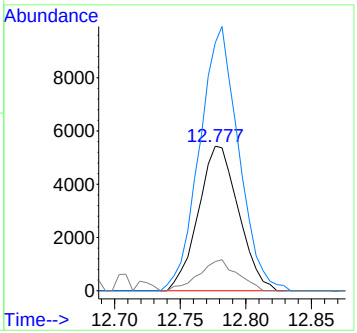


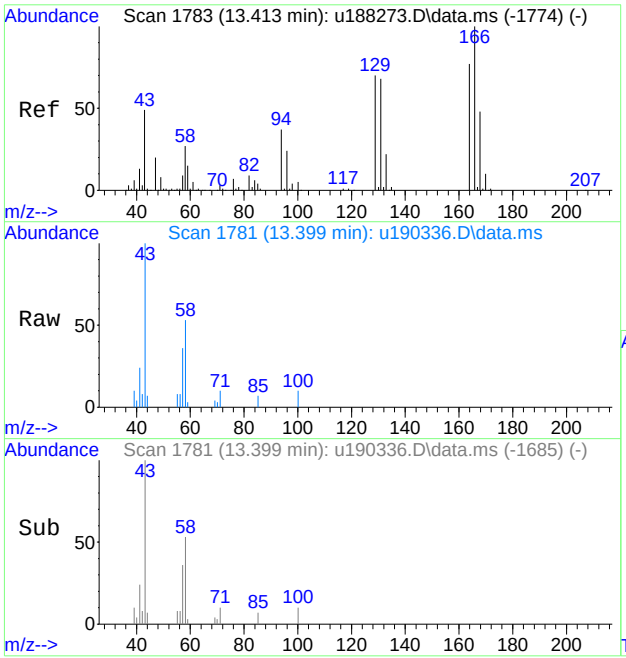


#90
toluene
Concen: 1.63 ug/L
RT: 12.777 min Scan# 1662
Delta R.T. -0.000 min
Lab File: u190336.D
Acq: 3 Dec 2014 7:50 pm

Tgt Ion: 92 Resp: 11602

Ion	Ratio	Lower	Upper
92	100		
91	171.4	138.3	198.3
65	20.2	0.0	49.2

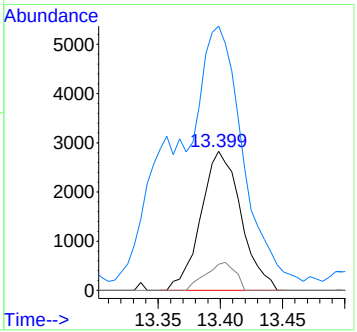


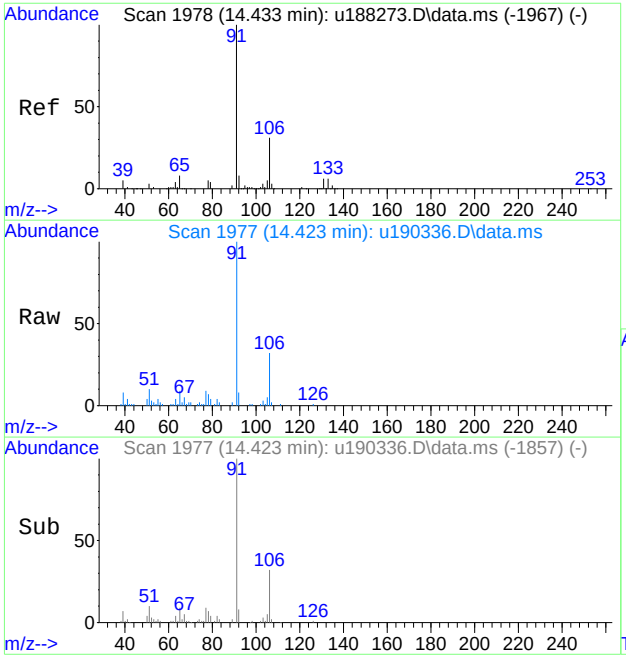


#95
2-hexanone
Concen: 6.73 ug/L
RT: 13.399 min Scan# 1781
Delta R.T. -0.000 min
Lab File: u190336.D
Acq: 3 Dec 2014 7:50 pm

Tgt Ion: 58 Resp: 6332

Ion	Ratio	Lower	Upper
58	100		
43	176.9	149.4	209.4
100	18.8	0.0	47.5

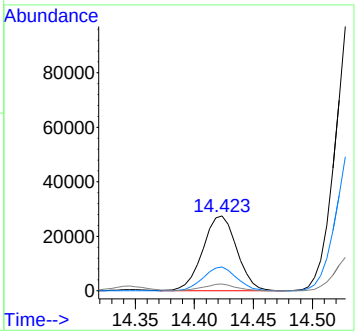


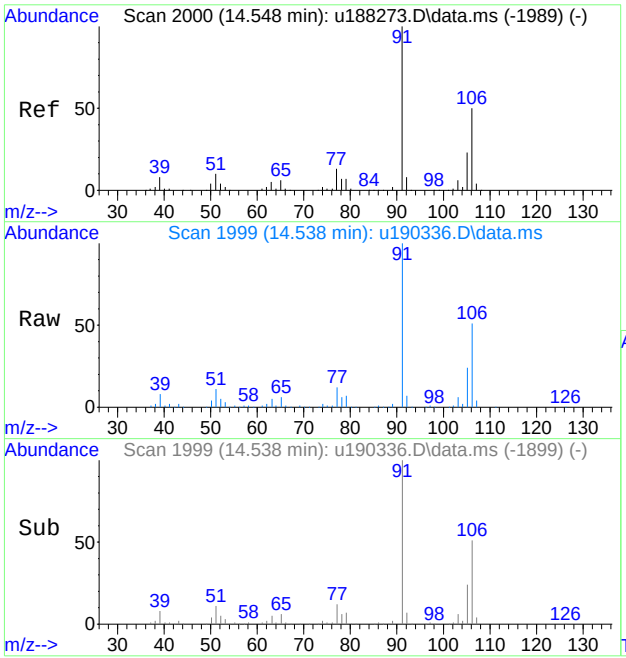


#107
ethylbenzene
Concen: 3.99 ug/L
RT: 14.423 min Scan# 1977
Delta R.T. -0.000 min
Lab File: u190336.D
Acq: 3 Dec 2014 7:50 pm

Tgt Ion: 91 Resp: 55142

Ion	Ratio	Lower	Upper
91	100		
106	31.8	1.0	61.0
77	9.0	0.0	38.4

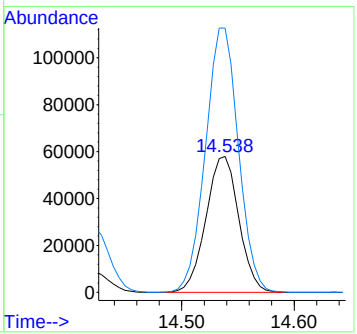


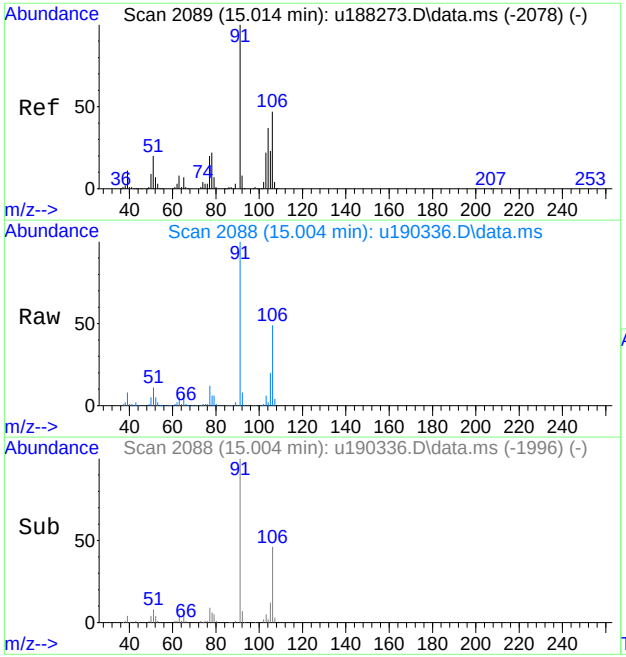


#108
m,p-xylene
Concen: 22.57 ug/L
RT: 14.538 min Scan# 1999
Delta R.T. 0.005 min
Lab File: u190336.D
Acq: 3 Dec 2014 7:50 pm

Tgt Ion:106 Resp: 118020

Ion	Ratio	Lower	Upper
106	100		
91	194.5	169.0	229.0

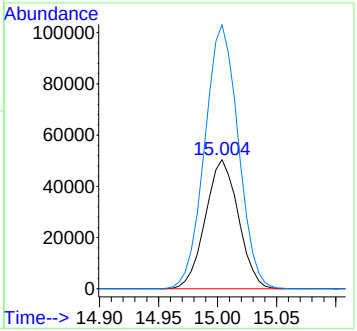


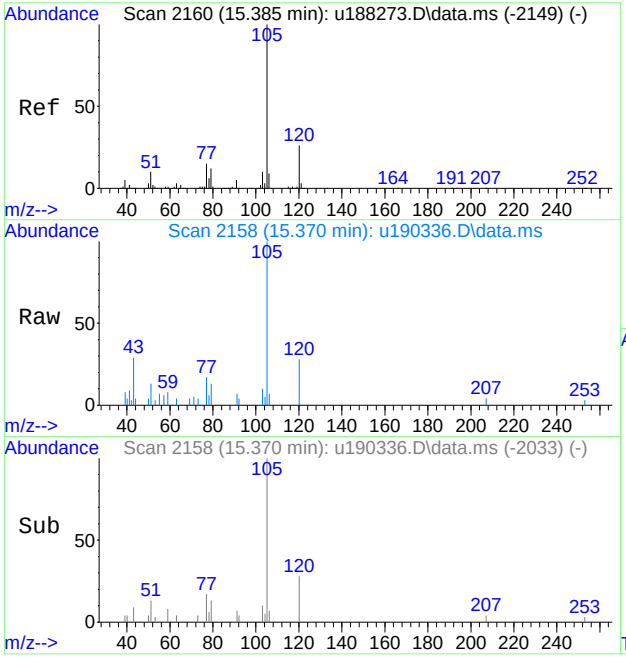


#109
o-xylene
Concen: 19.10 ug/L
RT: 15.004 min Scan# 2088
Delta R.T. -0.000 min
Lab File: u190336.D
Acq: 3 Dec 2014 7:50 pm

Tgt Ion:106 Resp: 98359

Ion	Ratio	Lower	Upper
106	100		
91	204.7	180.4	240.4

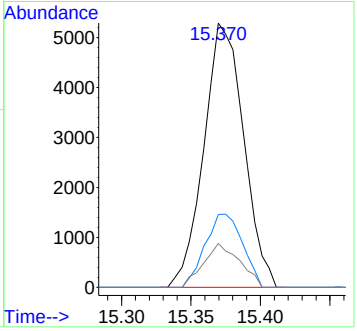




#113
isopropylbenzene
Concen: 0.78 ug/L
RT: 15.370 min Scan# 2158
Delta R.T. -0.006 min
Lab File: u190336.D
Acq: 3 Dec 2014 7:50 pm

Tgt Ion:105 Resp: 10515

Ion	Ratio	Lower	Upper
105	100		
120	27.5	0.0	55.8
77	16.7	0.0	44.7



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190336.D
Acq On : 3 Dec 2014 7:50 pm
Operator : yunxiac
Sample : JB82646-3
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 22 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MU8763.M
Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

Signal : TIC: u190336.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.720	106	121	155	rVV	277645	1780197	18.51%	4.956%
2	5.065	170	187	290	rVB	512895	3821129	39.73%	10.637%
3	6.032	340	372	418	rVV	1315515	9618454	100.00%	26.775%
4	6.440	420	450	481	rVV	504022	2096062	21.79%	5.835%
5	7.219	575	599	636	rBV3	63393	374096	3.89%	1.041%
6	7.883	708	726	744	rVV3	549516	2422855	25.19%	6.745%
7	8.035	745	755	776	rVV	126889	503046	5.23%	1.400%
8	8.244	777	795	828	rVB	290776	1161980	12.08%	3.235%
9	9.446	1004	1025	1043	rVV	400066	1326514	13.79%	3.693%
10	10.095	1134	1149	1158	rVV2	441917	1247270	12.97%	3.472%
11	10.184	1158	1166	1179	rVV3	173026	776808	8.08%	2.162%
12	10.293	1179	1187	1209	rVB4	201442	689473	7.17%	1.919%
13	10.607	1225	1247	1261	rBV5	285370	1069534	11.12%	2.977%
14	11.020	1315	1326	1347	rVB	409860	972141	10.11%	2.706%
15	11.569	1425	1431	1454	rVB3	112150	350435	3.64%	0.976%
16	12.107	1517	1534	1552	rVB3	106262	425763	4.43%	1.185%
17	12.703	1639	1648	1657	rVV	614184	1302006	13.54%	3.624%
18	14.345	1951	1962	1970	rBV	615052	1254407	13.04%	3.492%
19	14.533	1988	1998	2016	rVB	331112	695041	7.23%	1.935%
20	15.004	2078	2088	2101	rVB	287348	582577	6.06%	1.622%
21	15.621	2194	2206	2216	rBV	495380	983715	10.23%	2.738%
22	16.264	2316	2329	2337	rBV	206306	399057	4.15%	1.111%
23	16.436	2353	2362	2373	rBV	237075	462815	4.81%	1.288%
24	16.917	2441	2454	2467	rVB2	738991	1607262	16.71%	4.474%

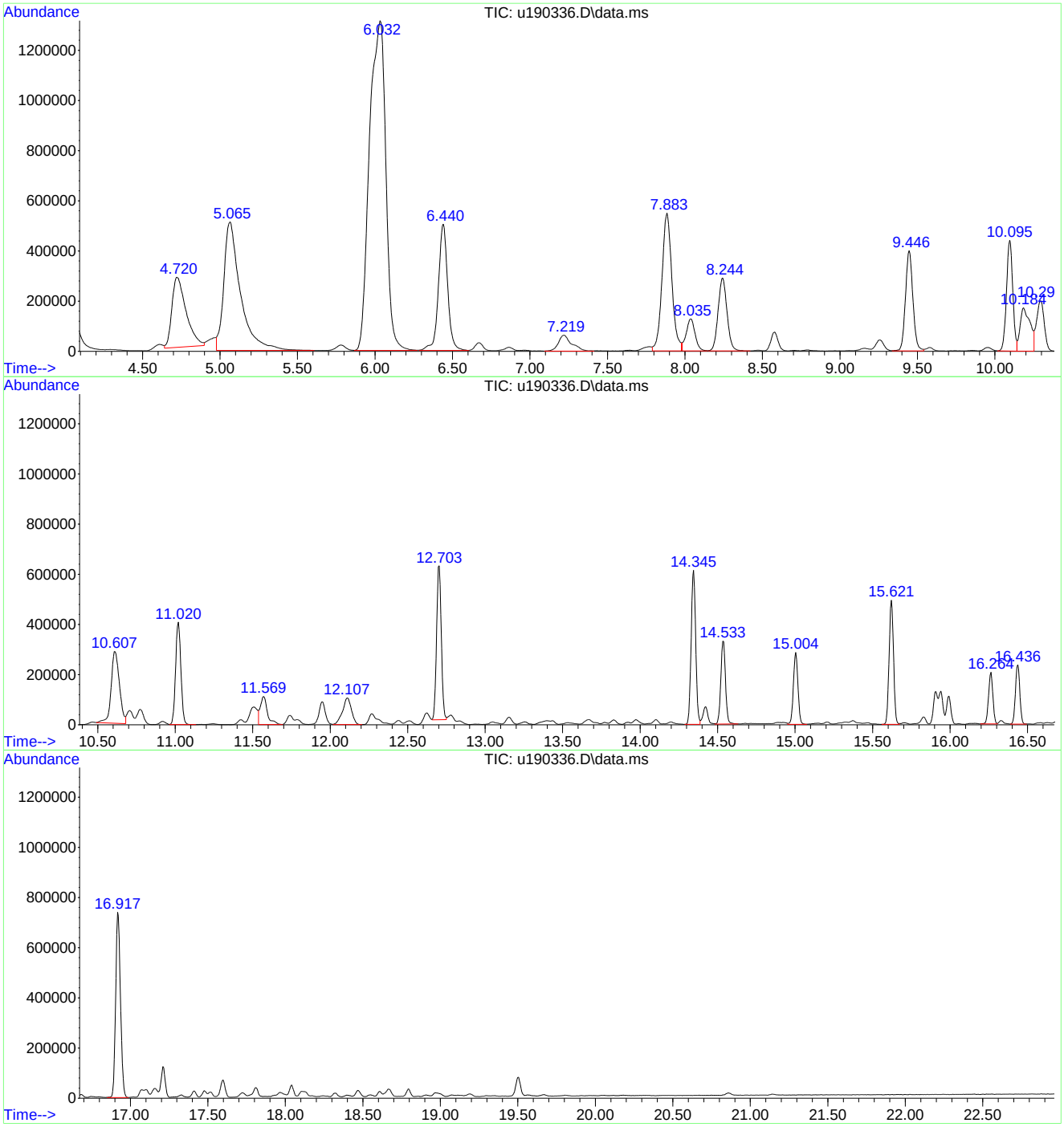
Sum of corrected areas: 35922637

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190336.D
Acq On : 3 Dec 2014 7:50 pm
Operator : yunxiac
Sample : JB82646-3
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190336.D
Acq On : 3 Dec 2014 7:50 pm
Operator : yunxiac
Sample : JB82646-3
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

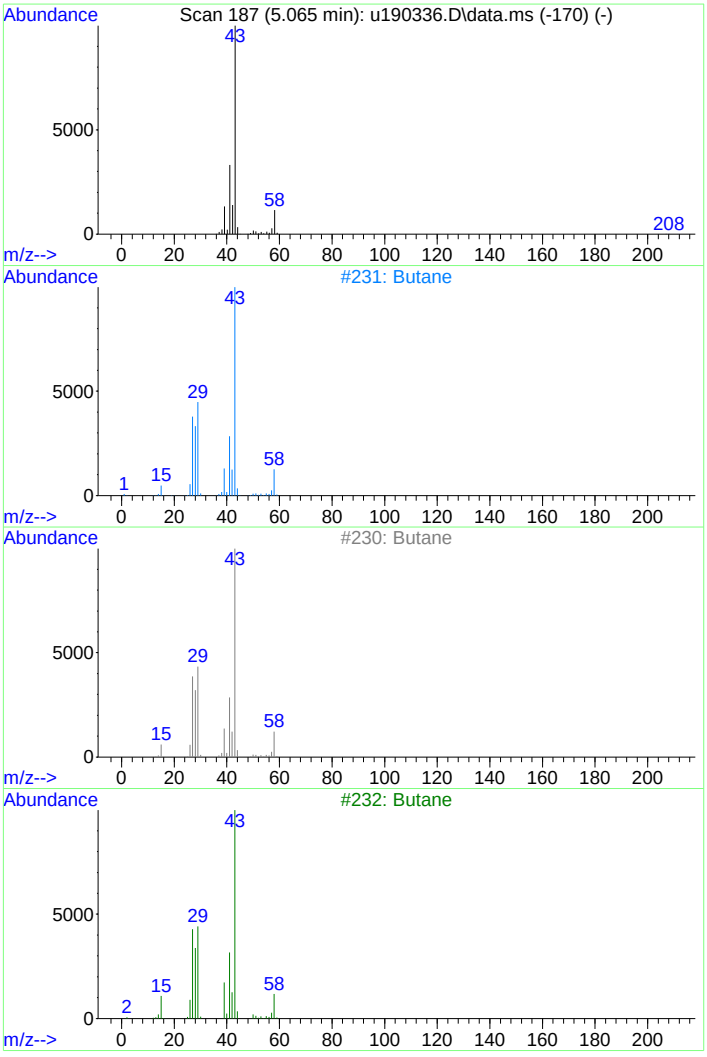
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

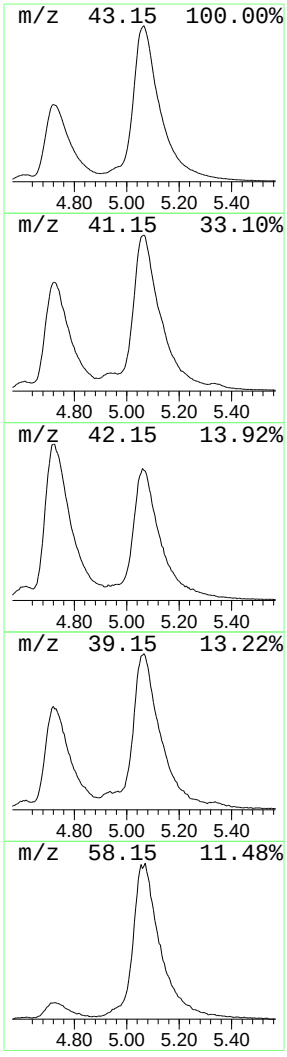
****

Peak Number 1 alkane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.065	153.18 ug/L	3821130	pentafluorobenzene	10.100

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	72
2	Butane	58	C4H10	000106-97-8	72
3	Butane	58	C4H10	000106-97-8	72
4	Isobutane	58	C4H10	000075-28-5	9
5	Isobutane	58	C4H10	000075-28-5	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190336.D
Acq On : 3 Dec 2014 7:50 pm
Operator : yunxiac
Sample : JB82646-3
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

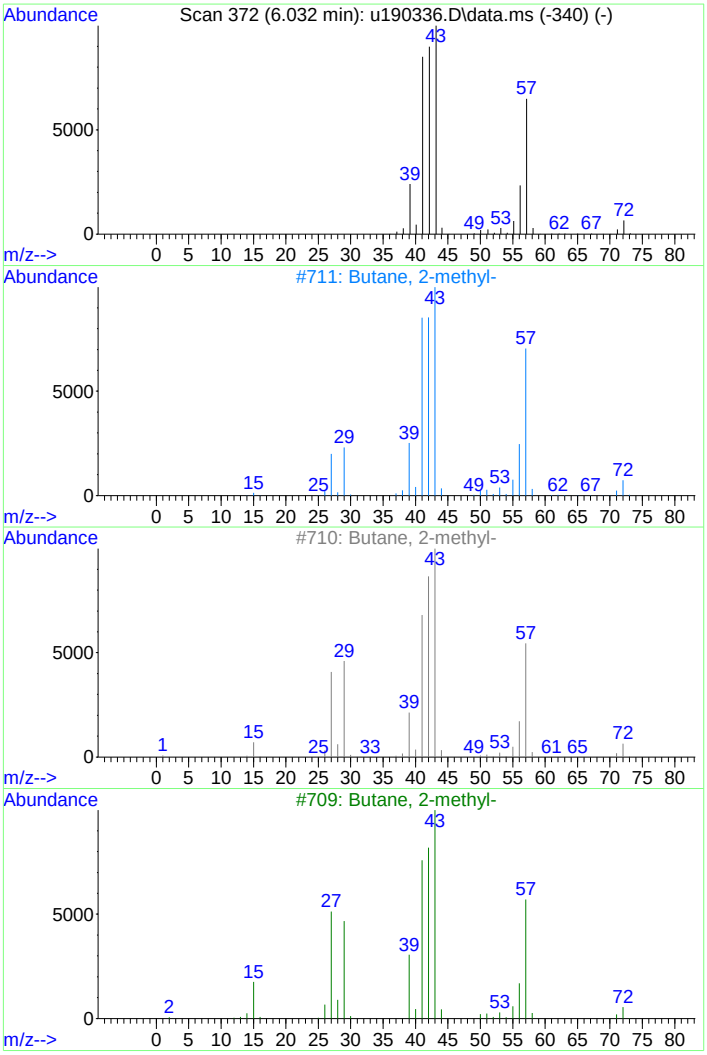
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

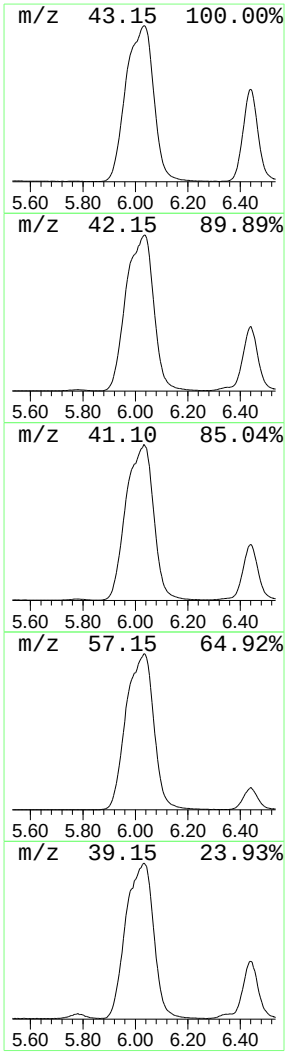
****

Peak Number 2 alkane Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.032	385.58 ug/L	9618450	pentafluorobenzene	10.100

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	94
2	Butane, 2-methyl-	72	C5H12	000078-78-4	91
3	Butane, 2-methyl-	72	C5H12	000078-78-4	90
4	Pentane	72	C5H12	000109-66-0	50
5	3-Buten-1-ol	72	C4H8O	000627-27-0	47





Library Search Compound Report

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Data File : u190336.D
Acq On : 3 Dec 2014 7:50 pm
Operator : yunxiac
Sample : JB82646-3
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

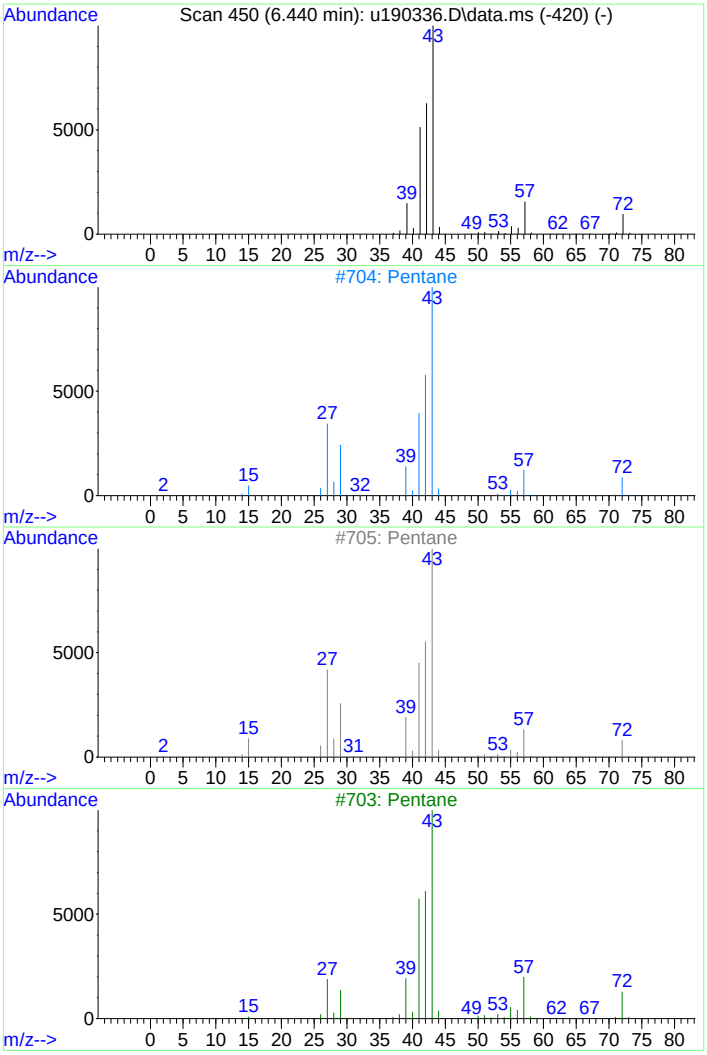
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

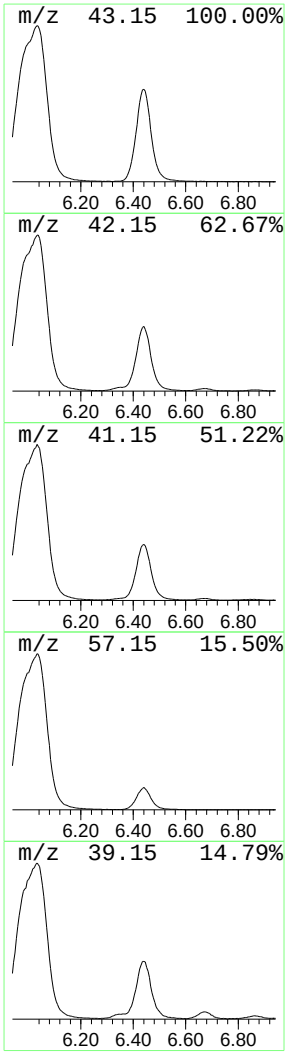
****

Peak Number 3 alkane Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.440	84.03 ug/L	2096060	pentafluorobenzene	10.100

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	90
2	Pentane	72	C5H12	000109-66-0	90
3	Pentane	72	C5H12	000109-66-0	80
4	Pentane	72	C5H12	000109-66-0	72
5	Diaziridine,3,3-dimethyl-	72	C3H8N2	004901-76-2	9





Library Search Compound Report

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Data File : u190336.D
Acq On : 3 Dec 2014 7:50 pm
Operator : yunxiac
Sample : JB82646-3
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

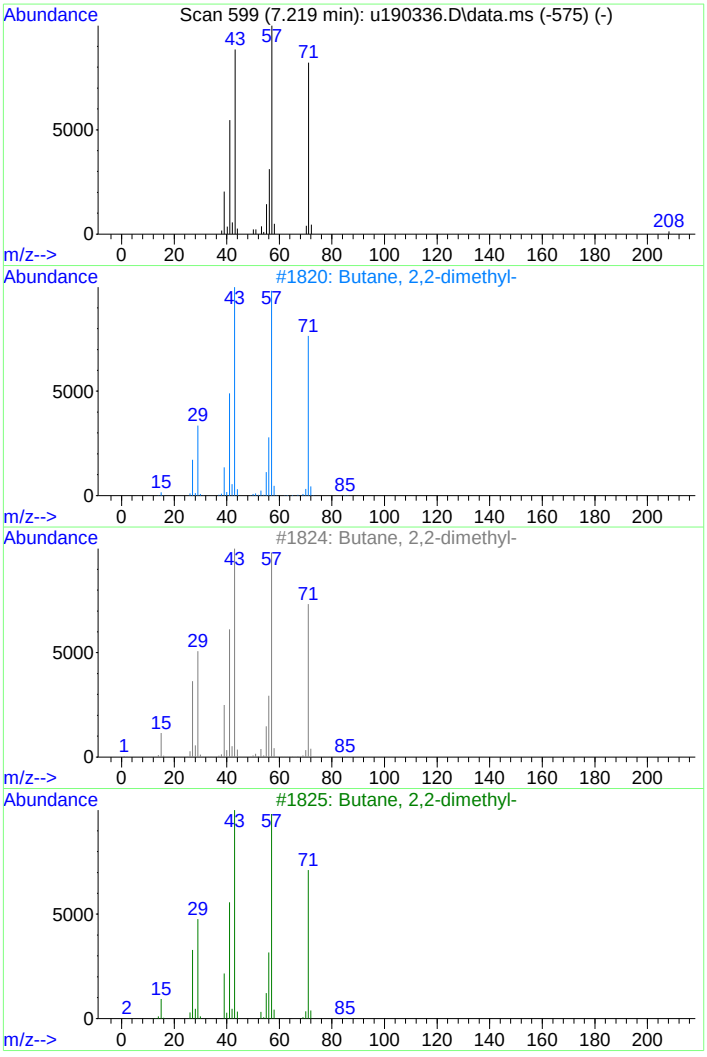
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

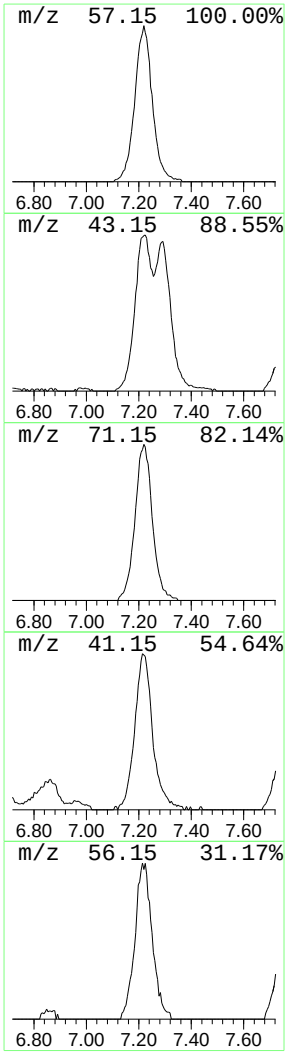
****

Peak Number 4 alkane Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.219	15.00 ug/L	374096	pentafluorobenzene	10.100

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2,2-dimethyl-	86	C6H14	000075-83-2	83
2	Butane, 2,2-dimethyl-	86	C6H14	000075-83-2	83
3	Butane, 2,2-dimethyl-	86	C6H14	000075-83-2	83
4	Butane, 2,2-dimethyl-	86	C6H14	000075-83-2	78
5	Sulfurous acid, isobutyl pentyl ...	208	C9H20O3S	1000309-13-8	72





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190336.D
Acq On : 3 Dec 2014 7:50 pm
Operator : yunxiac
Sample : JB82646-3
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

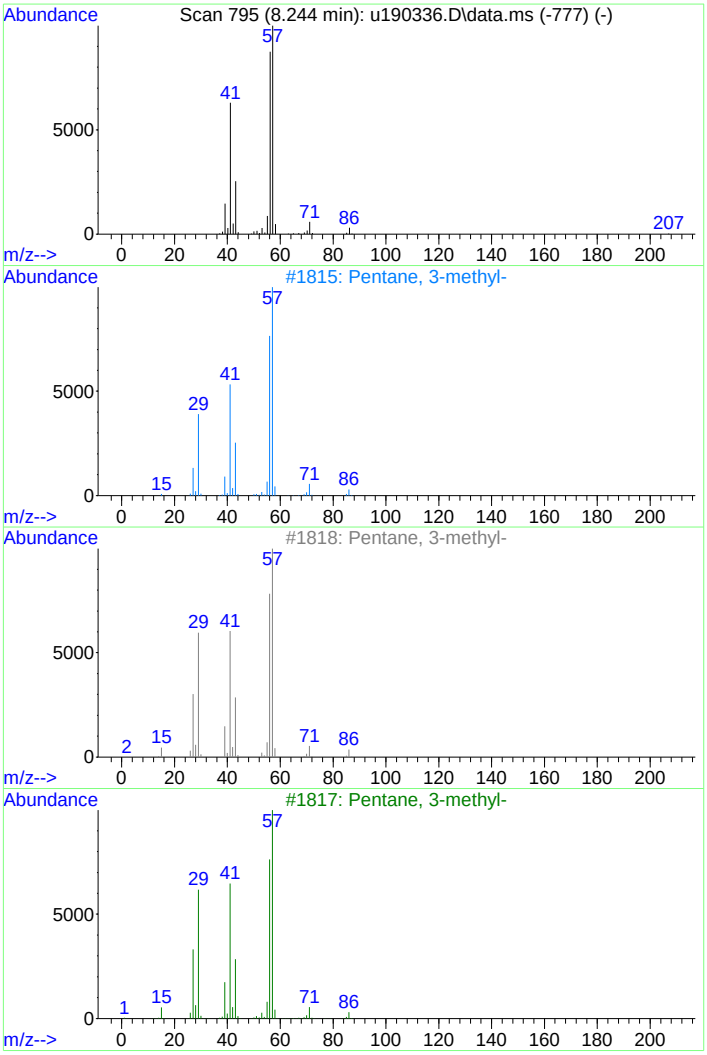
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

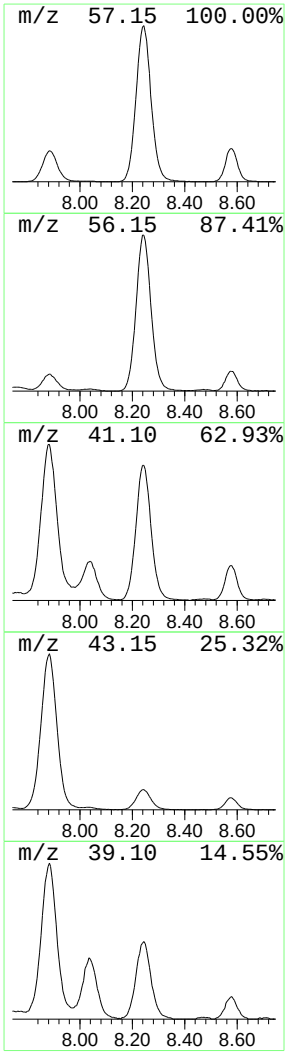
****

Peak Number 5 alkane Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.244	46.58 ug/L	1161980	pentafluorobenzene	10.100

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
2	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
3	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
4	Oxirane, (1-methylethyl)-	86	C5H10O	001438-14-8	45
5	Butyl isocyanatoacetate	157	C7H11NO3	017046-22-9	43





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190336.D
Acq On : 3 Dec 2014 7:50 pm
Operator : yunxiac
Sample : JB82646-3
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

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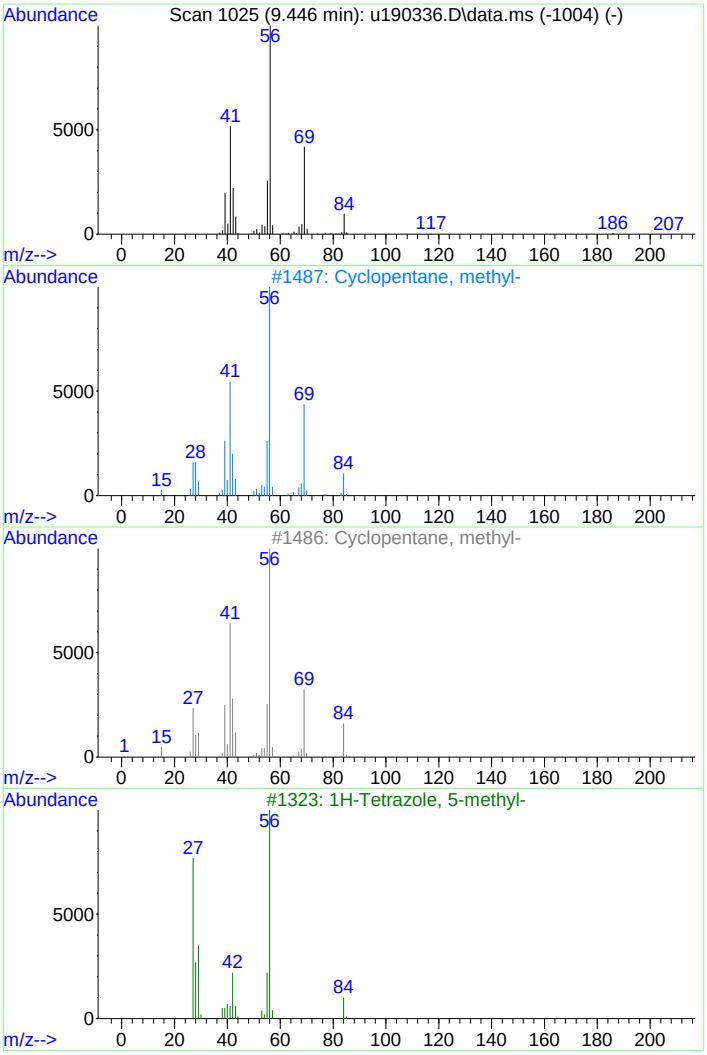
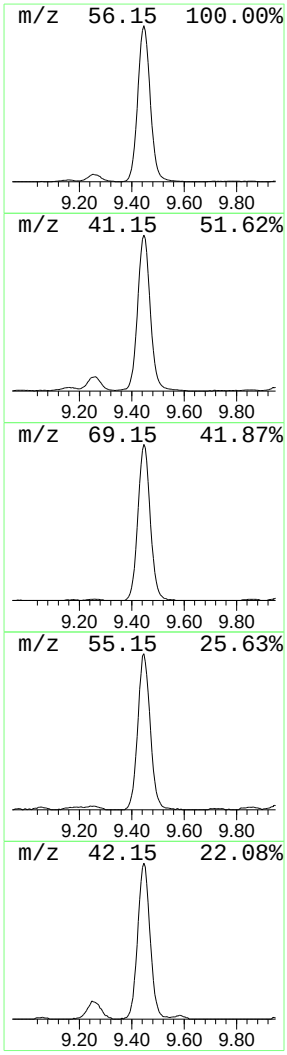
Peak Number 6 alkene Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.446	53.18 ug/L	1326510	pentafluorobenzene	10.100

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	94
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	91
3	1H-Tetrazole, 5-methyl-	84	C2H4N4	004076-36-2	80
4	Cyclopentane, methyl-	84	C6H12	000096-37-7	78
5	Tetramethylene diisocyanate	140	C6H8N2O2	004538-37-8	78





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190336.D
Acq On : 3 Dec 2014 7:50 pm
Operator : yunxiac
Sample : JB82646-3
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

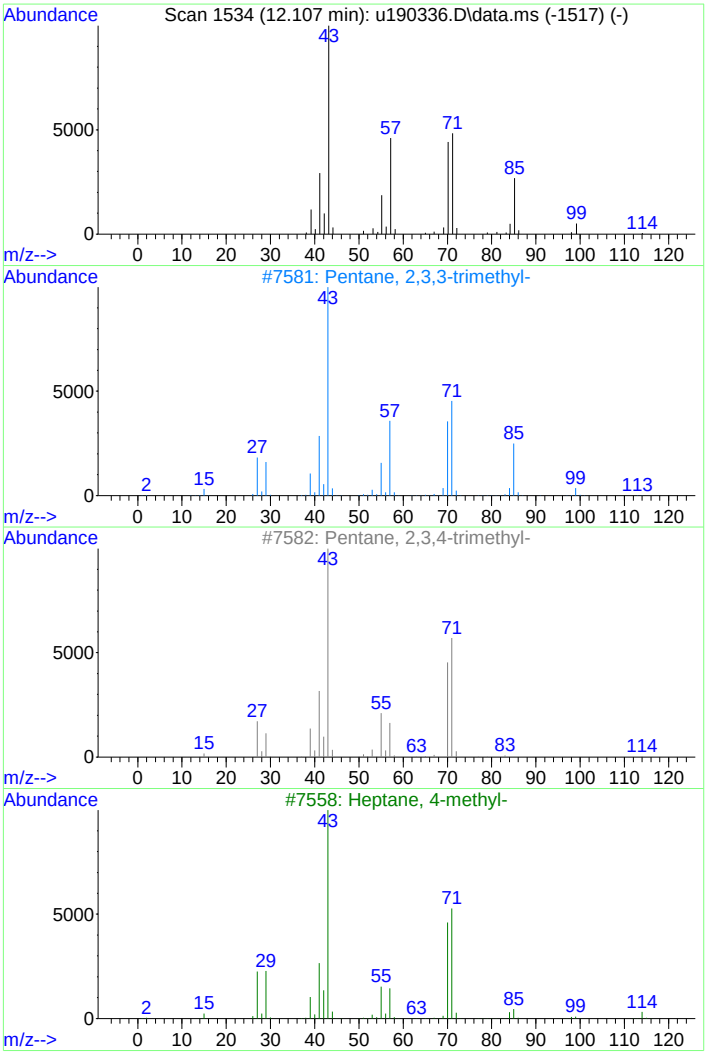
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

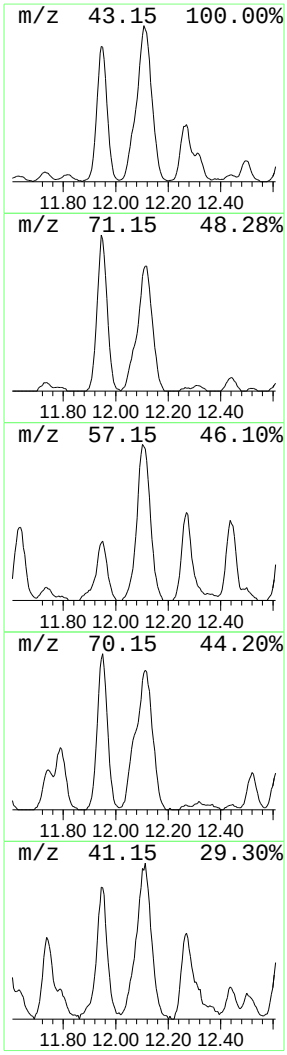
****

Peak Number 7 alkane Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.107	21.90 ug/L	425763	1,4-difluorobenzene	11.020

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	90
2	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	81
3	Heptane, 4-methyl-	114	C8H18	000589-53-7	64
4	Hexane, 3-methyl-	100	C7H16	000589-34-4	64
5	Hexane, 3-methyl-	100	C7H16	000589-34-4	64





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190336.D
Acq On : 3 Dec 2014 7:50 pm
Operator : yunxiac
Sample : JB82646-3
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

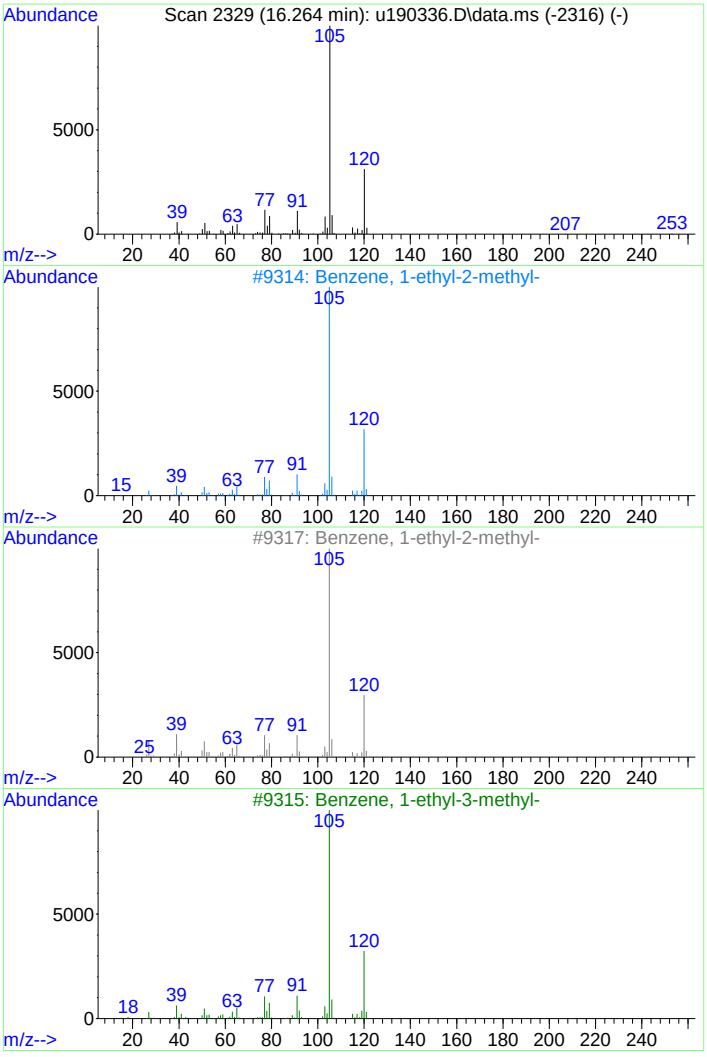
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

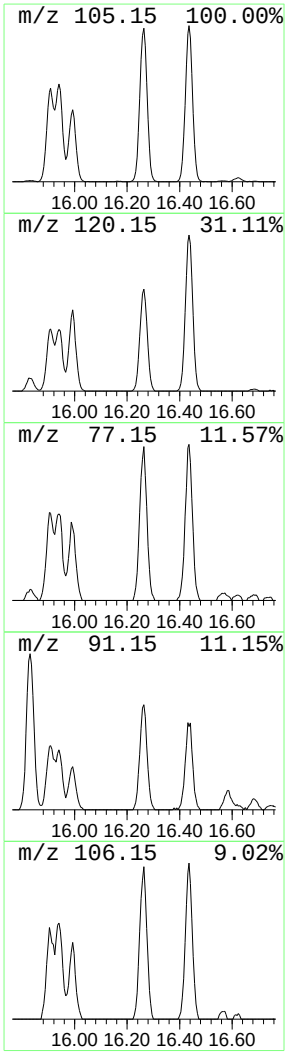
****

Peak Number 8 C3 alkyl benzene Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.264	12.41 ug/L	399057	1,4-dichlorobenzene-d4	16.917

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
3	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	91
5	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190336.D
Acq On : 3 Dec 2014 7:50 pm
Operator : yunxiac
Sample : JB82646-3
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

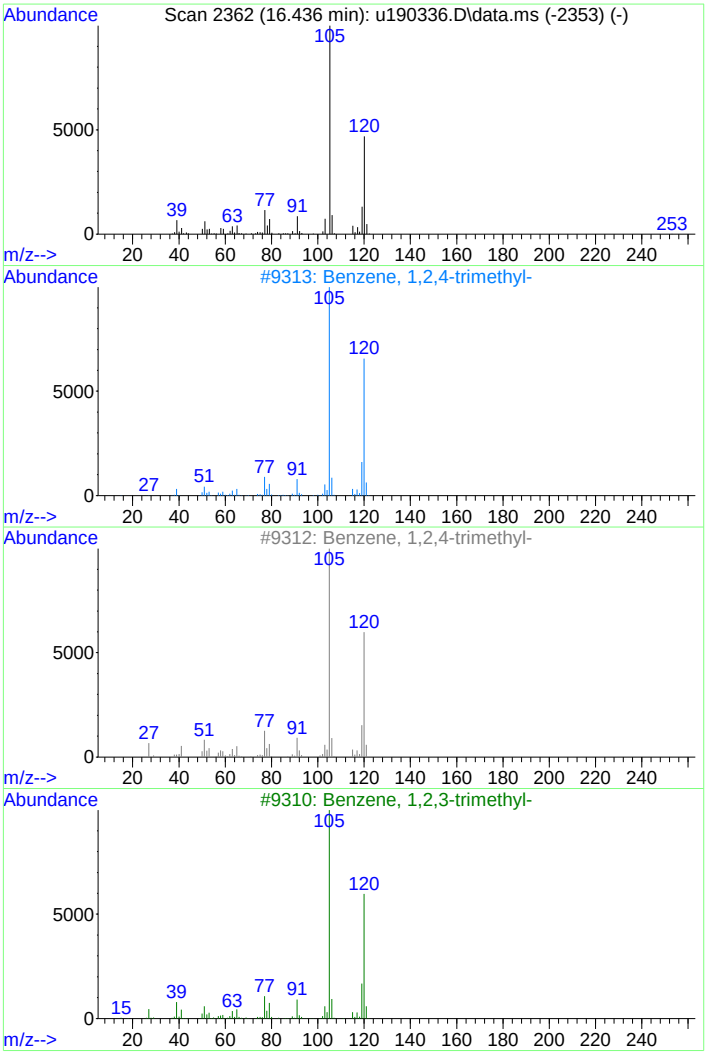
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

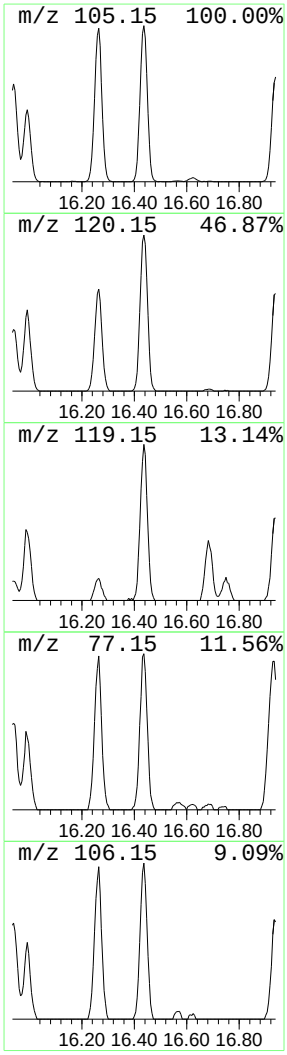
****

Peak Number 9 C3 alkyl benzene Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.436	14.40 ug/L	462815	1,4-dichlorobenzene-d4	16.917

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
2	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
3	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	94
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	93
5	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	93





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190336.D
Acq On : 3 Dec 2014 7:50 pm
Operator : yunxiac
Sample : JB82646-3
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

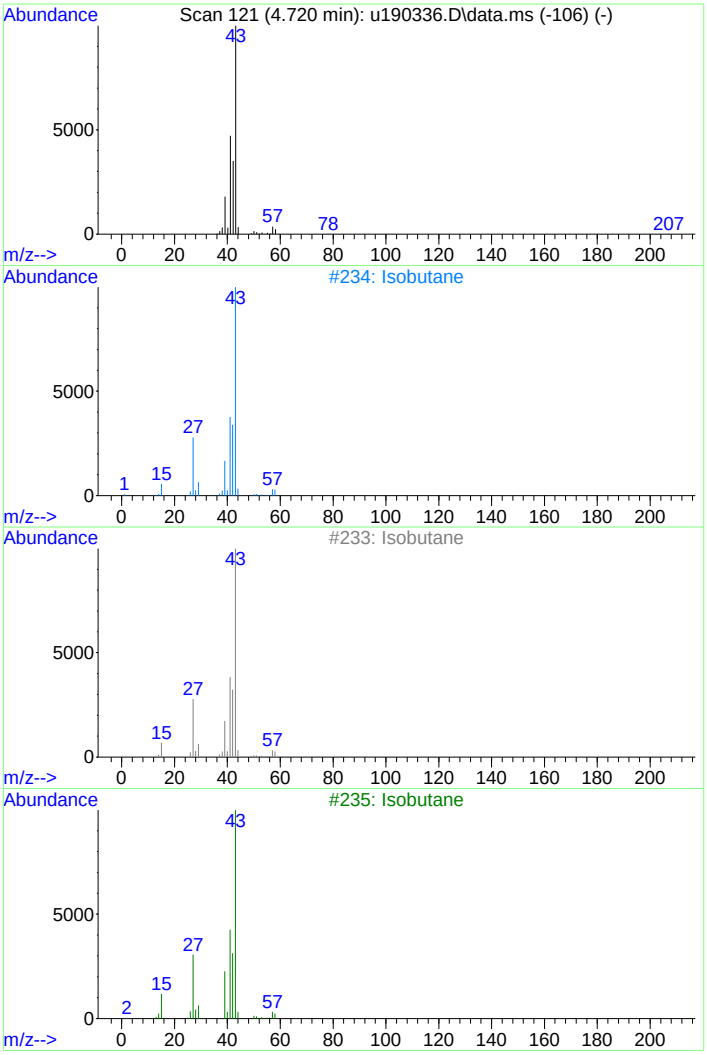
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

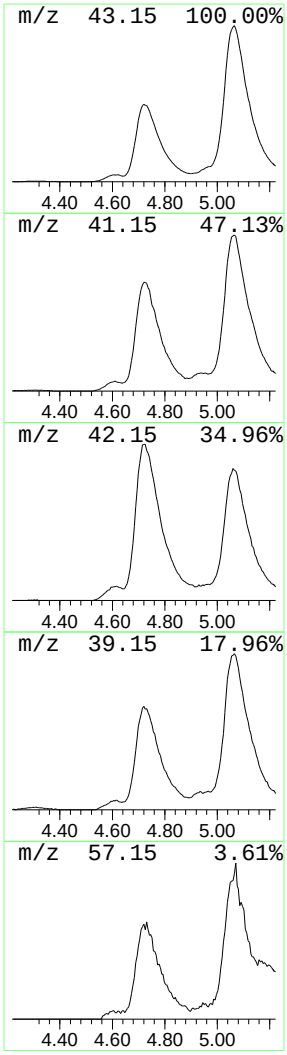
****

Peak Number 10 Isobutane Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.720	71.36 ug/L	1780200	pentafluorobenzene	10.100

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Isobutane	58	C4H10	000075-28-5	86
2	Isobutane	58	C4H10	000075-28-5	80
3	Isobutane	58	C4H10	000075-28-5	72
4	Isobutane	58	C4H10	000075-28-5	50
5	Cyclobutylamine	71	C4H9N	002516-34-9	9





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190336.D
Acq On : 3 Dec 2014 7:50 pm
Operator : yunxiac
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Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
alkane	5.065	153.2	ug/L	3821130	2	10.100	1247270	50.0
alkane	6.032	385.6	ug/L	9618450	2	10.100	1247270	50.0
alkane	6.440	84.0	ug/L	2096060	2	10.100	1247270	50.0
alkane	7.219	15.0	ug/L	374096	2	10.100	1247270	50.0
alkane	8.244	46.6	ug/L	1161980	2	10.100	1247270	50.0
alkene	9.446	53.2	ug/L	1326510	2	10.100	1247270	50.0
alkane	12.107	21.9	ug/L	425763	3	11.020	972141	50.0
C3 alkyl benzene	16.264	12.4	ug/L	399057	5	16.917	1607260	50.0
C3 alkyl benzene	16.436	14.4	ug/L	462815	5	16.917	1607260	50.0
Isobutane	4.720	71.4	ug/L	1780200	2	10.100	1247270	50.0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 4V13525.D
Acq On : 29 Nov 2014 2:02 pm
Operator : BenM
Sample : jb82646-4
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Dec 01 11:21:36 2014
Quant Method : C:\MSDCHEM\1\METHODS\M4V541.M
Quant Title : sw846 8260b
QLast Update : Fri Nov 14 17:30:26 2014
Response via : Initial Calibration

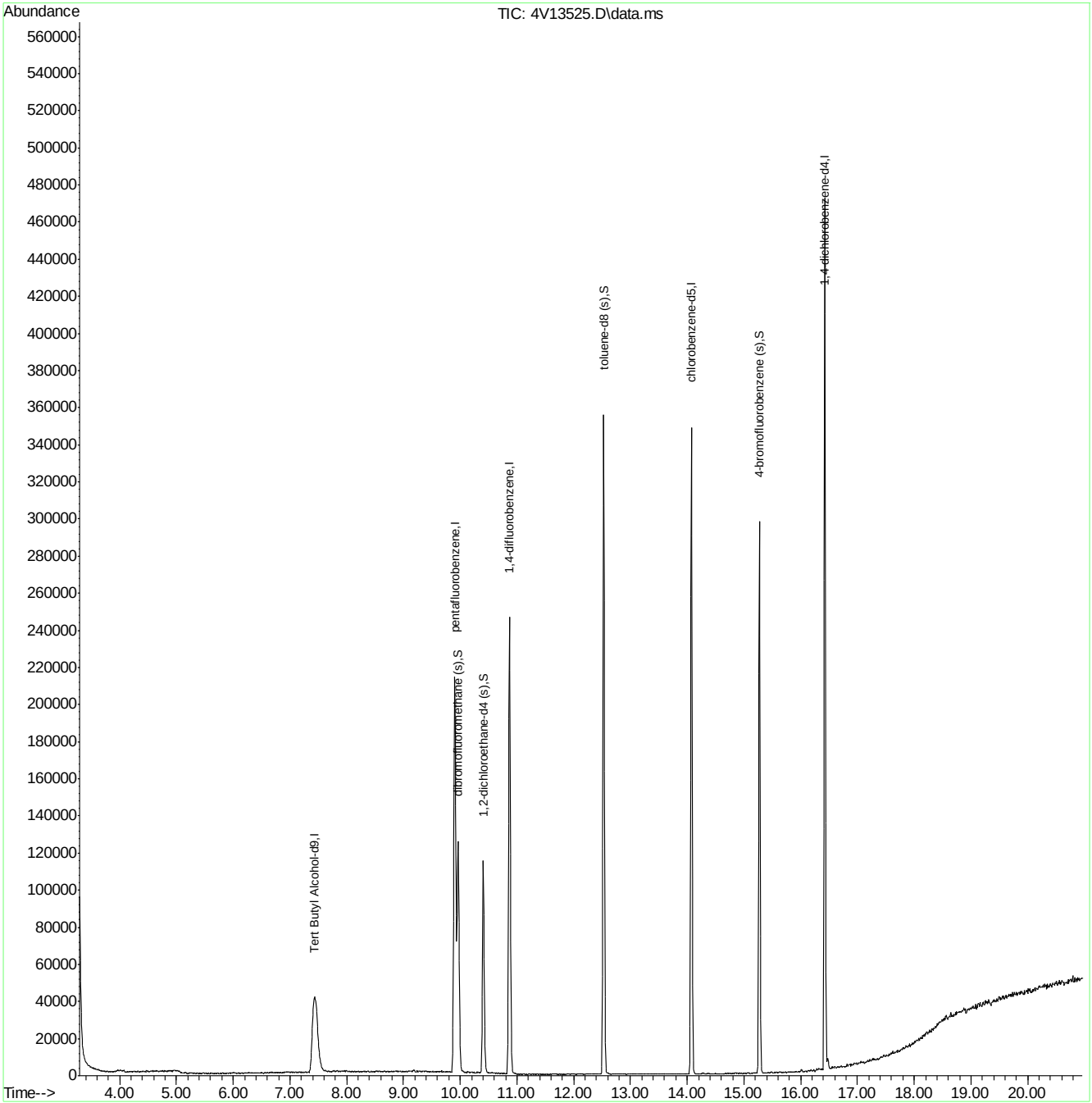
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.434	65	161338	500.00	ug/L	0.00
4) pentafluorobenzene	9.904	168	187447	50.00	ug/L	0.00
51) 1,4-difluorobenzene	10.868	114	222197	50.00	ug/L	0.00
81) chlorobenzene-d5	14.077	117	189107	50.00	ug/L	0.00
94) 1,4-dichlorobenzene-d4	16.426	152	110839	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	9.961	113	94300	52.31	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 104.62%			
46) 1,2-dichloroethane-d4 (s)	10.407	65	92708	56.99	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 113.98%			
73) toluene-d8 (s)	12.525	98	238116	48.91	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 97.82%			
96) 4-bromofluorobenzene (s)	15.272	95	101340	50.91	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 101.82%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 4V13525.D
Acq On : 29 Nov 2014 2:02 pm
Operator : BenM
Sample : jb82646-4
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Dec 01 11:21:36 2014
Quant Method : C:\MSDCHEM\1\METHODS\M4V541.M
Quant Title : sw846 8260b
QLast Update : Fri Nov 14 17:30:26 2014
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : 4V13525.D
Acq On : 29 Nov 2014 2:02 pm
Operator : BenM
Sample : jb82646-4
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4V541.M
Title : sw846 8260b

Signal : TIC: 4V13525.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.958	126	128	129	rBV2	801	589	0.08%	0.014%
2	4.199	173	174	176	rBV2	718	354	0.05%	0.008%
3	4.325	193	198	201	rBV5	582	814	0.12%	0.019%
4	4.388	208	210	213	rBV4	469	409	0.06%	0.010%
5	4.472	223	226	228	rBV4	538	370	0.05%	0.009%
6	5.148	354	355	357	rBV2	570	329	0.05%	0.008%
7	5.305	383	385	389	rVB2	416	318	0.05%	0.007%
8	5.463	412	415	416	rBV2	445	405	0.06%	0.009%
9	5.484	417	419	422	rVB3	378	357	0.05%	0.008%
10	5.552	429	432	436	rVB3	606	672	0.10%	0.016%
11	5.599	436	441	443	rBV2	468	736	0.11%	0.017%
12	5.672	452	455	457	rBV	456	383	0.05%	0.009%
13	5.809	478	481	485	rVB2	368	499	0.07%	0.012%
14	5.982	510	514	517	rVB2	287	459	0.07%	0.011%
15	6.008	517	519	522	rBV	502	386	0.06%	0.009%
16	6.113	537	539	542	rBV2	500	454	0.06%	0.011%
17	6.212	555	558	561	rVB3	366	443	0.06%	0.010%
18	6.254	563	566	567	rBV	421	410	0.06%	0.010%
19	6.296	572	574	580	rVV3	397	606	0.09%	0.014%
20	6.354	581	585	588	rBV2	418	547	0.08%	0.013%
21	6.501	608	613	619	rVB3	550	1053	0.15%	0.025%
22	6.543	619	621	622	rBV3	448	322	0.05%	0.008%
23	6.637	636	639	642	rBV2	445	593	0.08%	0.014%
24	6.690	647	649	655	rVB3	484	488	0.07%	0.011%
25	6.794	665	669	672	rBV3	515	581	0.08%	0.014%
26	6.873	679	684	686	rVB2	575	658	0.09%	0.015%
27	6.894	686	688	690	rBV2	749	724	0.10%	0.017%
28	7.256	755	757	765	rVB4	501	783	0.11%	0.018%
29	7.319	765	769	771	rBV3	582	569	0.08%	0.013%
30	7.434	773	791	824	rBV2	40932	274322	39.18%	6.403%
31	7.864	872	873	877	rBV2	497	530	0.08%	0.012%
32	8.483	989	991	993	rBV3	764	536	0.08%	0.013%
33	8.619	1015	1017	1019	rBV2	705	701	0.10%	0.016%
34	8.902	1069	1071	1074	rBV3	666	709	0.10%	0.017%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : 4V13525.D
Acq On : 29 Nov 2014 2:02 pm
Operator : BenM
Sample : jb82646-4
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4V541.M
Title : sw846 8260b

35	9.044	1097	1098	1102	rBV2	519	560	0.08%	0.013%
36	9.175	1118	1123	1129	rBV4	1123	2443	0.35%	0.057%
37	9.238	1133	1135	1138	rVV4	665	439	0.06%	0.010%
38	9.316	1149	1150	1153	rBV2	448	426	0.06%	0.010%
39	9.479	1179	1181	1185	rBV2	545	461	0.07%	0.011%
40	9.510	1186	1187	1189	rVB2	673	388	0.06%	0.009%
41	9.647	1212	1213	1217	rBV3	482	573	0.08%	0.013%
42	9.804	1241	1243	1247	rBV2	420	441	0.06%	0.010%
43	9.904	1251	1262	1268	rVV	213133	523252	74.73%	12.213%
44	9.961	1269	1273	1294	rVB	124689	281580	40.21%	6.572%
45	10.213	1316	1321	1323	rBV2	451	641	0.09%	0.015%
46	10.307	1334	1339	1341	rVV3	761	792	0.11%	0.018%
47	10.407	1349	1358	1375	rVV	114517	254882	36.40%	5.949%
48	10.501	1375	1376	1382	rVB3	593	474	0.07%	0.011%
49	10.706	1413	1415	1417	rVB2	595	290	0.04%	0.007%
50	10.721	1417	1418	1422	rVV2	278	330	0.05%	0.008%
51	10.758	1422	1425	1427	rVV2	411	324	0.05%	0.008%
52	10.779	1427	1429	1433	rVB3	342	382	0.05%	0.009%
53	10.868	1433	1446	1470	rVB	246365	511733	73.08%	11.944%
54	11.010	1472	1473	1477	rVB2	570	579	0.08%	0.014%
55	11.062	1480	1483	1486	rBV2	492	433	0.06%	0.010%
56	11.109	1489	1492	1493	rBV2	364	412	0.06%	0.010%
57	11.167	1499	1503	1506	rBV2	228	268	0.04%	0.006%
58	11.199	1506	1509	1512	rVV3	293	266	0.04%	0.006%
59	11.220	1512	1513	1519	rVB3	412	340	0.05%	0.008%
60	11.303	1526	1529	1532	rVV2	258	329	0.05%	0.008%
61	11.351	1535	1538	1543	rVB2	273	506	0.07%	0.012%
62	11.403	1543	1548	1551	rBV2	388	536	0.08%	0.013%
63	11.455	1557	1558	1562	rVB2	273	264	0.04%	0.006%
64	11.513	1567	1569	1572	rVV2	381	311	0.04%	0.007%
65	11.566	1576	1579	1581	rVB2	265	262	0.04%	0.006%
66	11.581	1581	1582	1587	rBV	266	332	0.05%	0.008%
67	11.628	1587	1591	1593	rBV3	312	436	0.06%	0.010%
68	11.744	1610	1613	1617	rVB2	290	354	0.05%	0.008%
69	11.812	1623	1626	1628	rVB	377	262	0.04%	0.006%
70	11.843	1628	1632	1634	rVB2	426	473	0.07%	0.011%
71	11.880	1634	1639	1642	rBV2	453	919	0.13%	0.021%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : 4V13525.D
Acq On : 29 Nov 2014 2:02 pm
Operator : BenM
Sample : jb82646-4
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4V541.M
Title : sw846 8260b

72	11.912	1642	1645	1649	rVB3	269	283	0.04%	0.007%
73	12.525	1753	1762	1775	rBV	355602	626433	89.46%	14.621%
74	12.661	1787	1788	1793	rBV2	191	289	0.04%	0.007%
75	12.756	1799	1806	1811	rVV3	278	554	0.08%	0.013%
76	13.002	1852	1853	1858	rVB2	270	260	0.04%	0.006%
77	13.165	1883	1884	1890	rBV2	301	297	0.04%	0.007%
78	13.574	1957	1962	1964	rBV3	210	340	0.05%	0.008%
79	13.794	2002	2004	2009	rVB2	256	288	0.04%	0.007%
80	13.941	2028	2032	2037	rBV3	323	378	0.05%	0.009%
81	14.077	2045	2058	2070	rBV	348555	589734	84.22%	13.764%
82	14.166	2071	2075	2080	rVB3	362	624	0.09%	0.015%
83	14.271	2091	2095	2101	rBV3	520	738	0.11%	0.017%
84	14.496	2134	2138	2144	rVB3	381	788	0.11%	0.018%
85	14.538	2144	2146	2148	rBV2	295	262	0.04%	0.006%
86	14.586	2150	2155	2157	rBV3	322	547	0.08%	0.013%
87	14.633	2157	2164	2165	rVV3	301	487	0.07%	0.011%
88	14.717	2177	2180	2183	rBV4	797	812	0.12%	0.019%
89	14.837	2200	2203	2204	rBV2	253	270	0.04%	0.006%
90	14.958	2223	2226	2231	rVB3	334	403	0.06%	0.009%
91	15.272	2277	2286	2298	rBV	297295	473929	67.68%	11.061%
92	15.466	2320	2323	2327	rVB3	405	519	0.07%	0.012%
93	15.613	2349	2351	2353	rBV	623	526	0.08%	0.012%
94	16.006	2424	2426	2433	rVB5	1086	1374	0.20%	0.032%
95	16.127	2446	2449	2450	rBV2	530	394	0.06%	0.009%
96	16.227	2467	2468	2473	rVB4	1158	1507	0.22%	0.035%
97	16.263	2473	2475	2477	rBV3	1121	1167	0.17%	0.027%
98	16.284	2477	2479	2480	rBV2	909	613	0.09%	0.014%
99	16.426	2495	2506	2513	rBV	470337	700228	100.00%	16.343%
100	16.552	2527	2530	2531	rBV3	1037	660	0.09%	0.015%

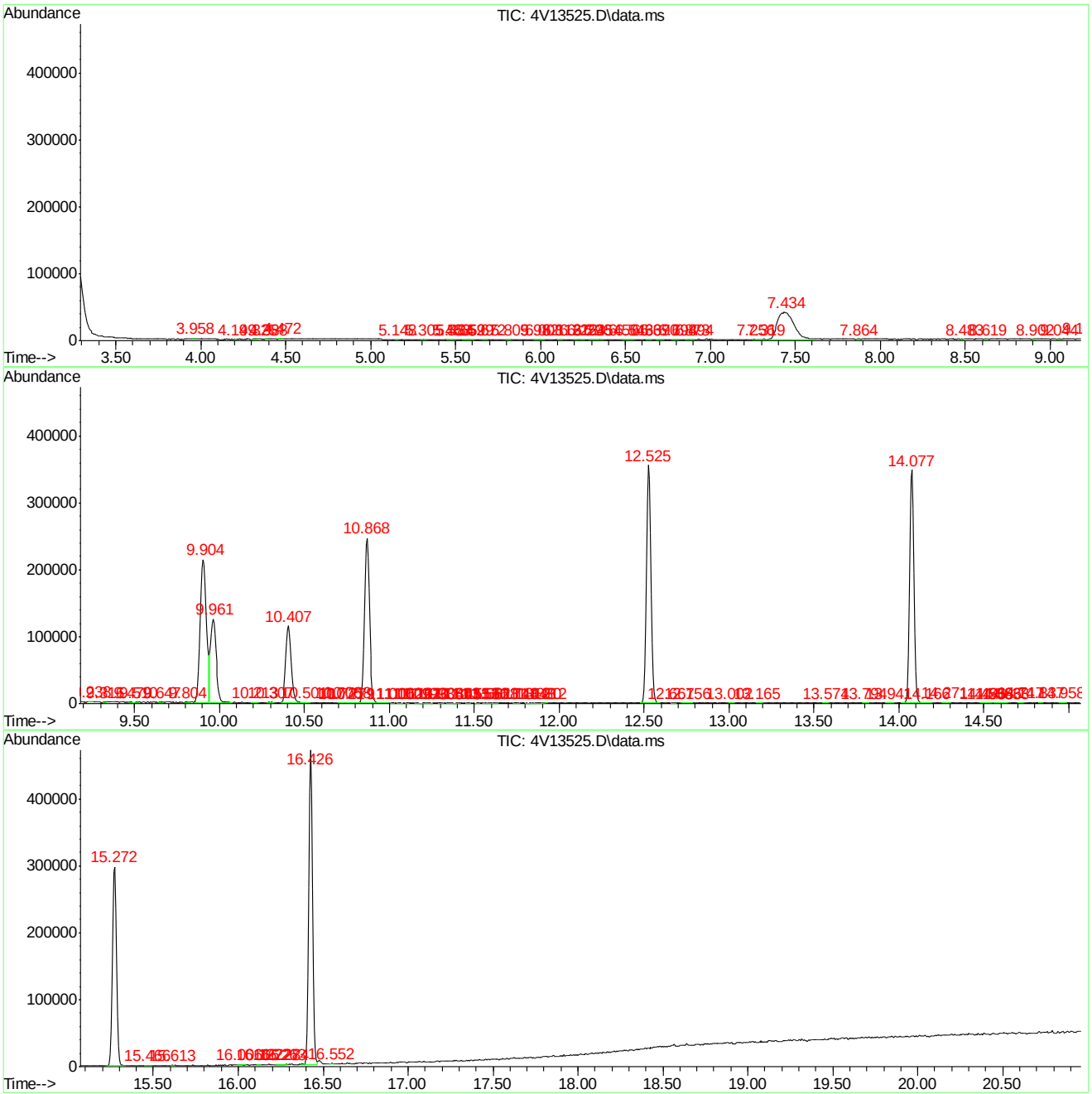
Sum of corrected areas: 4284506

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\
Data File : 4V13525.D
Acq On : 29 Nov 2014 2:02 pm
Operator : BenM
Sample : jb82646-4
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4V541.M
Quant Title : sw846 8260b

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p



Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\
Data File : 4V13525.D
Acq On : 29 Nov 2014 2:02 pm
Operator : BenM
Sample : jb82646-4
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4V541.M
Quant Title : sw846 8260b

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	Internal Standard RT	Internal Standard Resp	Internal Standard Conc

No Library Search Compounds Detected
****

Manual Integrations APPROVED (compounds with "m" flag)
Kanya Veerawat 12/05/14 01:57

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190335.D
Acq On : 3 Dec 2014 7:21 pm
Operator : yunxiac
Sample : JB82646-5
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Dec 04 09:53:28 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um
QLast Update : Thu Nov 20 10:49:23 2014
Response via : Initial Calibration

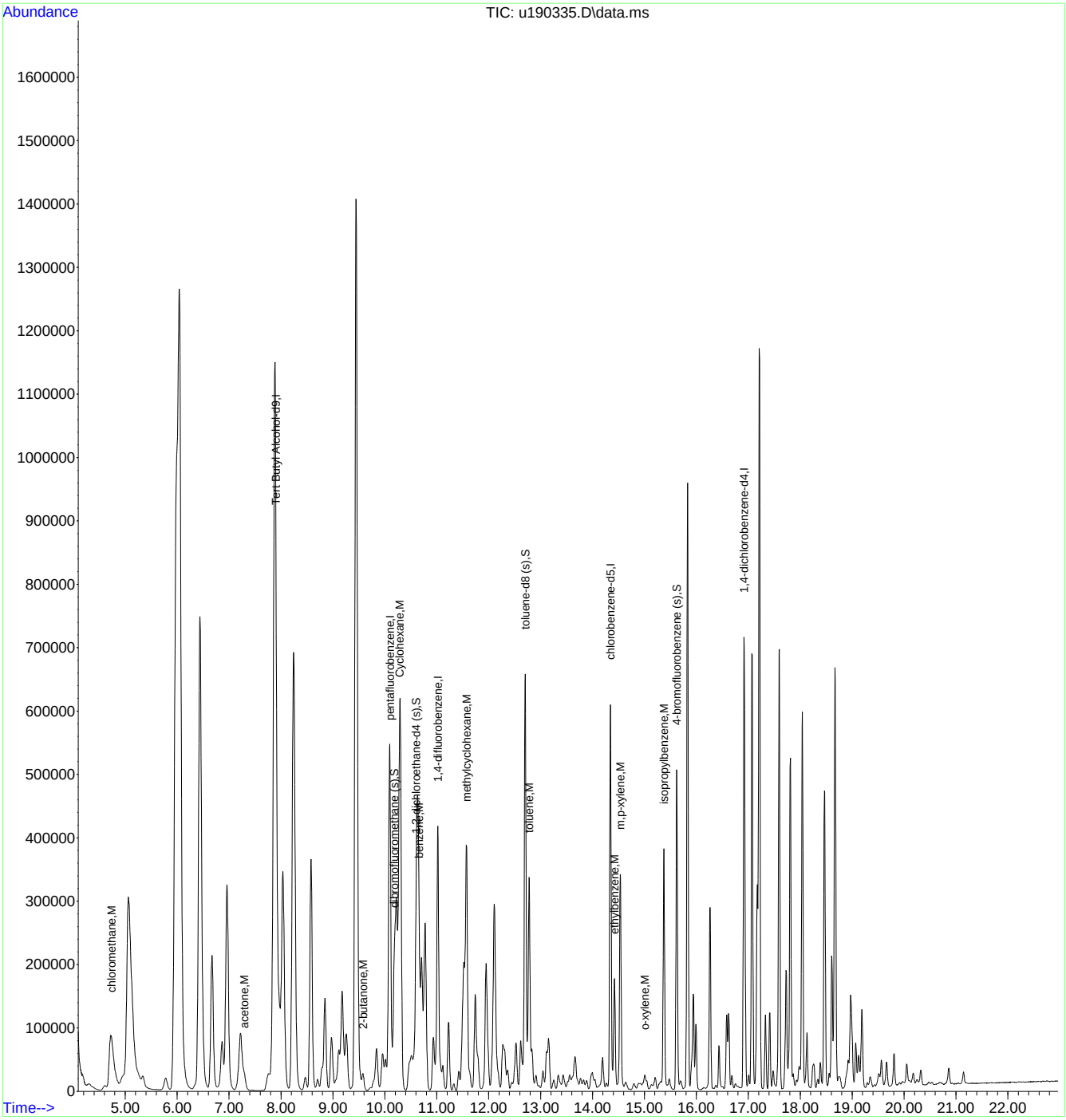
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.905	65	135005	500.00	ug/L	0.00
5) pentafluorobenzene	10.100	168	400638	50.00	ug/L	0.00
64) 1,4-difluorobenzene	11.020	114	434559	50.00	ug/L	0.00
96) chlorobenzene-d5	14.345	117	406287	50.00	ug/L	0.00
112) 1,4-dichlorobenzene-d4	16.918	152	225323	50.00	ug/L	0.00
System Monitoring Compounds						
56) dibromofluoromethane (s)	10.179	113	121506	51.45	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 102.90%			
57) 1,2-dichloroethane-d4 (s)	10.602	65	134507	51.69	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 103.38%			
88) toluene-d8 (s)	12.704	98	524900	55.56	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 111.12%			
114) 4-bromofluorobenzene (s)	15.621	95	192297	53.77	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 107.54%			
Target Compounds						Qvalue
15) chloromethane	4.736	50	3145m	0.75	ug/L	
29) acetone	7.293	58	18420	83.01	ug/L #	1
41) 2-butanone	9.583	72	9688	35.01	ug/L #	1
68) Cyclohexane	10.283	84	240217	64.65	ug/L #	67
72) benzene	10.660	78	114320	9.96	ug/L	99
79) methylcyclohexane	11.575	83	229143m	54.55	ug/L	
90) toluene	12.777	92	162575	23.24	ug/L	100
107) ethylbenzene	14.424	91	131111	9.56	ug/L	100
108) m,p-xylene	14.534	106	119586	23.03	ug/L	99
109) o-xylene	15.004	106	4410	0.86	ug/L	87
113) isopropylbenzene	15.375	105	316183	23.63	ug/L	98

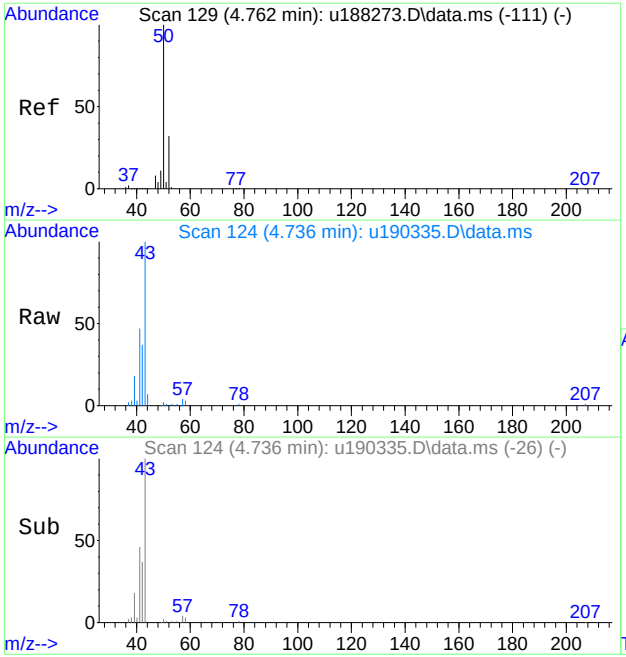
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190335.D
Acq On : 3 Dec 2014 7:21 pm
Operator : yunxiac
Sample : JB82646-5
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Dec 04 09:53:28 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um
QLast Update : Thu Nov 20 10:49:23 2014
Response via : Initial Calibration

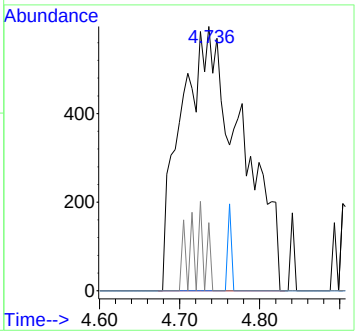


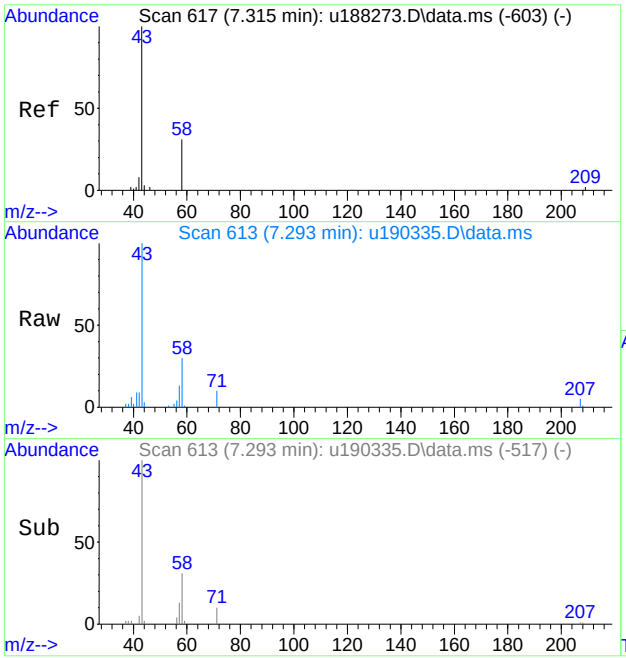


#15
chloromethane
Concen: 0.75 ug/L m
RT: 4.736 min Scan# 124
Delta R.T. -0.016 min
Lab File: u190335.D
Acq: 3 Dec 2014 7:21 pm

Tgt Ion: 50 Resp: 3145

Ion	Ratio	Lower	Upper
50	100		
52	0.0	1.8	61.8#
49	25.8	0.0	40.6

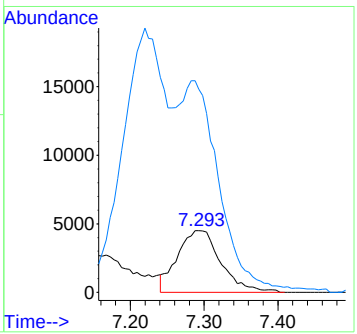


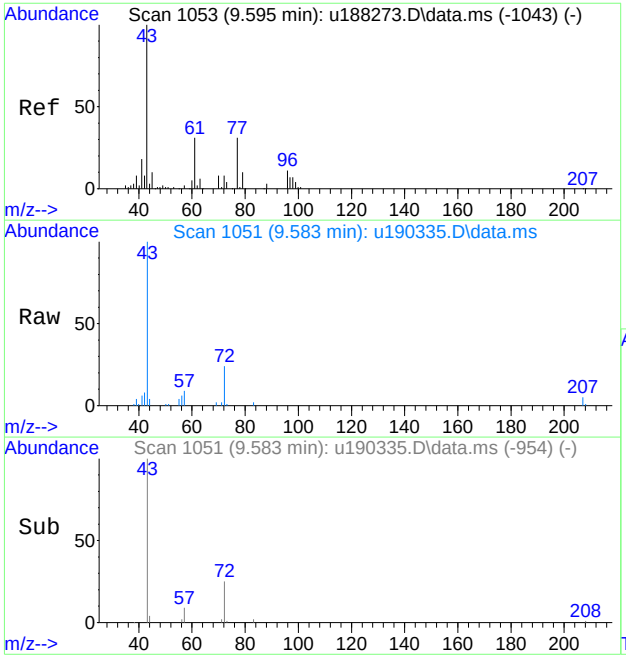


#29
acetone
Concen: 83.01 ug/L
RT: 7.293 min Scan# 613
Delta R.T. 0.000 min
Lab File: u190335.D
Acq: 3 Dec 2014 7:21 pm

Tgt Ion: 58 Resp: 18420

Ion	Ratio	Lower	Upper
58	100		
43	0.0	294.1	354.1#

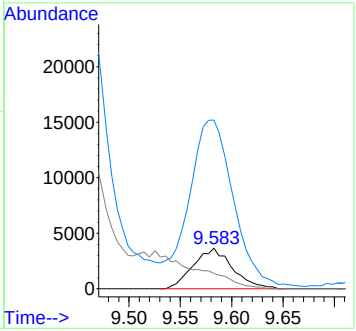


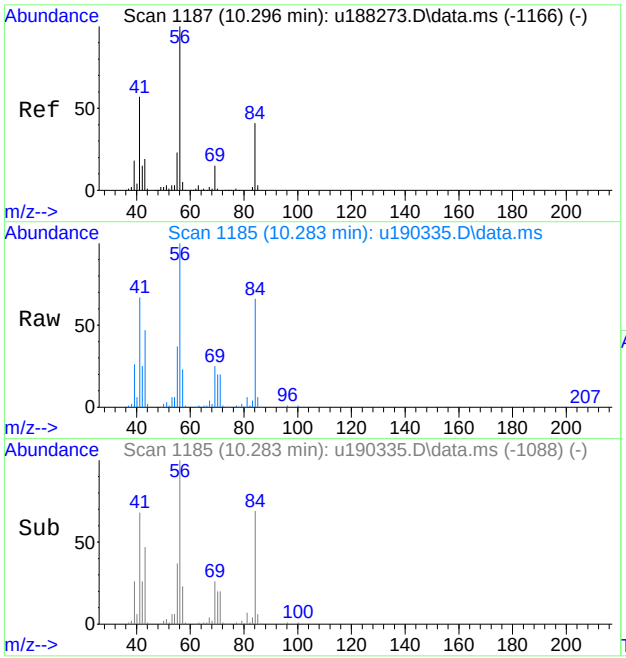


#41
2-butanone
Concen: 35.01 ug/L
RT: 9.583 min Scan# 1051
Delta R.T. 0.005 min
Lab File: u190335.D
Acq: 3 Dec 2014 7:21 pm

Tgt Ion: 72 Resp: 9688

Ion	Ratio	Lower	Upper
72	100		
43	464.2	1306.1	1366.1#
57	0.0	0.0	30.0

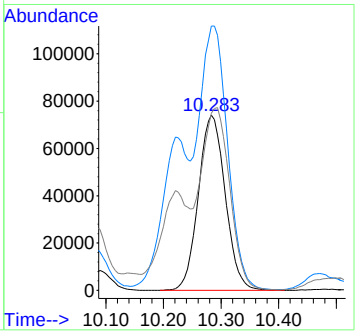


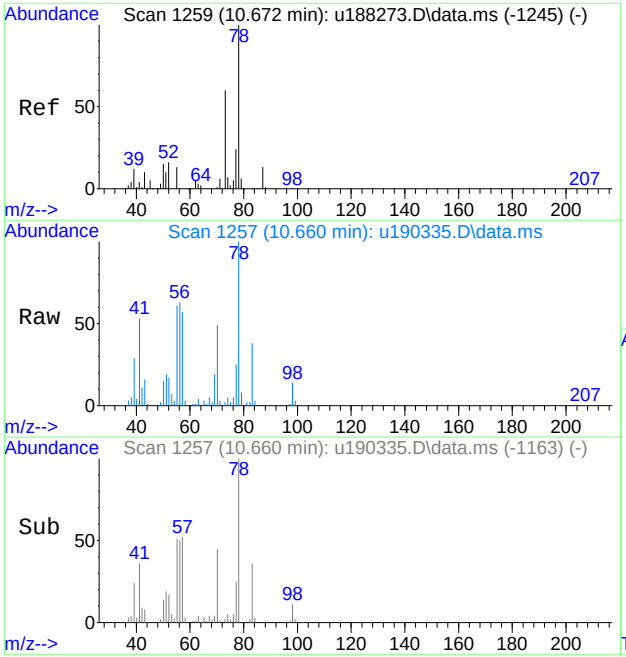


#68
Cyclohexane
Concen: 64.65 ug/L
RT: 10.283 min Scan# 1185
Delta R.T. 0.005 min
Lab File: u190335.D
Acq: 3 Dec 2014 7:21 pm

Tgt Ion: 84 Resp: 240217

Ion	Ratio	Lower	Upper
84	100		
56	151.0	183.5	243.5#
41	101.1	95.8	155.8

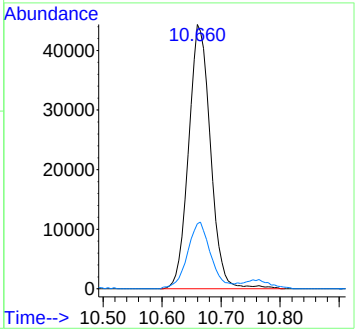


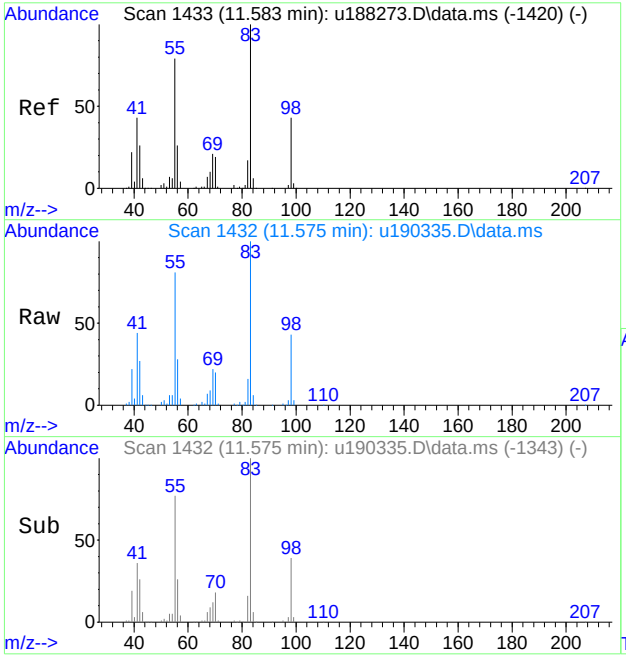


#72
benzene
Concen: 9.96 ug/L
RT: 10.660 min Scan# 1257
Delta R.T. 0.000 min
Lab File: u190335.D
Acq: 3 Dec 2014 7:21 pm

Tgt Ion: 78 Resp: 114320

Ion	Ratio	Lower	Upper
78	100		
77	24.6	0.0	54.0

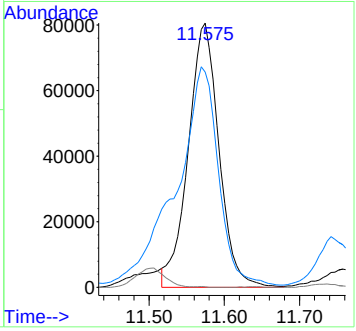


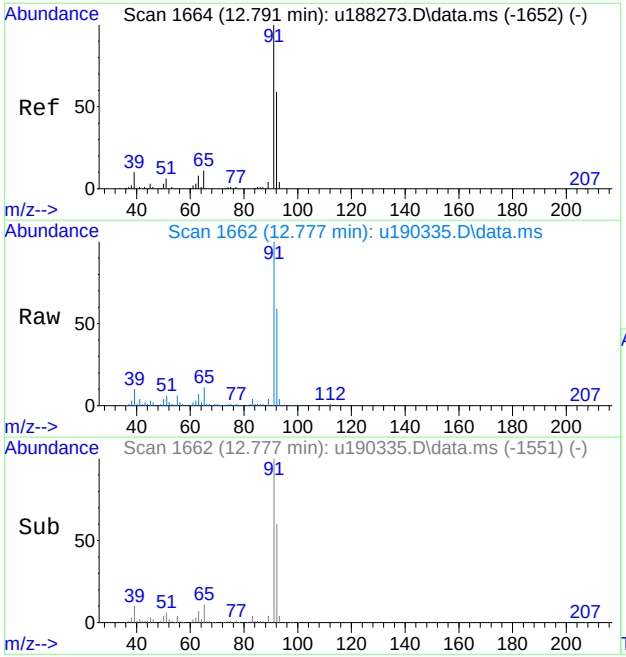


#79
methylcyclohexane
Concen: 54.55 ug/L m
RT: 11.575 min Scan# 1432
Delta R.T. 0.005 min
Lab File: u190335.D
Acq: 3 Dec 2014 7:21 pm

Tgt Ion: 83 Resp: 229143

Ion	Ratio	Lower	Upper
83	100		
55	81.4	56.2	116.2
85	0.2	0.0	50.2

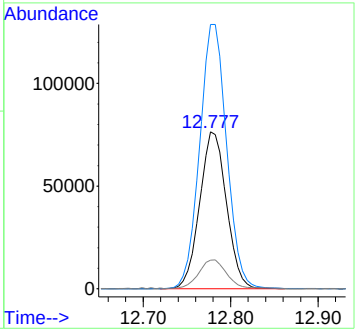


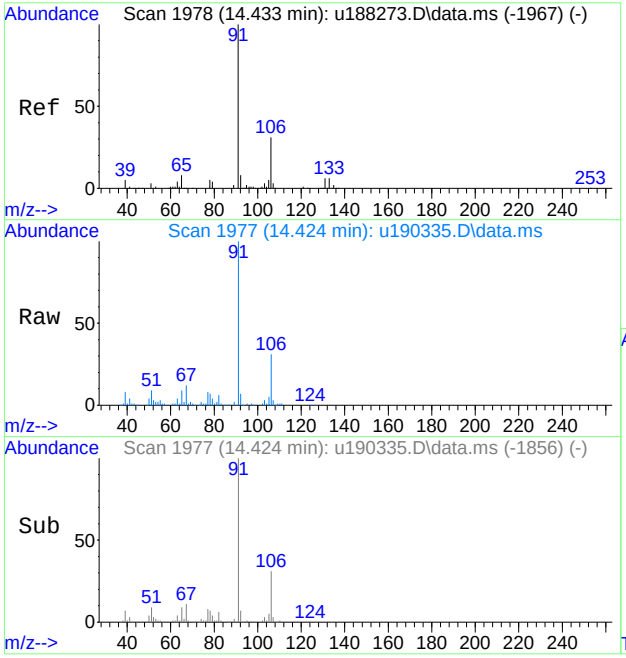


#90
toluene
Concen: 23.24 ug/L
RT: 12.777 min Scan# 1662
Delta R.T. -0.000 min
Lab File: u190335.D
Acq: 3 Dec 2014 7:21 pm

Tgt Ion: 92 Resp: 162575

Ion	Ratio	Lower	Upper
92	100		
91	168.3	138.3	198.3
65	18.0	0.0	49.2

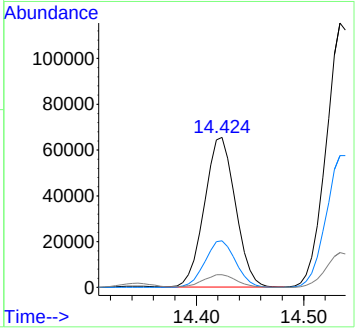


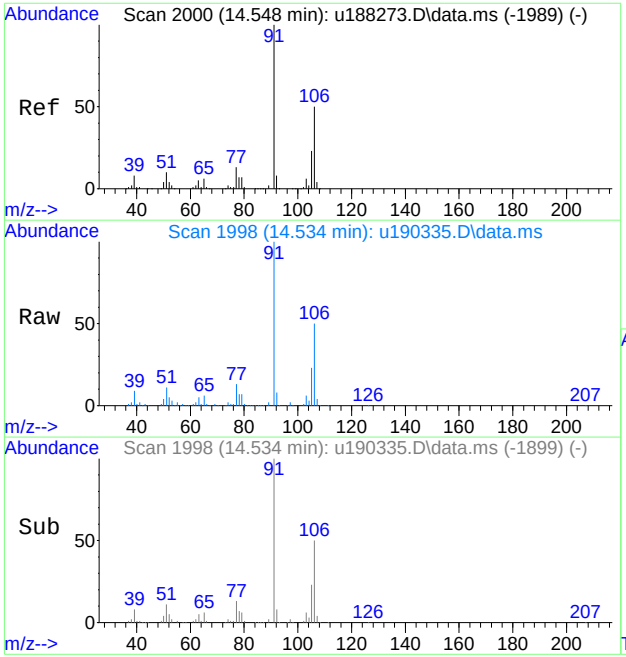


#107
ethylbenzene
Concen: 9.56 ug/L
RT: 14.424 min Scan# 1977
Delta R.T. 0.000 min
Lab File: u190335.D
Acq: 3 Dec 2014 7:21 pm

Tgt Ion: 91 Resp: 131111

Ion	Ratio	Lower	Upper
91	100		
106	31.2	1.0	61.0
77	8.4	0.0	38.4

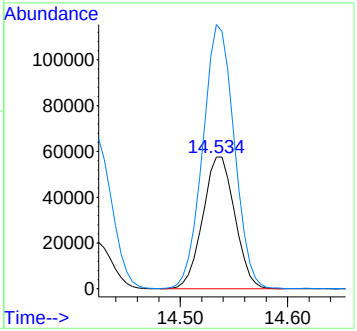


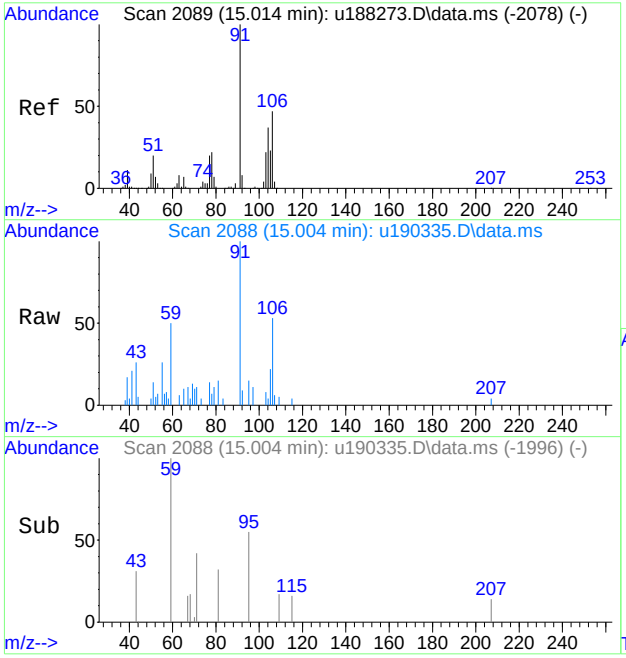


#108
m,p-xylene
Concen: 23.03 ug/L
RT: 14.534 min Scan# 1998
Delta R.T. 0.000 min
Lab File: u190335.D
Acq: 3 Dec 2014 7:21 pm

Tgt Ion:106 Resp: 119586

Ion	Ratio	Lower	Upper
106	100		
91	200.3	169.0	229.0

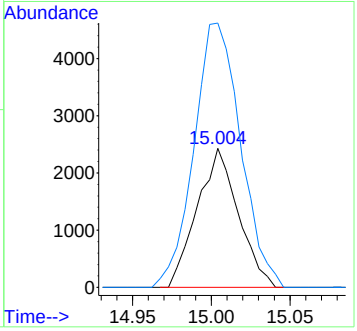


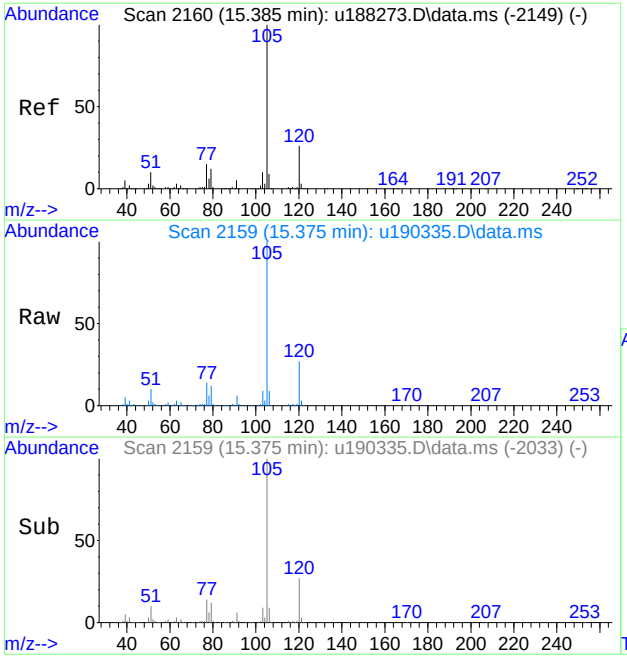


#109
o-xylene
Concen: 0.86 ug/L
RT: 15.004 min Scan# 2088
Delta R.T. 0.000 min
Lab File: u190335.D
Acq: 3 Dec 2014 7:21 pm

Tgt Ion:106 Resp: 4410

Ion	Ratio	Lower	Upper
106	100		
91	190.2	180.4	240.4

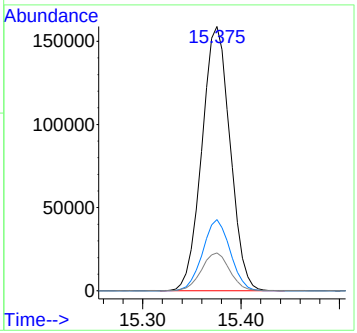




#113
isopropylbenzene
Concen: 23.63 ug/L
RT: 15.375 min Scan# 2159
Delta R.T. 0.000 min
Lab File: u190335.D
Acq: 3 Dec 2014 7:21 pm

Tgt Ion:105 Resp: 316183

Ion	Ratio	Lower	Upper
105	100		
120	26.9	0.0	55.8
77	14.3	0.0	44.7



7.1.9

7

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190335.D
Acq On : 3 Dec 2014 7:21 pm
Operator : yunxiac
Sample : JB82646-5
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 21 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MU8763.M
Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

Signal : TIC: u190335.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.721	106	121	153	rBV2	81860	510621	5.61%	0.740%
2	5.061	155	186	233	rVV2	293888	2096316	23.02%	3.037%
3	6.043	340	374	421	rVV	1264007	9105140	100.00%	13.192%
4	6.441	422	450	479	rVV	746952	3119777	34.26%	4.520%
5	6.671	480	494	514	rVV	213003	772657	8.49%	1.119%
6	6.864	517	531	538	rVV	77153	280835	3.08%	0.407%
7	6.958	538	549	577	rVV	324730	1221544	13.42%	1.770%
8	7.220	577	599	637	rVB4	90430	509625	5.60%	0.738%
9	7.884	708	726	746	rVV2	1148617	5225056	57.39%	7.570%
10	8.035	747	755	776	rVV	343904	1309106	14.38%	1.897%
11	8.244	778	795	826	rVB	690369	2757829	30.29%	3.996%
12	8.579	846	859	875	rVV	360099	1107344	12.16%	1.604%
13	8.846	890	910	923	rVB2	142002	501135	5.50%	0.726%
14	9.180	966	974	982	rVV3	155116	520522	5.72%	0.754%
15	9.259	983	989	1005	rVV2	88281	289143	3.18%	0.419%
16	9.447	1005	1025	1045	rVV	1406352	4671994	51.31%	6.769%
17	10.095	1138	1149	1158	rBV2	509975	1431670	15.72%	2.074%
18	10.221	1159	1173	1178	rVV2	243672	1000654	10.99%	1.450%
19	10.294	1179	1187	1208	rVB3	619028	2104707	23.12%	3.049%
20	10.508	1208	1228	1234	rBV7	55327	284425	3.12%	0.412%
21	10.634	1237	1252	1262	rBV6	412267	1745864	19.17%	2.530%
22	10.775	1273	1279	1298	rVB5	263714	804108	8.83%	1.165%
23	11.020	1316	1326	1341	rVV	416458	1176140	12.92%	1.704%
24	11.224	1355	1365	1378	rVB2	107046	287337	3.16%	0.416%
25	11.522	1408	1422	1424	rVV5	200681	573425	6.30%	0.831%
26	11.569	1425	1431	1452	rVB	383552	1134432	12.46%	1.644%
27	11.742	1452	1464	1487	rVB2	148781	520061	5.71%	0.753%
28	11.951	1487	1504	1518	rBV4	197879	647127	7.11%	0.938%
29	12.108	1518	1534	1556	rVB4	289265	1043937	11.47%	1.513%
30	12.270	1556	1565	1579	rBV3	67808	302058	3.32%	0.438%
31	12.704	1639	1648	1656	rVV	646571	1468211	16.13%	2.127%
32	12.777	1656	1662	1682	rVB	325305	874267	9.60%	1.267%
33	14.345	1952	1962	1970	rBV	602651	1227856	13.49%	1.779%
34	14.424	1970	1977	1986	rVV	170430	372367	4.09%	0.540%
35	14.534	1988	1998	2012	rVB	334884	703041	7.72%	1.019%
36	15.375	2150	2159	2171	rVB	373317	738088	8.11%	1.069%
37	15.621	2196	2206	2216	rBV	504826	988722	10.86%	1.433%
38	15.830	2230	2246	2255	rBV	956427	1830553	20.10%	2.652%
39	15.940	2255	2267	2272	rVV	150679	368650	4.05%	0.534%
40	16.264	2313	2329	2343	rVB	286077	584813	6.42%	0.847%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190335.D
Acq On : 3 Dec 2014 7:21 pm
Operator : yunxiac
Sample : JB82646-5
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 21 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MU8763.M
Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

41	16.918	2444	2454	2465	rBV2	711236	1503667	16.51%	2.179%
42	17.069	2475	2483	2493	rVB	679069	1275457	14.01%	1.848%
43	17.174	2493	2503	2505	rBV	315152	575873	6.32%	0.834%
44	17.210	2505	2510	2522	rVB2	1168629	2232993	24.52%	3.235%
45	17.597	2572	2584	2595	rVB	693621	1350551	14.83%	1.957%
46	17.728	2598	2609	2616	rBV2	186923	422033	4.64%	0.611%
47	17.812	2616	2625	2633	rVB	502043	960795	10.55%	1.392%
48	18.042	2661	2669	2677	rVV	586188	1108061	12.17%	1.605%
49	18.465	2742	2750	2761	rVB	465759	948204	10.41%	1.374%
50	18.606	2771	2777	2782	rBV	192336	369634	4.06%	0.536%
51	18.669	2782	2789	2799	rVB	651866	1350244	14.83%	1.956%
52	18.972	2840	2847	2859	rVV4	140131	418315	4.59%	0.606%
53	19.187	2881	2888	2902	rVB	123799	292573	3.21%	0.424%

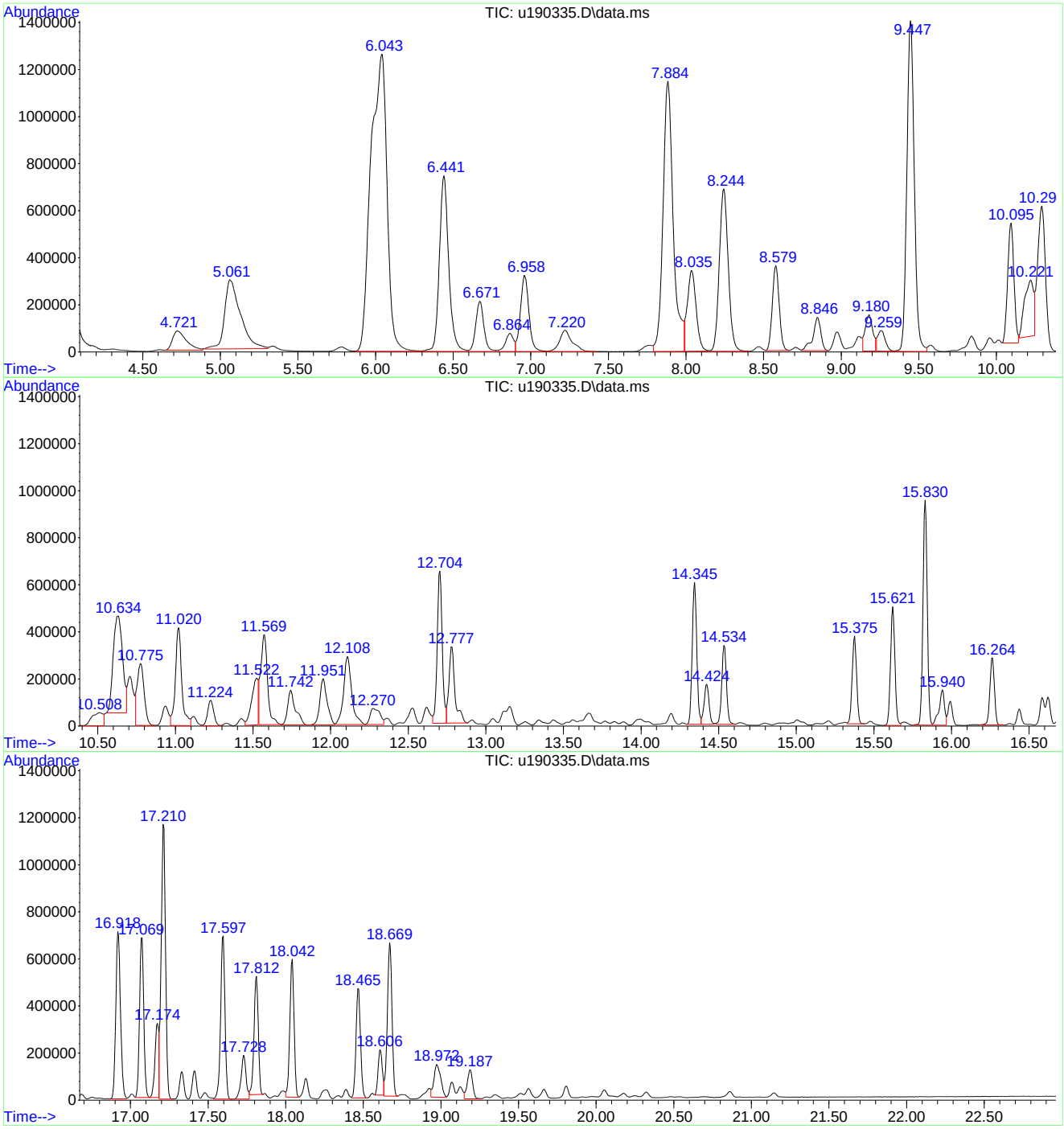
Sum of corrected areas: 69019557

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190335.D
Acq On : 3 Dec 2014 7:21 pm
Operator : yunxiac
Sample : JB82646-5
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190335.D
Acq On : 3 Dec 2014 7:21 pm
Operator : yunxiac
Sample : JB82646-5
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

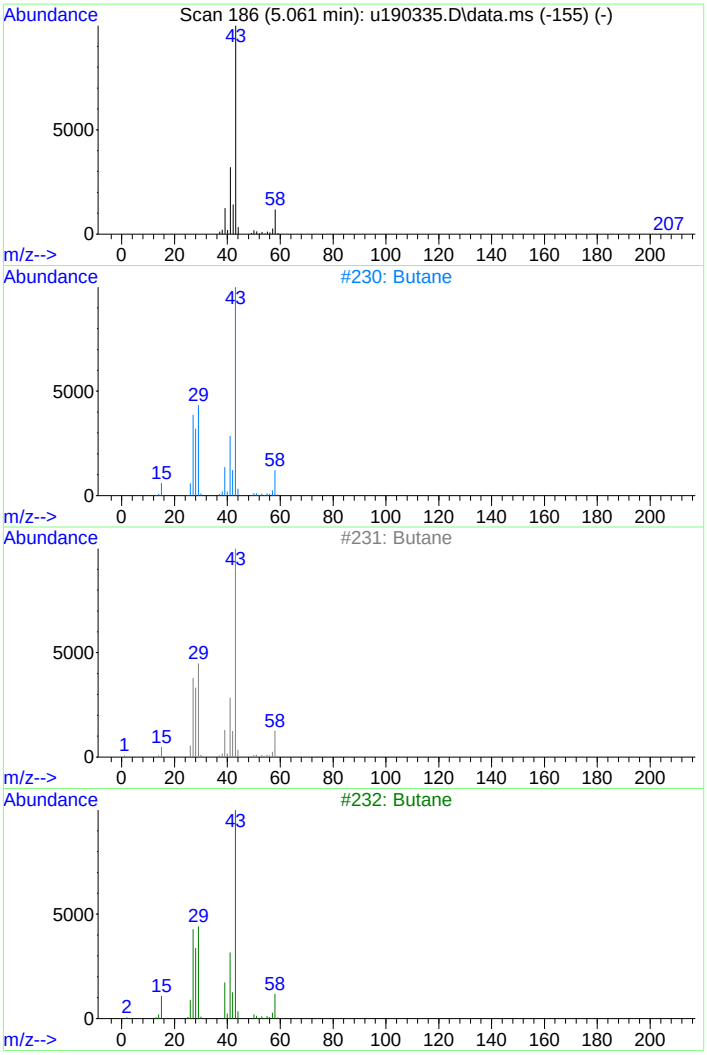
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

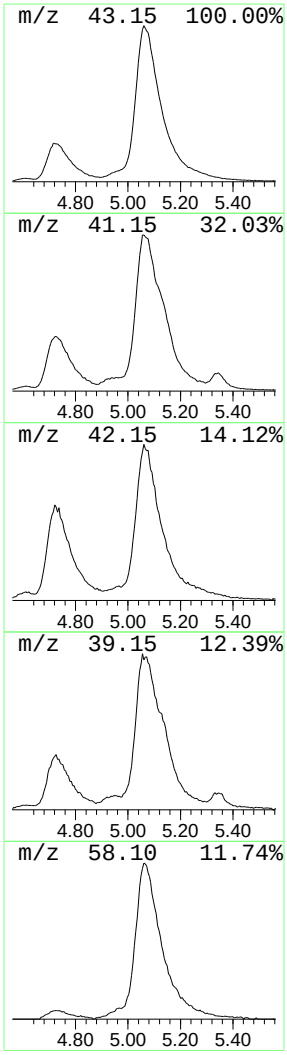
****

Peak Number 1 alkane Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.061	73.21 ug/L	2096320	pentafluorobenzene	10.100

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	72
2	Butane	58	C4H10	000106-97-8	72
3	Butane	58	C4H10	000106-97-8	52
4	Isopropylsulfonyl chloride	142	C3H7ClO2S	010147-37-2	9
5	Isobutane	58	C4H10	000075-28-5	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190335.D
Acq On : 3 Dec 2014 7:21 pm
Operator : yunxiac
Sample : JB82646-5
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

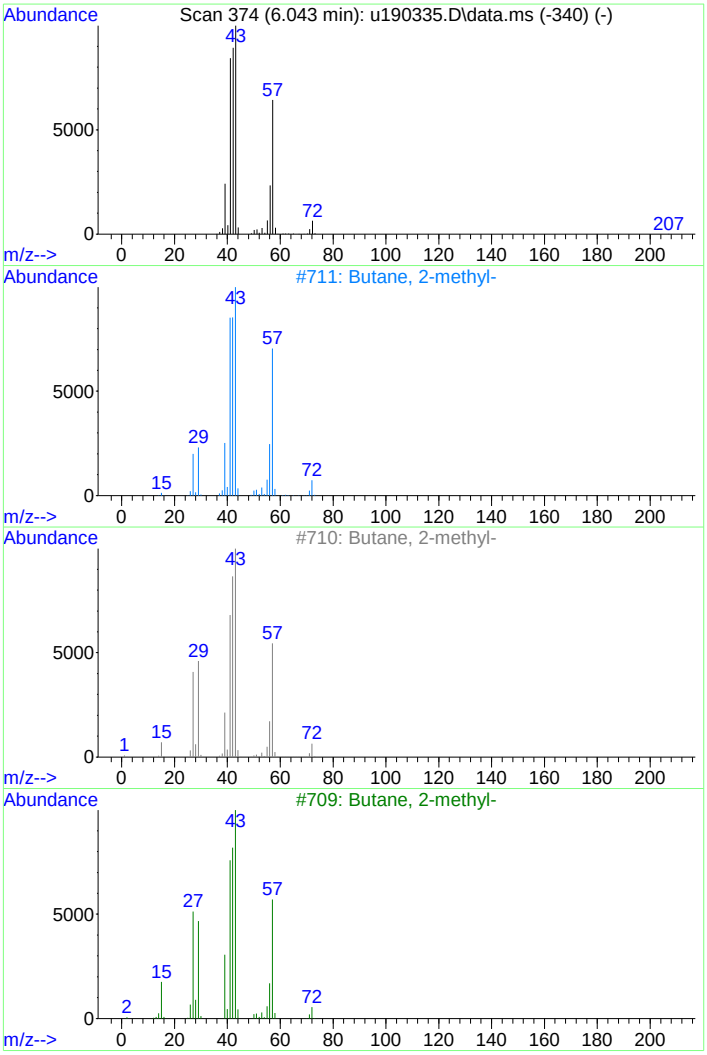
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

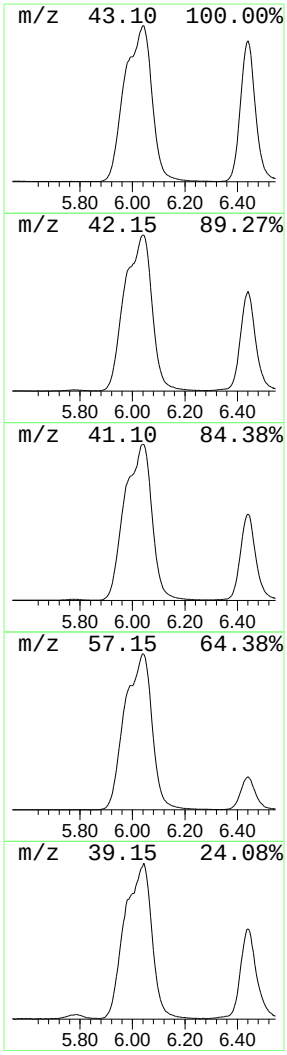
****

Peak Number 2 alkane Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.043	317.99 ug/L	9105140	pentafluorobenzene	10.100

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	94
2	Butane, 2-methyl-	72	C5H12	000078-78-4	91
3	Butane, 2-methyl-	72	C5H12	000078-78-4	90
4	Pentane	72	C5H12	000109-66-0	50
5	3-Buten-1-ol	72	C4H8O	000627-27-0	25





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190335.D
Acq On : 3 Dec 2014 7:21 pm
Operator : yunxiac
Sample : JB82646-5
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

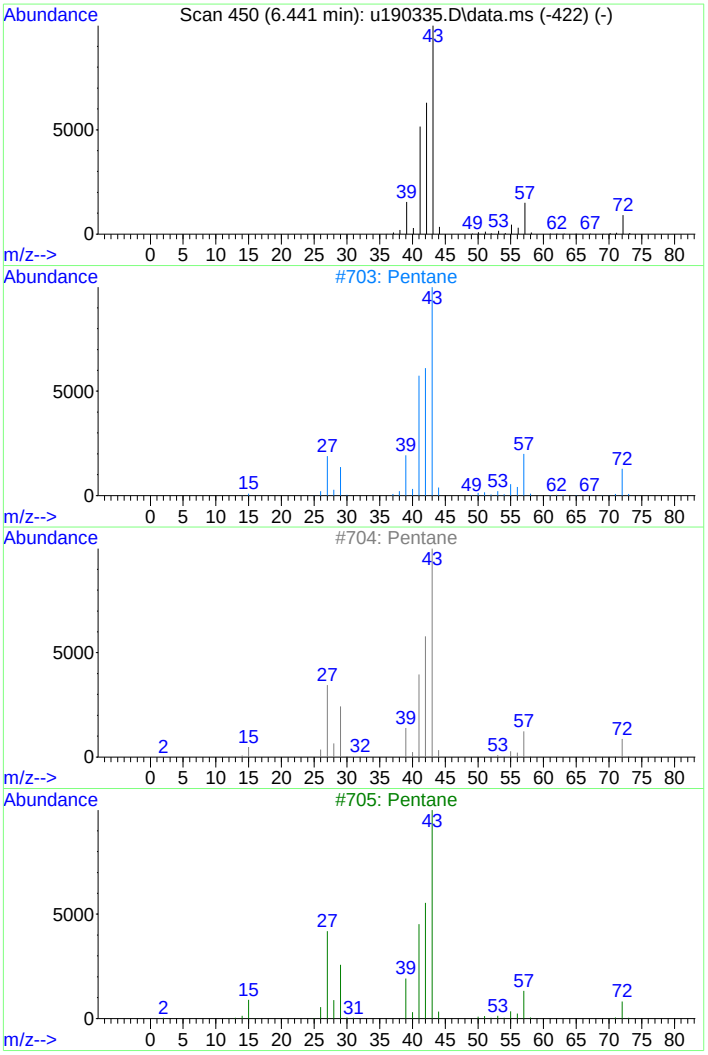
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

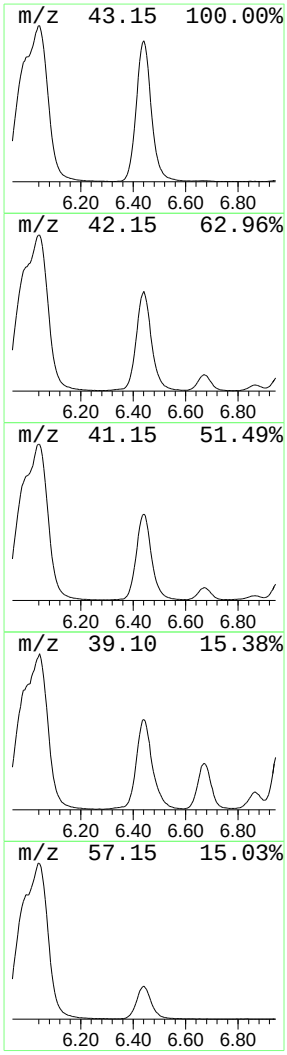
****

Peak Number 3 alkane Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.441	108.96 ug/L	3119780	pentafluorobenzene	10.100

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	91
2	Pentane	72	C5H12	000109-66-0	90
3	Pentane	72	C5H12	000109-66-0	90
4	Butane, 2-methyl-	72	C5H12	000078-78-4	64
5	Pentane	72	C5H12	000109-66-0	59





Library Search Compound Report

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Data File : u190335.D
Acq On : 3 Dec 2014 7:21 pm
Operator : yunxiac
Sample : JB82646-5
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

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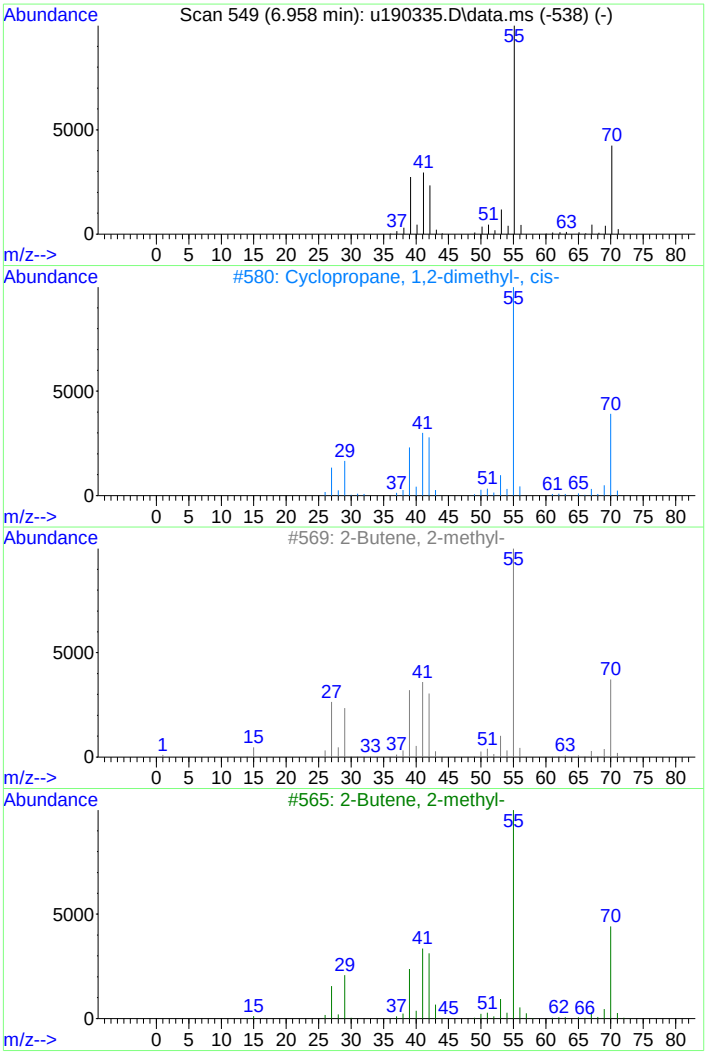
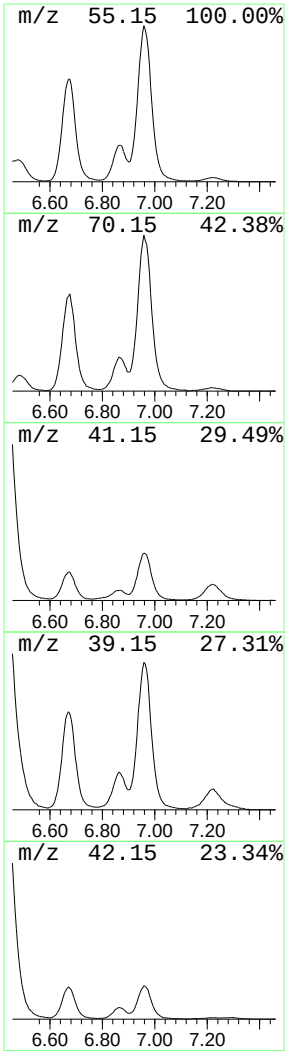
Peak Number 4 alkene Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.958	42.66 ug/L	1221540	pentafluorobenzene	10.100

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopropane, 1,2-dimethyl-, cis-	70	C5H10	000930-18-7	91
2	2-Butene, 2-methyl-	70	C5H10	000513-35-9	91
3	2-Butene, 2-methyl-	70	C5H10	000513-35-9	91
4	2-Pentene, (E)-	70	C5H10	000646-04-8	87
5	2-Pentene	70	C5H10	000109-68-2	83





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ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

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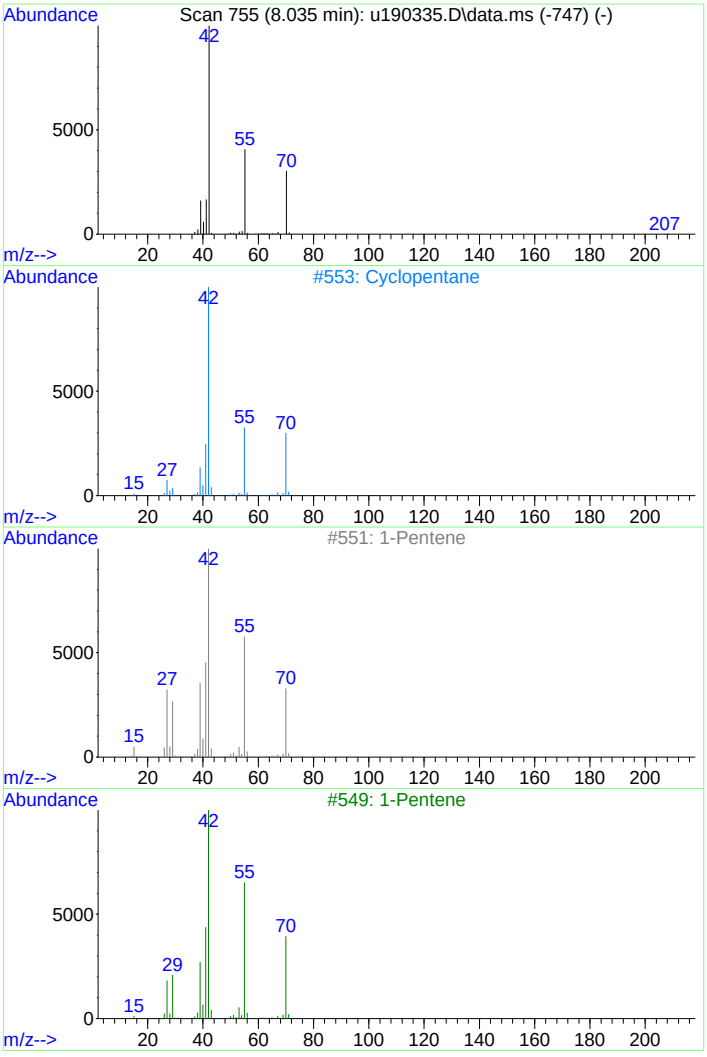
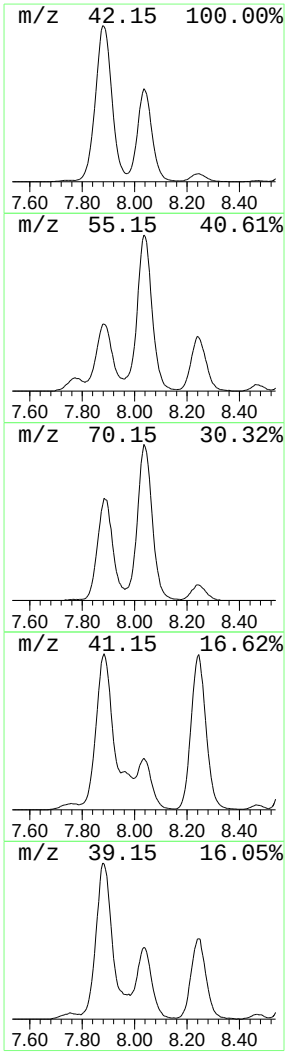
Peak Number 5 alkene Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.035	45.72 ug/L	1309110	pentafluorobenzene	10.100

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane	70	C5H10	000287-92-3	78
2	1-Pentene	70	C5H10	000109-67-1	40
3	1-Pentene	70	C5H10	000109-67-1	25
4	Cyclopentane	70	C5H10	000287-92-3	9
5	Cyclobutane, methyl-	70	C5H10	000598-61-8	9





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Sample : JB82646-5
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

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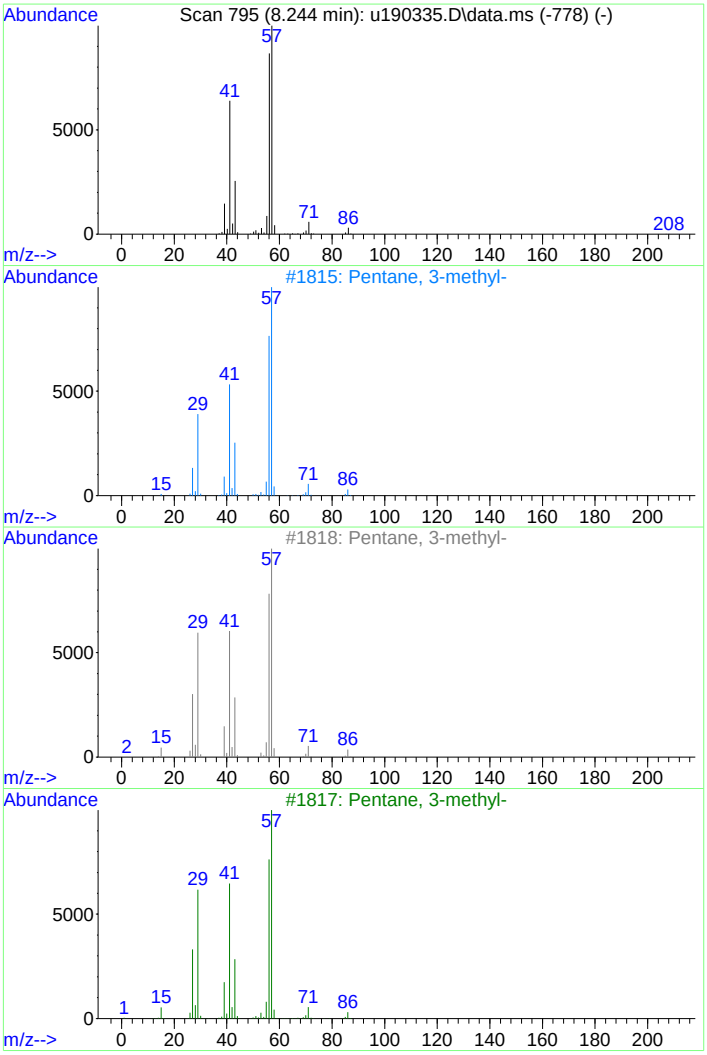
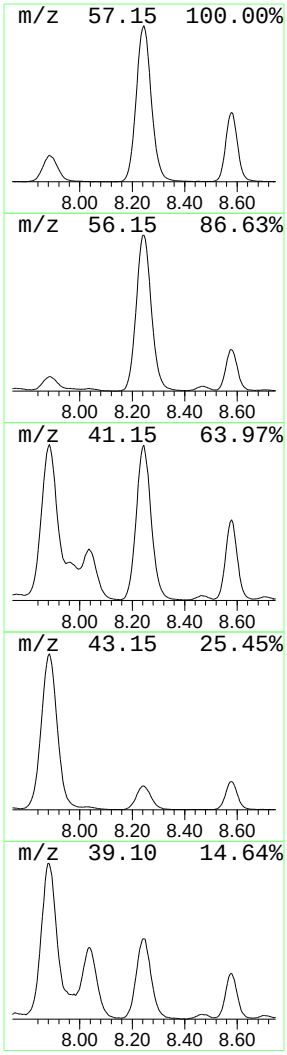
Peak Number 6 alkane Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.244	96.32 ug/L	2757830	pentafluorobenzene	10.100

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
2	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
3	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
4	Oxirane, (1-methylethyl)-	86	C5H10O	001438-14-8	64
5	Hexane, 2,2,3-trimethyl-	128	C9H20	016747-25-4	40





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Sample : JB82646-5
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

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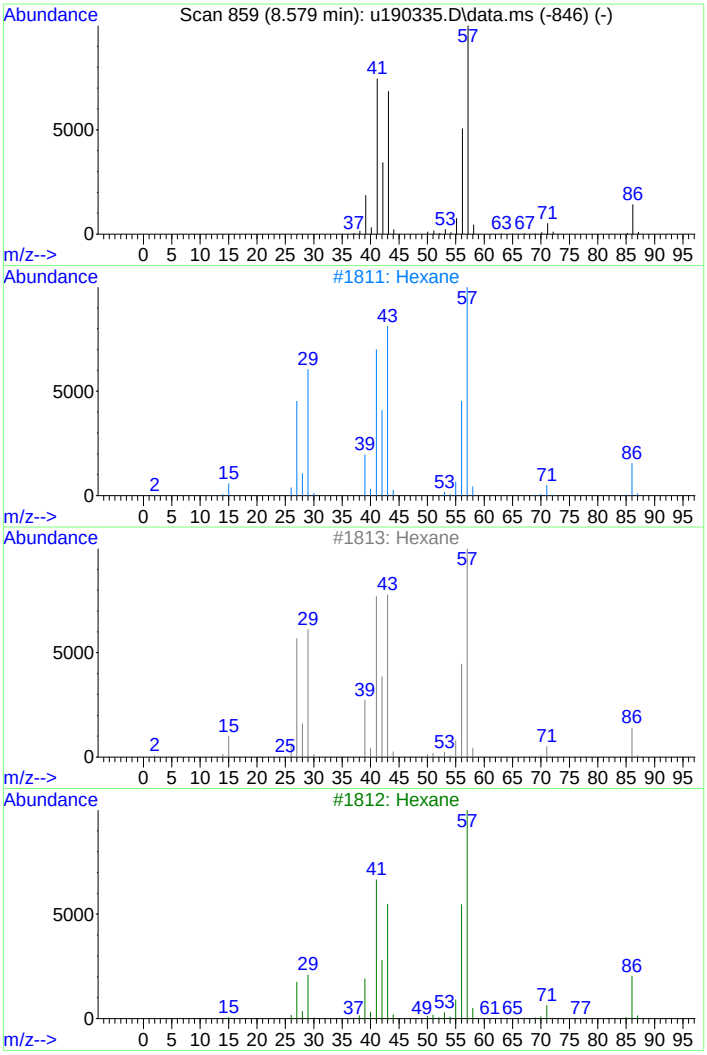
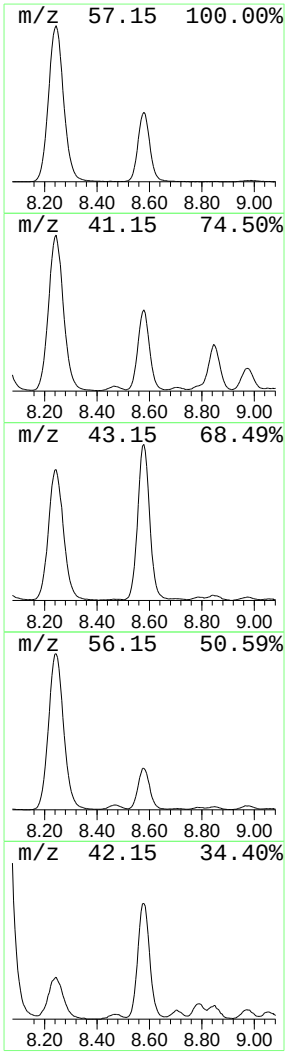
Peak Number 7 alkane-Hexane Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.579	38.67 ug/L	1107340	pentafluorobenzene	10.100

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexane	86	C6H14	000110-54-3	91
2	Hexane	86	C6H14	000110-54-3	91
3	Hexane	86	C6H14	000110-54-3	87
4	Pentane, 2,2,3,4-tetramethyl-	128	C9H20	001186-53-4	40
5	Butanal, 2-methyl-	86	C5H10O	000096-17-3	38





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Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

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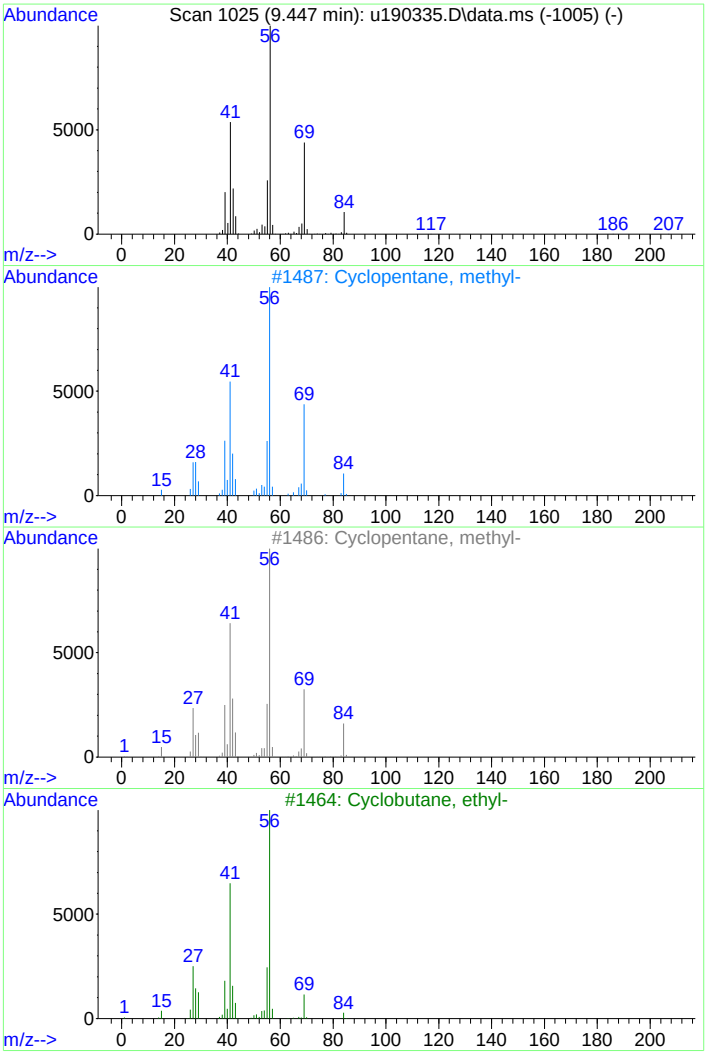
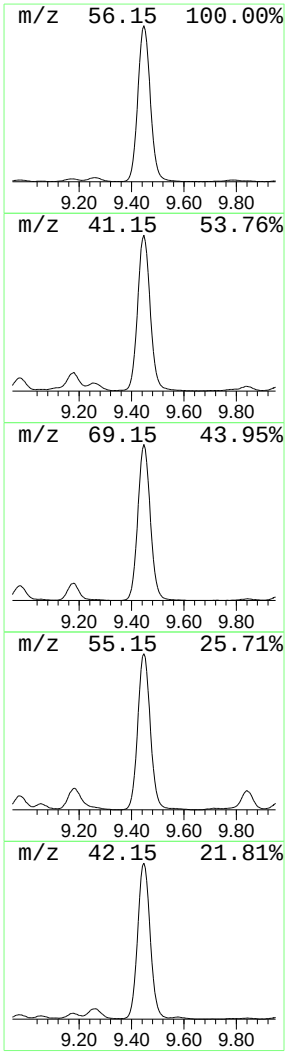
Peak Number 8 alkene Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.447	163.17 ug/L	4671990	pentafluorobenzene	10.100

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	94
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	91
3	Cyclobutane, ethyl-	84	C6H12	004806-61-5	80
4	1H-Tetrazole, 5-methyl-	84	C2H4N4	004076-36-2	80
5	Cyclohexane	84	C6H12	000110-82-7	78





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Sample : JB82646-5
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

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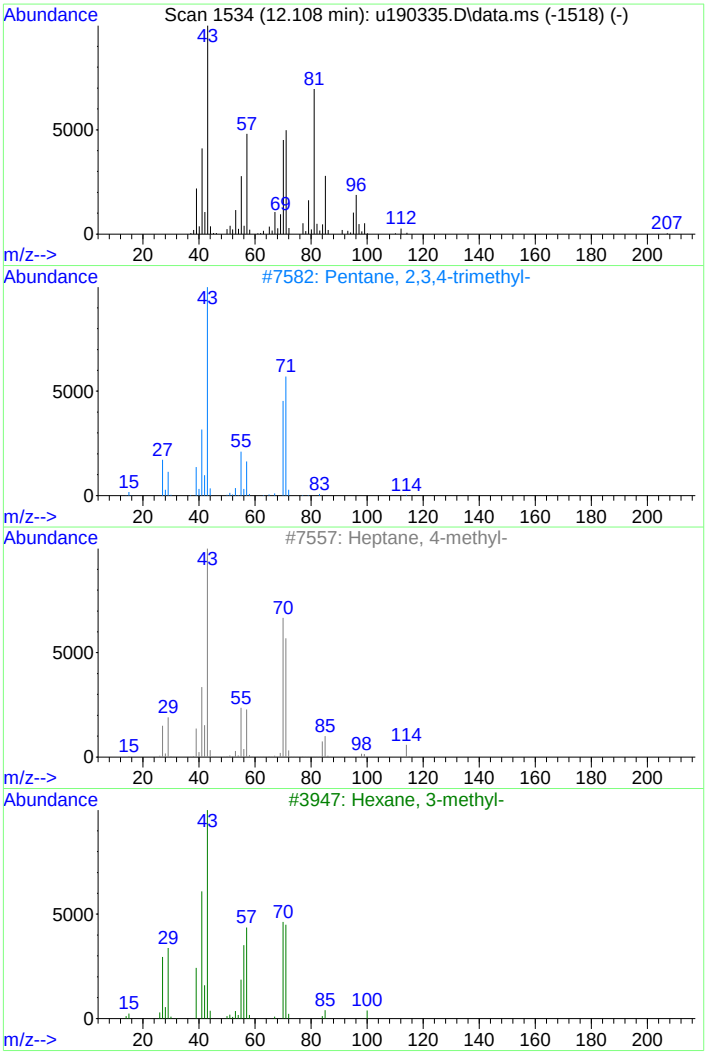
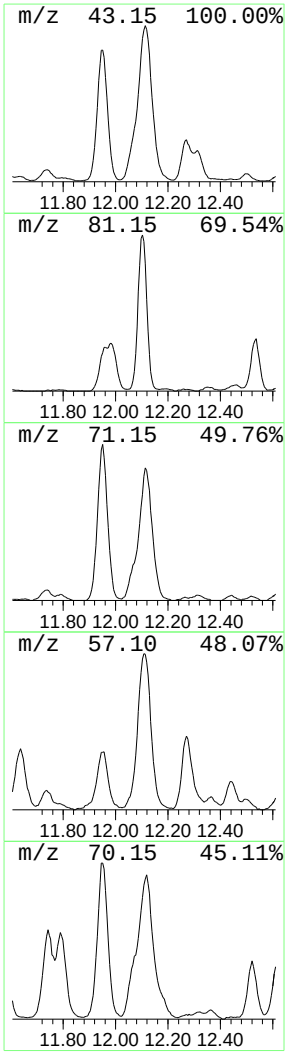
Peak Number 9 alkane Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.108	44.38 ug/L	1043940	1,4-difluorobenzene	11.020

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	43
2	Heptane, 4-methyl-	114	C8H18	000589-53-7	43
3	Hexane, 3-methyl-	100	C7H16	000589-34-4	38
4	Pentane, 3-ethyl-	100	C7H16	000617-78-7	38
5	Tridecane, 6-propyl-	226	C16H34	055045-10-8	38





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Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 21 Sample Multiplier: 1

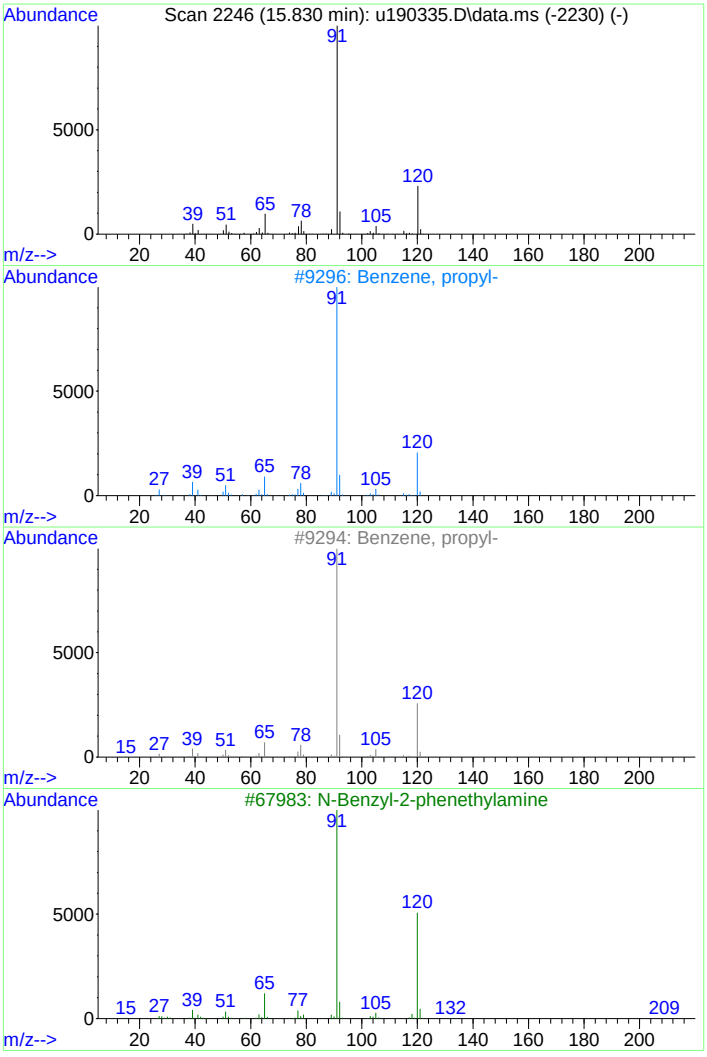
Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

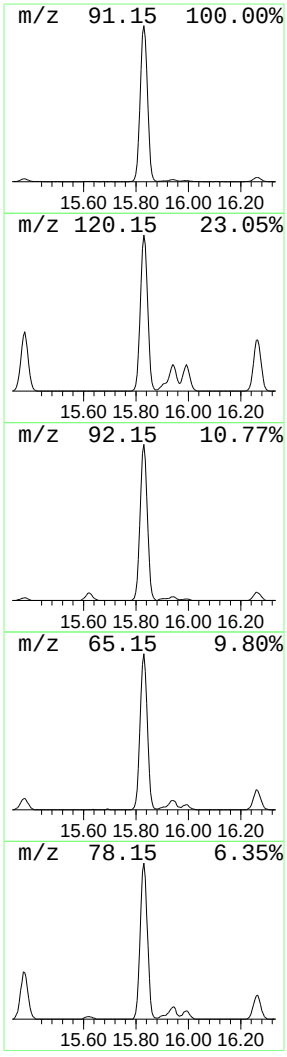
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

****
Peak Number 10 Benzene, propyl- Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.830	60.87 ug/L	1830550	1,4-dichlorobenzene-d4	16.918

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, propyl-	120	C9H12	000103-65-1	91
2	Benzene, propyl-	120	C9H12	000103-65-1	91
3	N-Benzyl-2-phenethylamine	211	C15H17N	003647-71-0	72
4	1,2-Ethanediamine, N,N'-bis(phen...	240	C16H20N2	000140-28-3	64
5	Ethanol, 2-[(phenylmethyl)amino]-	151	C9H13NO	000104-63-2	56





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Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

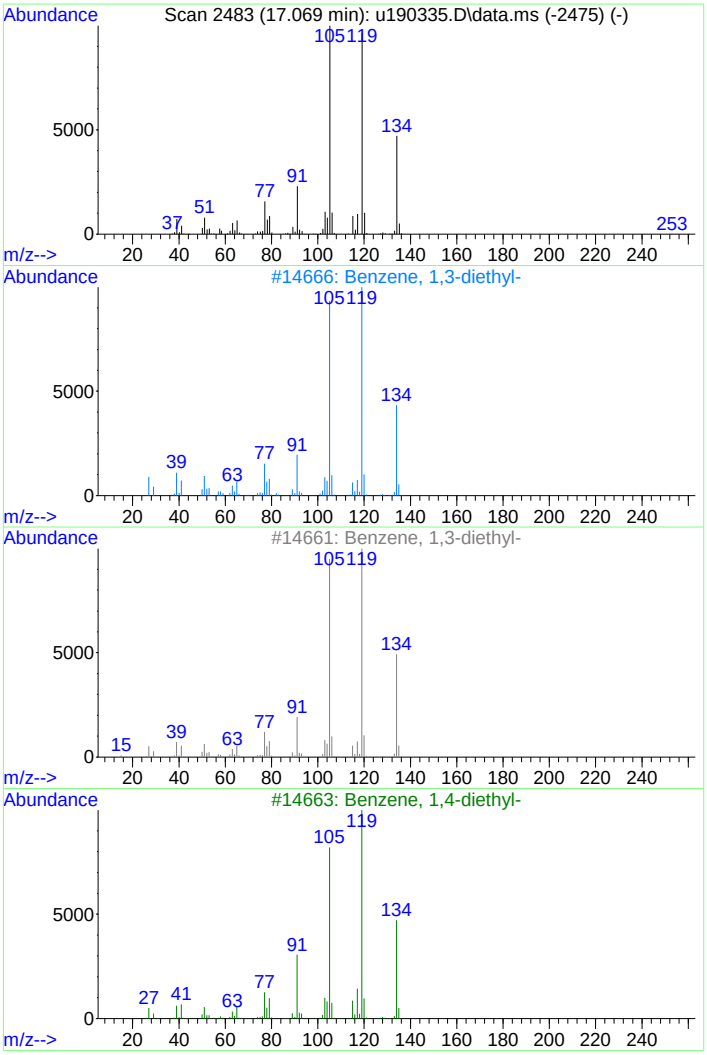
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

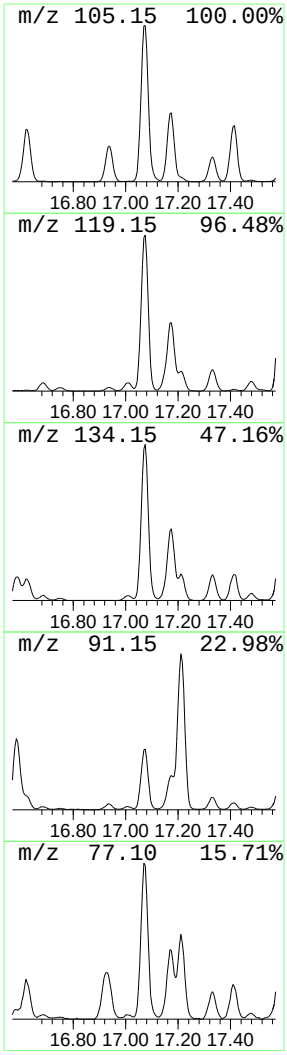
****

Peak Number 11 C4 alkyl benzene Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.069	42.41 ug/L	1275460	1,4-dichlorobenzene-d4	16.918

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	97
2	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	96
3	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	95
4	Benzene, 1,2-diethyl-	134	C10H14	000135-01-3	94
5	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	94





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Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

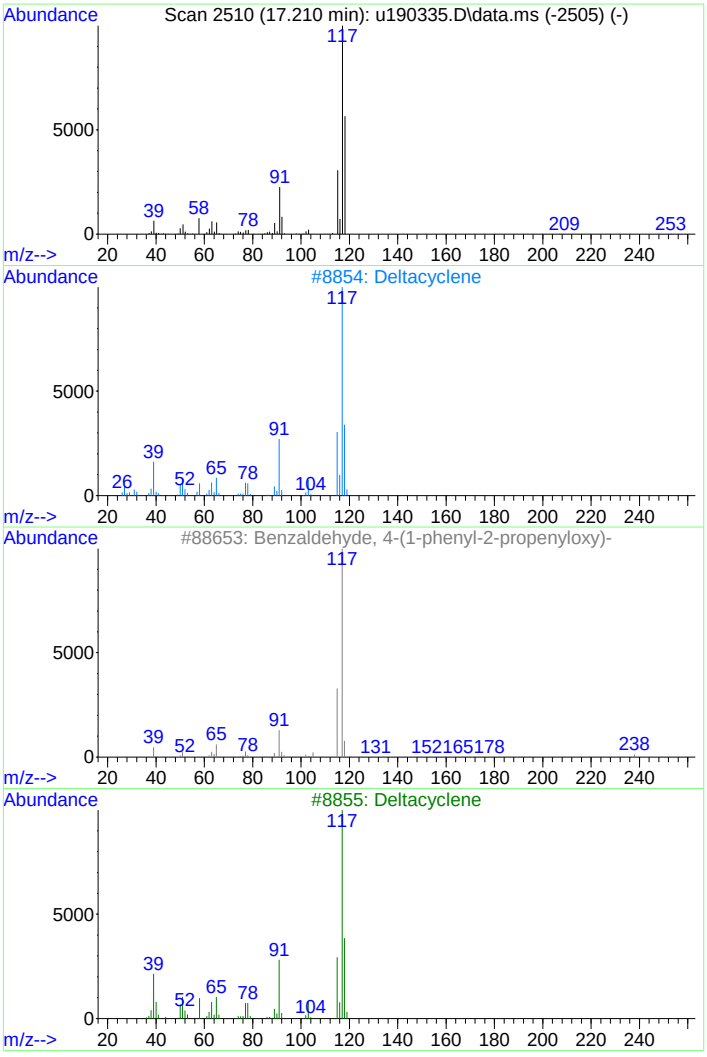
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

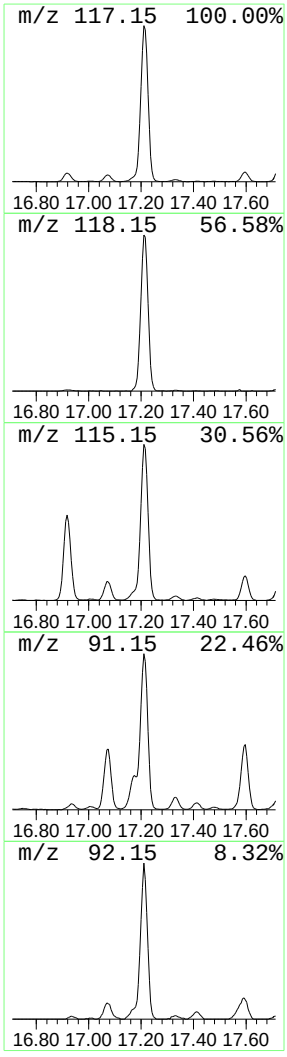
****

Peak Number 12 Indane Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.210	74.25 ug/L	2232990	1,4-dichlorobenzene-d4	16.918

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Deltacyclene	118	C9H10	007785-10-6	42
2	Benzaldehyde, 4-(1-phenyl-2-prop...	238	C16H14O2	1000277-56-1	42
3	Deltacyclene	118	C9H10	007785-10-6	42
4	trans-Cinnamyl bromide	196	C9H9Br	026146-77-0	42
5	Benzene, (2-bromocyclopropyl)-	196	C9H9Br	036617-02-4	38





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Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

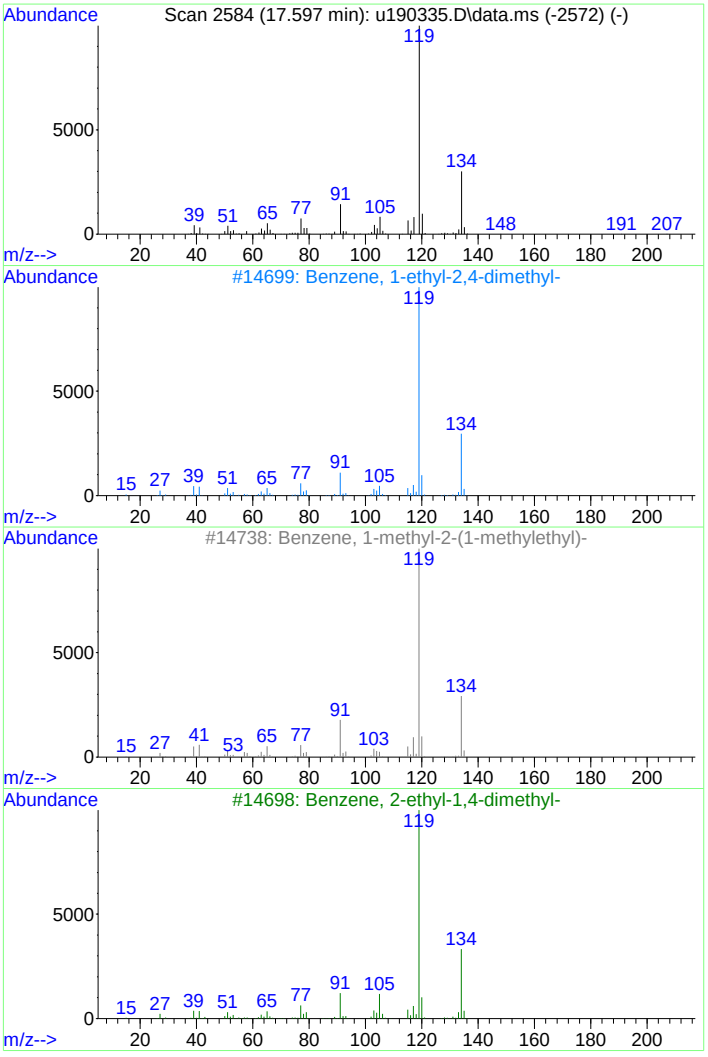
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

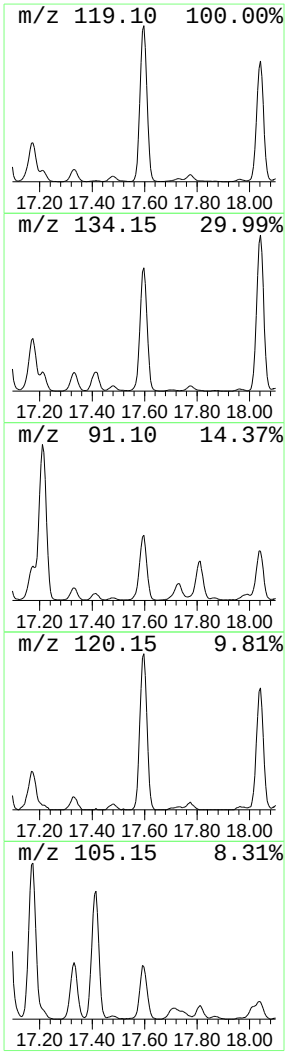
****

Peak Number 13 C4 alkyl benzene Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.597	44.91 ug/L	1350550	1,4-dichlorobenzene-d4	16.918

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	95
2	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	95
3	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	95
4	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14	002870-04-4	94
5	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	94





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Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

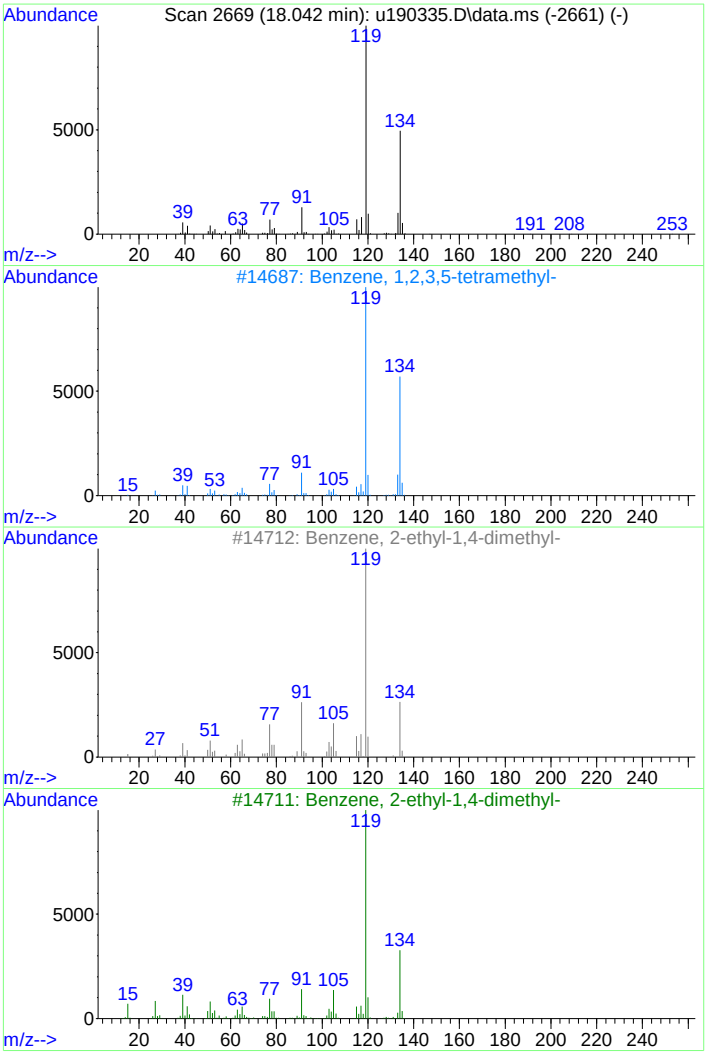
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

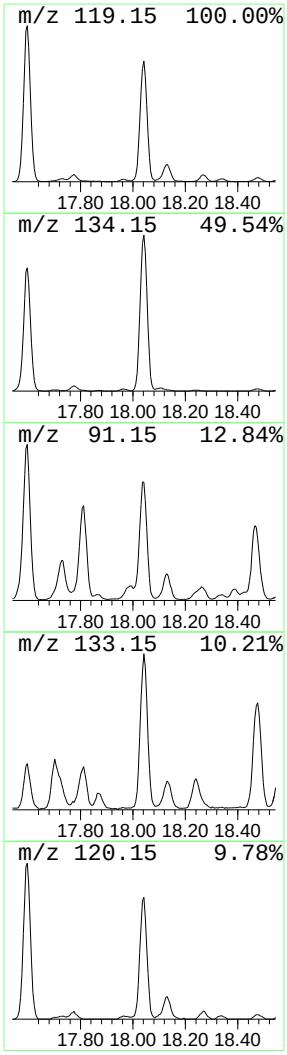
****

Peak Number 14 C4 alkyl benzene Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.042	36.85 ug/L	1108060	1,4-dichlorobenzene-d4	16.918

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	95
2	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	94
3	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	91
4	Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	91
5	Benzene, 1-ethyl-3,5-dimethyl-	134	C10H14	000934-74-7	91





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Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 21 Sample Multiplier: 1

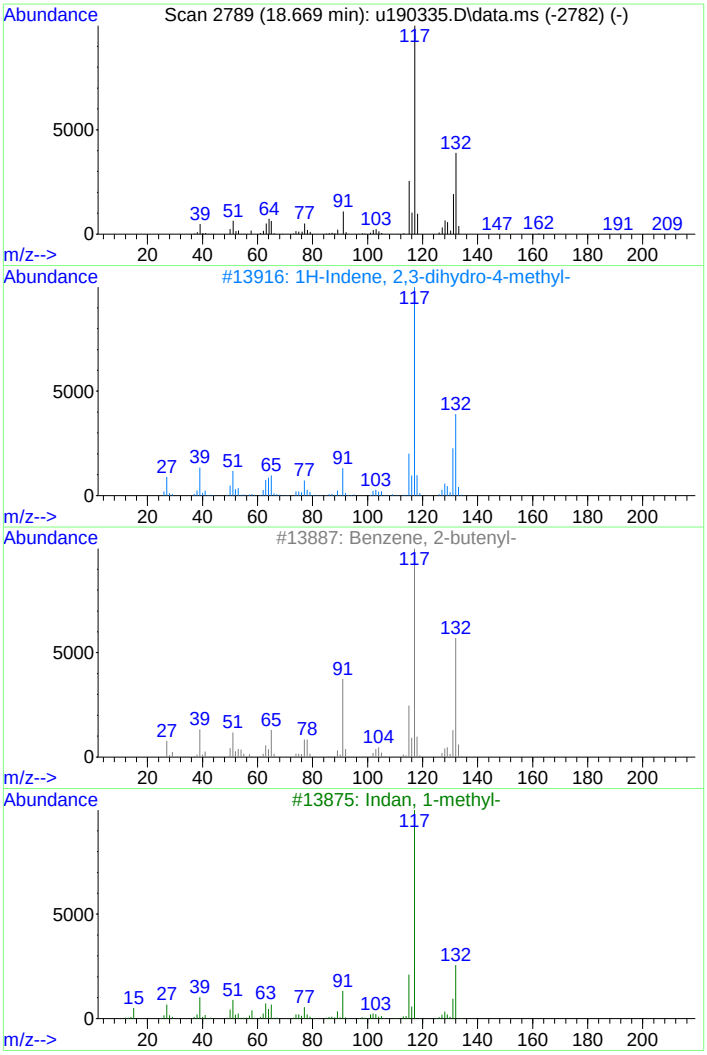
Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

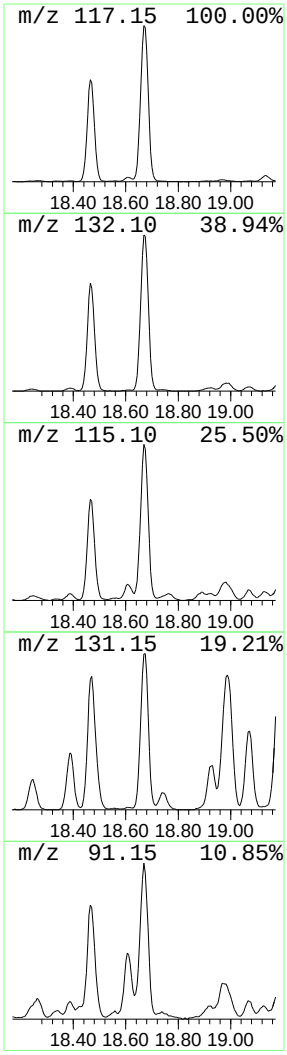
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

****
Peak Number 15 1H-Indene-dihydro-methyl- i... Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.669	44.90 ug/L	1350240	1,4-dichlorobenzene-d4	16.918

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	94
2	Benzene, 2-butenyl-	132	C10H12	001560-06-1	87
3	Indan, 1-methyl-	132	C10H12	000767-58-8	87
4	Indan, 1-methyl-	132	C10H12	000767-58-8	83
5	Benzene, 1-ethenyl-4-ethyl-	132	C10H12	003454-07-7	81





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190335.D
Acq On : 3 Dec 2014 7:21 pm
Operator : yunxiac
Sample : JB82646-5
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
alkane	5.061	73.2	ug/L	2096320	2	10.100	1431670	50.0
alkane	6.043	318.0	ug/L	9105140	2	10.100	1431670	50.0
alkane	6.441	109.0	ug/L	3119780	2	10.100	1431670	50.0
alkene	6.958	42.7	ug/L	1221540	2	10.100	1431670	50.0
alkene	8.035	45.7	ug/L	1309110	2	10.100	1431670	50.0
alkane	8.244	96.3	ug/L	2757830	2	10.100	1431670	50.0
alkane-Hexane	8.579	38.7	ug/L	1107340	2	10.100	1431670	50.0
alkene	9.447	163.2	ug/L	4671990	2	10.100	1431670	50.0
alkane	12.108	44.4	ug/L	1043940	3	11.020	1176140	50.0
Benzene, propyl-	15.830	60.9	ug/L	1830550	5	16.918	1503670	50.0
C4 alkyl benzene	17.069	42.4	ug/L	1275460	5	16.918	1503670	50.0
Indane	17.210	74.3	ug/L	2232990	5	16.918	1503670	50.0
C4 alkyl benzene	17.597	44.9	ug/L	1350550	5	16.918	1503670	50.0
C4 alkyl benzene	18.042	36.9	ug/L	1108060	5	16.918	1503670	50.0
1H-Indene-dihyd...	18.669	44.9	ug/L	1350240	5	16.918	1503670	50.0

Quantitation Report (LSC Reviewed)

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190338.D
Acq On : 3 Dec 2014 8:49 pm
Operator : yunxiac
Sample : JB82646-6
Misc : ms77650,vu8782,5.0,,,,2
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Dec 04 10:33:26 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um
QLast Update : Thu Nov 20 10:49:23 2014
Response via : Initial Calibration

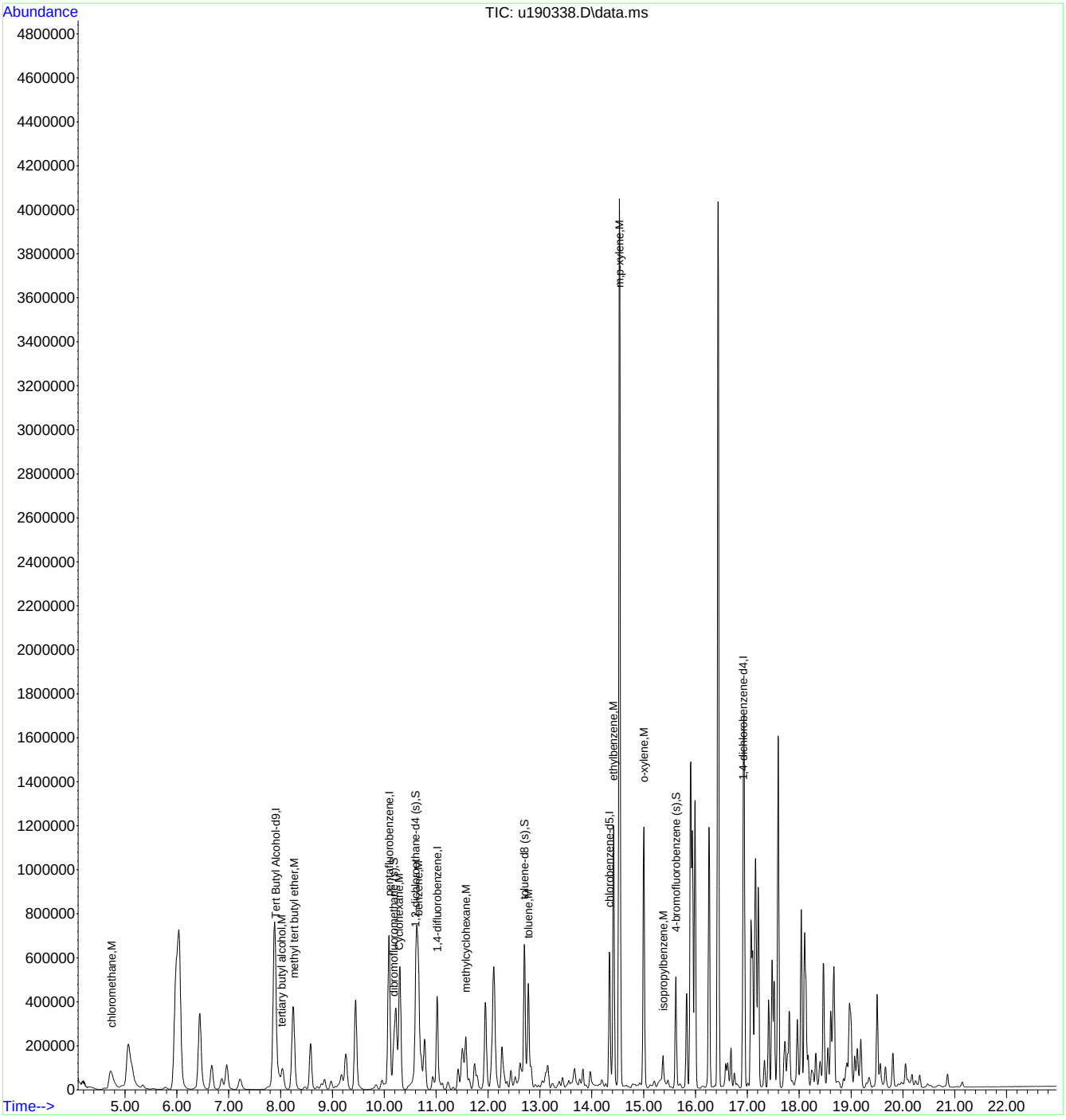
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.905	65	114740	500.00	ug/L	0.00
5) pentafluorobenzene	10.096	168	412728	50.00	ug/L	0.00
64) 1,4-difluorobenzene	11.021	114	442149	50.00	ug/L	0.00
96) chlorobenzene-d5	14.341	117	407537	50.00	ug/L	0.00
112) 1,4-dichlorobenzene-d4	16.918	152	226140	50.00	ug/L	0.00
System Monitoring Compounds						
56) dibromofluoromethane (s)	10.179	113	124353	51.11	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 102.22%			
57) 1,2-dichloroethane-d4 (s)	10.603	65	136307	50.85	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 101.70%			
88) toluene-d8 (s)	12.699	98	530683	55.21	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 110.42%			
114) 4-bromofluorobenzene (s)	15.622	95	191844	53.45	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 106.90%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	8.020	59	1843	7.33	ug/L #	1
15) chloromethane	4.742	50	3440	0.80	ug/L #	38
37) methyl tert butyl ether	8.261	73	5083	0.66	ug/L #	1
68) Cyclohexane	10.284	84	66522	17.60	ug/L #	39
72) benzene	10.660	78	450474	38.56	ug/L	99
79) methylcyclohexane	11.570	83	139879	32.73	ug/L	99
90) toluene	12.778	92	219879	30.89	ug/L	99
107) ethylbenzene	14.419	91	1042076	75.72	ug/L	100
108) m,p-xylene	14.534	106	1475367	283.25	ug/L	98
109) o-xylene	15.005	106	411604	80.25	ug/L	97
113) isopropylbenzene	15.376	105	125405	9.34	ug/L	98

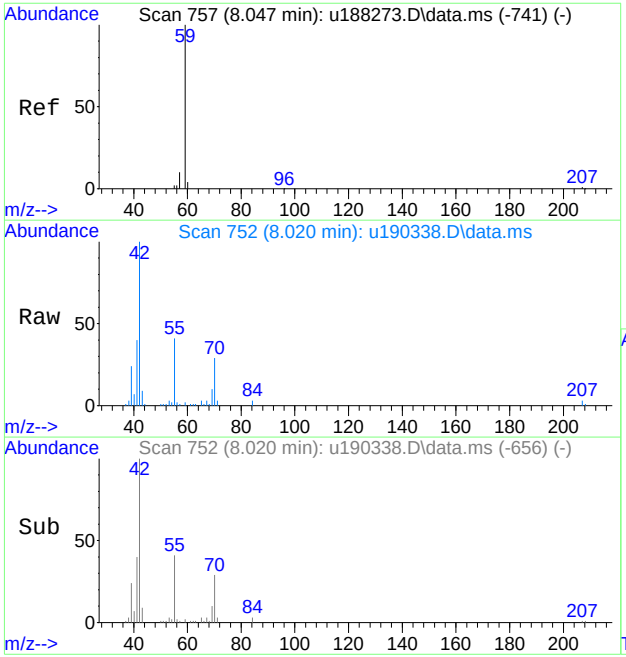
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (LSC Reviewed)

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190338.D
Acq On : 3 Dec 2014 8:49 pm
Operator : yunxiac
Sample : JB82646-6
Misc : ms77650,vu8782,5.0,,,,2
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Dec 04 10:33:26 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um
QLast Update : Thu Nov 20 10:49:23 2014
Response via : Initial Calibration

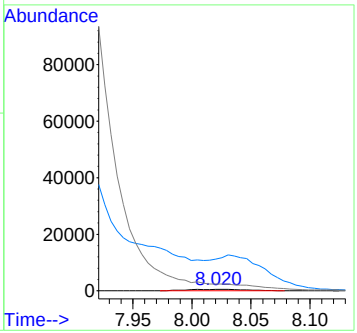


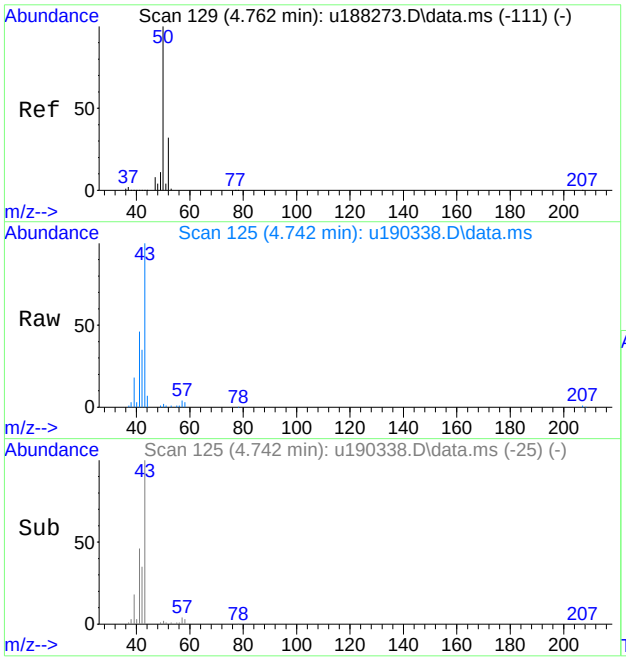


#2
tertiary butyl alcohol
Concen: 7.33 ug/L
RT: 8.020 min Scan# 752
Delta R.T. 0.001 min
Lab File: u190338.D
Acq: 3 Dec 2014 8:49 pm

Tgt Ion: 59 Resp: 1843

Ion	Ratio	Lower	Upper
59	100		
41	356.3	9.1	69.1#
43	0.0	0.0	51.3

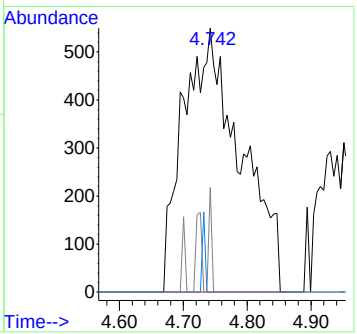


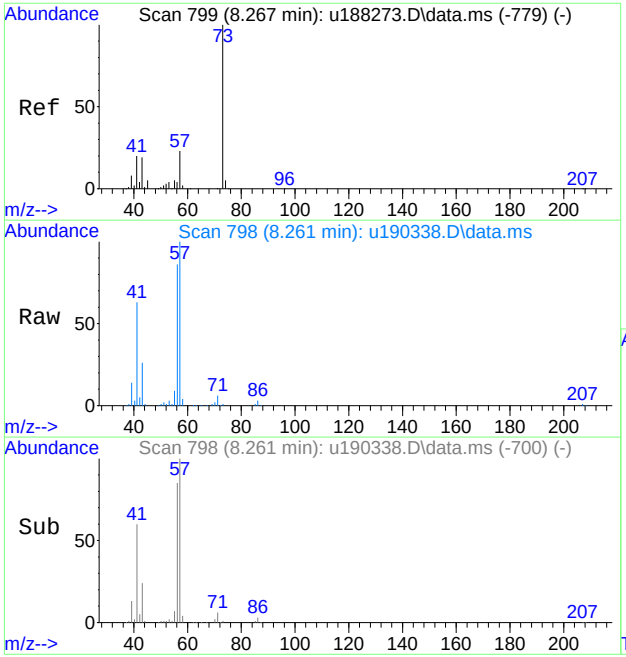


#15
chloromethane
Concen: 0.80 ug/L
RT: 4.742 min Scan# 125
Delta R.T. -0.010 min
Lab File: u190338.D
Acq: 3 Dec 2014 8:49 pm

Tgt Ion: 50 Resp: 3440

Ion	Ratio	Lower	Upper
50	100		
52	0.0	1.8	61.8#
49	39.6	0.0	40.6

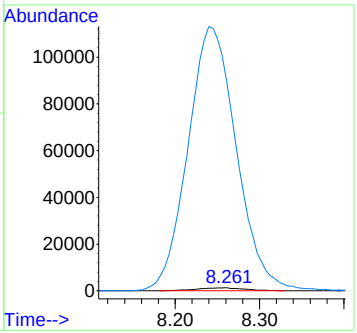


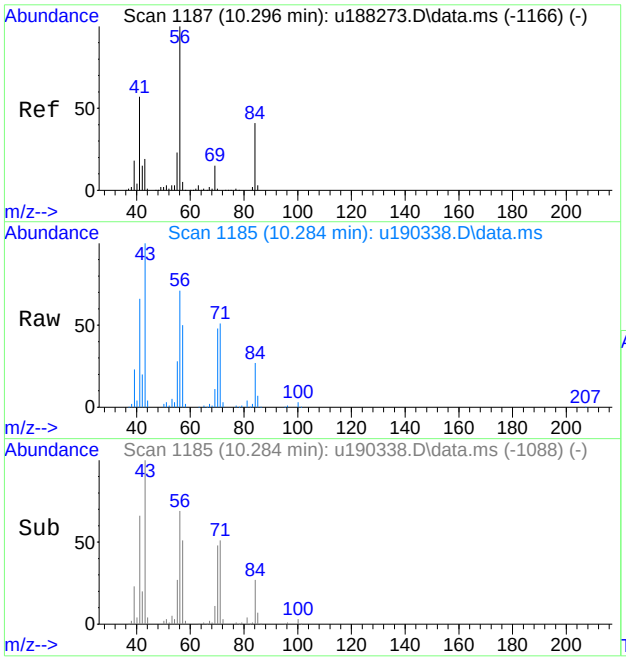


#37
methyl tert butyl ether
Concen: 0.66 ug/L
RT: 8.261 min Scan# 798
Delta R.T. 0.011 min
Lab File: u190338.D
Acq: 3 Dec 2014 8:49 pm

Tgt Ion: 73 Resp: 5083

Ion	Ratio	Lower	Upper
73	100		
57	8911.7	0.0	53.8#

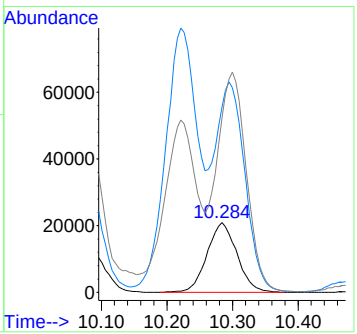


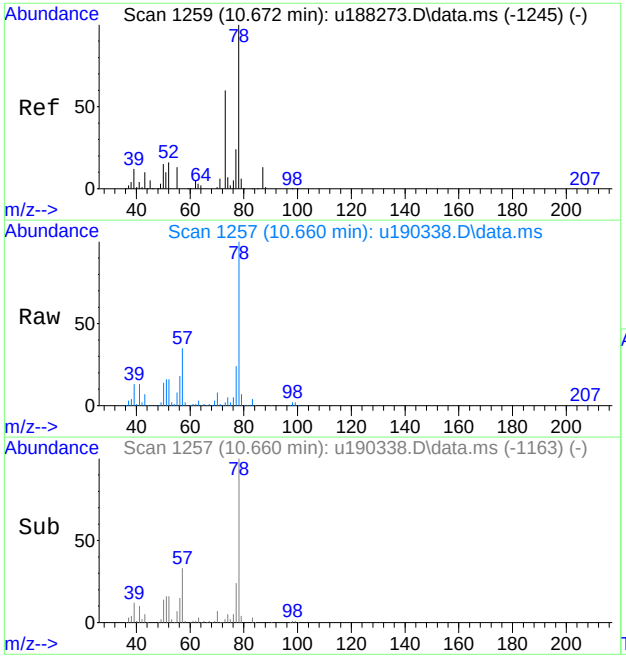


#68
Cyclohexane
Concen: 17.60 ug/L
RT: 10.284 min Scan# 1185
Delta R.T. 0.006 min
Lab File: u190338.D
Acq: 3 Dec 2014 8:49 pm

Tgt Ion: 84 Resp: 66522

Ion	Ratio	Lower	Upper
84	100		
56	265.3	183.5	243.5#
41	249.6	95.8	155.8#

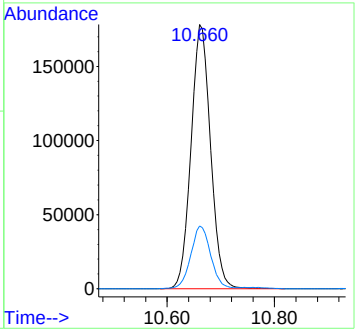


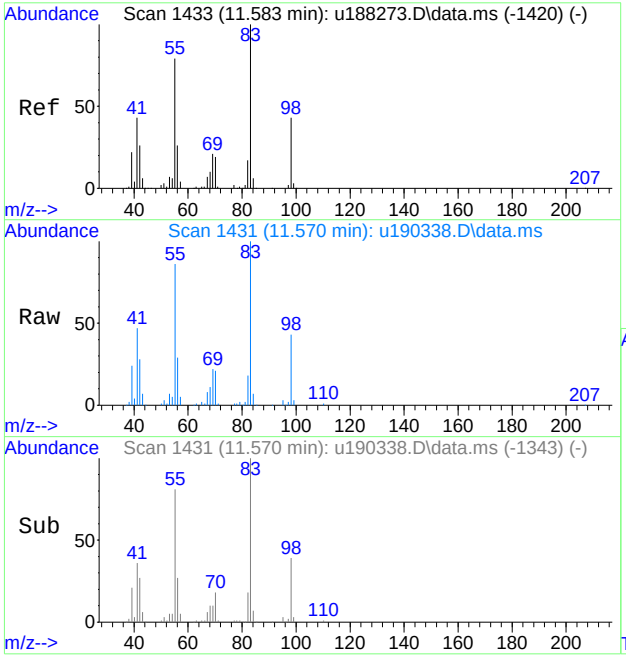


#72
benzene
Concen: 38.56 ug/L
RT: 10.660 min Scan# 1257
Delta R.T. 0.001 min
Lab File: u190338.D
Acq: 3 Dec 2014 8:49 pm

Tgt Ion: 78 Resp: 450474

Ion	Ratio	Lower	Upper
78	100		
77	23.7	0.0	54.0

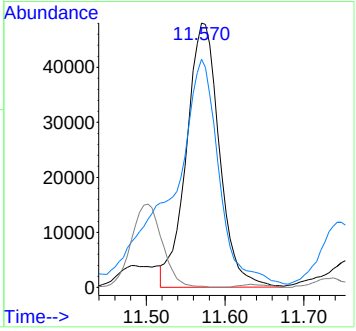


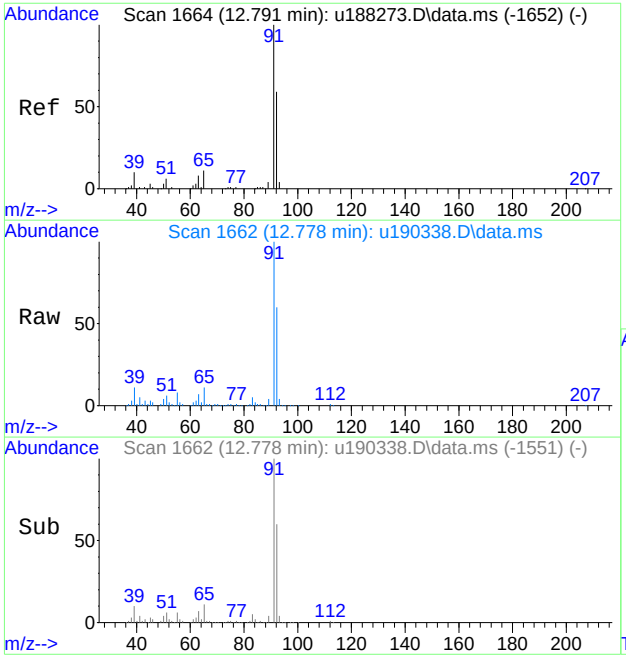


#79
methylcyclohexane
Concen: 32.73 ug/L
RT: 11.570 min Scan# 1431
Delta R.T. 0.001 min
Lab File: u190338.D
Acq: 3 Dec 2014 8:49 pm

Tgt Ion: 83 Resp: 139879

Ion	Ratio	Lower	Upper
83	100		
55	85.3	56.2	116.2
85	0.5	0.0	50.2

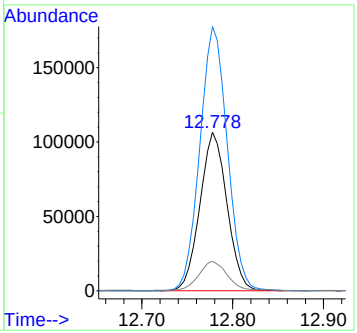


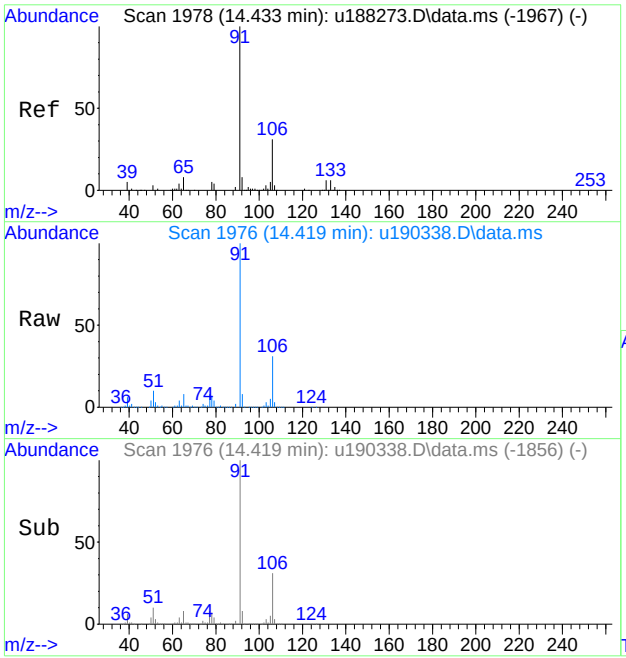


#90
toluene
Concen: 30.89 ug/L
RT: 12.778 min Scan# 1662
Delta R.T. 0.001 min
Lab File: u190338.D
Acq: 3 Dec 2014 8:49 pm

Tgt Ion: 92 Resp: 219879

Ion	Ratio	Lower	Upper
92	100		
91	166.6	138.3	198.3
65	18.3	0.0	49.2

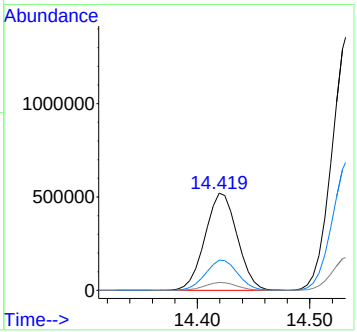


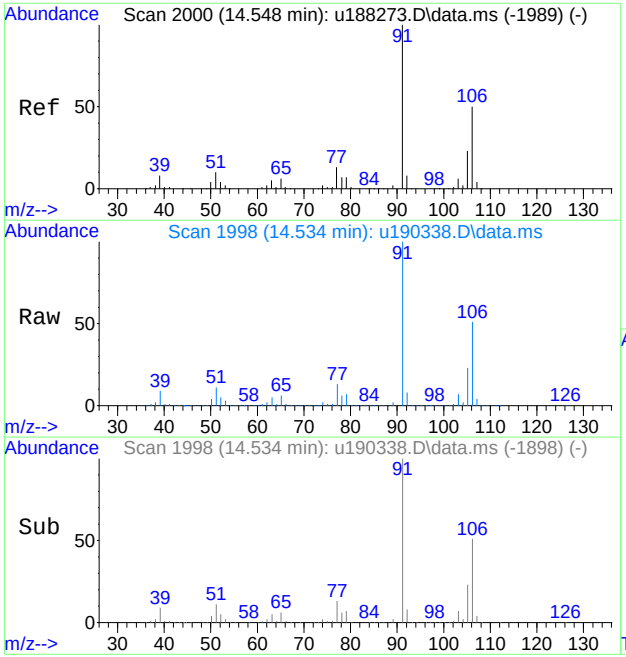


#107
ethylbenzene
Concen: 75.72 ug/L
RT: 14.419 min Scan# 1976
Delta R.T. -0.005 min
Lab File: u190338.D
Acq: 3 Dec 2014 8:49 pm

Tgt Ion: 91 Resp: 1042076

Ion	Ratio	Lower	Upper
91	100		
106	31.1	1.0	61.0
77	8.1	0.0	38.4

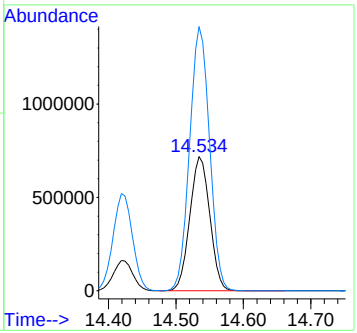


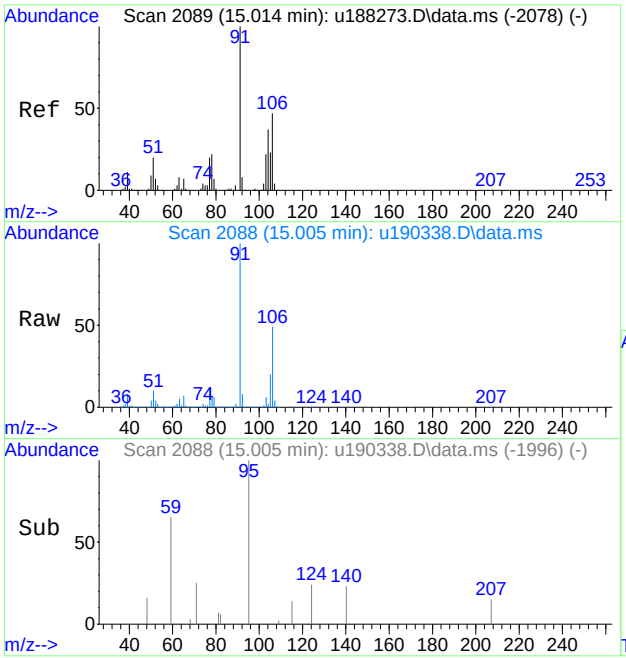


#108
m,p-xylene
Concen: 283.25 ug/L
RT: 14.534 min Scan# 1998
Delta R.T. 0.001 min
Lab File: u190338.D
Acq: 3 Dec 2014 8:49 pm

Tgt Ion:106 Resp: 1475367

Ion	Ratio	Lower	Upper
106	100		
91	196.7	169.0	229.0

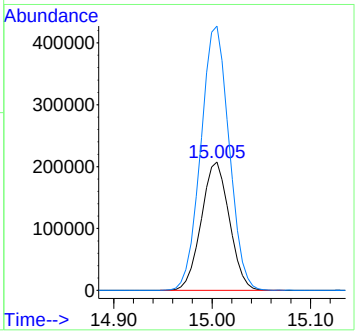


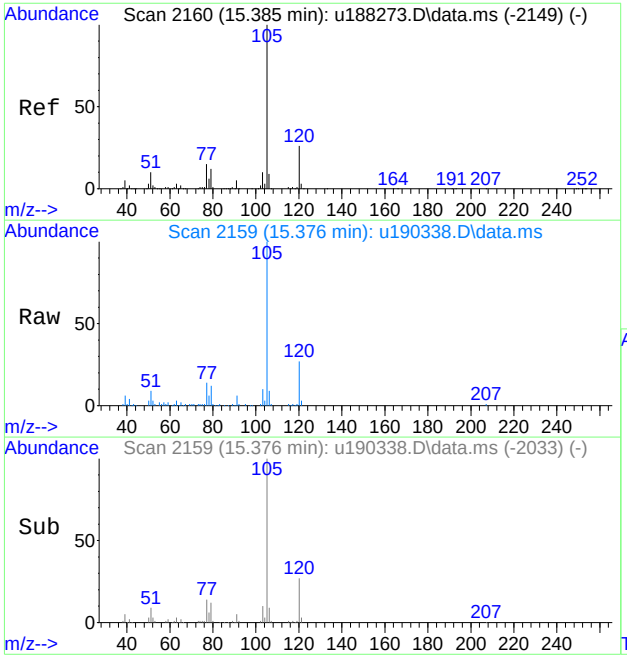


#109
o-xylene
Concen: 80.25 ug/L
RT: 15.005 min Scan# 2088
Delta R.T. 0.001 min
Lab File: u190338.D
Acq: 3 Dec 2014 8:49 pm

Tgt Ion:106 Resp: 411604

Ion	Ratio	Lower	Upper
106	100		
91	206.0	180.4	240.4

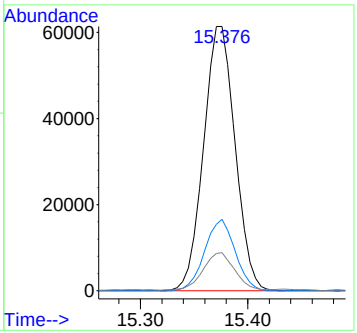




#113
isopropylbenzene
Concen: 9.34 ug/L
RT: 15.376 min Scan# 2159
Delta R.T. 0.001 min
Lab File: u190338.D
Acq: 3 Dec 2014 8:49 pm

Tgt Ion:105 Resp: 125405

Ion	Ratio	Lower	Upper
105	100		
120	27.0	0.0	55.8
77	14.1	0.0	44.7



7.1.11

7

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190338.D
Acq On : 3 Dec 2014 8:49 pm
Operator : yunxiac
Sample : JB82646-6
Misc : ms77650,vu8782,5.0,,,,2
ALS Vial : 24 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MU8763.M
Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

Signal : TIC: u190338.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.721	106	121	153	rBV2	79794	498617	6.02%	0.501%
2	5.061	170	186	232	rVB2	196639	1367800	16.51%	1.375%
3	6.039	340	373	419	rVV	725792	5231161	63.15%	5.260%
4	6.441	419	450	478	rVV	346271	1457630	17.60%	1.466%
5	6.671	479	494	515	rVV	110580	405001	4.89%	0.407%
6	6.959	539	549	578	rVV	113437	440048	5.31%	0.442%
7	7.884	683	726	748	rBV2	763194	3511687	42.39%	3.531%
8	8.036	749	755	776	rVV2	96312	343730	4.15%	0.346%
9	8.240	776	794	823	rVB	376859	1520583	18.36%	1.529%
10	8.580	846	859	874	rVB	206787	640089	7.73%	0.644%
11	9.259	980	989	1008	rVB3	159952	572918	6.92%	0.576%
12	9.447	1010	1025	1060	rVB	407721	1395210	16.84%	1.403%
13	10.091	1136	1148	1158	rBV2	674130	1984170	23.95%	1.995%
14	10.221	1158	1173	1180	rVV2	344877	1474578	17.80%	1.483%
15	10.300	1180	1188	1207	rVB3	559982	1746148	21.08%	1.756%
16	10.624	1209	1250	1272	rBV4	748568	4217888	50.92%	4.241%
17	10.775	1272	1279	1298	rVB3	228741	693501	8.37%	0.697%
18	11.021	1316	1326	1340	rVB	403409	987601	11.92%	0.993%
19	11.507	1409	1419	1425	rVV3	163841	537481	6.49%	0.540%
20	11.570	1425	1431	1440	rVB2	199866	517392	6.25%	0.520%
21	11.743	1453	1464	1489	rVB5	113961	457202	5.52%	0.460%
22	11.946	1489	1503	1517	rBV	391726	1175837	14.19%	1.182%
23	12.114	1517	1535	1554	rVB4	551554	2150416	25.96%	2.162%
24	12.271	1554	1565	1579	rBV2	186317	611124	7.38%	0.615%
25	12.621	1624	1632	1639	rBV	86103	261184	3.15%	0.263%
26	12.699	1639	1647	1655	rVV	633181	1484376	17.92%	1.493%
27	12.778	1655	1662	1682	rVB	471354	1350447	16.30%	1.358%
28	13.149	1719	1733	1743	rVB4	102606	421750	5.09%	0.424%
29	13.970	1882	1890	1909	rBV3	75915	248546	3.00%	0.250%
30	14.341	1953	1961	1969	rBV	614030	1277803	15.43%	1.285%
31	14.419	1969	1976	1988	rVV	1187829	2444211	29.51%	2.458%
32	14.534	1988	1998	2012	rVB	4034827	8283644	100.00%	8.330%
33	15.005	2078	2088	2101	rVB	1186019	2426312	29.29%	2.440%
34	15.376	2135	2159	2171	rBV	140890	456772	5.51%	0.459%
35	15.622	2196	2206	2216	rBV	507049	1016664	12.27%	1.022%
36	15.831	2232	2246	2252	rBV	430161	842163	10.17%	0.847%
37	15.909	2252	2261	2264	rBV	1465334	2930136	35.37%	2.946%
38	15.993	2272	2277	2295	rVB	1310125	2439340	29.45%	2.453%
39	16.260	2315	2328	2339	rBV	1183801	2359646	28.49%	2.373%
40	16.437	2352	2362	2379	rVB	4023388	7673714	92.64%	7.716%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190338.D
Acq On : 3 Dec 2014 8:49 pm
Operator : yunxiac
Sample : JB82646-6
Misc : ms77650,vu8782,5.0,,,,2
ALS Vial : 24 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MU8763.M
Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

41	16.683	2403	2409	2416	rVB	173137	315787	3.81%	0.318%
42	16.934	2444	2457	2467	rBV2	1693888	4022929	48.56%	4.045%
43	17.070	2475	2483	2493	rBV2	753747	2423130	29.25%	2.437%
44	17.159	2493	2500	2506	rVV3	1030674	2675808	32.30%	2.691%
45	17.211	2506	2510	2523	rVB	907153	1629509	19.67%	1.639%
46	17.410	2540	2548	2554	rBV	397953	749958	9.05%	0.754%
47	17.478	2554	2561	2565	rVV	560368	1090708	13.17%	1.097%
48	17.514	2565	2568	2575	rVV	462964	801512	9.68%	0.806%
49	17.593	2575	2583	2595	rVB	1598765	3081470	37.20%	3.099%
50	17.723	2596	2608	2614	rBV5	211188	577280	6.97%	0.580%
51	17.807	2614	2624	2633	rVB3	318857	805111	9.72%	0.810%
52	17.964	2642	2654	2661	rBV	299080	649824	7.84%	0.653%
53	18.042	2661	2669	2675	rBV	752526	1357520	16.39%	1.365%
54	18.105	2675	2681	2692	rBV2	638748	1755395	21.19%	1.765%
55	18.319	2716	2722	2730	rVB2	144529	287791	3.47%	0.289%
56	18.403	2730	2738	2743	rBV6	106149	255761	3.09%	0.257%
57	18.466	2743	2750	2760	rVV2	549336	1152654	13.91%	1.159%
58	18.555	2760	2767	2772	rVV3	161880	342246	4.13%	0.344%
59	18.607	2772	2777	2781	rVV	327174	639230	7.72%	0.643%
60	18.670	2782	2789	2798	rVB2	528377	1295749	15.64%	1.303%
61	18.973	2840	2847	2860	rVV4	361100	1275672	15.40%	1.283%
62	19.072	2860	2866	2870	rVV2	129902	264837	3.20%	0.266%
63	19.119	2870	2875	2881	rVV2	168929	377823	4.56%	0.380%
64	19.187	2882	2888	2900	rVB	221785	507225	6.12%	0.510%
65	19.501	2937	2948	2955	rBV	417869	889353	10.74%	0.894%
66	19.804	2994	3006	3019	rBV	157342	369254	4.46%	0.371%

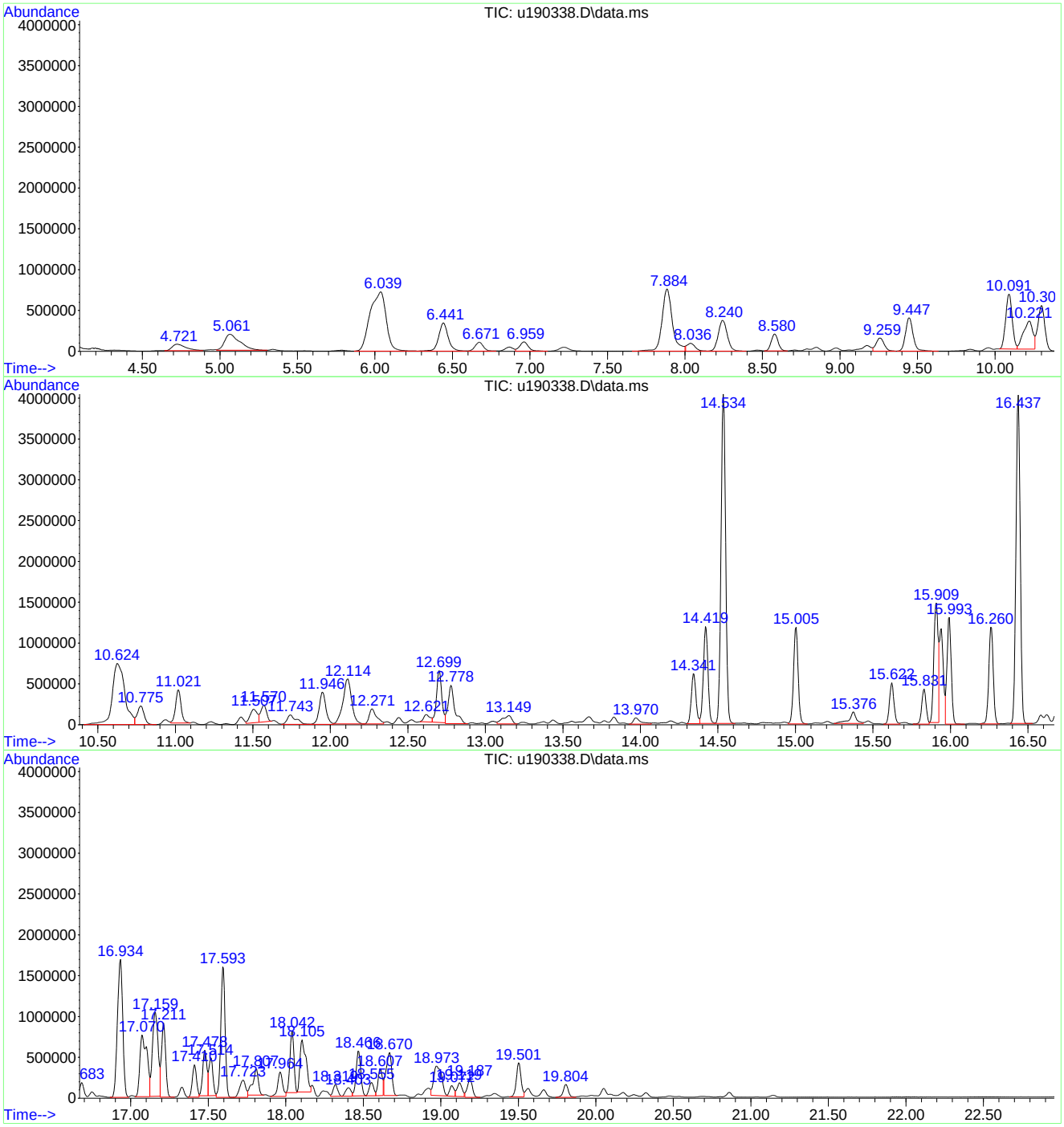
Sum of corrected areas: 99448056

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190338.D
Acq On : 3 Dec 2014 8:49 pm
Operator : yunxiac
Sample : JB82646-6
Misc : ms77650,vu8782,5.0,,,,2
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190338.D
Acq On : 3 Dec 2014 8:49 pm
Operator : yunxiac
Sample : JB82646-6
Misc : ms77650,vu8782,5.0,,,,2
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

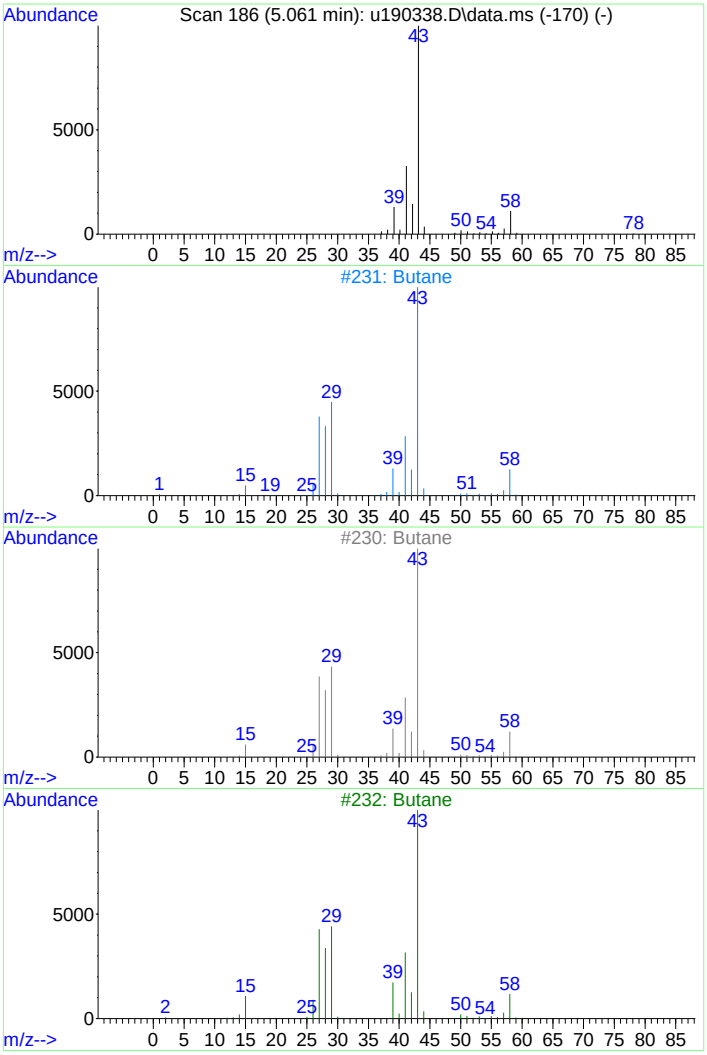
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

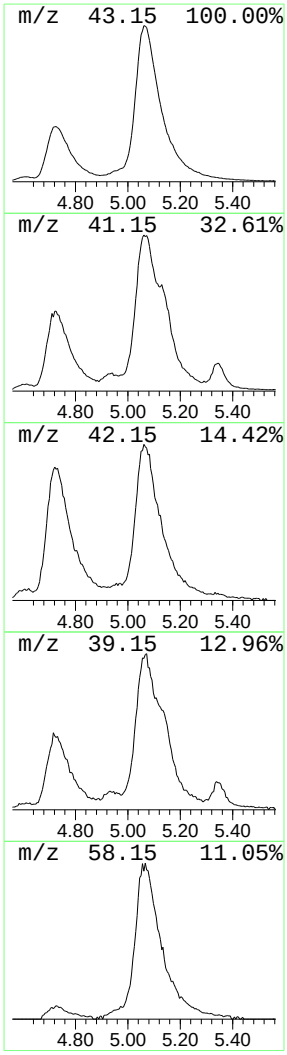
****

Peak Number 1 alkane Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.061	34.47 ug/L	1367800	pentafluorobenzene	10.096

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	80
2	Butane	58	C4H10	000106-97-8	80
3	Butane	58	C4H10	000106-97-8	72
4	Isopropylsulfonyl chloride	142	C3H7ClO2S	010147-37-2	9
5	Isobutane	58	C4H10	000075-28-5	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190338.D
Acq On : 3 Dec 2014 8:49 pm
Operator : yunxiac
Sample : JB82646-6
Misc : ms77650,vu8782,5.0,,,,2
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

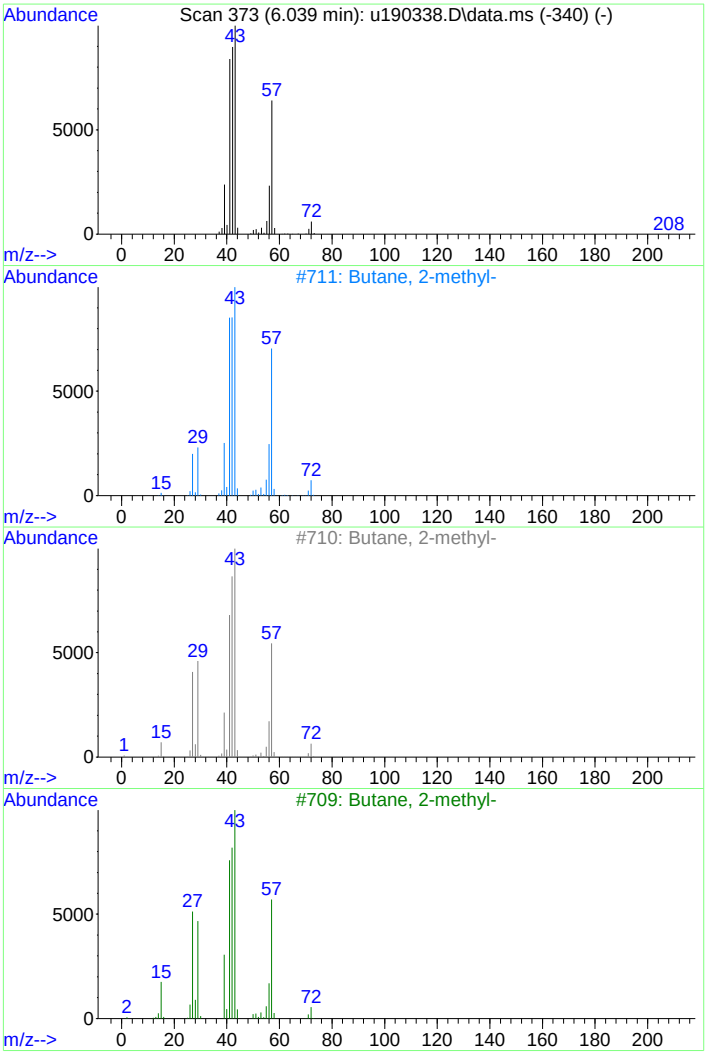
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

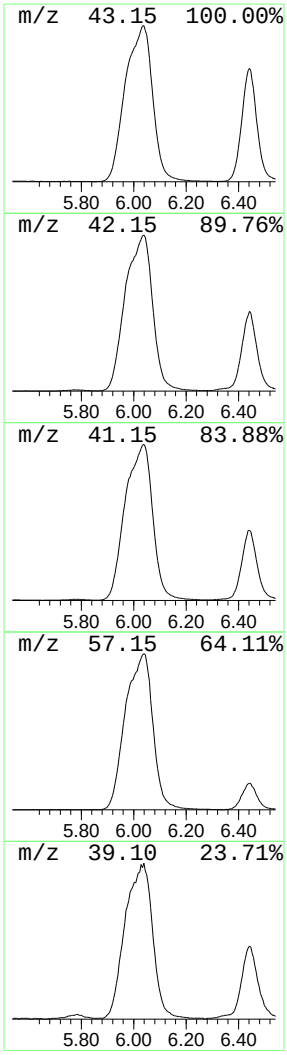
****

Peak Number 2 alkane Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.039	131.82 ug/L	5231160	pentafluorobenzene	10.096

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	94
2	Butane, 2-methyl-	72	C5H12	000078-78-4	91
3	Butane, 2-methyl-	72	C5H12	000078-78-4	90
4	Pentane	72	C5H12	000109-66-0	50
5	3-Buten-1-ol	72	C4H8O	000627-27-0	25





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190338.D
Acq On : 3 Dec 2014 8:49 pm
Operator : yunxiac
Sample : JB82646-6
Misc : ms77650,vu8782,5.0,,,,2
ALS Vial : 24 Sample Multiplier: 1

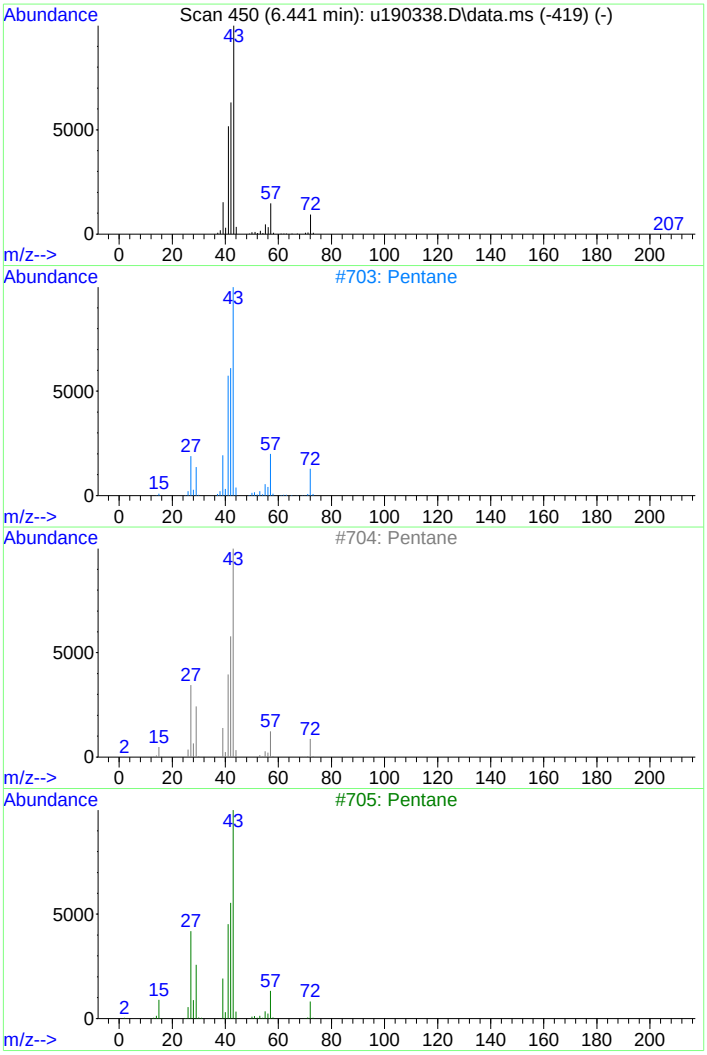
Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

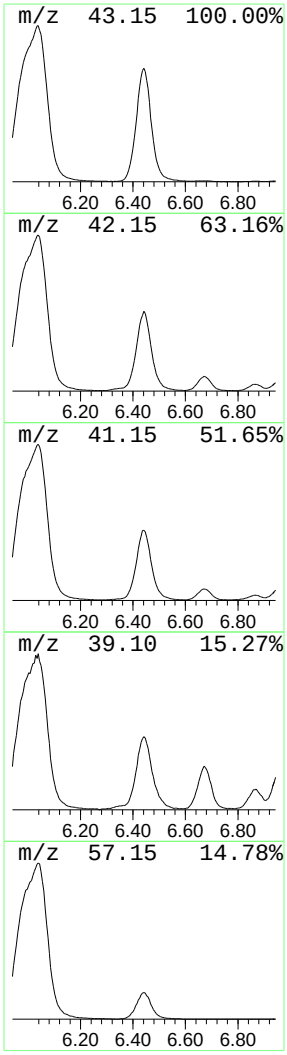
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

****
Peak Number 3 alkane Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.441	36.73 ug/L	1457630	pentafluorobenzene	10.096

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	91
2	Pentane	72	C5H12	000109-66-0	90
3	Pentane	72	C5H12	000109-66-0	90
4	Butane, 2-methyl-	72	C5H12	000078-78-4	80
5	Pentane	72	C5H12	000109-66-0	64





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190338.D
Acq On : 3 Dec 2014 8:49 pm
Operator : yunxiac
Sample : JB82646-6
Misc : ms77650,vu8782,5.0,,,,2
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

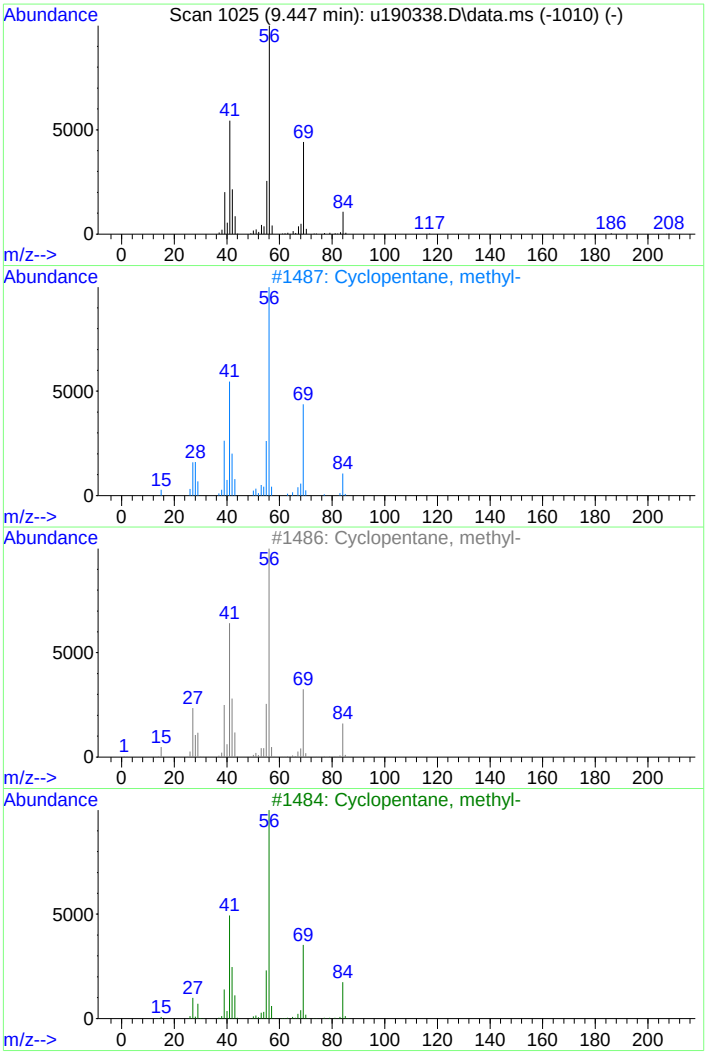
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

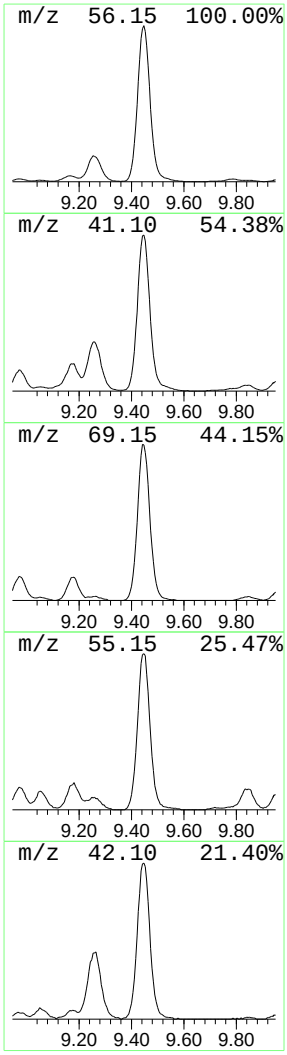
****

Peak Number 4 alkene Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.447	35.16 ug/L	1395210	pentafluorobenzene	10.096

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	94
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	91
3	Cyclopentane, methyl-	84	C6H12	000096-37-7	86
4	1H-Tetrazole, 5-methyl-	84	C2H4N4	004076-36-2	80
5	Cyclopropane, propyl-	84	C6H12	002415-72-7	72





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190338.D
Acq On : 3 Dec 2014 8:49 pm
Operator : yunxiac
Sample : JB82646-6
Misc : ms77650,vu8782,5.0,,,,2
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

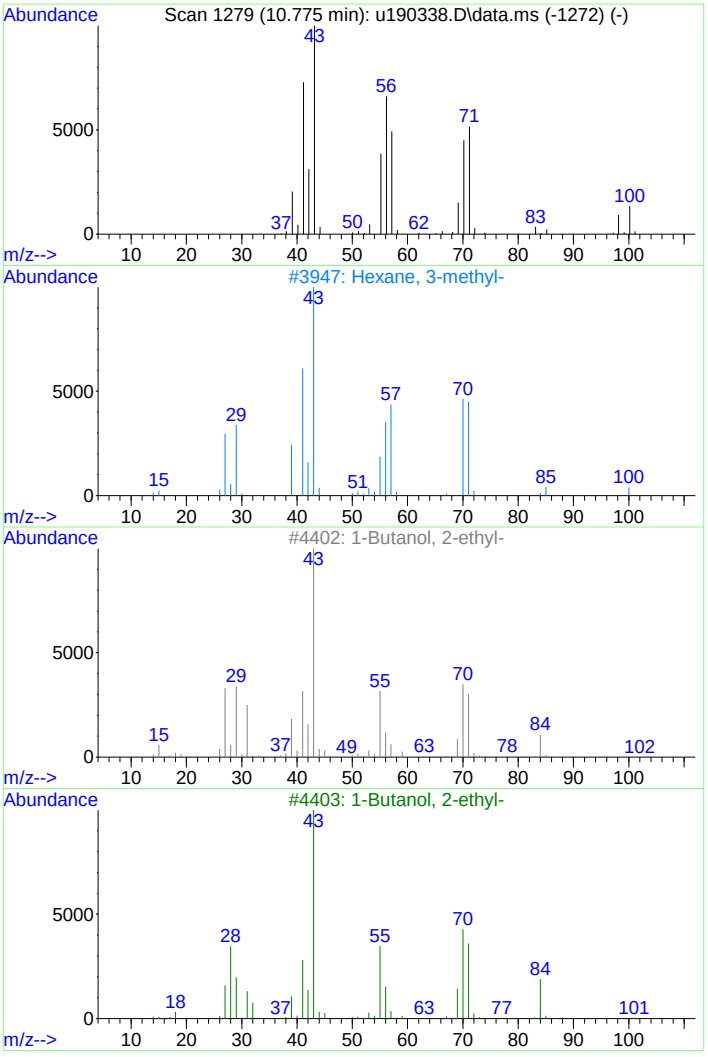
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

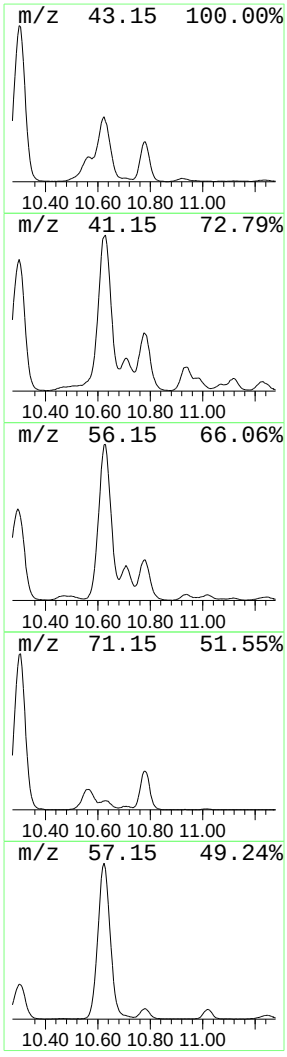
****

Peak Number 5 alkane Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.775	35.11 ug/L	693501	1,4-difluorobenzene	11.021

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexane, 3-methyl-	100	C7H16	000589-34-4	64
2	1-Butanol, 2-ethyl-	102	C6H14O	000097-95-0	53
3	1-Butanol, 2-ethyl-	102	C6H14O	000097-95-0	53
4	1-Heptene	98	C7H14	000592-76-7	50
5	Heptane	100	C7H16	000142-82-5	50





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190338.D
Acq On : 3 Dec 2014 8:49 pm
Operator : yunxiac
Sample : JB82646-6
Misc : ms77650,vu8782,5.0,,,,2
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

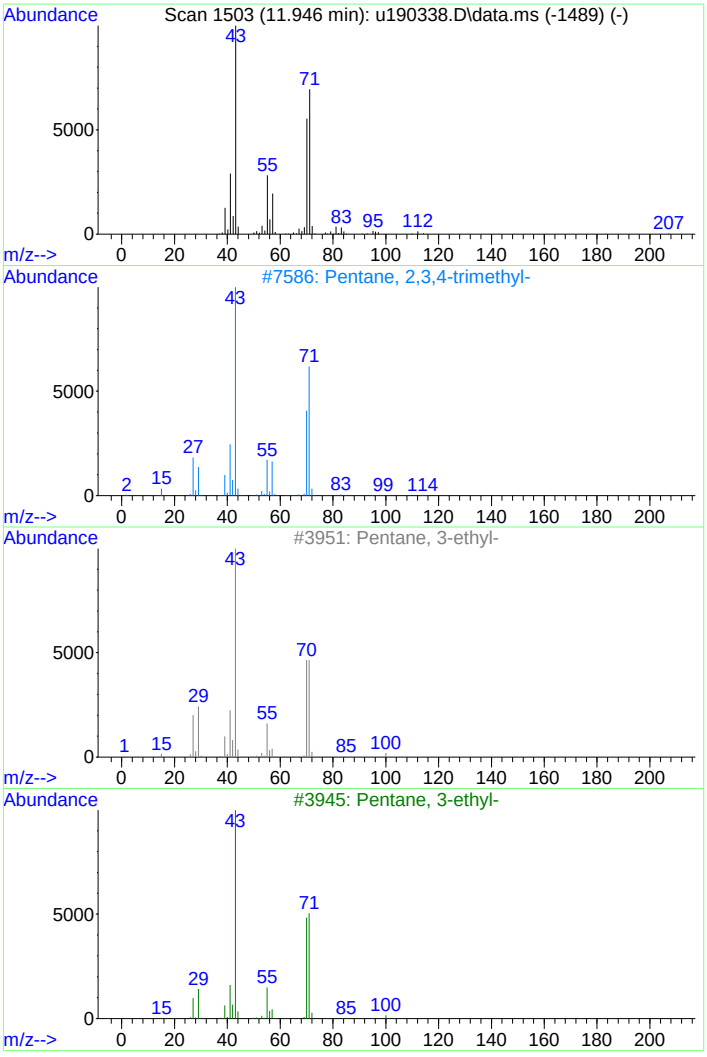
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

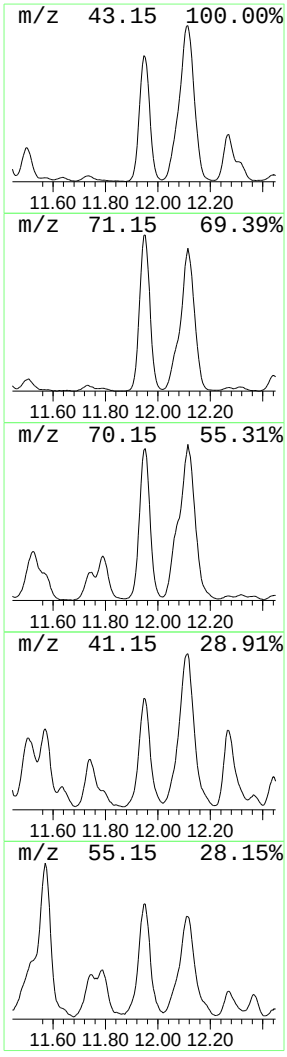
****

Peak Number 6 alkane Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.947	59.53 ug/L	1175840	1,4-difluorobenzene	11.021

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	83
2	Pentane, 3-ethyl-	100	C7H16	000617-78-7	72
3	Pentane, 3-ethyl-	100	C7H16	000617-78-7	72
4	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	72
5	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	64





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190338.D
Acq On : 3 Dec 2014 8:49 pm
Operator : yunxiac
Sample : JB82646-6
Misc : ms77650,vu8782,5.0,,,,2
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

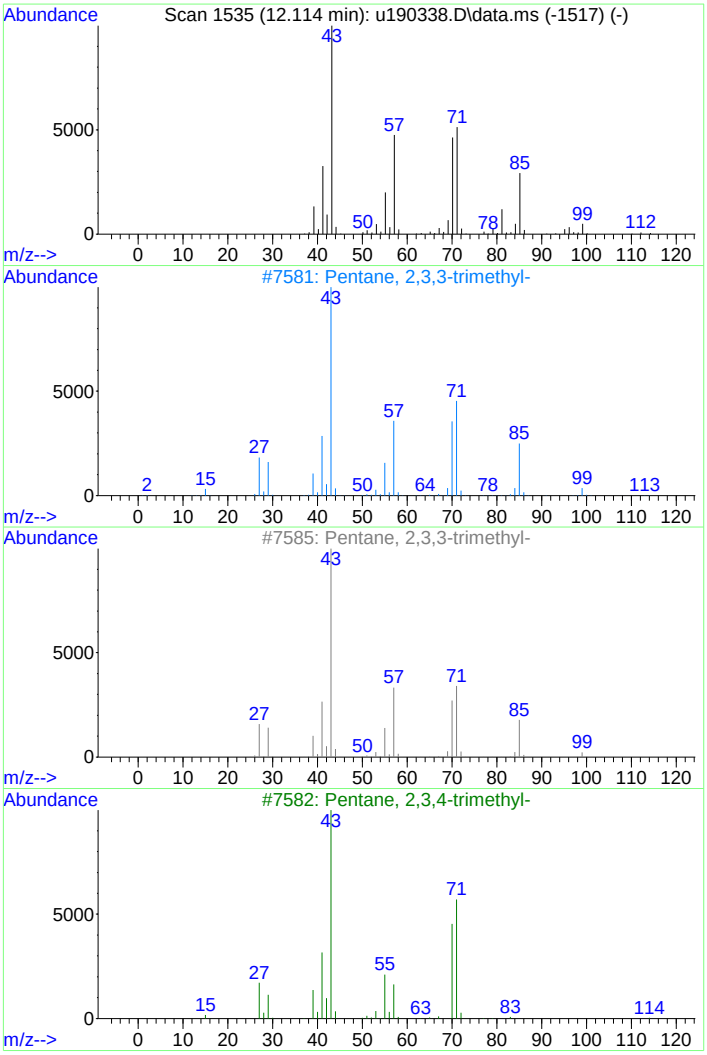
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

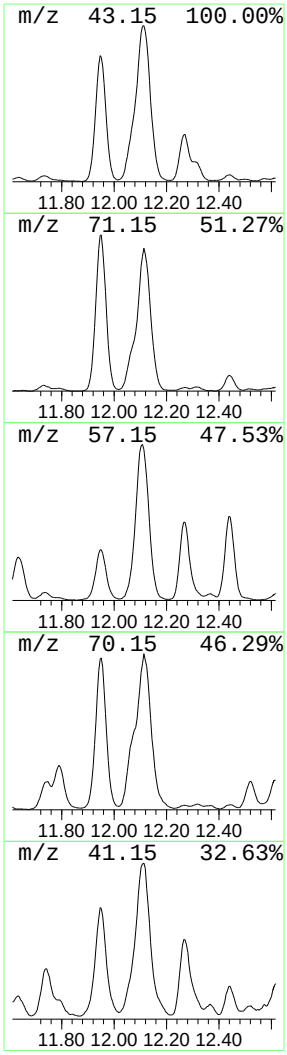
****

Peak Number 7 alkane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.114	108.87 ug/L	2150420	1,4-difluorobenzene	11.021

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	86
2	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	78
3	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	76
4	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	64
5	Hexane, 3-methyl-	100	C7H16	000589-34-4	59





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190338.D
Acq On : 3 Dec 2014 8:49 pm
Operator : yunxiac
Sample : JB82646-6
Misc : ms77650,vu8782,5.0,,,,2
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

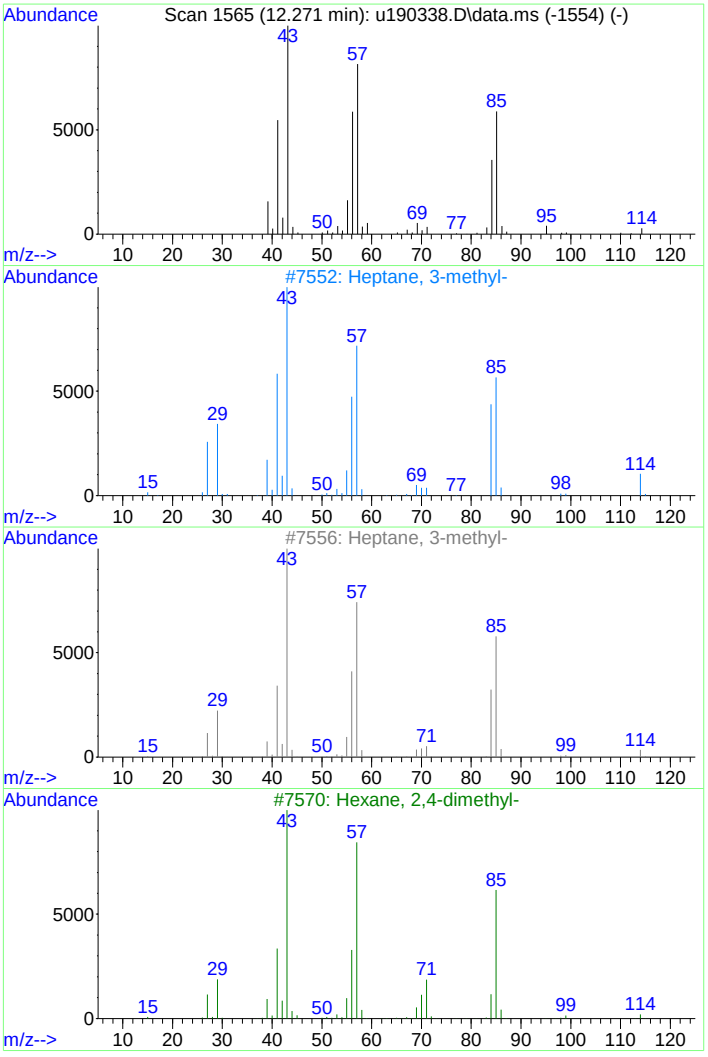
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

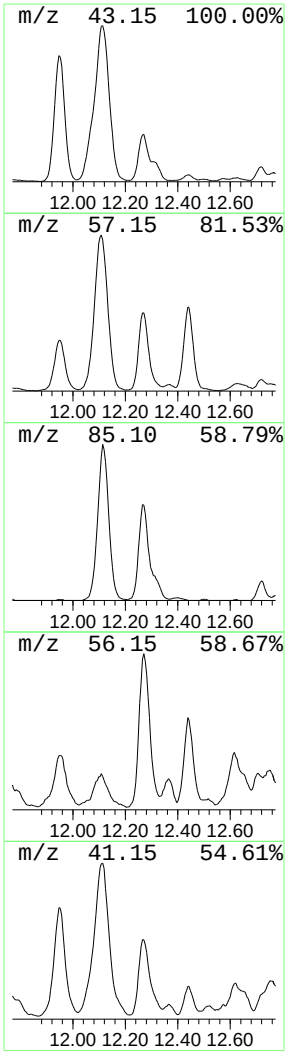
****

Peak Number 8 alkane Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.271	30.94 ug/L	611124	1,4-difluorobenzene	11.021

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptane, 3-methyl-	114	C8H18	000589-81-1	78
2	Heptane, 3-methyl-	114	C8H18	000589-81-1	74
3	Hexane, 2,4-dimethyl-	114	C8H18	000589-43-5	58
4	Hexane, 2,4-dimethyl-	114	C8H18	000589-43-5	58
5	Octane, 3,4-dimethyl-	142	C10H22	015869-92-8	53





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190338.D
Acq On : 3 Dec 2014 8:49 pm
Operator : yunxiac
Sample : JB82646-6
Misc : ms77650,vu8782,5.0,,,,2
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

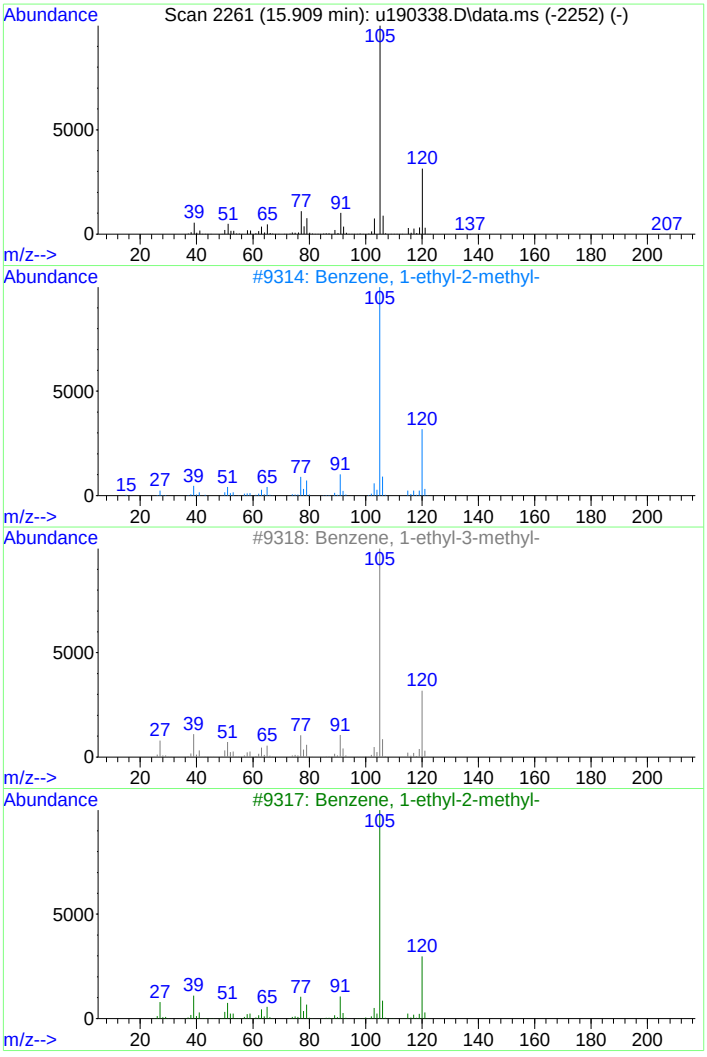
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

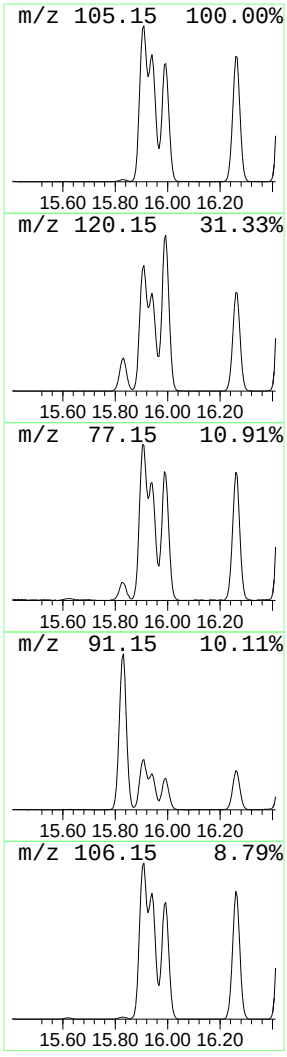
****

Peak Number 9 C3 alkyl benzene Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.909	36.42 ug/L	2930140	1,4-dichlorobenzene-d4	16.918

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
2	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	94
3	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
4	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	94
5	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190338.D
Acq On : 3 Dec 2014 8:49 pm
Operator : yunxiac
Sample : JB82646-6
Misc : ms77650,vu8782,5.0,,,,2
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

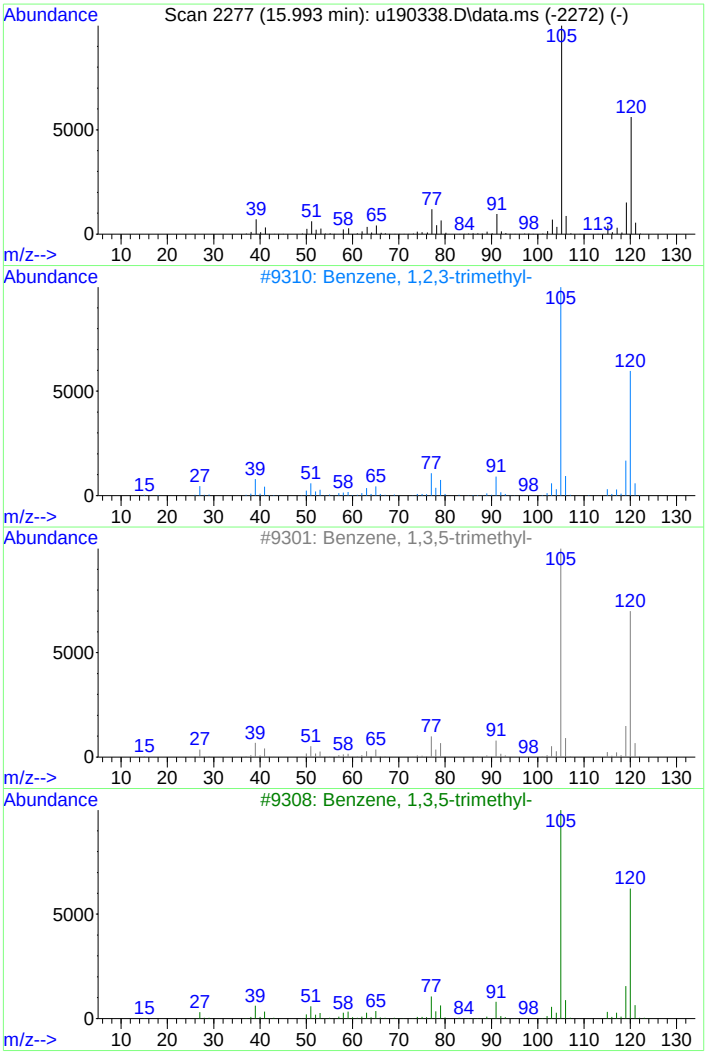
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

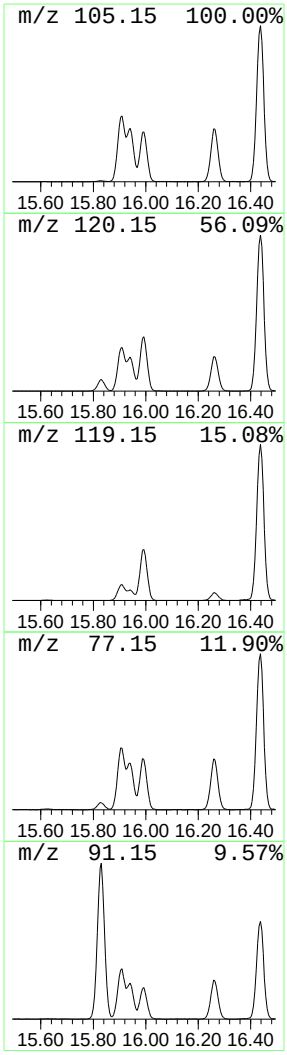
****

Peak Number 10 C3 alkyl benzene Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.993	30.32 ug/L	2439340	1,4-dichlorobenzene-d4	16.918

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190338.D
Acq On : 3 Dec 2014 8:49 pm
Operator : yunxiac
Sample : JB82646-6
Misc : ms77650,vu8782,5.0,,,,2
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

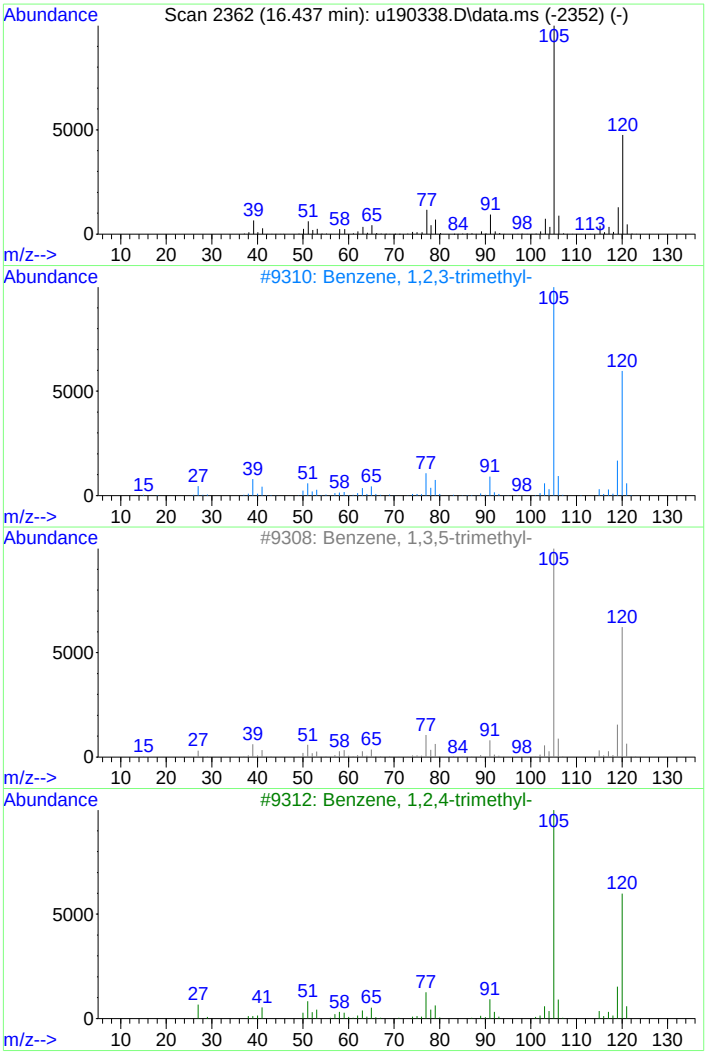
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

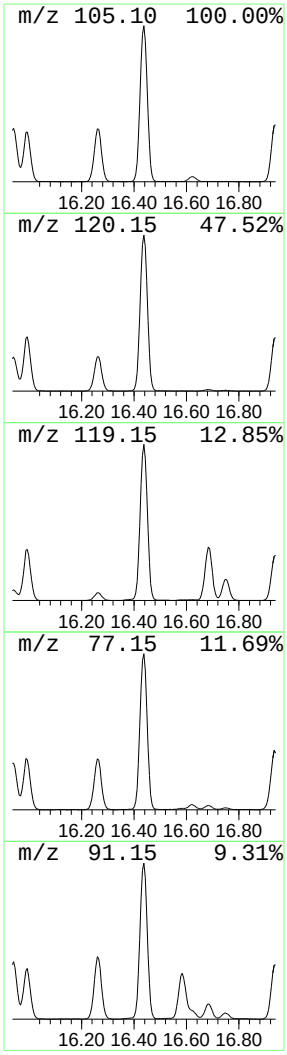
****

Peak Number 12 C3 alkyl benzene Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.437	95.37 ug/L	7673710	1,4-dichlorobenzene-d4	16.918

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
5	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190338.D
Acq On : 3 Dec 2014 8:49 pm
Operator : yunxiac
Sample : JB82646-6
Misc : ms77650,vu8782,5.0,,,,2
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

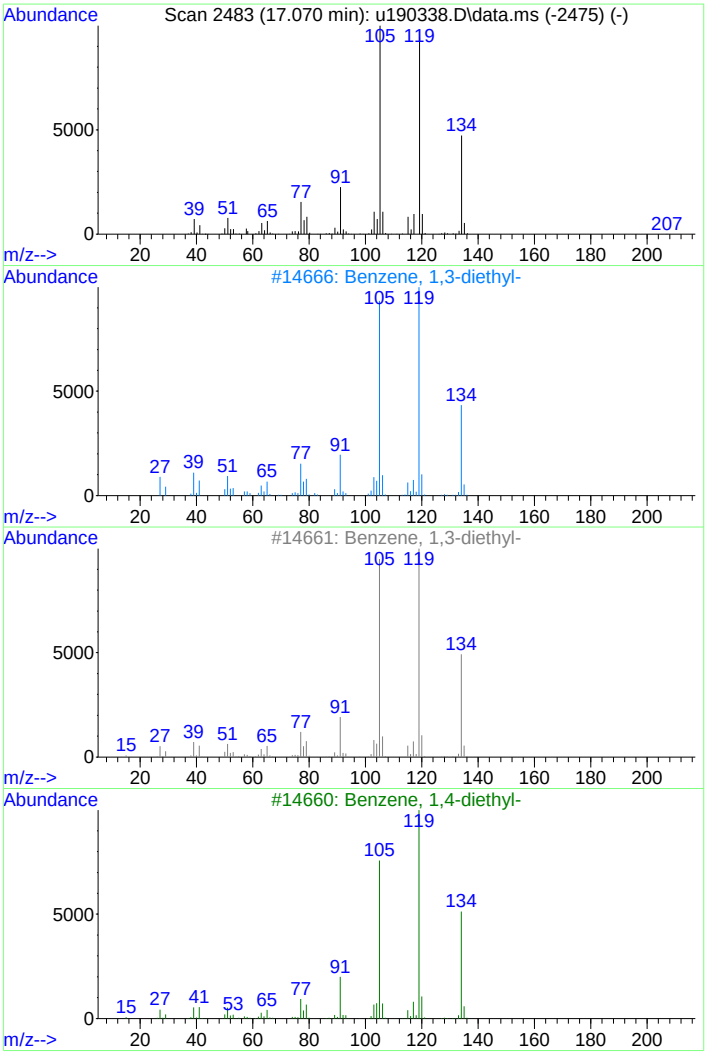
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

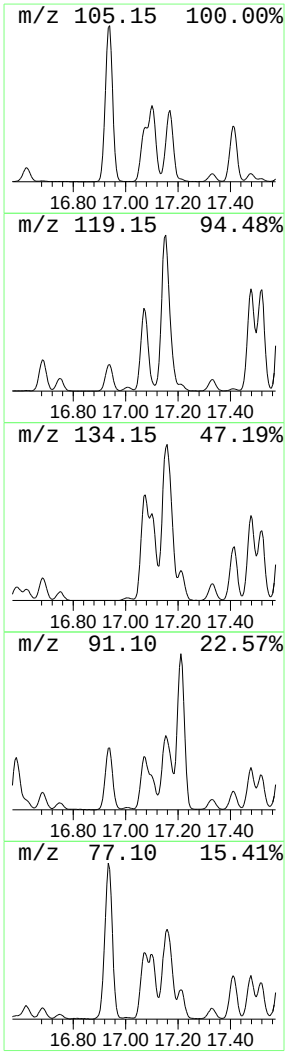
****

Peak Number 13 C4 alkyl benzene Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.070	30.12 ug/L	2423130	1,4-dichlorobenzene-d4	16.918

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	97
2	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	96
3	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	95
4	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	95
5	Benzene, 1,2-diethyl-	134	C10H14	000135-01-3	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190338.D
Acq On : 3 Dec 2014 8:49 pm
Operator : yunxiac
Sample : JB82646-6
Misc : ms77650,vu8782,5.0,,,,2
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

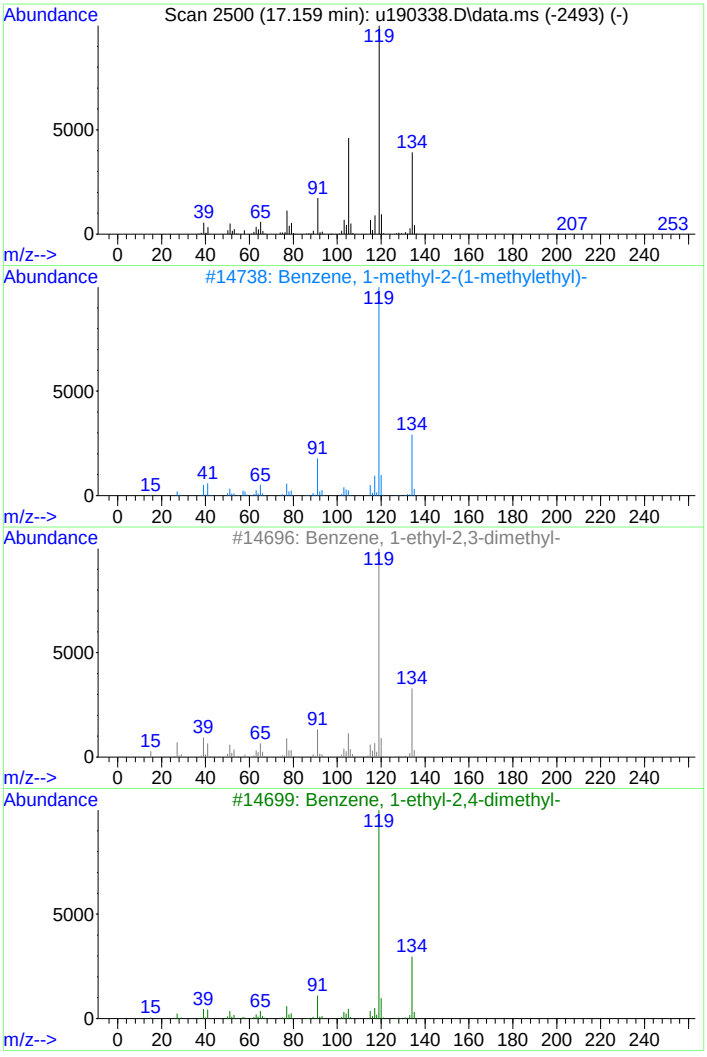
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

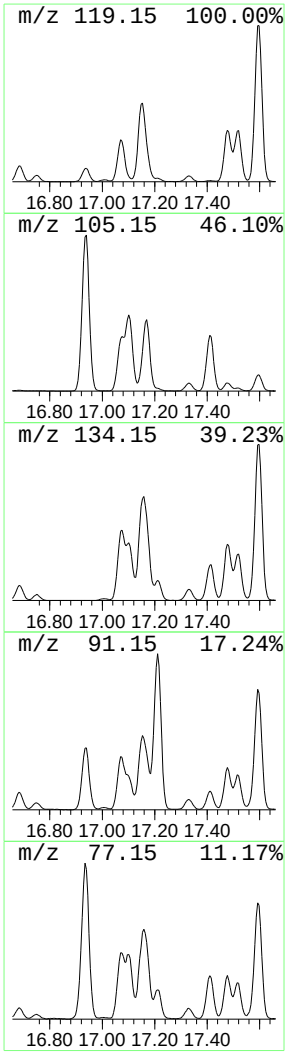
****

Peak Number 14 C4 alkyl benzene Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.159	33.26 ug/L	2675810	1,4-dichlorobenzene-d4	16.918

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	93
2	Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	91
3	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	91
4	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	91
5	1,3-Cyclopentadiene, 1,2,3,4-tet...	134	C10H14	076089-59-3	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190338.D
Acq On : 3 Dec 2014 8:49 pm
Operator : yunxiac
Sample : JB82646-6
Misc : ms77650,vu8782,5.0,,,,2
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

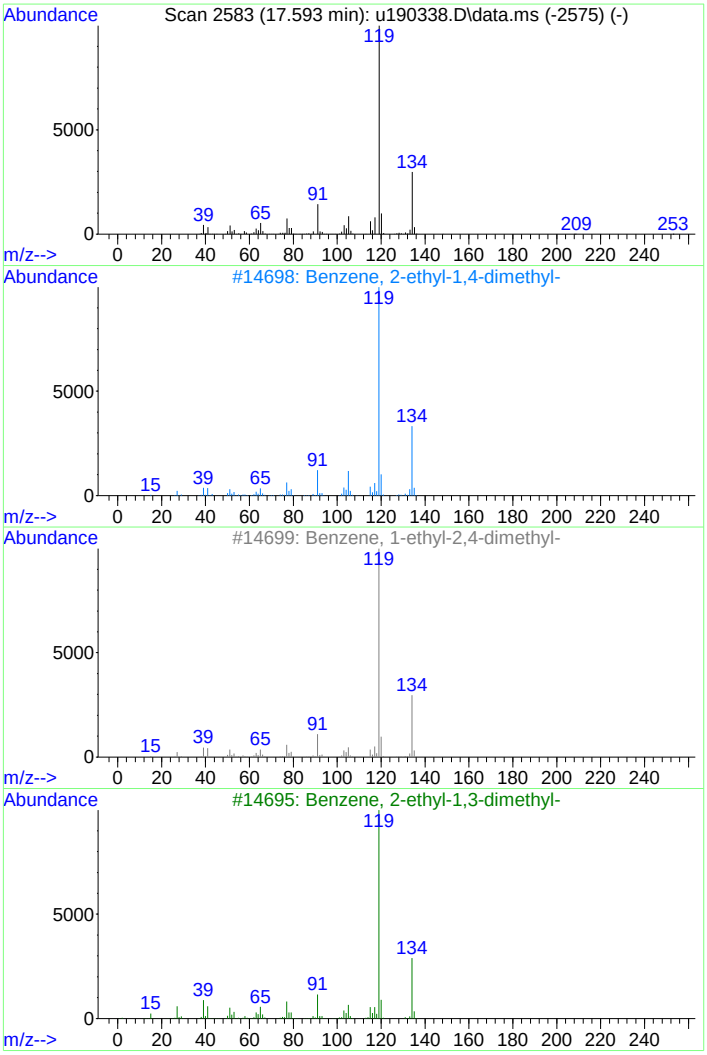
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

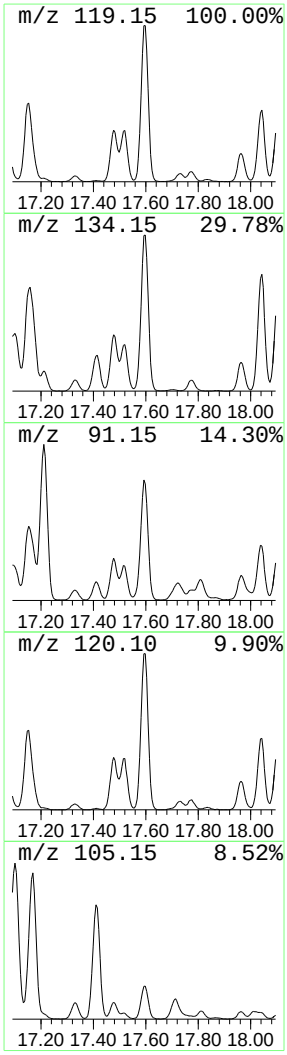
****

Peak Number 15 C4 alkyl benzene Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.593	38.30 ug/L	3081470	1,4-dichlorobenzene-d4	16.918

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	95
2	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	95
3	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14	002870-04-4	94
4	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14	002870-04-4	94
5	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	94





MU8763.M Thu Dec 04 10:37:16 2014 ACC-VOA-DP

Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190338.D
Acq On : 3 Dec 2014 8:49 pm
Operator : yunxiac
Sample : JB82646-6
Misc : ms77650,vu8782,5.0,,,,2
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

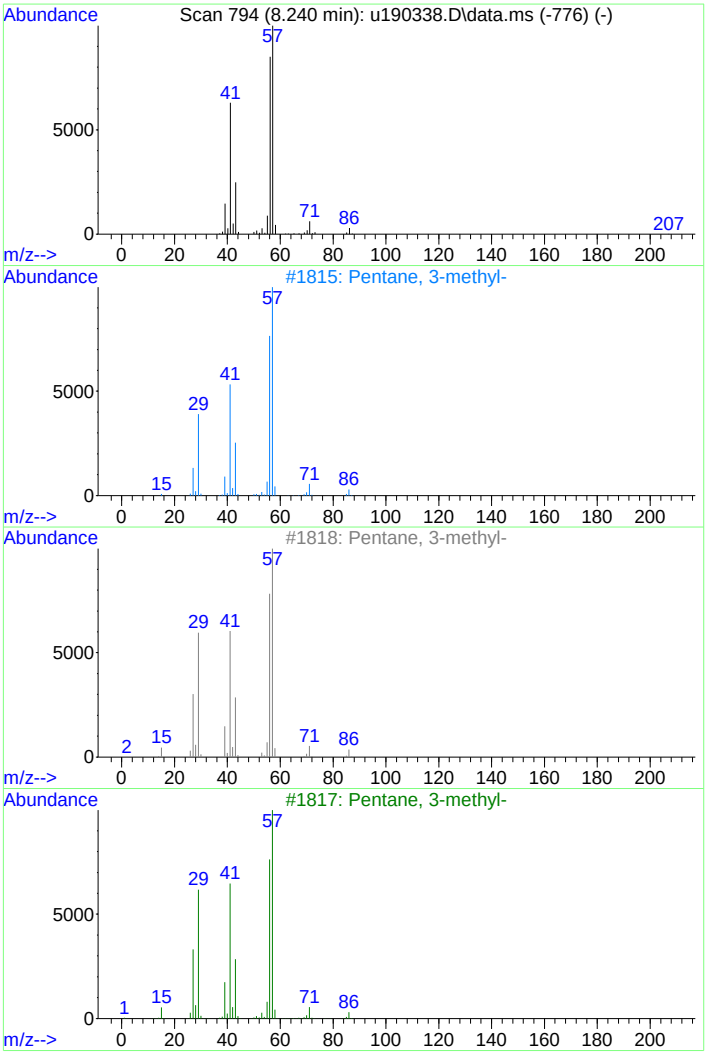
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

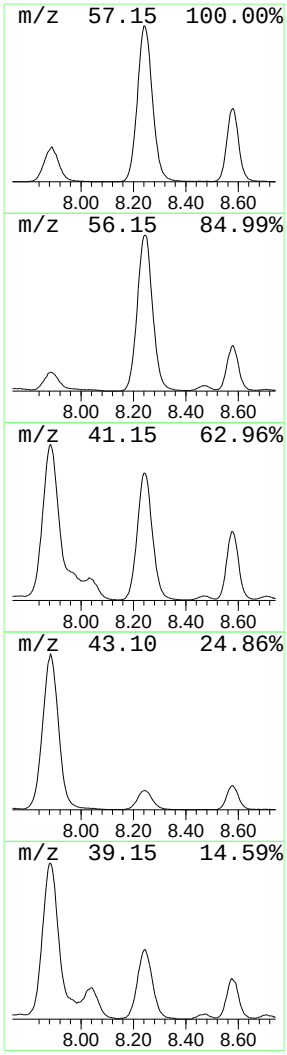
****

Peak Number 17 alkane Concentration Rank 17

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.240	38.32 ug/L	1520580	pentafluorobenzene	10.096

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
2	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
3	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
4	Oxirane, (1-methylethyl)-	86	C5H10O	001438-14-8	59
5	Butane, 1-chloro-	92	C4H9Cl	000109-69-3	45





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190338.D
Acq On : 3 Dec 2014 8:49 pm
Operator : yunxiac
Sample : JB82646-6
Misc : ms77650,vu8782,5.0,,,,2
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
alkane	5.061	34.5	ug/L	1367800	2	10.096	1984170	50.0
alkane	6.039	131.8	ug/L	5231160	2	10.096	1984170	50.0
alkane	6.441	36.7	ug/L	1457630	2	10.096	1984170	50.0
alkene	9.447	35.2	ug/L	1395210	2	10.096	1984170	50.0
alkane	10.775	35.1	ug/L	693501	3	11.021	987601	50.0
alkane	11.947	59.5	ug/L	1175840	3	11.021	987601	50.0
alkane	12.114	108.9	ug/L	2150420	3	11.021	987601	50.0
alkane	12.271	30.9	ug/L	611124	3	11.021	987601	50.0
C3 alkyl benzene	15.909	36.4	ug/L	2930140	5	16.918	4022930	50.0
C3 alkyl benzene	15.993	30.3	ug/L	2439340	5	16.918	4022930	50.0
C3 alkyl benzene	16.437	95.4	ug/L	7673710	5	16.918	4022930	50.0
C4 alkyl benzene	17.070	30.1	ug/L	2423130	5	16.918	4022930	50.0
C4 alkyl benzene	17.159	33.3	ug/L	2675810	5	16.918	4022930	50.0
C4 alkyl benzene	17.593	38.3	ug/L	3081470	5	16.918	4022930	50.0
alkane	8.240	38.3	ug/L	1520580	2	10.096	1984170	50.0

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 4V13529.D
Acq On : 29 Nov 2014 3:48 pm
Operator : BenM
Sample : jb82646-7
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Dec 01 11:25:17 2014
Quant Method : C:\MSDCHEM\1\METHODS\M4V541.M
Quant Title : sw846 8260b
QLast Update : Fri Nov 14 17:30:26 2014
Response via : Initial Calibration

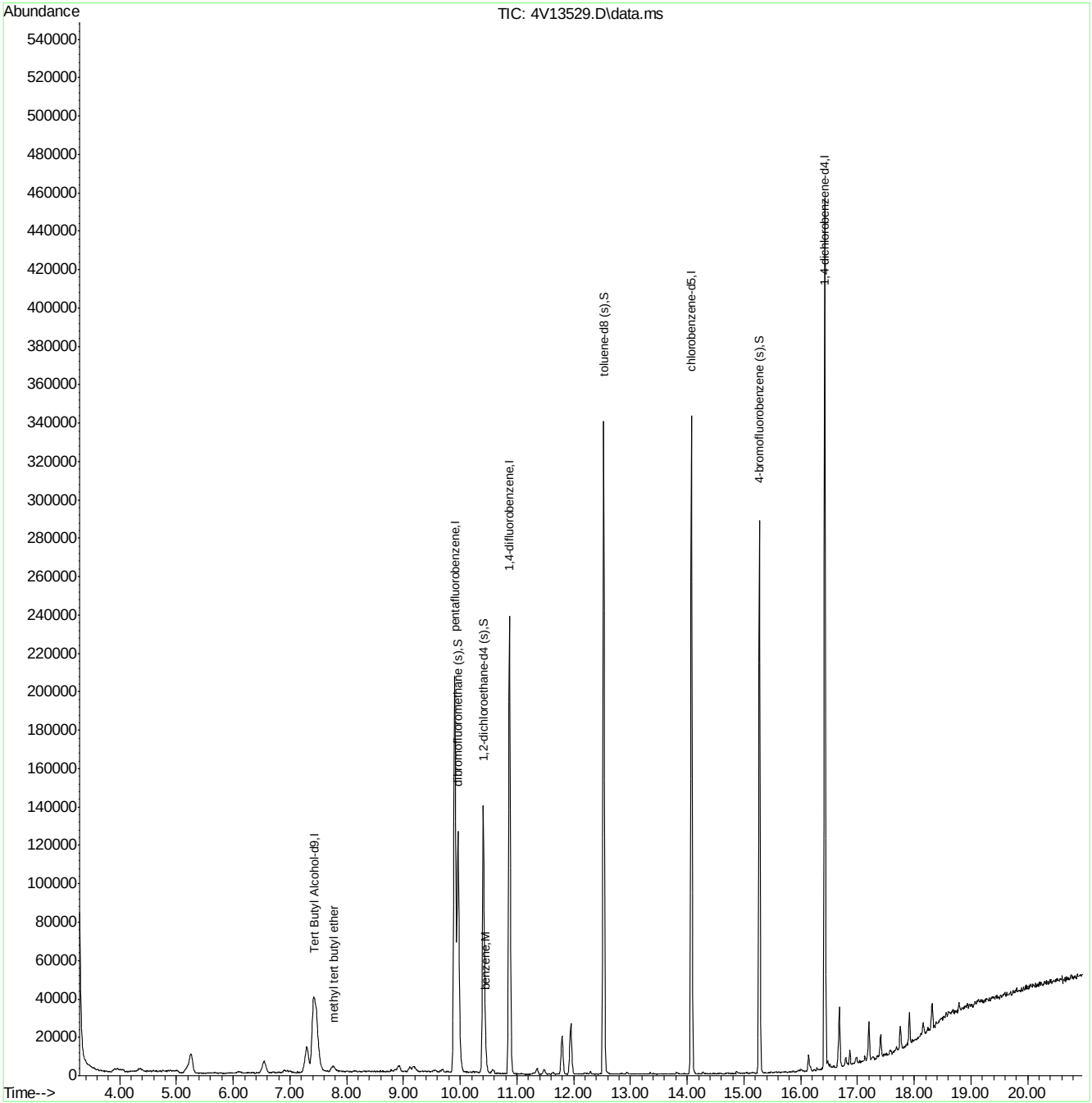
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.424	65	152525	500.00	ug/L	-0.02
4) pentafluorobenzene	9.904	168	179234	50.00	ug/L	0.00
51) 1,4-difluorobenzene	10.868	114	215119	50.00	ug/L	0.00
81) chlorobenzene-d5	14.077	117	184486	50.00	ug/L	0.00
94) 1,4-dichlorobenzene-d4	16.426	152	106469	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	9.961	113	90619	52.57	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 105.14%			
46) 1,2-dichloroethane-d4 (s)	10.407	65	89333	57.44	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 114.88%			
73) toluene-d8 (s)	12.525	98	228415	48.46	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 96.92%			
96) 4-bromofluorobenzene (s)	15.267	95	99025	51.79	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 103.58%			
Target Compounds						Qvalue
28) methyl tert butyl ether	7.775	73	4867	0.88	ug/L	79
58) benzene	10.449	78	2705	0.46	ug/L	85

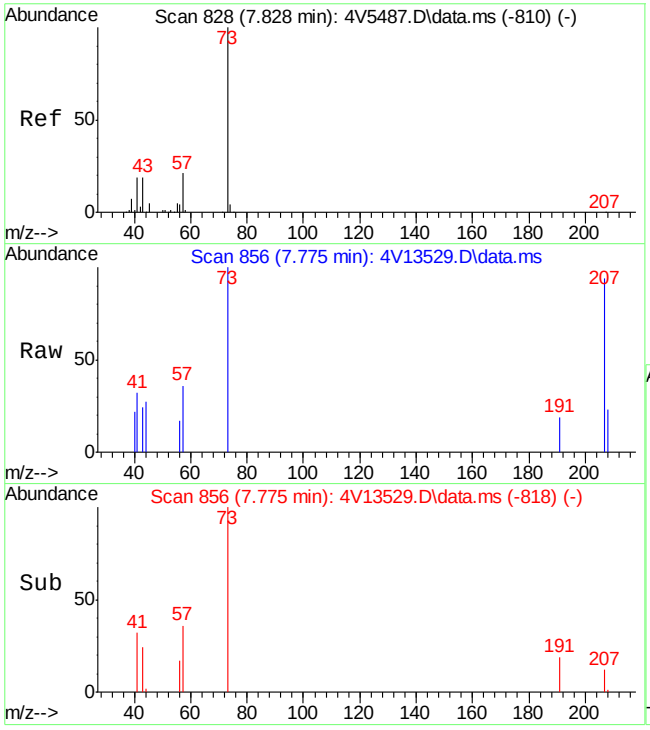
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 4V13529.D
Acq On : 29 Nov 2014 3:48 pm
Operator : BenM
Sample : jb82646-7
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Dec 01 11:25:17 2014
Quant Method : C:\MSDCHEM\1\METHODS\M4V541.M
Quant Title : sw846 8260b
QLast Update : Fri Nov 14 17:30:26 2014
Response via : Initial Calibration

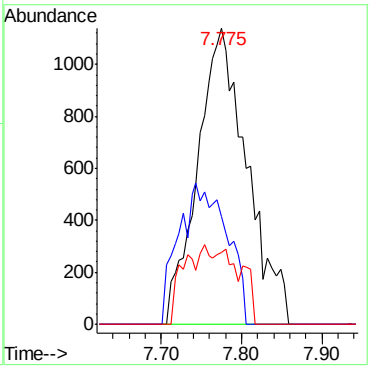


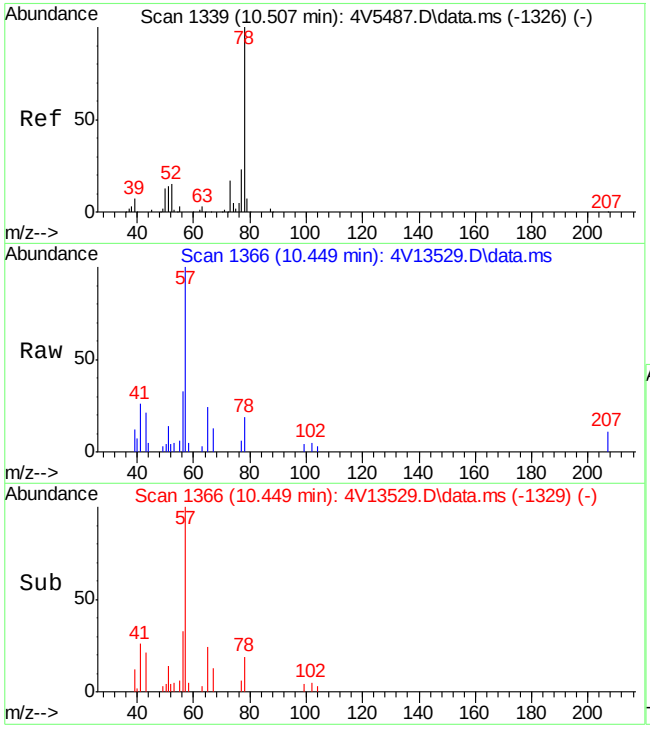


#28
methyl tert butyl ether
Concen: 0.88 ug/L
RT: 7.775 min Scan# 856
Delta R.T. 0.000 min
Lab File: 4V13529.D
Acq: 29 Nov 2014 3:48 pm

Tgt Ion: 73 Resp: 4867

Ion	Ratio	Lower	Upper
73	100		
57	36.3	0.0	52.6
43	24.4	0.0	49.1

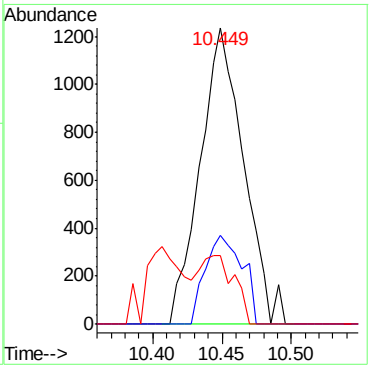




#58
benzene
Concen: 0.46 ug/L
RT: 10.449 min Scan# 1366
Delta R.T. -0.005 min
Lab File: 4V13529.D
Acq: 29 Nov 2014 3:48 pm

Tgt Ion: 78 Resp: 2705

Ion	Ratio	Lower	Upper
78	100		
77	30.0	0.0	53.3
52	23.1	0.0	45.5



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : 4V13529.D
Acq On : 29 Nov 2014 3:48 pm
Operator : BenM
Sample : jb82646-7
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4V541.M
Title : sw846 8260b

Signal : TIC: 4V13529.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.911	108	119	122	rBV4	1481	4193	0.63%	0.086%
2	4.335	194	200	201	rBV4	1256	1474	0.22%	0.030%
3	4.477	226	227	230	rBV3	620	497	0.07%	0.010%
4	4.755	277	280	287	rBV3	654	1390	0.21%	0.029%
5	5.253	346	375	394	rVB2	10459	57653	8.62%	1.189%
6	5.693	457	459	462	rVV2	336	412	0.06%	0.008%
7	5.741	466	468	473	rBV2	343	462	0.07%	0.010%
8	5.987	513	515	520	rBV4	368	442	0.07%	0.009%
9	6.076	526	532	535	rBV4	816	1841	0.28%	0.038%
10	6.275	568	570	573	rBV2	455	362	0.05%	0.007%
11	6.323	578	579	584	rBV2	555	565	0.08%	0.012%
12	6.412	594	596	599	rBV2	440	530	0.08%	0.011%
13	6.543	606	621	638	rVB3	6140	28867	4.31%	0.595%
14	6.690	645	649	654	rBV2	666	1197	0.18%	0.025%
15	6.884	680	686	688	rBV2	1533	2164	0.32%	0.045%
16	7.051	717	718	722	rVB2	418	446	0.07%	0.009%
17	7.135	731	734	737	rVB2	594	490	0.07%	0.010%
18	7.188	742	744	746	rBV	528	417	0.06%	0.009%
19	7.298	748	765	775	rVV3	13483	62353	9.32%	1.286%
20	7.424	775	789	825	rVB3	38729	262842	39.28%	5.421%
21	7.749	841	851	852	rBV6	2680	5309	0.79%	0.109%
22	7.932	884	886	890	rBV3	668	917	0.14%	0.019%
23	8.472	988	989	992	rBV3	732	648	0.10%	0.013%
24	8.671	1026	1027	1029	rBV2	786	460	0.07%	0.009%
25	8.698	1030	1032	1034	rVV2	400	381	0.06%	0.008%
26	8.787	1044	1049	1051	rBV3	944	1109	0.17%	0.023%
27	8.855	1056	1062	1065	rBV4	1321	2168	0.32%	0.045%
28	8.907	1065	1072	1083	rVB8	2910	10128	1.51%	0.209%
29	9.112	1102	1111	1117	rBV5	2379	7071	1.06%	0.146%
30	9.180	1117	1124	1142	rVB8	2844	11536	1.72%	0.238%
31	9.474	1178	1180	1181	rBV2	618	410	0.06%	0.008%
32	9.537	1188	1192	1193	rBV4	723	623	0.09%	0.013%
33	9.647	1211	1213	1214	rBV	833	519	0.08%	0.011%
34	9.694	1215	1222	1231	rVB5	1437	3523	0.53%	0.073%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : 4V13529.D
Acq On : 29 Nov 2014 3:48 pm
Operator : BenM
Sample : jb82646-7
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4V541.M
Title : sw846 8260b

35	9.904	1250	1262	1268	rBV	206237	506599	75.71%	10.448%
36	9.961	1268	1273	1292	rVB	125729	313462	46.85%	6.465%
37	10.229	1321	1324	1329	rBV4	983	1569	0.23%	0.032%
38	10.407	1342	1358	1380	rVV2	139410	361111	53.97%	7.447%
39	10.569	1383	1389	1397	rVB7	1974	5453	0.81%	0.112%
40	10.742	1420	1422	1427	rVB3	342	377	0.06%	0.008%
41	10.868	1436	1446	1463	rBV	238716	493593	73.77%	10.180%
42	10.994	1468	1470	1472	rBV	617	426	0.06%	0.009%
43	11.078	1480	1486	1488	rBV2	672	495	0.07%	0.010%
44	11.214	1507	1512	1514	rBV2	271	363	0.05%	0.007%
45	11.293	1520	1527	1528	rBV4	844	1279	0.19%	0.026%
46	11.351	1533	1538	1546	rVB5	3323	7537	1.13%	0.155%
47	11.408	1546	1549	1552	rVB3	310	393	0.06%	0.008%
48	11.476	1552	1562	1571	rBV5	2704	7365	1.10%	0.152%
49	11.566	1573	1579	1580	rBV2	268	433	0.06%	0.009%
50	11.639	1584	1593	1600	rBV3	1076	2486	0.37%	0.051%
51	11.791	1611	1622	1636	rBV	20104	47840	7.15%	0.987%
52	11.948	1640	1652	1665	rBV	26599	65251	9.75%	1.346%
53	12.127	1681	1686	1692	rBV3	327	467	0.07%	0.010%
54	12.184	1692	1697	1702	rVV3	774	1347	0.20%	0.028%
55	12.226	1702	1705	1711	rVV3	606	1089	0.16%	0.022%
56	12.289	1711	1717	1724	rVB3	1523	2469	0.37%	0.051%
57	12.420	1733	1742	1744	rVB2	336	565	0.08%	0.012%
58	12.467	1744	1751	1754	rBV2	711	1319	0.20%	0.027%
59	12.525	1754	1762	1776	rBV	340389	605510	90.49%	12.488%
60	12.740	1800	1803	1806	rBV2	424	454	0.07%	0.009%
61	12.934	1836	1840	1847	rBV5	897	1729	0.26%	0.036%
62	13.055	1862	1863	1868	rBV2	354	440	0.07%	0.009%
63	13.348	1915	1919	1923	rBV3	914	881	0.13%	0.018%
64	13.506	1942	1949	1953	rBV	322	728	0.11%	0.015%
65	13.810	2002	2007	2009	rBV3	869	922	0.14%	0.019%
66	13.941	2029	2032	2035	rBV2	302	346	0.05%	0.007%
67	13.998	2040	2043	2046	rVB2	323	381	0.06%	0.008%
68	14.077	2049	2058	2071	rBV	342802	575100	85.95%	11.861%
69	14.203	2081	2082	2086	rVB3	589	395	0.06%	0.008%
70	14.276	2092	2096	2102	rBV3	1069	1896	0.28%	0.039%
71	14.455	2129	2130	2135	rBV3	354	428	0.06%	0.009%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : 4V13529.D
Acq On : 29 Nov 2014 3:48 pm
Operator : BenM
Sample : jb82646-7
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4V541.M
Title : sw846 8260b

72	14.717	2175	2180	2183	rVB3	383	672	0.10%	0.014%
73	14.769	2188	2190	2193	rVB	597	431	0.06%	0.009%
74	14.869	2206	2209	2214	rBV5	1049	1651	0.25%	0.034%
75	14.995	2230	2233	2235	rVB3	390	363	0.05%	0.007%
76	15.042	2239	2242	2243	rBV2	683	350	0.05%	0.007%
77	15.157	2261	2264	2271	rVB3	481	665	0.10%	0.014%
78	15.272	2277	2286	2303	rBV	287964	461496	68.97%	9.518%
79	15.477	2321	2325	2329	rVB4	548	768	0.11%	0.016%
80	15.723	2369	2372	2375	rBV3	566	542	0.08%	0.011%
81	15.849	2393	2396	2400	rBV3	732	893	0.13%	0.018%
82	15.954	2413	2416	2422	rBV5	839	1357	0.20%	0.028%
83	16.012	2423	2427	2431	rVB2	1144	1853	0.28%	0.038%
84	16.138	2445	2451	2463	rBV2	8868	17866	2.67%	0.368%
85	16.216	2463	2466	2467	rBV3	770	567	0.08%	0.012%
86	16.227	2467	2468	2471	rBV2	1087	869	0.13%	0.018%
87	16.284	2475	2479	2486	rVV6	1242	1876	0.28%	0.039%
88	16.426	2498	2506	2514	rBV	454187	669128	100.00%	13.800%
89	16.510	2521	2522	2527	rVB2	1930	2093	0.31%	0.043%
90	16.573	2531	2534	2536	rBV4	976	918	0.14%	0.019%
91	16.683	2545	2555	2564	rBV2	31452	58144	8.69%	1.199%
92	16.793	2572	2576	2581	rBV4	4300	6999	1.05%	0.144%
93	16.866	2585	2590	2597	rVB	7676	11568	1.73%	0.239%
94	16.976	2607	2611	2617	rVB6	3189	4936	0.74%	0.102%
95	17.128	2637	2640	2645	rBV5	2852	3782	0.57%	0.078%
96	17.202	2647	2654	2660	rVB2	20154	32344	4.83%	0.667%
97	17.406	2688	2693	2700	rVB	11936	18407	2.75%	0.380%
98	17.752	2755	2759	2768	rVB3	11894	19093	2.85%	0.394%
99	17.915	2785	2790	2795	rVB	16174	21853	3.27%	0.451%
100	18.313	2862	2866	2872	rVB	12670	21432	3.20%	0.442%

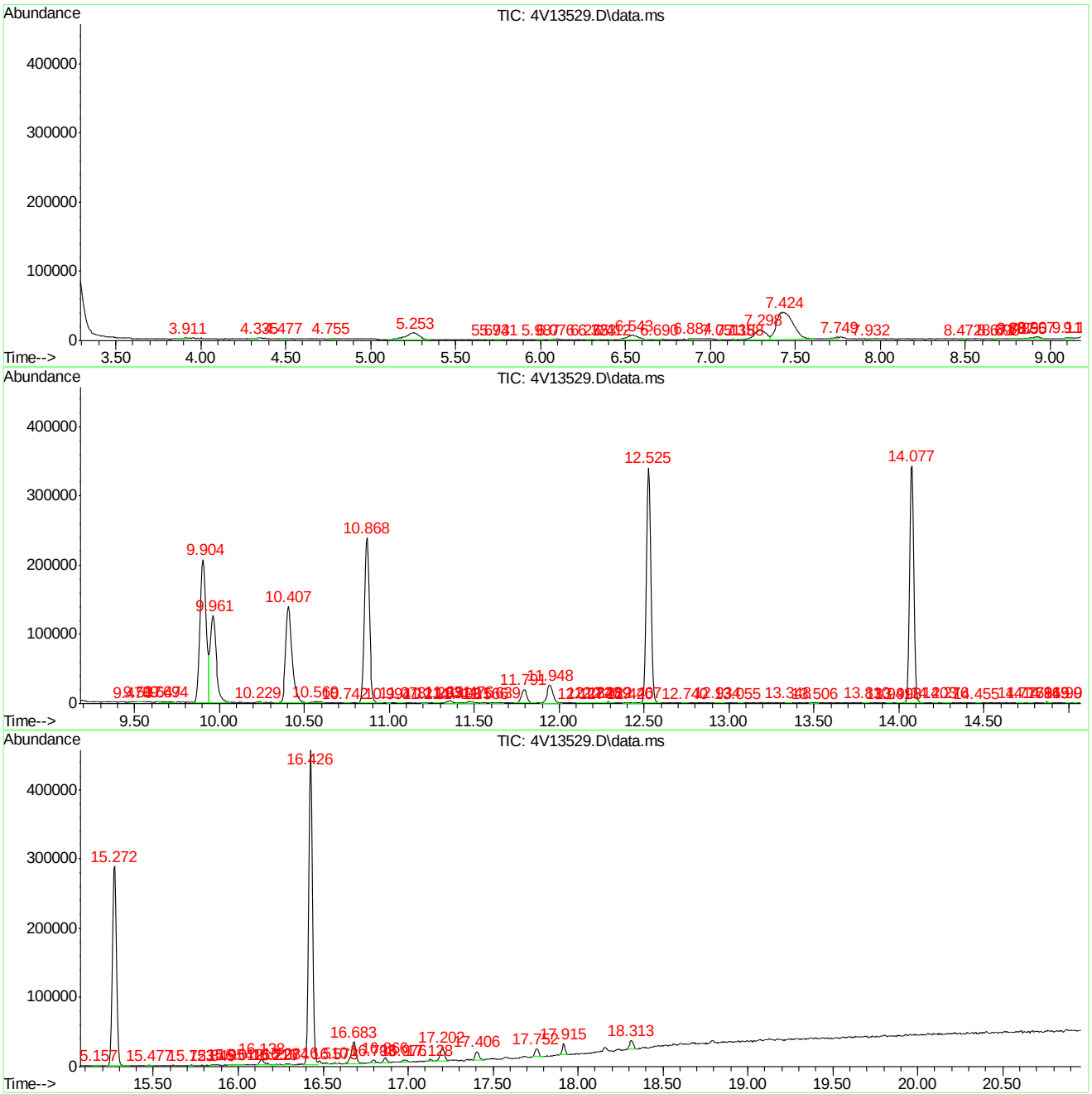
Sum of corrected areas: 4848813

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\
Data File : 4V13529.D
Acq On : 29 Nov 2014 3:48 pm
Operator : BenM
Sample : jb82646-7
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4V541.M
Quant Title : sw846 8260b

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : 4V13529.D
Acq On : 29 Nov 2014 3:48 pm
Operator : BenM
Sample : jb82646-7
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4V541.M
Quant Title : sw846 8260b

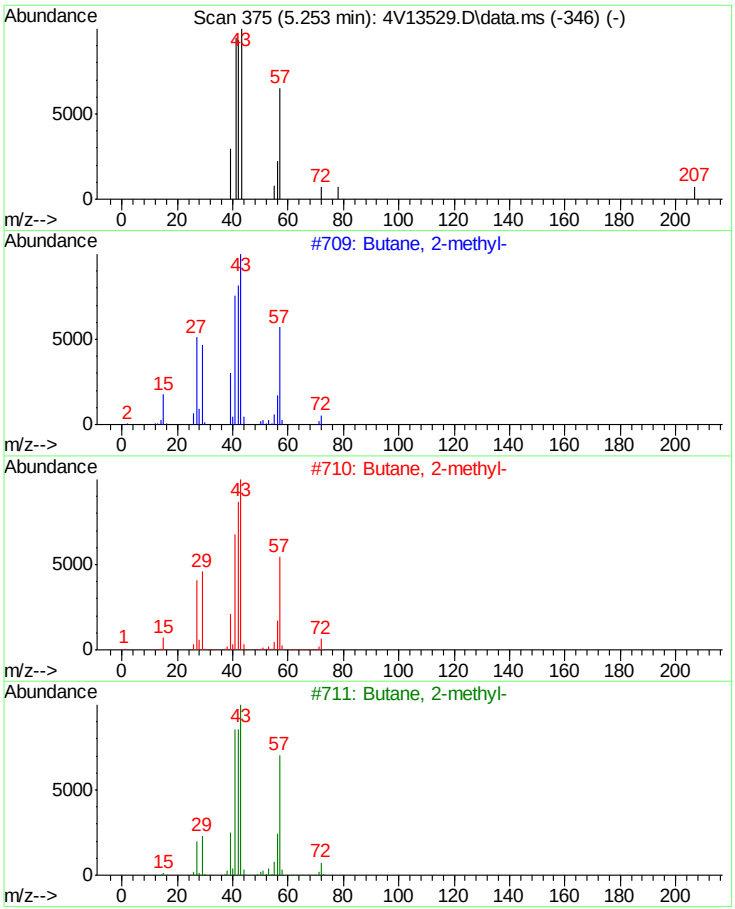
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p

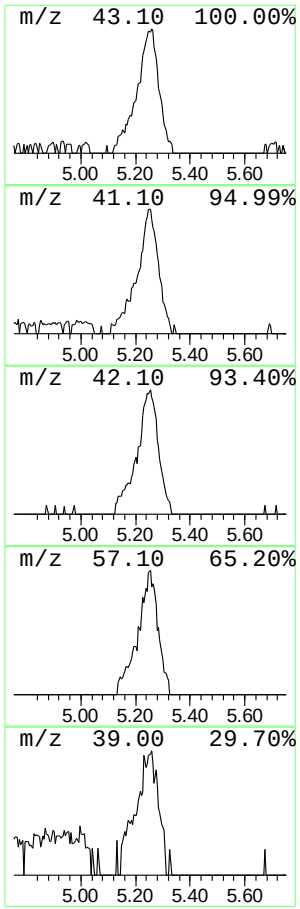
****

Peak Number 1 Butane, 2-methyl- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.253	5.69 ug/L	57653	pentafluorobenzene	9.904

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	90
2	Butane, 2-methyl-	72	C5H12	000078-78-4	90
3	Butane, 2-methyl-	72	C5H12	000078-78-4	90
4	Butane, 1,1-dibutoxy-	202	C12H26O2	005921-80-2	9
5	3-Buten-1-ol	72	C4H8O	000627-27-0	7





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : 4V13529.D
Acq On : 29 Nov 2014 3:48 pm
Operator : BenM
Sample : jb82646-7
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4V541.M
Quant Title : sw846 8260b

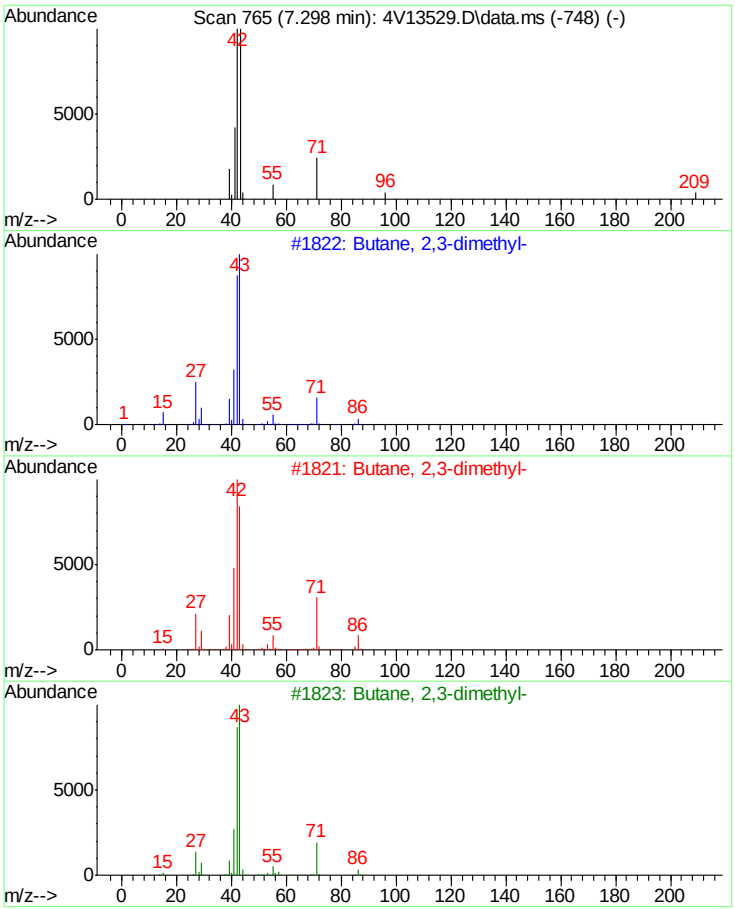
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p

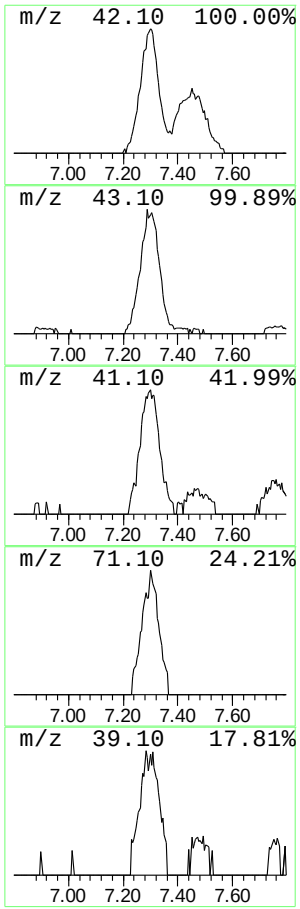
****

Peak Number 2 Butane, 2,3-dimethyl- Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.298	6.15 ug/L	62353	pentafluorobenzene	9.904

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	78
2	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	43
3	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	43
4	Pentane, 2-methyl-	86	C6H14	000107-83-5	9
5	(Aminomethyl)cyclopropane	71	C4H9N	002516-47-4	4





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : 4V13529.D
Acq On : 29 Nov 2014 3:48 pm
Operator : BenM
Sample : jb82646-7
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4V541.M
Quant Title : sw846 8260b

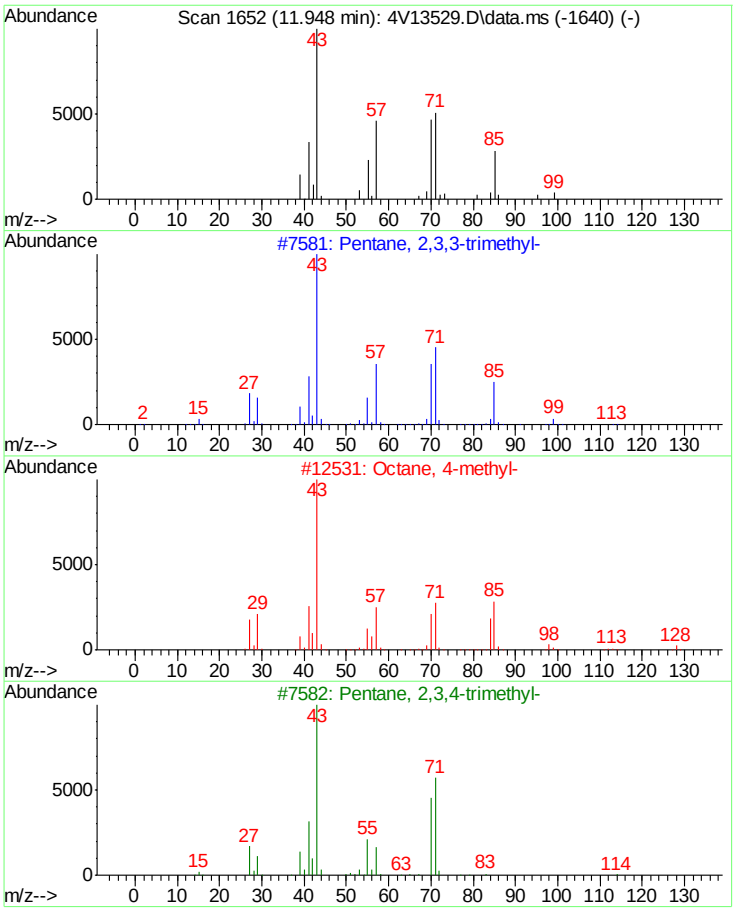
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p

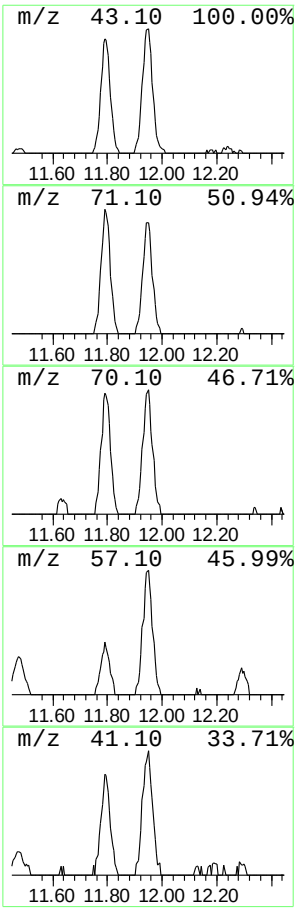
****

Peak Number 3 Pentane, 2,3,3-trimethyl- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.948	6.61 ug/L	65251	1,4-difluorobenzene	10.868

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	90
2	Octane, 4-methyl-	128	C9H20	002216-34-4	64
3	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	59
4	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	59
5	Decane, 3,3,4-trimethyl-	184	C13H28	049622-18-6	59





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\
Data File : 4V13529.D
Acq On : 29 Nov 2014 3:48 pm
Operator : BenM
Sample : jb82646-7
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4V541.M
Quant Title : sw846 8260b

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Butane, 2-methyl-	5.253	5.7	ug/L	57653	2	9.904	506599	50.0
Butane, 2,3-dim...	7.298	6.2	ug/L	62353	2	9.904	506599	50.0
Pentane, 2,3,3-...	11.948	6.6	ug/L	65251	3	10.868	493593	50.0

7.1.14

7

Manual Integrations APPROVED (compounds with "m" flag)
Kanya Veerawat 12/05/14 02:04

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190337.D
Acq On : 3 Dec 2014 8:20 pm
Operator : yunxiac
Sample : JB82646-8
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Dec 04 10:03:35 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um
QLast Update : Thu Nov 20 10:49:23 2014
Response via : Initial Calibration

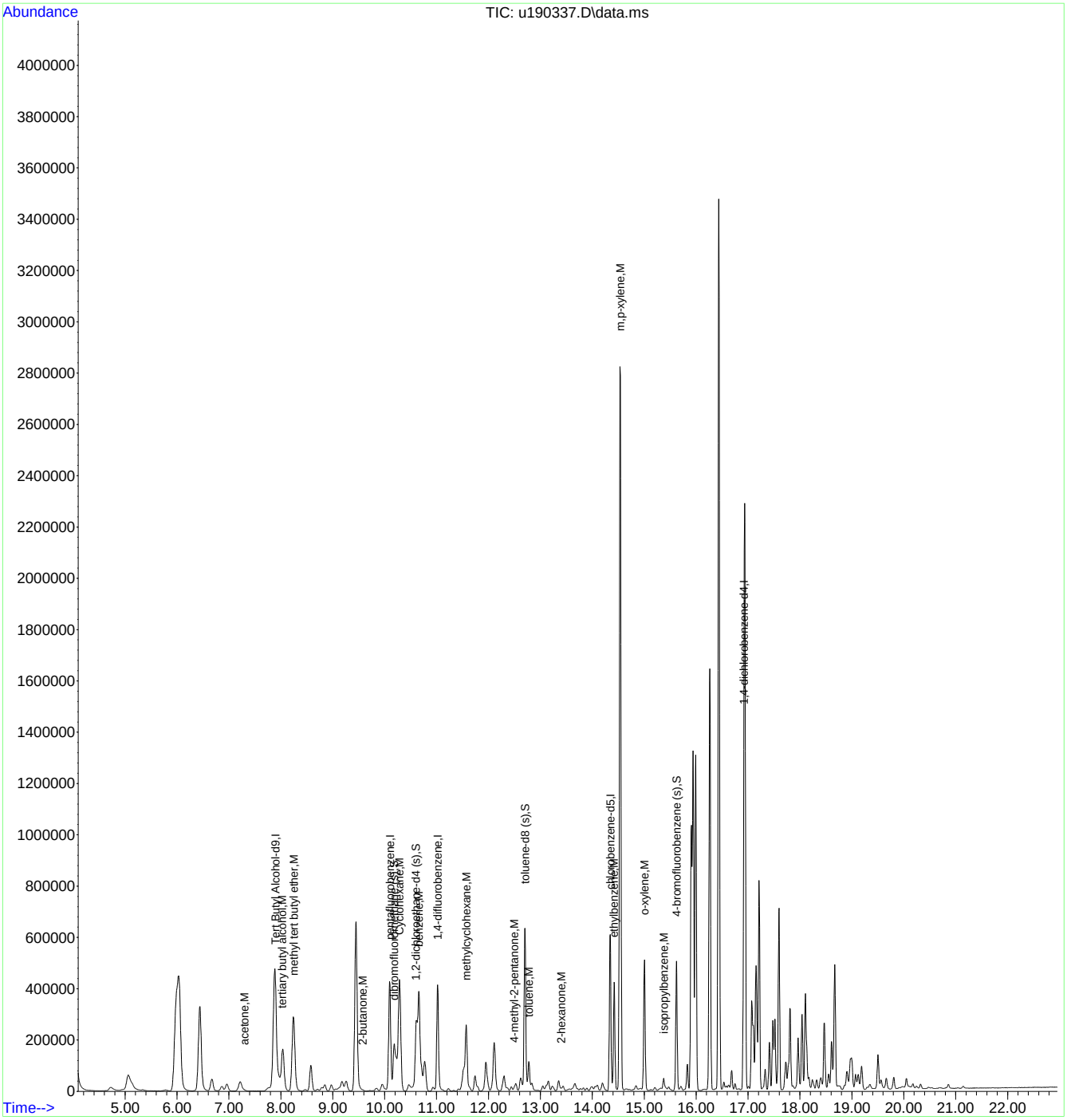
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.900	65	109548	500.00	ug/L	0.00
5) pentafluorobenzene	10.101	168	407561	50.00	ug/L	0.00
64) 1,4-difluorobenzene	11.021	114	444649	50.00	ug/L	0.00
96) chlorobenzene-d5	14.346	117	411515	50.00	ug/L	0.00
112) 1,4-dichlorobenzene-d4	16.918	152	226304	50.00	ug/L	0.00
System Monitoring Compounds						
56) dibromofluoromethane (s)	10.179	113	124583	51.86	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 103.72%			
57) 1,2-dichloroethane-d4 (s)	10.603	65	135124	51.05	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 102.10%			
88) toluene-d8 (s)	12.704	98	531416	54.97	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 109.94%			
114) 4-bromofluorobenzene (s)	15.622	95	194925	54.27	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 108.54%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	8.025	59	2575	10.72	ug/L #	1
29) acetone	7.299	58	2677	11.86	ug/L #	1
37) methyl tert butyl ether	8.250	73	32037	4.19	ug/L #	1
41) 2-butanone	9.578	72	1272	4.52	ug/L #	1
68) Cyclohexane	10.284	84	214185	56.34	ug/L #	56
72) benzene	10.660	78	382519	32.56	ug/L	99
79) methylcyclohexane	11.570	83	146522m	34.09	ug/L	
89) 4-methyl-2-pentanone	12.495	58	3828	3.90	ug/L #	55
90) toluene	12.778	92	51365	7.18	ug/L	99
95) 2-hexanone	13.400	58	4549	4.80	ug/L	99
107) ethylbenzene	14.419	91	363830	26.18	ug/L	99
108) m,p-xylene	14.539	106	1023831	194.66	ug/L	98
109) o-xylene	15.005	106	176612	34.10	ug/L	97
113) isopropylbenzene	15.376	105	40289	3.00	ug/L	97

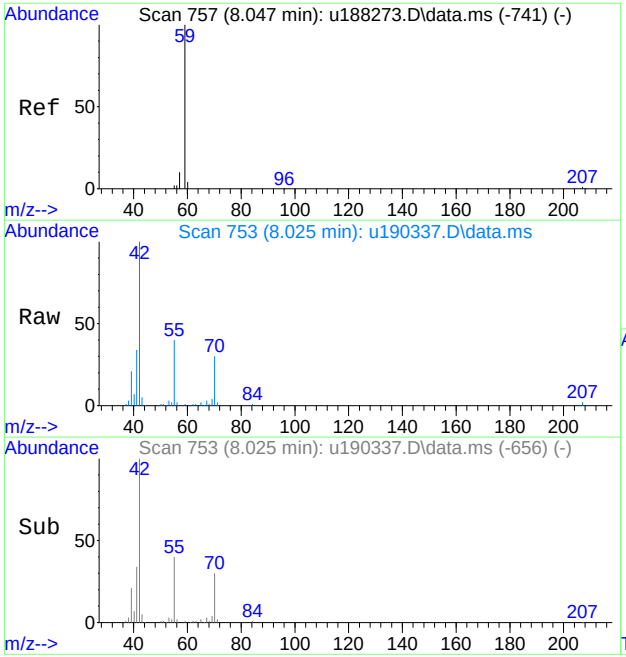
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190337.D
Acq On : 3 Dec 2014 8:20 pm
Operator : yunxiac
Sample : JB82646-8
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Dec 04 10:03:35 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um
QLast Update : Thu Nov 20 10:49:23 2014
Response via : Initial Calibration

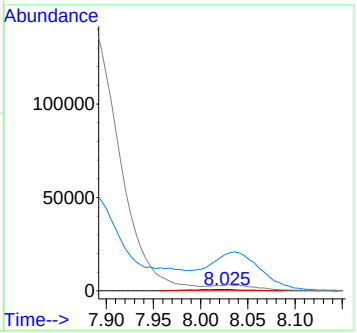


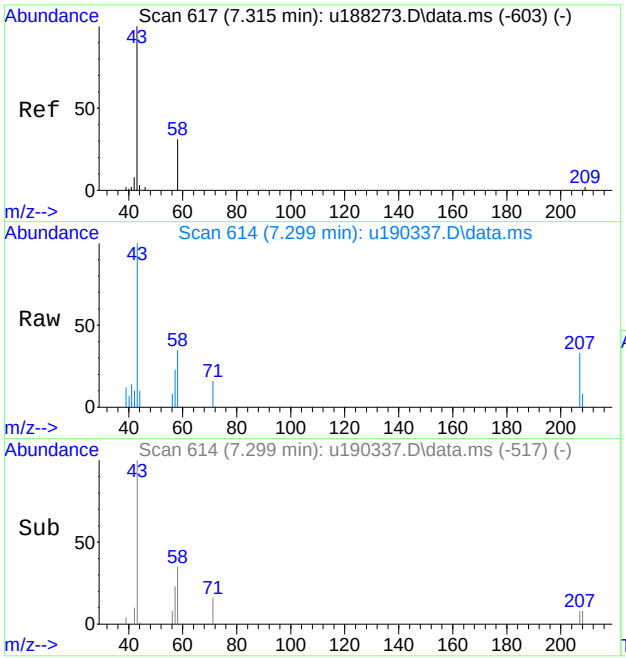


#2
tertiary butyl alcohol
Concen: 10.72 ug/L
RT: 8.025 min Scan# 753
Delta R.T. 0.006 min
Lab File: u190337.D
Acq: 3 Dec 2014 8:20 pm

Tgt Ion: 59 Resp: 2575

Ion	Ratio	Lower	Upper
59	100		
41	1783.9	9.1	69.1#
43	0.0	0.0	51.3

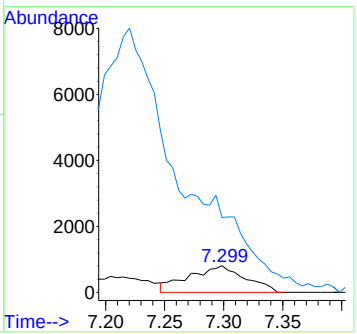


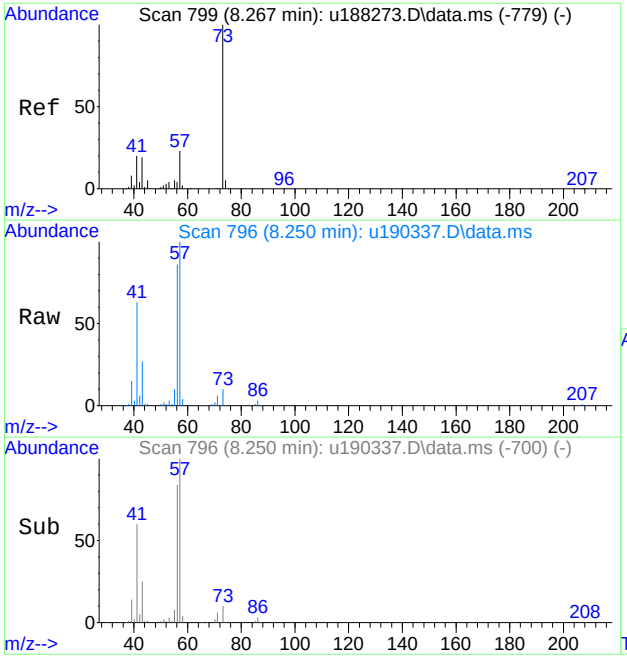


#29
acetone
Concen: 11.86 ug/L
RT: 7.299 min Scan# 614
Delta R.T. 0.006 min
Lab File: u190337.D
Acq: 3 Dec 2014 8:20 pm

Tgt Ion: 58 Resp: 2677

Ion	Ratio	Lower	Upper
58	100		
43	0.0	294.1	354.1#

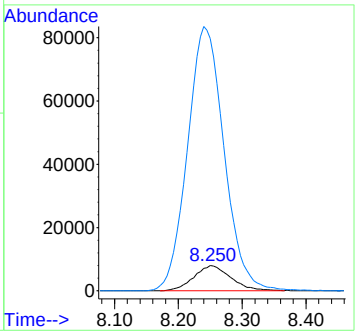


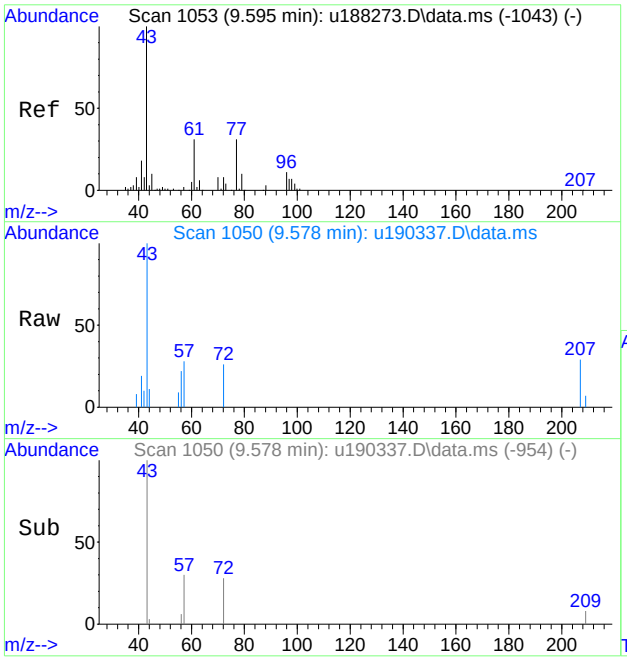


#37
methyl tert butyl ether
Concen: 4.19 ug/L
RT: 8.250 min Scan# 796
Delta R.T. 0.001 min
Lab File: u190337.D
Acq: 3 Dec 2014 8:20 pm

Tgt Ion: 73 Resp: 32037

Ion	Ratio	Lower	Upper
73	100		
57	1038.9	0.0	53.8#

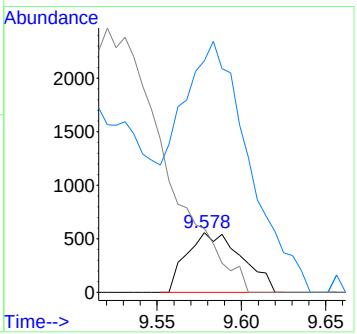


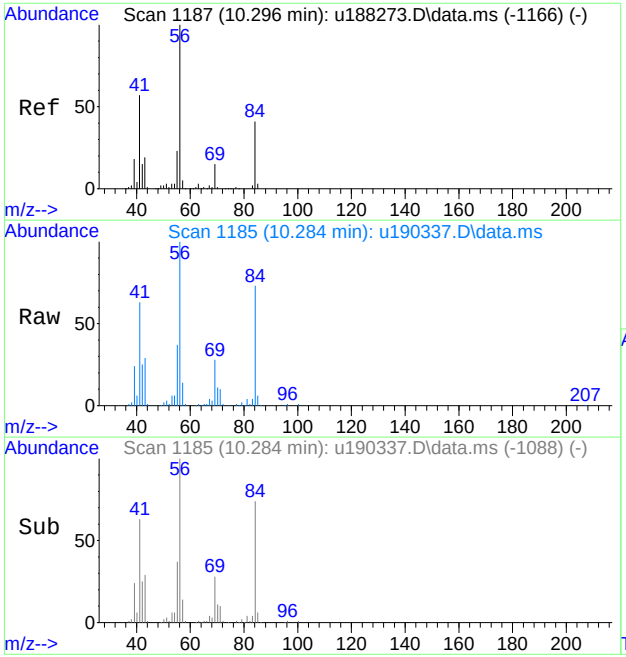


#41
2-butanone
Concen: 4.52 ug/L
RT: 9.578 min Scan# 1050
Delta R.T. 0.001 min
Lab File: u190337.D
Acq: 3 Dec 2014 8:20 pm

Tgt Ion: 72 Resp: 1272

Ion	Ratio	Lower	Upper
72	100		
43	530.7	1306.1	1366.1#
57	0.0	0.0	30.0

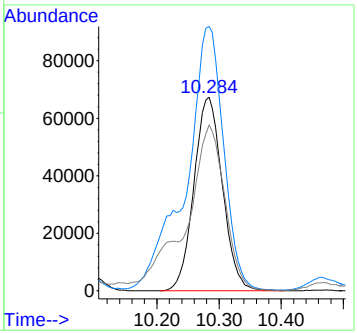


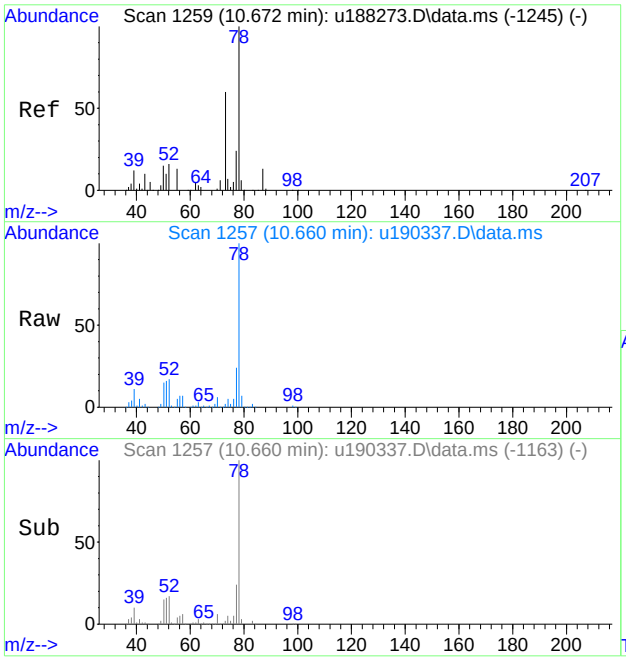


#68
Cyclohexane
Concen: 56.34 ug/L
RT: 10.284 min Scan# 1185
Delta R.T. 0.006 min
Lab File: u190337.D
Acq: 3 Dec 2014 8:20 pm

Tgt Ion: 84 Resp: 214185

Ion	Ratio	Lower	Upper
84	100		
56	136.5	183.5	243.5#
41	85.7	95.8	155.8#

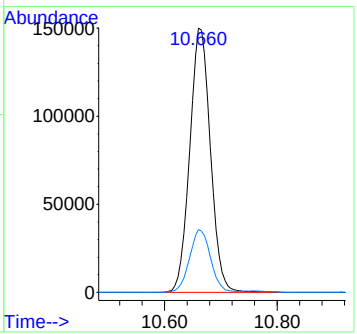


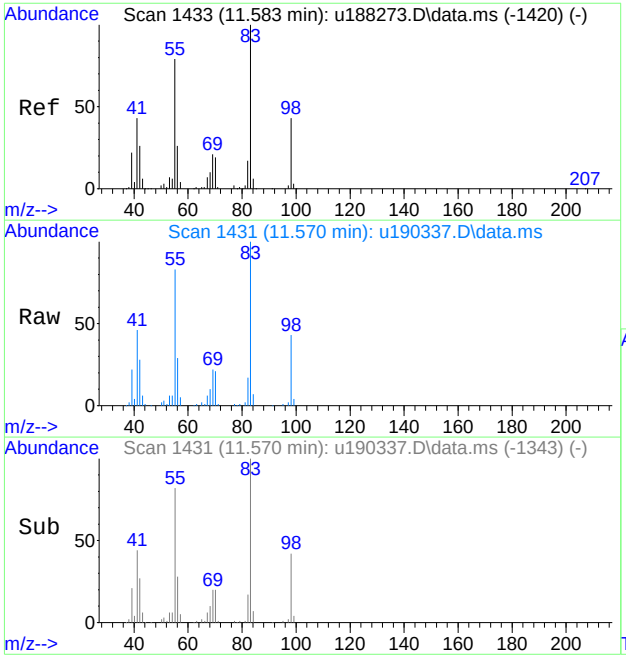


#72
benzene
Concen: 32.56 ug/L
RT: 10.660 min Scan# 1257
Delta R.T. 0.001 min
Lab File: u190337.D
Acq: 3 Dec 2014 8:20 pm

Tgt Ion: 78 Resp: 382519

Ion	Ratio	Lower	Upper
78	100		
77	23.7	0.0	54.0

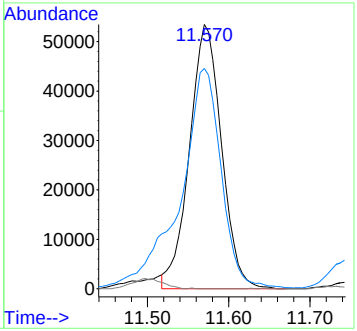


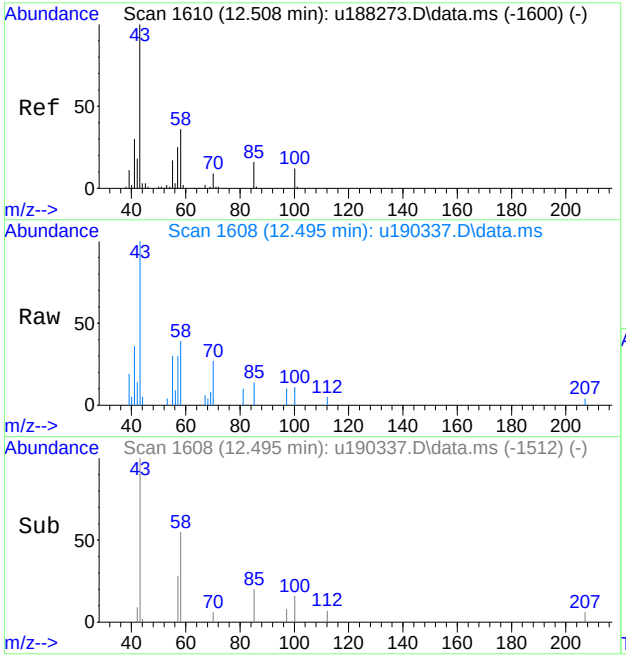


#79
methylcyclohexane
Concen: 34.09 ug/L m
RT: 11.570 min Scan# 1431
Delta R.T. 0.001 min
Lab File: u190337.D
Acq: 3 Dec 2014 8:20 pm

Tgt Ion: 83 Resp: 146522

Ion	Ratio	Lower	Upper
83	100		
55	83.3	56.2	116.2
85	0.0	0.0	50.2

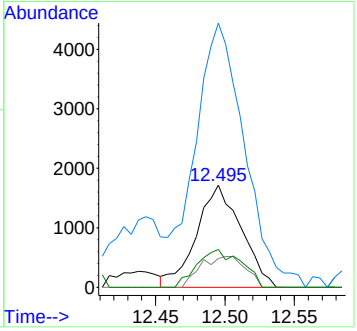


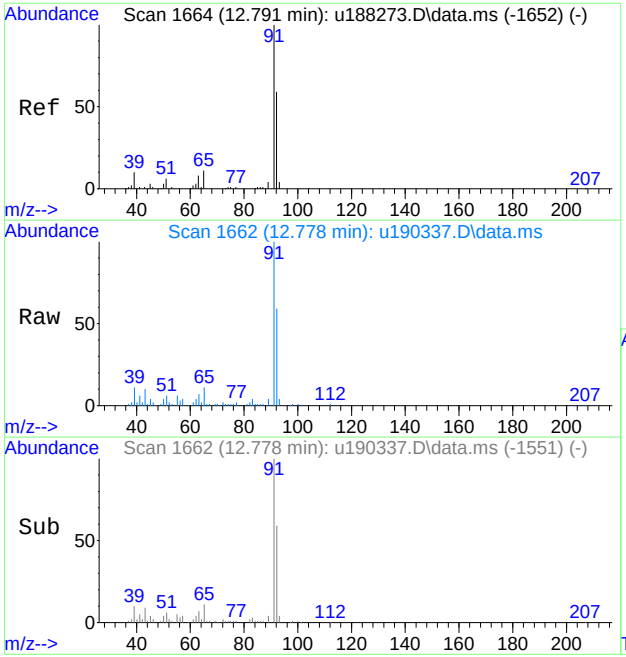


#89
4-methyl-2-pentanone
Concen: 3.90 ug/L
RT: 12.495 min Scan# 1608
Delta R.T. 0.001 min
Lab File: u190337.D
Acq: 3 Dec 2014 8:20 pm

Tgt Ion: 58 Resp: 3828

Ion	Ratio	Lower	Upper
58	100		
43	285.6	379.8	419.8#
100	0.0	10.0	50.0#
85	36.9	18.0	58.0

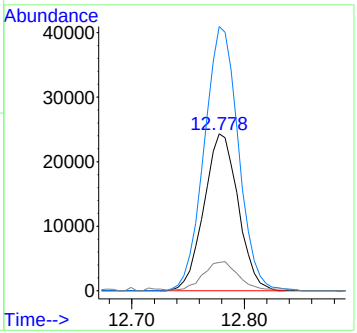


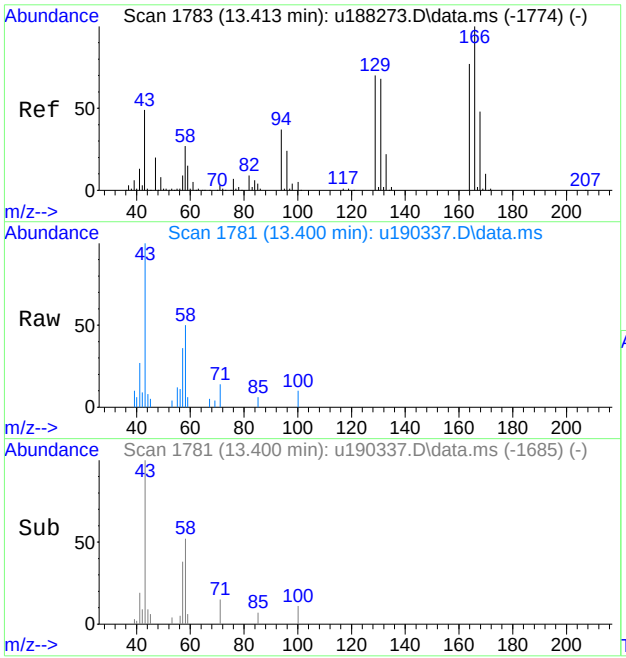


#90
toluene
Concen: 7.18 ug/L
RT: 12.778 min Scan# 1662
Delta R.T. 0.001 min
Lab File: u190337.D
Acq: 3 Dec 2014 8:20 pm

Tgt Ion: 92 Resp: 51365

Ion	Ratio	Lower	Upper
92	100		
91	168.6	138.3	198.3
65	17.0	0.0	49.2

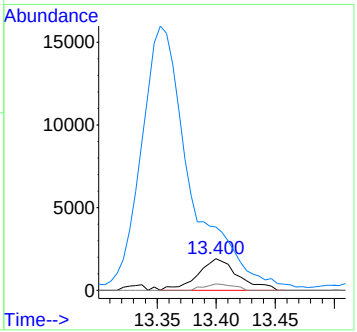


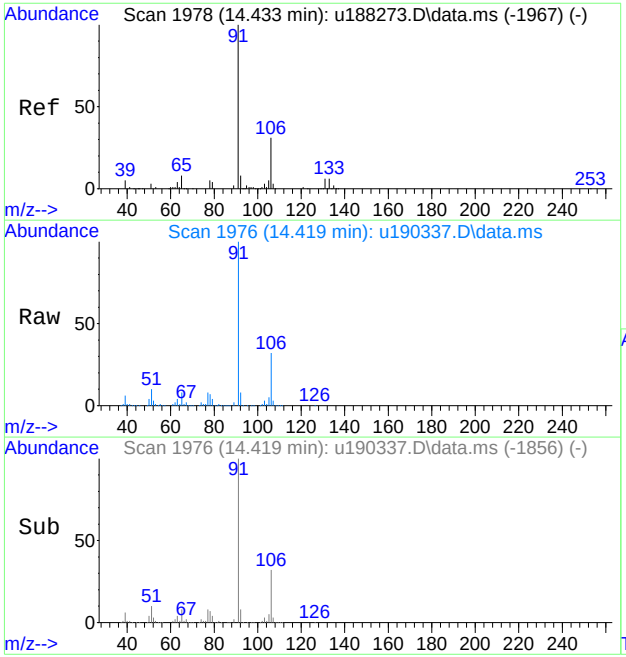


#95
2-hexanone
Concen: 4.80 ug/L
RT: 13.400 min Scan# 1781
Delta R.T. 0.001 min
Lab File: u190337.D
Acq: 3 Dec 2014 8:20 pm

Tgt Ion: 58 Resp: 4549

Ion	Ratio	Lower	Upper
58	100		
43	180.5	149.4	209.4
100	20.2	0.0	47.5

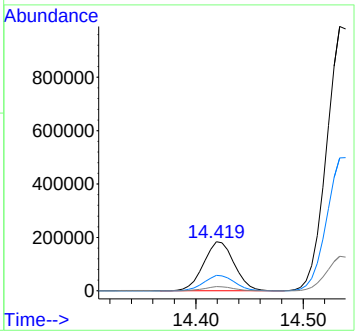


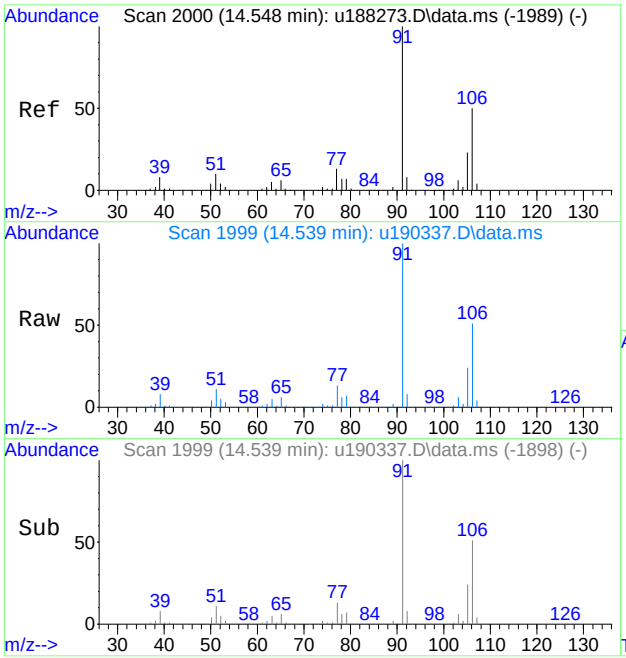


#107
ethylbenzene
Concen: 26.18 ug/L
RT: 14.419 min Scan# 1976
Delta R.T. -0.005 min
Lab File: u190337.D
Acq: 3 Dec 2014 8:20 pm

Tgt Ion: 91 Resp: 363830

Ion	Ratio	Lower	Upper
91	100		
106	31.6	1.0	61.0
77	8.4	0.0	38.4

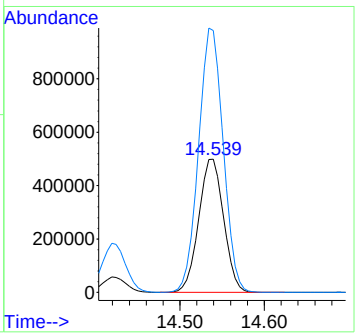


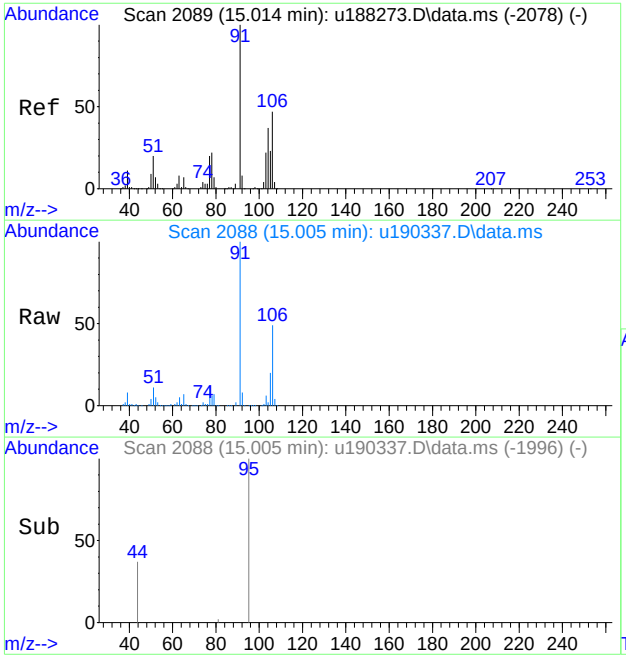


#108
m,p-xylene
Concen: 194.66 ug/L
RT: 14.539 min Scan# 1999
Delta R.T. 0.006 min
Lab File: u190337.D
Acq: 3 Dec 2014 8:20 pm

Tgt Ion:106 Resp: 1023831

Ion	Ratio	Lower	Upper
106	100		
91	196.5	169.0	229.0

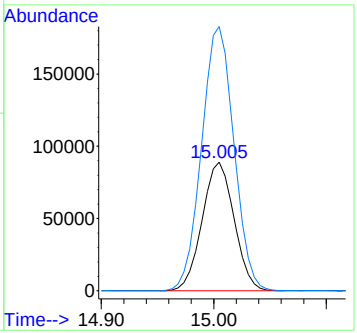


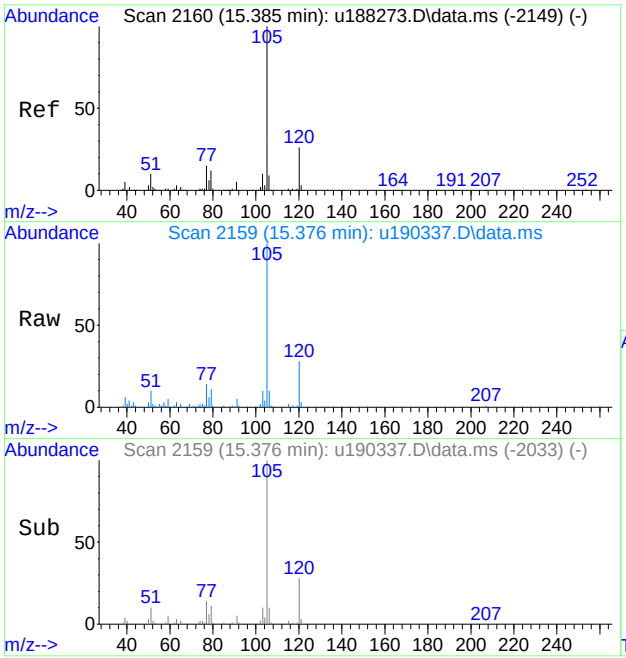


#109
o-xylene
Concen: 34.10 ug/L
RT: 15.005 min Scan# 2088
Delta R.T. 0.001 min
Lab File: u190337.D
Acq: 3 Dec 2014 8:20 pm

Tgt Ion:106 Resp: 176612

Ion	Ratio	Lower	Upper
106	100		
91	205.4	180.4	240.4

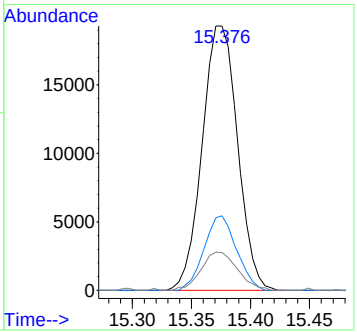




#113
isopropylbenzene
Concen: 3.00 ug/L
RT: 15.376 min Scan# 2159
Delta R.T. 0.001 min
Lab File: u190337.D
Acq: 3 Dec 2014 8:20 pm

Tgt Ion:105 Resp: 40289

Ion	Ratio	Lower	Upper
105	100		
120	28.2	0.0	55.8
77	14.3	0.0	44.7



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190337.D
Acq On : 3 Dec 2014 8:20 pm
Operator : yunxiac
Sample : JB82646-8
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 23 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MU8763.M
Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

Signal : TIC: u190337.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	5.061	170	186	232	rVB3	59542	405453	6.27%	0.619%
2	6.033	338	372	419	rBV3	449147	3226536	49.91%	4.926%
3	6.441	424	450	479	rVV	329203	1321533	20.44%	2.018%
4	7.884	708	726	745	rBV3	464426	2049525	31.70%	3.129%
5	8.036	746	755	777	rVB	162893	621898	9.62%	0.949%
6	8.240	777	794	827	rVB	289186	1152543	17.83%	1.760%
7	8.579	846	859	875	rBV	99340	308614	4.77%	0.471%
8	9.447	1007	1025	1063	rVB	660580	2197424	33.99%	3.355%
9	10.096	1137	1149	1158	rBV	420703	1150193	17.79%	1.756%
10	10.184	1158	1166	1176	rVV3	178840	731671	11.32%	1.117%
11	10.284	1176	1185	1207	rVB3	435379	1535788	23.76%	2.345%
12	10.608	1234	1247	1251	rVV3	274357	785698	12.15%	1.200%
13	10.660	1253	1257	1271	rVV	388510	1135652	17.57%	1.734%
14	10.770	1272	1278	1295	rVB5	117152	372633	5.76%	0.569%
15	11.021	1315	1326	1354	rVB	415328	1038573	16.07%	1.586%
16	11.570	1408	1431	1454	rVB2	258511	1010124	15.63%	1.542%
17	11.742	1454	1464	1486	rVB2	60056	198245	3.07%	0.303%
18	11.952	1486	1504	1518	rBV3	113110	378039	5.85%	0.577%
19	12.108	1519	1534	1556	rVB4	189057	600234	9.28%	0.916%
20	12.302	1556	1571	1580	rBV4	58616	196942	3.05%	0.301%
21	12.704	1639	1648	1656	rVV	620209	1360872	21.05%	2.078%
22	12.778	1656	1662	1669	rVB	92813	198710	3.07%	0.303%
23	14.346	1951	1962	1969	rBV	609753	1269599	19.64%	1.938%
24	14.419	1969	1976	1987	rVV	421900	859373	13.29%	1.312%
25	14.534	1987	1998	2013	rVB	2821079	5741976	88.82%	8.767%
26	15.005	2078	2088	2102	rVB	509362	1045569	16.17%	1.596%
27	15.622	2194	2206	2215	rBV	505216	994558	15.38%	1.518%
28	15.831	2230	2246	2252	rBV	102160	214361	3.32%	0.327%
29	15.909	2252	2261	2263	rVV	1034596	1886319	29.18%	2.880%
30	15.941	2264	2267	2272	rVV	1325056	2285360	35.35%	3.489%
31	15.993	2272	2277	2295	rVB	1309436	2450004	37.90%	3.741%
32	16.265	2316	2329	2345	rVB	1641308	3233106	50.01%	4.936%
33	16.437	2345	2362	2374	rBV	3472941	6464581	100.00%	9.870%
34	16.934	2444	2457	2467	rBV2	2286154	5184988	80.21%	7.916%
35	17.070	2475	2483	2493	rBV2	341947	1041375	16.11%	1.590%
36	17.153	2493	2499	2505	rVV2	478252	1164833	18.02%	1.778%
37	17.211	2505	2510	2520	rVB	813680	1525900	23.60%	2.330%
38	17.415	2540	2549	2555	rBV	184238	353798	5.47%	0.540%
39	17.478	2555	2561	2565	rVV	260420	503088	7.78%	0.768%
40	17.514	2565	2568	2575	rVV	265812	456230	7.06%	0.697%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190337.D
Acq On : 3 Dec 2014 8:20 pm
Operator : yunxiac
Sample : JB82646-8
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 23 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MU8763.M
Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

41	17.598	2575	2584	2594	rVB	708293	1383364	21.40%	2.112%
42	17.728	2597	2609	2614	rBV4	108752	271757	4.20%	0.415%
43	17.807	2614	2624	2633	rVB2	304192	694189	10.74%	1.060%
44	17.964	2643	2654	2661	rBV	197294	399114	6.17%	0.609%
45	18.042	2661	2669	2675	rVV	272853	496232	7.68%	0.758%
46	18.105	2675	2681	2692	rVV2	341460	786352	12.16%	1.201%
47	18.471	2743	2751	2760	rVV2	251950	532349	8.23%	0.813%
48	18.612	2771	2778	2782	rVV	176139	356488	5.51%	0.544%
49	18.670	2782	2789	2799	rVB	474782	990942	15.33%	1.513%
50	18.994	2840	2851	2860	rVB3	114893	418212	6.47%	0.639%
51	19.187	2881	2888	2901	rVB	90799	221878	3.43%	0.339%
52	19.501	2938	2948	2955	rBV	133827	294695	4.56%	0.450%

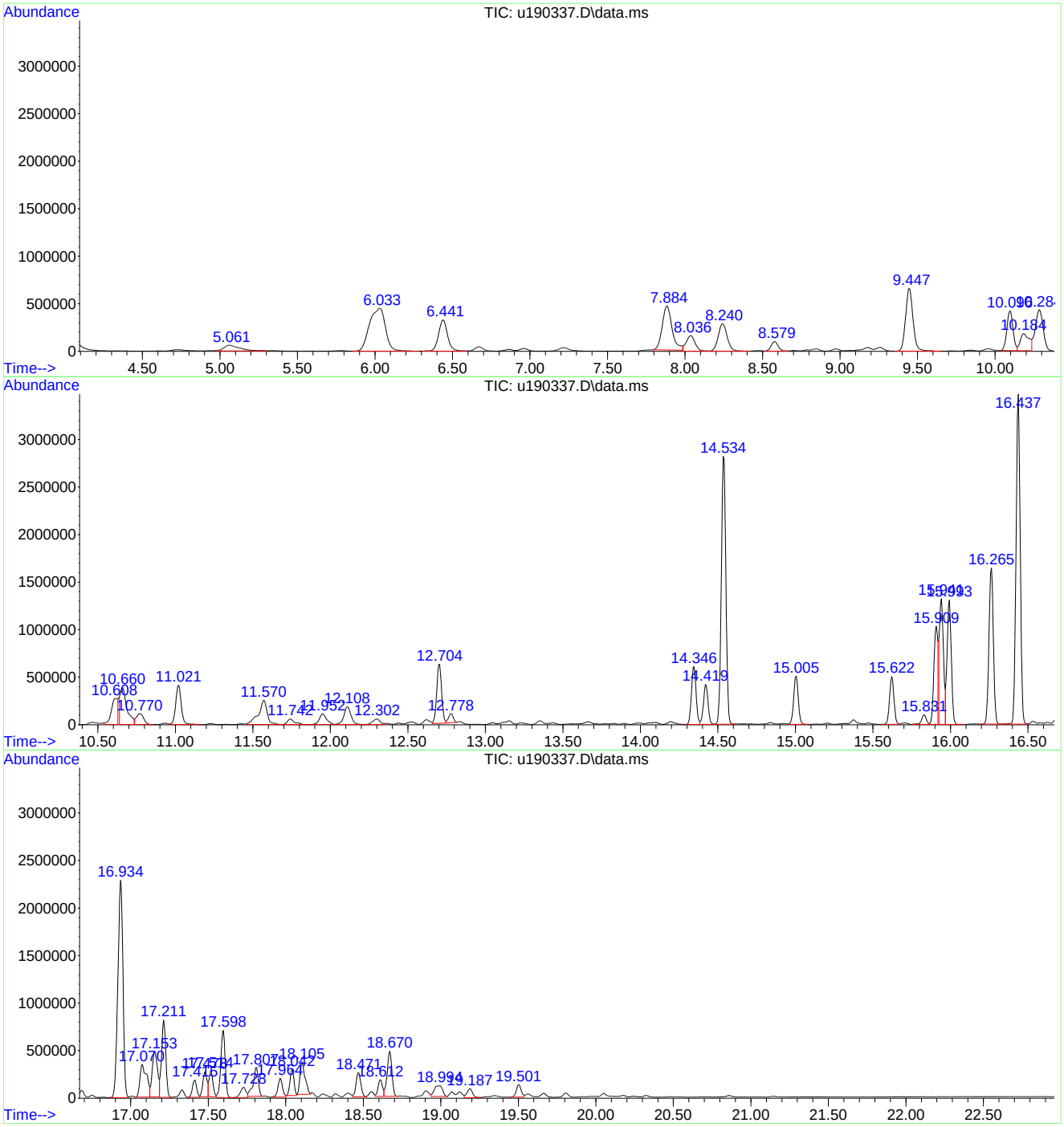
Sum of corrected areas: 65497490

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190337.D
Acq On : 3 Dec 2014 8:20 pm
Operator : yunxiac
Sample : JB82646-8
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190337.D
Acq On : 3 Dec 2014 8:20 pm
Operator : yunxiac
Sample : JB82646-8
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

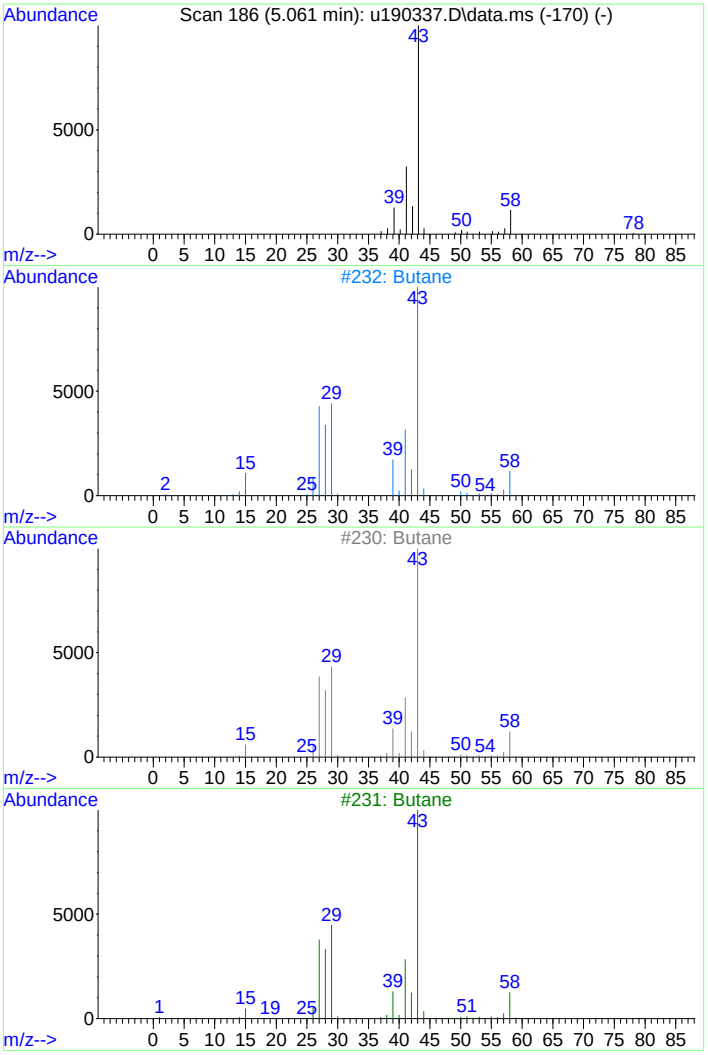
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

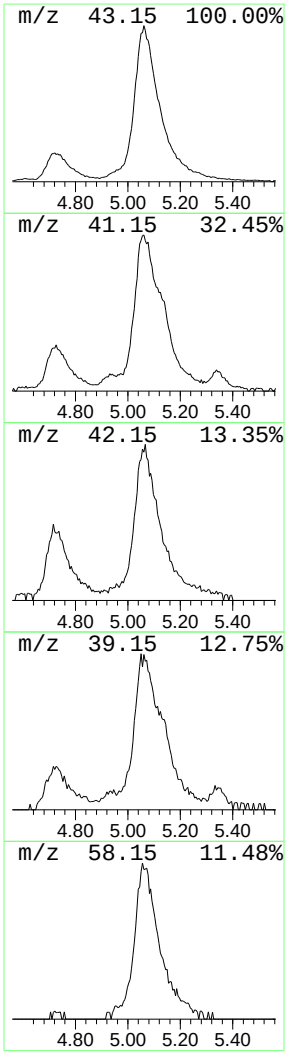
****

Peak Number 1 alkane Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.061	17.63 ug/L	405453	pentafluorobenzene	10.101

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	59
2	Butane	58	C4H10	000106-97-8	53
3	Butane	58	C4H10	000106-97-8	53
4	Formic acid, chloro-, (3,4,4-tri...	194	C7H11ClO4	107323-92-2	39
5	Isobutane	58	C4H10	000075-28-5	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190337.D
Acq On : 3 Dec 2014 8:20 pm
Operator : yunxiac
Sample : JB82646-8
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

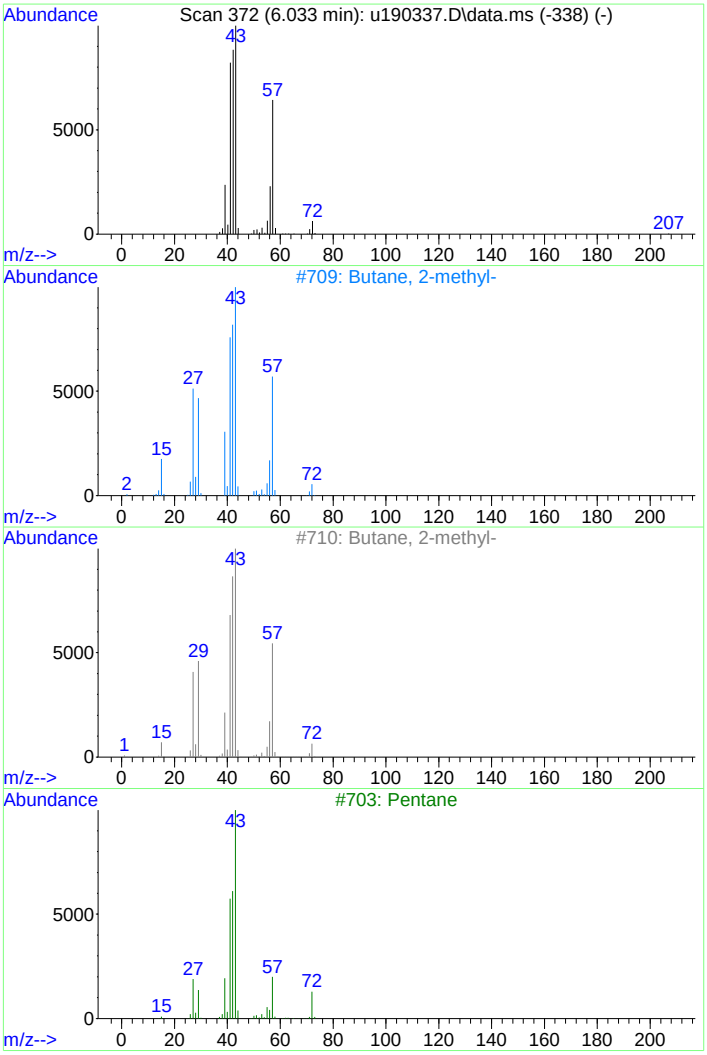
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

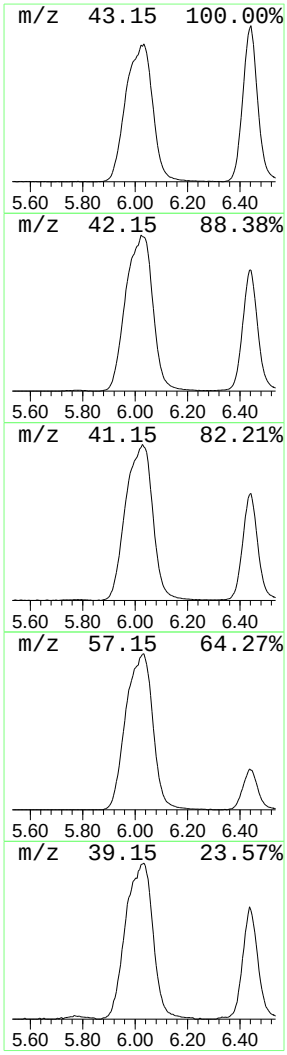
****

Peak Number 2 alkane Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.033	140.26 ug/L	3226540	pentafluorobenzene	10.101

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	90
2	Butane, 2-methyl-	72	C5H12	000078-78-4	87
3	Pentane	72	C5H12	000109-66-0	50
4	Butane, 2-methyl-	72	C5H12	000078-78-4	43
5	3-Buten-1-ol	72	C4H8O	000627-27-0	28





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190337.D
Acq On : 3 Dec 2014 8:20 pm
Operator : yunxiac
Sample : JB82646-8
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

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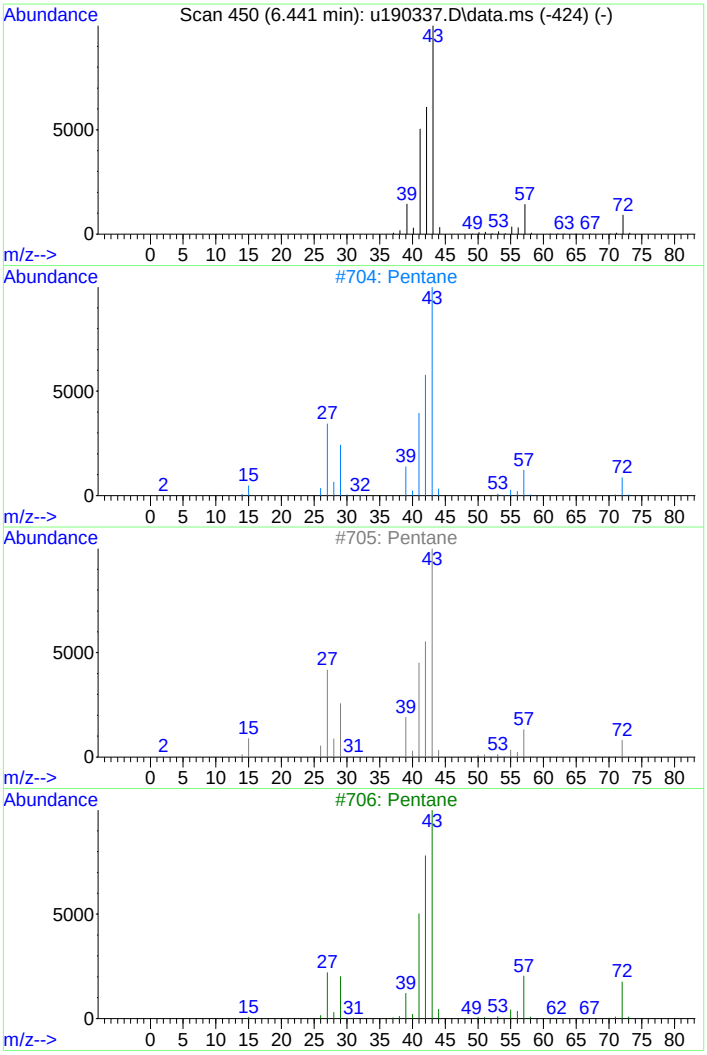
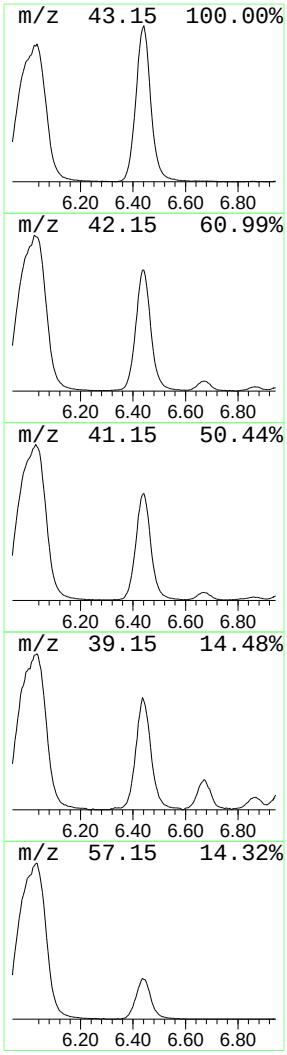
Peak Number 3 alkane Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.441	57.45 ug/L	1321530	pentafluorobenzene	10.101

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	90
2	Pentane	72	C5H12	000109-66-0	90
3	Pentane	72	C5H12	000109-66-0	64
4	Pentane	72	C5H12	000109-66-0	58
5	Diaziridine,3,3-dimethyl-	72	C3H8N2	004901-76-2	9





Library Search Compound Report

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Sample : JB82646-8
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

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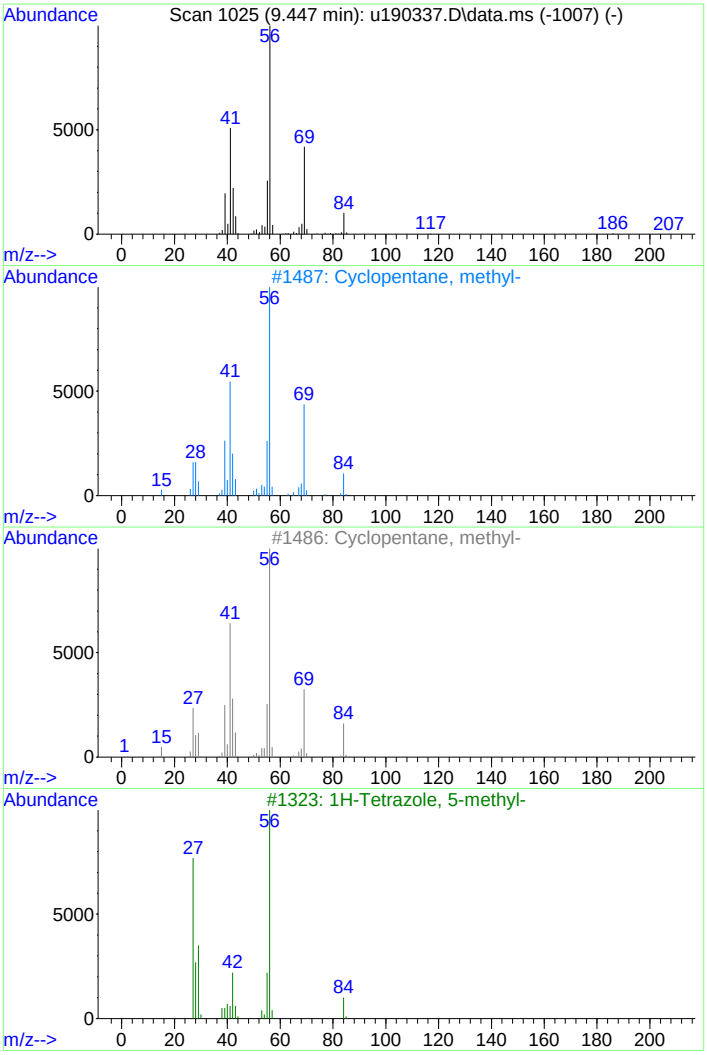
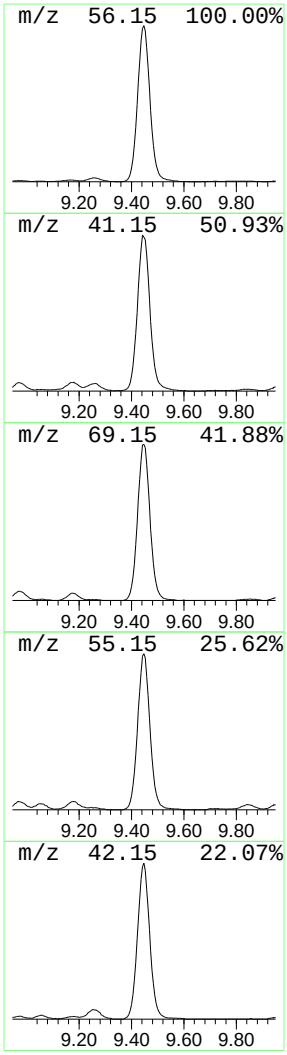
Peak Number 5 alkene Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.447	95.52 ug/L	2197420	pentafluorobenzene	10.101

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	94
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	91
3	1H-Tetrazole, 5-methyl-	84	C2H4N4	004076-36-2	80
4	Cyclobutane, ethyl-	84	C6H12	004806-61-5	80
5	Cyclopropane, propyl-	84	C6H12	002415-72-7	78





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ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

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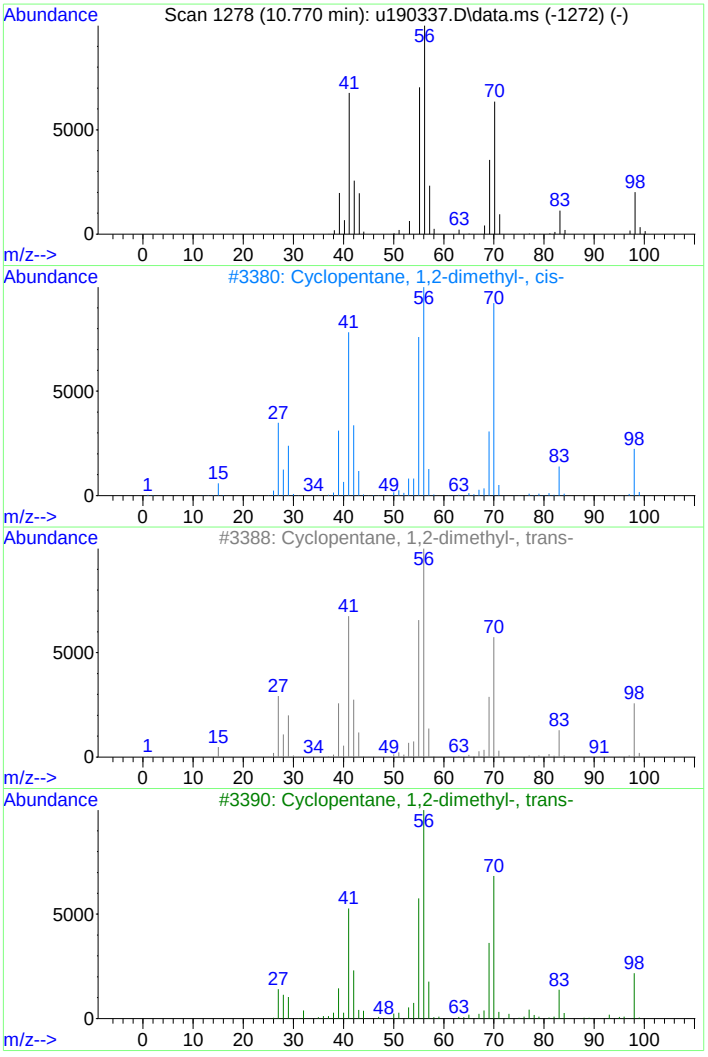
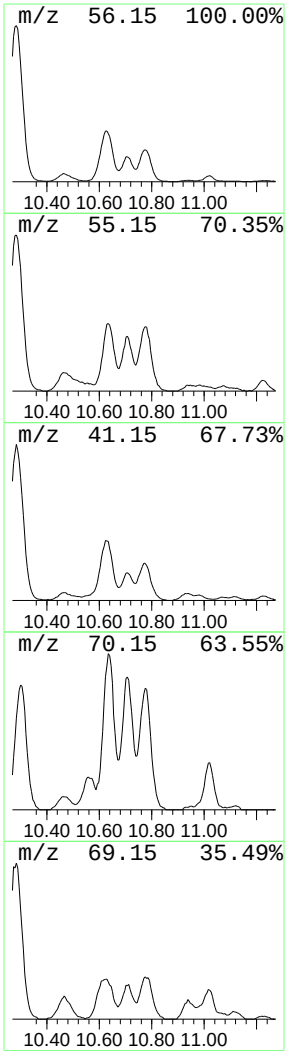
Peak Number 6 cyclopentane, dimethyl- isomer Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.770	17.94 ug/L	372633	1,4-difluorobenzene	11.021

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, 1,2-dimethyl-, cis-	98	C7H14	001192-18-3	91
2	Cyclopentane, 1,2-dimethyl-, trans-	98	C7H14	000822-50-4	87
3	Cyclopentane, 1,2-dimethyl-, trans-	98	C7H14	000822-50-4	87
4	Isopropylcyclobutane	98	C7H14	000872-56-0	87
5	1-Heptene	98	C7H14	000592-76-7	86





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Sample : JB82646-8
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

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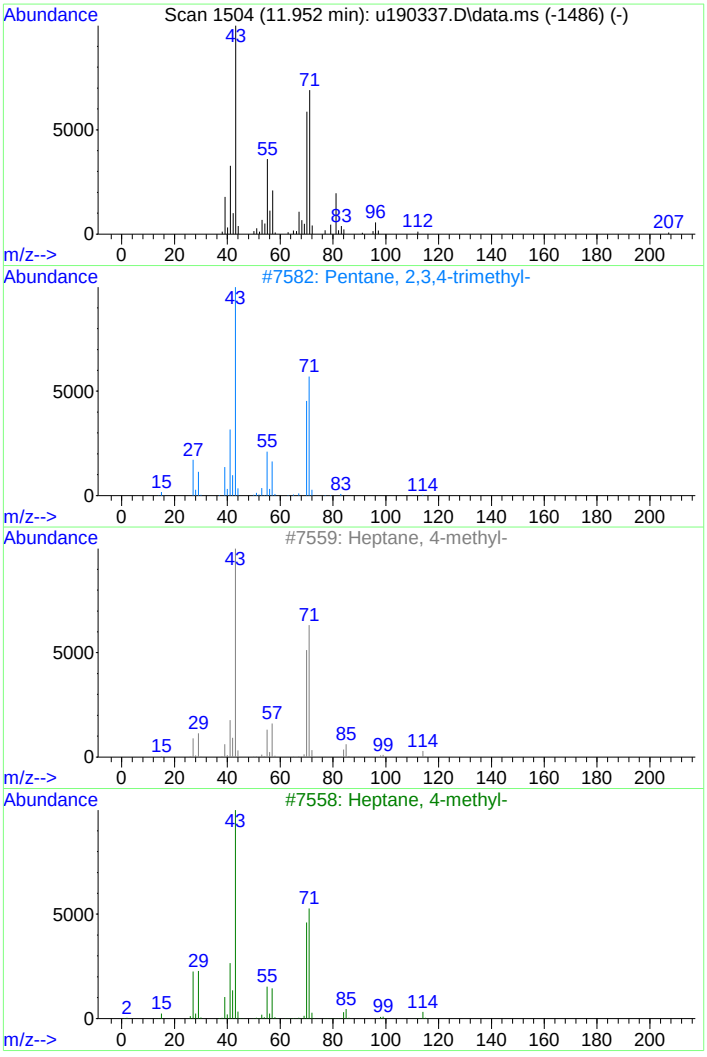
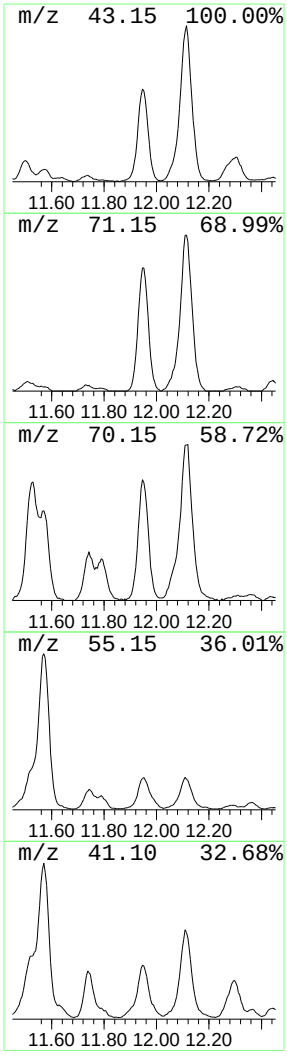
Peak Number 7 alkane Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.951	18.20 ug/L	378039	1,4-difluorobenzene	11.021

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	72
2	Heptane, 4-methyl-	114	C8H18	000589-53-7	64
3	Heptane, 4-methyl-	114	C8H18	000589-53-7	64
4	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	64
5	Heptane, 4-methyl-	114	C8H18	000589-53-7	59





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Operator : yunxiac
Sample : JB82646-8
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

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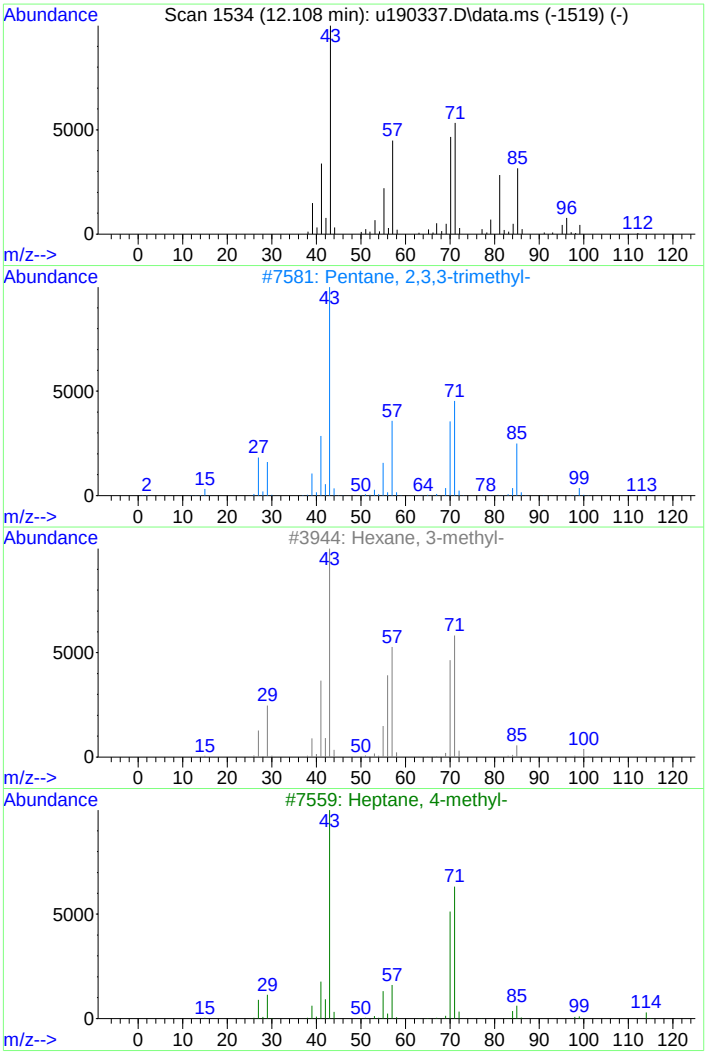
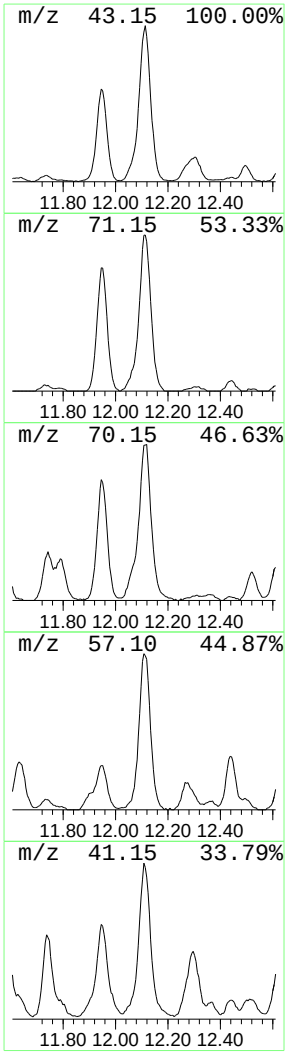
Peak Number 8 alkane Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.108	28.90 ug/L	600234	1,4-difluorobenzene	11.021

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	86
2	Hexane, 3-methyl-	100	C7H16	000589-34-4	59
3	Heptane, 4-methyl-	114	C8H18	000589-53-7	59
4	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	59
5	Hexane, 2,3,4-trimethyl-	128	C9H20	000921-47-1	56





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Operator : yunxiac
Sample : JB82646-8
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

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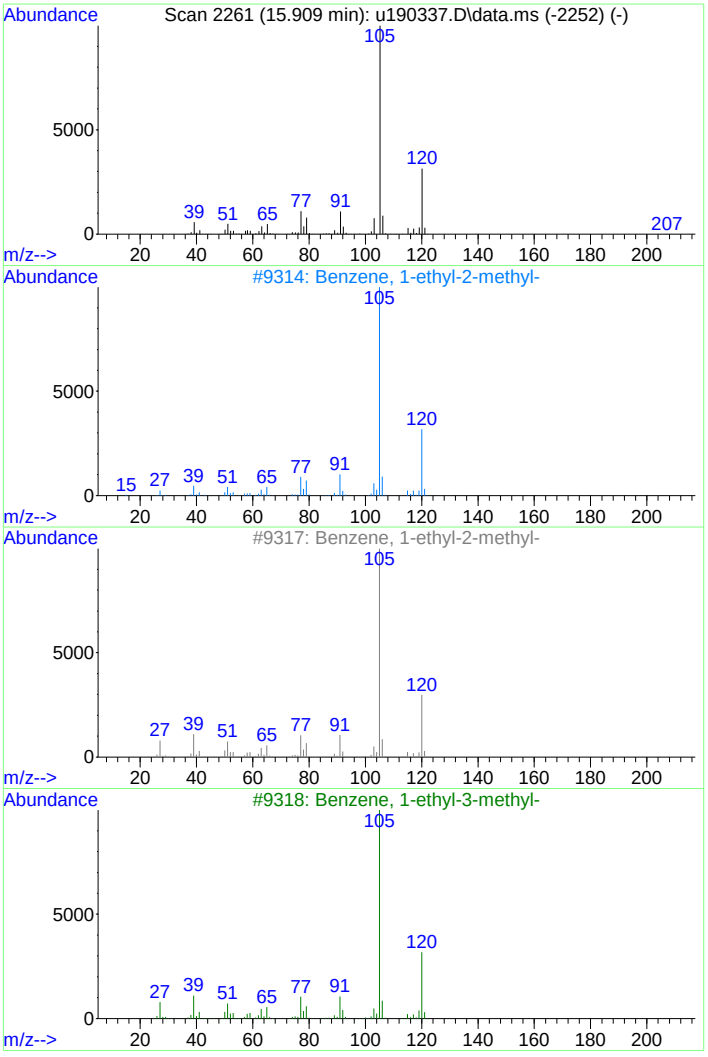
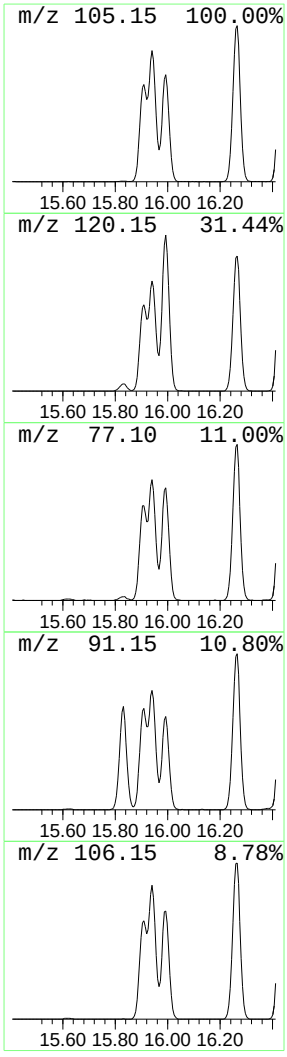
Peak Number 9 C3 alkyl benzene Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.909	18.19 ug/L	1886320	1,4-dichlorobenzene-d4	16.918

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	94
4	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	94
5	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91





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Acq On : 3 Dec 2014 8:20 pm
Operator : yunxiac
Sample : JB82646-8
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

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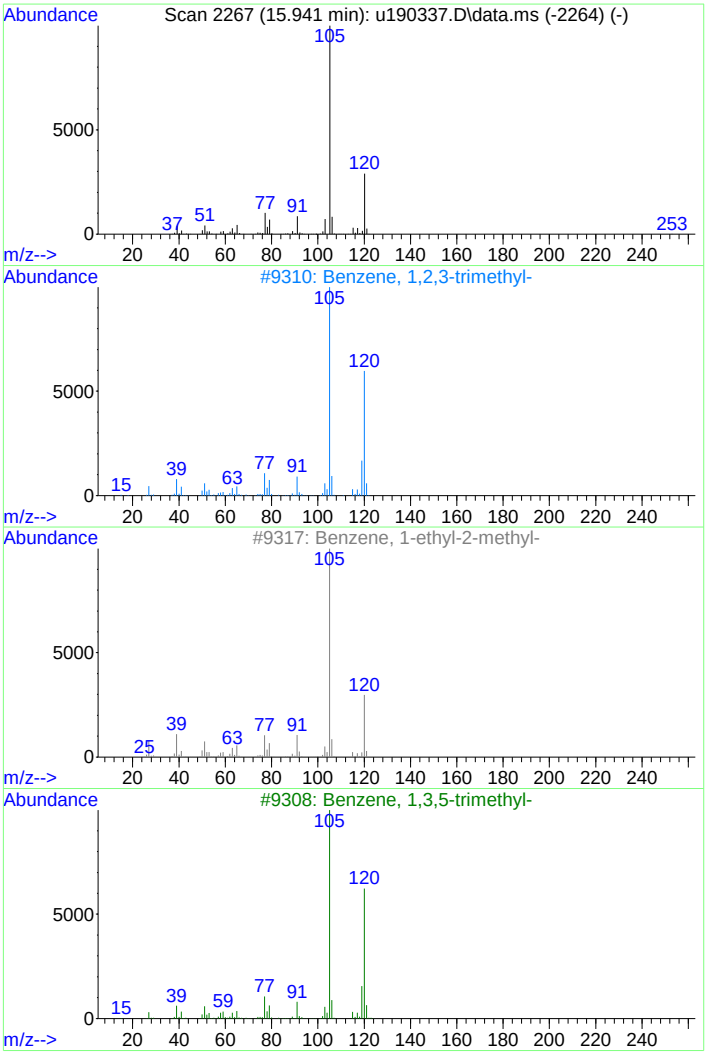
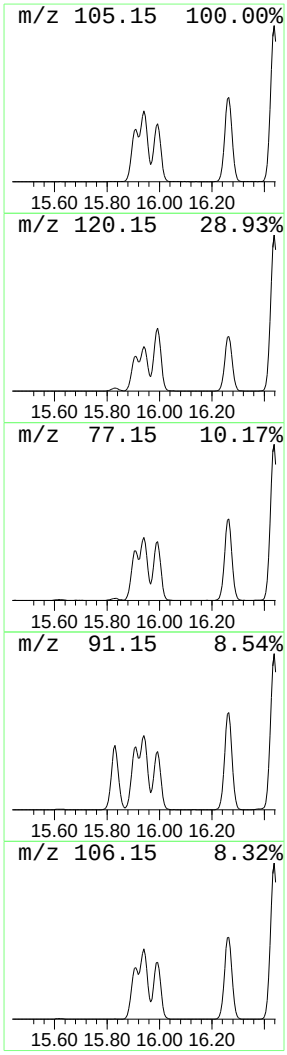
Peak Number 10 C3 alkyl benzene Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.941	22.04 ug/L	2285360	1,4-dichlorobenzene-d4	16.918

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	91
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	91
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
5	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	90





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Operator : yunxiac
Sample : JB82646-8
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

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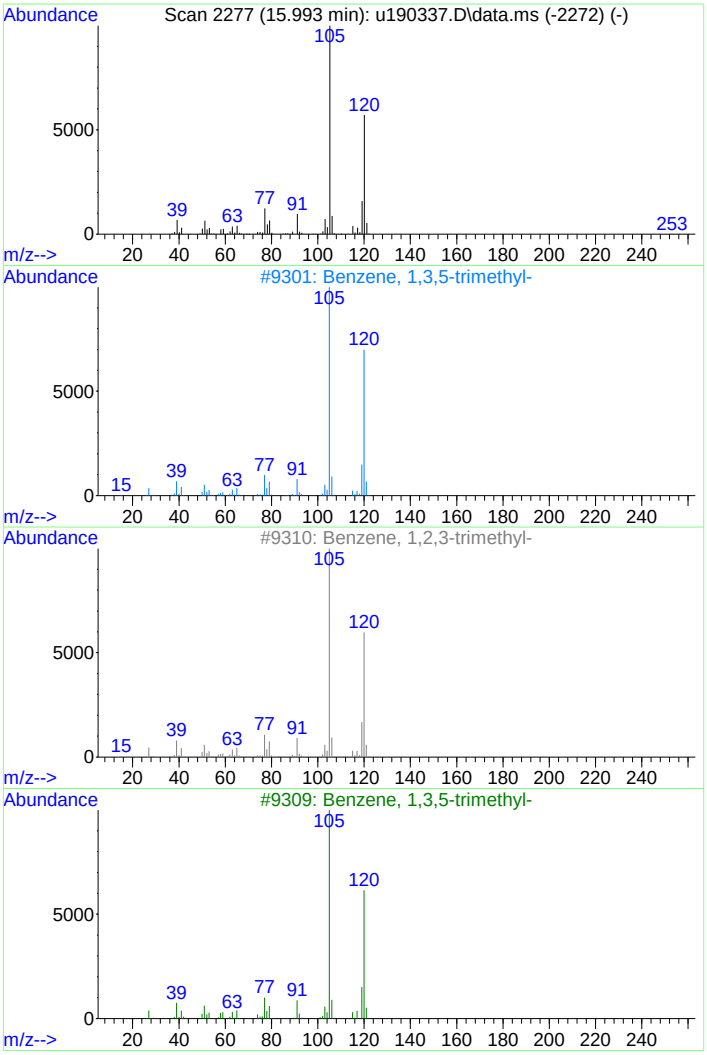
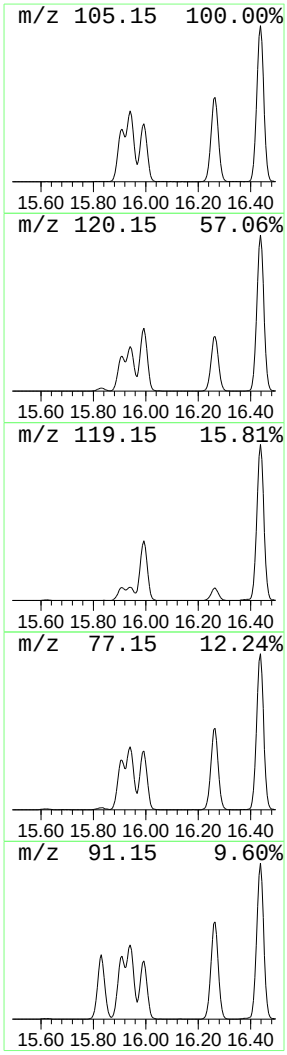
Peak Number 11 C3 alkyl benzene Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.993	23.63 ug/L	2450000	1,4-dichlorobenzene-d4	16.918

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	97
2	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95





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Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

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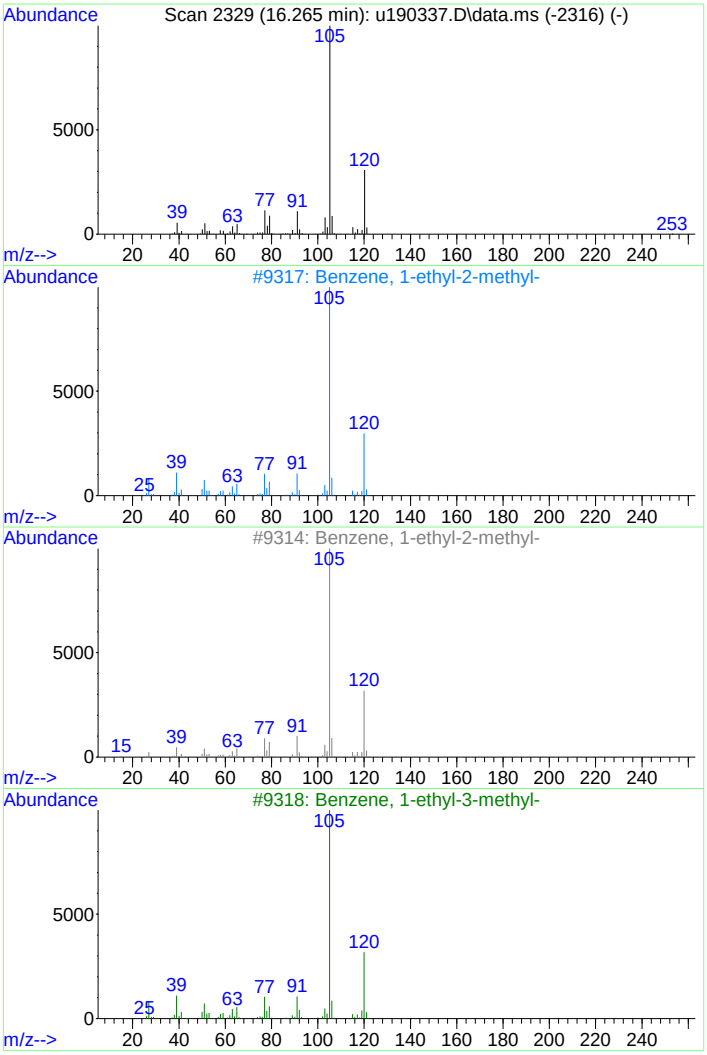
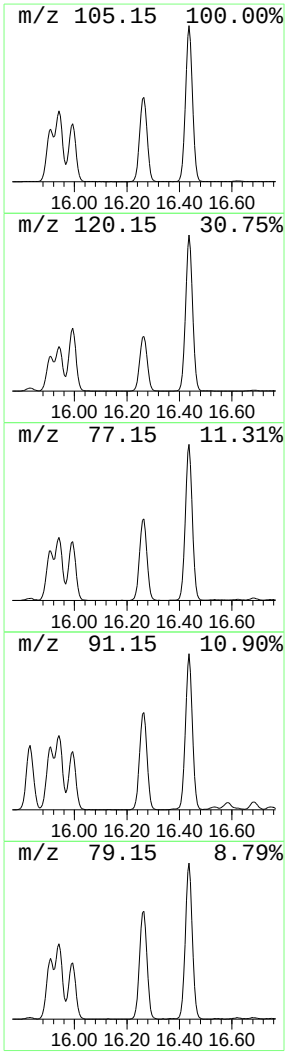
Peak Number 12 C3 alkyl benzene Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.265	31.18 ug/L	3233110	1,4-dichlorobenzene-d4	16.918

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
3	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91





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Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

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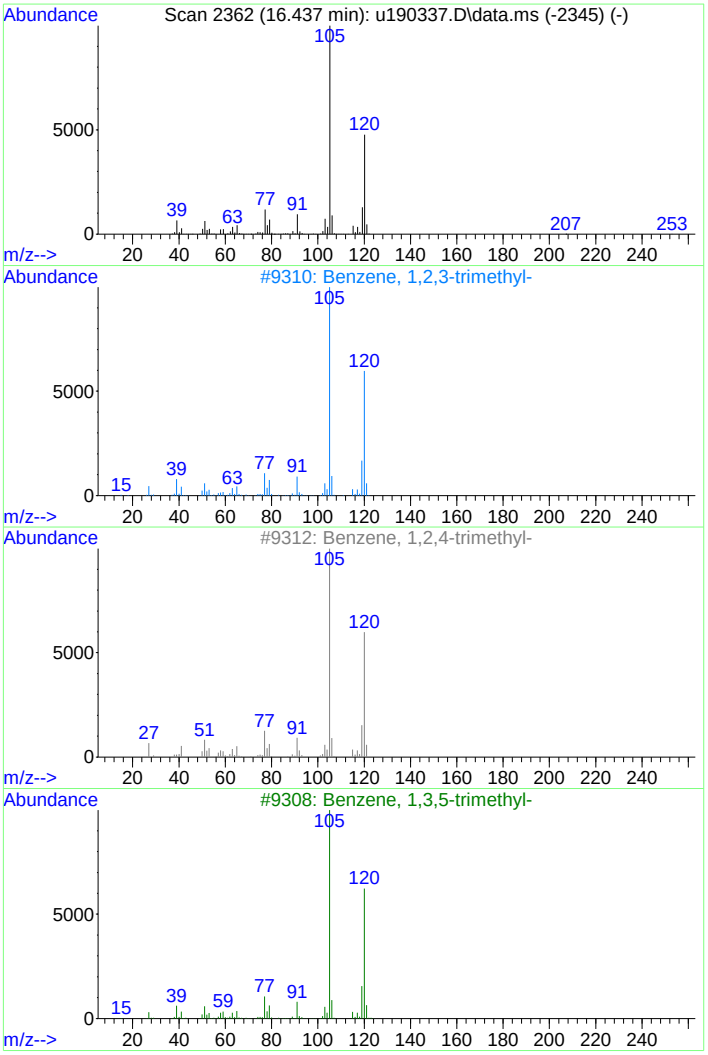
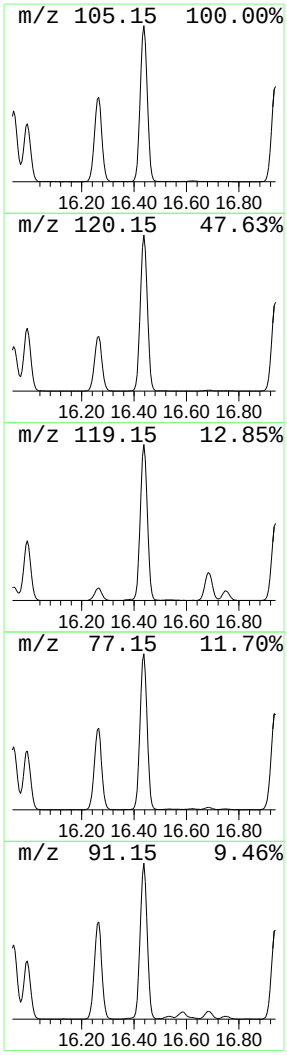
Peak Number 13 C3 alkyl benzene Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.437	62.34 ug/L	6464580	1,4-dichlorobenzene-d4	16.918

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94





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Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

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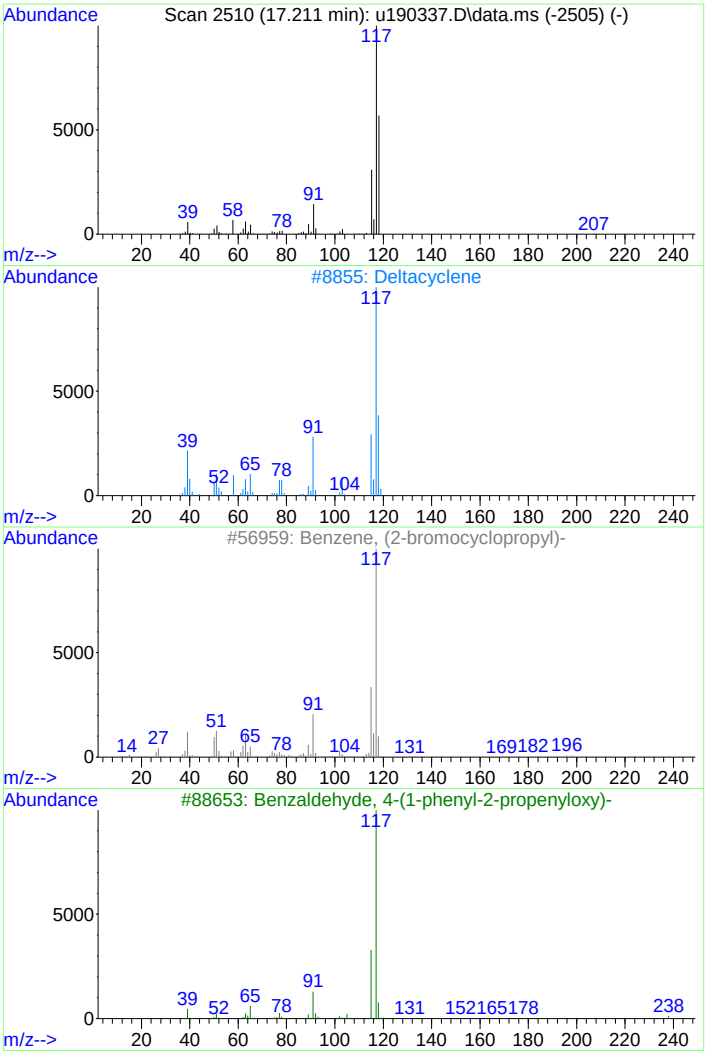
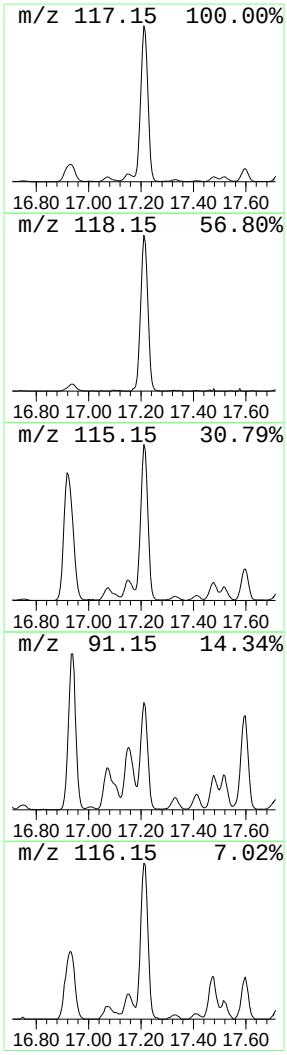
Peak Number 14 Indane Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.211	14.71 ug/L	1525900	1,4-dichlorobenzene-d4	16.918

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Deltacyclene	118	C9H10	007785-10-6	53
2	Benzene, (2-bromocyclopropyl)-	196	C9H9Br	036617-02-4	45
3	Benzaldehyde, 4-(1-phenyl-2-prop...	238	C16H14O2	1000277-56-1	42
4	Benzene, 1,1'-(1,5-hexadiene-1,6...	234	C18H18	004439-45-6	40
5	Benzene, (2-bromocyclopropyl)-	196	C9H9Br	036617-02-4	38





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Data File : u190337.D
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Operator : yunxiac
Sample : JB82646-8
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

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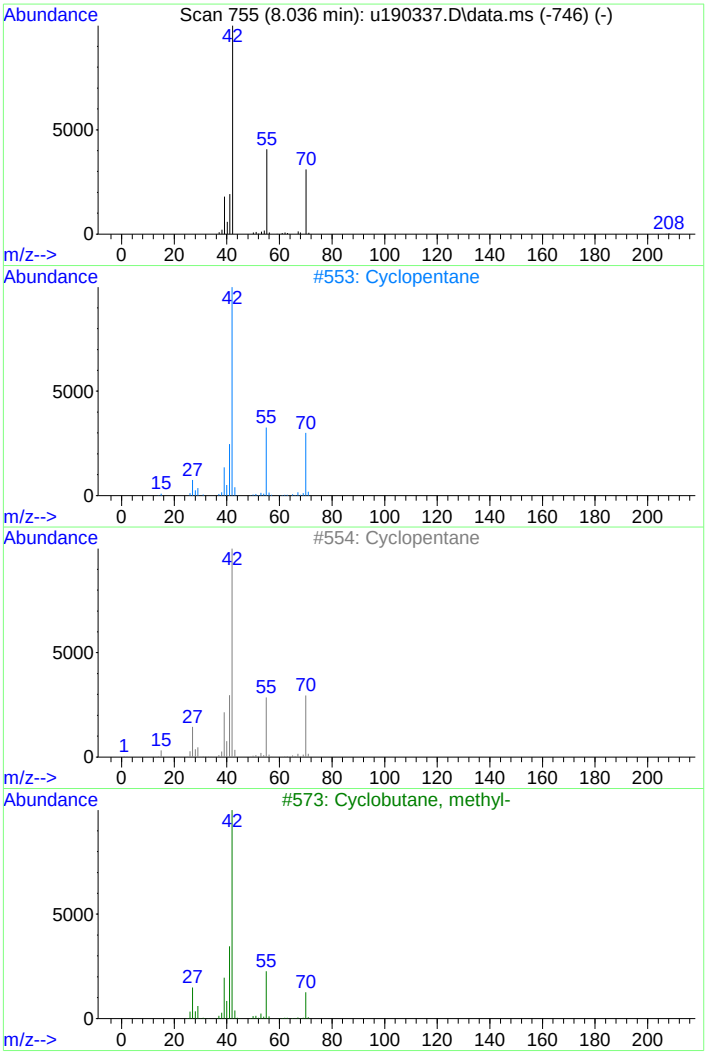
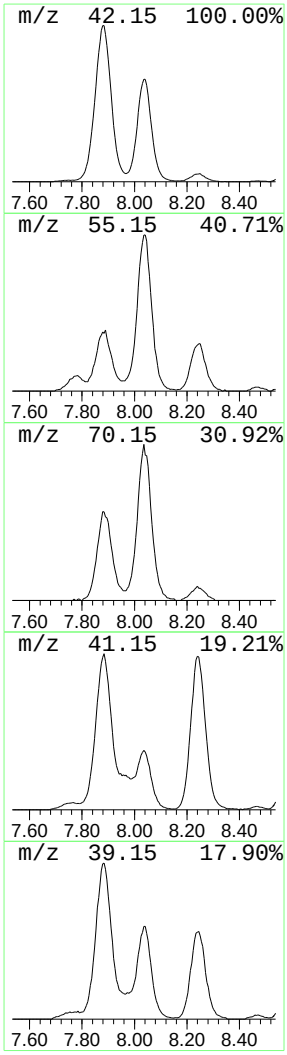
Peak Number 16 alkene Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.036	27.03 ug/L	621898	pentafluorobenzene	10.101

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane	70	C5H10	000287-92-3	86
2	Cyclopentane	70	C5H10	000287-92-3	86
3	Cyclobutane, methyl-	70	C5H10	000598-61-8	72
4	Cyclobutane, methyl-	70	C5H10	000598-61-8	72
5	1-Pentene	70	C5H10	000109-67-1	64





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190337.D
Acq On : 3 Dec 2014 8:20 pm
Operator : yunxiac
Sample : JB82646-8
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

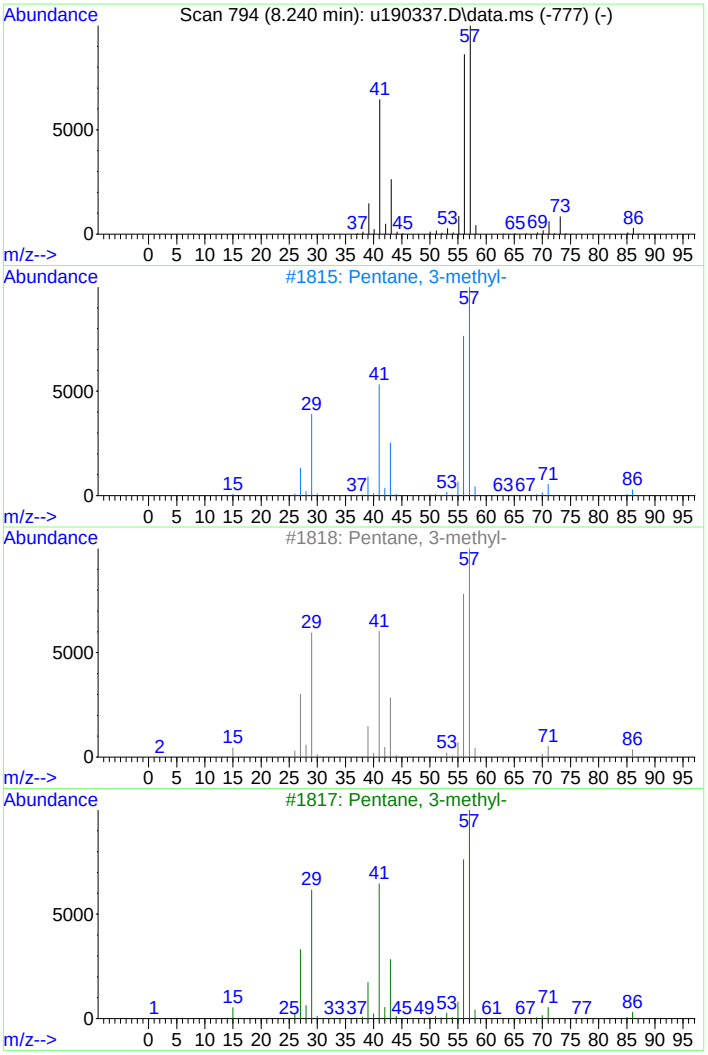
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

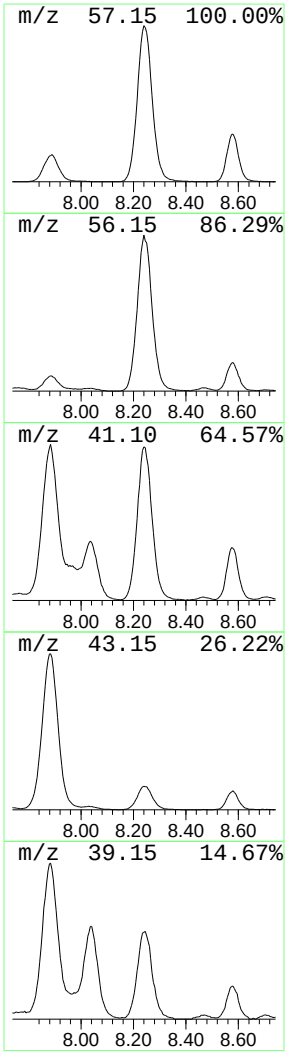
****

Peak Number 17 alkane Concentration Rank 17

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.240	50.10 ug/L	1152540	pentafluorobenzene	10.101

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 3-methyl-	86	C6H14	000096-14-0	90
2	Pentane, 3-methyl-	86	C6H14	000096-14-0	87
3	Pentane, 3-methyl-	86	C6H14	000096-14-0	87
4	Hexane, 2,2,3-trimethyl-	128	C9H20	016747-25-4	56
5	Oxirane, (1-methylethyl)-	86	C5H10O	001438-14-8	42





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190337.D
Acq On : 3 Dec 2014 8:20 pm
Operator : yunxiac
Sample : JB82646-8
Misc : ms77650,vu8782,5.0,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
alkane	5.061	17.6	ug/L	405453	2	10.101	1150190	50.0
alkane	6.033	140.3	ug/L	3226540	2	10.101	1150190	50.0
alkane	6.441	57.5	ug/L	1321530	2	10.101	1150190	50.0
alkene	9.447	95.5	ug/L	2197420	2	10.101	1150190	50.0
cyclopentane, d...	10.770	17.9	ug/L	372633	3	11.021	1038570	50.0
alkane	11.951	18.2	ug/L	378039	3	11.021	1038570	50.0
alkane	12.108	28.9	ug/L	600234	3	11.021	1038570	50.0
C3 alkyl benzene	15.909	18.2	ug/L	1886320	5	16.918	5184990	50.0
C3 alkyl benzene	15.941	22.0	ug/L	2285360	5	16.918	5184990	50.0
C3 alkyl benzene	15.993	23.6	ug/L	2450000	5	16.918	5184990	50.0
C3 alkyl benzene	16.265	31.2	ug/L	3233110	5	16.918	5184990	50.0
C3 alkyl benzene	16.437	62.3	ug/L	6464580	5	16.918	5184990	50.0
Indane	17.211	14.7	ug/L	1525900	5	16.918	5184990	50.0
alkene	8.036	27.0	ug/L	621898	2	10.101	1150190	50.0
alkane	8.240	50.1	ug/L	1152540	2	10.101	1150190	50.0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 4V13526.D
Acq On : 29 Nov 2014 2:28 pm
Operator : BenM
Sample : jb82646-9
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Dec 01 11:22:40 2014
Quant Method : C:\MSDCHEM\1\METHODS\M4V541.M
Quant Title : sw846 8260b
QLast Update : Fri Nov 14 17:30:26 2014
Response via : Initial Calibration

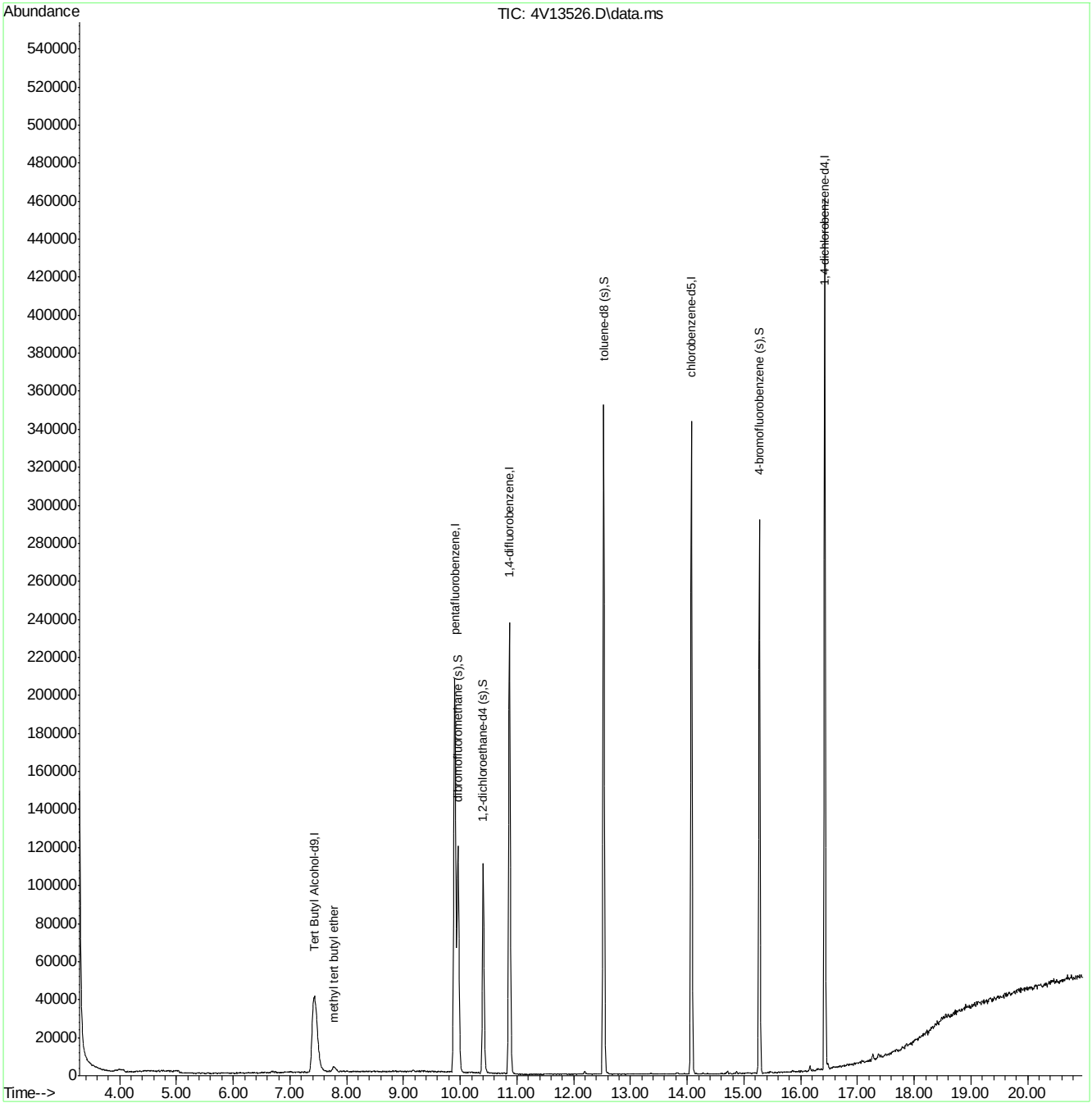
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.434	65	154039	500.00	ug/L	0.00
4) pentafluorobenzene	9.903	168	178558	50.00	ug/L	0.00
51) 1,4-difluorobenzene	10.868	114	213472	50.00	ug/L	0.00
81) chlorobenzene-d5	14.077	117	183163	50.00	ug/L	0.00
94) 1,4-dichlorobenzene-d4	16.426	152	107169	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	9.961	113	88845	51.74	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 103.48%			
46) 1,2-dichloroethane-d4 (s)	10.401	65	88863	57.35	ug/L	-0.01
Spiked Amount 50.000	Range 72 - 123		Recovery = 114.70%			
73) toluene-d8 (s)	12.525	98	233305	49.88	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 99.76%			
96) 4-bromofluorobenzene (s)	15.272	95	97957	50.89	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 101.78%			
Target Compounds						Qvalue
28) methyl tert butyl ether	7.775	73	5284	0.96	ug/L	88

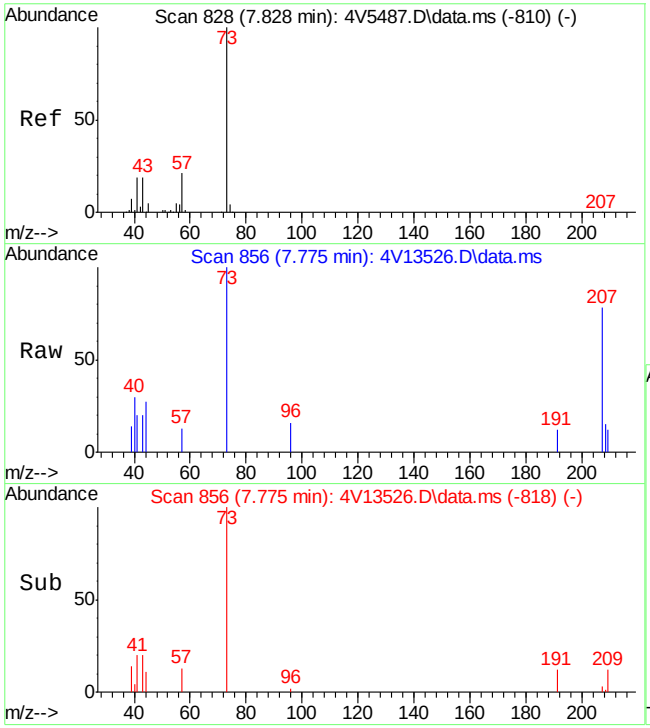
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 4V13526.D
Acq On : 29 Nov 2014 2:28 pm
Operator : BenM
Sample : jb82646-9
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Dec 01 11:22:40 2014
Quant Method : C:\MSDCHEM\1\METHODS\M4V541.M
Quant Title : sw846 8260b
QLast Update : Fri Nov 14 17:30:26 2014
Response via : Initial Calibration

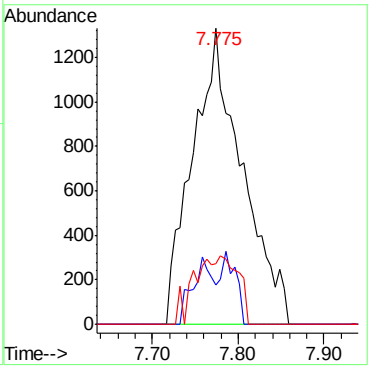




#28
methyl tert butyl ether
Concen: 0.96 ug/L
RT: 7.775 min Scan# 856
Delta R.T. -0.000 min
Lab File: 4V13526.D
Acq: 29 Nov 2014 2:28 pm

Tgt Ion: 73 Resp: 5284

Ion	Ratio	Lower	Upper
73	100		
57	13.3	0.0	52.6
43	20.4	0.0	49.1



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : 4V13526.D
Acq On : 29 Nov 2014 2:28 pm
Operator : BenM
Sample : jb82646-9
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4V541.M
Title : sw846 8260b

Signal : TIC: 4V13526.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.183	170	171	174	rBV2	560	466	0.07%	0.011%
2	4.739	274	277	279	rVB2	752	561	0.08%	0.013%
3	5.316	385	387	390	rVB2	462	343	0.05%	0.008%
4	5.436	408	410	416	rBV2	341	247	0.04%	0.006%
5	5.772	472	474	476	rBV2	433	353	0.05%	0.008%
6	5.955	504	509	510	rBV2	374	470	0.07%	0.011%
7	6.024	521	522	524	rBV	364	243	0.04%	0.006%
8	6.223	556	560	564	rBV3	375	627	0.09%	0.015%
9	6.375	587	589	591	rVB2	370	247	0.04%	0.006%
10	6.417	596	597	600	rVB2	600	349	0.05%	0.008%
11	6.438	600	601	609	rBV2	436	751	0.11%	0.018%
12	6.501	609	613	615	rBV4	497	615	0.09%	0.015%
13	6.527	615	618	620	rBV2	549	439	0.07%	0.011%
14	6.684	640	648	649	rBV3	904	1584	0.23%	0.038%
15	6.889	686	687	689	rBV2	473	249	0.04%	0.006%
16	7.182	741	743	744	rBV	427	244	0.04%	0.006%
17	7.203	744	747	750	rBV3	628	854	0.13%	0.020%
18	7.256	755	757	762	rVB3	765	733	0.11%	0.018%
19	7.298	762	765	767	rBV3	490	506	0.08%	0.012%
20	7.434	773	791	828	rBV2	39619	254134	37.69%	6.098%
21	7.691	837	840	842	rVB3	681	597	0.09%	0.014%
22	7.775	846	856	866	rVV6	2353	8474	1.26%	0.203%
23	8.320	958	960	962	rBV	341	308	0.05%	0.007%
24	8.535	998	1001	1004	rVB3	500	360	0.05%	0.009%
25	9.164	1119	1121	1128	rVB6	874	1749	0.26%	0.042%
26	9.369	1158	1160	1164	rVB2	906	699	0.10%	0.017%
27	9.657	1213	1215	1218	rBV3	696	603	0.09%	0.014%
28	9.903	1252	1262	1268	rBV	207181	501946	74.44%	12.045%
29	9.961	1268	1273	1293	rVB	119080	283016	41.97%	6.791%
30	10.134	1305	1306	1308	rBV	677	392	0.06%	0.009%
31	10.192	1315	1317	1319	rBV	587	551	0.08%	0.013%
32	10.323	1340	1342	1347	rVB3	715	829	0.12%	0.020%
33	10.407	1347	1358	1372	rBV	110509	247259	36.67%	5.933%
34	10.627	1397	1400	1402	rVB3	550	395	0.06%	0.009%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : 4V13526.D
Acq On : 29 Nov 2014 2:28 pm
Operator : BenM
Sample : jb82646-9
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4V541.M
Title : sw846 8260b

35	10.648	1402	1404	1407	rBV2	485	416	0.06%	0.010%
36	10.732	1417	1420	1422	rBV2	301	326	0.05%	0.008%
37	10.768	1422	1427	1434	rVV3	488	979	0.15%	0.023%
38	10.868	1436	1446	1465	rVB	237643	490464	72.74%	11.769%
39	11.219	1510	1513	1515	rBB2	291	288	0.04%	0.007%
40	11.240	1515	1517	1522	rBV3	480	604	0.09%	0.014%
41	11.309	1525	1530	1531	rVB3	320	413	0.06%	0.010%
42	11.345	1535	1537	1540	rBV2	343	294	0.04%	0.007%
43	11.419	1548	1551	1552	rVB2	319	254	0.04%	0.006%
44	11.429	1552	1553	1556	rVB	375	280	0.04%	0.007%
45	11.455	1556	1558	1560	rBV2	272	265	0.04%	0.006%
46	11.503	1561	1567	1571	rVV3	152	328	0.05%	0.008%
47	11.607	1585	1587	1593	rVB3	268	476	0.07%	0.011%
48	11.649	1593	1595	1598	rBV3	256	339	0.05%	0.008%
49	11.775	1613	1619	1620	rBV2	267	356	0.05%	0.009%
50	11.796	1620	1623	1624	rBV2	234	249	0.04%	0.006%
51	11.864	1635	1636	1641	rVB	320	325	0.05%	0.008%
52	11.901	1641	1643	1648	rVB	240	375	0.06%	0.009%
53	11.943	1648	1651	1654	rBV2	469	383	0.06%	0.009%
54	12.016	1659	1665	1666	rBV3	207	286	0.04%	0.007%
55	12.058	1671	1673	1677	rBV2	207	247	0.04%	0.006%
56	12.105	1677	1682	1684	rBV2	210	233	0.03%	0.006%
57	12.195	1689	1699	1707	rVV2	1492	3372	0.50%	0.081%
58	12.341	1724	1727	1729	rBV2	226	275	0.04%	0.007%
59	12.525	1752	1762	1783	rVB	352055	615068	91.21%	14.759%
60	12.939	1837	1841	1843	rBV3	185	266	0.04%	0.006%
61	13.238	1893	1898	1899	rBV3	266	345	0.05%	0.008%
62	13.364	1916	1922	1924	rVB2	403	575	0.09%	0.014%
63	13.453	1935	1939	1942	rVB3	218	266	0.04%	0.006%
64	13.484	1942	1945	1951	rBV3	177	386	0.06%	0.009%
65	13.610	1967	1969	1971	rBV	325	237	0.04%	0.006%
66	13.678	1979	1982	1986	rBV4	304	440	0.07%	0.011%
67	13.747	1992	1995	1997	rBV3	305	287	0.04%	0.007%
68	13.768	1997	1999	2003	rVV3	317	297	0.04%	0.007%
69	13.825	2003	2010	2015	rVB4	856	1985	0.29%	0.048%
70	13.899	2023	2024	2027	rVB	388	274	0.04%	0.007%
71	13.935	2027	2031	2032	rBV2	325	352	0.05%	0.008%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : 4V13526.D
Acq On : 29 Nov 2014 2:28 pm
Operator : BenM
Sample : jb82646-9
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4V541.M
Title : sw846 8260b

72	13.982	2035	2040	2042	rVB3	270	394	0.06%	0.009%
73	14.077	2048	2058	2070	rBV	343365	573276	85.02%	13.757%
74	14.229	2084	2087	2089	rBV3	324	374	0.06%	0.009%
75	14.271	2091	2095	2100	rVV4	742	1021	0.15%	0.025%
76	14.323	2100	2105	2107	rVB3	268	309	0.05%	0.007%
77	14.360	2111	2112	2115	rBV2	353	288	0.04%	0.007%
78	14.486	2134	2136	2139	rBV3	265	349	0.05%	0.008%
79	14.549	2143	2148	2150	rBV4	314	458	0.07%	0.011%
80	14.659	2165	2169	2170	rBV2	338	268	0.04%	0.006%
81	14.706	2173	2178	2184	rBV	1467	2339	0.35%	0.056%
82	14.869	2206	2209	2216	rVB4	1347	1675	0.25%	0.040%
83	14.926	2216	2220	2225	rBV4	375	738	0.11%	0.018%
84	14.968	2225	2228	2233	rBV3	246	329	0.05%	0.008%
85	15.005	2233	2235	2238	rBV2	312	301	0.04%	0.007%
86	15.173	2260	2267	2268	rBV3	405	731	0.11%	0.018%
87	15.272	2276	2286	2297	rBV	291559	462041	68.52%	11.087%
88	15.346	2298	2300	2302	rBV2	285	276	0.04%	0.007%
89	15.461	2319	2322	2327	rBV3	677	675	0.10%	0.016%
90	15.534	2335	2336	2340	rBV3	345	358	0.05%	0.009%
91	15.697	2365	2367	2370	rVB2	460	320	0.05%	0.008%
92	15.865	2394	2399	2401	rVV5	768	726	0.11%	0.017%
93	15.896	2401	2405	2406	rVB2	496	543	0.08%	0.013%
94	15.964	2416	2418	2422	rVB3	736	493	0.07%	0.012%
95	16.001	2422	2425	2427	rBV4	905	684	0.10%	0.016%
96	16.158	2451	2455	2462	rVB7	2679	3696	0.55%	0.089%
97	16.216	2463	2466	2468	rVB4	640	521	0.08%	0.013%
98	16.289	2475	2480	2482	rBV5	1388	1968	0.29%	0.047%
99	16.426	2498	2506	2514	rBV	458895	674309	100.00%	16.181%
100	17.270	2663	2667	2672	rBV4	2801	4030	0.60%	0.097%

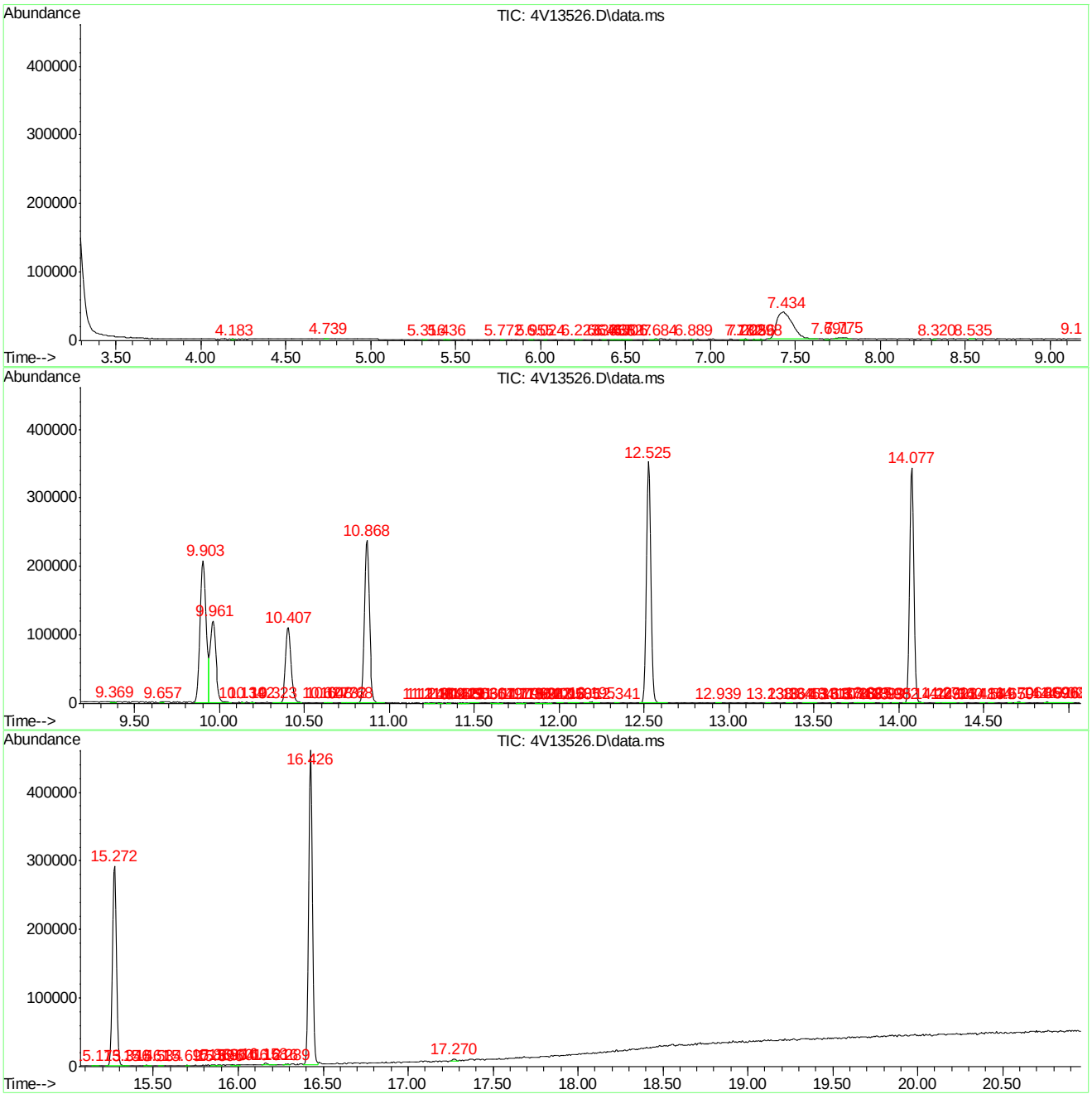
Sum of corrected areas: 4167288

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\
Data File : 4V13526.D
Acq On : 29 Nov 2014 2:28 pm
Operator : BenM
Sample : jb82646-9
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4V541.M
Quant Title : sw846 8260b

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p



Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\
Data File : 4V13526.D
Acq On : 29 Nov 2014 2:28 pm
Operator : BenM
Sample : jb82646-9
Misc : MS77650,V4V558,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4V541.M
Quant Title : sw846 8260b

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 4V13537.D
Acq On : 29 Nov 2014 7:19 pm
Operator : BenM
Sample : jb82646-10
Misc : MS77650,V4V558,5,,,,50
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Dec 01 11:27:44 2014
Quant Method : C:\MSDCHEM\1\METHODS\M4V541.M
Quant Title : sw846 8260b
QLast Update : Fri Nov 14 17:30:26 2014
Response via : Initial Calibration

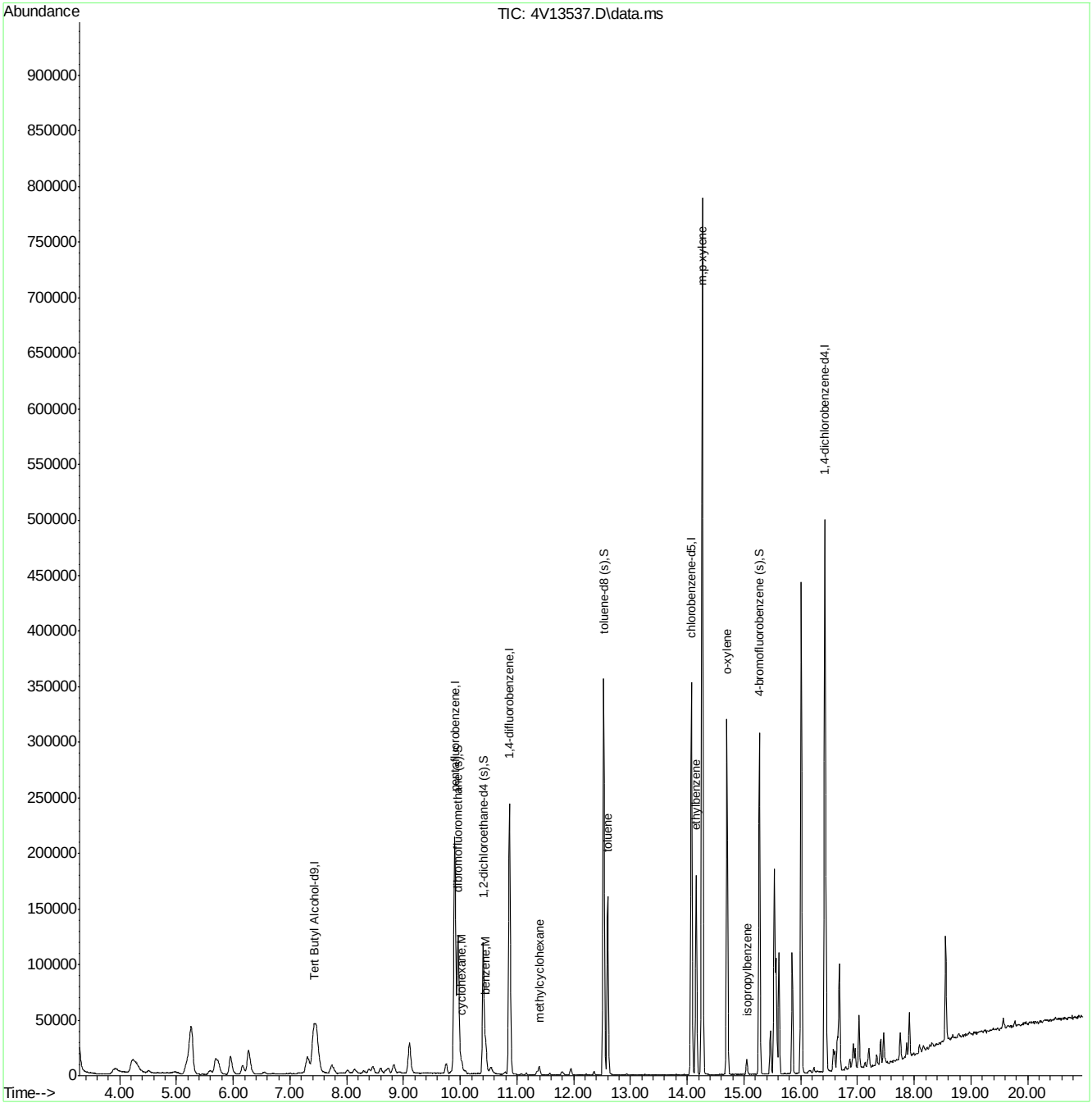
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.424	65	156246	500.00	ug/L	-0.02
4) pentafluorobenzene	9.904	168	186028	50.00	ug/L	0.00
51) 1,4-difluorobenzene	10.868	114	221502	50.00	ug/L	0.00
81) chlorobenzene-d5	14.077	117	190806	50.00	ug/L	0.00
94) 1,4-dichlorobenzene-d4	16.426	152	115825	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	9.961	113	92036	51.44	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 102.88%			
46) 1,2-dichloroethane-d4 (s)	10.407	65	90704	56.19	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 112.38%			
73) toluene-d8 (s)	12.525	98	242678	50.01	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 100.02%			
96) 4-bromofluorobenzene (s)	15.267	95	104181	50.08	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 100.16%			
Target Compounds						Qvalue
54) cyclohexane	10.024	84	5927	2.36	ug/L	# 42
58) benzene	10.449	78	25759	4.29	ug/L	96
69) methylcyclohexane	11.393	83	3675	1.43	ug/L	97
75) toluene	12.599	92	66594	21.43	ug/L	99
89) ethylbenzene	14.156	91	130491	19.74	ug/L	99
90) m,p-xylene	14.266	106	222507	91.15	ug/L	97
91) o-xylene	14.701	106	85942	33.83	ug/L	94
95) isopropylbenzene	15.052	105	9948	1.39	ug/L	96

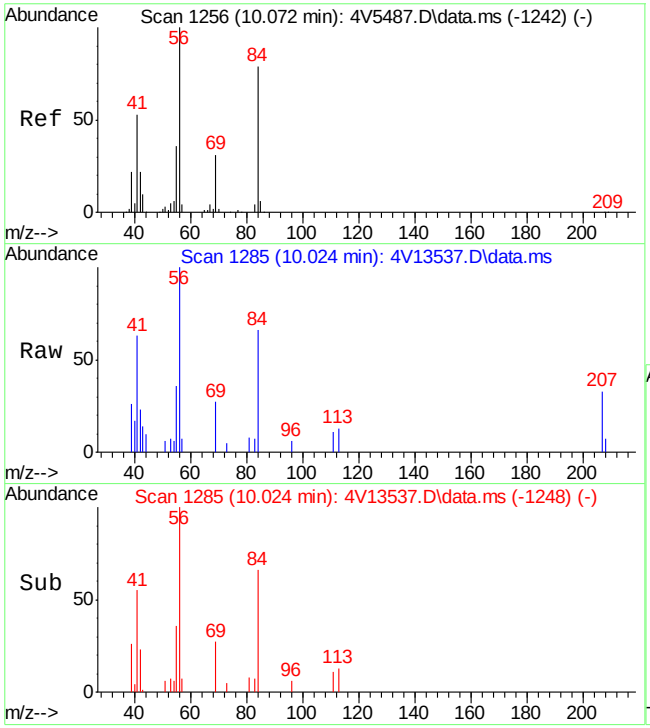
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 4V13537.D
Acq On : 29 Nov 2014 7:19 pm
Operator : BenM
Sample : jb82646-10
Misc : MS77650,V4V558,5,,,,50
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Dec 01 11:27:44 2014
Quant Method : C:\MSDCHEM\1\METHODS\M4V541.M
Quant Title : sw846 8260b
QLast Update : Fri Nov 14 17:30:26 2014
Response via : Initial Calibration

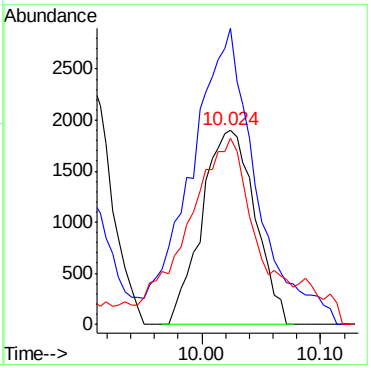


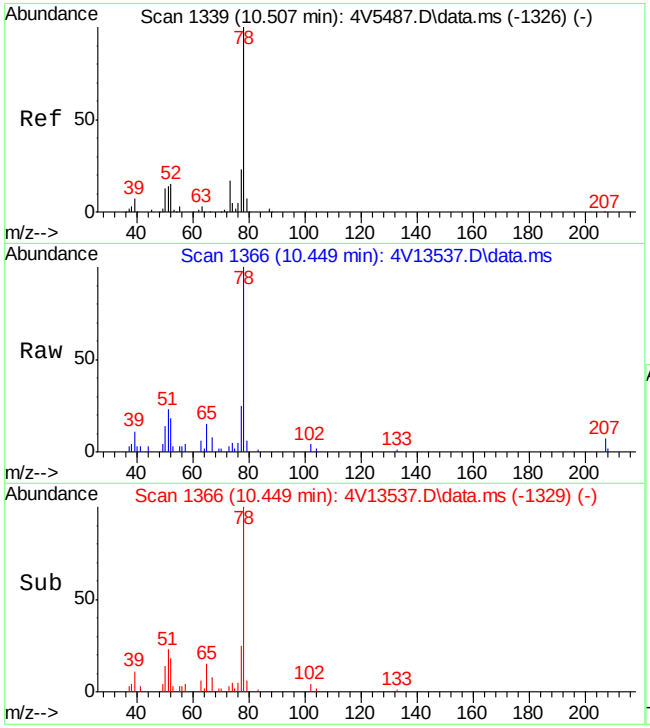


#54
cyclohexane
Concen: 2.36 ug/L
RT: 10.024 min Scan# 1285
Delta R.T. -0.005 min
Lab File: 4V13537.D
Acq: 29 Nov 2014 7:19 pm

Tgt Ion: 84 Resp: 5927

Ion	Ratio	Lower	Upper
84	100		
56	186.5	102.4	162.4#
41	134.8	39.2	99.2#

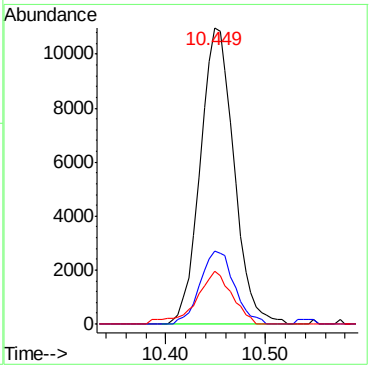


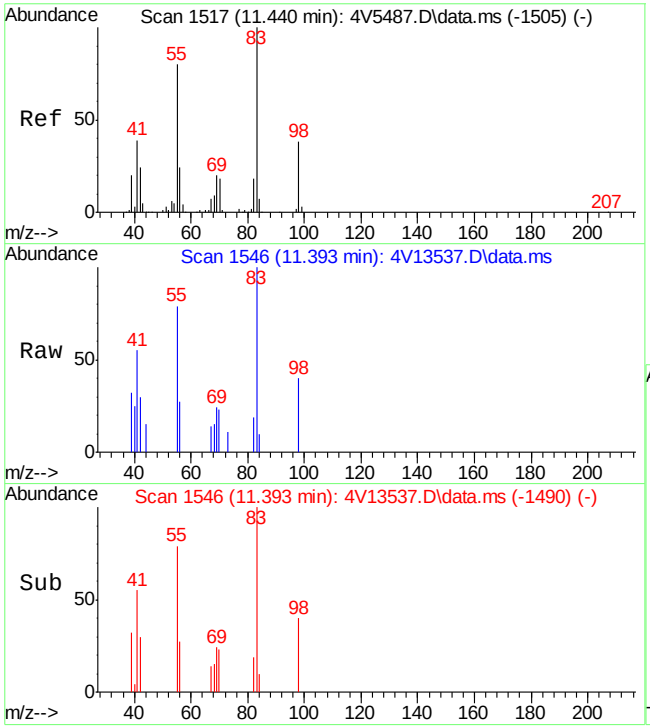


#58
benzene
Concen: 4.29 ug/L
RT: 10.449 min Scan# 1366
Delta R.T. -0.005 min
Lab File: 4V13537.D
Acq: 29 Nov 2014 7:19 pm

Tgt Ion: 78 Resp: 25759

Ion	Ratio	Lower	Upper
78	100		
77	24.8	0.0	53.3
52	18.0	0.0	45.5

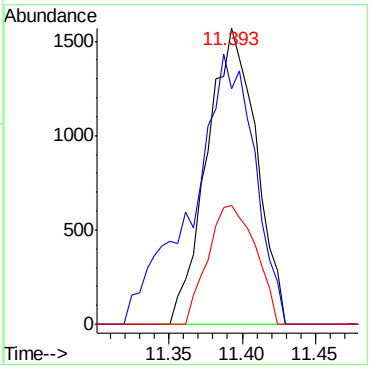


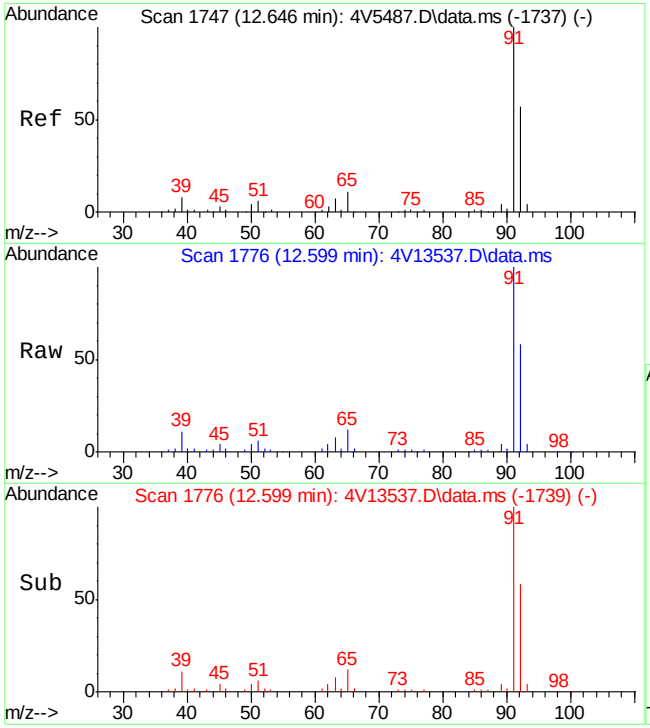


#69
methylcyclohexane
Concen: 1.43 ug/L
RT: 11.393 min Scan# 1546
Delta R.T. -0.005 min
Lab File: 4V13537.D
Acq: 29 Nov 2014 7:19 pm

Tgt Ion: 83 Resp: 3675

Ion	Ratio	Lower	Upper
83	100		
55	79.4	52.6	112.6
98	40.2	10.5	70.5

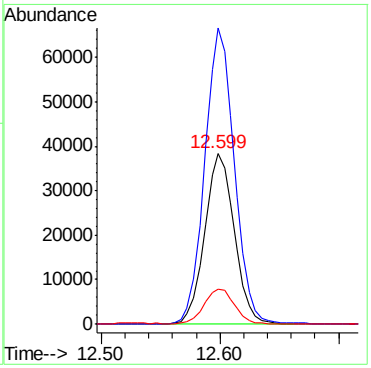


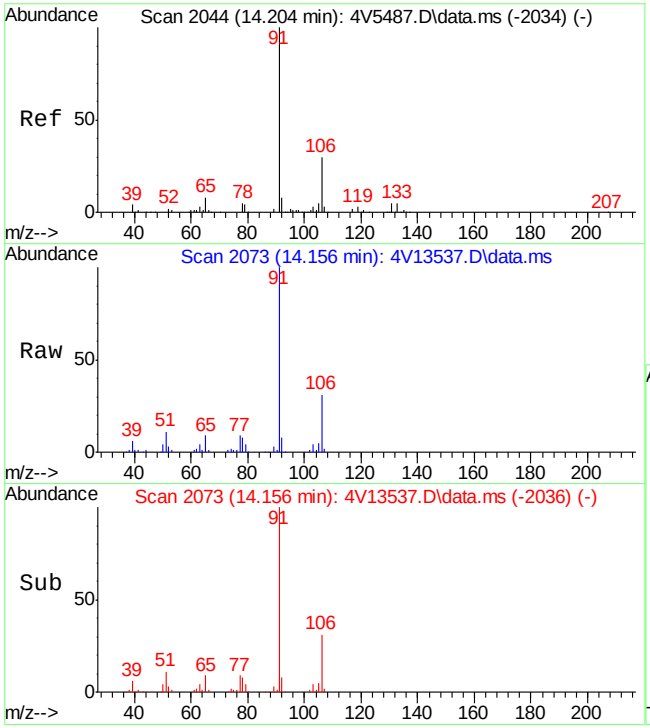


#75
toluene
Concen: 21.43 ug/L
RT: 12.599 min Scan# 1776
Delta R.T. -0.005 min
Lab File: 4V13537.D
Acq: 29 Nov 2014 7:19 pm

Tgt Ion: 92 Resp: 66594

Ion	Ratio	Lower	Upper
92	100		
91	173.5	142.0	202.0
65	20.1	0.0	48.6

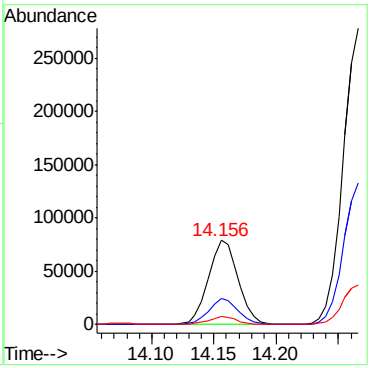


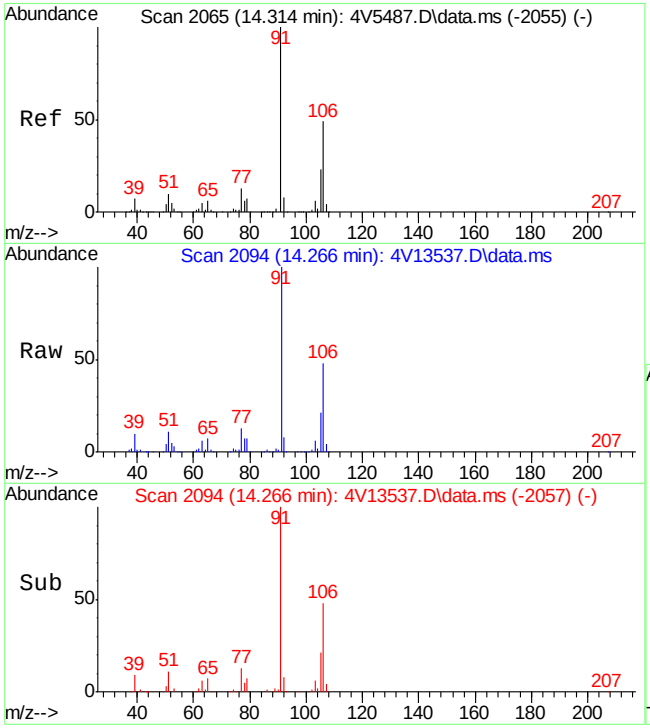


#89
ethylbenzene
Concen: 19.74 ug/L
RT: 14.156 min Scan# 2073
Delta R.T. -0.005 min
Lab File: 4V13537.D
Acq: 29 Nov 2014 7:19 pm

Tgt Ion: 91 Resp: 130491

Ion	Ratio	Lower	Upper
91	100		
106	30.6	1.0	61.0
77	9.1	0.0	38.4

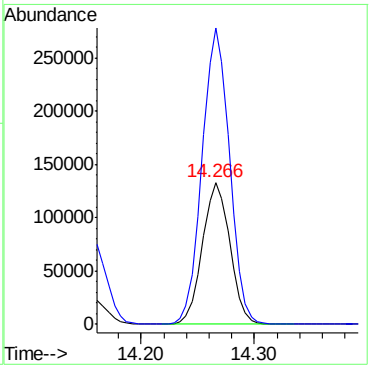


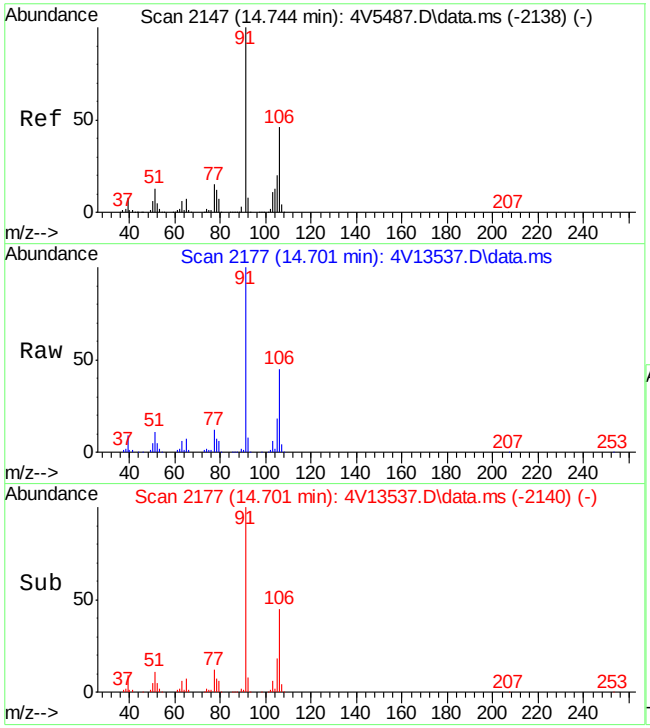


#90
m,p-xylene
Concen: 91.15 ug/L
RT: 14.266 min Scan# 2094
Delta R.T. -0.005 min
Lab File: 4V13537.D
Acq: 29 Nov 2014 7:19 pm

Tgt Ion:106 Resp: 222507

Ion	Ratio	Lower	Upper
106	100		
91	208.7	142.7	265.1

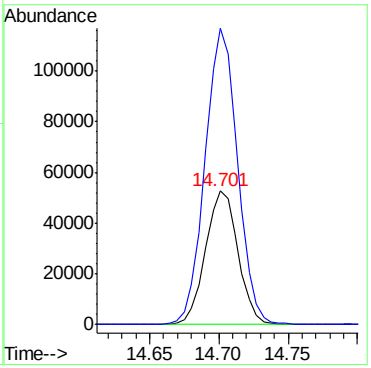


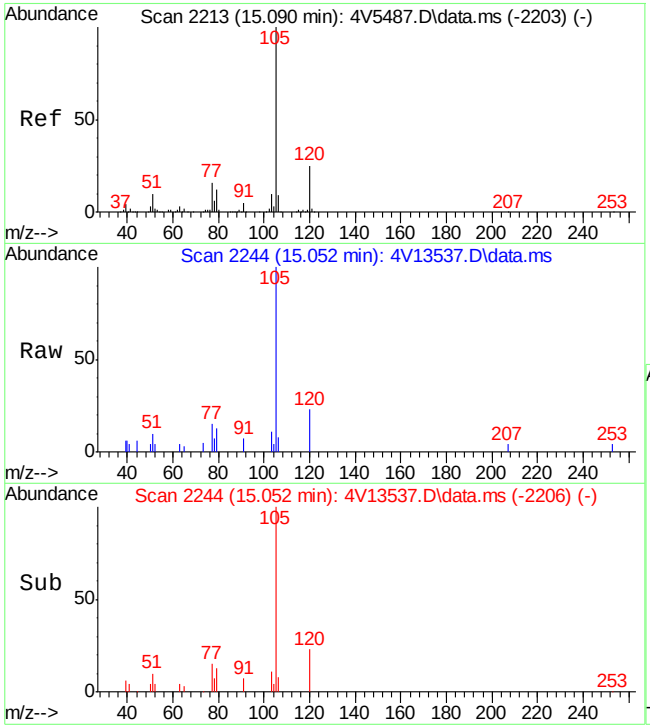


#91
o-xylene
Concen: 33.83 ug/L
RT: 14.701 min Scan# 2177
Delta R.T. -0.005 min
Lab File: 4V13537.D
Acq: 29 Nov 2014 7:19 pm

Tgt Ion:106 Resp: 85942

Ion	Ratio	Lower	Upper
106	100		
91	222.4	148.7	276.1

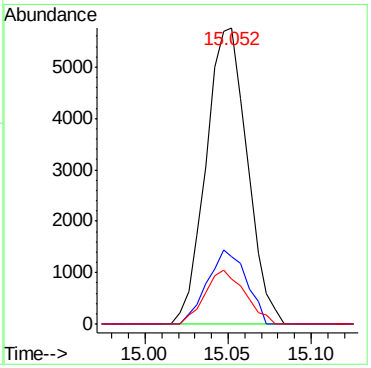




#95
isopropylbenzene
Concen: 1.39 ug/L
RT: 15.052 min Scan# 2244
Delta R.T. 0.000 min
Lab File: 4V13537.D
Acq: 29 Nov 2014 7:19 pm

Tgt Ion:105 Resp: 9948

Ion	Ratio	Lower	Upper
105	100		
120	22.6	0.0	55.5
77	15.2	0.0	45.2



Manual Integrations APPROVED (compounds with "m" flag)
Kanya Veerawat 12/05/14 12:35

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\U core\vu8783-8784\
Data File : u190371.D
Acq On : 4 Dec 2014 3:00 pm
Operator : yunxiac
Sample : jb82646-10
Misc : ms77650,vu8783,5.0,,,,10
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Dec 05 10:44:32 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um
QLast Update : Thu Nov 20 10:49:23 2014
Response via : Initial Calibration

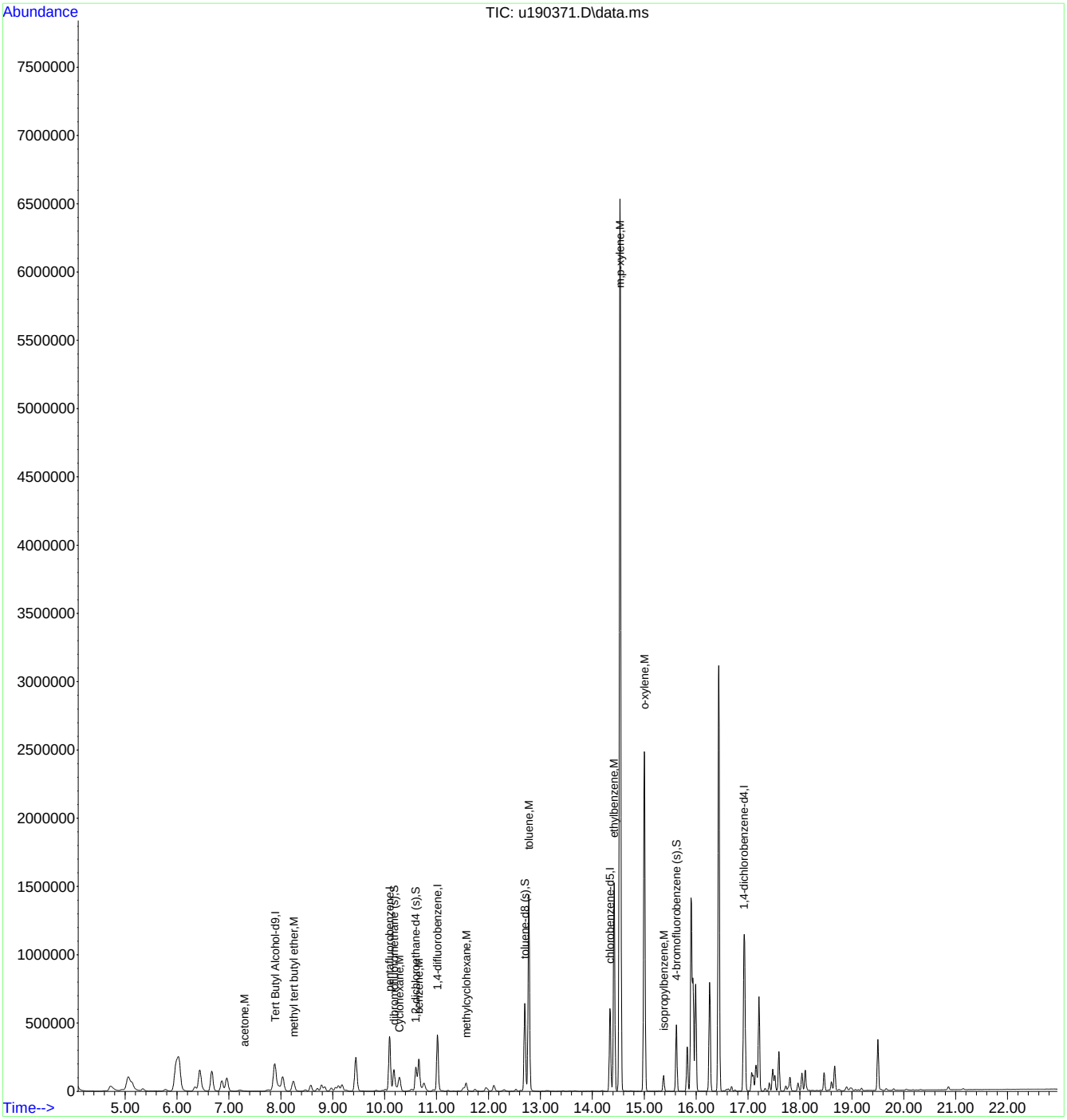
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.895	65	117260	500.00	ug/L	0.00
5) pentafluorobenzene	10.096	168	399427	50.00	ug/L	0.00
64) 1,4-difluorobenzene	11.016	114	433096	50.00	ug/L	0.00
96) chlorobenzene-d5	14.341	117	402917	50.00	ug/L	0.00
112) 1,4-dichlorobenzene-d4	16.918	152	221849	50.00	ug/L	0.00
System Monitoring Compounds						
56) dibromofluoromethane (s)	10.179	113	121473	51.59	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 103.18%			
57) 1,2-dichloroethane-d4 (s)	10.598	65	132594	51.11	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 102.22%			
88) toluene-d8 (s)	12.699	98	525736	55.84	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 111.68%			
114) 4-bromofluorobenzene (s)	15.617	95	189621	53.85	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 107.70%			
Target Compounds						Qvalue
29) acetone	7.299	58	1285	5.81	ug/L	91
37) methyl tert butyl ether	8.250	73	3104	0.41	ug/L #	1
68) Cyclohexane	10.284	84	49023	13.24	ug/L #	54
72) benzene	10.660	78	254413	22.23	ug/L	100
79) methylcyclohexane	11.570	83	33513m	8.01	ug/L	
90) toluene	12.778	92	752989	108.01	ug/L	100
107) ethylbenzene	14.419	91	1374829	101.05	ug/L	100
108) m,p-xylene	14.534	106	2365787	459.40	ug/L	100
109) o-xylene	15.005	106	871408	171.85	ug/L	98
113) isopropylbenzene	15.376	105	100295	7.61	ug/L	99

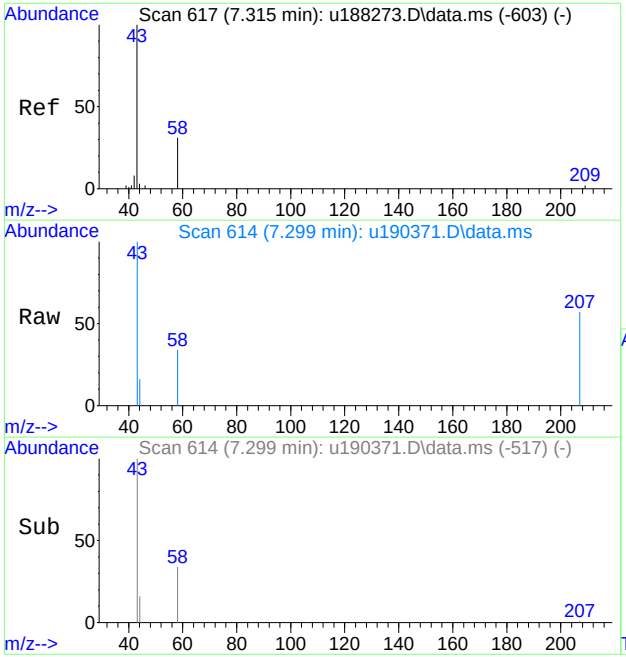
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\U core\vu8783-8784\
Data File : u190371.D
Acq On : 4 Dec 2014 3:00 pm
Operator : yunxiac
Sample : jb82646-10
Misc : ms77650,vu8783,5.0,,,,10
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Dec 05 10:44:32 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um
QLast Update : Thu Nov 20 10:49:23 2014
Response via : Initial Calibration

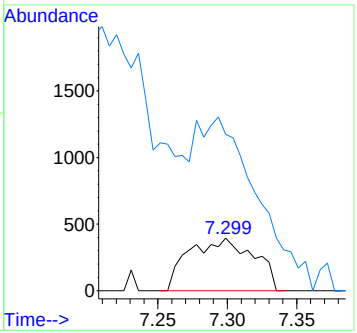


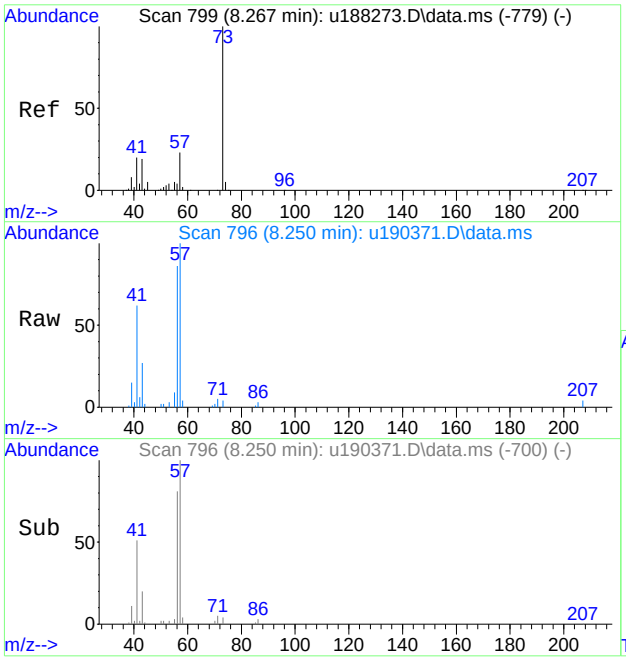


#29
acetone
Concen: 5.81 ug/L
RT: 7.299 min Scan# 614
Delta R.T. 0.006 min
Lab File: u190371.D
Acq: 4 Dec 2014 3:00 pm

Tgt Ion: 58 Resp: 1285

Ion	Ratio	Lower	Upper
58	100		
43	305.7	294.1	354.1

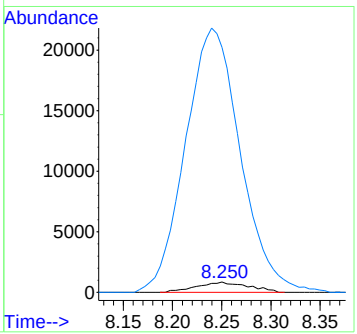


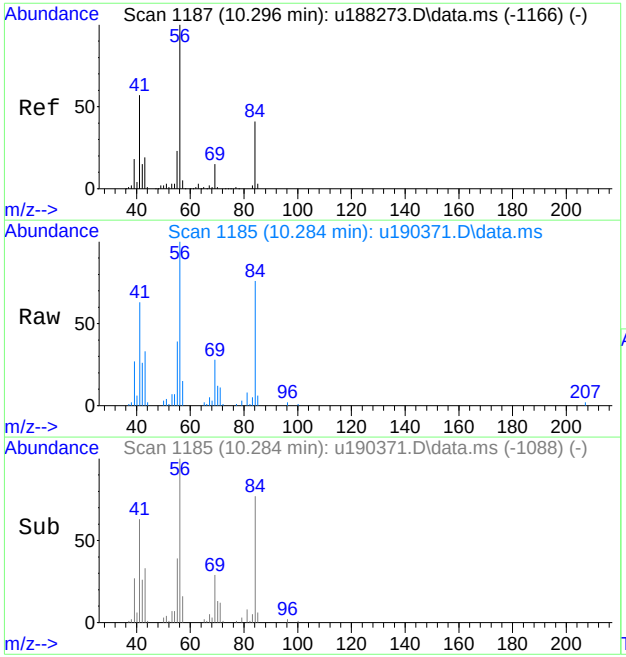


#37
methyl tert butyl ether
Concen: 0.41 ug/L
RT: 8.250 min Scan# 796
Delta R.T. 0.001 min
Lab File: u190371.D
Acq: 4 Dec 2014 3:00 pm

Tgt Ion: 73 Resp: 3104

Ion	Ratio	Lower	Upper
73	100		
57	2739.7	0.0	53.8#

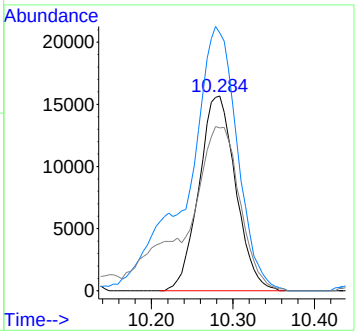


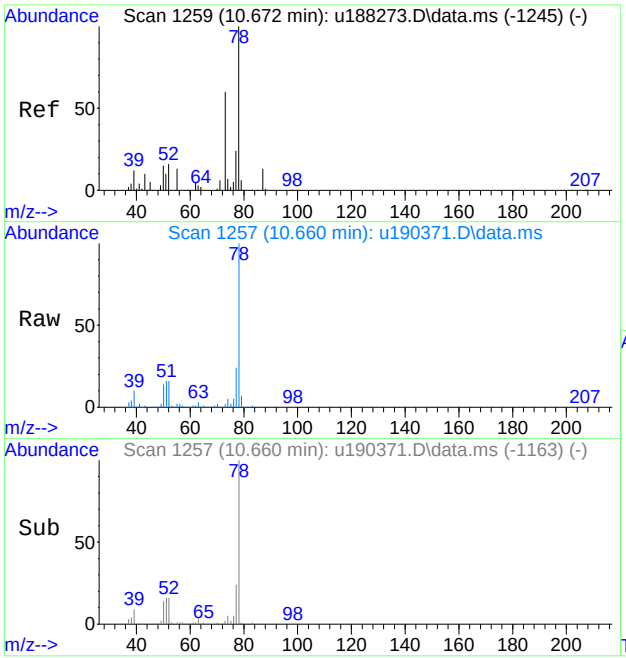


#68
Cyclohexane
Concen: 13.24 ug/L
RT: 10.284 min Scan# 1185
Delta R.T. 0.006 min
Lab File: u190371.D
Acq: 4 Dec 2014 3:00 pm

Tgt Ion: 84 Resp: 49023

Ion	Ratio	Lower	Upper
84	100		
56	132.3	183.5	243.5#
41	83.6	95.8	155.8#

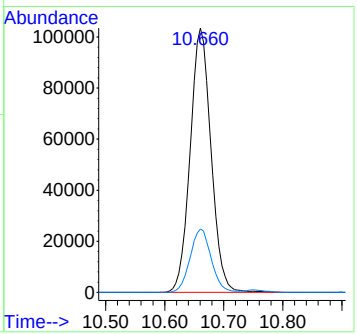


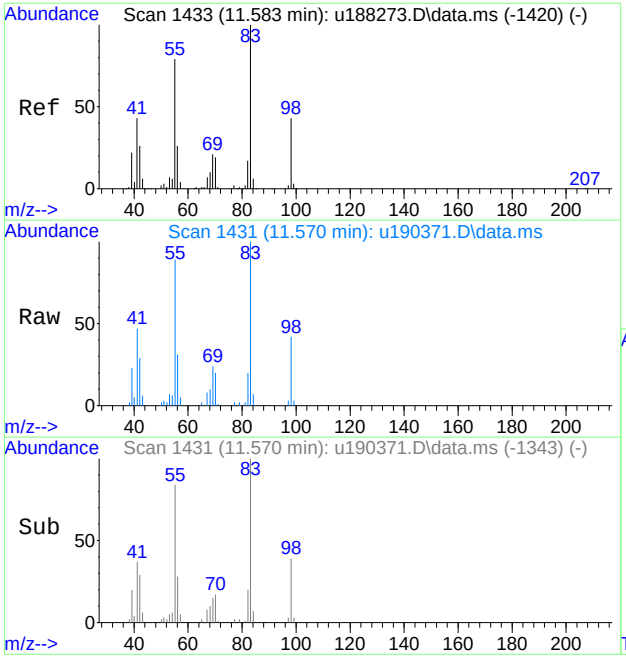


#72
benzene
Concen: 22.23 ug/L
RT: 10.660 min Scan# 1257
Delta R.T. 0.001 min
Lab File: u190371.D
Acq: 4 Dec 2014 3:00 pm

Tgt Ion: 78 Resp: 254413

Ion	Ratio	Lower	Upper
78	100		
77	24.0	0.0	54.0

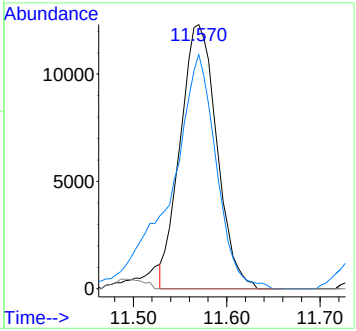


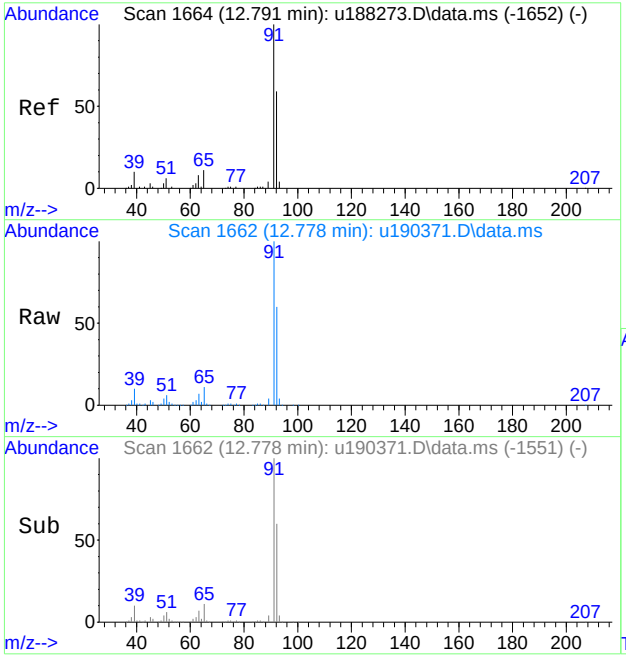


#79
methylcyclohexane
Concen: 8.01 ug/L m
RT: 11.570 min Scan# 1431
Delta R.T. 0.001 min
Lab File: u190371.D
Acq: 4 Dec 2014 3:00 pm

Tgt Ion: 83 Resp: 33513

Ion	Ratio	Lower	Upper
83	100		
55	88.7	56.2	116.2
85	0.0	0.0	50.2

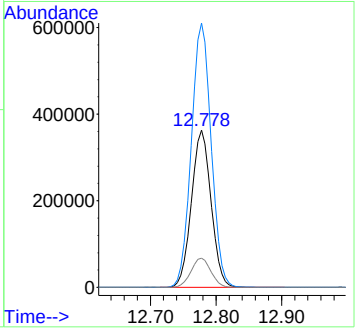


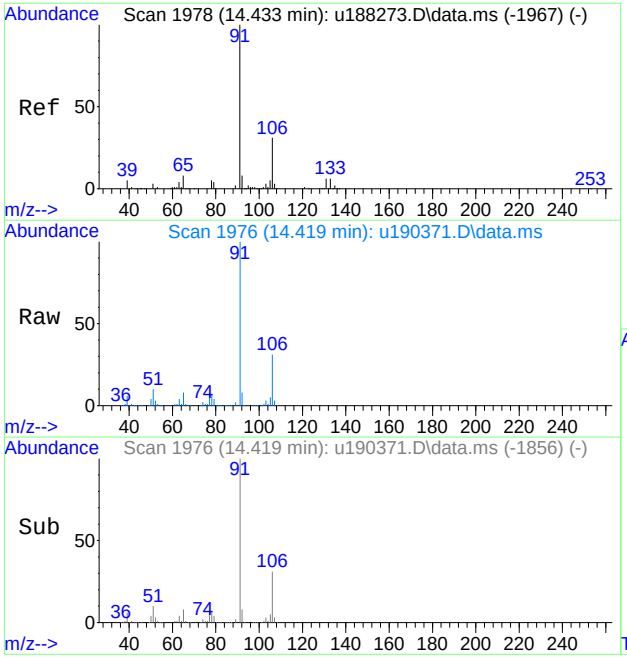


#90
toluene
Concen: 108.01 ug/L
RT: 12.778 min Scan# 1662
Delta R.T. 0.001 min
Lab File: u190371.D
Acq: 4 Dec 2014 3:00 pm

Tgt Ion: 92 Resp: 752989

Ion	Ratio	Lower	Upper
92	100		
91	168.0	138.3	198.3
65	18.6	0.0	49.2

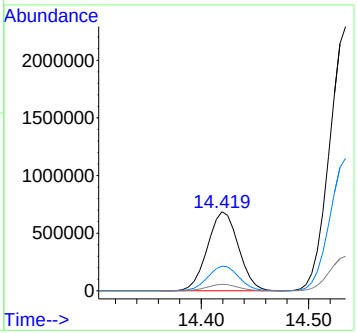


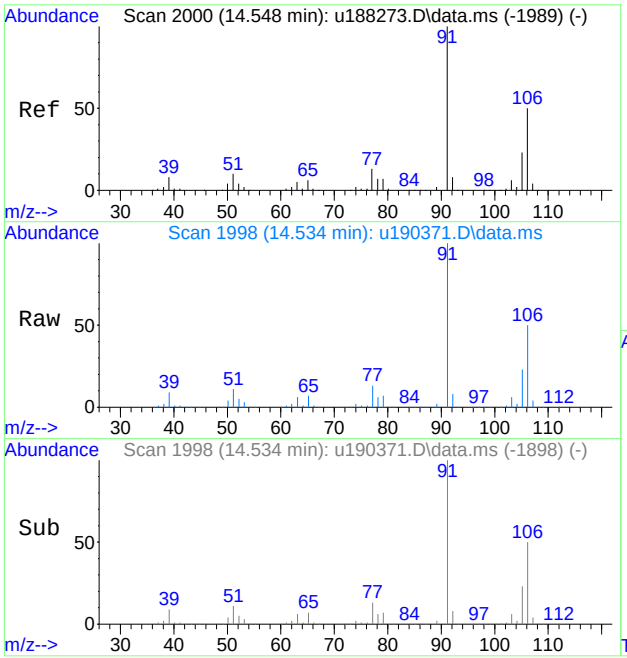


#107
ethylbenzene
Concen: 101.05 ug/L
RT: 14.419 min Scan# 1976
Delta R.T. -0.005 min
Lab File: u190371.D
Acq: 4 Dec 2014 3:00 pm

Tgt Ion: 91 Resp: 1374829

Ion	Ratio	Lower	Upper
91	100		
106	31.2	1.0	61.0
77	8.3	0.0	38.4

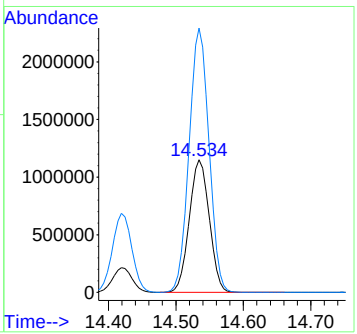


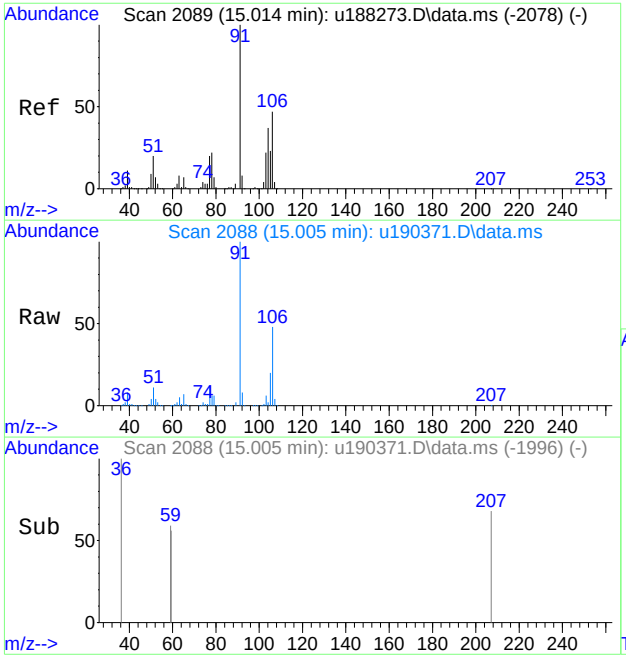


#108
m,p-xylene
Concen: 459.40 ug/L
RT: 14.534 min Scan# 1998
Delta R.T. 0.001 min
Lab File: u190371.D
Acq: 4 Dec 2014 3:00 pm

Tgt Ion:106 Resp: 2365787

Ion	Ratio	Lower	Upper
106	100		
91	199.2	169.0	229.0

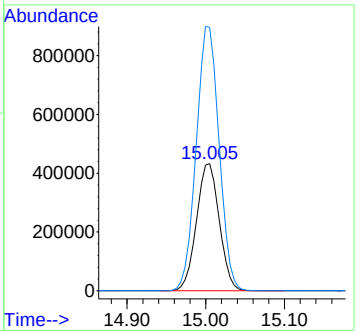


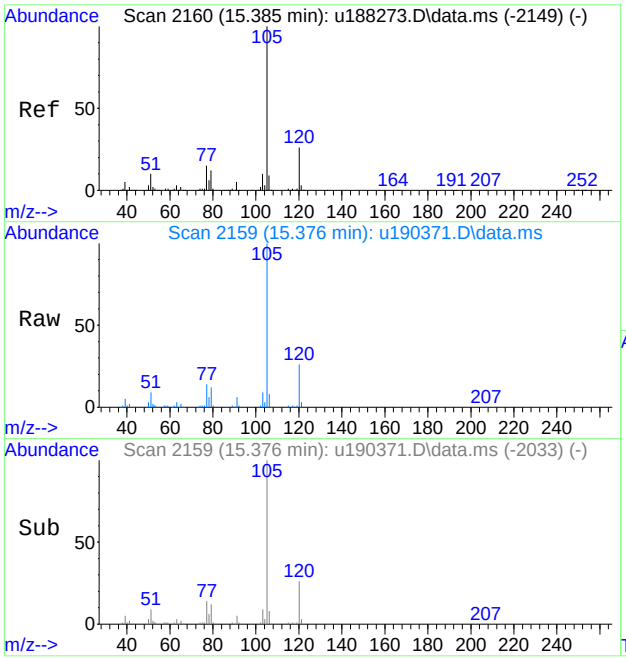


#109
o-xylene
Concen: 171.85 ug/L
RT: 15.005 min Scan# 2088
Delta R.T. 0.001 min
Lab File: u190371.D
Acq: 4 Dec 2014 3:00 pm

Tgt Ion:106 Resp: 871408

Ion	Ratio	Lower	Upper
106	100		
91	207.0	180.4	240.4

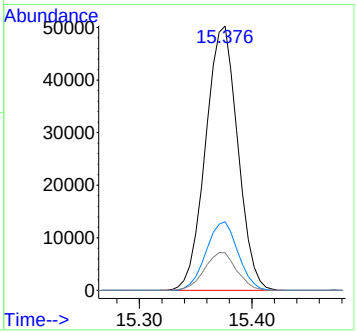




#113
isopropylbenzene
Concen: 7.61 ug/L
RT: 15.376 min Scan# 2159
Delta R.T. 0.001 min
Lab File: u190371.D
Acq: 4 Dec 2014 3:00 pm

Tgt Ion:105 Resp: 100295

Ion	Ratio	Lower	Upper
105	100		
120	26.0	0.0	55.8
77	14.2	0.0	44.7



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\U core\vu8783-8784\
Data File : u190371.D
Acq On : 4 Dec 2014 3:00 pm
Operator : yunxiac
Sample : jb83646-10
Misc : ms77650,vu8783,5.0,,,,10
ALS Vial : 13 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MU8763.M
Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

Signal : TIC: u190371.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	5.061	170	186	230	rVB2	100117	737798	5.52%	1.313%
2	6.028	341	371	414	rVB	252673	1800289	13.48%	3.205%
3	6.436	438	449	477	rVB	154857	629953	4.72%	1.121%
4	6.666	478	493	515	rVV2	147604	519501	3.89%	0.925%
5	7.884	710	726	745	rBV5	193188	878191	6.57%	1.563%
6	9.442	1008	1024	1048	rBV	249324	807258	6.04%	1.437%
7	10.096	1138	1149	1158	rBV	395319	1017323	7.62%	1.811%
8	10.179	1158	1165	1176	rVV	155234	459295	3.44%	0.818%
9	10.603	1236	1246	1251	rBV2	170266	444118	3.32%	0.791%
10	10.660	1251	1257	1268	rVV	232087	621538	4.65%	1.106%
11	11.016	1315	1325	1340	rVB	411649	962256	7.20%	1.713%
12	12.699	1636	1647	1654	rBV	639530	1365010	10.22%	2.430%
13	12.778	1654	1662	1690	rVB	1440240	3037860	22.74%	5.408%
14	14.341	1950	1961	1968	rBV	606606	1206769	9.03%	2.148%
15	14.419	1968	1976	1987	rVV	1528627	3066789	22.96%	5.459%
16	14.534	1987	1998	2013	rVV	6534581	13359446	100.00%	23.781%
17	15.000	2071	2087	2105	rBV	2487918	5031185	37.66%	8.956%
18	15.617	2193	2205	2219	rBV	487447	948268	7.10%	1.688%
19	15.831	2235	2246	2252	rBV	324692	632045	4.73%	1.125%
20	15.904	2252	2260	2272	rVV	1417037	4253366	31.84%	7.571%
21	15.993	2272	2277	2291	rVB	785116	1476519	11.05%	2.628%
22	16.260	2318	2328	2341	rBV	797793	1556118	11.65%	2.770%
23	16.437	2347	2362	2374	rBV	3118721	5927959	44.37%	10.552%
24	16.929	2443	2456	2468	rBV2	1149329	2840538	21.26%	5.056%
25	17.211	2504	2510	2525	rVB	691733	1308152	9.79%	2.329%
26	17.593	2575	2583	2596	rVB	290516	544816	4.08%	0.970%
27	19.501	2939	2948	2958	rBV	373795	744532	5.57%	1.325%

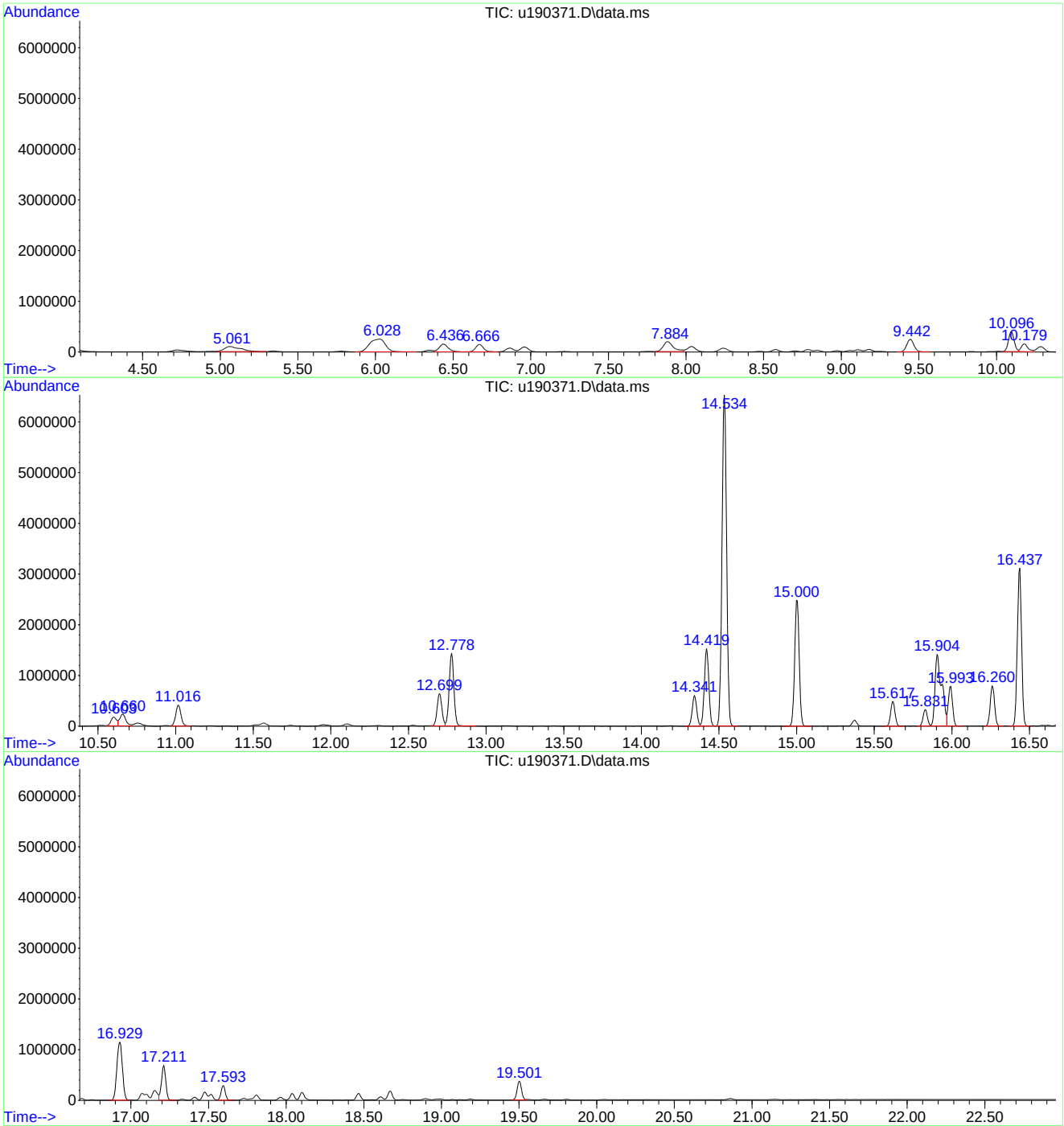
Sum of corrected areas: 56176892

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\U core\vu8783-8784\
Data File : u190371.D
Acq On : 4 Dec 2014 3:00 pm
Operator : yunxiac
Sample : jb83646-10
Misc : ms77650,vu8783,5.0,,,,10
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8783-8784\
Data File : u190371.D
Acq On : 4 Dec 2014 3:00 pm
Operator : yunxiac
Sample : jb83646-10
Misc : ms77650,vu8783,5.0,,,,10
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

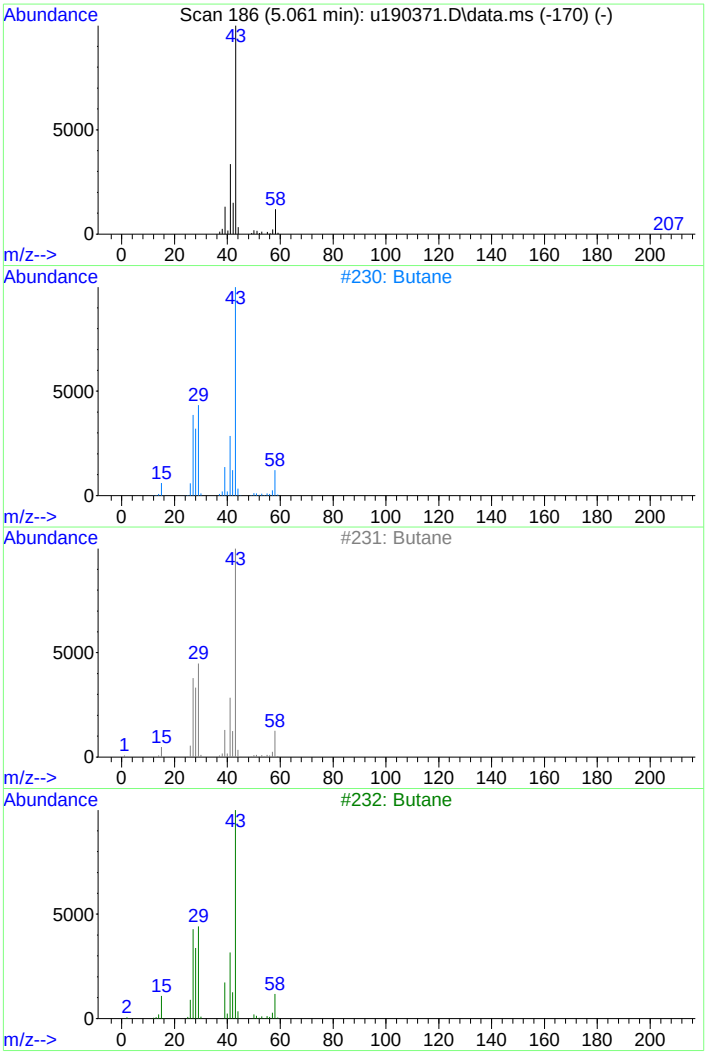
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

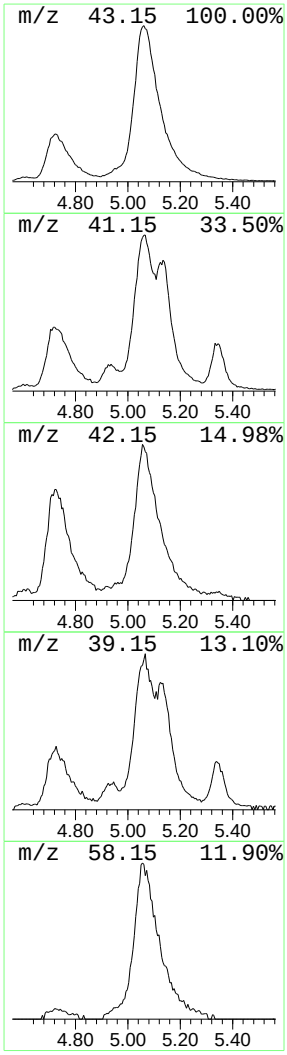
****

Peak Number 1 alkane Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.061	36.26 ug/L	737798	pentafluorobenzene	10.096

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	72
2	Butane	58	C4H10	000106-97-8	72
3	Butane	58	C4H10	000106-97-8	53
4	Isobutane	58	C4H10	000075-28-5	9
5	Propane, 1-nitro-	89	C3H7NO2	000108-03-2	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8783-8784\
Data File : u190371.D
Acq On : 4 Dec 2014 3:00 pm
Operator : yunxiac
Sample : jb83646-10
Misc : ms77650,vu8783,5.0,,,,10
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

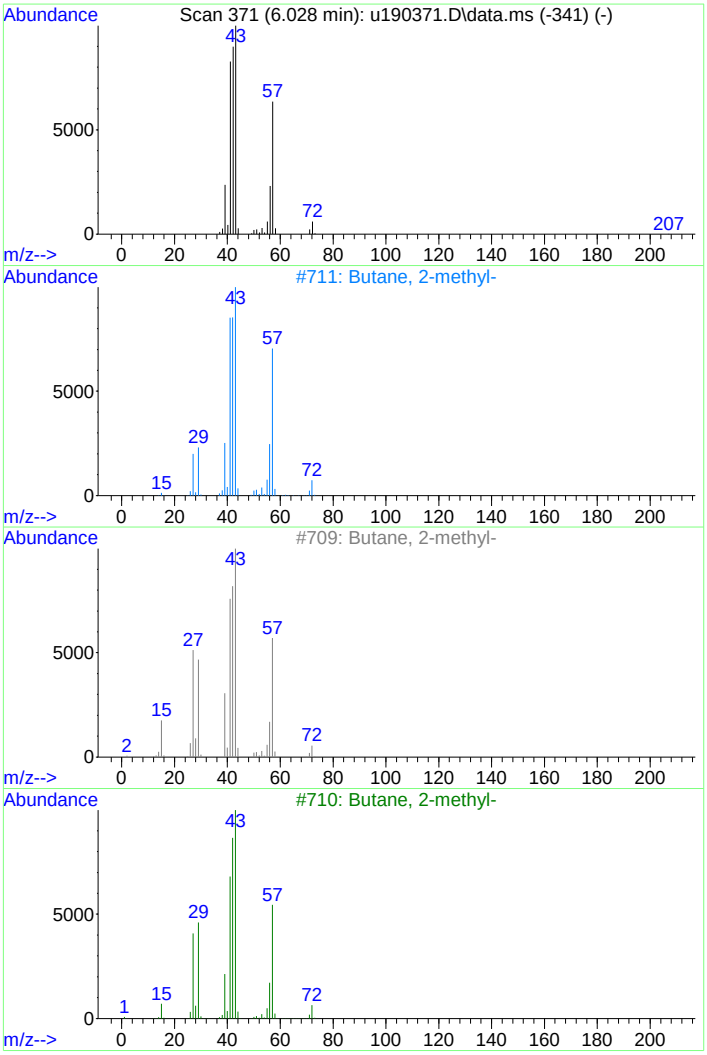
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

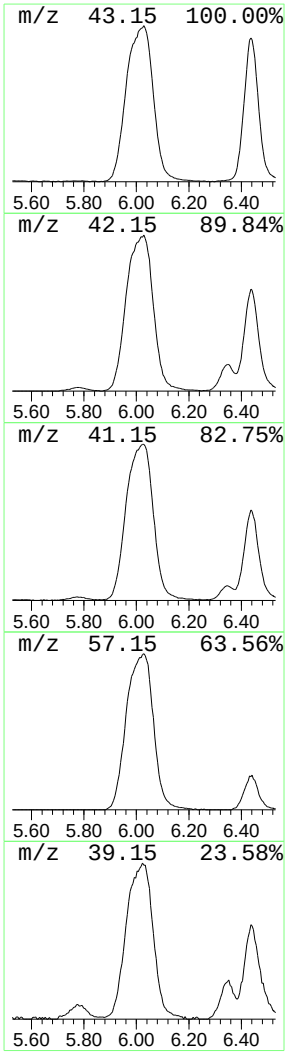
****

Peak Number 2 alkane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.028	88.48 ug/L	1800290	pentafluorobenzene	10.096

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	94
2	Butane, 2-methyl-	72	C5H12	000078-78-4	90
3	Butane, 2-methyl-	72	C5H12	000078-78-4	87
4	Pentane	72	C5H12	000109-66-0	50
5	3-Buten-1-ol	72	C4H8O	000627-27-0	47





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8783-8784\
Data File : u190371.D
Acq On : 4 Dec 2014 3:00 pm
Operator : yunxiac
Sample : jb83646-10
Misc : ms77650,vu8783,5.0,,,,10
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

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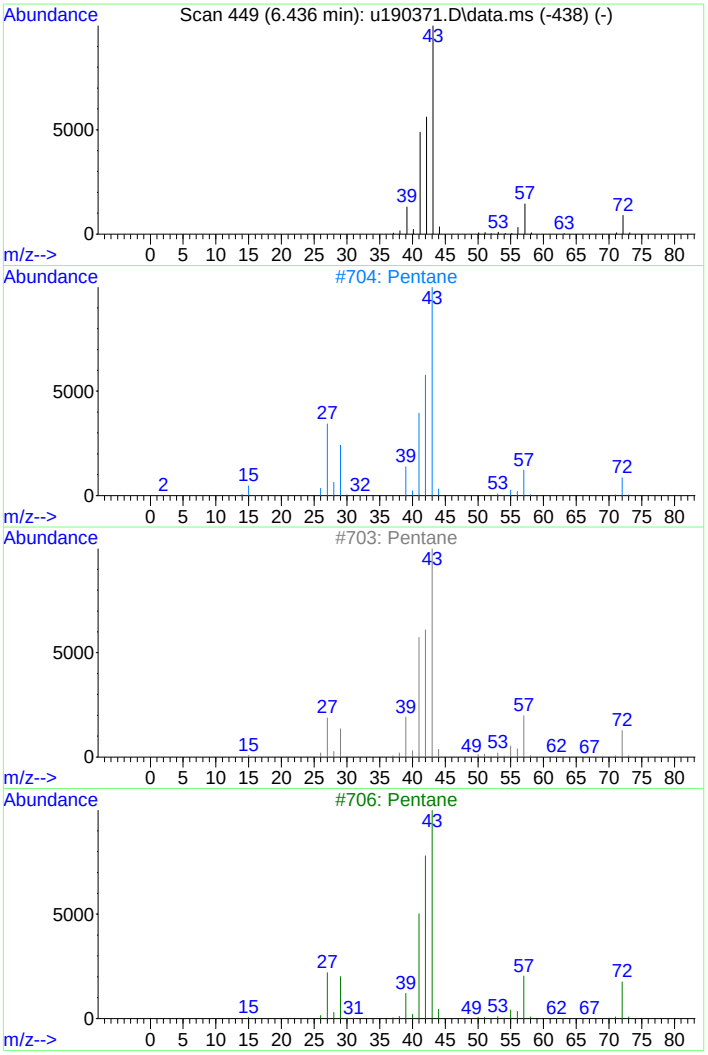
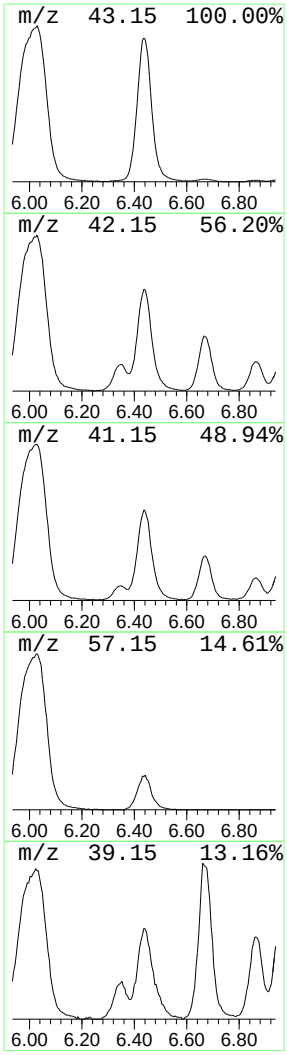
Peak Number 3 alkane Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.436	30.96 ug/L	629953	pentafluorobenzene	10.096

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	90
2	Pentane	72	C5H12	000109-66-0	78
3	Pentane	72	C5H12	000109-66-0	64
4	Pentane	72	C5H12	000109-66-0	47
5	Isobutane	58	C4H10	000075-28-5	28





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8783-8784\
Data File : u190371.D
Acq On : 4 Dec 2014 3:00 pm
Operator : yunxiac
Sample : jb83646-10
Misc : ms77650,vu8783,5.0,,,,10
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

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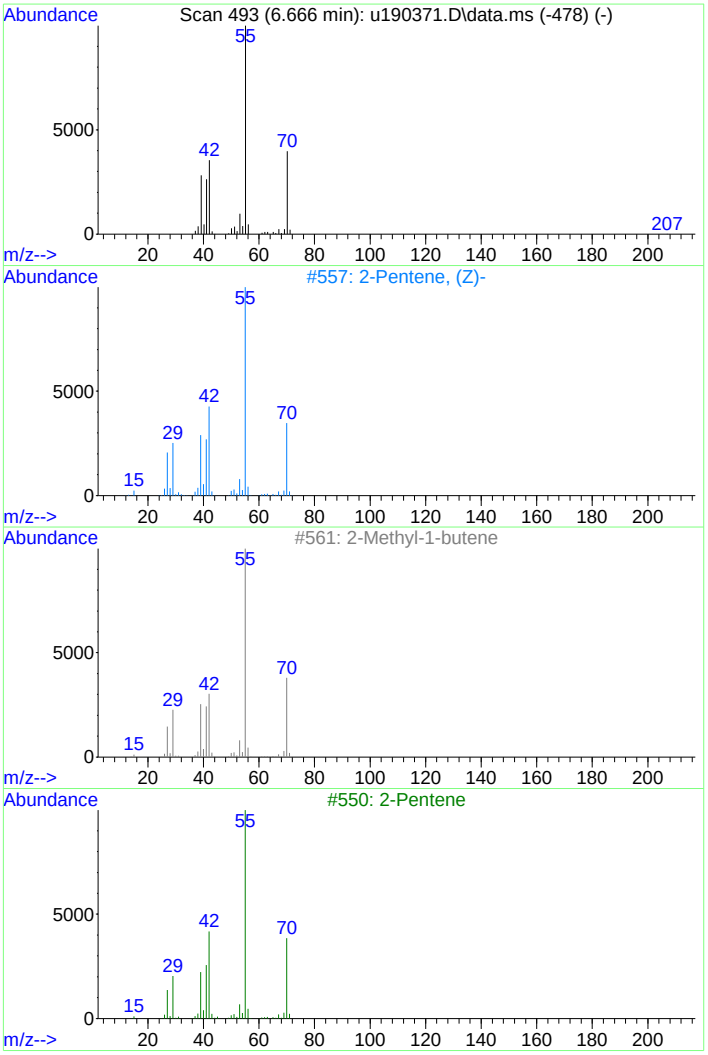
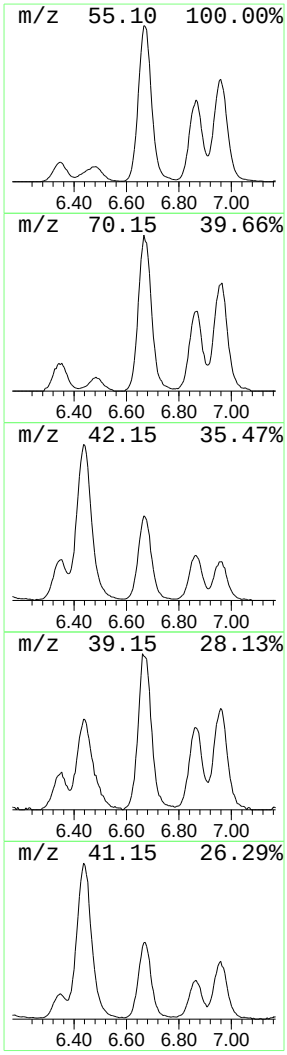
Peak Number 4 alkene Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.666	25.53 ug/L	519501	pentafluorobenzene	10.096

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentene, (Z)-	70	C5H10	000627-20-3	91
2	2-Methyl-1-butene	70	C5H10	000563-46-2	91
3	2-Pentene	70	C5H10	000109-68-2	91
4	2-Pentene, (Z)-	70	C5H10	000627-20-3	91
5	2-Pentene, (E)-	70	C5H10	000646-04-8	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8783-8784\
Data File : u190371.D
Acq On : 4 Dec 2014 3:00 pm
Operator : yunxiac
Sample : jb83646-10
Misc : ms77650,vu8783,5.0,,,,10
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

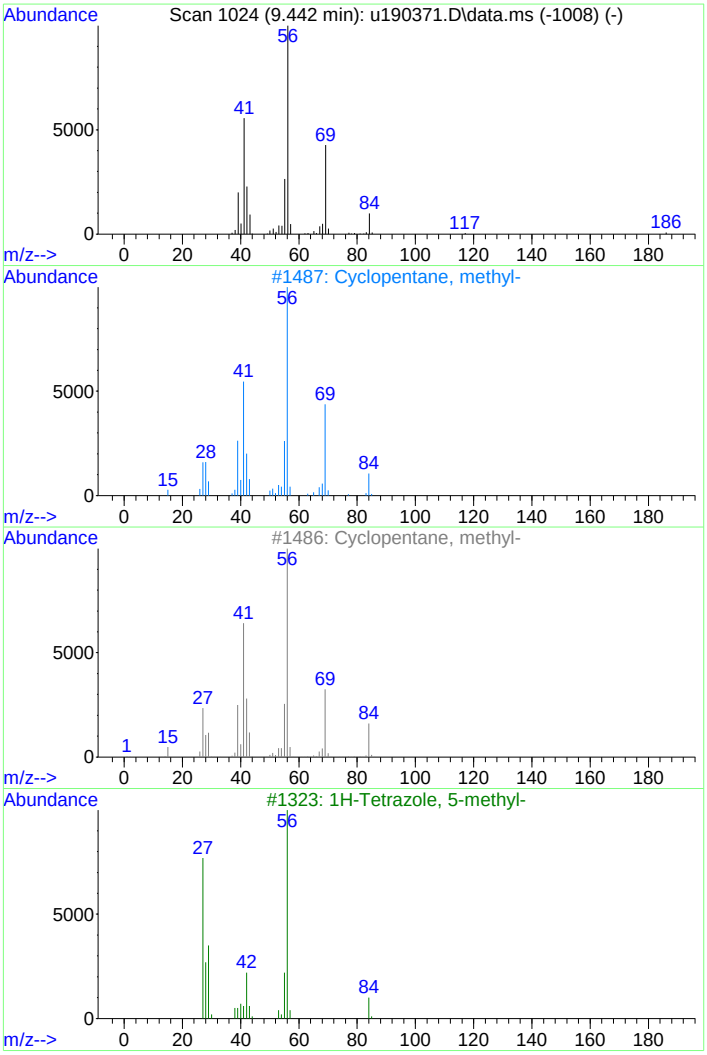
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

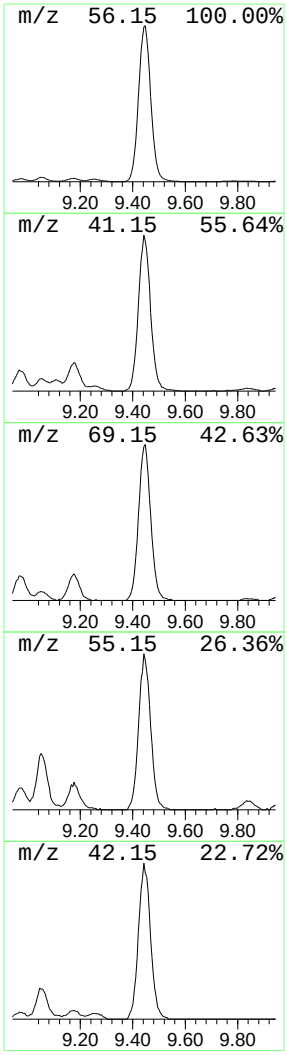
****

Peak Number 5 alkene Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.442	39.68 ug/L	807258	pentafluorobenzene	10.096

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	94
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	91
3	1H-Tetrazole, 5-methyl-	84	C2H4N4	004076-36-2	80
4	Cyclopentane, methyl-	84	C6H12	000096-37-7	78
5	Cyclohexane	84	C6H12	000110-82-7	78





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8783-8784\
Data File : u190371.D
Acq On : 4 Dec 2014 3:00 pm
Operator : yunxiac
Sample : jb83646-10
Misc : ms77650,vu8783,5.0,,,,10
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

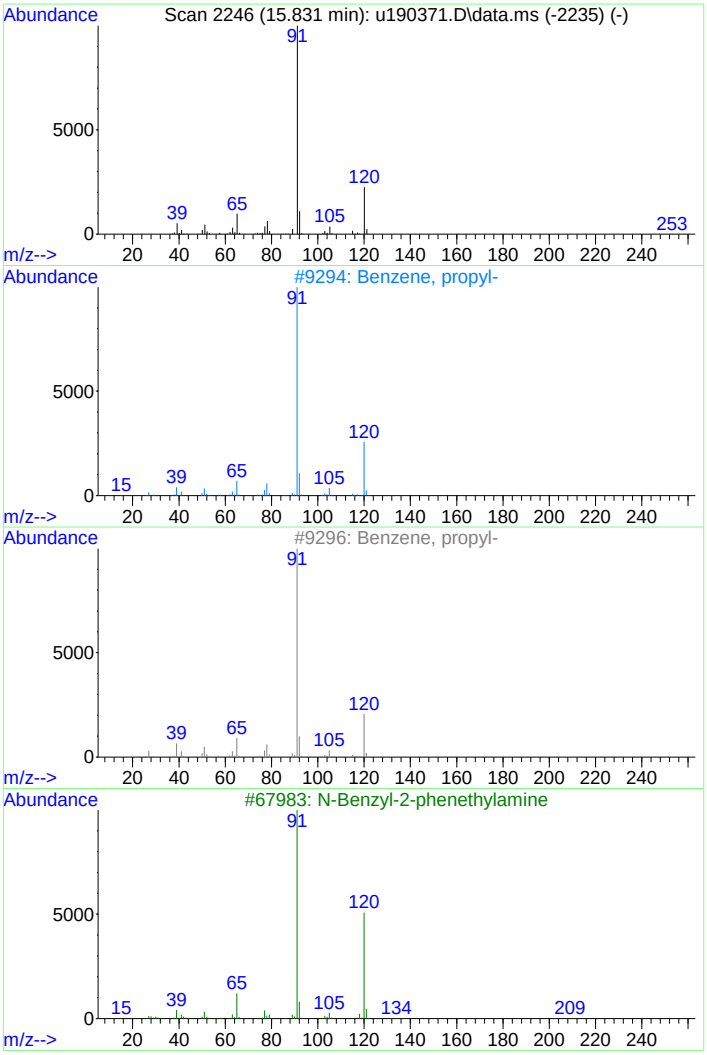
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

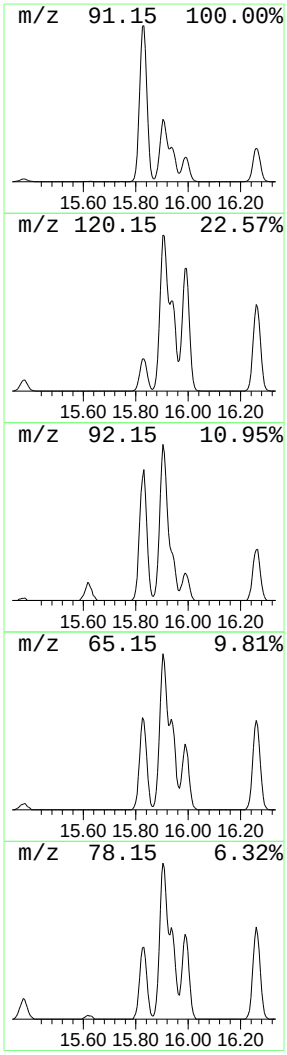
****

Peak Number 6 Benzene, propyl- Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.831	11.13 ug/L	632045	1,4-dichlorobenzene-d4	16.918

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, propyl-	120	C9H12	000103-65-1	91
2	Benzene, propyl-	120	C9H12	000103-65-1	91
3	N-Benzyl-2-phenethylamine	211	C15H17N	003647-71-0	72
4	1,2-Ethanediamine, N,N'-bis(phen...	240	C16H20N2	000140-28-3	64
5	Ethanol, 2-[(phenylmethyl)amino]-	151	C9H13NO	000104-63-2	56





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8783-8784\
Data File : u190371.D
Acq On : 4 Dec 2014 3:00 pm
Operator : yunxiac
Sample : jb83646-10
Misc : ms77650,vu8783,5.0,,,,10
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

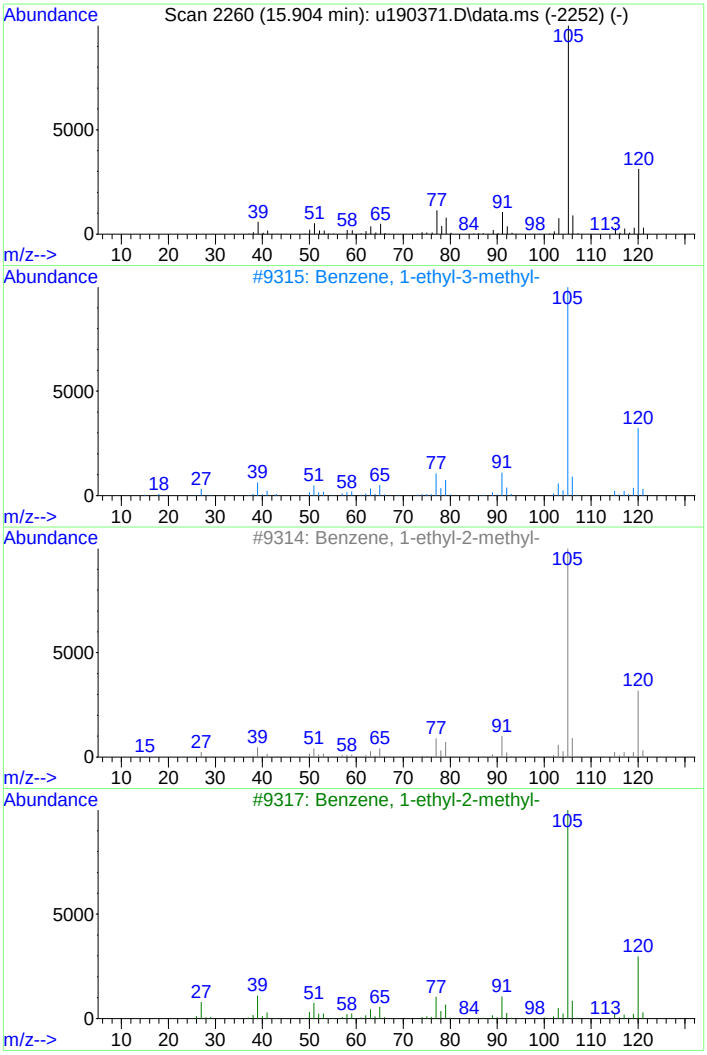
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

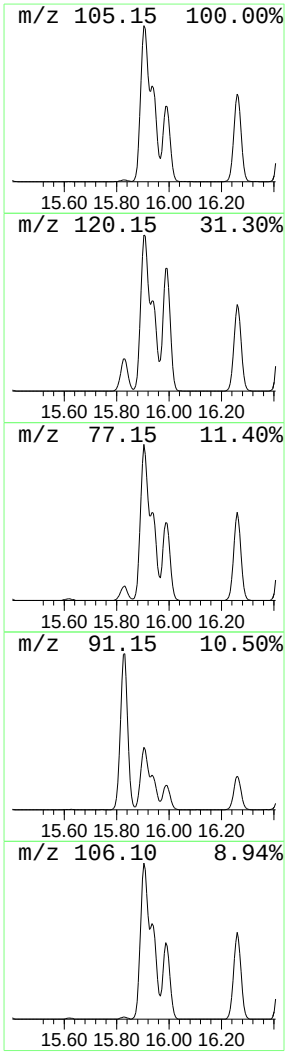
****

Peak Number 7 C3 alkyl benzene Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.904	74.87 ug/L	4253370	1,4-dichlorobenzene-d4	16.918

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	94
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
4	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	94
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8783-8784\
Data File : u190371.D
Acq On : 4 Dec 2014 3:00 pm
Operator : yunxiac
Sample : jb83646-10
Misc : ms77650,vu8783,5.0,,,,10
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

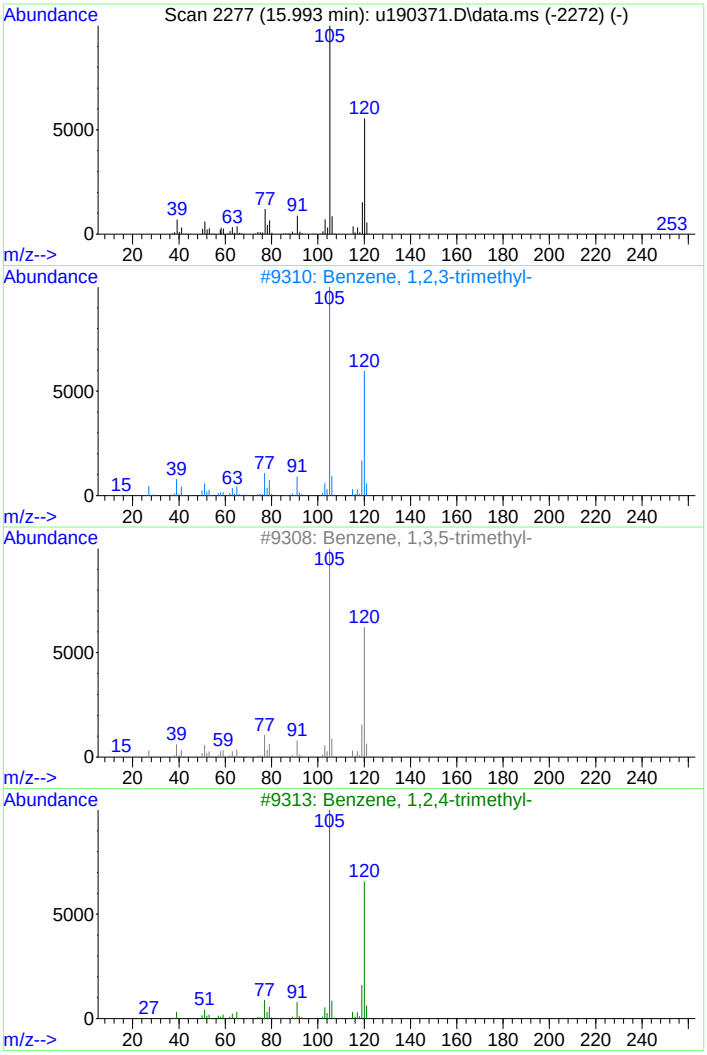
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

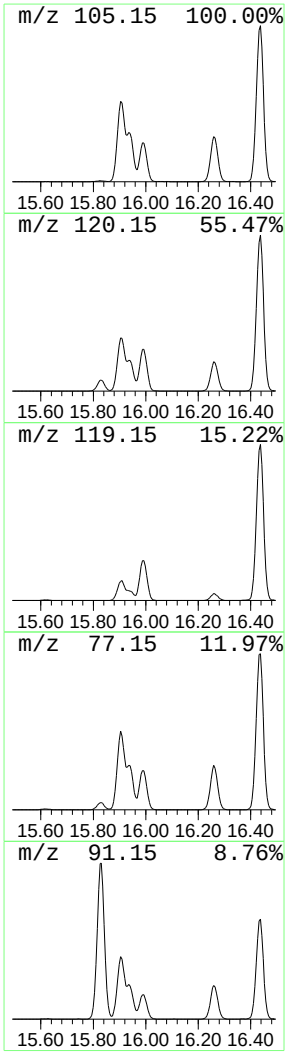
****

Peak Number 8 C3 alkyl benzene Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.993	25.99 ug/L	1476520	1,4-dichlorobenzene-d4	16.918

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8783-8784\
Data File : u190371.D
Acq On : 4 Dec 2014 3:00 pm
Operator : yunxiac
Sample : jb83646-10
Misc : ms77650,vu8783,5.0,,,,10
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

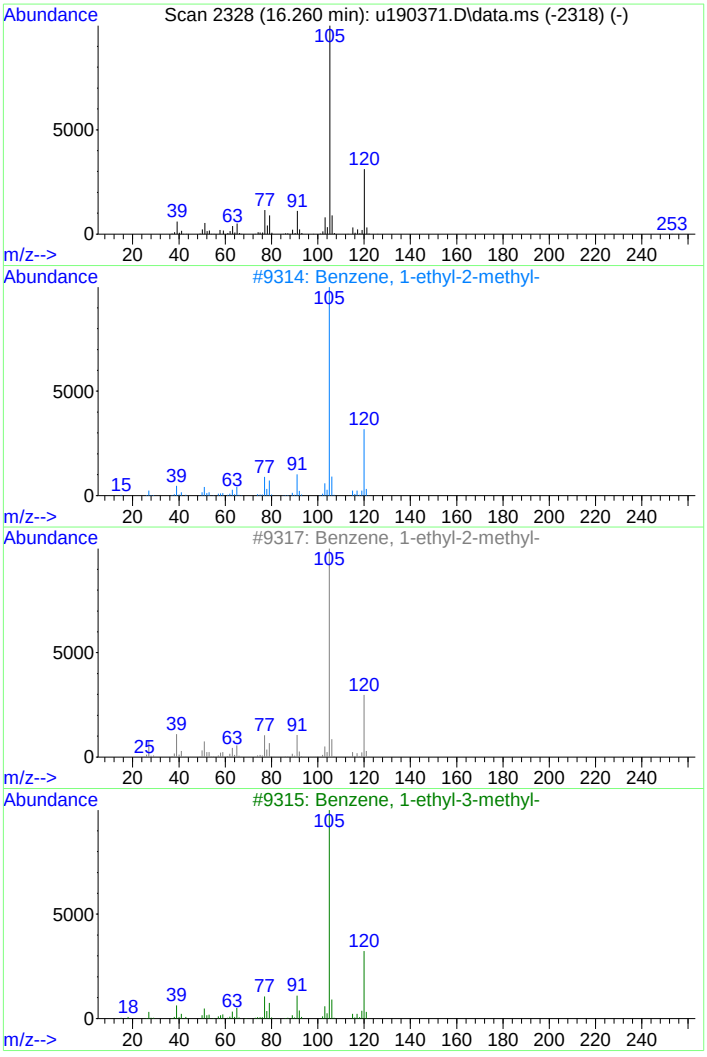
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

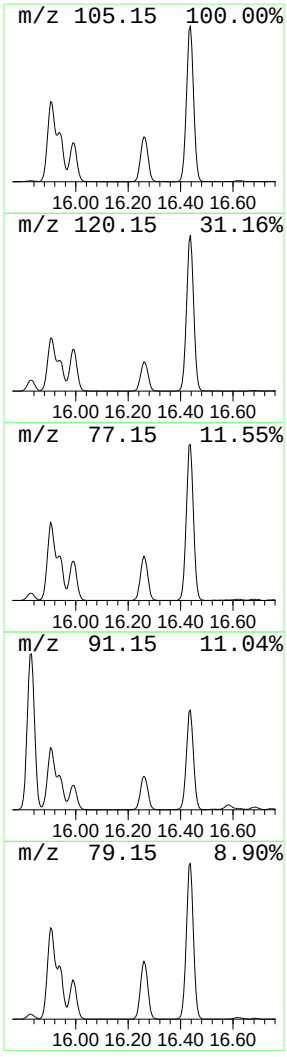
****

Peak Number 9 C3 alkyl benzene Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.260	27.39 ug/L	1556120	1,4-dichlorobenzene-d4	16.918

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
3	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
5	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8783-8784\
Data File : u190371.D
Acq On : 4 Dec 2014 3:00 pm
Operator : yunxiac
Sample : jb83646-10
Misc : ms77650,vu8783,5.0,,,,10
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

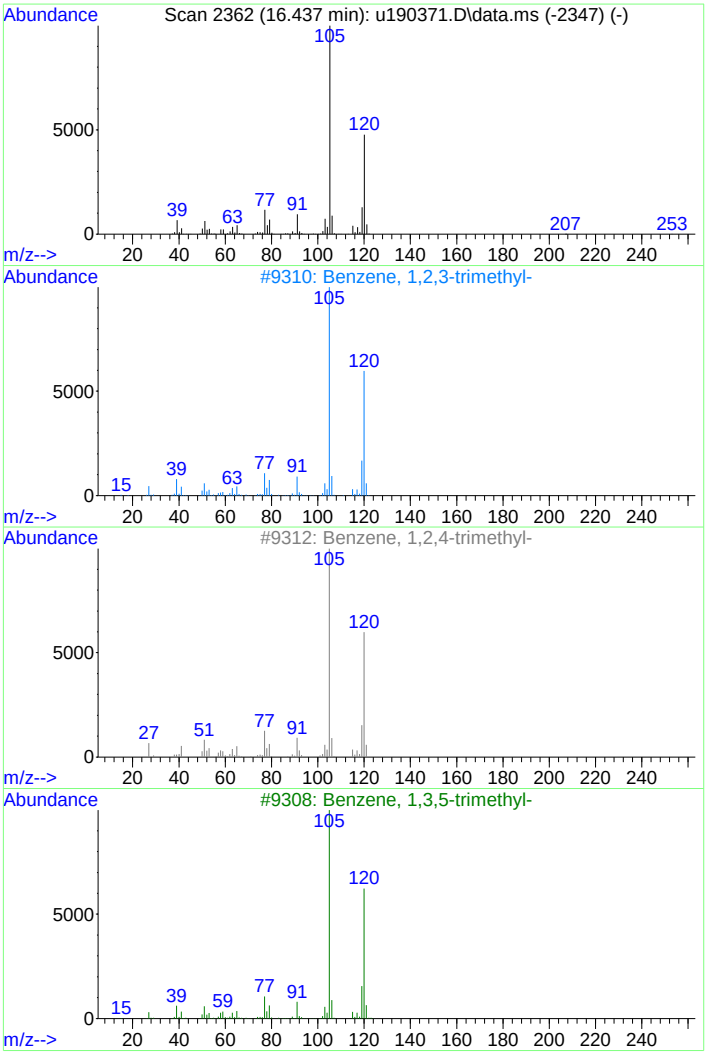
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

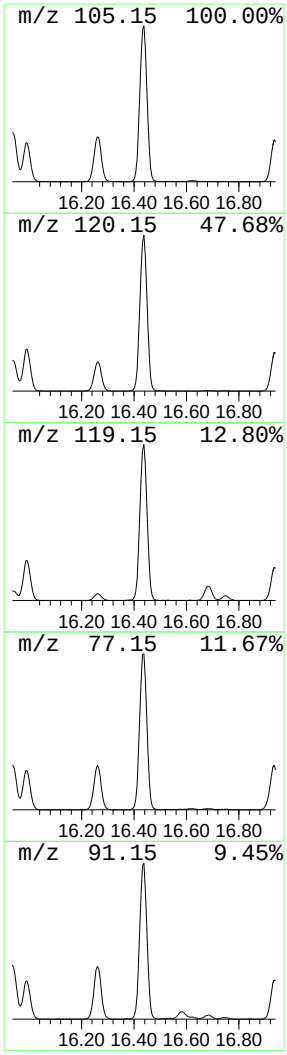
****

Peak Number 10 C3 alkyl benzene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.437	104.35 ug/L	5927960	1,4-dichlorobenzene-d4	16.918

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8783-8784\
Data File : u190371.D
Acq On : 4 Dec 2014 3:00 pm
Operator : yunxiac
Sample : jb83646-10
Misc : ms77650,vu8783,5.0,,,,10
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

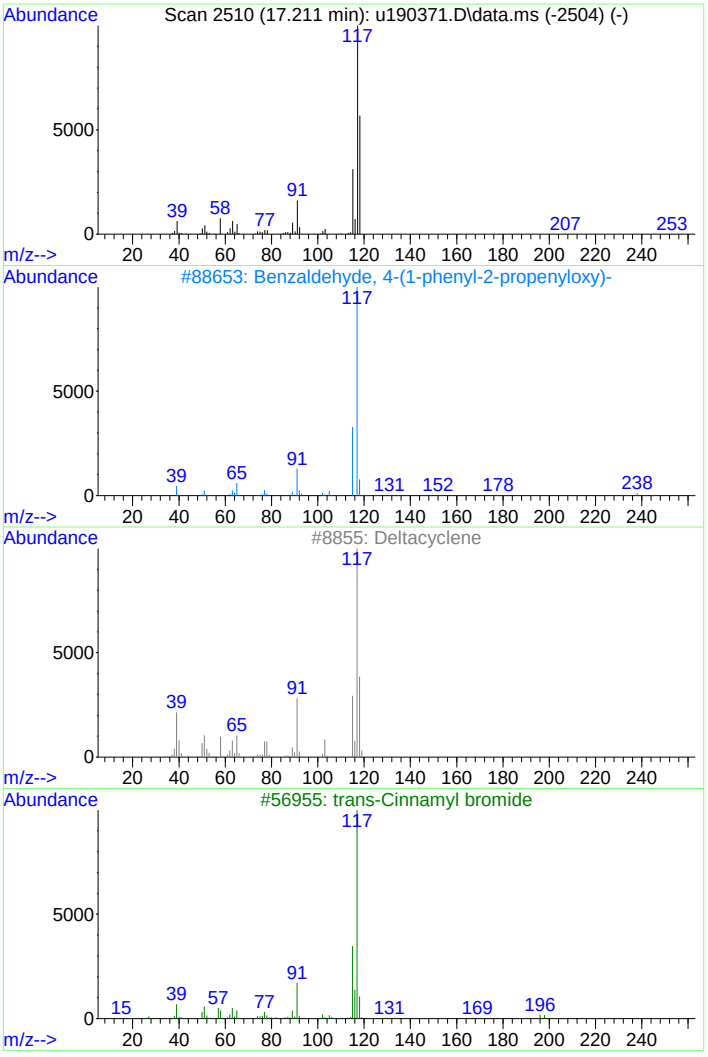
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

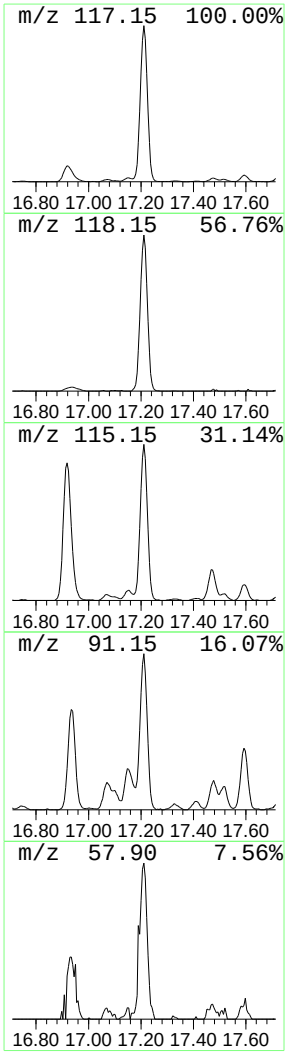
****

Peak Number 11 Indane Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.211	23.03 ug/L	1308150	1,4-dichlorobenzene-d4	16.918

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzaldehyde, 4-(1-phenyl-2-prop...	238	C16H14O2	1000277-56-1	53
2	Deltacyclene	118	C9H10	007785-10-6	42
3	trans-Cinnamyl bromide	196	C9H9Br	026146-77-0	42
4	Benzene, (2-bromocyclopropyl)-	196	C9H9Br	036617-02-4	42
5	Benzene, 1,1'-(1,5-hexadiene-1,6...	234	C18H18	004439-45-6	40





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8783-8784\
Data File : u190371.D
Acq On : 4 Dec 2014 3:00 pm
Operator : yunxiac
Sample : jb83646-10
Misc : ms77650,vu8783,5.0,,,,10
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

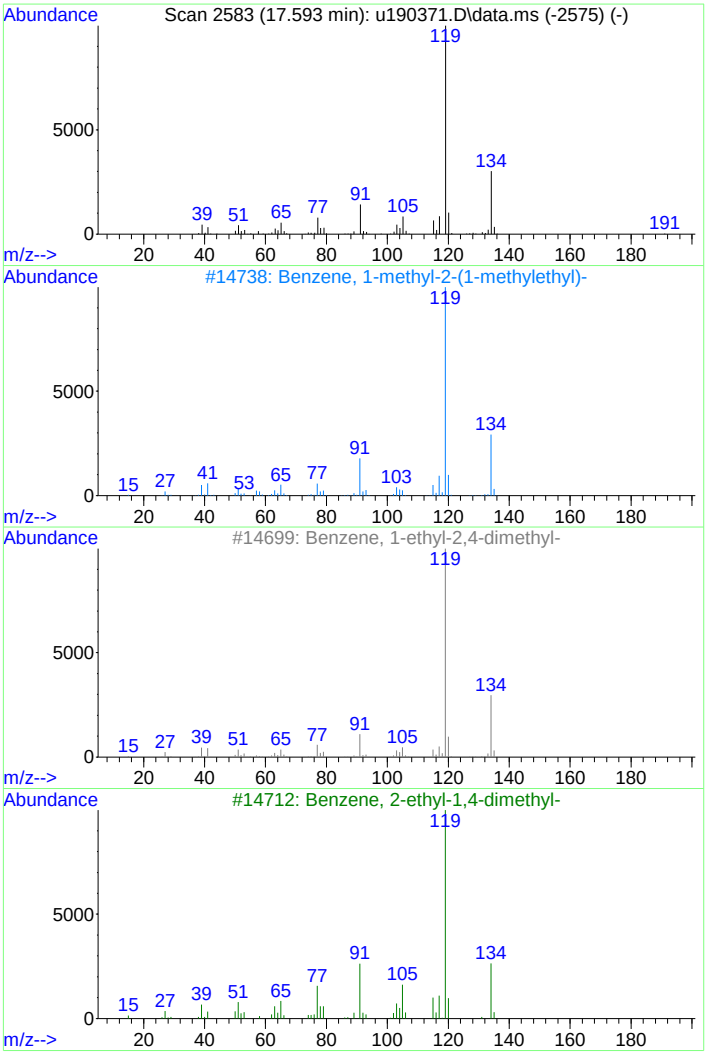
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

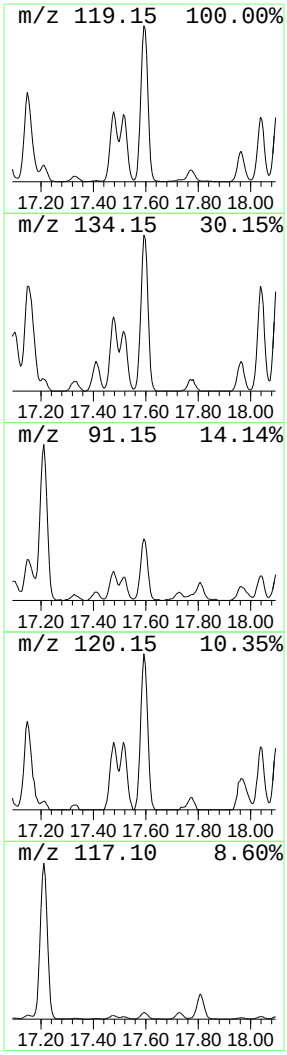
****

Peak Number 12 C4 alkyl benzene Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.593	9.59 ug/L	544816	1,4-dichlorobenzene-d4	16.918

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	95
2	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	95
3	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	95
4	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	94
5	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\U core\vu8783-8784\
Data File : u190371.D
Acq On : 4 Dec 2014 3:00 pm
Operator : yunxiac
Sample : jb83646-10
Misc : ms77650,vu8783,5.0,,,,10
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

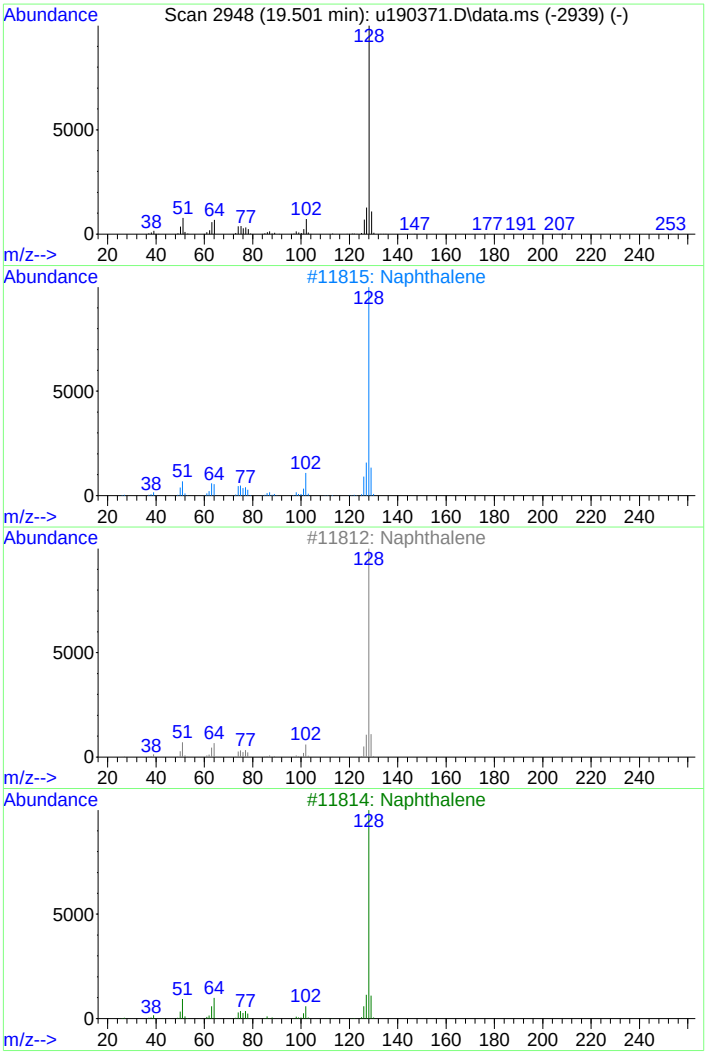
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

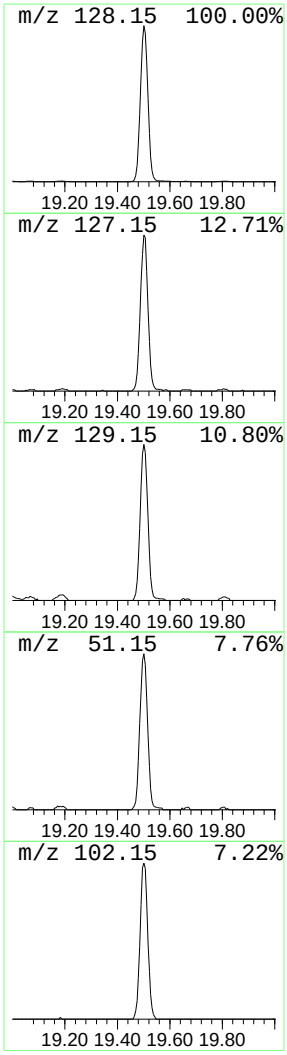
****

Peak Number 13 Naphthalene Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.501	13.11 ug/L	744532	1,4-dichlorobenzene-d4	16.918

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Naphthalene	128	C10H8	000091-20-3	97
2	Naphthalene	128	C10H8	000091-20-3	95
3	Naphthalene	128	C10H8	000091-20-3	95
4	Naphthalene	128	C10H8	000091-20-3	91
5	Azulene	128	C10H8	000275-51-4	91





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\U core\vu8783-8784\
Data File : u190371.D
Acq On : 4 Dec 2014 3:00 pm
Operator : yunxiac
Sample : jb83646-10
Misc : ms77650,vu8783,5.0,,,,10
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
alkane	5.061	36.3	ug/L	737798	2	10.096	1017320	50.0
alkane	6.028	88.5	ug/L	1800290	2	10.096	1017320	50.0
alkane	6.436	31.0	ug/L	629953	2	10.096	1017320	50.0
alkene	6.666	25.5	ug/L	519501	2	10.096	1017320	50.0
alkene	9.442	39.7	ug/L	807258	2	10.096	1017320	50.0
Benzene, propyl-	15.831	11.1	ug/L	632045	5	16.918	2840540	50.0
C3 alkyl benzene	15.904	74.9	ug/L	4253370	5	16.918	2840540	50.0
C3 alkyl benzene	15.993	26.0	ug/L	1476520	5	16.918	2840540	50.0
C3 alkyl benzene	16.260	27.4	ug/L	1556120	5	16.918	2840540	50.0
C3 alkyl benzene	16.437	104.3	ug/L	5927960	5	16.918	2840540	50.0
Indane	17.211	23.0	ug/L	1308150	5	16.918	2840540	50.0
C4 alkyl benzene	17.593	9.6	ug/L	544816	5	16.918	2840540	50.0
Naphthalene	19.501	13.1	ug/L	744532	5	16.918	2840540	50.0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 4V13518.D
Acq On : 29 Nov 2014 10:48 am
Operator : BenM
Sample : mb
Misc : MS77506,V4V558,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 01 11:17:25 2014
Quant Method : C:\MSDCHEM\1\METHODS\M4V541.M
Quant Title : sw846 8260b
QLast Update : Fri Nov 14 17:30:26 2014
Response via : Initial Calibration

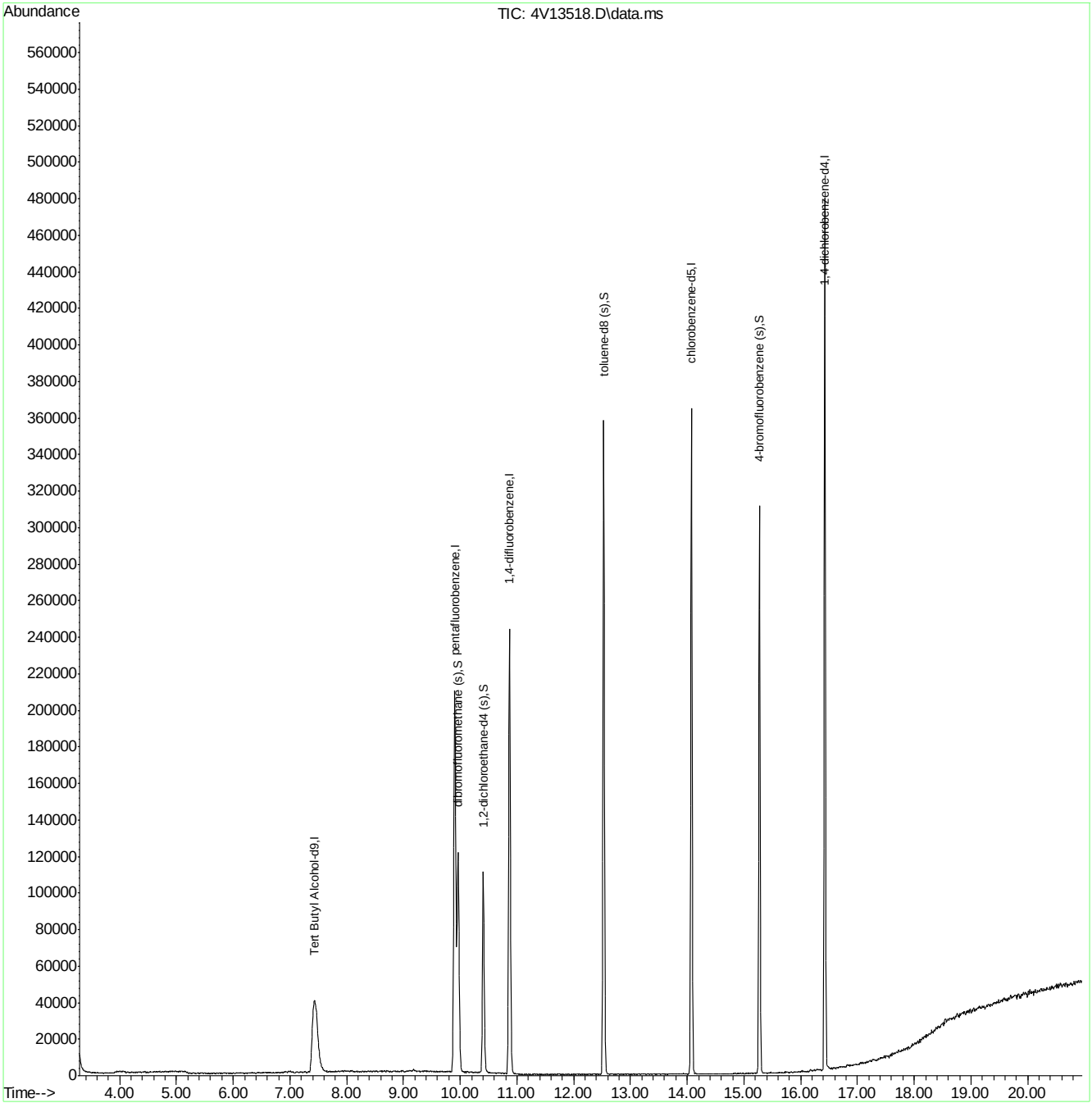
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.434	65	157074	500.00	ug/L	0.00
4) pentafluorobenzene	9.909	168	183573	50.00	ug/L	0.00
51) 1,4-difluorobenzene	10.868	114	219887	50.00	ug/L	0.00
81) chlorobenzene-d5	14.077	117	195555	50.00	ug/L	0.00
94) 1,4-dichlorobenzene-d4	16.426	152	112693	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	9.961	113	91150	51.63	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 103.26%			
46) 1,2-dichloroethane-d4 (s)	10.407	65	89608	56.25	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 112.50%			
73) toluene-d8 (s)	12.525	98	239453	49.70	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 99.40%			
96) 4-bromofluorobenzene (s)	15.272	95	104450	51.61	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 103.22%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 4V13518.D
Acq On : 29 Nov 2014 10:48 am
Operator : BenM
Sample : mb
Misc : MS77506,V4V558,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 01 11:17:25 2014
Quant Method : C:\MSDCHEM\1\METHODS\M4V541.M
Quant Title : sw846 8260b
QLast Update : Fri Nov 14 17:30:26 2014
Response via : Initial Calibration



ACCUTEST LABORATORIES JB82646

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : 4V13518.D
Acq On : 29 Nov 2014 10:48 am
Operator : BenM
Sample : mb
Misc : MS77506,V4V558,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4V541.M
Title : sw846 8260b

Signal : TIC: 4V13518.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.512	41	43	46	rBV2	362	321	0.04%	0.007%
2	3.727	81	84	87	rBV2	448	613	0.09%	0.014%
3	3.848	105	107	111	rBV2	272	288	0.04%	0.007%
4	3.947	116	126	131	rBV3	1139	2878	0.40%	0.067%
5	4.031	140	142	143	rBV	595	397	0.06%	0.009%
6	4.136	159	162	167	rBV3	440	565	0.08%	0.013%
7	4.251	181	184	186	rBV	611	577	0.08%	0.013%
8	4.272	186	188	191	rVB3	450	521	0.07%	0.012%
9	4.755	278	280	284	rBV3	571	742	0.10%	0.017%
10	5.122	347	350	351	rBV2	728	686	0.10%	0.016%
11	5.216	367	368	373	rBV	450	560	0.08%	0.013%
12	5.478	417	418	421	rBV2	507	371	0.05%	0.009%
13	5.557	432	433	437	rBV2	313	248	0.03%	0.006%
14	5.620	442	445	447	rBV2	389	369	0.05%	0.009%
15	5.782	473	476	477	rVB3	534	335	0.05%	0.008%
16	5.840	482	487	489	rBV2	400	677	0.09%	0.016%
17	5.887	494	496	499	rBV2	375	338	0.05%	0.008%
18	6.039	523	525	527	rBV	409	366	0.05%	0.009%
19	6.207	556	557	560	rBV2	415	383	0.05%	0.009%
20	6.291	569	573	574	rBV3	377	445	0.06%	0.010%
21	6.370	587	588	593	rVB3	472	450	0.06%	0.010%
22	6.406	593	595	597	rBV2	382	272	0.04%	0.006%
23	6.427	597	599	601	rBV2	601	457	0.06%	0.011%
24	6.490	609	611	616	rVB2	359	398	0.06%	0.009%
25	6.585	627	629	632	rBV2	741	501	0.07%	0.012%
26	6.705	651	652	656	rBV2	348	395	0.06%	0.009%
27	6.752	657	661	662	rVB2	322	376	0.05%	0.009%
28	6.810	671	672	674	rBV	725	339	0.05%	0.008%
29	6.889	684	687	688	rBV	774	703	0.10%	0.016%
30	6.973	700	703	705	rBV2	869	1124	0.16%	0.026%
31	7.098	725	727	730	rBV2	458	385	0.05%	0.009%
32	7.161	738	739	743	rBV3	547	526	0.07%	0.012%
33	7.434	764	791	828	rBV3	39861	272389	38.16%	6.354%
34	7.843	867	869	875	rVB6	593	788	0.11%	0.018%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : 4V13518.D
Acq On : 29 Nov 2014 10:48 am
Operator : BenM
Sample : mb
Misc : MS77506,V4V558,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4V541.M
Title : sw846 8260b

35	7.964	889	892	894	rBV3	569	515	0.07%	0.012%
36	8.063	909	911	915	rBV2	512	516	0.07%	0.012%
37	8.273	949	951	955	rBV2	462	663	0.09%	0.015%
38	8.414	976	978	984	rBV4	704	1185	0.17%	0.028%
39	8.619	1016	1017	1020	rBV2	709	615	0.09%	0.014%
40	8.881	1065	1067	1071	rBV2	651	741	0.10%	0.017%
41	9.169	1119	1122	1131	rVB4	1029	2138	0.30%	0.050%
42	9.311	1147	1149	1155	rBV4	732	1249	0.17%	0.029%
43	9.358	1156	1158	1163	rVV4	576	614	0.09%	0.014%
44	9.778	1236	1238	1241	rVB3	511	467	0.07%	0.011%
45	9.825	1246	1247	1249	rBV2	472	312	0.04%	0.007%
46	9.903	1251	1262	1268	rBV	208645	509208	71.33%	11.878%
47	9.961	1269	1273	1286	rVB3	120126	268244	37.58%	6.257%
48	10.113	1300	1302	1304	rBV	682	655	0.09%	0.015%
49	10.160	1310	1311	1314	rBV3	596	584	0.08%	0.014%
50	10.328	1340	1343	1345	rBV3	655	582	0.08%	0.014%
51	10.407	1347	1358	1377	rVB	109905	247428	34.66%	5.772%
52	10.868	1436	1446	1463	rVV	243677	503626	70.55%	11.748%
53	10.963	1463	1464	1471	rVB3	647	664	0.09%	0.015%
54	11.167	1497	1503	1505	rVB2	364	450	0.06%	0.010%
55	11.204	1505	1510	1511	rBV	292	303	0.04%	0.007%
56	11.277	1520	1524	1527	rVB2	278	413	0.06%	0.010%
57	11.324	1527	1533	1536	rBV2	321	664	0.09%	0.015%
58	11.361	1537	1540	1541	rVB2	398	267	0.04%	0.006%
59	11.392	1543	1546	1552	rVB2	256	430	0.06%	0.010%
60	11.524	1568	1571	1573	rVB2	351	333	0.05%	0.008%
61	11.550	1573	1576	1578	rBV2	335	383	0.05%	0.009%
62	11.592	1580	1584	1587	rVB2	339	417	0.06%	0.010%
63	11.613	1587	1588	1592	rBV2	283	351	0.05%	0.008%
64	11.718	1607	1608	1618	rVB3	380	600	0.08%	0.014%
65	11.796	1621	1623	1626	rBV3	228	296	0.04%	0.007%
66	12.006	1662	1663	1667	rBV3	239	238	0.03%	0.006%
67	12.064	1670	1674	1677	rBV2	382	718	0.10%	0.017%
68	12.100	1677	1681	1685	rVB2	406	710	0.10%	0.017%
69	12.137	1685	1688	1692	rBV2	323	570	0.08%	0.013%
70	12.189	1696	1698	1700	rVB	355	264	0.04%	0.006%
71	12.205	1700	1701	1703	rBV2	331	271	0.04%	0.006%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : 4V13518.D
Acq On : 29 Nov 2014 10:48 am
Operator : BenM
Sample : mb
Misc : MS77506,V4V558,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4V541.M
Title : sw846 8260b

72	12.525	1751	1762	1782	rBV	358103	629847	88.23%	14.692%
73	12.745	1801	1804	1806	rBV3	414	327	0.05%	0.008%
74	13.044	1858	1861	1867	rBV2	206	418	0.06%	0.010%
75	13.081	1867	1868	1875	rVB2	164	265	0.04%	0.006%
76	13.133	1875	1878	1883	rBV3	183	277	0.04%	0.006%
77	13.348	1917	1919	1924	rBV2	239	322	0.05%	0.008%
78	13.930	2027	2030	2035	rBV2	448	462	0.06%	0.011%
79	14.077	2049	2058	2069	rBV	364712	603764	84.58%	14.084%
80	14.218	2083	2085	2090	rVB	344	254	0.04%	0.006%
81	14.271	2094	2095	2099	rVB3	412	299	0.04%	0.007%
82	14.386	2115	2117	2120	rVB	407	316	0.04%	0.007%
83	14.418	2120	2123	2124	rBV2	350	246	0.03%	0.006%
84	14.465	2127	2132	2134	rBV2	279	401	0.06%	0.009%
85	14.612	2159	2160	2162	rBV2	369	244	0.03%	0.006%
86	14.816	2196	2199	2201	rVB2	390	342	0.05%	0.008%
87	14.848	2201	2205	2207	rBV3	437	460	0.06%	0.011%
88	14.984	2227	2231	2237	rBV4	332	563	0.08%	0.013%
89	15.031	2237	2240	2242	rBV3	357	248	0.03%	0.006%
90	15.089	2250	2251	2255	rBV3	449	530	0.07%	0.012%
91	15.199	2267	2272	2273	rVB2	286	372	0.05%	0.009%
92	15.272	2278	2286	2297	rVV	310762	487239	68.25%	11.366%
93	15.466	2319	2323	2327	rBV5	565	889	0.12%	0.021%
94	15.603	2346	2349	2350	rBV3	399	305	0.04%	0.007%
95	15.728	2371	2373	2376	rBV3	640	339	0.05%	0.008%
96	16.174	2452	2458	2464	rBV5	1194	2385	0.33%	0.056%
97	16.248	2469	2472	2474	rVB3	672	304	0.04%	0.007%
98	16.279	2477	2478	2483	rBV3	755	1116	0.16%	0.026%
99	16.426	2496	2506	2520	rBV	477592	713852	100.00%	16.652%
100	16.651	2543	2549	2550	rBV6	1268	2133	0.30%	0.050%

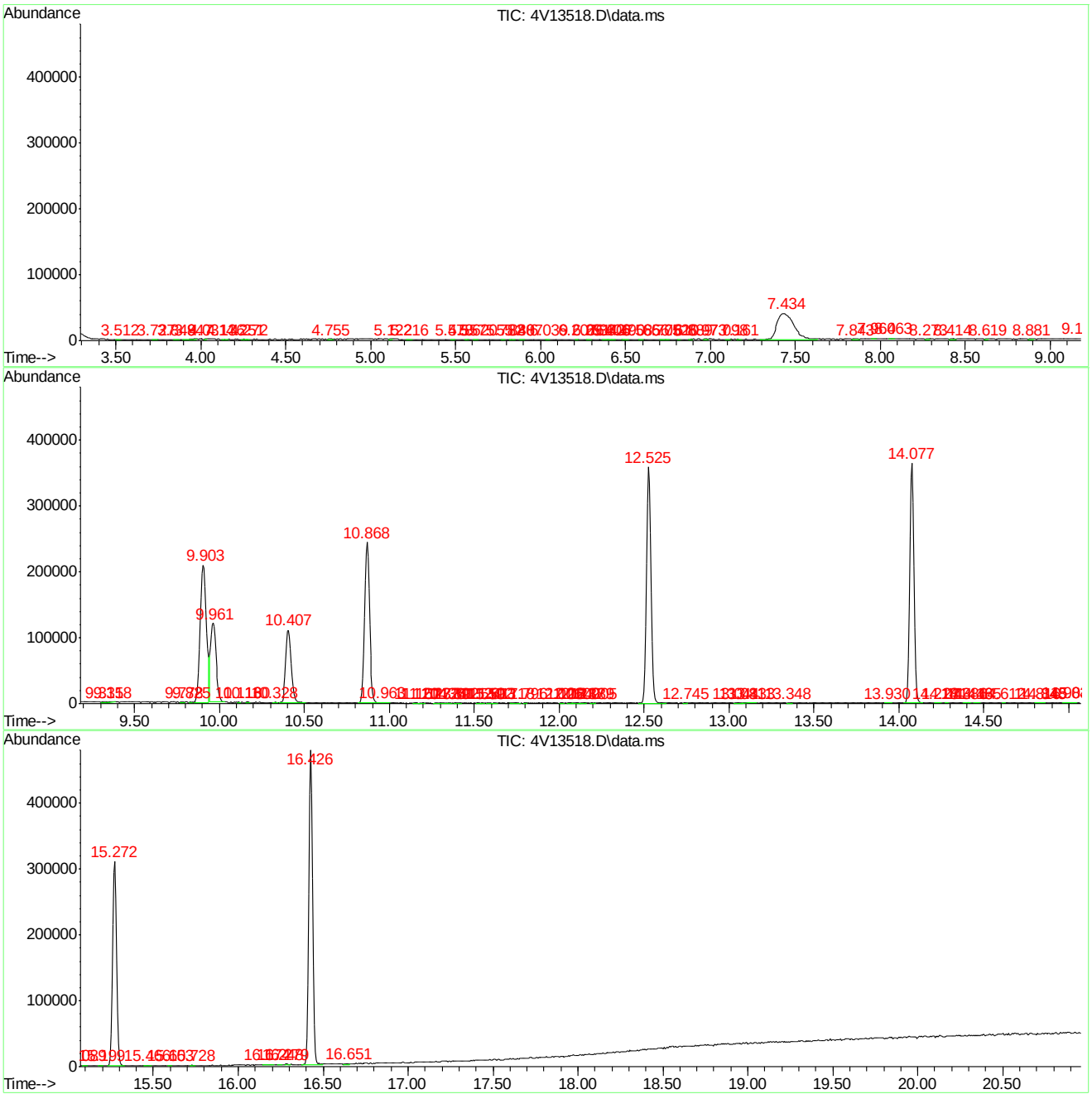
Sum of corrected areas: 4286986

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\
Data File : 4V13518.D
Acq On : 29 Nov 2014 10:48 am
Operator : BenM
Sample : mb
Misc : MS77506,V4V558,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4V541.M
Quant Title : sw846 8260b

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p



Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\
Data File : 4V13518.D
Acq On : 29 Nov 2014 10:48 am
Operator : BenM
Sample : mb
Misc : MS77506,V4V558,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4V541.M
Quant Title : sw846 8260b

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	Internal Standard RT	Internal Standard Resp	Internal Standard Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190321.D
Acq On : 3 Dec 2014 12:22 pm
Operator : yunxiac
Sample : mb
Misc : ms77638,vu8782,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 03 16:54:21 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um
QLast Update : Thu Nov 20 10:49:23 2014
Response via : Initial Calibration

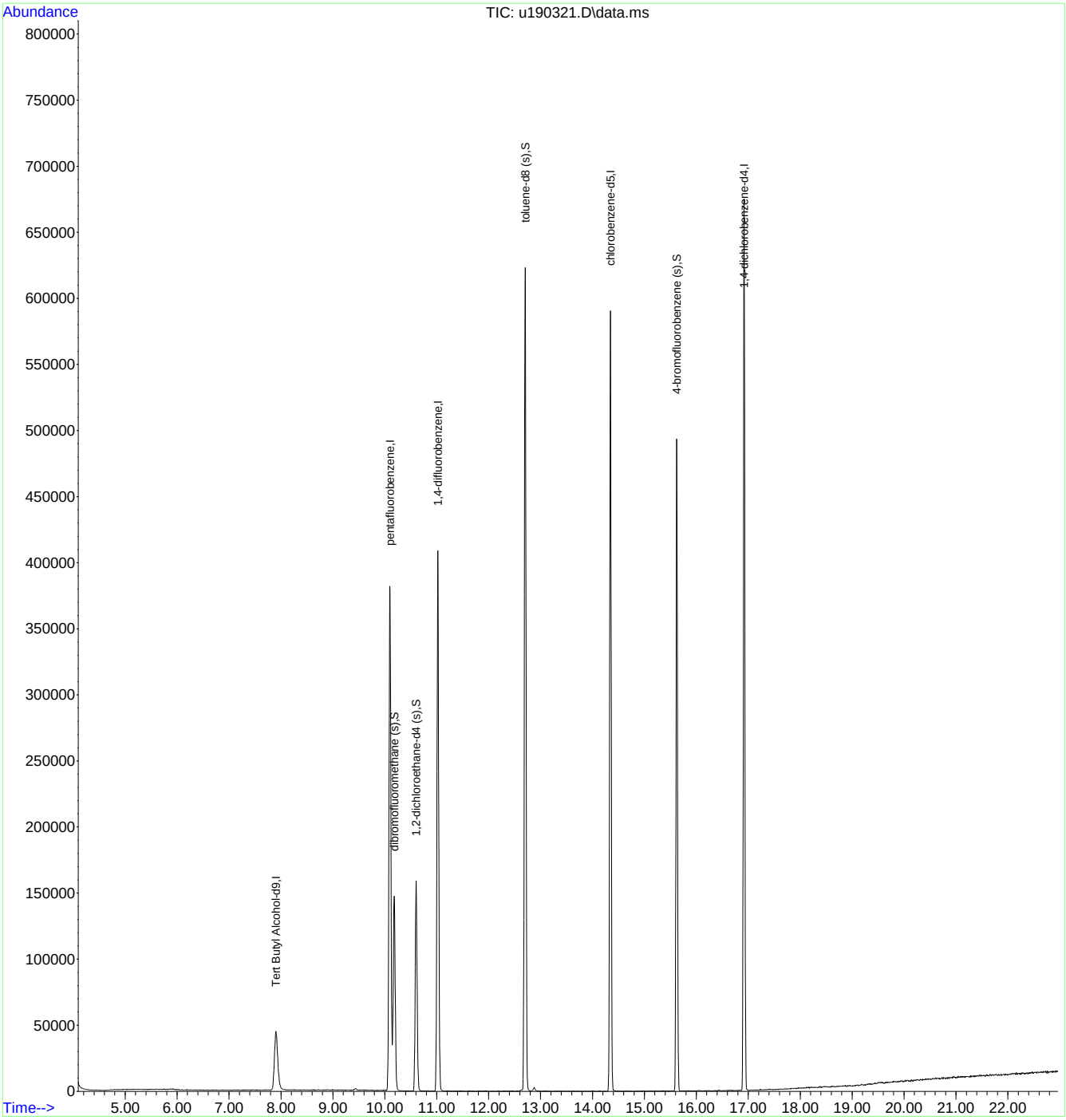
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.905	65	117629	500.00	ug/L	0.00
5) pentafluorobenzene	10.101	168	404745	50.00	ug/L	0.00
64) 1,4-difluorobenzene	11.021	114	436278	50.00	ug/L	0.00
96) chlorobenzene-d5	14.346	117	402840	50.00	ug/L	0.00
112) 1,4-dichlorobenzene-d4	16.918	152	220197	50.00	ug/L	0.00
System Monitoring Compounds						
56) dibromofluoromethane (s)	10.179	113	122913	51.52	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 103.04%			
57) 1,2-dichloroethane-d4 (s)	10.602	65	133139	50.65	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 101.30%			
88) toluene-d8 (s)	12.704	98	524860	55.34	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 110.68%			
114) 4-bromofluorobenzene (s)	15.621	95	189065	54.09	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 108.18%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190321.D
Acq On : 3 Dec 2014 12:22 pm
Operator : yunxiac
Sample : mb
Misc : ms77638,vu8782,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 03 16:54:21 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um
QLast Update : Thu Nov 20 10:49:23 2014
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190321.D
Acq On : 3 Dec 2014 12:22 pm
Operator : yunxiac
Sample : mb
Misc : ms77638,vu8782,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MU8763.M
Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

Signal : TIC: u190321.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	7.905	710	730	768	rBV	44683	206277	15.25%	2.676%
2	10.095	1136	1149	1158	rBV	381838	994641	73.52%	12.905%
3	10.179	1158	1165	1186	rVB	147475	396535	29.31%	5.145%
4	10.602	1235	1246	1261	rBV	159043	389906	28.82%	5.059%
5	11.021	1311	1326	1350	rBB	409139	960764	71.01%	12.466%
6	12.704	1635	1648	1669	rVB	623316	1352914	100.00%	17.554%
7	14.346	1950	1962	1982	rBB	590684	1194210	88.27%	15.495%
8	15.621	2195	2206	2221	rBV	493685	945394	69.88%	12.266%
9	16.918	2444	2454	2470	rVB	674691	1266576	93.62%	16.434%

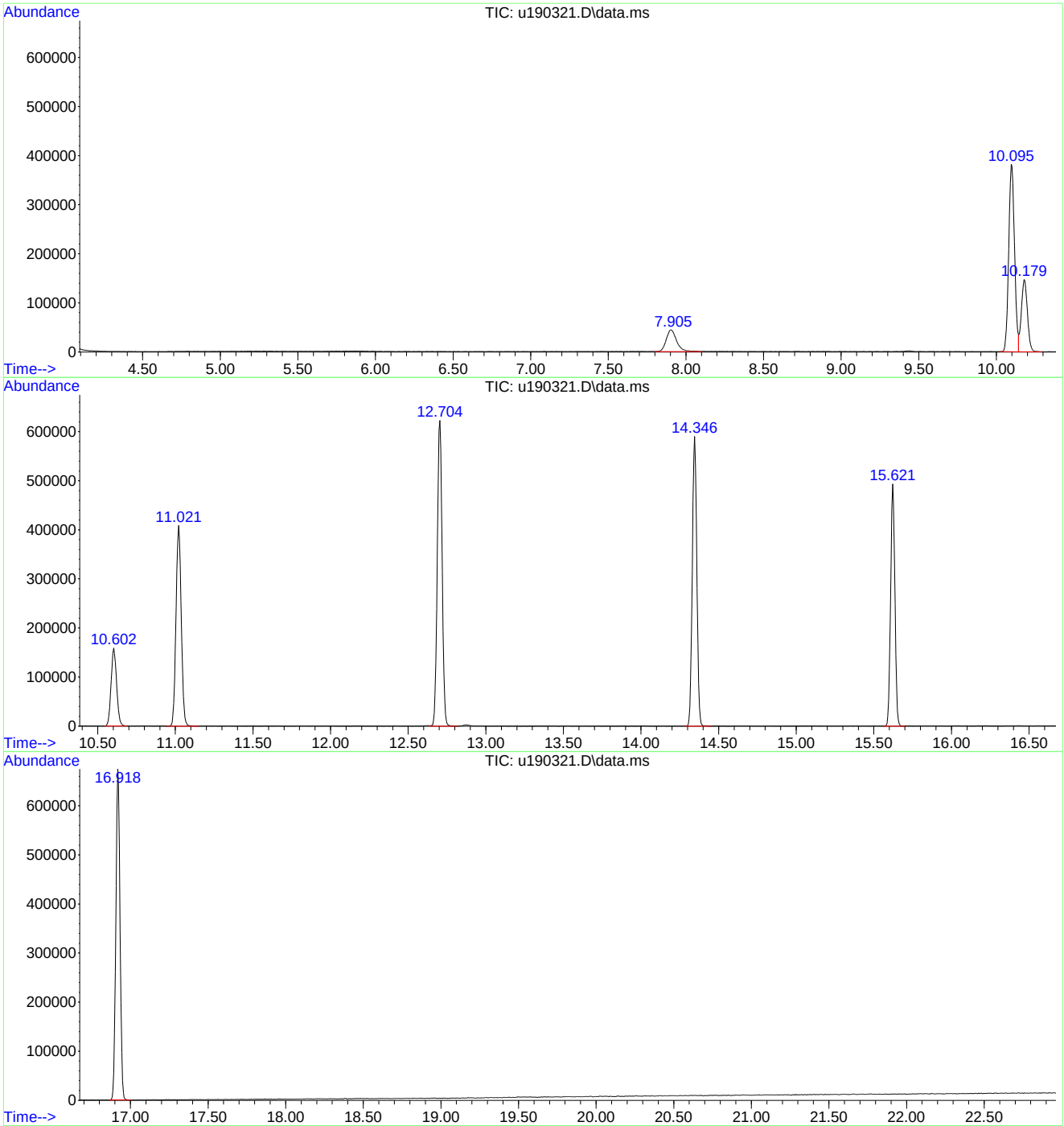
Sum of corrected areas: 7707217

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190321.D
Acq On : 3 Dec 2014 12:22 pm
Operator : yunxiac
Sample : mb
Misc : ms77638,vu8782,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P



Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\U core\vu8781cont-8782\
Data File : u190321.D
Acq On : 3 Dec 2014 12:22 pm
Operator : yunxiac
Sample : mb
Misc : ms77638,vu8782,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\U core\vu8783\
Data File : u190362.D
Acq On : 4 Dec 2014 10:33 am
Operator : yunxiac
Sample : mb2
Misc : ms77846,vu8783,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 04 14:52:51 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um
QLast Update : Thu Nov 20 10:49:23 2014
Response via : Initial Calibration

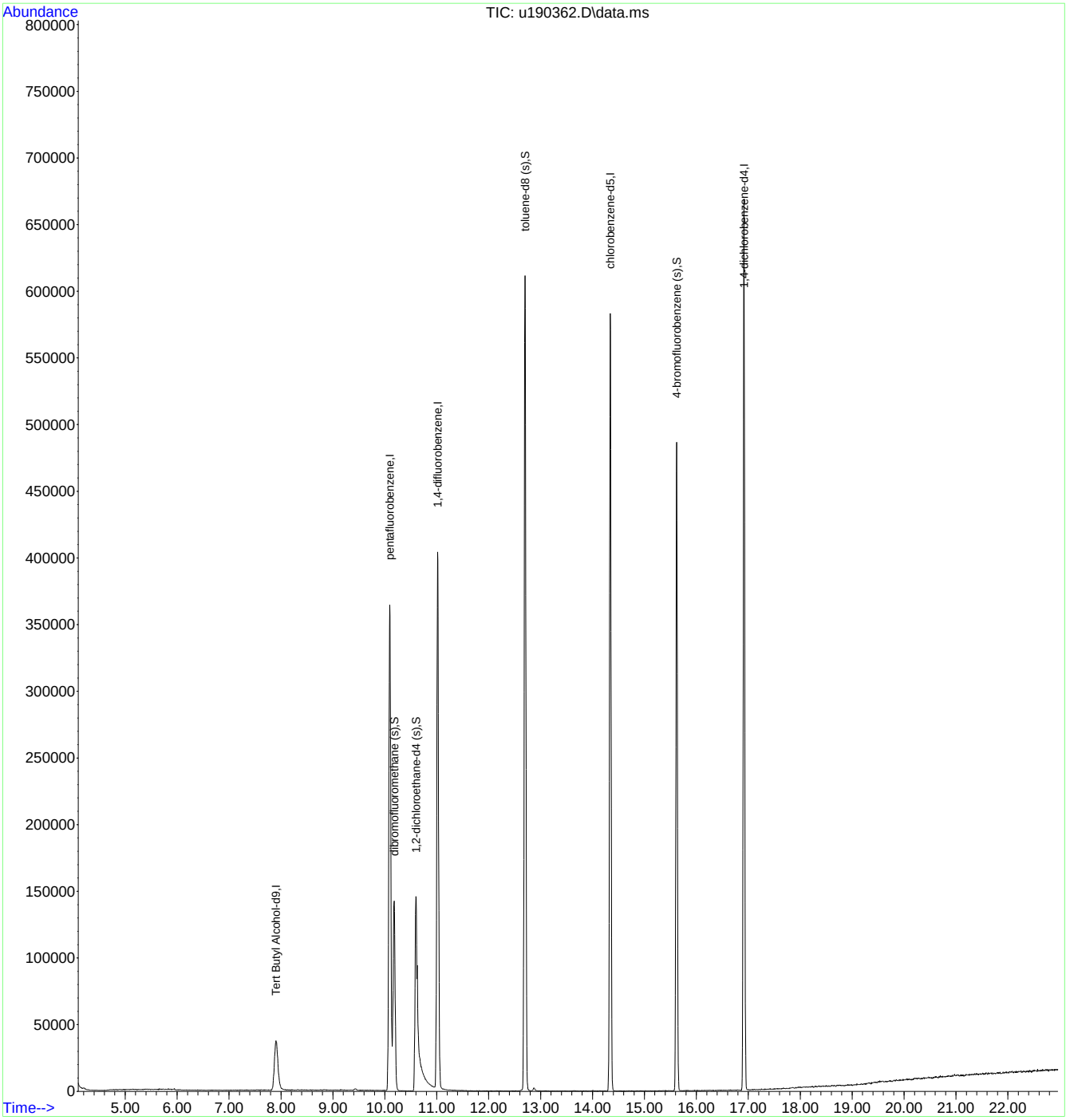
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.904	65	105010	500.00	ug/L	0.00
5) pentafluorobenzene	10.095	168	389853	50.00	ug/L	0.00
64) 1,4-difluorobenzene	11.015	114	429562	50.00	ug/L	0.00
96) chlorobenzene-d5	14.340	117	394064	50.00	ug/L	0.00
112) 1,4-dichlorobenzene-d4	16.917	152	218308	50.00	ug/L	0.00
System Monitoring Compounds						
56) dibromofluoromethane (s)	10.178	113	119569	52.03	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 104.06%			
57) 1,2-dichloroethane-d4 (s)	10.602	65	129401	51.11	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 102.22%			
88) toluene-d8 (s)	12.698	98	513979	55.04	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 110.08%			
114) 4-bromofluorobenzene (s)	15.621	95	187250	54.04	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 108.08%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\U core\vu8783\
Data File : u190362.D
Acq On : 4 Dec 2014 10:33 am
Operator : yunxiac
Sample : mb2
Misc : ms77846,vu8783,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 04 14:52:51 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um
QLast Update : Thu Nov 20 10:49:23 2014
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\U core\vu8783\
Data File : u190362.D
Acq On : 4 Dec 2014 10:33 am
Operator : yunxiac
Sample : mb2
Misc : ms77846,vu8783,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MU8763.M
Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

Signal : TIC: u190362.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	7.904	713	730	766	rBV2	37251	181511	13.71%	2.329%
2	10.095	1137	1149	1158	rBV	364384	969044	73.17%	12.435%
3	10.178	1158	1165	1188	rVB	142393	381620	28.81%	4.897%
4	10.596	1234	1245	1313	rBV2	146067	628120	47.43%	8.060%
5	11.015	1315	1325	1346	rVB	403075	961991	72.64%	12.344%
6	12.698	1626	1647	1666	rBV	611568	1324398	100.00%	16.995%
7	14.340	1949	1961	1977	rBV	583336	1168949	88.26%	15.000%
8	15.621	2194	2206	2221	rBV	486437	932339	70.40%	11.964%
9	16.917	2444	2454	2468	rBV	668645	1245086	94.01%	15.977%

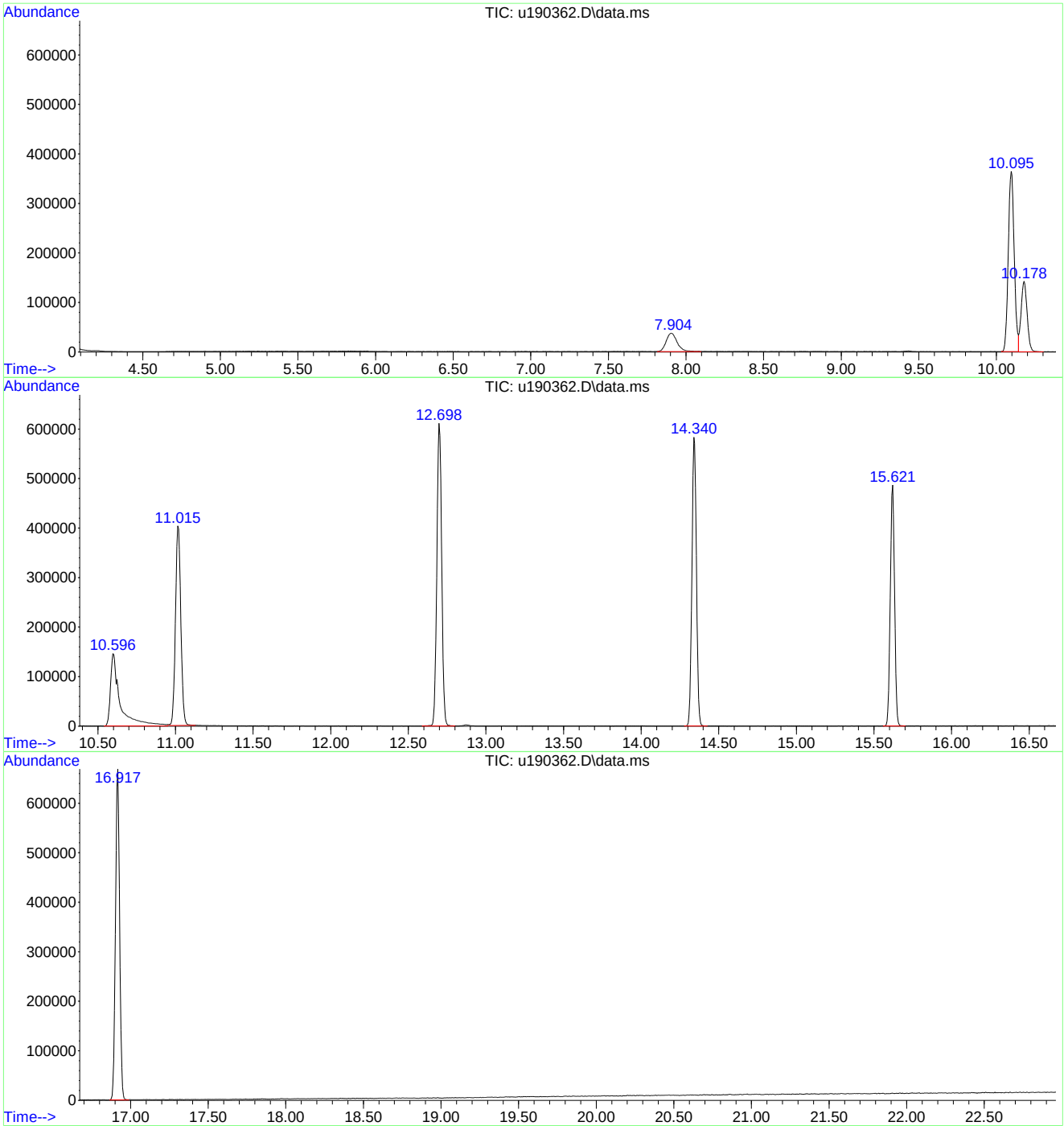
Sum of corrected areas: 7793058

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\U core\vu8783\
Data File : u190362.D
Acq On : 4 Dec 2014 10:33 am
Operator : yunxiac
Sample : mb2
Misc : ms77846,vu8783,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P



Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\U core\vu8783\
Data File : u190362.D
Acq On : 4 Dec 2014 10:33 am
Operator : yunxiac
Sample : mb2
Misc : ms77846,vu8783,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MU8763.M
Quant Title : SW-846 8260B, ZB624 60m x 250um x 1.40um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	Internal Standard RT	Internal Standard Resp	Internal Standard Conc

No Library Search Compounds Detected
****

New Jersey ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC120314M2.ICP Date Analyzed: 12/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: KF Run ID: MA35568
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:41	MA35568-STD1	1		STDA
17:47	MA35568-STD2	1		STDB
17:52	ZZZZZZ	1		
17:58	ZZZZZZ	1		
18:06	MA35568-ICV1	1		
18:17	MA35568-ICB1	1		
18:22	MA35568-ICCV1	1		
18:36	MA35568-CCB1	1		
18:43	MA35568-CRI1	1		
18:49	MA35568-CRID1	1		
18:55	MA35568-CRIA1	1		
19:01	MA35568-CRID2	1		
19:06	MA35568-ICSA1	1		
19:12	MA35568-ICSAB1	1		
19:18	ZZZZZZ	1		
19:23	ZZZZZZ	1		
19:29	MA35568-CCV1	1		
19:35	MA35568-CCB2	1		
19:41	MP83582-MB1	1		
19:46	ZZZZZZ	1		
19:52	ZZZZZZ	1		
19:58	ZZZZZZ	1		
20:03	MP83582-B1	1		
20:09	ZZZZZZ	1		
20:15	MP83582-S1	1		
20:20	MP83582-S2	1		
20:26	ZZZZZZ	1		
20:32	MA35568-CCV2	1		
20:37	MA35568-CCB3	1		
20:43	JB82352-4	1		(sample used for QC only; not part of login JB82646)
20:49	MP83582-SD1	5		
20:54	ZZZZZZ	1		
21:00	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC120314M2.ICP Date Analyzed: 12/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: KF Run ID: MA35568
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
21:06	ZZZZZZ	1		
21:11	ZZZZZZ	1		
21:17	ZZZZZZ	1		
21:23	ZZZZZZ	1		
21:29	ZZZZZZ	1		
21:34	MA35568-CCV3	1		
21:40	MA35568-CCB4	1		
21:46	MP83582-B1	1		
21:51	ZZZZZZ	1		
21:57	ZZZZZZ	1		
22:03	ZZZZZZ	1		
22:09	MP83638-B1	1		
22:14	MP83638-MB1	1		
---------->	Last reportable sample/prep for job JB82646			
22:20	ZZZZZZ	1		
22:26	MP83592-B1	5		
22:31	MP83592-MB1	5		
22:37	MA35568-CCV4	1		
22:43	MA35568-CCB5	1		
22:49	MP83592-S1	5		
22:54	MP83592-S2	5		
23:00	JB82724-1A	5		(sample used for QC only; not part of login JB82646)
23:06	MP83592-SD1	25		
23:11	ZZZZZZ	5		
23:17	ZZZZZZ	5		
23:23	ZZZZZZ	5		
23:28	ZZZZZZ	5		
23:34	ZZZZZZ	5		
23:40	MA35568-CCV5	1		
23:45	MA35568-CCB6	1		
23:51	ZZZZZZ	1		
23:57	MA35568-CRID3	1		
00:03	MA35568-CRIA2	1		
00:08	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC120314M2.ICP Date Analyzed: 12/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: KF Run ID: MA35568
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
00:14	MA35568-ICSA2	1		
00:20	MA35568-ICSAB2	1		
00:26	MA35568-CCV6	1		
00:31	MA35568-CCB7	1		
---------->	Last reportable CCB for job JB82646			
00:37	MA35568-CRI2	1		
00:43	ZZZZZZ	1		
00:49	ZZZZZZ	1		
00:54	ZZZZZZ	1		
01:00	ZZZZZZ	1		
01:06	ZZZZZZ	1		
01:12	ZZZZZZ	1		
01:17	ZZZZZZ	1		
01:23	ZZZZZZ	1		
01:29	ZZZZZZ	1		
01:35	MA35568-CCV7	1		
01:40	MA35568-CCB8	1		
01:46	ZZZZZZ	5		
01:52	ZZZZZZ	5		
01:57	ZZZZZZ	1		
02:03	ZZZZZZ	1		
02:09	ZZZZZZ	1		
02:15	ZZZZZZ	1		
02:20	MP83585-S1	1		
02:26	MP83585-S2	1		
02:32	JB82403-12	1		(sample used for QC only; not part of login JB82646)
02:37	MP83585-SD1	5		
02:43	MA35568-CCV8	1		
02:49	MA35568-CCB9	1		
02:54	MP83560-MB1	1		CRI/CCV out
03:00	MP83560-MB2	1		CRI/CCV out
03:06	MP83560-MB3	1		CRI/CCV out
03:12	MP83560-B1	1		CRI/CCV out
03:17	MP83560-B2	1		CRI/CCV out

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC120314M2.ICP Date Analyzed: 12/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: KF Run ID: MA35568
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
03:23	MP83560-B3	1		CRI/CCV out
03:28	MP83560-S1	5		CRI/CCV out
03:34	MP83560-S2	5		CRI/CCV out
03:40	JB81987-41	5		(sample used for QC only; not part of login JB82646)
03:45	MP83560-SD1	25		CRI/CCV out
03:51	MA35568-CCV9	1		
03:57	MA35568-CCB10	1		
04:03	MP83560-S3	5		CRI/CCV out
04:08	MP83560-S4	5		CRI/CCV out
04:14	JB81987-41F	5		(sample used for QC only; not part of login JB82646)
04:20	MP83560-SD2	25		CRI/CCV out
04:25	ZZZZZZ	5		
04:31	ZZZZZZ	5		
04:37	ZZZZZZ	5		
04:42	ZZZZZZ	5		
04:48	ZZZZZZ	5		
04:54	ZZZZZZ	5		
04:59	MA35568-CCV10	1		
05:05	MA35568-CCB11	1		
05:11	ZZZZZZ	5		
05:17	ZZZZZZ	5		
05:22	ZZZZZZ	5		
05:28	ZZZZZZ	5		
05:34	ZZZZZZ	5		
05:39	ZZZZZZ	5		
05:45	ZZZZZZ	5		
05:51	ZZZZZZ	5		
05:57	ZZZZZZ	5		
06:02	ZZZZZZ	5		
06:08	MA35568-CCV11	1		
06:14	MA35568-CCB12	1		
06:19	ZZZZZZ	1		
06:25	MA35568-CRID4	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC120314M2.ICP Date Analyzed: 12/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: KF Run ID: MA35568
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
06:31	MA35568-CRIA3	1		
06:37	MA35568-CRI3	1		
06:42	ZZZZZZ	1		
06:48	MA35568-ICSA3	1		
06:54	MA35568-ICSAB3	1		
06:59	MA35568-CCV12	1		
07:05	MA35568-CCB13	1		
07:11	MP83560-S1	1		CRI/CCV out
07:17	MP83560-S2	1		CRI/CCV out
07:22	JB81987-41	1		(sample used for QC only; not part of login JB82646)
07:28	MP83560-SD1	5		CRI/CCV out
07:34	MP83560-S3	1		CRI/CCV out
07:39	MP83560-S4	1		CRI/CCV out
07:45	JB81987-41F	1		(sample used for QC only; not part of login JB82646)
07:51	MP83560-SD2	5		CRI/CCV out
08:01	ZZZZZZ	1		
08:07	MA35568-CCV13	1		
08:14	MA35568-CCB14	1		
08:20	JB82208-1A	10		(sample used for QC only; not part of login JB82646)
08:27	MP83572-SD1	50		
08:32	MP83572-S1	10		
08:38	MP83572-S2	10		
08:42	ZZZZZZ	1		
08:47	MA35568-CRI4	1		
08:53	MA35568-CRID5	1		
09:00	MA35568-CCV14	1		
09:10	MA35568-CCB15	1		
09:49	ZZZZZZ	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC120314M2.ICP Date Analyzed: 12/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: KF Run ID: MA35568
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
17:41	MA35568-STD1	5178 R	114470 R	4730 R	8143 R
17:47	MA35568-STD2	4458	99777	4398	6684
17:52	ZZZZZZ	4625	103160	4470	6920
17:58	ZZZZZZ	5161	114600	4707	8095
18:06	MA35568-ICV1	4679	103730	4475	6982
18:17	MA35568-ICB1	5215	115550	4677	8188
18:22	MA35568-ICCV1	4696	102970	4439	7005
18:36	MA35568-CCB1	5203	114570	4640	8158
18:43	MA35568-CRI1	5024	111410	4540	7813
18:49	MA35568-CRID1	No results reported for the elements associated with this internal standard.			
18:55	MA35568-CRIA1	5144	114350	4597	8109
19:01	MA35568-CRID2	5126	114870	4624	8034
19:06	MA35568-ICSA1	4057	88956	4081	6072
19:12	MA35568-ICSAB1	4015	88293	3975	6025
19:18	ZZZZZZ	5032	111270	4523	7720
19:23	ZZZZZZ	5088	115150	4555	8111
19:29	MA35568-CCV1	4605	102670	4285	6892
19:35	MA35568-CCB2	5141	113520	4505	8083
19:41	MP83582-MB1	5179	113900	4537	8209
19:46	ZZZZZZ	4762	105870	4455	7234
19:52	ZZZZZZ	5331	112240	4615	8513
19:58	ZZZZZZ	5269	115990	4701	8511
20:03	MP83582-B1	No results reported for the elements associated with this internal standard.			
20:09	ZZZZZZ	4884	108290	4482	7436
20:15	MP83582-S1	4876	107000	4473	7383
20:20	MP83582-S2	4819	105800	4378	7323
20:26	ZZZZZZ	4033	89147	4206	5970
20:32	MA35568-CCV2	4593	102590	3973	6911
20:37	MA35568-CCB3	5291	116930	4582	8298
20:43	JB82352-4	5290	117170	4696	8515
20:49	MP83582-SD1	5283	116000	4548	8415
20:54	ZZZZZZ	5350	118480	4719	8558
21:00	ZZZZZZ	5238	115110	4620	8329

INTERNAL STANDARD SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC120314M2.ICP Date Analyzed: 12/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: KF Run ID: MA35568
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
21:06	ZZZZZZ	5297	116570	4620	8592
21:11	ZZZZZZ	5241	116170	4644	8406
21:17	ZZZZZZ	5211	114920	4554	8317
21:23	ZZZZZZ	5143	115150	4462	8369
21:29	ZZZZZZ	5265	117440	4544	8530
21:34	MA35568-CCV3	4626	101120	4089	6960
21:40	MA35568-CCB4	5123	113440	4343	8113
21:46	MP83582-B1	4827	107050	4339	7398
21:51	ZZZZZZ	5201	115080	4475	8446
21:57	ZZZZZZ	4656	104050	4287	7129
22:03	ZZZZZZ	4088	92193	3910	6077
22:09	MP83638-B1	5457	122700	5196	8274
22:14	MP83638-MB1	5844	131340	5304	9317
22:20	ZZZZZZ	4799	106550	4896	6995
22:26	MP83592-B1	5127	113590	4872	7437
22:31	MP83592-MB1	5111	113360	4848	7427
22:37	MA35568-CCV4	5067	113040	4678	7581
22:43	MA35568-CCB5	5585	125670	4853	8802
22:49	MP83592-S1	5062	111590	4671	7372
22:54	MP83592-S2	5084	109970	4579	7379
23:00	JB82724-1A	5108	113250	4701	7411
23:06	MP83592-SD1	5400	121540	4787	8118
23:11	ZZZZZZ	5202	115970	4760	7604
23:17	ZZZZZZ	5189	115700	4731	7541
23:23	ZZZZZZ	5196	114930	4504	7583
23:28	ZZZZZZ	5130	114630	4684	7444
23:34	ZZZZZZ	5154	114510	4670	7500
23:40	MA35568-CCV5	5136	114500	4526	7658
23:45	MA35568-CCB6	5746	128490	4822	9000
23:51	ZZZZZZ	5562	124600	4739	8633
23:57	MA35568-CRID3	5675	127190	4780	8895
00:03	MA35568-CRIA2	5690	126280	4731	8956
00:08	ZZZZZZ	5695	126990	4749	8920

INTERNAL STANDARD SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC120314M2.ICP Date Analyzed: 12/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: KF Run ID: MA35568
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
00:14	MA35568-ICSA2	4429	98140	4237	6576
00:20	MA35568-ICSAB2	4446	99092	4207	6593
00:26	MA35568-CCV6	5134	114880	4525	7643
00:31	MA35568-CCB7	5769	129150	4748	9026
00:37	MA35568-CRI2	5573	125250	4742	8650
00:43	ZZZZZZ	5762	127440	4746	8910
00:49	ZZZZZZ	5752	129190	4797	8950
00:54	ZZZZZZ	5163	111640	4627	7960
01:00	ZZZZZZ	5760	129540	4817	9041
01:06	ZZZZZZ	5759	127550	4755	8967
01:12	ZZZZZZ	5733	128180	4687	8963
01:17	ZZZZZZ	5008	113120	4447	7278
01:23	ZZZZZZ	5736	128180	4713	9259
01:29	ZZZZZZ	5691	127000	4663	9012
01:35	MA35568-CCV7	5122	114380	4407	7632
01:40	MA35568-CCB8	5721	127230	4614	8963
01:46	ZZZZZZ	5046	111140	4413	7331
01:52	ZZZZZZ	5133	114470	4449	7486
01:57	ZZZZZZ	5739	129130	4665	8895
02:03	ZZZZZZ	5377	118320	4569	7945
02:09	ZZZZZZ	5237	116750	4550	7623
02:15	ZZZZZZ	5816	129330	4672	9031
02:20	MP83585-S1	5186	115660	4389	7643
02:26	MP83585-S2	5202	116270	4443	7667
02:32	JB82403-12	5512	122450	4597	8223
02:37	MP83585-SD1	5597	123670	4547	8571
02:43	MA35568-CCV8	5067	113250	4297	7568
02:49	MA35568-CCB9	5664	125830	4484	8899
02:54	MP83560-MB1	5777	128420	4626	9001
03:00	MP83560-MB2	5769	128160	4565	8997
03:06	MP83560-MB3	5819	129050	4626	9058
03:12	MP83560-B1	5310	117690	4375	7916
03:17	MP83560-B2	5334	118140	4486	7948

INTERNAL STANDARD SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC120314M2.ICP Date Analyzed: 12/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: KF Run ID: MA35568
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
03:23	MP83560-B3	5311	118600	4432	7933
03:28	MP83560-S1	No results reported for the elements associated with this internal standard.			
03:34	MP83560-S2	No results reported for the elements associated with this internal standard.			
03:40	JB81987-41	No results reported for the elements associated with this internal standard.			
03:45	MP83560-SD1	No results reported for the elements associated with this internal standard.			
03:51	MA35568-CCV9	5037	113720	4200	7541
03:57	MA35568-CCB10	5659	126860	4496	8910
04:03	MP83560-S3	No results reported for the elements associated with this internal standard.			
04:08	MP83560-S4	No results reported for the elements associated with this internal standard.			
04:14	JB81987-41F	No results reported for the elements associated with this internal standard.			
04:20	MP83560-SD2	No results reported for the elements associated with this internal standard.			
04:25	ZZZZZZ	5480	122370	4419	8543
04:31	ZZZZZZ	5564	123790	4437	8675
04:37	ZZZZZZ	5589	124860	4430	8832
04:42	ZZZZZZ	5730	128860	4494	9029
04:48	ZZZZZZ	5463	122520	4424	8432
04:54	ZZZZZZ	5402	119700	4360	8357
04:59	MA35568-CCV10	5108	114170	4221	7653
05:05	MA35568-CCB11	5696	127790	4456	8990
05:11	ZZZZZZ	5567	124740	4435	8733
05:17	ZZZZZZ	5612	125190	4428	8858
05:22	ZZZZZZ	5509	123940	4428	8594
05:28	ZZZZZZ	5561	125480	4499	8693
05:34	ZZZZZZ	5581	125970	4461	8851
05:39	ZZZZZZ	5703	128490	4507	9030
05:45	ZZZZZZ	5473	122840	4382	8469
05:51	ZZZZZZ	5379	120840	4377	8324
05:57	ZZZZZZ	5538	125290	4390	8728
06:02	ZZZZZZ	5577	125970	4437	8839
06:08	MA35568-CCV11	5082	114120	4205	7650
06:14	MA35568-CCB12	5673	127770	4436	8983
06:19	ZZZZZZ	5491	124600	4333	8619
06:25	MA35568-CRID4	5683	126630	4369	8989

INTERNAL STANDARD SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC120314M2.ICP Date Analyzed: 12/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: KF Run ID: MA35568
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
06:31	MA35568-CRIA3	5609	126520	4424	8929
06:37	MA35568-CRI3	5537	124700	4338	8688
06:42	ZZZZZZ	5640	127620	4415	8941
06:48	MA35568-ICSA3	4391	98976	3871	6600
06:54	MA35568-ICSAB3	4423	99619	3911	6649
06:59	MA35568-CCV12	5073	114720	4125	7653
07:05	MA35568-CCB13	5670	128040	4203	8982
07:11	MP83560-S1	5144	116420	4214	7680
07:17	MP83560-S2	5156	115970	4228	7699
07:22	JB81987-41	5408	121900	4281	8254
07:28	MP83560-SD1	5559	126930	4335	8858
07:34	MP83560-S3	5108	115460	4185	7632
07:39	MP83560-S4	5117	116150	4182	7661
07:45	JB81987-41F	5391	122730	4286	8249
07:51	MP83560-SD2	5580	126450	4305	8897
08:01	ZZZZZZ	5642	127870	4300	8965
08:07	MA35568-CCV13	5061	115070	4104	7655
08:14	MA35568-CCB14	5659	128680	4312	9011
08:20	JB82208-1A	5039	113900	4128	7668
08:27	MP83572-SD1	5359	122170	4188	8442
08:32	MP83572-S1	5006	113340	4111	7595
08:38	MP83572-S2	5010	113000	4058	7622
08:42	ZZZZZZ	5673	129700	4320	9066
08:47	MA35568-CRI4	5534	126510	4236	8768
08:53	MA35568-CRID5	5668	128750	4278	9075
09:00	MA35568-CCV14	5076	115380	4051	7741
09:10	MA35568-CCB15	5600	129630	4293	9013
09:49	ZZZZZZ	5622	130080	4265	9075

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC120314M2.ICP Date Analyzed: 12/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35568 Units: ug/l

Time:			18:17		18:36		19:35		20:37	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	19	anr							
Antimony	6.0	1.2	anr							
Arsenic	3.0	1.7	anr							
Barium	200	.4	anr							
Beryllium	1.0	.13	anr							
Bismuth	20	2.1								
Boron	100	1.1								
Cadmium	3.0	.22	anr							
Calcium	5000	32	anr							
Chromium	10	.52	anr							
Cobalt	50	.29	anr							
Copper	10	1.2	anr							
Iron	100	8.8	-5.3	<100	-11	<100	-3.6	<100	3.3	<100
Lead	3.0	.97	anr							
Lithium	20	1.7								
Magnesium	5000	32	anr							
Manganese	15	.14	anr							
Molybdenum	20	.37								
Nickel	10	.54	anr							
Palladium	50	1.9								
Potassium	10000	38	anr							
Selenium	10	2	anr							
Silicon	200	10								
Silver	10	.74	anr							
Sodium	10000	10	anr							
Sulfur	50	3.7								
Strontium	10	.16								
Thallium	2.0	1.4	anr							
Tin	10	.8	anr							
Titanium	10	.53								
Tungsten	50	4.8								
Vanadium	50	.52	anr							
Zinc	20	6.5	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC120314M2.ICP Date Analyzed: 12/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35568 Units: ug/l

Time:			18:17		18:36		19:35		20:37	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.32								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC120314M2.ICP Date Analyzed: 12/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35568 Units: ug/l

Time:			21:40		22:43		23:45		00:31	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	19	anr							
Antimony	6.0	1.2	anr							
Arsenic	3.0	1.7	anr							
Barium	200	.4	anr							
Beryllium	1.0	.13	anr							
Bismuth	20	2.1								
Boron	100	1.1								
Cadmium	3.0	.22	anr							
Calcium	5000	32	anr							
Chromium	10	.52	anr							
Cobalt	50	.29	anr							
Copper	10	1.2	anr							
Iron	100	8.8	-2.2	<100	-0.40	<100	-9.8	<100	-4.2	<100
Lead	3.0	.97	anr							
Lithium	20	1.7								
Magnesium	5000	32	anr							
Manganese	15	.14	anr							
Molybdenum	20	.37								
Nickel	10	.54	anr							
Palladium	50	1.9								
Potassium	10000	38	anr							
Selenium	10	2	anr							
Silicon	200	10								
Silver	10	.74	anr							
Sodium	10000	10	anr							
Sulfur	50	3.7								
Strontium	10	.16								
Thallium	2.0	1.4	anr							
Tin	10	.8	anr							
Titanium	10	.53								
Tungsten	50	4.8								
Vanadium	50	.52	anr							
Zinc	20	6.5	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC120314M2.ICP Date Analyzed: 12/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35568 Units: ug/l

Time:			21:40		22:43		23:45		00:31	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.32								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC120314M2.ICP Date Analyzed: 12/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35568 Units: ug/l

Time:		18:22	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	anr		
Beryllium	anr		
Bismuth			
Boron			
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	40000	40700	101.8
Lead	anr		
Lithium			
Magnesium	anr		
Manganese	anr		
Molybdenum			
Nickel	anr		
Palladium			
Potassium	anr		
Selenium	anr		
Silicon			
Silver	anr		
Sodium	anr		
Sulfur			
Strontium			
Thallium	anr		
Tin	anr		
Titanium			
Tungsten			
Vanadium	anr		
Zinc	anr		

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC120314M2.ICP Date Analyzed: 12/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35568 Units: ug/l

Time:		18:22	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec

Zirconium

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC120314M2.ICP Date Analyzed: 12/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35568 Units: ug/l

Time:		18:06			19:29			20:32	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron									
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40700	101.8	40000	40200	100.5	40000	40600	101.5
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC120314M2.ICP Date Analyzed: 12/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35568 Units: ug/l

Time:		18:06			19:29			20:32	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC120314M2.ICP Date Analyzed: 12/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35568 Units: ug/l

Time:		21:34			22:37			23:40	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron									
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	41200	103.0	40000	41300	103.3	40000	40400	101.0
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC120314M2.ICP Date Analyzed: 12/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35568 Units: ug/l

Time:		21:34			22:37			23:40	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC120314M2.ICP Date Analyzed: 12/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35568 Units: ug/l

Time:		00:26	
Sample ID:	CCV	CCV6	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	anr		
Beryllium	anr		
Bismuth			
Boron			
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	40000	40600	101.5
Lead	anr		
Lithium			
Magnesium	anr		
Manganese	anr		
Molybdenum			
Nickel	anr		
Palladium			
Potassium	anr		
Selenium	anr		
Silicon			
Silver	anr		
Sodium	anr		
Sulfur			
Strontium			
Thallium	anr		
Tin	anr		
Titanium			
Tungsten			
Vanadium	anr		
Zinc	anr		

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC120314M2.ICP Date Analyzed: 12/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35568 Units: ug/l

Time:		00:26	
Sample ID:	CCV	CCV6	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC120314M2.ICP Date Analyzed: 12/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35568 Units: ug/l

Time:				18:43		18:55		19:01	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		94.5	94.5	501	100.2		
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	anr					
Molybdenum	20								
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50								
Strontium	10								
Thallium	10		2.0	anr					
Tin	10			anr					
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC120314M2.ICP Date Analyzed: 12/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35568 Units: ug/l

Time:				18:43		18:55		19:01	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10								

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC120314M2.ICP Date Analyzed: 12/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35568 Units: ug/l

Time:				23:57		00:03	
Sample ID:	CRI	CRIA	CRID	CRID3		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr			
Antimony	6.0	20	3.0	anr			
Arsenic	8.0	20	3.0	anr			
Barium	200		4.0	anr			
Beryllium	2.0		1.0	anr			
Bismuth	20						
Boron	100		10				
Cadmium	3.0		1.0	anr			
Calcium	5000	2000	1000	anr			
Chromium	10		2.0	anr			
Cobalt	50		3.0	anr			
Copper	10		2.0				
Iron	100	500				521	104.2
Lead	3.0	20	2.5	anr			
Lithium	20						
Magnesium	5000	2000	100				
Manganese	15		3.0	anr			
Molybdenum	20						
Nickel	10		4.0	anr			
Palladium	50						
Potassium	5000		2000	anr			
Selenium	10	20	5.0				
Silicon	200						
Silver	5.0		1.0				
Sodium	5000		1000	anr			
Sulfur	50						
Strontium	10						
Thallium	10		2.0	anr			
Tin	10						
Titanium	10						
Tungsten	50						
Vanadium	50		2.0	anr			
Zinc	20		10	anr			

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC120314M2.ICP Date Analyzed: 12/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35568 Units: ug/l

Time:				23:57		00:03	
Sample ID:	CRI	CRIA	CRID	CRID3		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec
Zirconium	10						

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC120314M2.ICP Date Analyzed: 12/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA35568 Units: ug/l

Time:			19:06		19:12		00:14		00:20	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	508000	101.6	523000	104.6	513000	102.6	519000	103.8
Antimony		1000	-0.30		1060	106.0	0.10		1110	111.0
Arsenic		1000	3.0		1070	107.0	3.2		1080	108.0
Barium		500	0.40		528	105.6	-0.60		528	105.6
Beryllium		500	0.90		519	103.8	1.0		527	105.4
Bismuth		500	12.5		475	95.0	9.0		507	101.4
Boron			-0.30		15.5		0.40		14.7	
Cadmium		1000	0.40		992	99.2	0.90		1050	105.0
Calcium	400000	400000	387000	96.8	397000	99.3	384000	96.0	384000	96.0
Chromium		500	4.3		501	100.2	5.0		487	97.4
Cobalt		500	0.50		477	95.4	0.60		482	96.4
Copper		500	-3.3		480	96.0	1.1		531	106.2
Iron	200000	200000	187000	93.5	199000	99.5	190000	95.0	198000	99.0
Lead		1000	-1.8		946	94.6	-1.3		955	95.5
Lithium		500	7.9		703	140.6	11.7		752	150.4*
Magnesium	500000	500000	490000	98.0	494000	98.8	496000	99.2	490000	98.0
Manganese		500	2.0		511	102.2	2.3		502	100.4
Molybdenum		500	-1.6		502	100.4	-1.4		493	98.6
Nickel		1000	-1.5		933	93.3	-1.8		939	93.9
Palladium		500	-22		467	93.4	-22		506	101.2
Potassium			181		214		73.3		131	
Selenium		1000	-1.7		1040	104.0	-0.90		1080	108.0
Silicon			3.6		7.9		1.8		6.5	
Silver		1000	0.50		1130	113.0	-1.5		1180	118.0
Sodium			134		164		430		440	
Sulfur		500	-49		449	89.8	-43		477	95.4
Strontium			-4.8		-4.8		-4.7		-4.7	
Thallium		1000	1.1		954	95.4	0.50		975	97.5
Tin			-3.9		-4.5		-4.0		-4.7	
Titanium			4.1		4.2		4.6		4.8	
Tungsten		500	2.5		508	101.6	5.3		497	99.4
Vanadium		500	-3.6		497	99.4	-3.5		490	98.0
Zinc		1000	3.1		992	99.2	3.4		975	97.5

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SC120314M2.ICP Date Analyzed: 12/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA35568 Units: ug/l

Time:			19:06		19:12		00:14		00:20	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	4.9		501	100.2	5.3		497	99.4

(*) Outside of QC limits
(anr) Analyte not requested

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA35575
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:53	MA35575-STD1	1		STDA
11:59	MA35575-STD2	1		STDB
12:06	ZZZZZZ	1		
12:11	ZZZZZZ	1		
12:18	MA35575-ICV1	1		
12:30	MA35575-ICB1	1		
12:35	MA35575-ICCV1	1		
12:44	MA35575-CCB1	1		
12:51	MA35575-CRI1	1		
12:57	MA35575-CRID1	1		
13:03	MA35575-CRIA1	1		
13:09	MA35575-ICSA1	1		
13:15	MA35575-ICSAB1	1		
13:22	ZZZZZZ	1		
13:28	ZZZZZZ	1		
13:34	ZZZZZZ	1		
13:40	ZZZZZZ	1		
13:46	MA35575-CCV1	1		
13:52	MA35575-CCB2	1		
13:58	ZZZZZZ	1		
14:04	ZZZZZZ	5		
14:10	ZZZZZZ	1		
14:16	ZZZZZZ	1		
14:22	MP83640-MB1	1		
14:28	MP83639-MB1	1		
14:34	MP83641-MB1	1		
14:40	MA35575-CCV2	1		
14:46	MA35575-CCB3	1		
14:52	MP83640-B1	1		
14:58	MP83640-S1	1		
15:04	MP83640-S2	1		
15:10	JB82425-1	1		(sample used for QC only; not part of login JB82646)
15:17	MP83640-SD1	5		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA35575
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:23	ZZZZZZ	1		
15:29	ZZZZZZ	1		
15:35	ZZZZZZ	1		
15:41	ZZZZZZ	1		
15:47	MA35575-CCV3	1		
15:53	MA35575-CCB4	1		
15:59	ZZZZZZ	1		
16:05	ZZZZZZ	1		
16:11	ZZZZZZ	1		
16:17	ZZZZZZ	1		
16:23	ZZZZZZ	1		
16:29	ZZZZZZ	1		
16:35	ZZZZZZ	1		
16:41	ZZZZZZ	1		
16:47	ZZZZZZ	1		
16:54	MA35575-CCV4	1		
17:00	MA35575-CCB5	1		
17:06	MA35575-CRI2	1		
17:12	MA35575-CRID2	1		
17:18	MA35575-CRIA2	1		
17:24	MA35575-CRID3	1		
17:30	MA35575-ICSA2	1		
17:36	MA35575-ICSAB2	1		
17:42	MA35575-CCV5	1		
17:48	MA35575-CCB6	1		
17:54	ZZZZZZ	1		
18:00	ZZZZZZ	1		
18:06	ZZZZZZ	1		
18:12	ZZZZZZ	1		
18:18	ZZZZZZ	1		
18:25	MP83639-B1	1		
18:30	MP83639-S1	1		
18:36	MP83639-S2	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA35575
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:42	JB82378-1F	1		(sample used for QC only; not part of login JB82646)
18:49	MA35575-CCV6	1		
18:55	MA35575-CCB7	1		
19:01	MP83639-SD1	5		
19:07	ZZZZZZ	1		
19:13	ZZZZZZ	1		
19:19	ZZZZZZ	1		
19:25	ZZZZZZ	1		
19:31	ZZZZZZ	1		
19:37	ZZZZZZ	1		
19:43	ZZZZZZ	1		
19:49	ZZZZZZ	1		
19:55	MA35575-CCV7	1		
20:01	MA35575-CCB8	1		
20:07	ZZZZZZ	1		
20:13	ZZZZZZ	1		
20:19	ZZZZZZ	1		
20:25	ZZZZZZ	1		
20:31	ZZZZZZ	1		
20:37	ZZZZZZ	1		
20:43	ZZZZZZ	1		
20:49	ZZZZZZ	1		
20:55	ZZZZZZ	1		
21:01	MA35575-CCV8	1		
21:07	MA35575-CCB9	1		
21:13	ZZZZZZ	1		
21:19	MP83641-B1	1		
21:25	MP83641-S1	1		
21:31	MP83641-S2	1		
21:37	JB82473-10	1		(sample used for QC only; not part of login JB82646)
21:43	MP83641-SD1	5		
21:49	ZZZZZZ	1		
21:55	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA35575
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
22:01	ZZZZZZ	1		
22:07	MA35575-CCV9	1		
22:13	MA35575-CCB10	1		
22:19	ZZZZZZ	1		
22:25	ZZZZZZ	1		
22:30	JB82646-9	1		
22:37	JB82646-10	1		
22:43	JB82646-11	1		
---------->	Last reportable sample/prep for job JB82646			
22:49	MP83659-MB1	1		
22:55	MP83659-B1	1		
23:01	MP83659-S1	1		
23:07	MP83659-S2	1		
23:13	MA35575-CCV10	1		
23:19	MA35575-CCB11	1		
23:25	MA35575-CRI3	1		
23:31	MA35575-CRID4	1		
23:37	MA35575-CRIA3	1		
23:43	ZZZZZZ	3		
23:49	MA35575-ICSA3	1		
23:55	MA35575-ICSAB3	1		
00:01	MA35575-CCV11	1		
00:07	MA35575-CCB12	1		
---------->	Last reportable CCB for job JB82646			
00:13	ZZZZZZ	1		
00:19	ZZZZZZ	1		
00:25	ZZZZZZ	1		
00:31	ZZZZZZ	1		
00:38	ZZZZZZ	1		
00:44	ZZZZZZ	1		
00:50	ZZZZZZ	1		
00:56	ZZZZZZ	1		
01:02	ZZZZZZ	1		
01:08	ZZZZZZ	1		
01:14	MA35575-CCV12	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA35575
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
01:20	MA35575-CCB13	1		
01:26	MP83674-MB1	1		
01:32	MP83674-MB2	1		
01:38	MP83674-B1	1		
01:44	MP83674-B2	1		
01:50	ZZZZZZ	1		
01:56	ZZZZZZ	1		
02:02	ZZZZZZ	3		
02:08	ZZZZZZ	1		
02:14	ZZZZZZ	2		
02:20	ZZZZZZ	1		
02:27	MA35575-CCV13	1		
02:32	MA35575-CCB14	1		
02:39	ZZZZZZ	1		
02:45	MP83640-S1	3		
02:51	MP83640-S2	3		
02:57	JB82425-1	3		(sample used for QC only; not part of login JB82646)
03:03	MP83640-SD1	15		
03:09	ZZZZZZ	2		
03:15	ZZZZZZ	5		
03:21	ZZZZZZ	10		
03:27	ZZZZZZ	3		
03:33	ZZZZZZ	5		
03:39	MA35575-CCV14	1		
03:45	MA35575-CCB15	1		
03:51	ZZZZZZ	10		
03:57	ZZZZZZ	3		
04:03	JB82600-3	1		(sample used for QC only; not part of login JB82646)
04:09	MP83659-SD1	5		
04:15	ZZZZZZ	1		
04:21	ZZZZZZ	1		
04:27	ZZZZZZ	1		
04:33	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA35575
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
04:39	ZZZZZZ	1		
04:45	ZZZZZZ	1		
04:51	MA35575-CCV15	1		
04:57	MA35575-CCB16	1		
05:03	ZZZZZZ	1		
05:09	ZZZZZZ	1		
05:15	ZZZZZZ	1		
05:21	ZZZZZZ	1		
05:27	ZZZZZZ	1		
05:33	ZZZZZZ	1		
05:39	ZZZZZZ	1		
05:45	ZZZZZZ	1		
05:51	ZZZZZZ	1		
05:57	ZZZZZZ	1		
06:03	MA35575-CCV16	1		
06:09	MA35575-CCB17	1		
06:15	MA35575-CRI4	1		
06:21	ZZZZZZ	50		
06:27	MA35575-CRIA4	1		
06:33	MA35575-CRID5	1		
06:39	MA35575-CCV17	1		
06:45	MA35575-CCB18	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA35575
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
11:53	MA35575-STD1	2598 R	137800 R	40671 R	6961 R
11:59	MA35575-STD2	2381	127900	39944	6310
12:06	ZZZZZZ	2444	131460	40275	6471
12:11	ZZZZZZ	2595	138290	41061	6958
12:18	MA35575-ICV1	2446	131160	40253	6482
12:30	MA35575-ICB1	2528	138670	41005	6800
12:35	MA35575-ICCV1	2440	131450	40463	6461
12:44	MA35575-CCB1	2570	138700	41367	6903
12:51	MA35575-CRI1	2560	136140	40917	6866
12:57	MA35575-CRID1	2544	137590	41062	6832
13:03	MA35575-CRIA1	2527	138370	41320	6784
13:09	MA35575-ICSA1	2232	121070	38626	5805
13:15	MA35575-ICSAB1	2212	121150	38723	5743
13:22	ZZZZZZ	1969	129060	39218	6273
13:28	ZZZZZZ	2560	137810	41319	6880
13:34	ZZZZZZ	2486	134840	40989	6807
13:40	ZZZZZZ	2507	137140	41160	6847
13:46	MA35575-CCV1	2445	131390	40460	6476
13:52	MA35575-CCB2	2571	138200	41312	6902
13:58	ZZZZZZ	2532	136960	41536	6835
14:04	ZZZZZZ	2433	131730	39714	6517
14:10	ZZZZZZ	2528	135420	40941	6786
14:16	ZZZZZZ	2545	135870	41309	6831
14:22	MP83640-MB1	2532	137360	41191	6826
14:28	MP83639-MB1	2528	138350	41198	6825
14:34	MP83641-MB1	2573	142130	42166	6963
14:40	MA35575-CCV2	2454	131890	40130	6486
14:46	MA35575-CCB3	2565	137590	40898	6873
14:52	MP83640-B1	2455	132500	39938	6572
14:58	MP83640-S1	2326	123990	39673	6011
15:04	MP83640-S2	2334	124460	39616	6022
15:10	JB82425-1	2366	126340	40288	6079
15:17	MP83640-SD1	2494	132740	40604	6634

INTERNAL STANDARD SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA35575
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
15:23	ZZZZZZ	2438	131410	40569	6544
15:29	ZZZZZZ	2468	131810	39651	6616
15:35	ZZZZZZ	2490	134790	40850	6695
15:41	ZZZZZZ	2472	133030	40871	6578
15:47	MA35575-CCV3	2455	131580	40372	6494
15:53	MA35575-CCB4	2561	138660	40804	6876
15:59	ZZZZZZ	2438	131630	40534	6504
16:05	ZZZZZZ	2423	130560	40446	6461
16:11	ZZZZZZ	2526	139540	41397	6832
16:17	ZZZZZZ	2169	112900	38548	5426
16:23	ZZZZZZ	2185	118830	39063	5650
16:29	ZZZZZZ	2270	122520	39473	5893
16:35	ZZZZZZ	2543	138740	40215	6873
16:41	ZZZZZZ	2153	113140	38805	5367
16:47	ZZZZZZ	2184	118440	39037	5674
16:54	MA35575-CCV4	2439	132910	39822	6480
17:00	MA35575-CCB5	2557	138810	41162	6889
17:06	MA35575-CRI2	2534	138150	41014	6813
17:12	MA35575-CRID2	2551	139200	41348	6869
17:18	MA35575-CRIA2	2565	138660	40959	6897
17:24	MA35575-CRID3	2560	140530	40572	6885
17:30	MA35575-ICSA2	2260	121760	38052	5854
17:36	MA35575-ICSAB2	2259	122860	38777	5842
17:42	MA35575-CCV5	2476	132600	40167	6518
17:48	MA35575-CCB6	2586	139000	40742	6927
17:54	ZZZZZZ	2265	121720	38876	5847
18:00	ZZZZZZ	2547	139350	41377	6854
18:06	ZZZZZZ	2449	130610	40413	6332
18:12	ZZZZZZ	2404	130500	40076	6354
18:18	ZZZZZZ	2407	130970	40491	6352
18:25	MP83639-B1	2476	134700	40769	6616
18:30	MP83639-S1	2399	130660	40119	6327
18:36	MP83639-S2	2398	130570	40039	6327

INTERNAL STANDARD SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA35575
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
18:42	JB82378-1F	2430	131060	40255	6431
18:49	MA35575-CCV6	2476	132700	40280	6521
18:55	MA35575-CCB7	2586	138600	40722	6897
19:01	MP83639-SD1	2541	136690	40815	6785
19:07	ZZZZZZ	2442	131950	40119	6487
19:13	ZZZZZZ	2518	132430	40291	6613
19:19	ZZZZZZ	2505	134810	40465	6624
19:25	ZZZZZZ	2504	133940	40645	6649
19:31	ZZZZZZ	2467	999999 !	40078	6510
19:37	ZZZZZZ	2473	133430	40275	6530
19:43	ZZZZZZ	2498	134410	40430	6635
19:49	ZZZZZZ	No results reported for the elements associated with this internal standard.			
19:55	MA35575-CCV7	2491	133280	40209	6550
20:01	MA35575-CCB8	2601	139040	40831	6912
20:07	ZZZZZZ	2579	139360	40878	6893
20:13	ZZZZZZ	2591	139730	41606	6803
20:19	ZZZZZZ	2894	156320	47179	6542
20:25	ZZZZZZ	No results reported for the elements associated with this internal standard.			
20:31	ZZZZZZ	2647	142940	42939	6604
20:37	ZZZZZZ	2559	137690	40896	6797
20:43	ZZZZZZ	2630	142040	41937	6806
20:49	ZZZZZZ	2587	999999 !	41091	6942
20:55	ZZZZZZ	2479	132010	40534	6543
21:01	MA35575-CCV8	2503	130750	39732	6562
21:07	MA35575-CCB9	2614	136710	40403	6930
21:13	ZZZZZZ	2517	133530	40255	6678
21:19	MP83641-B1	2577	135910	40688	6817
21:25	MP83641-S1	2474	131800	40812	6530
21:31	MP83641-S2	2469	128010	40002	6509
21:37	JB82473-10	2508	132540	40361	6666
21:43	MP83641-SD1	2565	135020	40225	6856
21:49	ZZZZZZ	2558	133240	40772	6809
21:55	ZZZZZZ	2511	131540	40440	6629

INTERNAL STANDARD SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA35575
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
22:01	ZZZZZZ	2542	133580	40734	6794
22:07	MA35575-CCV9	2486	129730	39626	6514
22:13	MA35575-CCB10	2602	137230	39616	6904
22:19	ZZZZZZ	2571	134030	40886	6805
22:25	ZZZZZZ	2528	132750	40413	6688
22:30	JB82646-9	2457	129520	39746	6427
22:37	JB82646-10	2518	132160	40789	6642
22:43	JB82646-11	2339	121050	38686	6030
22:49	MP83659-MB1	2579	135630	40359	6868
22:55	MP83659-B1	2501	132540	40360	6635
23:01	MP83659-S1	2467	130070	40262	6421
23:07	MP83659-S2	2470	129530	39993	6419
23:13	MA35575-CCV10	2504	130500	39735	6553
23:19	MA35575-CCB11	2606	136370	39994	6916
23:25	MA35575-CRI3	2573	133550	40466	6840
23:31	MA35575-CRID4	2590	135080	40293	6873
23:37	MA35575-CRIA3	2603	137210	40981	6922
23:43	ZZZZZZ	2596	135920	40222	6894
23:49	MA35575-ICSA3	2273	122090	38031	5840
23:55	MA35575-ICSAB3	2299	120380	37940	5885
00:01	MA35575-CCV11	2507	130380	39776	6546
00:07	MA35575-CCB12	2602	138480	40246	6919
00:13	ZZZZZZ	2568	129140	39971	6535
00:19	ZZZZZZ	2609	136270	40389	6895
00:25	ZZZZZZ	2608	136630	40474	6927
00:31	ZZZZZZ	2618	136750	40193	6915
00:38	ZZZZZZ	2605	136130	40158	6919
00:44	ZZZZZZ	2612	139030	39596	6948
00:50	ZZZZZZ	2417	126040	39175	6285
00:56	ZZZZZZ	2617	137280	40503	6946
01:02	ZZZZZZ	2608	134950	39392	6900
01:08	ZZZZZZ	2592	136560	40490	6900
01:14	MA35575-CCV12	2499	129910	39740	6543

INTERNAL STANDARD SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA35575
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
01:20	MA35575-CCB13	2607	136520	39911	6924
01:26	MP83674-MB1	2635	138800	41320	7054
01:32	MP83674-MB2	2615	139470	41179	7006
01:38	MP83674-B1	2533	133620	40910	6744
01:44	MP83674-B2	2518	132950	40886	6709
01:50	ZZZZZZ	2533	134460	41676	6805
01:56	ZZZZZZ	2534	134760	41102	6830
02:02	ZZZZZZ	2577	135530	40750	6892
02:08	ZZZZZZ	2538	133670	41951	6798
02:14	ZZZZZZ	2518	131530	40180	6668
02:20	ZZZZZZ	2485	130370	39764	6526
02:27	MA35575-CCV13	2510	131210	39900	6568
02:32	MA35575-CCB14	2613	138030	40527	6949
02:39	ZZZZZZ	2574	136240	40550	6879
02:45	MP83640-S1	2505	129930	40160	6509
02:51	MP83640-S2	2492	128520	39841	6470
02:57	JB82425-1	2521	129930	39730	6570
03:03	MP83640-SD1	2590	135560	40379	6857
03:09	ZZZZZZ	5108 !	999999 !	999999 !	999999 !
03:15	ZZZZZZ	2447	124430	38977	6231
03:21	ZZZZZZ	4938 !a	999999 !a	46004	12007 !a
03:27	ZZZZZZ	2454	126510	38809	6363
03:33	ZZZZZZ	2436	124810	39051	6200
03:39	MA35575-CCV14	2520	130320	39436	6553
03:45	MA35575-CCB15	2610	136710	40114	6912
03:51	ZZZZZZ	2524	130800	39459	6628
03:57	ZZZZZZ	2451	127300	39274	6372
04:03	JB82600-3	2526	131810	40299	6531
04:09	MP83659-SD1	2596	135060	40205	6847
04:15	ZZZZZZ	2569	134400	39959	6731
04:21	ZZZZZZ	2574	135670	40184	6822
04:27	ZZZZZZ	2462	128300	39526	6444
04:33	ZZZZZZ	2530	133650	40070	6656

INTERNAL STANDARD SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA35575
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
04:39	ZZZZZZ	2517	130490	39392	6582
04:45	ZZZZZZ	2484	129080	38985	6480
04:51	MA35575-CCV15	2515	130020	38879	6557
04:57	MA35575-CCB16	2624	137530	40194	6917
05:03	ZZZZZZ	2442	127650	39824	6361
05:09	ZZZZZZ	2527	132260	39419	6684
05:15	ZZZZZZ	2507	131760	39582	6630
05:21	ZZZZZZ	2596	137080	40350	6895
05:27	ZZZZZZ	2578	131440	40873	6824
05:33	ZZZZZZ	2550	132820	40278	6736
05:39	ZZZZZZ	2514	131900	40059	6580
05:45	ZZZZZZ	2506	131580	39656	6590
05:51	ZZZZZZ	2517	130310	39684	6603
05:57	ZZZZZZ	2609	136630	40540	6913
06:03	MA35575-CCV16	2532	131040	40001	6598
06:09	MA35575-CCB17	2625	136650	40606	6945
06:15	MA35575-CRI4	2591	135590	40008	6854
06:21	ZZZZZZ	2613	135610	40226	6916
06:27	MA35575-CRIA4	2624	136670	40570	6951
06:33	MA35575-CRID5	2620	136410	40141	6933
06:39	MA35575-CCV17	2508	129800	39217	6542
06:45	MA35575-CCB18	2628	136770	40251	6960

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

(a) No samples reported for the elements associated with this internal standard.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35575 Units: ug/l

Time:			12:30		12:44		13:52		14:46	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	5.9	anr							
Antimony	6.0	1.6	anr							
Arsenic	3.0	.86	anr							
Barium	200	.19	anr							
Beryllium	1.0	.12	anr							
Bismuth	20	2.4								
Boron	100	.88	anr							
Cadmium	3.0	.2	anr							
Calcium	5000	9.6	anr							
Chromium	10	.39	anr							
Cobalt	50	.35	anr							
Copper	10	.82	anr							
Iron	100	2.9	1.2	<100	1.7	<100	3.5	<100	1.5	<100
Lead	3.0	1.6	anr							
Lithium	20	2.9								
Magnesium	5000	15	anr							
Manganese	15	.12	anr							
Molybdenum	20	.33								
Nickel	10	.35	anr							
Palladium	50	1.7								
Potassium	10000	30	anr							
Selenium	10	1.7	anr							
Silicon	200	2.3								
Silver	10	.89	anr							
Sodium	10000	13	anr							
Sulfur	50	6.7								
Strontium	10	.17								
Thallium	2.0	1.7	anr							
Tin	10	1.1	anr							
Titanium	10	.39								
Tungsten	50	1.4								
Vanadium	50	.34	anr							
Zinc	20	1.6	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35575 Units: ug/l

Time:			12:30		12:44		13:52		14:46	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.31								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35575 Units: ug/l

Time:			15:53		17:00		17:48		18:55	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	5.9	anr							
Antimony	6.0	1.6	anr							
Arsenic	3.0	.86	anr							
Barium	200	.19	anr							
Beryllium	1.0	.12	anr							
Bismuth	20	2.4								
Boron	100	.88	anr							
Cadmium	3.0	.2	anr							
Calcium	5000	9.6	anr							
Chromium	10	.39	anr							
Cobalt	50	.35	anr							
Copper	10	.82	anr							
Iron	100	2.9	1.5	<100	-0.20	<100	0.20	<100	0.70	<100
Lead	3.0	1.6	anr							
Lithium	20	2.9								
Magnesium	5000	15	anr							
Manganese	15	.12	anr							
Molybdenum	20	.33								
Nickel	10	.35	anr							
Palladium	50	1.7								
Potassium	10000	30	anr							
Selenium	10	1.7	anr							
Silicon	200	2.3								
Silver	10	.89	anr							
Sodium	10000	13	anr							
Sulfur	50	6.7								
Strontium	10	.17								
Thallium	2.0	1.7	anr							
Tin	10	1.1	anr							
Titanium	10	.39								
Tungsten	50	1.4								
Vanadium	50	.34	anr							
Zinc	20	1.6	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35575 Units: ug/l

Time:			15:53		17:00		17:48		18:55	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.31								

(*) Outside of QC limits
(anr) Analyte not requested

8.2.2
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BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35575 Units: ug/l

Time:			20:01		21:07		22:13		23:19	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	5.9	anr							
Antimony	6.0	1.6	anr							
Arsenic	3.0	.86	anr							
Barium	200	.19	anr							
Beryllium	1.0	.12	anr							
Bismuth	20	2.4								
Boron	100	.88	anr							
Cadmium	3.0	.2	anr							
Calcium	5000	9.6	anr							
Chromium	10	.39	anr							
Cobalt	50	.35	anr							
Copper	10	.82	anr							
Iron	100	2.9	0.70	<100	2.3	<100	-0.10	<100	-0.90	<100
Lead	3.0	1.6	anr							
Lithium	20	2.9								
Magnesium	5000	15	anr							
Manganese	15	.12	anr							
Molybdenum	20	.33								
Nickel	10	.35	anr							
Palladium	50	1.7								
Potassium	10000	30	anr							
Selenium	10	1.7	anr							
Silicon	200	2.3								
Silver	10	.89	anr							
Sodium	10000	13	anr							
Sulfur	50	6.7								
Strontium	10	.17								
Thallium	2.0	1.7	anr							
Tin	10	1.1	anr							
Titanium	10	.39								
Tungsten	50	1.4								
Vanadium	50	.34	anr							
Zinc	20	1.6	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35575 Units: ug/l

Time:			20:01		21:07		22:13		23:19	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.31								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35575 Units: ug/l

Time:			00:07	
Sample ID:			CCB12	
Metal	RL	IDL	raw	final
Aluminum	200	5.9	anr	
Antimony	6.0	1.6	anr	
Arsenic	3.0	.86	anr	
Barium	200	.19	anr	
Beryllium	1.0	.12	anr	
Bismuth	20	2.4		
Boron	100	.88	anr	
Cadmium	3.0	.2	anr	
Calcium	5000	9.6	anr	
Chromium	10	.39	anr	
Cobalt	50	.35	anr	
Copper	10	.82	anr	
Iron	100	2.9	0.0	<100
Lead	3.0	1.6	anr	
Lithium	20	2.9		
Magnesium	5000	15	anr	
Manganese	15	.12	anr	
Molybdenum	20	.33		
Nickel	10	.35	anr	
Palladium	50	1.7		
Potassium	10000	30	anr	
Selenium	10	1.7	anr	
Silicon	200	2.3		
Silver	10	.89	anr	
Sodium	10000	13	anr	
Sulfur	50	6.7		
Strontium	10	.17		
Thallium	2.0	1.7	anr	
Tin	10	1.1	anr	
Titanium	10	.39		
Tungsten	50	1.4		
Vanadium	50	.34	anr	
Zinc	20	1.6	anr	

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35575 Units: ug/l

Time:			00:07	
Sample ID:			CCB12	
Metal	RL	IDL	raw	final
Zirconium	10	.31		

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35575 Units: ug/l

Time:		12:35	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	anr		
Beryllium	anr		
Bismuth			
Boron	anr		
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	40000	40300	100.8
Lead	anr		
Lithium			
Magnesium	anr		
Manganese	anr		
Molybdenum			
Nickel	anr		
Palladium			
Potassium	anr		
Selenium	anr		
Silicon			
Silver	anr		
Sodium	anr		
Sulfur			
Strontium			
Thallium	anr		
Tin	anr		
Titanium			
Tungsten			
Vanadium	anr		
Zinc	anr		

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35575 Units: ug/l

Time:		12:35	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35575 Units: ug/l

Time:		12:18			13:46			14:40	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40500	101.3	40000	40300	100.8	40000	40600	101.5
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35575 Units: ug/l

Time:		12:18			13:46			14:40	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35575 Units: ug/l

Time:		15:47			16:54			17:42	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40700	101.8	40000	41500	103.8	40000	40900	102.3
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35575 Units: ug/l

Time:		15:47			16:54			17:42	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35575 Units: ug/l

Time:		18:49			19:55			21:01	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40800	102.0	40000	41000	102.5	40000	40700	101.8
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35575 Units: ug/l

Time:		18:49			19:55			21:01	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35575 Units: ug/l

Time:		22:07			23:13			00:01	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	41100	102.8	40000	41000	102.5	40000	41100	102.8
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35575 Units: ug/l

Time:		22:07			23:13			00:01	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35575 Units: ug/l

Time:				12:51		12:57		13:03	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID1		CRIA1	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		105	105.0			513	102.6
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	anr					
Molybdenum	20								
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50								
Strontium	10								
Thallium	10		2.0	anr					
Tin	10			anr					
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35575 Units: ug/l

Time:				12:51		12:57		13:03	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID1		CRIA1	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35575 Units: ug/l

Time:				17:06		17:12		17:18	
Sample ID:	CRI	CRIA	CRID	CRI2		CRID2		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		105	105.0			523	104.6
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	anr					
Molybdenum	20								
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50								
Strontium	10								
Thallium	10		2.0	anr					
Tin	10			anr					
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35575 Units: ug/l

Time:				17:06		17:12		17:18	
Sample ID:	CRI	CRIA	CRID	CRI2		CRID2		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35575 Units: ug/l

Time:				17:24		23:25		23:31	
Sample ID:	CRI	CRIA	CRID	CRID3		CRI3		CRID4	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500				104	104.0		
Lead	3.0	20	2.5						
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	anr					
Molybdenum	20								
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0						
Sodium	5000		1000	anr					
Sulfur	50								
Strontium	10								
Thallium	10		2.0	anr					
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35575 Units: ug/l

Time:				17:24		23:25		23:31	
Sample ID:	CRI	CRIA	CRID	CRID3		CRI3		CRID4	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35575 Units: ug/l

Time:				23:37	
Sample ID:	CRI	CRIA	CRID	CRIA3	
Metal	True	True	True	Results	% Rec
Aluminum	200	500	100	anr	
Antimony	6.0	20	3.0	anr	
Arsenic	8.0	20	3.0	anr	
Barium	200		4.0		
Beryllium	2.0		1.0		
Bismuth	20				
Boron	100		10		
Cadmium	3.0		1.0		
Calcium	5000	2000	1000	anr	
Chromium	10		2.0		
Cobalt	50		3.0		
Copper	10		2.0		
Iron	100	500		512	102.4
Lead	3.0	20	2.5	anr	
Lithium	20				
Magnesium	5000	2000	100	anr	
Manganese	15		3.0		
Molybdenum	20				
Nickel	10		4.0		
Palladium	50				
Potassium	5000		2000		
Selenium	10	20	5.0	anr	
Silicon	200				
Silver	5.0		1.0		
Sodium	5000		1000		
Sulfur	50				
Strontium	10				
Thallium	10		2.0		
Tin	10				
Titanium	10				
Tungsten	50				
Vanadium	50		2.0		
Zinc	20		10		

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35575 Units: ug/l

Time:				23:37	
Sample ID:	CRI	CRIA	CRID	CRIA3	
Metal	True	True	True	Results	% Rec
Zirconium	10		5.0		

(*) Outside of QC limits
(anr) Analyte not requested

8.2.5

8

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA35575 Units: ug/l

Time:			13:09		13:15		17:30		17:36	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	502000	100.4	505000	101.0	513000	102.6	509000	101.8
Antimony		1000	-5.1		1060	106.0	-4.7		1040	104.0
Arsenic		1000	0.0		1060	106.0	-1.2		1050	105.0
Barium		500	-0.40		506	101.2	-0.50		502	100.4
Beryllium		500	0.10		509	101.8	0.0		498	99.6
Bismuth		500	1.0		515	103.0	-0.60		506	101.2
Boron			0.10		-3.0		-0.20		-2.6	
Cadmium		1000	0.20		1030	103.0	0.0		1020	102.0
Calcium	400000	400000	378000	94.5	377000	94.3	382000	95.5	377000	94.3
Chromium		500	0.80		475	95.0	0.70		479	95.8
Cobalt		500	-0.30		488	97.6	0.0		485	97.0
Copper		500	1.3		500	100.0	1.6		496	99.2
Iron	200000	200000	181000	90.5	190000	95.0	185000	92.5	191000	95.5
Lead		1000	2.8		972	97.2	1.5		966	96.6
Lithium		500	1.3		573	114.6	0.60		562	112.4
Magnesium	500000	500000	539000	107.8	528000	105.6	540000	108.0	522000	104.4
Manganese		500	3.1		492	98.4	3.4		488	97.6
Molybdenum		500	-6.2		491	98.2	-6.0		484	96.8
Nickel		1000	0.60		976	97.6	0.20		969	96.9
Palladium		500	-1.2		523	104.6	-1.0		519	103.8
Potassium			93.0		90.8		98.4		101	
Selenium		1000	3.2		1020	102.0	1.6		1010	101.0
Silicon			-27		-46		-30		-46	
Silver		1000	9.8		1100	110.0	9.0		1100	110.0
Sodium			4.1		8.2		44.9		47.6	
Sulfur		500	20.8		546	109.2	10.9		526	105.2
Strontium			-5.6		-5.7		-5.8		-5.8	
Thallium		1000	2.4		960	96.0	3.2		953	95.3
Tin			0.0		0.50		-0.90		1.4	
Titanium			-0.40		-0.80		-0.40		-0.40	
Tungsten		500	-2.0		489	97.8	-2.6		479	95.8
Vanadium		500	-0.30		482	96.4	-0.20		480	96.0
Zinc		1000	1.4		959	95.9	1.1		958	95.8

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA35575 Units: ug/l

Time:			13:09		13:15		17:30		17:36	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	23.5*		631	126.2*	23.9*		633	126.6*

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA35575 Units: ug/l

Time:			23:49		23:55	
Sample ID:	ICSA	ICSAB	ICSA3		ICSAB3	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	500000	500000	502000	100.4	512000	102.4
Antimony		1000	-4.3		1050	105.0
Arsenic		1000	0.20		1060	106.0
Barium		500	-0.50		508	101.6
Beryllium		500	0.10		509	101.8
Bismuth		500	-1.1		493	98.6
Boron			0.30		-2.7	
Cadmium		1000	0.10		1010	101.0
Calcium	400000	400000	385000	96.3	387000	96.8
Chromium		500	0.70		486	97.2
Cobalt		500	0.0		491	98.2
Copper		500	2.1		503	100.6
Iron	200000	200000	182000	91.0	191000	95.5
Lead		1000	-1.1		983	98.3
Lithium		500	-0.40		589	117.8
Magnesium	500000	500000	553000	110.6	550000	110.0
Manganese		500	2.2		506	101.2
Molybdenum		500	-6.3		481	96.2
Nickel		1000	0.10		987	98.7
Palladium		500	0.0		535	107.0
Potassium			82.7		92.5	
Selenium		1000	-0.10		1000	100.0
Silicon			-27		-45	
Silver		1000	7.1		1120	112.0
Sodium			19.9		30.5	
Sulfur		500	36.7		564	112.8
Strontium			-6.0		-5.9	
Thallium		1000	-0.40		956	95.6
Tin			-0.60		-0.40	
Titanium			-0.30		-1.0	
Tungsten		500	-1.4		476	95.2
Vanadium		500	0.20		495	99.0
Zinc		1000	1.7		955	95.5

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA35575 Units: ug/l

Time:			23:49		23:55	
Sample ID:	ICSA	ICSAB	ICSA3		ICSAB3	
Metal	True	True	Results	% Rec	Results	% Rec
Zirconium		500	23.3*		643	128.6*

(*) Outside of QC limits
(anr) Analyte not requested

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA35578
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:10	MA35578-STD1	1		STDA
09:16	MA35578-STD2	1		STDB
09:22	ZZZZZZ	1		
09:28	ZZZZZZ	1		
09:37	MA35578-ICV1	1		
09:52	MA35578-ICB1	1		
09:59	MA35578-ICV2	1		
10:15	MA35578-ICB2	1		
10:20	MA35578-ICCV1	1		
10:40	MA35578-CCB1	1		
10:45	MA35578-CRI1	1		
10:51	MA35578-CRID1	1		
10:57	MA35578-CRIA1	1		
11:04	MA35578-CRI2	1		
11:13	MA35578-ICSA1	1		
11:19	MA35578-ICSAB1	1		
11:25	ZZZZZZ	1		
11:31	ZZZZZZ	1		
11:38	MA35578-CCV1	1		
11:43	MA35578-CCB2	1		
11:55	ZZZZZZ	1		
12:01	ZZZZZZ	1		
12:07	ZZZZZZ	1		
12:13	ZZZZZZ	1		
12:19	ZZZZZZ	1		
12:25	ZZZZZZ	1		
12:32	ZZZZZZ	1		
12:38	ZZZZZZ	1		
12:44	ZZZZZZ	1		
12:50	MA35578-CCV2	1		
12:56	MA35578-CCB3	1		
13:02	ZZZZZZ	1		
13:08	MP83627-S1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA35578
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:14	MP83627-S2	1		
13:20	JB82473-3	1		(sample used for QC only; not part of login JB82646)
13:26	MP83627-SD1	5		
13:32	ZZZZZZ	1		
13:38	ZZZZZZ	1		
13:44	ZZZZZZ	1		
13:51	ZZZZZZ	1		
13:57	MA35578-CCV3	1		
14:03	MA35578-CCB4	1		
14:09	ZZZZZZ	1		
14:15	ZZZZZZ	1		
14:21	ZZZZZZ	1		
14:27	ZZZZZZ	1		
14:33	MP83645-S1	1		
14:39	MP83645-S2	1		
14:45	JB82736-2	1		(sample used for QC only; not part of login JB82646)
14:51	MP83645-SD1	5		
14:57	ZZZZZZ	1		
15:03	MA35578-CCV4	1		
15:09	MA35578-CCB5	1		
15:16	ZZZZZZ	1		
15:21	ZZZZZZ	1		
15:28	MP83586-MB1	1		
15:34	ZZZZZZ	1		
15:40	ZZZZZZ	1		
15:45	ZZZZZZ	1		
15:51	ZZZZZZ	1		
15:57	ZZZZZZ	5		
16:03	ZZZZZZ	1		
16:09	MA35578-CCV5	1		
16:15	MA35578-CCB6	1		
16:21	MA35578-CRID2	1		
16:27	MA35578-CRI3	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA35578
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:34	MA35578-CRIA2	1		
16:40	ZZZZZZ	25		
16:46	MA35578-ICSA2	1		
16:52	MA35578-ICSAB2	1		
16:58	MA35578-CCV6	1		
17:04	MA35578-CCB7	1		
17:10	ZZZZZZ	1		
17:16	ZZZZZZ	1		
17:22	ZZZZZZ	1		
17:28	ZZZZZZ	1		
17:34	ZZZZZZ	1		
17:40	ZZZZZZ	1		
17:46	ZZZZZZ	1		
17:52	ZZZZZZ	1		
17:58	ZZZZZZ	1		
18:04	MA35578-CCV7	1		
18:10	MA35578-CCB8	1		
18:16	ZZZZZZ	1		
18:22	ZZZZZZ	1		
18:28	ZZZZZZ	1		
18:34	ZZZZZZ	1		
18:40	ZZZZZZ	1		
18:46	ZZZZZZ	1		
18:52	ZZZZZZ	1		
18:58	ZZZZZZ	1		
19:04	ZZZZZZ	1		
19:10	MA35578-CCV8	1		
19:16	MA35578-CCB9	1		
19:22	ZZZZZZ	1		
19:28	ZZZZZZ	1		
19:35	ZZZZZZ	1		
19:41	ZZZZZZ	1		
19:47	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA35578
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
19:53	ZZZZZZ	1		
19:59	ZZZZZZ	1		
20:05	ZZZZZZ	1		
20:11	ZZZZZZ	1		
20:17	MA35578-CCV9	1		
20:23	MA35578-CCB10	1		
20:29	ZZZZZZ	1		
20:35	ZZZZZZ	1		
20:41	ZZZZZZ	1		
20:48	MP83643-MB1	1		
20:54	MP83643-B1	1		
21:00	MP83643-S1	1		Na high
21:06	MP83643-S2	1		Na high
21:12	JB82516-4	1		(sample used for QC only; not part of login JB82646)
21:18	MP83643-SD1	5		Na high
21:24	MA35578-CCV10	1		
21:30	MA35578-CCB11	1		
21:36	ZZZZZZ	2		
21:42	MA35578-CRID3	1		
21:48	MA35578-CRIA3	1		
21:55	ZZZZZZ	15		
22:01	MA35578-CRI4	1		
22:07	MA35578-ICSA3	1		
22:13	MA35578-ICSAB3	1		
22:19	MA35578-CCV11	1		
22:25	MA35578-CCB12	1		
22:31	ZZZZZZ	1		
22:38	ZZZZZZ	1		
22:44	ZZZZZZ	1		
22:50	ZZZZZZ	1		
22:56	ZZZZZZ	1		
23:02	ZZZZZZ	1		
23:09	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA35578
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
23:15	ZZZZZZ	1		
23:21	ZZZZZZ	1		
23:27	MA35578-CCV12	1		
23:33	MA35578-CCB13	1		
23:39	ZZZZZZ	1		
23:45	ZZZZZZ	1		
23:51	ZZZZZZ	1		
23:57	ZZZZZZ	1		
00:03	ZZZZZZ	1		
00:10	ZZZZZZ	1		
00:16	ZZZZZZ	1		
00:22	ZZZZZZ	1		
00:28	ZZZZZZ	1		
00:34	ZZZZZZ	1		
00:40	MA35578-CCV13	1		
00:46	MA35578-CCB14	1		
00:52	ZZZZZZ	1		
00:58	ZZZZZZ	1		
01:05	ZZZZZZ	1		
01:11	ZZZZZZ	1		
01:17	ZZZZZZ	1		
01:23	ZZZZZZ	1		
01:29	ZZZZZZ	1		
01:35	MP83651-MB1	1		
01:41	MP83651-MB2	1		
01:47	MP83651-B1	1		
01:53	MA35578-CCV14	1		
01:59	MA35578-CCB15	1		
02:05	MP83651-B2	1		
02:11	MP83651-S1	1		
02:17	MP83651-S2	1		
02:23	JB82652-1AF	1		(sample used for QC only; not part of login JB82646)
02:29	MP83651-SD1	5		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA35578
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
02:35	ZZZZZZ	1		
02:42	ZZZZZZ	1		
02:48	ZZZZZZ	1		
02:54	ZZZZZZ	1		
03:00	ZZZZZZ	1		
03:06	MA35578-CCV15	1		
03:12	MA35578-CCB16	1		
03:18	ZZZZZZ	1		
03:25	ZZZZZZ	1		
03:31	ZZZZZZ	1		
03:37	ZZZZZZ	1		
03:43	ZZZZZZ	1		
03:49	ZZZZZZ	1		
03:55	ZZZZZZ	1		
04:01	ZZZZZZ	1		
04:07	ZZZZZZ	1		
04:14	ZZZZZZ	1		
04:20	MA35578-CCV16	1		
04:26	MA35578-CCB17	1		
04:32	MA35578-CRI5	1		
04:38	MA35578-CRID4	1		
04:44	MA35578-CRIA4	1		
04:50	MA35578-ICSA4	1		
04:56	MA35578-ICSAB4	1		
05:02	MA35578-CCV17	1		
05:08	MA35578-CCB18	1		
05:15	ZZZZZZ	1		
05:21	ZZZZZZ	1		
05:27	ZZZZZZ	1		
05:33	ZZZZZZ	1		
05:39	ZZZZZZ	1		
05:45	MP83638-S1	1		
05:51	MP83638-S2	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA35578
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
05:57	JB82646-3	1		
06:03	MP83638-SD1	5		
06:09	JB82646-1	1		
---------->	Last reportable sample/prep for job JB82646			
06:15	MA35578-CCV18	1		
06:21	MA35578-CCB19	1		
06:27	MP83643-MB1	1		
06:33	ZZZZZZ	1		
06:39	ZZZZZZ	2		
06:45	ZZZZZZ	1		
06:51	MA35578-CRIA5	1		
06:57	MA35578-CRI6	1		
07:03	MA35578-CRID5	1		
07:08	MA35578-ICSA5	1		
07:12	MA35578-ICSAB5	1		
07:17	MA35578-CCV19	1		
07:26	MA35578-CCB20	1		
---------->	Last reportable CCB for job JB82646			

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA35578
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
09:10	MA35578-STD1	2569 R	55095 R	13678 R	4622 R
09:16	MA35578-STD2	2368	54084	13590	4198
09:22	ZZZZZZ	2424	54162	13603	4297
09:28	ZZZZZZ	2575	55413	13896	4630
09:37	MA35578-ICV1	No results reported for the elements associated with this internal standard.			
09:52	MA35578-ICB1	No results reported for the elements associated with this internal standard.			
09:59	MA35578-ICV2	2400	53837	13614	4270
10:15	MA35578-ICB2	2470	54288	13742	4463
10:20	MA35578-ICCV1	2447	54203	13752	4343
10:40	MA35578-CCB1	2513	55268	13889	4528
10:45	MA35578-CRI1	No results reported for the elements associated with this internal standard.			
10:51	MA35578-CRID1	2466	54628	13715	4452
10:57	MA35578-CRIA1	2468	54417	13808	4451
11:04	MA35578-CRI2	2451	54553	13756	4424
11:13	MA35578-ICSA1	2214	50530	13272	3881
11:19	MA35578-ICSAB1	2220	50871	13430	3885
11:25	ZZZZZZ	2440	54613	13705	4491
11:31	ZZZZZZ	2430	54838	13828	4454
11:38	MA35578-CCV1	2390	53251	13760	4252
11:43	MA35578-CCB2	2513	55069	13893	4525
11:55	ZZZZZZ	2480	54666	13839	4473
12:01	ZZZZZZ	2478	54657	13881	4470
12:07	ZZZZZZ	2474	54427	13844	4455
12:13	ZZZZZZ	2309	52756	13382	4082
12:19	ZZZZZZ	2475	54424	13747	4460
12:25	ZZZZZZ	2465	54284	13839	4444
12:32	ZZZZZZ	2475	53119	14571	4279
12:38	ZZZZZZ	2291	52658	13394	4075
12:44	ZZZZZZ	2464	54369	13816	4455
12:50	MA35578-CCV2	2372	53237	13721	4227
12:56	MA35578-CCB3	2499	55173	14041	4507
13:02	ZZZZZZ	2483	55339	14116	4512
13:08	MP83627-S1	2379	54702	13936	4268

INTERNAL STANDARD SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA35578
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
13:14	MP83627-S2	2385	54057	14108	4280
13:20	JB82473-3	2444	54711	14166	4410
13:26	MP83627-SD1	2446	53727	14157	4432
13:32	ZZZZZZ	2509	55099	14191	4547
13:38	ZZZZZZ	2426	53792	14079	4392
13:44	ZZZZZZ	2419	54277	13974	4351
13:51	ZZZZZZ	2390	53718	14025	4318
13:57	MA35578-CCV3	2358	53382	13738	4213
14:03	MA35578-CCB4	2513	53523	13853	4539
14:09	ZZZZZZ	2414	54593	14026	4333
14:15	ZZZZZZ	2419	54266	14138	4395
14:21	ZZZZZZ	2416	54221	13913	4387
14:27	ZZZZZZ	2357	53222	13836	4249
14:33	MP83645-S1	2299	54044	13844	4075
14:39	MP83645-S2	2314	52900	13664	4095
14:45	JB82736-2	2328	53897	13656	4154
14:51	MP83645-SD1	2401	54020	13694	4335
14:57	ZZZZZZ	2416	54969	14131	4184
15:03	MA35578-CCV4	2372	53018	13711	4227
15:09	MA35578-CCB5	2474	54008	13795	4467
15:16	ZZZZZZ	2561	57996	15027	4241
15:21	ZZZZZZ	2368	55028	13983	4125
15:28	MP83586-MB1	2485	54669	14069	4497
15:34	ZZZZZZ	2382	53581	13816	4275
15:40	ZZZZZZ	2425	54906	14416	4163
15:45	ZZZZZZ	2418	55004	14453	4148
15:51	ZZZZZZ	2493	55777	14604	4264
15:57	ZZZZZZ	2466	54478	14008	4388
16:03	ZZZZZZ	2469	56220	14565	4221
16:09	MA35578-CCV5	2374	53440	13631	4234
16:15	MA35578-CCB6	2463	54782	13779	4456
16:21	MA35578-CRID2	2443	54502	13728	4427
16:27	MA35578-CRI3	2431	54225	13641	4401

INTERNAL STANDARD SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA35578
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
16:34	MA35578-CRIA2	2448	54247	13778	4435
16:40	ZZZZZZ	2440	54116	13802	4421
16:46	MA35578-ICSA2	2196	50263	13263	3860
16:52	MA35578-ICSAB2	2199	50601	13335	3868
16:58	MA35578-CCV6	2359	53130	13685	4215
17:04	MA35578-CCB7	2445	54077	13608	4429
17:10	ZZZZZZ	2577	58283	15026	4238
17:16	ZZZZZZ	2475	55130	14223	4292
17:22	ZZZZZZ	2589	57705	15160	4266
17:28	ZZZZZZ	2568	57093	14742	4267
17:34	ZZZZZZ	2468	55017	14136	4282
17:40	ZZZZZZ	2671	59675	15507	4261
17:46	ZZZZZZ	2456	54496	13947	4388
17:52	ZZZZZZ	2479	54946	14397	4347
17:58	ZZZZZZ	2543	56305	14626	4347
18:04	MA35578-CCV7	2369	53301	13658	4228
18:10	MA35578-CCB8	2534	55361	13839	4573
18:16	ZZZZZZ	2595	57272	14878	4358
18:22	ZZZZZZ	2586	56724	14749	4367
18:28	ZZZZZZ	No results reported for the elements associated with this internal standard.			
18:34	ZZZZZZ	2519	55875	14492	4343
18:40	ZZZZZZ	2474	54820	14083	4365
18:46	ZZZZZZ	2457	55151	14214	4256
18:52	ZZZZZZ	2480	55020	14155	4347
18:58	ZZZZZZ	2377	53964	13464	4235
19:04	ZZZZZZ	2449	54543	13732	4416
19:10	MA35578-CCV8	2383	53280	13550	4244
19:16	MA35578-CCB9	2495	54907	13668	4507
19:22	ZZZZZZ	2397	54360	13446	4302
19:28	ZZZZZZ	2389	53771	13567	4167
19:35	ZZZZZZ	2416	54120	13756	4346
19:41	ZZZZZZ	2427	54176	13663	4340
19:47	ZZZZZZ	2419	54255	13601	4308

INTERNAL STANDARD SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA35578
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
19:53	ZZZZZZ	2390	54007	13686	4300
19:59	ZZZZZZ	2387	53928	13619	4272
20:05	ZZZZZZ	2364	53848	13577	4217
20:11	ZZZZZZ	2328	53617	13373	4063
20:17	MA35578-CCV9	2395	53517	13484	4258
20:23	MA35578-CCB10	2490	54442	13620	4496
20:29	ZZZZZZ	2417	54414	13817	4315
20:35	ZZZZZZ	2411	54582	13686	4329
20:41	ZZZZZZ	2401	54048	13740	4312
20:48	MP83643-MB1	2499	55035	13672	4507
20:54	MP83643-B1	2423	54577	13606	4345
21:00	MP83643-S1	2281	52463	13113	3888
21:06	MP83643-S2	2276	52144	13206	3885
21:12	JB82516-4	2291	52451	12957	3924
21:18	MP83643-SD1	2415	54434	13448	4266
21:24	MA35578-CCV10	2406	53986	13567	4272
21:30	MA35578-CCB11	2487	54316	13505	4484
21:36	ZZZZZZ	2471	54658	13472	4452
21:42	MA35578-CRID3	2485	55055	13518	4484
21:48	MA35578-CRIA3	2481	54858	13633	4480
21:55	ZZZZZZ	2489	54952	13553	4489
22:01	MA35578-CRI4	2468	54740	13478	4451
22:07	MA35578-ICSA3	2228	50546	13098	3896
22:13	MA35578-ICSAB3	2234	50890	13211	3902
22:19	MA35578-CCV11	2399	53136	13371	4261
22:25	MA35578-CCB12	2504	54886	13568	4512
22:31	ZZZZZZ	2205	50038	12640	3701
22:38	ZZZZZZ	2195	49321	12791	3689
22:44	ZZZZZZ	2376	53810	13417	4141
22:50	ZZZZZZ	2384	53776	13435	4176
22:56	ZZZZZZ	2371	53603	13355	4107
23:02	ZZZZZZ	2203	50331	12734	3684
23:09	ZZZZZZ	2490	54970	13620	4502

INTERNAL STANDARD SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA35578
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
23:15	ZZZZZZ	2172	50499	12644	3710
23:21	ZZZZZZ	2154	50134	12593	3678
23:27	MA35578-CCV12	2402	52860	13436	4272
23:33	MA35578-CCB13	2489	54057	13520	4492
23:39	ZZZZZZ	2405	54095	13696	4191
23:45	ZZZZZZ	2427	53193	13488	4355
23:51	ZZZZZZ	2466	53540	13744	4425
23:57	ZZZZZZ	2457	54559	13791	4359
00:03	ZZZZZZ	2389	53967	13464	4228
00:10	ZZZZZZ	2425	54276	13539	4332
00:16	ZZZZZZ	2269	51752	13082	3914
00:22	ZZZZZZ	2467	54082	13616	4453
00:28	ZZZZZZ	2440	54577	13508	4409
00:34	ZZZZZZ	2483	54865	13636	4494
00:40	MA35578-CCV13	2414	53722	13629	4292
00:46	MA35578-CCB14	2495	54357	13590	4500
00:52	ZZZZZZ	2532	55329	14029	4594
00:58	ZZZZZZ	2507	55307	14163	4551
01:05	ZZZZZZ	2514	55722	14039	4533
01:11	ZZZZZZ	2524	55513	14078	4562
01:17	ZZZZZZ	2524	55481	13951	4549
01:23	ZZZZZZ	2495	55056	13877	4534
01:29	ZZZZZZ	2524	55131	13965	4579
01:35	MP83651-MB1	2513	55328	13759	4554
01:41	MP83651-MB2	2502	55272	13947	4541
01:47	MP83651-B1	2453	54886	13850	4405
01:53	MA35578-CCV14	2400	53832	13487	4271
01:59	MA35578-CCB15	2497	54560	13646	4510
02:05	MP83651-B2	2462	54756	13950	4425
02:11	MP83651-S1	2428	54632	13796	4342
02:17	MP83651-S2	2418	54539	13852	4328
02:23	JB82652-1AF	2461	54846	13773	4437
02:29	MP83651-SD1	2485	55149	13649	4505

INTERNAL STANDARD SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA35578
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
02:35	ZZZZZZ	2504	58557	15007	4117
02:42	ZZZZZZ	2278	53368	13218	3945
02:48	ZZZZZZ	2314	52927	13272	4002
02:54	ZZZZZZ	2533	59305	15019	4175
03:00	ZZZZZZ	2306	52440	13190	3951
03:06	MA35578-CCV15	2399	53167	13640	4280
03:12	MA35578-CCB16	2491	55057	13685	4508
03:18	ZZZZZZ	2317	52712	13135	3999
03:25	ZZZZZZ	2486	54932	13776	4512
03:31	ZZZZZZ	2471	54869	13746	4459
03:37	ZZZZZZ	2488	55167	13844	4490
03:43	ZZZZZZ	2476	55199	13819	4468
03:49	ZZZZZZ	2480	55000	13745	4478
03:55	ZZZZZZ	2481	55083	13792	4475
04:01	ZZZZZZ	2465	55307	13818	4456
04:07	ZZZZZZ	2208	52044	12952	3907
04:14	ZZZZZZ	2151	51381	12639	3779
04:20	MA35578-CCV16	2424	53923	13741	4318
04:26	MA35578-CCB17	2510	55032	13778	4534
04:32	MA35578-CRI5	2482	56188	13744	4485
04:38	MA35578-CRID4	2496	54894	13674	4515
04:44	MA35578-CRIA4	2512	55571	13955	4541
04:50	MA35578-ICSA4	2245	50584	13204	3925
04:56	MA35578-ICSAB4	2255	51578	13277	3936
05:02	MA35578-CCV17	2424	54225	13645	4310
05:08	MA35578-CCB18	2501	54878	13632	4520
05:15	ZZZZZZ	2396	54041	13447	4287
05:21	ZZZZZZ	2220	52189	13061	3932
05:27	ZZZZZZ	2174	51679	12749	3825
05:33	ZZZZZZ	2551	56304	14084	4644
05:39	ZZZZZZ	2487	55304	14064	4491
05:45	MP83638-S1	2391	54164	13863	4238
05:51	MP83638-S2	2383	54033	14038	4224

INTERNAL STANDARD SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA35578
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
05:57	JB82646-3	2373	54399	13543	4259
06:03	MP83638-SD1	2453	54643	13667	4452
06:09	JB82646-1	2493	55156	14029	4533
06:15	MA35578-CCV18	2396	53547	13598	4285
06:21	MA35578-CCB19	2498	55313	13696	4531
06:27	MP83643-MB1	2498	55208	13787	4534
06:33	ZZZZZZ	2510	54863	14086	4498
06:39	ZZZZZZ	2433	55228	13729	4322
06:45	ZZZZZZ	2416	54423	13945	4340
06:51	MA35578-CRIA5	2490	54878	13625	4523
06:57	MA35578-CRI6	2475	55158	13481	4487
07:03	MA35578-CRID5	2489	54588	13735	4523
07:08	MA35578-ICSA5	2223	50622	13283	3913
07:12	MA35578-ICSAB5	2241	51585	13374	3935
07:17	MA35578-CCV19	2417	53964	13645	4316
07:26	MA35578-CCB20	2505	55211	13664	4549

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35578 Units: ug/l

Time:			10:15		10:40		11:43		12:56	
Sample ID:			ICB2		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	8.1	anr							
Antimony	6.0	1.6	anr							
Arsenic	3.0	.92	anr							
Barium	200	.22	anr							
Beryllium	1.0	.14	anr							
Bismuth	20	1								
Boron	100	1.2	anr							
Cadmium	3.0	.17	anr							
Calcium	2000	14	anr							
Chromium	10	.53	anr							
Cobalt	50	.31	anr							
Copper	10	.61	anr							
Iron	100	3.1	-0.70	<100	-1.4	<100	0.20	<100	0.40	<100
Lead	3.0	1.7	anr							
Lithium	20	.78								
Magnesium	2000	33	anr							
Manganese	15	.087	anr							
Molybdenum	20	.28	anr							
Nickel	10	.84	anr							
Palladium	50	1.1								
Potassium	2000	19	anr							
Selenium	10	2.6	anr							
Silicon	200	8.2								
Silver	10	.62	anr							
Sodium	2000	5.8	anr							
Sulfur	50	13								
Strontium	10	.05								
Thallium	2.0	1.5	anr							
Tin	10	.79	anr							
Titanium	10	.58								
Tungsten	50	4.7								
Vanadium	50	.59	anr							
Zinc	20	3.3	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35578 Units: ug/l

Time: / Sample ID:			10:15 ICB2		10:40 CCB1		11:43 CCB2		12:56 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.2								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35578 Units: ug/l

Time:			14:03		15:09		16:15		17:04	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	8.1	anr							
Antimony	6.0	1.6	anr							
Arsenic	3.0	.92	anr							
Barium	200	.22	anr							
Beryllium	1.0	.14	anr							
Bismuth	20	1								
Boron	100	1.2	anr							
Cadmium	3.0	.17	anr							
Calcium	2000	14	anr							
Chromium	10	.53	anr							
Cobalt	50	.31	anr							
Copper	10	.61	anr							
Iron	100	3.1	0.50	<100	2.1	<100	4.7	<100	-1.4	<100
Lead	3.0	1.7	anr							
Lithium	20	.78								
Magnesium	2000	33	anr							
Manganese	15	.087	anr							
Molybdenum	20	.28	anr							
Nickel	10	.84	anr							
Palladium	50	1.1								
Potassium	2000	19	anr							
Selenium	10	2.6	anr							
Silicon	200	8.2								
Silver	10	.62	anr							
Sodium	2000	5.8	anr							
Sulfur	50	13								
Strontium	10	.05								
Thallium	2.0	1.5	anr							
Tin	10	.79	anr							
Titanium	10	.58								
Tungsten	50	4.7								
Vanadium	50	.59	anr							
Zinc	20	3.3	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35578 Units: ug/l

Time:			14:03		15:09		16:15		17:04	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.2								

(*) Outside of QC limits
(anr) Analyte not requested

8.3.2
8

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35578 Units: ug/l

Time: / Sample ID:			18:10 CCB8		19:16 CCB9		20:23 CCB10		21:30 CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	8.1	anr							
Antimony	6.0	1.6	anr							
Arsenic	3.0	.92	anr							
Barium	200	.22	anr							
Beryllium	1.0	.14	anr							
Bismuth	20	1								
Boron	100	1.2	anr							
Cadmium	3.0	.17	anr							
Calcium	2000	14	anr							
Chromium	10	.53	anr							
Cobalt	50	.31	anr							
Copper	10	.61	anr							
Iron	100	3.1	0.0	<100	0.50	<100	1.4	<100	1.9	<100
Lead	3.0	1.7	anr							
Lithium	20	.78								
Magnesium	2000	33	anr							
Manganese	15	.087	anr							
Molybdenum	20	.28	anr							
Nickel	10	.84	anr							
Palladium	50	1.1								
Potassium	2000	19	anr							
Selenium	10	2.6	anr							
Silicon	200	8.2								
Silver	10	.62	anr							
Sodium	2000	5.8	anr							
Sulfur	50	13								
Strontium	10	.05								
Thallium	2.0	1.5	anr							
Tin	10	.79	anr							
Titanium	10	.58								
Tungsten	50	4.7								
Vanadium	50	.59	anr							
Zinc	20	3.3	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35578 Units: ug/l

Time:			18:10		19:16		20:23		21:30	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.2								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35578 Units: ug/l

Time:			22:25		23:33		00:46		01:59	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	8.1	anr							
Antimony	6.0	1.6	anr							
Arsenic	3.0	.92	anr							
Barium	200	.22	anr							
Beryllium	1.0	.14	anr							
Bismuth	20	1								
Boron	100	1.2	anr							
Cadmium	3.0	.17	anr							
Calcium	2000	14	anr							
Chromium	10	.53	anr							
Cobalt	50	.31	anr							
Copper	10	.61	anr							
Iron	100	3.1	1.2	<100	-0.80	<100	-0.30	<100	-1.0	<100
Lead	3.0	1.7	anr							
Lithium	20	.78								
Magnesium	2000	33	anr							
Manganese	15	.087	anr							
Molybdenum	20	.28	anr							
Nickel	10	.84	anr							
Palladium	50	1.1								
Potassium	2000	19	anr							
Selenium	10	2.6	anr							
Silicon	200	8.2								
Silver	10	.62	anr							
Sodium	2000	5.8	anr							
Sulfur	50	13								
Strontium	10	.05								
Thallium	2.0	1.5	anr							
Tin	10	.79	anr							
Titanium	10	.58								
Tungsten	50	4.7								
Vanadium	50	.59	anr							
Zinc	20	3.3	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35578 Units: ug/l

Time:			22:25		23:33		00:46		01:59	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.2								

(*) Outside of QC limits
(anr) Analyte not requested

8.3.2
8

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35578 Units: ug/l

Time:			03:12		04:26		05:08		06:21	
Sample ID:			CCB16		CCB17		CCB18		CCB19	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	8.1	anr							
Antimony	6.0	1.6	anr							
Arsenic	3.0	.92	anr							
Barium	200	.22	anr							
Beryllium	1.0	.14	anr							
Bismuth	20	1								
Boron	100	1.2	anr							
Cadmium	3.0	.17	anr							
Calcium	2000	14	anr							
Chromium	10	.53	anr							
Cobalt	50	.31	anr							
Copper	10	.61	anr							
Iron	100	3.1	2.4	<100	1.2	<100	-3.7	<100	0.40	<100
Lead	3.0	1.7	anr							
Lithium	20	.78								
Magnesium	2000	33	anr							
Manganese	15	.087	anr							
Molybdenum	20	.28	anr							
Nickel	10	.84	anr							
Palladium	50	1.1								
Potassium	2000	19	anr							
Selenium	10	2.6	anr							
Silicon	200	8.2								
Silver	10	.62	anr							
Sodium	2000	5.8	anr							
Sulfur	50	13								
Strontium	10	.05								
Thallium	2.0	1.5	anr							
Tin	10	.79	anr							
Titanium	10	.58								
Tungsten	50	4.7								
Vanadium	50	.59	anr							
Zinc	20	3.3	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35578 Units: ug/l

Time:			03:12		04:26		05:08		06:21	
Sample ID:			CCB16		CCB17		CCB18		CCB19	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.2								

(*) Outside of QC limits
(anr) Analyte not requested

8.3.2

8

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35578 Units: ug/l

Time:			07:26	
Sample ID:			CCB20	
Metal	RL	IDL	raw	final
Aluminum	200	8.1	anr	
Antimony	6.0	1.6	anr	
Arsenic	3.0	.92	anr	
Barium	200	.22	anr	
Beryllium	1.0	.14	anr	
Bismuth	20	1		
Boron	100	1.2	anr	
Cadmium	3.0	.17	anr	
Calcium	2000	14	anr	
Chromium	10	.53	anr	
Cobalt	50	.31	anr	
Copper	10	.61	anr	
Iron	100	3.1	2.7	<100
Lead	3.0	1.7	anr	
Lithium	20	.78		
Magnesium	2000	33	anr	
Manganese	15	.087	anr	
Molybdenum	20	.28	anr	
Nickel	10	.84	anr	
Palladium	50	1.1		
Potassium	2000	19	anr	
Selenium	10	2.6	anr	
Silicon	200	8.2		
Silver	10	.62	anr	
Sodium	2000	5.8	anr	
Sulfur	50	13		
Strontium	10	.05		
Thallium	2.0	1.5	anr	
Tin	10	.79	anr	
Titanium	10	.58		
Tungsten	50	4.7		
Vanadium	50	.59	anr	
Zinc	20	3.3	anr	

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35578 Units: ug/l

Time:			07:26	
Sample ID:			CCB20	
Metal	RL	IDL	raw	final
Zirconium	10	.2		

(*) Outside of QC limits
(anr) Analyte not requested

8.3.2
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35578 Units: ug/l

Time:		10:20	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	anr		
Beryllium	anr		
Bismuth			
Boron	anr		
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	40000	41000	102.5
Lead	anr		
Lithium			
Magnesium	anr		
Manganese	anr		
Molybdenum	anr		
Nickel	anr		
Palladium			
Potassium	anr		
Selenium	anr		
Silicon			
Silver	anr		
Sodium	anr		
Sulfur			
Strontium			
Thallium	anr		
Tin	anr		
Titanium			
Tungsten			
Vanadium	anr		
Zinc	anr		

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35578 Units: ug/l

Time:		10:20	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35578 Units: ug/l

Time:		09:59			11:38			12:50	
Sample ID:	ICV	ICV2		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	41300	103.3	40000	40800	102.0	40000	40700	101.8
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35578 Units: ug/l

Time:		09:59			11:38			12:50	
Sample ID:	ICV	ICV2		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35578 Units: ug/l

Time:		13:57			15:03			16:09	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40700	101.8	40000	40700	101.8	40000	41000	102.5
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35578 Units: ug/l

Time:		13:57			15:03			16:09	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35578 Units: ug/l

Time:		16:58			18:04			19:10	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	41300	103.3	40000	40800	102.0	40000	40700	101.8
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35578 Units: ug/l

Time:		16:58			18:04			19:10	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35578 Units: ug/l

Time:		20:17			21:24			22:19	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40800	102.0	40000	40500	101.3	40000	41700	104.3
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35578 Units: ug/l

Time:		20:17			21:24			22:19	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35578 Units: ug/l

Time:		23:27			00:40			01:53	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	41000	102.5	40000	41000	102.5	40000	41200	103.0
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35578 Units: ug/l

Time:		23:27			00:40			01:53	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35578 Units: ug/l

Time:		03:06			04:20			05:02	
Sample ID:	CCV	CCV15		CCV	CCV16		CCV	CCV17	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40700	101.8	40000	40700	101.8	40000	41000	102.5
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35578 Units: ug/l

Time:		03:06			04:20			05:02	
Sample ID:	CCV	CCV15		CCV	CCV16		CCV	CCV17	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35578 Units: ug/l

Time:		06:15			07:17	
Sample ID:	CCV	CCV18		CCV	CCV19	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum	anr					
Antimony	anr					
Arsenic	anr					
Barium	anr					
Beryllium	anr					
Bismuth						
Boron	anr					
Cadmium	anr					
Calcium	anr					
Chromium	anr					
Cobalt	anr					
Copper	anr					
Iron	40000	40900	102.3	40000	41300	103.3
Lead	anr					
Lithium						
Magnesium	anr					
Manganese	anr					
Molybdenum	anr					
Nickel	anr					
Palladium						
Potassium	anr					
Selenium	anr					
Silicon						
Silver	anr					
Sodium	anr					
Sulfur						
Strontium						
Thallium	anr					
Tin	anr					
Titanium						
Tungsten						
Vanadium	anr					
Zinc	anr					

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35578 Units: ug/l

Time:		06:15			07:17	
Sample ID:	CCV	CCV18		CCV	CCV19	
Metal	True	Results	% Rec	True	Results	% Rec
Zirconium						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35578 Units: ug/l

Time:				10:51		10:57		11:04	
Sample ID:	CRI	CRIA	CRID	CRID1		CRIA1		CRI2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500				536	107.2	106	106.0
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	anr					
Molybdenum	20								
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0						
Sodium	5000		1000	anr					
Sulfur	50								
Strontium	10								
Thallium	10		2.0	anr					
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35578 Units: ug/l

Time:				10:51		10:57		11:04	
Sample ID:	CRI	CRIA	CRID	CRID1		CRIA1		CRI2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10								

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35578 Units: ug/l

Time:				16:21		16:27		16:34	
Sample ID:	CRI	CRIA	CRID	CRID2		CRI3		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500				128	128.0	539	107.8
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	anr					
Molybdenum	20								
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0						
Sodium	5000		1000	anr					
Sulfur	50								
Strontium	10								
Thallium	10		2.0	anr					
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35578 Units: ug/l

Time:				16:21		16:27		16:34	
Sample ID:	CRI	CRIA	CRID	CRID2		CRI3		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10								

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35578 Units: ug/l

Time:				21:42		21:48		22:01	
Sample ID:	CRI	CRIA	CRID	CRID3		CRIA3		CRI4	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0						
Iron	100	500				531	106.2	103	103.0
Lead	3.0	20	2.5						
Lithium	20								
Magnesium	5000	2000	100						
Manganese	15		3.0	anr					
Molybdenum	20								
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0						
Sodium	5000		1000	anr					
Sulfur	50								
Strontium	10								
Thallium	10		2.0	anr					
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35578 Units: ug/l

Time:				21:42		21:48		22:01	
Sample ID:	CRI	CRIA	CRID	CRID3		CRIA3		CRI4	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10								

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35578 Units: ug/l

Time:				04:32		04:38		04:44	
Sample ID:	CRI	CRIA	CRID	CRI5		CRID4		CRIA4	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		104	104.0			525	105.0
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	anr					
Molybdenum	20			anr					
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50								
Strontium	10								
Thallium	10		2.0	anr					
Tin	10			anr					
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35578 Units: ug/l

Time:				04:32		04:38		04:44	
Sample ID:	CRI	CRIA	CRID	CRI5		CRID4		CRIA4	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10								

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35578 Units: ug/l

Time:				06:51		06:57		07:03	
Sample ID:	CRI	CRIA	CRID	CRIA5		CRI6		CRID5	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0						
Beryllium	2.0		1.0						
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0						
Calcium	5000	2000	1000	anr					
Chromium	10		2.0						
Cobalt	50		3.0						
Copper	10		2.0						
Iron	100	500		538	107.6	103	103.0		
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0						
Molybdenum	20								
Nickel	10		4.0						
Palladium	50								
Potassium	5000		2000						
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0						
Sodium	5000		1000						
Sulfur	50								
Strontium	10								
Thallium	10		2.0						
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0						
Zinc	20		10						

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35578 Units: ug/l

Time:				06:51		06:57		07:03	
Sample ID:	CRI	CRIA	CRID	CRIA5		CRI6		CRID5	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10								

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA35578 Units: ug/l

Time:			11:13		11:19		16:46		16:52	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	506000	101.2	506000	101.2	505000	101.0	508000	101.6
Antimony		1000	2.7		1060	106.0	4.2		1070	107.0
Arsenic		1000	-3.4		1030	103.0	-2.5		1050	105.0
Barium		500	-1.4		497	99.4	-1.5		502	100.4
Beryllium		500	0.0		492	98.4	0.10		495	99.0
Bismuth		500	-11		494	98.8	-9.2		502	100.4
Boron			-2.0		-1.1		-1.2		-0.70	
Cadmium		1000	1.3		1020	102.0	1.7		1030	103.0
Calcium	400000	400000	381000	95.3	378000	94.5	378000	94.5	378000	94.5
Chromium		500	1.4		493	98.6	1.9		493	98.6
Cobalt		500	0.20		488	97.6	-0.20		491	98.2
Copper		500	-1.7		513	102.6	-1.8		525	105.0
Iron	200000	200000	184000	92.0	191000	95.5	185000	92.5	193000	96.5
Lead		1000	4.3		981	98.1	1.6		991	99.1
Lithium		500	12.6		578	115.6	11.3		584	116.8
Magnesium	500000	500000	513000	102.6	498000	99.6	507000	101.4	497000	99.4
Manganese		500	1.4		496	99.2	1.1		497	99.4
Molybdenum		500	-1.0		497	99.4	-1.0		503	100.6
Nickel		1000	-0.10		967	96.7	-0.10		967	96.7
Palladium		500	69.8		595	119.0	67.8		598	119.6
Potassium			166		149		146		145	
Selenium		1000	2.2		1020	102.0	2.7		1030	103.0
Silicon			9.3		9.9		10.7		10.5	
Silver		1000	4.6		1090	109.0	4.4		1100	110.0
Sodium			-19		4.4		-3.5		15.6	
Sulfur		500	-3.5		506	101.2	-3.9		511	102.2
Strontium			-4.7		-4.6		-4.3		-4.4	
Thallium		1000	-2.2		953	95.3	-2.1		962	96.2
Tin			-4.4		-4.0		-4.8		-3.3	
Titanium			0.60		0.90		0.60		0.80	
Tungsten		500	3.4		506	101.2	2.0		511	102.2
Vanadium		500	-0.30		501	100.2	-0.30		507	101.4
Zinc		1000	3.0		964	96.4	2.8		970	97.0

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA35578 Units: ug/l

Time:			11:13		11:19		16:46		16:52	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	4.1		619	123.8*	4.4		626	125.2*

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA35578 Units: ug/l

Time: / Sample ID: / Metal	ICSA True	ICSAB True	22:07 ICSA3 Results	% Rec	22:13 ICSAB3 Results	% Rec	04:50 ICSA4 Results	% Rec	04:56 ICSAB4 Results	% Rec
Aluminum	500000	500000	514000	102.8	516000	103.2	519000	103.8	520000	104.0
Antimony		1000	6.2		1060	106.0	5.4		1070	107.0
Arsenic		1000	-3.4		1050	105.0	-0.90		1050	105.0
Barium		500	-1.2		505	101.0	-1.4		508	101.6
Beryllium		500	0.0		499	99.8	-0.10		497	99.4
Bismuth		500	-11		497	99.4	-12		499	99.8
Boron			-1.7		-0.40		-2.3		-0.50	
Cadmium		1000	1.3		1030	103.0	1.5		1030	103.0
Calcium	400000	400000	381000	95.3	380000	95.0	380000	95.0	379000	94.8
Chromium		500	1.0		500	100.0	1.2		499	99.8
Cobalt		500	-0.30		496	99.2	0.0		495	99.0
Copper		500	-2.2		524	104.8	-3.0		523	104.6
Iron	200000	200000	183000	91.5	193000	96.5	183000	91.5	191000	95.5
Lead		1000	4.3		989	98.9	4.1		994	99.4
Lithium		500	12.0		581	116.2	9.4		583	116.6
Magnesium	500000	500000	515000	103.0	502000	100.4	513000	102.6	500000	100.0
Manganese		500	0.50		508	101.6	0.40		505	101.0
Molybdenum		500	-1.2		502	100.4	-0.90		501	100.2
Nickel		1000	-0.30		981	98.1	0.0		979	97.9
Palladium		500	70.7		603	120.6*	69.0		598	119.6
Potassium			146		182		158		159	
Selenium		1000	-0.10		1020	102.0	1.9		1020	102.0
Silicon			9.9		13.4		9.1		10.3	
Silver		1000	3.4		1100	110.0	4.1		1100	110.0
Sodium			38.8		39.6		72.8		83.9	
Sulfur		500	-6.7		504	100.8	-3.9		504	100.8
Strontium			-4.4		-4.4		-4.2		-4.3	
Thallium		1000	-3.8		969	96.9	-2.9		965	96.5
Tin			-4.3		-4.4		-3.9		-4.6	
Titanium			0.60		0.70		0.60		0.60	
Tungsten		500	1.8		511	102.2	2.8		511	102.2
Vanadium		500	0.30		512	102.4	-0.20		510	102.0
Zinc		1000	2.9		984	98.4	2.8		980	98.0

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA35578 Units: ug/l

Time:			22:07		22:13		04:50		04:56	
Sample ID:	ICSA	ICSAB	ICSA3		ICSAB3		ICSA4		ICSAB4	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	3.7		635	127.0*	3.7		633	126.6*

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA35578 Units: ug/l

Time:			07:08		07:12	
Sample ID:	ICSA	ICSAB	ICSA5		ICSAB5	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	500000	500000	515000	103.0	516000	103.2
Antimony		1000	6.2		1080	108.0
Arsenic		1000	-0.70		1050	105.0
Barium		500	-1.5		510	102.0
Beryllium		500	0.0		492	98.4
Bismuth		500	-9.6		502	100.4
Boron			-1.3		-0.20	
Cadmium		1000	1.5		1030	103.0
Calcium	400000	400000	378000	94.5	375000	93.8
Chromium		500	1.8		496	99.2
Cobalt		500	-0.20		493	98.6
Copper		500	-2.1		531	106.2
Iron	200000	200000	183000	91.5	191000	95.5
Lead		1000	2.9		998	99.8
Lithium		500	11.0		587	117.4
Magnesium	500000	500000	505000	101.0	492000	98.4
Manganese		500	0.90		501	100.2
Molybdenum		500	-1.5		506	101.2
Nickel		1000	-0.20		969	96.9
Palladium		500	67.3		599	119.8
Potassium			108		119	
Selenium		1000	1.3		1030	103.0
Silicon			10.2		10.7	
Silver		1000	4.5		1100	110.0
Sodium			51.0		64.4	
Sulfur		500	-4.0		510	102.0
Strontium			-4.1		-4.1	
Thallium		1000	-3.4		971	97.1
Tin			-4.3		-3.7	
Titanium			0.50		0.70	
Tungsten		500	4.8		515	103.0
Vanadium		500	0.30		511	102.2
Zinc		1000	2.9		978	97.8

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD120414M1.ICP Date Analyzed: 12/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA35578 Units: ug/l

Time:			07:08		07:12	
Sample ID:	ICSA	ICSAB	ICSA5		ICSAB5	
Metal	True	True	Results	% Rec	Results	% Rec
Zirconium		500	4.0		634	126.8*

(*) Outside of QC limits
(anr) Analyte not requested

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA35586
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:59	MA35586-STD1	1		STDA
10:05	MA35586-STD2	1		STDB
10:11	ZZZZZZ	1		
10:17	ZZZZZZ	1		
10:25	MA35586-ICV1	1		
10:44	MA35586-ICB1	1		
10:49	MA35586-ICCV1	1		
10:59	MA35586-CCB1	1		
11:04	MA35586-CRI1	1		
11:10	MA35586-CRID1	1		
11:16	MA35586-CRIA1	1		
11:22	MA35586-ICSA1	1		
11:28	MA35586-ICSAB1	1		
11:34	ZZZZZZ	1		
11:40	ZZZZZZ	1		
11:46	MA35586-CCV1	1		
11:52	MA35586-CCB2	1		
11:58	MA35586-CRID2	1		
12:04	ZZZZZZ	1		
12:10	ZZZZZZ	1		
12:16	ZZZZZZ	1		
12:22	ZZZZZZ	1		
12:28	MP83662-MB1	1		
12:34	MP83662-B1	1		
12:40	MP83662-S1	1		
12:46	MP83662-S2	1		
12:52	MA35586-CCV2	1		
12:58	MA35586-CCB3	1		
13:04	ZZZZZZ	1		
13:10	MP83666-MB1	1		
13:16	JB82698-6	1		(sample used for QC only; not part of login JB82646)
13:22	MP83662-SD1	5		
13:28	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA35586
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:34	ZZZZZZ	1		
13:40	ZZZZZZ	1		
13:46	ZZZZZZ	1		
13:52	ZZZZZZ	1		
13:58	MA35586-CCV3	1		
14:05	MA35586-CCB4	1		
14:11	ZZZZZZ	1		
14:17	ZZZZZZ	1		
14:23	ZZZZZZ	1		
14:29	ZZZZZZ	1		
14:35	MP83666-B1	1		
14:41	MP83666-S1	1		
14:47	MP83666-S2	1		
14:53	JB82751-1	1		(sample used for QC only; not part of login JB82646)
14:59	MP83666-SD1	5		
15:05	MA35586-CCV4	1		
15:11	MA35586-CCB5	1		
15:17	ZZZZZZ	1		
15:23	ZZZZZZ	1		
15:29	ZZZZZZ	1		
15:35	ZZZZZZ	1		
15:41	ZZZZZZ	1		
15:47	ZZZZZZ	1		
15:53	ZZZZZZ	1		
15:59	ZZZZZZ	1		
16:05	ZZZZZZ	1		
16:11	MA35586-CCV5	1		
16:17	MA35586-CCB6	1		
16:23	ZZZZZZ	1		
16:29	ZZZZZZ	1		
16:35	ZZZZZZ	1		
16:41	ZZZZZZ	1		
16:48	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA35586
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:55	MP83674-S1	1		
17:00	MP83674-S2	1		
17:06	JB82645-1F	1		(sample used for QC only; not part of login JB82646)
17:12	MP83674-SD1	5		
17:18	MA35586-CCV6	1		
17:24	MA35586-CCB7	1		
17:30	ZZZZZZ	1		
17:36	ZZZZZZ	1		
17:42	ZZZZZZ	1		
17:48	ZZZZZZ	1		
17:54	ZZZZZZ	1		
18:00	ZZZZZZ	1		
18:07	ZZZZZZ	1		
18:13	ZZZZZZ	1		
18:19	ZZZZZZ	1		
18:26	MA35586-CCV7	1		
18:32	MA35586-CCB8	1		
18:38	MA35586-CRI2	1		
18:44	ZZZZZZ	1		
18:50	MA35586-CRIA2	1		
18:56	MA35586-CRID3	1		
19:02	MA35586-ICSA2	1		
19:08	MA35586-ICSAB2	1		
19:14	MA35586-CCV8	1		
19:20	MA35586-CCB9	1		
19:26	ZZZZZZ	1		
19:32	ZZZZZZ	3		
19:38	ZZZZZZ	1		
19:44	MP83665-SD1	5		
19:50	ZZZZZZ	1		
19:56	ZZZZZZ	1		
20:02	ZZZZZZ	1		
20:08	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA35586
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
20:14	JB82646-2	1		
20:20	MA35586-CCV9	1		
20:26	MA35586-CCB10	1		
20:32	JB82646-4	1		
20:38	JB82646-5	1		
20:45	JB82646-6	1		
20:50	JB82646-7	1		
20:57	JB82646-8	1		
---------->	Last reportable sample/prep for job JB82646			
21:02	ZZZZZZ	1		
21:09	MP83675-MB1	1		
21:15	MP83675-B1	1		
21:21	MP83675-S1	1		
21:26	MA35586-CCV10	1		
21:32	MA35586-CCB11	1		
21:38	MP83675-S2	1		
21:44	JB82603-1	1		(sample used for QC only; not part of login JB82646)
21:50	MP83675-SD1	5		
21:56	ZZZZZZ	1		
22:02	ZZZZZZ	1		
22:08	ZZZZZZ	1		
22:14	ZZZZZZ	1		
22:20	ZZZZZZ	1		
22:26	ZZZZZZ	1		
22:32	MA35586-CCV11	1		
22:38	MA35586-CCB12	1		
22:44	ZZZZZZ	1		
22:50	ZZZZZZ	1		
22:56	ZZZZZZ	1		
23:02	MP83682-B1	1		
23:09	MP83682-S1	1		Si high. To reanalysis for Sb to confirm.
23:15	MP83682-S2	1		Si high. To reanalysis for Sb to confirm.
23:21	MA35586-CCV12	1		
23:27	MA35586-CCB13	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA35586
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
23:33	MA35586-CRI3	1		
23:39	MA35586-CRID4	1		
23:45	MA35586-CRIA3	1		
23:51	ZZZZZZ	1		
23:57	MA35586-ICSA3	1		
00:04	MA35586-ICSAB3	1		
00:10	MA35586-CCV13	1		
00:16	MA35586-CCB14	1		
---------->	Last reportable CCB for job JB82646			
00:22	ZZZZZZ	1		
00:28	ZZZZZZ	1		
00:34	ZZZZZZ	1		
00:40	ZZZZZZ	1		
00:46	ZZZZZZ	1		
00:52	ZZZZZZ	1		
00:58	ZZZZZZ	1		
01:04	ZZZZZZ	1		
01:10	MA35586-CCV14	1		
01:16	MA35586-CCB15	1		
01:22	MP83682-MB1	1		
01:28	MP83682-MB2	1		
01:34	MP83682-MB3	1		
01:40	JB82377-2	1		(sample used for QC only; not part of login JB82646)
01:46	MP83682-SD1	5		Si high. To reanalysis for Sb to confirm.
01:52	MP83682-S3	1		
01:58	MP83682-S4	1		
02:04	JB82377-2F	1		(sample used for QC only; not part of login JB82646)
02:10	MP83682-SD2	5		
02:16	ZZZZZZ	1		
02:22	MA35586-CCV15	1		
02:28	MA35586-CCB16	1		
02:34	ZZZZZZ	1		
02:40	ZZZZZZ	1		
02:46	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA35586
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
02:52	ZZZZZZ	1		
02:58	ZZZZZZ	1		
03:04	ZZZZZZ	1		
03:10	ZZZZZZ	1		
03:16	ZZZZZZ	1		
03:22	ZZZZZZ	1		
03:28	ZZZZZZ	1		
03:34	MA35586-CCV16	1		
03:40	MA35586-CCB17	1		
03:46	MA35586-CRI4	1		
03:52	MA35586-CRID5	1		
03:58	MA35586-CRIA4	1		
04:04	ZZZZZZ	1		
04:10	MA35586-CCV17	1		
04:16	MA35586-CCB18	1		
04:22	ZZZZZZ	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA35586
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
09:59	MA35586-STD1	2498 R	136470 R	39570 R	6949 R
10:05	MA35586-STD2	2326	127880	38878	6345
10:11	ZZZZZZ	2368	129860	39171	6489
10:17	ZZZZZZ	2493	136360	39802	6937
10:25	MA35586-ICV1	2354	131430	39386	6476
10:44	MA35586-ICB1	2485	136890	39669	6925
10:49	MA35586-ICCV1	2370	130160	39440	6503
10:59	MA35586-CCB1	2494	135750	39505	6917
11:04	MA35586-CRI1	2443	134740	41700	6783
11:10	MA35586-CRID1	No results reported for the elements associated with this internal standard.			
11:16	MA35586-CRIA1	2464	136020	40029	6860
11:22	MA35586-ICSA1	2172	119650	37391	5838
11:28	MA35586-ICSAB1	2183	123850	37568	5851
11:34	ZZZZZZ	2427	134280	39626	6883
11:40	ZZZZZZ	2420	136200	39899	6871
11:46	MA35586-CCV1	2379	130210	39012	6509
11:52	MA35586-CCB2	2480	137960	40246	6912
11:58	MA35586-CRID2	2457	136410	39787	6843
12:04	ZZZZZZ	2425	135060	41171	6803
12:10	ZZZZZZ	2450	140340	41059	6916
12:16	ZZZZZZ	7152 !	323720 !	68902 !	17720 !
12:22	ZZZZZZ	2465	135810	40368	6904
12:28	MP83662-MB1	2463	136090	39789	6890
12:34	MP83662-B1	2394	132120	40249	6670
12:40	MP83662-S1	2369	131810	40159	6599
12:46	MP83662-S2	2366	131170	40206	6601
12:52	MA35586-CCV2	2344	128500	39294	6416
12:58	MA35586-CCB3	2455	135400	39773	6811
13:04	ZZZZZZ	2457	134510	39824	6822
13:10	MP83666-MB1	2464	135940	39938	6854
13:16	JB82698-6	2465	135620	40628	6902
13:22	MP83662-SD1	2444	135710	40122	6829
13:28	ZZZZZZ	2454	135720	40787	6901

INTERNAL STANDARD SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA35586
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
13:34	ZZZZZZ	2397	133190	40269	6763
13:40	ZZZZZZ	2439	136120	41047	6865
13:46	ZZZZZZ	2434	134450	40602	6825
13:52	ZZZZZZ	2447	134420	40693	6855
13:58	MA35586-CCV3	2345	128500	39119	6425
14:05	MA35586-CCB4	2453	135180	39860	6806
14:11	ZZZZZZ	2458	135980	40781	6882
14:17	ZZZZZZ	2435	134830	40819	6791
14:23	ZZZZZZ	2443	134350	40454	6825
14:29	ZZZZZZ	2456	136300	40543	6888
14:35	MP83666-B1	2384	131530	40315	6633
14:41	MP83666-S1	2328	128090	39922	6420
14:47	MP83666-S2	2336	127870	39845	6451
14:53	JB82751-1	2397	130990	40307	6625
14:59	MP83666-SD1	2429	132860	39588	6770
15:05	MA35586-CCV4	2352	127920	39045	6416
15:11	MA35586-CCB5	2504	134600	39862	6936
15:17	ZZZZZZ	2490	136910	40754	6934
15:23	ZZZZZZ	2349	129950	39836	6452
15:29	ZZZZZZ	2334	125720	39554	6293
15:35	ZZZZZZ	2380	129420	40123	6511
15:41	ZZZZZZ	2408	131920	40024	6649
15:47	ZZZZZZ	2383	132660	40070	6583
15:53	ZZZZZZ	2412	133070	40636	6632
15:59	ZZZZZZ	2183	114420	38405	5558
16:05	ZZZZZZ	2367	129000	39846	6524
16:11	MA35586-CCV5	2342	127430	38921	6388
16:17	MA35586-CCB6	2456	134410	39766	6781
16:23	ZZZZZZ	2476	136120	40807	6906
16:29	ZZZZZZ	7214 !	330430 !	66905 !	17698 !
16:35	ZZZZZZ	7321 !	316340 !	66528 !	17912 !
16:41	ZZZZZZ	7251 !	313110 !	65347 !	17739 !
16:48	ZZZZZZ	2453	135720	40092	6850

INTERNAL STANDARD SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA35586
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
16:55	MP83674-S1	2329	127740	39239	6402
17:00	MP83674-S2	2326	127390	39351	6397
17:06	JB82645-1F	2383	130790	39778	6595
17:12	MP83674-SD1	2414	132530	39354	6698
17:18	MA35586-CCV6	2341	127940	38606	6365
17:24	MA35586-CCB7	2446	133810	39331	6758
17:30	ZZZZZZ	2308	124620	38945	6067
17:36	ZZZZZZ	6896 !	299600 !	61996 !	16908 !
17:42	ZZZZZZ	2388	130300	39586	6546
17:48	ZZZZZZ	2421	133330	40187	6734
17:54	ZZZZZZ	2288	123710	38975	6125
18:00	ZZZZZZ	2447	133620	39329	6738
18:07	ZZZZZZ	2375	129260	39355	6392
18:13	ZZZZZZ	2143	116760	37642	5631
18:19	ZZZZZZ	No results reported for the elements associated with this internal standard.			
18:26	MA35586-CCV7	2343	127890	38965	6373
18:32	MA35586-CCB8	2447	134600	39497	6754
18:38	MA35586-CRI2	2434	133090	39439	6694
18:44	ZZZZZZ	2448	134500	39479	6746
18:50	MA35586-CRIA2	2445	134630	39778	6762
18:56	MA35586-CRID3	2452	133980	39498	6764
19:02	MA35586-ICSA2	2143	117930	37137	5713
19:08	MA35586-ICSAB2	2160	118990	37349	5736
19:14	MA35586-CCV8	2357	128760	38684	6408
19:20	MA35586-CCB9	2445	134810	38388	6754
19:26	ZZZZZZ	2325	127670	39503	6306
19:32	ZZZZZZ	2279	121730	38803	5988
19:38	ZZZZZZ	2425	133920	39160	6687
19:44	MP83665-SD1	2452	134970	39481	6746
19:50	ZZZZZZ	2269	122740	38825	5805
19:56	ZZZZZZ	2279	123430	38968	5827
20:02	ZZZZZZ	2551	139800	42167	6579
20:08	ZZZZZZ	2501	136980	40289	6901

INTERNAL STANDARD SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA35586
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
20:14	JB82646-2	2404	131360	40066	6537
20:20	MA35586-CCV9	2334	128270	38651	6337
20:26	MA35586-CCB10	2439	134520	39407	6708
20:32	JB82646-4	2947	161660	48914	6630
20:38	JB82646-5	2378	131080	40090	6524
20:45	JB82646-6	2400	132340	40347	6559
20:50	JB82646-7	2373	131650	40259	6563
20:57	JB82646-8	2367	131390	40013	6556
21:02	ZZZZZZ	2235	119150	38587	5878
21:09	MP83675-MB1	2436	135390	40368	6794
21:15	MP83675-B1	2366	129930	39935	6531
21:21	MP83675-S1	2332	128950	39762	6407
21:26	MA35586-CCV10	2329	126920	39168	6326
21:32	MA35586-CCB11	2434	134010	39704	6722
21:38	MP83675-S2	2351	129760	39908	6451
21:44	JB82603-1	2394	131730	40178	6632
21:50	MP83675-SD1	2420	133540	39926	6715
21:56	ZZZZZZ	2402	131980	39951	6640
22:02	ZZZZZZ	2393	132150	40149	6636
22:08	ZZZZZZ	2391	131300	39991	6631
22:14	ZZZZZZ	2385	131660	39919	6610
22:20	ZZZZZZ	2381	132500	40206	6626
22:26	ZZZZZZ	2402	131160	39986	6650
22:32	MA35586-CCV11	2320	128310	39208	6324
22:38	MA35586-CCB12	2437	134430	39719	6723
22:44	ZZZZZZ	2409	132460	40169	6664
22:50	ZZZZZZ	2392	131910	40106	6624
22:56	ZZZZZZ	2389	132290	40066	6609
23:02	MP83682-B1	2337	130500	39821	6458
23:09	MP83682-S1	2360	131870	39922	6413
23:15	MP83682-S2	2366	131720	40119	6412
23:21	MA35586-CCV12	2338	128170	39028	6333
23:27	MA35586-CCB13	2438	134940	39707	6714

INTERNAL STANDARD SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA35586
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
23:33	MA35586-CRI3	2414	133300	39618	6639
23:39	MA35586-CRID4	2449	134560	40085	6735
23:45	MA35586-CRIA3	2446	135840	39588	6734
23:51	ZZZZZZ	2441	135060	39870	6726
23:57	MA35586-ICSA3	2142	117780	37232	5676
00:04	MA35586-ICSAB3	2142	118990	37675	5689
00:10	MA35586-CCV13	2345	127730	39070	6357
00:16	MA35586-CCB14	2439	135870	39869	6713
00:22	ZZZZZZ	2245	123440	38215	6067
00:28	ZZZZZZ	2399	128950	39001	6335
00:34	ZZZZZZ	2271	124150	38542	6094
00:40	ZZZZZZ	2442	135220	39988	6724
00:46	ZZZZZZ	2437	133850	39758	6700
00:52	ZZZZZZ	2450	134470	39717	6710
00:58	ZZZZZZ	2441	134440	39735	6698
01:04	ZZZZZZ	2446	135470	39755	6715
01:10	MA35586-CCV14	2351	129240	38803	6350
01:16	MA35586-CCB15	2448	135370	39917	6708
01:22	MP83682-MB1	2430	136390	40242	6719
01:28	MP83682-MB2	2444	133660	40620	6780
01:34	MP83682-MB3	2439	136280	40625	6773
01:40	JB82377-2	2452	134270	40715	6647
01:46	MP83682-SD1	2450	135540	40135	6684
01:52	MP83682-S3	2337	129840	39238	6398
01:58	MP83682-S4	2337	130060	39686	6398
02:04	JB82377-2F	2401	133930	39979	6609
02:10	MP83682-SD2	2437	134940	39976	6691
02:16	ZZZZZZ	2400	135010	40080	6621
02:22	MA35586-CCV15	2340	128290	38951	6310
02:28	MA35586-CCB16	2444	135130	39769	6698
02:34	ZZZZZZ	2427	135700	40282	6692
02:40	ZZZZZZ	2390	129430	40140	6502
02:46	ZZZZZZ	2388	132230	39876	6491

INTERNAL STANDARD SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA35586
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
02:52	ZZZZZZ	2383	131780	39842	6509
02:58	ZZZZZZ	2383	131320	39704	6511
03:04	ZZZZZZ	2386	131720	39726	6519
03:10	ZZZZZZ	2392	132090	39764	6540
03:16	ZZZZZZ	2385	131950	39592	6502
03:22	ZZZZZZ	2390	133980	39909	6575
03:28	ZZZZZZ	2315	130580	37932	6262
03:34	MA35586-CCV16	2347	128650	38956	6315
03:40	MA35586-CCB17	2442	133900	39337	6675
03:46	MA35586-CRI4	2428	133480	39520	6616
03:52	MA35586-CRID5	2447	134780	39857	6687
03:58	MA35586-CRIA4	2452	134910	39671	6706
04:04	ZZZZZZ	2444	134400	40203	6675
04:10	MA35586-CCV17	2332	128420	38674	6274
04:16	MA35586-CCB18	2451	134600	39748	6678
04:22	ZZZZZZ	2454	134850	39697	6696

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35586 Units: ug/l

Time:			10:44		10:59		11:52		12:58	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	5.9	anr							
Antimony	6.0	1.6	anr							
Arsenic	3.0	.86	anr							
Barium	200	.19	anr							
Beryllium	1.0	.12	anr							
Bismuth	20	2.4								
Boron	100	.88								
Cadmium	3.0	.2	anr							
Calcium	5000	9.6	anr							
Chromium	10	.39	anr							
Cobalt	50	.35	anr							
Copper	10	.82	anr							
Iron	100	2.9	0.60	<100	0.50	<100	0.40	<100	0.0	<100
Lead	3.0	1.6	anr							
Lithium	20	2.9								
Magnesium	5000	15	anr							
Manganese	15	.12	anr							
Molybdenum	20	.33								
Nickel	10	.35	anr							
Palladium	50	1.7								
Potassium	10000	30	anr							
Selenium	10	1.7	anr							
Silicon	200	2.3	anr							
Silver	10	.89	anr							
Sodium	10000	13	anr							
Sulfur	50	6.7								
Strontium	10	.17								
Thallium	2.0	1.7	anr							
Tin	10	1.1								
Titanium	10	.39								
Tungsten	50	1.4								
Vanadium	50	.34	anr							
Zinc	20	1.6	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35586 Units: ug/l

Time:			10:44		10:59		11:52		12:58	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.31								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35586 Units: ug/l

Time:			14:05		15:11		16:17		17:24	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	5.9	anr							
Antimony	6.0	1.6	anr							
Arsenic	3.0	.86	anr							
Barium	200	.19	anr							
Beryllium	1.0	.12	anr							
Bismuth	20	2.4								
Boron	100	.88								
Cadmium	3.0	.2	anr							
Calcium	5000	9.6	anr							
Chromium	10	.39	anr							
Cobalt	50	.35	anr							
Copper	10	.82	anr							
Iron	100	2.9	0.70	<100	-0.40	<100	-0.20	<100	1.3	<100
Lead	3.0	1.6	anr							
Lithium	20	2.9								
Magnesium	5000	15	anr							
Manganese	15	.12	anr							
Molybdenum	20	.33								
Nickel	10	.35	anr							
Palladium	50	1.7								
Potassium	10000	30	anr							
Selenium	10	1.7	anr							
Silicon	200	2.3	anr							
Silver	10	.89	anr							
Sodium	10000	13	anr							
Sulfur	50	6.7								
Strontium	10	.17								
Thallium	2.0	1.7	anr							
Tin	10	1.1								
Titanium	10	.39								
Tungsten	50	1.4								
Vanadium	50	.34	anr							
Zinc	20	1.6	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35586 Units: ug/l

Time: / Sample ID:			14:05 CCB4		15:11 CCB5		16:17 CCB6		17:24 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.31								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35586 Units: ug/l

Time:			18:32		19:20		20:26		21:32	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	5.9	anr							
Antimony	6.0	1.6	anr							
Arsenic	3.0	.86	anr							
Barium	200	.19	anr							
Beryllium	1.0	.12	anr							
Bismuth	20	2.4								
Boron	100	.88								
Cadmium	3.0	.2	anr							
Calcium	5000	9.6	anr							
Chromium	10	.39	anr							
Cobalt	50	.35	anr							
Copper	10	.82	anr							
Iron	100	2.9	0.50	<100	2.9	<100	1.5	<100	0.60	<100
Lead	3.0	1.6	anr							
Lithium	20	2.9								
Magnesium	5000	15	anr							
Manganese	15	.12	anr							
Molybdenum	20	.33								
Nickel	10	.35	anr							
Palladium	50	1.7								
Potassium	10000	30	anr							
Selenium	10	1.7	anr							
Silicon	200	2.3	anr							
Silver	10	.89	anr							
Sodium	10000	13	anr							
Sulfur	50	6.7								
Strontium	10	.17								
Thallium	2.0	1.7	anr							
Tin	10	1.1								
Titanium	10	.39								
Tungsten	50	1.4								
Vanadium	50	.34	anr							
Zinc	20	1.6	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35586 Units: ug/l

Time: / Sample ID:			18:32 CCB8		19:20 CCB9		20:26 CCB10		21:32 CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.31								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35586 Units: ug/l

Time:			22:38		23:27		00:16	
Sample ID:			CCB12		CCB13		CCB14	
Metal	RL	IDL	raw	final	raw	final	raw	final
Aluminum	200	5.9	anr					
Antimony	6.0	1.6	anr					
Arsenic	3.0	.86	anr					
Barium	200	.19	anr					
Beryllium	1.0	.12	anr					
Bismuth	20	2.4						
Boron	100	.88						
Cadmium	3.0	.2	anr					
Calcium	5000	9.6	anr					
Chromium	10	.39	anr					
Cobalt	50	.35	anr					
Copper	10	.82	anr					
Iron	100	2.9	0.10	<100	0.30	<100	0.10	<100
Lead	3.0	1.6	anr					
Lithium	20	2.9						
Magnesium	5000	15	anr					
Manganese	15	.12	anr					
Molybdenum	20	.33						
Nickel	10	.35	anr					
Palladium	50	1.7						
Potassium	10000	30	anr					
Selenium	10	1.7	anr					
Silicon	200	2.3	anr					
Silver	10	.89	anr					
Sodium	10000	13	anr					
Sulfur	50	6.7						
Strontium	10	.17						
Thallium	2.0	1.7	anr					
Tin	10	1.1						
Titanium	10	.39						
Tungsten	50	1.4						
Vanadium	50	.34	anr					
Zinc	20	1.6	anr					

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA35586 Units: ug/l

Time:			22:38		23:27		00:16	
Sample ID:			CCB12		CCB13		CCB14	
Metal	RL	IDL	raw	final	raw	final	raw	final
Zirconium	10	.31						

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35586 Units: ug/l

Time:		10:49	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	anr		
Beryllium	anr		
Bismuth			
Boron			
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	40000	39800	99.5
Lead	anr		
Lithium			
Magnesium	anr		
Manganese	anr		
Molybdenum			
Nickel	anr		
Palladium			
Potassium	anr		
Selenium	anr		
Silicon	anr		
Silver	anr		
Sodium	anr		
Sulfur			
Strontium			
Thallium	anr		
Tin			
Titanium			
Tungsten			
Vanadium	anr		
Zinc	anr		

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35586 Units: ug/l

Time:		10:49	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35586 Units: ug/l

Time:		10:25			11:46			12:52	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron									
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40300	100.8	40000	40300	100.8	40000	39900	99.8
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon	anr								
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35586 Units: ug/l

Time:		10:25			11:46			12:52	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35586 Units: ug/l

Time:		13:58			15:05			16:11	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron									
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40000	100.0	40000	40000	100.0	40000	39500	98.8
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon	anr								
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35586 Units: ug/l

Time:		13:58			15:05			16:11	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35586 Units: ug/l

Time:		17:18			18:26			19:14	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron									
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40200	100.5	40000	40000	100.0	40000	40300	100.8
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon	anr								
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35586 Units: ug/l

Time:		17:18			18:26			19:14	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35586 Units: ug/l

Time:		20:20			21:26			22:32	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron									
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40600	101.5	40000	40500	101.3	40000	40700	101.8
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon	anr								
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35586 Units: ug/l

Time:		20:20			21:26			22:32	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35586 Units: ug/l

Time:		23:21			00:10		
Sample ID:	CCV	CCV12		CCV	CCV13		
Metal	True	Results	% Rec	True	Results	% Rec	
Aluminum	anr						
Antimony	anr						
Arsenic	anr						
Barium	anr						
Beryllium	anr						
Bismuth							
Boron							
Cadmium	anr						
Calcium	anr						
Chromium	anr						
Cobalt	anr						
Copper	anr						
Iron	40000	40800	102.0	40000	40800	102.0	
Lead	anr						
Lithium							
Magnesium	anr						
Manganese	anr						
Molybdenum							
Nickel	anr						
Palladium							
Potassium	anr						
Selenium	anr						
Silicon	anr						
Silver	anr						
Sodium	anr						
Sulfur							
Strontium							
Thallium	anr						
Tin							
Titanium							
Tungsten							
Vanadium	anr						
Zinc	anr						

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA35586 Units: ug/l

Time:		23:21			00:10	
Sample ID:	CCV	CCV12		CCV	CCV13	
Metal	True	Results	% Rec	True	Results	% Rec
Zirconium						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35586 Units: ug/l

Time:				11:04		11:16		11:58	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		97.6	97.6	508	101.6		
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	anr					
Molybdenum	20								
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200			anr					
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50								
Strontium	10								
Thallium	10		2.0	anr					
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35586 Units: ug/l

Time:				11:04		11:16		11:58	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35586 Units: ug/l

Time:				18:38		18:50		18:56	
Sample ID:	CRI	CRIA	CRID	CRI2		CRIA2		CRID3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		106	106.0	517	103.4		
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	anr					
Molybdenum	20								
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200			anr					
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50								
Strontium	10								
Thallium	10		2.0	anr					
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35586 Units: ug/l

Time:				18:38		18:50		18:56	
Sample ID:	CRI	CRIA	CRID	CRI2		CRIA2		CRID3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35586 Units: ug/l

Time:				23:33		23:39		23:45	
Sample ID:	CRI	CRIA	CRID	CRI3		CRID4		CRIA3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		108	108.0			523	104.6
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	anr					
Molybdenum	20								
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200			anr					
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50								
Strontium	10								
Thallium	10		2.0	anr					
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA35586 Units: ug/l

Time:				23:33		23:39		23:45	
Sample ID:	CRI	CRIA	CRID	CRI3		CRID4		CRIA3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA35586 Units: ug/l

Time:			11:22		11:28		19:02		19:08	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	501000	100.2	500000	100.0	511000	102.2	514000	102.8
Antimony		1000	-3.7		1040	104.0	-3.5		1060	106.0
Arsenic		1000	1.3		1020	102.0	-1.3		1040	104.0
Barium		500	-0.60		504	100.8	-0.60		510	102.0
Beryllium		500	0.0		507	101.4	0.0		513	102.6
Bismuth		500	0.60		505	101.0	-0.20		508	101.6
Boron			1.1		-3.0		0.0		-2.9	
Cadmium		1000	0.30		1010	101.0	0.10		1030	103.0
Calcium	400000	400000	373000	93.3	373000	93.3	374000	93.5	374000	93.5
Chromium		500	-0.20		462	92.4	0.70		485	97.0
Cobalt		500	-0.30		480	96.0	0.10		490	98.0
Copper		500	0.60		483	96.6	1.4		503	100.6
Iron	200000	200000	179000	89.5	189000	94.5	182000	91.0	191000	95.5
Lead		1000	1.8		952	95.2	3.8		947	94.7
Lithium		500	0.10		574	114.8	-0.40		588	117.6
Magnesium	500000	500000	529000	105.8	517000	103.4	529000	105.8	518000	103.6
Manganese		500	4.0		480	96.0	2.7		498	99.6
Molybdenum		500	-6.6		482	96.4	-6.1		482	96.4
Nickel		1000	1.1		964	96.4	0.60		990	99.0
Palladium		500	-2.7		507	101.4	-1.6		540	108.0
Potassium			95.5		103		80.5		96.7	
Selenium		1000	0.30		1010	101.0	2.9		1030	103.0
Silicon			-28		-46		-27		-43	
Silver		1000	5.2		1070	107.0	1.5		1120	112.0
Sodium			5.0		16.4		36.4		41.6	
Sulfur		500	-9.2		468	93.6	-9.8		427	85.4
Strontium			-5.4		-5.3		-5.1		-5.2	
Thallium		1000	-2.6		956	95.6	-1.2		967	96.7
Tin			-1.2		-1.7		-0.20		0.10	
Titanium			0.10		-0.30		-0.10		-0.10	
Tungsten		500	0.20		481	96.2	-1.3		481	96.2
Vanadium		500	-0.60		468	93.6	0.10		490	98.0
Zinc		1000	1.3		951	95.1	1.0		949	94.9

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA35586 Units: ug/l

Time:			11:22		11:28		19:02		19:08	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	24.1*		611	122.2*	23.3*		644	128.8*

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA35586 Units: ug/l

Time:			23:57		00:04	
Sample ID:	ICSA	ICSAB	ICSA3		ICSAB3	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	500000	500000	516000	103.2	514000	102.8
Antimony		1000	-0.80		1080	108.0
Arsenic		1000	1.5		1040	104.0
Barium		500	-0.40		511	102.2
Beryllium		500	-0.10		510	102.0
Bismuth		500	-3.2		512	102.4
Boron			0.20		-1.9	
Cadmium		1000	0.0		1040	104.0
Calcium	400000	400000	375000	93.8	371000	92.8
Chromium		500	0.40		486	97.2
Cobalt		500	0.10		492	98.4
Copper		500	2.0		506	101.2
Iron	200000	200000	183000	91.5	191000	95.5
Lead		1000	4.2		940	94.0
Lithium		500	0.60		593	118.6
Magnesium	500000	500000	522000	104.4	509000	101.8
Manganese		500	1.8		493	98.6
Molybdenum		500	-6.2		481	96.2
Nickel		1000	-0.10		995	99.5
Palladium		500	-0.50		547	109.4
Potassium			78.5		89.1	
Selenium		1000	3.8		1050	105.0
Silicon			-29		-45	
Silver		1000	-1.9		1120	112.0
Sodium			19.7		26.0	
Sulfur		500	-7.3		420	84.0
Strontium			-5.2		-5.1	
Thallium		1000	-3.4		963	96.3
Tin			0.50		-1.5	
Titanium			0.20		0.10	
Tungsten		500	-0.30		480	96.0
Vanadium		500	0.50		489	97.8
Zinc		1000	1.0		946	94.6

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SA120514M1.ICP Date Analyzed: 12/05/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA35586 Units: ug/l

Time:			23:57		00:04	
Sample ID:	ICSA	ICSAB	ICSA3		ICSAB3	
Metal	True	True	Results	% Rec	Results	% Rec
Zirconium		500	22.7*		648	129.6*

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83638
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 12/03/14

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	19	16		
Antimony	6.0	1.2	3.8		
Arsenic	3.0	1.7	2.1		
Barium	200	.4	.51		
Beryllium	1.0	.13	.17		
Bismuth	20	2.1	3.9		
Boron	100	1.1	1.5		
Cadmium	3.0	.22	.3		
Calcium	5000	32	17		
Chromium	10	.52	.99		
Cobalt	50	.29	.69		
Copper	10	1.2	.86		
Iron	100	8.8	9.5	-9.9	<100
Lead	3.0	.97	1.5		
Lithium	20	1.7	1.6		
Magnesium	5000	32	46		
Manganese	15	.14	.28		
Molybdenum	20	.37	2.5		
Nickel	10	.54	1.2		
Palladium	50	1.9	2.3		
Potassium	10000	38	41		
Selenium	10	2	4.7		
Silicon	200	10	7.4		
Silver	10	.74	.91		
Sodium	10000	10	37		
Sulfur	50	3.7	7.2		
Strontium	10	.16	.28		
Thallium	2.0	1.4	1.7		
Tin	10	.8	1.8		
Titanium	10	.53	.83		
Tungsten	50	4.8	8		
Vanadium	50	.52	.91		
Zinc	20	6.5	3.2		

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83638
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 12/03/14

Metal	RL	IDL	MDL	MB raw	final
Zirconium	10	.32	1.2		

Associated samples MP83638: JB82646-1, JB82646-2, JB82646-3, JB82646-4, JB82646-5, JB82646-6, JB82646-7, JB82646-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83638
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 12/03/14

Metal	JB82646-3 Original	MS	Spikelot MPSPK	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	anr				
Barium					
Beryllium					
Bismuth					
Boron					
Cadmium					
Calcium	anr				
Chromium	anr				
Cobalt					
Copper					
Iron	589	21700	25000	84.4	70-130
Lead					
Lithium					
Magnesium					
Manganese	anr				
Molybdenum					
Nickel	anr				
Palladium					
Potassium					
Selenium					
Silicon					
Silver					
Sodium					
Sulfur					
Strontium					
Thallium					
Tin					
Titanium					
Tungsten					
Vanadium					
Zinc	anr				

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83638
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 12/03/14

Metal	JB82646-3 Original MS	Spikelot MPSPK	% Rec	QC Limits
Zirconium				

Associated samples MP83638: JB82646-1, JB82646-2, JB82646-3, JB82646-4, JB82646-5, JB82646-6, JB82646-7, JB82646-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83638 Methods: EPA 200.7
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 12/03/14

Metal	JB82646-3 Original	MSD	Spikelot MPSPK	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	anr					
Barium						
Beryllium						
Bismuth						
Boron						
Cadmium						
Calcium	anr					
Chromium	anr					
Cobalt						
Copper						
Iron	589	23600	25000	92.0	8.4	16
Lead						
Lithium						
Magnesium						
Manganese	anr					
Molybdenum						
Nickel	anr					
Palladium						
Potassium						
Selenium						
Silicon						
Silver						
Sodium						
Sulfur						
Strontium						
Thallium						
Tin						
Titanium						
Tungsten						
Vanadium						
Zinc	anr					

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83638 Methods: EPA 200.7
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 12/03/14

Metal	JB82646-3 Original	MSD	Spikelot MPSPK	% Rec	MSD RPD	QC Limit
Zirconium						

Associated samples MP83638: JB82646-1, JB82646-2, JB82646-3, JB82646-4, JB82646-5, JB82646-6, JB82646-7, JB82646-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83638
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 12/03/14

Metal	BSP Result	Spikelot MPSPK	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium				
Beryllium				
Bismuth				
Boron				
Cadmium				
Calcium	anr			
Chromium	anr			
Cobalt				
Copper				
Iron	24700	25000	98.8	85-115
Lead				
Lithium				
Magnesium				
Manganese	anr			
Molybdenum				
Nickel	anr			
Palladium				
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Sulfur				
Strontium				
Thallium				
Tin				
Titanium				
Tungsten				
Vanadium				
Zinc	anr			

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83638
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 12/03/14

Metal	BSP Result	Spikelot MPSPK	% Rec	QC Limits
Zirconium				

Associated samples MP83638: JB82646-1, JB82646-2, JB82646-3, JB82646-4, JB82646-5, JB82646-6, JB82646-7, JB82646-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83638
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 12/03/14

Metal	JB82646-3 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium				
Beryllium				
Bismuth				
Boron				
Cadmium				
Calcium	anr			
Chromium	anr			
Cobalt				
Copper				
Iron	589	580	1.6	0-10
Lead				
Lithium				
Magnesium				
Manganese	anr			
Molybdenum				
Nickel	anr			
Palladium				
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Sulfur				
Strontium				
Thallium				
Tin				
Titanium				
Tungsten				
Vanadium				
Zinc	anr			

SERIAL DILUTION RESULTS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83638
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 12/03/14

Metal	JB82646-3 Original SDL 1:5	%DIF	QC Limits
Zirconium			

Associated samples MP83638: JB82646-1, JB82646-2, JB82646-3, JB82646-4, JB82646-5, JB82646-6, JB82646-7, JB82646-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83641
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 12/03/14

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	5.9	16		
Antimony	6.0	1.6	3.8		
Arsenic	3.0	.86	2.1		
Barium	200	.19	.51		
Beryllium	1.0	.12	.17		
Bismuth	20	2.4	3.9		
Boron	100	.88	1.5		
Cadmium	3.0	.2	.3		
Calcium	5000	9.6	17		
Chromium	10	.39	.99		
Cobalt	50	.35	.69		
Copper	10	.82	.86		
Iron	100	2.9	9.5	5.1	<100
Lead	3.0	1.6	1.5		
Lithium	20	2.9	1.6		
Magnesium	5000	15	46		
Manganese	15	.12	.28		
Molybdenum	20	.33	2.5		
Nickel	10	.35	1.2		
Palladium	50	1.7	2.3		
Potassium	10000	30	41		
Selenium	10	1.7	4.7		
Silicon	200	2.3	7.4		
Silver	10	.89	.91		
Sodium	10000	13	37		
Sulfur	50	6.7	7.2		
Strontium	10	.17	.28		
Thallium	2.0	1.7	1.7		
Tin	10	1.1	1.8		
Titanium	10	.39	.83		
Tungsten	50	1.4	8		
Vanadium	50	.34	.91		
Zinc	20	1.6	3.2		

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83641
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 12/03/14

Metal	RL	IDL	MDL	MB raw	final
Zirconium	10	.31	1.2		

Associated samples MP83641: JB82646-9, JB82646-10, JB82646-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83641
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 12/03/14

Metal	JB82473-10 Original MS		Spikelot MPSPK	% Rec	QC Limits
Aluminum	anr				
Antimony					
Arsenic	anr				
Barium					
Beryllium					
Bismuth					
Boron					
Cadmium	anr				
Calcium					
Chromium	anr				
Cobalt					
Copper	anr				
Iron	378	25100	25000	98.9	70-130
Lead	anr				
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel	anr				
Palladium					
Potassium					
Selenium					
Silicon					
Silver					
Sodium					
Sulfur					
Strontium					
Thallium					
Tin	anr				
Titanium					
Tungsten					
Vanadium					
Zinc	anr				

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83641
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 12/03/14

Metal	JB82473-10 Original MS	Spikelot MPSPK	% Rec	QC Limits
Zirconium				

Associated samples MP83641: JB82646-9, JB82646-10, JB82646-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83641 Methods: EPA 200.7
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 12/03/14

Metal	JB82473-10 Original	MSD	Spikelot MPSPK	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony						
Arsenic	anr					
Barium						
Beryllium						
Bismuth						
Boron						
Cadmium	anr					
Calcium						
Chromium	anr					
Cobalt						
Copper	anr					
Iron	378	25500	25000	100.5	1.6	16
Lead	anr					
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel	anr					
Palladium						
Potassium						
Selenium						
Silicon						
Silver						
Sodium						
Sulfur						
Strontium						
Thallium						
Tin	anr					
Titanium						
Tungsten						
Vanadium						
Zinc	anr					

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83641 Methods: EPA 200.7
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 12/03/14

Metal	JB82473-10 Original MSD	Spikelot MPSPK	% Rec	MSD RPD	QC Limit
Zirconium					

Associated samples MP83641: JB82646-9, JB82646-10, JB82646-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83641
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 12/03/14

Metal	BSP Result	Spikelot MPSPK	% Rec	QC Limits
Aluminum	anr			
Antimony				
Arsenic	anr			
Barium				
Beryllium				
Bismuth				
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper	anr			
Iron	25700	25000	102.8	85-115
Lead	anr			
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	anr			
Palladium				
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Sulfur				
Strontium				
Thallium				
Tin	anr			
Titanium				
Tungsten				
Vanadium				
Zinc	anr			

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83641
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 12/03/14

Metal	BSP Result	Spikelot MPSPK	% Rec	QC Limits
Zirconium				

Associated samples MP83641: JB82646-9, JB82646-10, JB82646-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83641
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 12/03/14

Metal	JB82473-10 Original	SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony				
Arsenic	anr			
Barium				
Beryllium				
Bismuth				
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper	anr			
Iron	378	400	5.7	0-10
Lead	anr			
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	anr			
Palladium				
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Sulfur				
Strontium				
Thallium				
Tin	anr			
Titanium				
Tungsten				
Vanadium				
Zinc	anr			

SERIAL DILUTION RESULTS SUMMARY

Login Number: JB82646
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP83641
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 12/03/14

Metal	JB82473-10 Original SDL 1:5	%DIF	QC Limits
Zirconium			

Associated samples MP83641: JB82646-9, JB82646-10, JB82646-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

New Jersey
ACCUTEST
LABORATORIES

04/30/15

Technical Report for

Atlantic Richfield Company

ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Accutest Job Number: JB92664

Sampling Date: 04/16/15

Report to:

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ATTN: Donna Nicholls

Total number of pages in report: **357**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Kelly Patterson 732-329-0200

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Accutest Laboratories

Sample Summary

Atlantic Richfield Company

Job No: JB92664

ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JB92664-1	04/16/15	10:28	KM	04/17/15	AQ	Ground Water	MW-1
JB92664-2	04/16/15	11:24	KM	04/17/15	AQ	Ground Water	MW-3
JB92664-3	04/16/15	14:30	KM	04/17/15	AQ	Ground Water	MW-11
JB92664-4	04/16/15	11:45	KM	04/17/15	AQ	Ground Water	MW-19
JB92664-5	04/16/15	14:21	KM	04/17/15	AQ	Ground Water	MW-12
JB92664-6	04/16/15	11:02	KM	04/17/15	AQ	Ground Water	MW-2
JB92664-7	04/16/15	13:30	KM	04/17/15	AQ	Ground Water	MW-14
JB92664-8	04/16/15	12:33	KM	04/17/15	AQ	Ground Water	MW-16R
JB92664-9	04/16/15	12:54	KM	04/17/15	AQ	Ground Water	MW-17R
JB92664-10	04/16/15	12:08	KM	04/17/15	AQ	Ground Water	MW-18R

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Atlantic Richfield Company	**Job No**	JB92664
Site:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ	**Report Date**	4/30/2015 10:08:02 A

On 04/17/2015, 10 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of #1: (5/3.2) C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of JB92664 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GCMS By Method SW846 8260C

Matrix: AQ **Batch ID:** V2B5826

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB92664-2MS, JB92664-6DUP were used as the QC samples indicated.

Matrix: AQ **Batch ID:** V2B5827

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB93029-10DUP, JB93029-9MS were used as the QC samples indicated.

Metals By Method EPA 200.7

Matrix: AQ **Batch ID:** MP86013

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB92664-10MS, JB92664-10MSD, JB92664-10SDL were used as the QC samples for metals.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

Summary of Hits

Job Number: JB92664
Account: Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Collected: 04/16/15

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB92664-1	**MW-1**					
Total Alkanes		17.4 J			ug/l	
Iron		2920	100		ug/l	EPA 200.7
JB92664-2	**MW-3**					
Methyl Tert Butyl Ether		0.36 J	1.0	0.24	ug/l	SW846 8260C
Iron		480	100		ug/l	EPA 200.7
JB92664-3	**MW-11**					
Benzene		1.3	0.50	0.24	ug/l	SW846 8260C
2-Butanone (MEK)		11.1	10	5.6	ug/l	SW846 8260C
Chloromethane		4.2	1.0	0.41	ug/l	SW846 8260C
Cyclohexane		31.8	5.0	0.28	ug/l	SW846 8260C
Ethylbenzene		41.0	1.0	0.27	ug/l	SW846 8260C
Isopropylbenzene		5.0	1.0	0.23	ug/l	SW846 8260C
Methylcyclohexane		25.0	5.0	0.22	ug/l	SW846 8260C
Toluene		9.0	1.0	0.16	ug/l	SW846 8260C
m,p-Xylene		187	1.0	0.38	ug/l	SW846 8260C
o-Xylene		92.1	1.0	0.17	ug/l	SW846 8260C
Xylene (total)		279	1.0	0.17	ug/l	SW846 8260C
Total TIC, Volatile		890 J			ug/l	
Total Alkanes		446 J			ug/l	
Iron		463	100		ug/l	EPA 200.7
JB92664-4	**MW-19**					
Benzene		6.6	0.50	0.24	ug/l	SW846 8260C
Methyl Tert Butyl Ether		2.5	1.0	0.24	ug/l	SW846 8260C
Iron		3070	100		ug/l	EPA 200.7
JB92664-5	**MW-12**					
Benzene		1.5	0.50	0.24	ug/l	SW846 8260C
Cyclohexane		16.4	5.0	0.28	ug/l	SW846 8260C
Ethylbenzene		8.1	1.0	0.27	ug/l	SW846 8260C
Isopropylbenzene		5.6	1.0	0.23	ug/l	SW846 8260C
Methylcyclohexane		18.3	5.0	0.22	ug/l	SW846 8260C
Toluene		0.84 J	1.0	0.16	ug/l	SW846 8260C
m,p-Xylene		21.4	1.0	0.38	ug/l	SW846 8260C
o-Xylene		6.1	1.0	0.17	ug/l	SW846 8260C
Xylene (total)		27.5	1.0	0.17	ug/l	SW846 8260C
Total TIC, Volatile		348 J			ug/l	

Summary of Hits

Job Number: JB92664
Account: Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Collected: 04/16/15

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Total Alkanes		456 J			ug/l	
Iron		440	100		ug/l	EPA 200.7
JB92664-6	**MW-2**					
Iron		725	100		ug/l	EPA 200.7
JB92664-7	**MW-14**					
Benzene		53.5	0.50	0.24	ug/l	SW846 8260C
Cyclohexane		49.7	5.0	0.28	ug/l	SW846 8260C
Ethylbenzene		74.5	1.0	0.27	ug/l	SW846 8260C
Isopropylbenzene		10.1	1.0	0.23	ug/l	SW846 8260C
Methylcyclohexane		77.2	5.0	0.22	ug/l	SW846 8260C
Methyl Tert Butyl Ether		3.3	1.0	0.24	ug/l	SW846 8260C
Toluene		10.3	1.0	0.16	ug/l	SW846 8260C
m,p-Xylene		262	1.0	0.38	ug/l	SW846 8260C
o-Xylene		34.0	1.0	0.17	ug/l	SW846 8260C
Xylene (total)		296	1.0	0.17	ug/l	SW846 8260C
Total TIC, Volatile		1508 J			ug/l	
Total Alkanes		163 J			ug/l	
Iron		820	100		ug/l	EPA 200.7
JB92664-8	**MW-16R**					
Benzene		183	0.50	0.24	ug/l	SW846 8260C
2-Butanone (MEK)		7.4 J	10	5.6	ug/l	SW846 8260C
Cyclohexane		23.2	5.0	0.28	ug/l	SW846 8260C
Ethylbenzene		18.7	1.0	0.27	ug/l	SW846 8260C
Isopropylbenzene		5.3	1.0	0.23	ug/l	SW846 8260C
Methylcyclohexane		11.1	5.0	0.22	ug/l	SW846 8260C
Methyl Tert Butyl Ether		4.3	1.0	0.24	ug/l	SW846 8260C
Tert Butyl Alcohol		20.7	10	2.8	ug/l	SW846 8260C
Toluene		35.9	1.0	0.16	ug/l	SW846 8260C
m,p-Xylene		37.6	1.0	0.38	ug/l	SW846 8260C
o-Xylene		15.2	1.0	0.17	ug/l	SW846 8260C
Xylene (total)		52.8	1.0	0.17	ug/l	SW846 8260C
Total TIC, Volatile		344 J			ug/l	
Total Alkanes		437 J			ug/l	
Iron		5050	100		ug/l	EPA 200.7
JB92664-9	**MW-17R**					
Benzene		245	5.0	2.4	ug/l	SW846 8260C
Cyclohexane		45.2	5.0	0.28	ug/l	SW846 8260C

Summary of Hits

Job Number: JB92664
Account: Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Collected: 04/16/15

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Ethylbenzene		158	1.0	0.27	ug/l	SW846 8260C
Isopropylbenzene		26.1	1.0	0.23	ug/l	SW846 8260C
Methylcyclohexane		34.6	5.0	0.22	ug/l	SW846 8260C
Methyl Tert Butyl Ether		4.4	1.0	0.24	ug/l	SW846 8260C
Tert Butyl Alcohol		46.7	10	2.8	ug/l	SW846 8260C
Toluene		54.1	1.0	0.16	ug/l	SW846 8260C
m,p-Xylene		367	1.0	0.38	ug/l	SW846 8260C
o-Xylene		85.5	1.0	0.17	ug/l	SW846 8260C
Xylene (total)		452	1.0	0.17	ug/l	SW846 8260C
Total TIC, Volatile		1189 J			ug/l	
Total Alkanes		342 J			ug/l	
Iron		11000	100		ug/l	EPA 200.7
JB92664-10	**MW-18R**					
Acetone		72.1	10	3.3	ug/l	SW846 8260C
Benzene		108	0.50	0.24	ug/l	SW846 8260C
2-Butanone (MEK)		18.5	10	5.6	ug/l	SW846 8260C
Cyclohexane		38.5	5.0	0.28	ug/l	SW846 8260C
Ethylbenzene		176	10	2.7	ug/l	SW846 8260C
2-Hexanone		20.9	5.0	1.7	ug/l	SW846 8260C
Isopropylbenzene		40.3	1.0	0.23	ug/l	SW846 8260C
Methylcyclohexane		39.6	5.0	0.22	ug/l	SW846 8260C
Methyl Tert Butyl Ether		9.3	1.0	0.24	ug/l	SW846 8260C
4-Methyl-2-pentanone(MIBK)		28.6	5.0	1.0	ug/l	SW846 8260C
Tert Butyl Alcohol		21.6	10	2.8	ug/l	SW846 8260C
Toluene		133	1.0	0.16	ug/l	SW846 8260C
m,p-Xylene		932	10	3.8	ug/l	SW846 8260C
o-Xylene		207	10	1.7	ug/l	SW846 8260C
Xylene (total)		1140	10	1.7	ug/l	SW846 8260C
Total TIC, Volatile		4139 J			ug/l	
Iron		404	100		ug/l	EPA 200.7

New Jersey ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID: MW-1
Lab Sample ID: JB92664-1 **Date Sampled:** 04/16/15
Matrix: AQ - Ground Water **Date Received:** 04/17/15
Method: SW846 8260C **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B130342.D	1	04/23/15	BK	n/a	n/a	V2B5826
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
123-91-1	1,4-Dioxane	ND	130	41	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	JB92664-1	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		76-120%
17060-07-0	1,2-Dichloroethane-D4	103%		73-122%
2037-26-5	Toluene-D8	101%		84-119%
460-00-4	4-Bromofluorobenzene	102%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	
	Total Alkanes		17.4	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	JB92664-1	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	2920	100	ug/l	1	04/24/15	04/27/15	BS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA36523
(2) Prep QC Batch: MP86013

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID: MW-3
Lab Sample ID: JB92664-2 **Date Sampled:** 04/16/15
Matrix: AQ - Ground Water **Date Received:** 04/17/15
Method: SW846 8260C **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B130343.D	1	04/23/15	BK	n/a	n/a	V2B5826
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
123-91-1	1,4-Dioxane	ND	130	41	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	JB92664-2	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.36	1.0	0.24	ug/l	J
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		76-120%
17060-07-0	1,2-Dichloroethane-D4	104%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	97%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	
	Total Alkanes		0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	JB92664-2	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	480	100	ug/l	1	04/24/15	04/27/15	BS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA36523
(2) Prep QC Batch: MP86013

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID: MW-11
Lab Sample ID: JB92664-3 **Date Sampled:** 04/16/15
Matrix: AQ - Ground Water **Date Received:** 04/17/15
Method: SW846 8260C **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B130344.D	1	04/23/15	BK	n/a	n/a	V2B5826
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	1.3	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	11.1	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	4.2	1.0	0.41	ug/l	
110-82-7	Cyclohexane	31.8	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
123-91-1	1,4-Dioxane	ND	130	41	ug/l	
100-41-4	Ethylbenzene	41.0	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-11		
Lab Sample ID:	JB92664-3	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	5.0	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	25.0	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	9.0	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	187	1.0	0.38	ug/l	
95-47-6	o-Xylene	92.1	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	279	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		76-120%
17060-07-0	1,2-Dichloroethane-D4	104%		73-122%
2037-26-5	Toluene-D8	103%		84-119%
460-00-4	4-Bromofluorobenzene	96%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
96-37-7	Cyclopentane, methyl-	10.14	52	ug/l	JN
	C3 alkyl benzene	16.06	100	ug/l	J
	C3 alkyl benzene	16.08	60	ug/l	J
	C3 alkyl benzene	16.13	100	ug/l	J
	C3 alkyl benzene	16.34	140	ug/l	J
	C3 alkyl benzene	16.49	190	ug/l	J
496-11-7	Indane	17.13	100	ug/l	JN
	C4 alkyl benzene	17.50	55	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-11		
Lab Sample ID:	JB92664-3	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	1H-Indene-dihydro-methyl- isomer	17.67	39	ug/l	J
	1H-Indene-dihydro-methyl- isomer	18.45	54	ug/l	J
	Total TIC, Volatile		890	ug/l	J
	Total Alkanes		446	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-11		
Lab Sample ID:	JB92664-3	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	463	100	ug/l	1	04/24/15	04/27/15	BS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA36523
(2) Prep QC Batch: MP86013

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-19		
Lab Sample ID:	JB92664-4	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B130345.D	1	04/23/15	BK	n/a	n/a	V2B5826
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	6.6	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
123-91-1	1,4-Dioxane	ND	130	41	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-19		
Lab Sample ID:	JB92664-4	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2.5	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		76-120%
17060-07-0	1,2-Dichloroethane-D4	99%		73-122%
2037-26-5	Toluene-D8	98%		84-119%
460-00-4	4-Bromofluorobenzene	101%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	
	Total Alkanes		0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-19		
Lab Sample ID:	JB92664-4	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	3070	100	ug/l	1	04/24/15	04/27/15	BS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA36523
(2) Prep QC Batch: MP86013

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-12		
Lab Sample ID:	JB92664-5	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B130346.D	1	04/23/15	BK	n/a	n/a	V2B5826
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	1.5	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	16.4	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
123-91-1	1,4-Dioxane	ND	130	41	ug/l	
100-41-4	Ethylbenzene	8.1	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-12		
Lab Sample ID:	JB92664-5	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	5.6	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	18.3	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	0.84	1.0	0.16	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	21.4	1.0	0.38	ug/l	
95-47-6	o-Xylene	6.1	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	27.5	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		76-120%
17060-07-0	1,2-Dichloroethane-D4	101%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	99%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	C3 alkyl benzene	16.08	35	ug/l	J
	C3 alkyl benzene	16.34	48	ug/l	J
	C3 alkyl benzene	16.49	68	ug/l	J
	C4 alkyl benzene	17.04	36	ug/l	J
	Indane + C4 alkyl benzene	17.12	45	ug/l	J
	C4 alkyl benzene	17.50	49	ug/l	J
	C4 alkyl benzene	17.90	33	ug/l	J
	1H-Indene-dihydro-methyl- isomer	18.45	34	ug/l	J

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-12		
Lab Sample ID:	JB92664-5	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		348	ug/l	J
	Total Alkanes		456	ug/l	J

ND = Not detected MDL = Method Detection Limit
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E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-12		
Lab Sample ID:	JB92664-5	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	440	100	ug/l	1	04/24/15	04/27/15	BS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA36523
(2) Prep QC Batch: MP86013

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-2		
Lab Sample ID:	JB92664-6	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B130347.D	1	04/23/15	BK	n/a	n/a	V2B5826
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
123-91-1	1,4-Dioxane	ND	130	41	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-2		
Lab Sample ID:	JB92664-6	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		76-120%
17060-07-0	1,2-Dichloroethane-D4	99%		73-122%
2037-26-5	Toluene-D8	101%		84-119%
460-00-4	4-Bromofluorobenzene	100%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	
	Total Alkanes		0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-2		
Lab Sample ID:	JB92664-6	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	725	100	ug/l	1	04/24/15	04/27/15	BS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA36523
(2) Prep QC Batch: MP86013

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID: MW-14
Lab Sample ID: JB92664-7 **Date Sampled:** 04/16/15
Matrix: AQ - Ground Water **Date Received:** 04/17/15
Method: SW846 8260C **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B130348.D	1	04/23/15	BK	n/a	n/a	V2B5826
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	53.5	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	49.7	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
123-91-1	1,4-Dioxane	ND	130	41	ug/l	
100-41-4	Ethylbenzene	74.5	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	JB92664-7	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	10.1	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	77.2	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	3.3	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	10.3	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	262	1.0	0.38	ug/l	
95-47-6	o-Xylene	34.0	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	296	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		76-120%
17060-07-0	1,2-Dichloroethane-D4	101%		73-122%
2037-26-5	Toluene-D8	102%		84-119%
460-00-4	4-Bromofluorobenzene	97%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	C3 alkyl benzene	16.05	98	ug/l	J
	C3 alkyl benzene	16.08	85	ug/l	J
	C3 alkyl benzene	16.13	93	ug/l	J
	C3 alkyl benzene	16.34	93	ug/l	J
	C3 alkyl benzene	16.49	360	ug/l	J
	C4 alkyl benzene	17.04	70	ug/l	J
	Indane + C4 alkyl benzene	17.12	170	ug/l	J
	C4 alkyl benzene	17.40	76	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	JB92664-7	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	C4 alkyl benzene	17.43	66	ug/l	J
	C4 alkyl benzene	17.50	150	ug/l	J
	C4 alkyl benzene	17.90	75	ug/l	J
	C4 alkyl benzene	17.95	95	ug/l	J
	1H-Indene-dihydro-methyl- isomer	18.45	77	ug/l	J
	Total TIC, Volatile		1508	ug/l	J
	Total Alkanes		163	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	JB92664-7	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	820	100	ug/l	1	04/24/15	04/27/15	BS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA36523
(2) Prep QC Batch: MP86013

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID: MW-16R
Lab Sample ID: JB92664-8 **Date Sampled:** 04/16/15
Matrix: AQ - Ground Water **Date Received:** 04/17/15
Method: SW846 8260C **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B130349.D	1	04/23/15	BK	n/a	n/a	V2B5826
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	183	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	7.4	10	5.6	ug/l	J
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	23.2	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
123-91-1	1,4-Dioxane	ND	130	41	ug/l	
100-41-4	Ethylbenzene	18.7	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-16R		
Lab Sample ID:	JB92664-8	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	5.3	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	11.1	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	4.3	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	20.7	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	35.9	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	37.6	1.0	0.38	ug/l	
95-47-6	o-Xylene	15.2	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	52.8	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		76-120%
17060-07-0	1,2-Dichloroethane-D4	95%		73-122%
2037-26-5	Toluene-D8	103%		84-119%
460-00-4	4-Bromofluorobenzene	101%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	alkene	5.31	35	ug/l	J
	alkene	8.56	32	ug/l	J
96-37-7	Cyclopentane, methyl-	10.14	43	ug/l	JN
	C3 alkyl benzene	16.34	34	ug/l	J
	C3 alkyl benzene	16.49	44	ug/l	J
	C4 alkyl benzene	17.04	22	ug/l	J
496-11-7	Indane	17.13	43	ug/l	JN
	C4 alkyl benzene	17.50	41	ug/l	J

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J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-16R		
Lab Sample ID:	JB92664-8	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	C4 alkyl benzene	17.90	22	ug/l	J
	1H-Indene-dihydro-methyl- isomer	18.45	28	ug/l	J
	Total TIC, Volatile		344	ug/l	J
	Total Alkanes		437	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-16R		
Lab Sample ID:	JB92664-8	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	5050	100	ug/l	1	04/24/15	04/27/15	BS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA36523
(2) Prep QC Batch: MP86013

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-17R		
Lab Sample ID:	JB92664-9	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B130350.D	1	04/23/15	BK	n/a	n/a	V2B5826
Run #2	2B130380.D	10	04/23/15	BK	n/a	n/a	V2B5827

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	245 [a]	5.0	2.4	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	45.2	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
123-91-1	1,4-Dioxane	ND	130	41	ug/l	
100-41-4	Ethylbenzene	158	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-17R		
Lab Sample ID:	JB92664-9	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	26.1	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	34.6	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	4.4	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	46.7	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	54.1	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	367	1.0	0.38	ug/l	
95-47-6	o-Xylene	85.5	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	452	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%	99%	76-120%
17060-07-0	1,2-Dichloroethane-D4	92%	107%	73-122%
2037-26-5	Toluene-D8	103%	100%	84-119%
460-00-4	4-Bromofluorobenzene	99%	98%	78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
96-37-7	Cyclopentane, methyl-	10.14	76	ug/l	JN
103-65-1	Benzene, propyl-	15.99	70	ug/l	JN
	C3 alkyl benzene	16.05	110	ug/l	J
	C3 alkyl benzene	16.08	90	ug/l	J
	C3 alkyl benzene	16.13	62	ug/l	J
	C3 alkyl benzene	16.34	110	ug/l	J
	C3 alkyl benzene	16.49	320	ug/l	J
	C4 alkyl benzene	17.04	56	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-17R		
Lab Sample ID:	JB92664-9	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
496-11-7	Indane	17.13	160	ug/l	JN
	C4 alkyl benzene	17.50	83	ug/l	J
	1H-Indene-dihydro-methyl- isomer	18.45	52	ug/l	J
	Total TIC, Volatile		1189	ug/l	J
	Total Alkanes		342	ug/l	J

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-17R		
Lab Sample ID:	JB92664-9	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	11000	100	ug/l	1	04/24/15	04/27/15	BS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA36523
(2) Prep QC Batch: MP86013

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-18R		
Lab Sample ID:	JB92664-10	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B130351.D	1	04/23/15	BK	n/a	n/a	V2B5826
Run #2	2B130381.D	10	04/23/15	BK	n/a	n/a	V2B5827

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	72.1	10	3.3	ug/l	
71-43-2	Benzene	108	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	18.5	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	38.5	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
123-91-1	1,4-Dioxane	ND	130	41	ug/l	
100-41-4	Ethylbenzene	176 [a]	10	2.7	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-18R		
Lab Sample ID:	JB92664-10	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	20.9	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	40.3	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	39.6	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	9.3	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	28.6	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	21.6	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	133	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	932 [a]	10	3.8	ug/l	
95-47-6	o-Xylene	207 [a]	10	1.7	ug/l	
1330-20-7	Xylene (total)	1140 [a]	10	1.7	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%	101%	76-120%
17060-07-0	1,2-Dichloroethane-D4	89%	107%	73-122%
2037-26-5	Toluene-D8	102%	102%	84-119%
460-00-4	4-Bromofluorobenzene	97%	96%	78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
103-65-1	Benzene, propyl-	15.99	120	ug/l	JN
	C3 alkyl benzene	16.06	440	ug/l	J
	C3 alkyl benzene	16.09	300	ug/l	J
	C3 alkyl benzene	16.13	380	ug/l	J
	C3 alkyl benzene	16.34	310	ug/l	J
	C3 alkyl benzene	16.50	1100	ug/l	J
	C4 alkyl benzene	17.04	120	ug/l	J
	Indane + C4 alkyl benzene	17.12	410	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-18R		
Lab Sample ID:	JB92664-10	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	C4 alkyl benzene	17.40	120	ug/l	J
	C4 alkyl benzene	17.43	99	ug/l	J
	C4 alkyl benzene	17.50	240	ug/l	J
	C4 alkyl benzene	17.90	120	ug/l	J
	C4 alkyl benzene	17.95	140	ug/l	J
	1H-Indene-dihydro-methyl- isomer	18.27	110	ug/l	J
	1H-Indene-dihydro-methyl- isomer	18.45	130	ug/l	J
	Total TIC, Volatile		4139	ug/l	J
	Total Alkanes		0	ug/l	

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-18R		
Lab Sample ID:	JB92664-10	**Date Sampled:**	04/16/15
Matrix:	AQ - Ground Water	**Date Received:**	04/17/15
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	404	100	ug/l	1	04/24/15	04/27/15	BS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA36523
(2) Prep QC Batch: MP86013

RL = Reporting Limit

New Jersey ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

CW

ACCUTEST Laboratories

Mid Atlantic

2235 Route 130, Dayton, NJ 08810

Tel. (732) 329-0200 Fax: (732) 329-3499/3480

Chain Of Custody Record

10/04

☐ SCIENCE & ENGINEERING
☐ TECHNICAL SERVICES
☑ BILL CONSULTANT

Accutest Job #

Accutest Quote #

DATE: April 2015

PAGE: 1 of 1

CONSULTANT: EnviroTrac Ltd.

ADDRESS: 400 E Corporate Court

CITY: South Plainfield, NJ 07080

TELEPHONE: (908) 757-1900 FAX: (908) 757-0017 E-MAIL: christineh@envirotrac.com

SITE ADDRESS (Street and City): 945 Pleasant Vally Way, West Orange

PROJECT NAME: BP 84849

PROJECT CONTACT (Report to): Christine Hahn

CONSULTANT PROJECT NO.

Kevin C. Mellon

LAB JOB NUMBER (SDG): JB92664

TURNAROUND TIME (BUSINESS DAYS): ☑ STANDARD ☐ 7 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS

DATA DELIVERABLES (CHECK ONE): ☐ COMMA ☐ COMMB ☑ NJ REDT2 ☐ FULL T1 ☐ OTHER

REQUESTED ANALYSIS if more than one method is listed, circle one

SPECIAL INSTRUCTIONS OR NOTES :

LAB Sample #	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VO+10, MTBE,TBA via 8260	Total Iron 200.7	Container PID Readings or Laboratory Notes
1	MW-1	4/16/15	1028	GW	3	1				4	X	X	
2	MW-3		1124	GW	3	1				4	X	X	
3	MW-11		1430	GW	3	1				4	X	X	A7
4	MW-19		1145	GW	3	1				4	X	X	V779
	~~MW-6~~ Rem	—	—	GW	3	1				4	X	X	
5	MW-12	4/16/15	1421	GW	3	1				4	X	X	No Sample
6	MW-2		1102	GW	3	1				4	X	X	
7	MW-14		1330	GW	3	1				4	X	X	
8	MW-16R		1233	GW	3	1				4	X	X	
9	MW-17R		1254	GW	3	1				4	X	X	
													● VOA QC VAL 4-17-15 AM

Relinquished by: (Sampler Signature)	Received by: (Signature)	Date: 4-17-15	Time: 11:25
Relinquished by: (Signature)	Received by: (Signature)	Date: 4/17/15	Time: 1125
Relinquished by: (Signature)	Received by: (Signature)	Date: 4/17/15	Time: 1230

INITIAL ASESSMENT: AM 3A

LABEL VERIFICATION: AS

4-17-15 AM
ALL SAMPLES RECEIVED
PRESERVED AS APPLICABLE

SAMPLE RECEIVED @ LAB ☐ YES ☐ NO

SAMPLE TEMP UPON RECEIPT: _____ Degrees C

5.0°C-B

JB92664: Chain of Custody
Page 1 of 3

ACCUTEST Laboratories
Mid Atlantic
2235 Route 130, Dayton, NJ 08810
Tel. (732) 329-0200 Fax: (732) 329-3499/3480

Chain Of Custody Record

10/04

☐ SCIENCE & ENGINEERING
☐ TECHNICAL SERVICES
☑ SELL CONSULTANT

Accutest Job #
Accutest Quote #

DATE: April 2015
PAGE: 1 of 1

CONSULTANT: EnviroTrac Ltd.
ADDRESS: 400 E Corporate Court
CITY: South Plainfield, NJ 07080
TELEPHONE: (908) 757-1900 FAX: (908) 757-0017 E-MAIL: christineh@enviroTrac.com

SITE ADDRESS (Street and City): 945 Pleasant Vally Way, West Orange
PROJECT NAME: BP 84849
PROJECT CONTACT (Report to): Christine Hahn
CONSULTANT PROJECT NO.

Kevin C. Miller

LAB JOB NUMBER (SDG): JB92664

TURNAROUND TIME (BUSINESS DAYS): ☑ STANDARD ☐ 7 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS

DATA DELIVERABLES (CHECK ONE): ☐ COMMA ☐ COMMB ☑ NJ REDT2 ☐ FULL T1 ☐ OTHER

REQUESTED ANALYSIS if more than one method is listed, circle one

SPECIAL INSTRUCTIONS OR NOTES :

LAB Sample #	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VO+10, MTBE,TBA via 8260	Total Iron 200.7	Container PID Readings or Laboratory Notes
10	MW-18R	4/16/15	1208	GW	3	1				4	X	X	

Relinquished by: (Sampler Signature) — Received by: (Signature) — Date: 4-17-15 — Time: 11:25
Relinquished by: (Signature) — Received by: (Signature) — Date: 4/17/15 — Time: 1125
Relinquished by: (Signature) — Received by: (Signature) — Date: 4/17/15 — Time: 1230

SAMPLE RECEIVED @ LAB ☐ ICE? ☐ NO

SAMPLE TEMP UPON RECEIPT: _____ Degrees C
5.0°C-B
3.0°C-P.O

JB92664: Chain of Custody
Page 2 of 3

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JB92664 **Client:** **Project:**

Date / Time Received: 4/17/2015 12:30:00 PM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (5/3.2); 0

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

JB92664: Chain of Custody
Page 3 of 3

Internal Sample Tracking Chronicle

Atlantic Richfield Company

Job No: JB92664

ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JB92664-1 MW-1	Collected: 16-APR-15 10:28 By: KM		Received: 17-APR-15 By: AM			
JB92664-1	SW846 8260C	23-APR-15 01:41	BK			V8260TCL11+
JB92664-1	EPA 200.7	27-APR-15 18:11	BS	24-APR-15	MO	FE
JB92664-2 MW-3	Collected: 16-APR-15 11:24 By: KM		Received: 17-APR-15 By: AM			
JB92664-2	SW846 8260C	23-APR-15 02:10	BK			V8260TCL11+
JB92664-2	EPA 200.7	27-APR-15 18:17	BS	24-APR-15	MO	FE
JB92664-3 MW-11	Collected: 16-APR-15 14:30 By: KM		Received: 17-APR-15 By: AM			
JB92664-3	SW846 8260C	23-APR-15 02:39	BK			V8260TCL11+
JB92664-3	EPA 200.7	27-APR-15 18:23	BS	24-APR-15	MO	FE
JB92664-4 MW-19	Collected: 16-APR-15 11:45 By: KM		Received: 17-APR-15 By: AM			
JB92664-4	SW846 8260C	23-APR-15 03:08	BK			V8260TCL11+
JB92664-4	EPA 200.7	27-APR-15 18:41	BS	24-APR-15	MO	FE
JB92664-5 MW-12	Collected: 16-APR-15 14:21 By: KM		Received: 17-APR-15 By: AM			
JB92664-5	SW846 8260C	23-APR-15 03:37	BK			V8260TCL11+
JB92664-5	EPA 200.7	27-APR-15 18:47	BS	24-APR-15	MO	FE
JB92664-6 MW-2	Collected: 16-APR-15 11:02 By: KM		Received: 17-APR-15 By: AM			
JB92664-6	SW846 8260C	23-APR-15 04:06	BK			V8260TCL11+
JB92664-6	EPA 200.7	27-APR-15 18:53	BS	24-APR-15	MO	FE
JB92664-7 MW-14	Collected: 16-APR-15 13:30 By: KM		Received: 17-APR-15 By: AM			
JB92664-7	SW846 8260C	23-APR-15 04:34	BK			V8260TCL11+

Internal Sample Tracking Chronicle

Atlantic Richfield Company

Job No: JB92664

ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JB92664-7	EPA 200.7	27-APR-15 18:59	BS	24-APR-15	MO	FE
JB92664-8 MW-16R	Collected: 16-APR-15 12:33 By: KM	Received: 17-APR-15 By: AM				
JB92664-8	SW846 8260C	23-APR-15 05:03	BK			V8260TCL11+
JB92664-8	EPA 200.7	27-APR-15 19:06	BS	24-APR-15	MO	FE
JB92664-9 MW-17R	Collected: 16-APR-15 12:54 By: KM	Received: 17-APR-15 By: AM				
JB92664-9	SW846 8260C	23-APR-15 05:32	BK			V8260TCL11+
JB92664-9	SW846 8260C	23-APR-15 20:33	BK			V8260TCL11+
JB92664-9	EPA 200.7	27-APR-15 19:12	BS	24-APR-15	MO	FE
JB92664-10 MW-18R	Collected: 16-APR-15 12:08 By: KM	Received: 17-APR-15 By: AM				
JB92664-10	SW846 8260C	23-APR-15 06:01	BK			V8260TCL11+
JB92664-10	SW846 8260C	23-APR-15 21:02	BK			V8260TCL11+
JB92664-10	EPA 200.7	27-APR-15 17:59	BS	24-APR-15	MO	FE

Accutest Internal Chain of Custody

Job Number: JB92664
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Received: 04/17/15

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB92664-1.1	Secured Storage	Todd Shoemaker	04/24/15 11:55	Retrieve from Storage
JB92664-1.1	Todd Shoemaker	Secured Staging Area	04/24/15 11:55	Return to Storage
JB92664-1.1	Secured Staging Area	Michael Obasidey	04/24/15 14:44	Retrieve from Storage
JB92664-1.1	Michael Obasidey	Masooda Sultani	04/25/15 13:14	Custody Transfer
JB92664-1.1	Masooda Sultani	Secured Storage	04/25/15 14:13	Return to Storage
JB92664-1.1.1	Michael Obasidey	Metals Digestion	04/24/15 15:07	Digestate from JB92664-1.1
JB92664-1.1.1	Metals Digestion	Michael Obasidey	04/24/15 15:08	Digestate from JB92664-1.1
JB92664-1.1.1	Michael Obasidey	Metals Digestate Storage	04/24/15 15:08	Return to Storage
JB92664-1.1.1	Metals Digestate Storage	Bryan Stokes-Cawley	04/27/15 15:07	Retrieve from Storage
JB92664-1.1.1	Bryan Stokes-Cawley	Metals Digestate Storage	04/27/15 15:08	Return to Storage
JB92664-1.3	Secured Storage	Bridget Kelly	04/22/15 16:25	Retrieve from Storage
JB92664-1.3	Bridget Kelly	GCMS2B	04/22/15 16:25	Load on Instrument
JB92664-1.3	GCMS2B	Bridget Kelly	04/23/15 09:41	Unload from Instrument
JB92664-1.3	Bridget Kelly	Secured Storage	04/23/15 09:41	Return to Storage
JB92664-2.1	Secured Storage	Todd Shoemaker	04/24/15 11:55	Retrieve from Storage
JB92664-2.1	Todd Shoemaker	Secured Staging Area	04/24/15 11:55	Return to Storage
JB92664-2.1	Secured Staging Area	Michael Obasidey	04/24/15 14:44	Retrieve from Storage
JB92664-2.1	Michael Obasidey	Masooda Sultani	04/25/15 13:14	Custody Transfer
JB92664-2.1	Masooda Sultani	Secured Storage	04/25/15 14:13	Return to Storage
JB92664-2.1.1	Michael Obasidey	Metals Digestion	04/24/15 15:07	Digestate from JB92664-2.1
JB92664-2.1.1	Metals Digestion	Michael Obasidey	04/24/15 15:08	Digestate from JB92664-2.1
JB92664-2.1.1	Michael Obasidey	Metals Digestate Storage	04/24/15 15:08	Return to Storage
JB92664-2.1.1	Metals Digestate Storage	Bryan Stokes-Cawley	04/27/15 15:07	Retrieve from Storage
JB92664-2.1.1	Bryan Stokes-Cawley	Metals Digestate Storage	04/27/15 15:08	Return to Storage
JB92664-2.2	Secured Storage	Bridget Kelly	04/23/15 08:42	Retrieve from Storage
JB92664-2.2	Bridget Kelly	GCMS2B	04/23/15 08:42	Load on Instrument
JB92664-2.2	GCMS2B	Bridget Kelly	04/23/15 09:41	Unload from Instrument
JB92664-2.2	Bridget Kelly	Secured Storage	04/23/15 09:41	Return to Storage
JB92664-2.3	Secured Storage	Bridget Kelly	04/22/15 16:25	Retrieve from Storage
JB92664-2.3	Bridget Kelly	GCMS2B	04/22/15 16:25	Load on Instrument
JB92664-2.3	GCMS2B	Bridget Kelly	04/23/15 09:41	Unload from Instrument
JB92664-2.3	Bridget Kelly	Secured Storage	04/23/15 09:41	Return to Storage
JB92664-3.1	Secured Storage	Todd Shoemaker	04/24/15 11:55	Retrieve from Storage
JB92664-3.1	Todd Shoemaker	Secured Staging Area	04/24/15 11:55	Return to Storage
JB92664-3.1	Secured Staging Area	Michael Obasidey	04/24/15 14:44	Retrieve from Storage
JB92664-3.1	Michael Obasidey	Masooda Sultani	04/25/15 13:14	Custody Transfer
JB92664-3.1	Masooda Sultani	Secured Storage	04/25/15 14:13	Return to Storage

Accutest Internal Chain of Custody

Job Number: JB92664
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Received: 04/17/15

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB92664-3.1.1	Michael Obasidey	Metals Digestion	04/24/15 15:07	Digestate from JB92664-3.1
JB92664-3.1.1	Metals Digestion	Michael Obasidey	04/24/15 15:08	Digestate from JB92664-3.1
JB92664-3.1.1	Michael Obasidey	Metals Digestate Storage	04/24/15 15:08	Return to Storage
JB92664-3.1.1	Metals Digestate Storage	Bryan Stokes-Cawley	04/27/15 15:07	Retrieve from Storage
JB92664-3.1.1	Bryan Stokes-Cawley	Metals Digestate Storage	04/27/15 15:08	Return to Storage
JB92664-3.2	Secured Storage	Bridget Kelly	04/22/15 16:25	Retrieve from Storage
JB92664-3.2	Bridget Kelly	GCMS2B	04/22/15 16:25	Load on Instrument
JB92664-3.2	GCMS2B	Bridget Kelly	04/23/15 09:41	Unload from Instrument
JB92664-3.2	Bridget Kelly	Secured Storage	04/23/15 09:41	Return to Storage
JB92664-4.1	Secured Storage	Todd Shoemaker	04/24/15 11:55	Retrieve from Storage
JB92664-4.1	Todd Shoemaker	Secured Staging Area	04/24/15 11:55	Return to Storage
JB92664-4.1	Secured Staging Area	Michael Obasidey	04/24/15 14:44	Retrieve from Storage
JB92664-4.1	Michael Obasidey	Masooda Sultani	04/25/15 13:14	Custody Transfer
JB92664-4.1	Masooda Sultani	Secured Storage	04/25/15 14:13	Return to Storage
JB92664-4.1.1	Michael Obasidey	Metals Digestion	04/24/15 15:07	Digestate from JB92664-4.1
JB92664-4.1.1	Metals Digestion	Michael Obasidey	04/24/15 15:08	Digestate from JB92664-4.1
JB92664-4.1.1	Michael Obasidey	Metals Digestate Storage	04/24/15 15:08	Return to Storage
JB92664-4.1.1	Metals Digestate Storage	Bryan Stokes-Cawley	04/27/15 15:07	Retrieve from Storage
JB92664-4.1.1	Bryan Stokes-Cawley	Metals Digestate Storage	04/27/15 15:08	Return to Storage
JB92664-4.2	Secured Storage	Bridget Kelly	04/24/15 15:44	Retrieve from Storage
JB92664-4.2	Bridget Kelly	GCMS2B	04/24/15 15:44	Load on Instrument
JB92664-4.2	GCMS2B	Bridget Kelly	04/27/15 09:42	Unload from Instrument
JB92664-4.2	Bridget Kelly	Secured Storage	04/27/15 09:42	Return to Storage
JB92664-4.3	Secured Storage	Bridget Kelly	04/22/15 16:25	Retrieve from Storage
JB92664-4.3	Bridget Kelly	GCMS2B	04/22/15 16:25	Load on Instrument
JB92664-4.3	GCMS2B	Bridget Kelly	04/23/15 09:41	Unload from Instrument
JB92664-4.3	Bridget Kelly	Secured Storage	04/23/15 09:41	Return to Storage
JB92664-5.1	Secured Storage	Todd Shoemaker	04/24/15 11:55	Retrieve from Storage
JB92664-5.1	Todd Shoemaker	Secured Staging Area	04/24/15 11:55	Return to Storage
JB92664-5.1	Secured Staging Area	Michael Obasidey	04/24/15 14:44	Retrieve from Storage
JB92664-5.1	Michael Obasidey	Masooda Sultani	04/25/15 13:14	Custody Transfer
JB92664-5.1	Masooda Sultani	Secured Storage	04/25/15 14:13	Return to Storage
JB92664-5.1.1	Michael Obasidey	Metals Digestion	04/24/15 15:07	Digestate from JB92664-5.1
JB92664-5.1.1	Metals Digestion	Michael Obasidey	04/24/15 15:08	Digestate from JB92664-5.1
JB92664-5.1.1	Michael Obasidey	Metals Digestate Storage	04/24/15 15:08	Return to Storage
JB92664-5.1.1	Metals Digestate Storage	Bryan Stokes-Cawley	04/27/15 15:07	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: JB92664
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Received: 04/17/15

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB92664-5.1.1	Bryan Stokes-Cawley	Metals Digestate Storage	04/27/15 15:08	Return to Storage
JB92664-5.3	Secured Storage	Bridget Kelly	04/22/15 16:25	Retrieve from Storage
JB92664-5.3	Bridget Kelly	GCMS2B	04/22/15 16:25	Load on Instrument
JB92664-5.3	GCMS2B	Bridget Kelly	04/23/15 09:41	Unload from Instrument
JB92664-5.3	Bridget Kelly	Secured Storage	04/23/15 09:41	Return to Storage
JB92664-6.1	Secured Storage	Todd Shoemaker	04/24/15 11:55	Retrieve from Storage
JB92664-6.1	Todd Shoemaker	Secured Staging Area	04/24/15 11:55	Return to Storage
JB92664-6.1	Secured Staging Area	Michael Obasidey	04/24/15 14:44	Retrieve from Storage
JB92664-6.1	Michael Obasidey	Masooda Sultani	04/25/15 13:14	Custody Transfer
JB92664-6.1	Masooda Sultani	Secured Storage	04/25/15 14:13	Return to Storage
JB92664-6.1.1	Michael Obasidey	Metals Digestion	04/24/15 15:07	Digestate from JB92664-6.1
JB92664-6.1.1	Metals Digestion	Michael Obasidey	04/24/15 15:08	Digestate from JB92664-6.1
JB92664-6.1.1	Michael Obasidey	Metals Digestate Storage	04/24/15 15:08	Return to Storage
JB92664-6.1.1	Metals Digestate Storage	Bryan Stokes-Cawley	04/27/15 15:07	Retrieve from Storage
JB92664-6.1.1	Bryan Stokes-Cawley	Metals Digestate Storage	04/27/15 15:08	Return to Storage
JB92664-6.2	Secured Storage	Bridget Kelly	04/23/15 08:42	Retrieve from Storage
JB92664-6.2	Bridget Kelly	GCMS2B	04/23/15 08:42	Load on Instrument
JB92664-6.2	GCMS2B	Bridget Kelly	04/23/15 09:41	Unload from Instrument
JB92664-6.2	Bridget Kelly	Secured Storage	04/23/15 09:41	Return to Storage
JB92664-6.3	Secured Storage	Bridget Kelly	04/22/15 16:25	Retrieve from Storage
JB92664-6.3	Bridget Kelly	GCMS2B	04/22/15 16:25	Load on Instrument
JB92664-6.3	GCMS2B	Bridget Kelly	04/23/15 09:41	Unload from Instrument
JB92664-6.3	Bridget Kelly	Secured Storage	04/23/15 09:41	Return to Storage
JB92664-7.1	Secured Storage	Todd Shoemaker	04/24/15 11:55	Retrieve from Storage
JB92664-7.1	Todd Shoemaker	Secured Staging Area	04/24/15 11:55	Return to Storage
JB92664-7.1	Secured Staging Area	Michael Obasidey	04/24/15 14:44	Retrieve from Storage
JB92664-7.1	Michael Obasidey	Masooda Sultani	04/25/15 13:14	Custody Transfer
JB92664-7.1	Masooda Sultani	Secured Storage	04/25/15 14:13	Return to Storage
JB92664-7.1.1	Michael Obasidey	Metals Digestion	04/24/15 15:07	Digestate from JB92664-7.1
JB92664-7.1.1	Metals Digestion	Michael Obasidey	04/24/15 15:08	Digestate from JB92664-7.1
JB92664-7.1.1	Michael Obasidey	Metals Digestate Storage	04/24/15 15:08	Return to Storage
JB92664-7.1.1	Metals Digestate Storage	Bryan Stokes-Cawley	04/27/15 15:07	Retrieve from Storage
JB92664-7.1.1	Bryan Stokes-Cawley	Metals Digestate Storage	04/27/15 15:08	Return to Storage
JB92664-7.2	Secured Storage	Bridget Kelly	04/22/15 16:25	Retrieve from Storage
JB92664-7.2	Bridget Kelly	GCMS2B	04/22/15 16:25	Load on Instrument
JB92664-7.2	GCMS2B	Bridget Kelly	04/23/15 09:41	Unload from Instrument

Accutest Internal Chain of Custody

Job Number: JB92664
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Received: 04/17/15

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB92664-7.2	Bridget Kelly	Secured Storage	04/23/15 09:41	Return to Storage
JB92664-8.1	Secured Storage	Todd Shoemaker	04/24/15 11:55	Retrieve from Storage
JB92664-8.1	Todd Shoemaker	Secured Staging Area	04/24/15 11:55	Return to Storage
JB92664-8.1	Secured Staging Area	Michael Obasidey	04/24/15 14:44	Retrieve from Storage
JB92664-8.1	Michael Obasidey	Masooda Sultani	04/25/15 13:14	Custody Transfer
JB92664-8.1	Masooda Sultani	Secured Storage	04/25/15 14:13	Return to Storage
JB92664-8.1.1	Michael Obasidey	Metals Digestion	04/24/15 15:07	Digestate from JB92664-8.1
JB92664-8.1.1	Metals Digestion	Michael Obasidey	04/24/15 15:08	Digestate from JB92664-8.1
JB92664-8.1.1	Michael Obasidey	Metals Digestate Storage	04/24/15 15:08	Return to Storage
JB92664-8.1.1	Metals Digestate Storage	Bryan Stokes-Cawley	04/27/15 15:07	Retrieve from Storage
JB92664-8.1.1	Bryan Stokes-Cawley	Metals Digestate Storage	04/27/15 15:08	Return to Storage
JB92664-8.4	Secured Storage	Bridget Kelly	04/22/15 16:25	Retrieve from Storage
JB92664-8.4	Bridget Kelly	GCMS2B	04/22/15 16:25	Load on Instrument
JB92664-8.4	GCMS2B	Bridget Kelly	04/23/15 09:41	Unload from Instrument
JB92664-8.4	Bridget Kelly	Secured Storage	04/23/15 09:41	Return to Storage
JB92664-9.1	Secured Storage	Todd Shoemaker	04/24/15 11:55	Retrieve from Storage
JB92664-9.1	Todd Shoemaker	Secured Staging Area	04/24/15 11:55	Return to Storage
JB92664-9.1	Secured Staging Area	Michael Obasidey	04/24/15 14:44	Retrieve from Storage
JB92664-9.1	Michael Obasidey	Masooda Sultani	04/25/15 13:14	Custody Transfer
JB92664-9.1	Masooda Sultani	Secured Storage	04/25/15 14:13	Return to Storage
JB92664-9.1.1	Michael Obasidey	Metals Digestion	04/24/15 15:07	Digestate from JB92664-9.1
JB92664-9.1.1	Metals Digestion	Michael Obasidey	04/24/15 15:08	Digestate from JB92664-9.1
JB92664-9.1.1	Michael Obasidey	Metals Digestate Storage	04/24/15 15:08	Return to Storage
JB92664-9.1.1	Metals Digestate Storage	Bryan Stokes-Cawley	04/27/15 15:07	Retrieve from Storage
JB92664-9.1.1	Bryan Stokes-Cawley	Metals Digestate Storage	04/27/15 15:08	Return to Storage
JB92664-9.2	Secured Storage	Bridget Kelly	04/22/15 16:25	Retrieve from Storage
JB92664-9.2	Bridget Kelly	GCMS2B	04/22/15 16:25	Load on Instrument
JB92664-9.2	GCMS2B	Bridget Kelly	04/23/15 09:41	Unload from Instrument
JB92664-9.2	Bridget Kelly	Secured Storage	04/23/15 09:41	Return to Storage
JB92664-9.3	Secured Storage	Bridget Kelly	04/23/15 15:34	Retrieve from Storage
JB92664-9.3	Bridget Kelly	Secured Storage	04/23/15 16:07	Return to Storage
JB92664-10.1	Secured Storage	Todd Shoemaker	04/24/15 11:55	Retrieve from Storage
JB92664-10.1	Todd Shoemaker	Secured Staging Area	04/24/15 11:55	Return to Storage
JB92664-10.1	Secured Staging Area	Michael Obasidey	04/24/15 14:44	Retrieve from Storage
JB92664-10.1	Michael Obasidey	Masooda Sultani	04/25/15 13:14	Custody Transfer
JB92664-10.1	Masooda Sultani	Secured Storage	04/25/15 14:13	Return to Storage

Accutest Internal Chain of Custody

Job Number: JB92664
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Received: 04/17/15

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB92664-10.1.1	Michael Obasidey	Metals Digestion	04/24/15 15:07	Digestate from JB92664-10.1
JB92664-10.1.1	Metals Digestion	Michael Obasidey	04/24/15 15:08	Digestate from JB92664-10.1
JB92664-10.1.1	Michael Obasidey	Metals Digestate Storage	04/24/15 15:08	Return to Storage
JB92664-10.1.1	Metals Digestate Storage	Bryan Stokes-Cawley	04/27/15 15:07	Retrieve from Storage
JB92664-10.1.1	Bryan Stokes-Cawley	Metals Digestate Storage	04/27/15 15:08	Return to Storage
JB92664-10.2	Secured Storage	Bridget Kelly	04/22/15 16:25	Retrieve from Storage
JB92664-10.2	Bridget Kelly	GCMS2B	04/22/15 16:25	Load on Instrument
JB92664-10.2	GCMS2B	Bridget Kelly	04/23/15 09:41	Unload from Instrument
JB92664-10.2	Bridget Kelly	Secured Storage	04/23/15 09:41	Return to Storage
JB92664-10.3	Secured Storage	Bridget Kelly	04/23/15 15:34	Retrieve from Storage
JB92664-10.3	Bridget Kelly	Secured Storage	04/23/15 16:07	Return to Storage

New Jersey ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: JB92664
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B5826-MB	2B130339.D	1	04/23/15	BK	n/a	n/a	V2B5826

The QC reported here applies to the following samples: **Method:** SW846 8260C

JB92664-1, JB92664-2, JB92664-3, JB92664-4, JB92664-5, JB92664-6, JB92664-7, JB92664-8, JB92664-9, JB92664-10

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
123-91-1	1,4-Dioxane	ND	130	41	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	

Method Blank Summary

Job Number: JB92664
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B5826-MB	2B130339.D	1	04/23/15	BK	n/a	n/a	V2B5826

The QC reported here applies to the following samples: **Method:** SW846 8260C

JB92664-1, JB92664-2, JB92664-3, JB92664-4, JB92664-5, JB92664-6, JB92664-7, JB92664-8, JB92664-9, JB92664-10

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	76-120%
17060-07-0	1,2-Dichloroethane-D4	101%	73-122%
2037-26-5	Toluene-D8	100%	84-119%
460-00-4	4-Bromofluorobenzene	101%	78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JB92664
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B5827-MB	2B130361.D	1	04/23/15	BK	n/a	n/a	V2B5827

The QC reported here applies to the following samples: **Method:** SW846 8260C

JB92664-9, JB92664-10

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.24	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	99%	76-120%
17060-07-0	1,2-Dichloroethane-D4	97%	73-122%
2037-26-5	Toluene-D8	100%	84-119%
460-00-4	4-Bromofluorobenzene	101%	78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: JB92664
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B5826-BS	2B130340.D	1	04/23/15	BK	n/a	n/a	V2B5826

The QC reported here applies to the following samples: **Method:** SW846 8260C

JB92664-1, JB92664-2, JB92664-3, JB92664-4, JB92664-5, JB92664-6, JB92664-7, JB92664-8, JB92664-9, JB92664-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	51.4	103	47-144
71-43-2	Benzene	50	54.5	109	81-119
74-97-5	Bromochloromethane	50	53.8	108	84-120
75-27-4	Bromodichloromethane	50	55.9	112	81-125
75-25-2	Bromoform	50	55.6	111	74-128
74-83-9	Bromomethane	50	47.6	95	52-146
78-93-3	2-Butanone (MEK)	50	52.7	105	68-130
75-15-0	Carbon disulfide	50	50.4	101	71-129
56-23-5	Carbon tetrachloride	50	58.0	116	77-140
108-90-7	Chlorobenzene	50	55.0	110	84-116
75-00-3	Chloroethane	50	55.2	110	70-148
67-66-3	Chloroform	50	54.8	110	81-120
74-87-3	Chloromethane	50	42.3	85	50-143
110-82-7	Cyclohexane	50	53.8	108	77-125
96-12-8	1,2-Dibromo-3-chloropropane	50	52.9	106	66-132
124-48-1	Dibromochloromethane	50	55.6	111	81-122
106-93-4	1,2-Dibromoethane	50	53.0	106	81-120
95-50-1	1,2-Dichlorobenzene	50	55.9	112	80-117
541-73-1	1,3-Dichlorobenzene	50	54.9	110	81-116
106-46-7	1,4-Dichlorobenzene	50	54.7	109	80-115
75-71-8	Dichlorodifluoromethane	50	43.7	87	36-169
75-34-3	1,1-Dichloroethane	50	52.4	105	80-125
107-06-2	1,2-Dichloroethane	50	56.6	113	78-131
75-35-4	1,1-Dichloroethene	50	52.8	106	73-127
156-59-2	cis-1,2-Dichloroethene	50	52.0	104	77-118
156-60-5	trans-1,2-Dichloroethene	50	49.1	98	75-118
78-87-5	1,2-Dichloropropane	50	52.2	104	80-124
10061-01-5	cis-1,3-Dichloropropene	50	50.2	100	72-121
10061-02-6	trans-1,3-Dichloropropene	50	56.9	114	73-122
123-91-1	1,4-Dioxane	1250	1210	97	63-145
100-41-4	Ethylbenzene	50	54.2	108	80-118
76-13-1	Freon 113	50	53.7	107	76-140
591-78-6	2-Hexanone	50	53.4	107	66-128
98-82-8	Isopropylbenzene	50	56.0	112	78-125
79-20-9	Methyl Acetate	50	52.7	105	63-120
108-87-2	Methylcyclohexane	50	50.3	101	69-132

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB92664
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B5826-BS	2B130340.D	1	04/23/15	BK	n/a	n/a	V2B5826

The QC reported here applies to the following samples: **Method:** SW846 8260C

JB92664-1, JB92664-2, JB92664-3, JB92664-4, JB92664-5, JB92664-6, JB92664-7, JB92664-8, JB92664-9, JB92664-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	100	108	108	73-122
108-10-1	4-Methyl-2-pentanone(MIBK)	50	53.1	106	73-129
75-09-2	Methylene chloride	50	50.0	100	75-122
100-42-5	Styrene	50	56.6	113	81-121
75-65-0	Tert Butyl Alcohol	250	254	102	79-121
79-34-5	1,1,2,2-Tetrachloroethane	50	51.2	102	69-116
127-18-4	Tetrachloroethene	50	54.5	109	69-138
108-88-3	Toluene	50	54.6	109	80-122
87-61-6	1,2,3-Trichlorobenzene	50	59.3	119	74-137
120-82-1	1,2,4-Trichlorobenzene	50	60.3	121	75-135
71-55-6	1,1,1-Trichloroethane	50	56.8	114	80-131
79-00-5	1,1,2-Trichloroethane	50	54.5	109	78-122
79-01-6	Trichloroethene	50	57.1	114	83-122
75-69-4	Trichlorofluoromethane	50	52.4	105	66-143
75-01-4	Vinyl chloride	50	45.8	92	57-138
	m,p-Xylene	100	110	110	82-119
95-47-6	o-Xylene	50	54.6	109	82-119
1330-20-7	Xylene (total)	150	165	110	82-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	76-120%
17060-07-0	1,2-Dichloroethane-D4	102%	73-122%
2037-26-5	Toluene-D8	103%	84-119%
460-00-4	4-Bromofluorobenzene	99%	78-117%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB92664
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B5827-BS	2B130362.D	1	04/23/15	BK	n/a	n/a	V2B5827

The QC reported here applies to the following samples: **Method:** SW846 8260C

JB92664-9, JB92664-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	51.6	103	81-119
100-41-4	Ethylbenzene	50	51.8	104	80-118
	m,p-Xylene	100	106	106	82-119
95-47-6	o-Xylene	50	52.3	105	82-119
1330-20-7	Xylene (total)	150	158	105	82-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	76-120%
17060-07-0	1,2-Dichloroethane-D4	100%	73-122%
2037-26-5	Toluene-D8	103%	84-119%
460-00-4	4-Bromofluorobenzene	100%	78-117%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JB92664
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB92664-2MS	2B130356.D	1	04/23/15	BK	n/a	n/a	V2B5826
JB92664-2	2B130343.D	1	04/23/15	BK	n/a	n/a	V2B5826

The QC reported here applies to the following samples: **Method:** SW846 8260C

JB92664-1, JB92664-2, JB92664-3, JB92664-4, JB92664-5, JB92664-6, JB92664-7, JB92664-8, JB92664-9, JB92664-10

CAS No.	Compound	JB92664-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
67-64-1	Acetone	ND		50	48.2	96	33-158
71-43-2	Benzene	ND		50	52.5	105	43-138
74-97-5	Bromochloromethane	ND		50	51.1	102	75-127
75-27-4	Bromodichloromethane	ND		50	49.3	99	72-128
75-25-2	Bromoform	ND		50	51.1	102	70-131
74-83-9	Bromomethane	ND		50	51.8	104	47-142
78-93-3	2-Butanone (MEK)	ND		50	52.5	105	56-146
75-15-0	Carbon disulfide	ND		50	51.5	103	38-136
56-23-5	Carbon tetrachloride	ND		50	47.5	95	45-149
108-90-7	Chlorobenzene	ND		50	50.7	101	70-124
75-00-3	Chloroethane	ND		50	57.9	116	47-139
67-66-3	Chloroform	ND		50	49.1	98	66-126
74-87-3	Chloromethane	ND		50	51.5	103	41-140
110-82-7	Cyclohexane	ND		50	53.6	107	30-148
96-12-8	1,2-Dibromo-3-chloropropane	ND		50	48.5	97	64-136
124-48-1	Dibromochloromethane	ND		50	49.2	98	75-126
106-93-4	1,2-Dibromoethane	ND		50	51.2	102	77-124
95-50-1	1,2-Dichlorobenzene	ND		50	51.7	103	71-124
541-73-1	1,3-Dichlorobenzene	ND		50	51.1	102	69-125
106-46-7	1,4-Dichlorobenzene	ND		50	51.4	103	69-122
75-71-8	Dichlorodifluoromethane	ND		50	47.5	95	24-161
75-34-3	1,1-Dichloroethane	ND		50	50.2	100	60-129
107-06-2	1,2-Dichloroethane	ND		50	45.4	91	72-133
75-35-4	1,1-Dichloroethene	ND		50	52.6	105	40-137
156-59-2	cis-1,2-Dichloroethene	ND		50	51.6	103	57-128
156-60-5	trans-1,2-Dichloroethene	ND		50	50.2	100	53-128
78-87-5	1,2-Dichloropropane	ND		50	51.2	102	69-127
10061-01-5	cis-1,3-Dichloropropene	ND		50	50.7	101	67-129
10061-02-6	trans-1,3-Dichloropropene	ND		50	52.1	104	68-130
123-91-1	1,4-Dioxane	ND		1250	1150	92	56-146
100-41-4	Ethylbenzene	ND		50	49.3	99	38-139
76-13-1	Freon 113	ND		50	48.6	97	34-154
591-78-6	2-Hexanone	ND		50	55.2	110	55-148
98-82-8	Isopropylbenzene	ND		50	52.3	105	54-137
79-20-9	Methyl Acetate	ND		50	57.2	114	60-137
108-87-2	Methylcyclohexane	ND		50	51.0	102	30-152

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JB92664
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB92664-2MS	2B130356.D	1	04/23/15	BK	n/a	n/a	V2B5826
JB92664-2	2B130343.D	1	04/23/15	BK	n/a	n/a	V2B5826

The QC reported here applies to the following samples: **Method:** SW846 8260C

JB92664-1, JB92664-2, JB92664-3, JB92664-4, JB92664-5, JB92664-6, JB92664-7, JB92664-8, JB92664-9, JB92664-10

CAS No.	Compound	JB92664-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
1634-04-4	Methyl Tert Butyl Ether	0.36	J	50	52.0	103	64-132
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		50	54.9	110	68-139
75-09-2	Methylene chloride	ND		50	49.6	99	63-128
100-42-5	Styrene	ND		50	52.6	105	61-134
75-65-0	Tert Butyl Alcohol	ND		250	244	98	67-138
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	55.3	111	67-126
127-18-4	Tetrachloroethene	ND		50	48.2	96	43-145
108-88-3	Toluene	ND		50	50.0	100	51-136
87-61-6	1,2,3-Trichlorobenzene	ND		50	53.7	107	66-140
120-82-1	1,2,4-Trichlorobenzene	ND		50	55.0	110	65-138
71-55-6	1,1,1-Trichloroethane	ND		50	48.8	98	51-141
79-00-5	1,1,2-Trichloroethane	ND		50	50.7	101	71-127
79-01-6	Trichloroethene	ND		50	51.8	104	55-136
75-69-4	Trichlorofluoromethane	ND		50	49.7	99	33-157
75-01-4	Vinyl chloride	ND		50	53.8	108	34-147
	m,p-Xylene	ND		100	102	102	42-139
95-47-6	o-Xylene	ND		50	51.1	102	56-134
1330-20-7	Xylene (total)	ND		150	153	102	46-137

CAS No.	Surrogate Recoveries	MS	JB92664-2	Limits
1868-53-7	Dibromofluoromethane	98%	100%	76-120%
17060-07-0	1,2-Dichloroethane-D4	92%	104%	73-122%
2037-26-5	Toluene-D8	100%	100%	84-119%
460-00-4	4-Bromofluorobenzene	102%	97%	78-117%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JB92664
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB93029-9MS	2B130370.D	1	04/23/15	BK	n/a	n/a	V2B5827
JB93029-9	2B130365.D	1	04/23/15	BK	n/a	n/a	V2B5827

The QC reported here applies to the following samples: **Method:** SW846 8260C

JB92664-9, JB92664-10

CAS No.	Compound	JB93029-9 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
71-43-2	Benzene	ND		50	51.8	104	43-138
100-41-4	Ethylbenzene	ND		50	53.3	107	38-139
	m,p-Xylene	ND		100	108	108	42-139
95-47-6	o-Xylene	ND		50	53.5	107	56-134
1330-20-7	Xylene (total)	ND		150	162	108	46-137

CAS No.	Surrogate Recoveries	MS	JB93029-9	Limits
1868-53-7	Dibromofluoromethane	101%	98%	76-120%
17060-07-0	1,2-Dichloroethane-D4	103%	99%	73-122%
2037-26-5	Toluene-D8	102%	101%	84-119%
460-00-4	4-Bromofluorobenzene	101%	100%	78-117%

* = Outside of Control Limits.

Duplicate Summary

Job Number: JB92664
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB92664-6DUP	2B130357.D	1	04/23/15	BK	n/a	n/a	V2B5826
JB92664-6	2B130347.D	1	04/23/15	BK	n/a	n/a	V2B5826

The QC reported here applies to the following samples: **Method:** SW846 8260C

JB92664-1, JB92664-2, JB92664-3, JB92664-4, JB92664-5, JB92664-6, JB92664-7, JB92664-8, JB92664-9, JB92664-10

CAS No.	Compound	JB92664-6 ug/l	Q	DUP ug/l	Q	RPD	Limits
67-64-1	Acetone	ND		ND		nc	30
71-43-2	Benzene	ND		ND		nc	30
74-97-5	Bromochloromethane	ND		ND		nc	30
75-27-4	Bromodichloromethane	ND		ND		nc	30
75-25-2	Bromoform	ND		ND		nc	30
74-83-9	Bromomethane	ND		ND		nc	30
78-93-3	2-Butanone (MEK)	ND		ND		nc	30
75-15-0	Carbon disulfide	ND		ND		nc	30
56-23-5	Carbon tetrachloride	ND		ND		nc	30
108-90-7	Chlorobenzene	ND		ND		nc	30
75-00-3	Chloroethane	ND		ND		nc	30
67-66-3	Chloroform	ND		ND		nc	30
74-87-3	Chloromethane	ND		ND		nc	30
110-82-7	Cyclohexane	ND		ND		nc	30
96-12-8	1,2-Dibromo-3-chloropropane	ND		ND		nc	30
124-48-1	Dibromochloromethane	ND		ND		nc	30
106-93-4	1,2-Dibromoethane	ND		ND		nc	30
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	30
541-73-1	1,3-Dichlorobenzene	ND		ND		nc	30
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	30
75-71-8	Dichlorodifluoromethane	ND		ND		nc	30
75-34-3	1,1-Dichloroethane	ND		ND		nc	30
107-06-2	1,2-Dichloroethane	ND		ND		nc	30
75-35-4	1,1-Dichloroethene	ND		ND		nc	30
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	30
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	30
78-87-5	1,2-Dichloropropane	ND		ND		nc	30
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	30
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	30
123-91-1	1,4-Dioxane	ND		ND		nc	30
100-41-4	Ethylbenzene	ND		ND		nc	30
76-13-1	Freon 113	ND		ND		nc	30
591-78-6	2-Hexanone	ND		ND		nc	30
98-82-8	Isopropylbenzene	ND		ND		nc	30
79-20-9	Methyl Acetate	ND		ND		nc	30
108-87-2	Methylcyclohexane	ND		ND		nc	30

* = Outside of Control Limits.

Duplicate Summary

Job Number: JB92664
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB92664-6DUP	2B130357.D	1	04/23/15	BK	n/a	n/a	V2B5826
JB92664-6	2B130347.D	1	04/23/15	BK	n/a	n/a	V2B5826

The QC reported here applies to the following samples: **Method:** SW846 8260C

JB92664-1, JB92664-2, JB92664-3, JB92664-4, JB92664-5, JB92664-6, JB92664-7, JB92664-8, JB92664-9, JB92664-10

CAS No.	Compound	JB92664-6 ug/l	Q	DUP ug/l	Q	RPD	Limits
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	30
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		ND		nc	30
75-09-2	Methylene chloride	ND		ND		nc	30
100-42-5	Styrene	ND		ND		nc	30
75-65-0	Tert Butyl Alcohol	ND		ND		nc	30
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	30
127-18-4	Tetrachloroethene	ND		ND		nc	30
108-88-3	Toluene	ND		ND		nc	30
87-61-6	1,2,3-Trichlorobenzene	ND		ND		nc	30
120-82-1	1,2,4-Trichlorobenzene	ND		ND		nc	30
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	30
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	30
79-01-6	Trichloroethene	ND		ND		nc	30
75-69-4	Trichlorofluoromethane	ND		ND		nc	30
75-01-4	Vinyl chloride	ND		ND		nc	30
	m,p-Xylene	ND		ND		nc	30
95-47-6	o-Xylene	ND		ND		nc	30
1330-20-7	Xylene (total)	ND		ND		nc	30

CAS No.	Surrogate Recoveries	DUP	JB92664-6	Limits
1868-53-7	Dibromofluoromethane	95%	100%	76-120%
17060-07-0	1,2-Dichloroethane-D4	89%	99%	73-122%
2037-26-5	Toluene-D8	100%	101%	84-119%
460-00-4	4-Bromofluorobenzene	100%	100%	78-117%

* = Outside of Control Limits.

Duplicate Summary

Job Number: JB92664
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB93029-10DUP	2B130371.D	1	04/23/15	BK	n/a	n/a	V2B5827
JB93029-10	2B130366.D	1	04/23/15	BK	n/a	n/a	V2B5827

The QC reported here applies to the following samples: **Method:** SW846 8260C

JB92664-9, JB92664-10

CAS No.	Compound	JB93029-10 ug/l	Q	DUP ug/l	Q	RPD	Limits
71-43-2	Benzene	ND		ND		nc	30
100-41-4	Ethylbenzene	ND		ND		nc	30
	m,p-Xylene	ND		ND		nc	30
95-47-6	o-Xylene	ND		ND		nc	30
1330-20-7	Xylene (total)	ND		ND		nc	30

CAS No.	Surrogate Recoveries	DUP	JB93029-10	Limits
1868-53-7	Dibromofluoromethane	99%	99%	76-120%
17060-07-0	1,2-Dichloroethane-D4	106%	103%	73-122%
2037-26-5	Toluene-D8	99%	102%	84-119%
460-00-4	4-Bromofluorobenzene	98%	102%	78-117%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JB92664
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample: V2B5824-BFB
Lab File ID: 2B130294.D
Instrument ID: GCMS2B
Injection Date: 04/21/15
Injection Time: 14:00

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	13572	19.5		Pass
75	30.0 - 60.0% of mass 95	36842	52.9		Pass
95	Base peak, 100% relative abundance	69704	100.0		Pass
96	5.0 - 9.0% of mass 95	4598	6.60		Pass
173	Less than 2.0% of mass 174	539	0.77	(0.69) [a]	Pass
174	50.0 - 120.0% of mass 95	78261	112.3		Pass
175	5.0 - 9.0% of mass 174	6970	10.00	(8.91) [a]	Pass
176	95.0 - 101.0% of mass 174	77293	110.9	(98.8) [a]	Pass
177	5.0 - 9.0% of mass 176	5039	7.23	(6.52) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2B5824-IC5824	2B130296.D	04/21/15	14:59	00:59	Initial cal 0.5
V2B5824-IC5824	2B130297.D	04/21/15	15:28	01:28	Initial cal 1
V2B5824-IC5824	2B130298.D	04/21/15	15:56	01:56	Initial cal 2
V2B5824-IC5824	2B130299.D	04/21/15	16:25	02:25	Initial cal 5
V2B5824-IC5824	2B130300.D	04/21/15	16:58	02:58	Initial cal 10
V2B5824-IC5824	2B130301.D	04/21/15	17:27	03:27	Initial cal 20
V2B5824-ICC5824	2B130302.D	04/21/15	17:56	03:56	Initial cal 50
V2B5824-IC5824	2B130303.D	04/21/15	18:25	04:25	Initial cal 100
V2B5824-IC5824	2B130304.D	04/21/15	18:54	04:54	Initial cal 200
V2B5824-ICV5824	2B130307.D	04/21/15	20:21	06:21	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JB92664
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample:	V2B5826-BFB	**Injection Date:**	04/22/15
Lab File ID:	2B130336.D	**Injection Time:**	22:49
Instrument ID:	GCMS2B		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	9680	19.4		Pass
75	30.0 - 60.0% of mass 95	26057	52.3		Pass
95	Base peak, 100% relative abundance	49779	100.0		Pass
96	5.0 - 9.0% of mass 95	3417	6.86		Pass
173	Less than 2.0% of mass 174	69	0.14	(0.12) [a]	Pass
174	50.0 - 120.0% of mass 95	56564	113.6		Pass
175	5.0 - 9.0% of mass 174	4796	9.63	(8.48) [a]	Pass
176	95.0 - 101.0% of mass 174	53974	108.4	(95.4) [a]	Pass
177	5.0 - 9.0% of mass 176	3883	7.80	(7.19) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2B5826-CC5824	2B130337.D	04/22/15	23:18	00:29	Continuing cal 50
V2B5826-MB	2B130339.D	04/23/15	00:15	01:26	Method Blank
V2B5826-BS	2B130340.D	04/23/15	00:44	01:55	Blank Spike
JB92664-1	2B130342.D	04/23/15	01:41	02:52	MW-1
JB92664-2	2B130343.D	04/23/15	02:10	03:21	MW-3
JB92664-3	2B130344.D	04/23/15	02:39	03:50	MW-11
JB92664-4	2B130345.D	04/23/15	03:08	04:19	MW-19
JB92664-5	2B130346.D	04/23/15	03:37	04:48	MW-12
JB92664-6	2B130347.D	04/23/15	04:06	05:17	MW-2
JB92664-7	2B130348.D	04/23/15	04:34	05:45	MW-14
JB92664-8	2B130349.D	04/23/15	05:03	06:14	MW-16R
JB92664-9	2B130350.D	04/23/15	05:32	06:43	MW-17R
JB92664-10	2B130351.D	04/23/15	06:01	07:12	MW-18R
ZZZZZZ	2B130354.D	04/23/15	07:27	08:38	(unrelated sample)
JB92664-2MS	2B130356.D	04/23/15	08:48	09:59	Matrix Spike
JB92664-6DUP	2B130357.D	04/23/15	09:17	10:28	Duplicate

Instrument Performance Check (BFB)

Job Number: JB92664
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample: V2B5827-BFB
Lab File ID: 2B130358.D
Instrument ID: GCMS2B
Injection Date: 04/23/15
Injection Time: 09:45

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	14904	18.1		Pass
75	30.0 - 60.0% of mass 95	40125	48.8		Pass
95	Base peak, 100% relative abundance	82296	100.0		Pass
96	5.0 - 9.0% of mass 95	5421	6.59		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	92578	112.5		Pass
175	5.0 - 9.0% of mass 174	7410	9.00	(8.00) [a]	Pass
176	95.0 - 101.0% of mass 174	90032	109.4	(97.2) [a]	Pass
177	5.0 - 9.0% of mass 176	6119	7.44	(6.80) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2B5827-CC5824	2B130359.D	04/23/15	10:18	00:33	Continuing cal 20
V2B5827-MB	2B130361.D	04/23/15	11:22	01:37	Method Blank
V2B5827-BS	2B130362.D	04/23/15	11:51	02:06	Blank Spike
ZZZZZZ	2B130364.D	04/23/15	12:53	03:08	(unrelated sample)
JB93029-9	2B130365.D	04/23/15	13:21	03:36	(used for QC only; not part of job JB92664)
JB93029-10	2B130366.D	04/23/15	13:50	04:05	(used for QC only; not part of job JB92664)
ZZZZZZ	2B130367.D	04/23/15	14:19	04:34	(unrelated sample)
ZZZZZZ	2B130368.D	04/23/15	14:47	05:02	(unrelated sample)
ZZZZZZ	2B130369.D	04/23/15	15:16	05:31	(unrelated sample)
JB93029-9MS	2B130370.D	04/23/15	15:45	06:00	Matrix Spike
JB93029-10DUP	2B130371.D	04/23/15	16:14	06:29	Duplicate
ZZZZZZ	2B130372.D	04/23/15	16:42	06:57	(unrelated sample)
ZZZZZZ	2B130373.D	04/23/15	17:11	07:26	(unrelated sample)
ZZZZZZ	2B130374.D	04/23/15	17:40	07:55	(unrelated sample)
ZZZZZZ	2B130375.D	04/23/15	18:08	08:23	(unrelated sample)
ZZZZZZ	2B130376.D	04/23/15	18:37	08:52	(unrelated sample)
ZZZZZZ	2B130377.D	04/23/15	19:06	09:21	(unrelated sample)
ZZZZZZ	2B130378.D	04/23/15	19:35	09:50	(unrelated sample)
ZZZZZZ	2B130379.D	04/23/15	20:04	10:19	(unrelated sample)
JB92664-9	2B130380.D	04/23/15	20:33	10:48	MW-17R
JB92664-10	2B130381.D	04/23/15	21:02	11:17	MW-18R
V2B5828-CC5824	2B130384.D	04/23/15	22:29	12:44	Continuing cal 50

Volatile Internal Standard Area Summary

Job Number: JB92664
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Check Std: V2B5826-CC5824 **Injection Date:** 04/22/15
Lab File ID: 2B130337.D **Injection Time:** 23:18
Instrument ID: GCMS2B **Method:** SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	54507	8.36	249661	10.82	241834	11.73	206174	14.71	123238	16.87
Upper Limit [a]	109014	8.86	499322	11.32	483668	12.23	412348	15.21	246476	17.37
Lower Limit [b]	27254	7.86	124831	10.32	120917	11.23	103087	14.21	61619	16.37

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V2B5826-MB	59400	8.35	266694	10.81	247863	11.72	199642	14.71	115602	16.87
V2B5826-BS	55784	8.36	246142	10.82	238021	11.72	199729	14.71	121585	16.87
JB92664-1	59047	8.36	267207	10.81	246863	11.73	202387	14.71	116531	16.87
JB92664-2	57903	8.36	261644	10.82	244402	11.73	194821	14.71	115546	16.87
JB92664-3	58518	8.35	249612	10.82	236679	11.73	202138	14.71	125160	16.87
JB92664-4	67138	8.35	294947	10.81	278331	11.72	220922	14.71	127241	16.87
JB92664-5	61800	8.35	257780	10.81	241273	11.72	202410	14.71	123604	16.87
JB92664-6	69784	8.35	293283	10.81	273195	11.73	222363	14.71	129744	16.87
JB92664-7	66408	8.35	265398	10.81	250476	11.72	214144	14.71	134131	16.87
JB92664-8	89087	8.36	323413	10.81	308018	11.72	260103	14.71	150747	16.87
JB92664-9	100746	8.36	352719	10.81	341344	11.73	296800	14.71	174029	16.86
JB92664-10	105023	8.36	393022	10.81	381761	11.72	326912	14.71	196521	16.87
ZZZZZZ	97248	8.35	417555	10.81	406661	11.72	326472	14.71	187842	16.86
JB92664-2MS	87520	8.36	360214	10.81	354147	11.72	289527	14.71	167503	16.86
JB92664-6DUP	90381	8.36	394328	10.82	378047	11.73	306510	14.71	174706	16.87

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: JB92664
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Check Std:	V2B5827-CC5824	**Injection Date:**	04/23/15
Lab File ID:	2B130359.D	**Injection Time:**	10:18
Instrument ID:	GCMS2B	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	76729	8.36	327900	10.82	320919	11.73	271715	14.71	154787	16.87
Upper Limit [a]	153458	8.86	655800	11.32	641838	12.23	543430	15.21	309574	17.37
Lower Limit [b]	38365	7.86	163950	10.32	160460	11.23	135858	14.21	77394	16.37

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V2B5827-MB	72900	8.36	317495	10.82	300314	11.73	249538	14.71	140580	16.87
V2B5827-BS	64972	8.35	275524	10.81	272615	11.72	230370	14.71	140712	16.87
ZZZZZZ	64199	8.36	296742	10.82	278504	11.73	219897	14.71	131838	16.87
JB93029-9	62703	8.36	281981	10.82	260605	11.73	218376	14.71	125333	16.87
JB93029-10	60344	8.35	269583	10.81	250612	11.72	207682	14.71	120881	16.87
ZZZZZZ	58294	8.36	257504	10.81	240835	11.72	202289	14.71	117577	16.87
ZZZZZZ	57749	8.36	251883	10.81	235145	11.72	197201	14.71	112244	16.87
ZZZZZZ	59255	8.36	250700	10.82	234131	11.73	190463	14.71	112489	16.87
JB93029-9MS	55744	8.36	237852	10.81	227368	11.73	186362	14.71	115525	16.86
JB93029-10DUP	59786	8.36	254346	10.82	239982	11.73	195922	14.71	115404	16.86
ZZZZZZ	57785	8.36	252568	10.82	232501	11.73	193439	14.71	111907	16.87
ZZZZZZ	57873	8.35	249476	10.81	229846	11.72	186809	14.71	109315	16.87
ZZZZZZ	55797	8.36	244403	10.82	227543	11.73	186039	14.71	107301	16.87
ZZZZZZ	55452	8.36	244257	10.81	225771	11.73	185739	14.71	108432	16.86
ZZZZZZ	51834	8.36	236856	10.82	220428	11.72	180380	14.71	105878	16.87
ZZZZZZ	53748	8.35	236276	10.81	218880	11.72	174446	14.71	105816	16.87
ZZZZZZ	52102	8.35	228894	10.82	213669	11.73	173686	14.71	102871	16.87
ZZZZZZ	52095	8.36	229778	10.82	212211	11.73	171767	14.71	102370	16.87
JB92664-9	50792	8.36	228288	10.82	210982	11.73	170698	14.71	104078	16.86
JB92664-10	50531	8.36	226128	10.81	208449	11.72	174529	14.71	106398	16.87

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: JB92664
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Method: SW846 8260C **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JB92664-1	2B130342.D	100	103	101	102
JB92664-2	2B130343.D	100	104	100	97
JB92664-3	2B130344.D	99	104	103	96
JB92664-4	2B130345.D	98	99	98	101
JB92664-5	2B130346.D	99	101	99	99
JB92664-6	2B130347.D	100	99	101	100
JB92664-7	2B130348.D	97	101	102	97
JB92664-8	2B130349.D	98	95	103	101
JB92664-9	2B130380.D	99	107	100	98
JB92664-9	2B130350.D	98	92	103	99
JB92664-10	2B130381.D	101	107	102	96
JB92664-10	2B130351.D	97	89	102	97
JB92664-2MS	2B130356.D	98	92	100	102
JB92664-6DUP	2B130357.D	95	89	100	100
JB93029-10DUP	2B130371.D	99	106	99	98
JB93029-9MS	2B130370.D	101	103	102	101
V2B5826-BS	2B130340.D	101	102	103	99
V2B5826-MB	2B130339.D	100	101	100	101
V2B5827-BS	2B130362.D	100	100	103	100
V2B5827-MB	2B130361.D	99	97	100	101

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	76-120%
S2 = 1,2-Dichloroethane-D4	73-122%
S3 = Toluene-D8	84-119%
S4 = 4-Bromofluorobenzene	78-117%

Initial Calibration Summary

Job Number: JB92664 **Sample:** V2B5824-ICC5824
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 2B130302.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Response Factor Report MS2B

Method : C:\MSDCHEM\1\METHODS\M2B5824.M (RTE Integrator)
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
Last Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration

Calibration Files
1 =2B130297.D 2 =2B130298.D 100 =2B130303.D 50 =2B130302.D
20 =2B130301.D 200 =2B130304.D 5 =2B130299.D 10 =2B130300.D
0.5 =2B130296.D =

Compound	1	2	100	50	20	200	5	10	0.5	Avg	%RSD
1) I Tert Butyl Alcohol-d9	----------ISTD----------										
2) tertiary butyl alcohol	0.899	1.151	1.155	1.284	1.067	1.048	1.197			1.114	11.08
3) ethanol	***This Compound did not meet the QC criteria.										
	0.094	0.096	0.107	0.114	0.092	0.095	0.109			0.101	8.90
4) 1,4-dioxane	0.090	0.093	0.098	0.082	0.077	0.097				0.090	9.35
5) I pentafluorobenzene	----------ISTD----------										
6) freon 143a										0.000#	-1.00
7) freon 142b										0.000#	-1.00
8) freon 141b										0.000#	-1.00
9) chlorodifluoromethane	0.258	0.375	0.375	0.368	0.359	0.295	0.354			0.341	13.39
10) dichlorodifluoromethane	0.406	0.403	0.586	0.585	0.576	0.531	0.427	0.519		0.504	15.98
11) chlorotrifluoroethene										0.000#	-1.00
12) chloromethane	0.388	0.386	0.482	0.473	0.454	0.439	0.367	0.410	0.360	0.418	10.97
13) vinyl chloride	0.330	0.350	0.443	0.426	0.429	0.408	0.335	0.374	0.374	0.385	11.07
14) 1,3-Butadiene										0.000#	-1.00
15) bromomethane	0.292	0.265	0.300	0.300	0.309	0.273	0.264	0.280		0.285	6.01
16) chloroethane	0.127	0.145	0.199	0.193	0.198	0.191	0.161	0.185		0.175	15.51
17) vinyl bromide										0.000#	-1.00
18) trichlorofluoromethane	0.570	0.555	0.687	0.715	0.735	0.634	0.564	0.677		0.642	11.19
19) Pentane										0.000#	-1.00
20) ethyl ether	0.134	0.160	0.160	0.166	0.156	0.131	0.164			0.153	9.34
21) acrolein	0.054	0.053		0.051	0.052		0.047	0.051	0.040	0.050	9.98
22) 2-chloropropane	0.424	0.454	0.505	0.494	0.521	0.463	0.462	0.491		0.477	6.61
23) 1,2-dichloro-1,2,2-trifluoroet											

											0.000#	-1.00
24)	1,1-dichloroethene											
	0.241	0.239	0.285	0.276	0.290	0.264	0.255	0.283			0.267	7.46
25)	acetone											
			0.076	0.085	0.090	0.068	0.083	0.099			0.084	12.97
26)	allyl chloride											
		0.137	0.149	0.147	0.156	0.146	0.131	0.140			0.144	5.75
27)	acetonitrile											
			0.014	0.015	0.016	0.013	0.015	0.018			0.015	9.81
28)	iodomethane											
	0.535	0.591	0.688	0.678	0.702	0.645	0.606	0.663			0.638	8.92
29)	iso-butyl alcohol											
			0.004	0.004	0.004	0.003	0.003	0.003			0.004#	8.71
30)	carbon disulfide											
	0.739	0.896	0.961	0.964	1.021	0.907	0.855	0.956			0.912	9.48
31)	methylene chloride											
	0.297	0.310	0.317	0.312	0.329	0.303	0.297	0.301			0.308	3.60
32)	methyl acetate											
			0.041	0.042	0.045	0.040	0.030	0.037			0.039	13.56
33)	1-chloropropane											
	0.454	0.507	0.519	0.520	0.560	0.495	0.498	0.519			0.509	5.88
34)	methyl tert butyl ether											
	0.763	0.819	0.968	0.954	0.990	0.889	0.858	0.916	0.733		0.877	10.37
35)	trans-1,2-dichloroethene											
	0.266	0.299	0.310	0.309	0.324	0.291	0.299	0.311			0.301	5.80
36)	di-isopropyl ether											
	0.648	0.728	0.896	0.902	0.943	0.868	0.833	0.939	0.689		0.827	13.44
37)	2-butanone											
			0.031	0.031	0.032	0.031	0.025	0.025			0.029	10.77
38)	1,1-dichloroethane											
	0.478	0.511	0.552	0.543	0.570	0.527	0.504	0.529			0.527	5.54
39)	chloroprene											
	0.326	0.381	0.469	0.476	0.493	0.456	0.439	0.476			0.439	13.05
40)	acrylonitrile											
	0.067	0.081	0.098	0.095	0.096	0.096	0.085	0.091			0.089	11.85
41)	vinyl acetate											
			0.052	0.054	0.054	0.051	0.036	0.048			0.049	13.75
42)	ethyl tert-butyl ether											
	0.686	0.787	1.012	0.998	1.030	0.990	0.898	1.007	0.760		0.907	14.37
43)	ethyl acetate											
			0.031	0.032	0.033	0.031	0.023	0.037			0.031	14.62
44)	2,2-dichloropropane											
	0.435	0.483	0.518	0.526	0.558	0.468	0.484	0.529			0.500	7.97
45)	cis-1,2-dichloroethene											
	0.284	0.331	0.351	0.344	0.365	0.339	0.322	0.335	0.323		0.333	6.83
46)	propionitrile											
	0.022	0.029	0.034	0.034	0.037	0.033	0.030	0.035			0.032	13.98
47)	bromochloromethane											
	0.148	0.174	0.202	0.194	0.206	0.196	0.182	0.197			0.187	10.21
48)	tetrahydrofuran											
	0.072	0.080	0.067	0.071	0.072	0.067	0.068	0.075			0.071	6.18
49)	chloroform											
	0.501	0.561	0.602	0.602	0.629	0.573	0.557	0.585	0.522		0.570	7.13
50)	t-butyl formate											
	0.151	0.209	0.271	0.257	0.262	0.270	0.207	0.249			0.235	17.95
51)	dibromofluoromethane (s)											
	0.329	0.334	0.336	0.336	0.333	0.333	0.337	0.337	0.329		0.334	0.93
52)	1,2-dichloroethane-d4 (s)											
	0.397	0.405	0.390	0.392	0.397	0.382	0.399	0.403	0.390		0.395	1.83
53)	freon 113											

Initial Calibration Summary

Job Number: JB92664 **Sample:** V2B5824-ICC5824
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 2B130302.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	0.231	0.280	0.288	0.310	0.259	0.279	0.313			0.280	10.26
54) methacrylonitrile											
	0.134	0.169	0.163	0.164	0.166	0.145	0.158			0.157	8.14
55) 1,1,1-trichloroethane											
	0.444	0.525	0.600	0.587	0.607	0.561	0.505	0.539		0.546	10.08
56) Cyclohexane											
	0.308	0.334	0.415	0.408	0.424	0.400	0.349	0.393		0.379	11.22
57) tert amyl alcohol											
										0.000#	-1.00
58) I 1,4-difluorobenzene	----------ISTD----------										
59) tert amyl ethyl ether											
										0.000#	-1.00
60) Di-isobutylene											
										0.000#	-1.00
61) epichlorohydrin											
	0.017	0.024	0.023	0.024	0.023	0.019	0.024			0.022	12.61
62) n-butyl alcohol											
	0.005	0.005	0.006	0.005	0.004	0.005				0.005#	8.44
63) carbon tetrachloride											
	0.433	0.535	0.559	0.559	0.602	0.504	0.509	0.574		0.534	9.82
64) 1,1-dichloropropene											
	0.315	0.333	0.404	0.403	0.424	0.382	0.367	0.400		0.379	9.98
65) hexane											
	0.295	0.337	0.331	0.359	0.334	0.303	0.366			0.332	7.90
66) benzene											
	0.853	1.004	1.086	1.086	1.137	1.026	1.007	1.061	0.818	1.009	10.64
67) 2,2,4-trimethylpentane											
	0.632	0.754	0.898	0.914	0.935	0.855	0.848	0.984		0.852	13.17
68) tert-amyl methyl ether											
	0.654	0.738	0.869	0.870	0.902	0.818	0.826	0.911	0.735	0.814	10.75
69) heptane											
	0.143	0.179	0.178	0.186	0.179	0.165	0.193			0.175	9.32
70) isopropyl acetate											
	0.324	0.374	0.478	0.468	0.482	0.474	0.407	0.483		0.436	13.94
71) 1,2-dichloroethane											
	0.408	0.439	0.478	0.485	0.511	0.431	0.434	0.484	0.405	0.453	8.28
72) trichloroethene											
	0.222	0.265	0.328	0.317	0.328	0.314	0.282	0.300		0.294	12.46
73) ethyl acrylate											
										0.000#	-1.00
74) 2-nitropropane											
	0.083	0.079	0.082	0.077	0.076	0.081				0.080	3.71
75) 2-chloroethyl vinyl ether											
	0.101	0.122	0.115	0.117	0.116	0.095	0.109			0.111	8.78
76) methyl methacrylate											
	0.053	0.069	0.068	0.072	0.065	0.065	0.064			0.065	9.20
77) 1,2-dichloropropane											
	0.230	0.255	0.270	0.261	0.277	0.255	0.249	0.255		0.257	5.42
78) dibromomethane											
	0.147	0.168	0.203	0.201	0.217	0.188	0.188	0.200		0.189	11.77
79) methylcyclohexane											
	0.378	0.457	0.456	0.475	0.433	0.406	0.474			0.440	8.36
80) bromodichloromethane											
	0.353	0.420	0.480	0.470	0.489	0.450	0.429	0.468	0.373	0.437	10.95
81) cis-1,3-dichloropropene											
	0.404	0.431	0.509	0.486	0.503	0.470	0.419	0.464		0.461	8.46
82) toluene-d8 (s)											
	1.033	1.047	1.078	1.045	1.063	1.046	1.057	1.065	1.042	1.053	1.34
83) 4-methyl-2-pentanone											

Initial Calibration Summary

Job Number: JB92664 **Sample:** V2B5824-ICC5824
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 2B130302.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

		0.091	0.086	0.090	0.088	0.073	0.083				0.085	7.80
84)	toluene											
		0.554	0.588	0.705	0.665	0.711	0.657	0.597	0.650		0.641	8.82
85)	3-methyl-1-butanol											
		0.005	0.007	0.009	0.009	0.009	0.009	0.008	0.009		0.008#	19.75
86)	trans-1,3-dichloropropene											
		0.344	0.397	0.497	0.467	0.487	0.450	0.383	0.439	0.374	0.427	12.69
87)	ethyl methacrylate											
			0.231	0.335	0.317	0.334	0.312	0.254	0.302		0.298	13.49
88)	1,1,2-trichloroethane											
		0.179	0.189	0.223	0.210	0.215	0.206	0.187	0.203		0.201	7.64
89)	2-hexanone											
			0.080	0.074	0.077	0.074	0.056	0.071			0.072	11.96
90)	I chlorobenzene-d5	----------ISTD----------										
91)	butyl ether											
		0.860	1.020	1.358	1.284	1.295	1.367	1.009	1.140		1.167	16.13
92)	tetrachloroethene											
		0.312	0.345	0.392	0.396	0.433	0.384	0.348	0.389		0.375	10.07
93)	1,3-dichloropropane											
		0.397	0.459	0.520	0.502	0.529	0.512	0.447	0.473		0.480	9.34
94)	butyl acetate											
			0.123	0.169	0.169	0.174	0.182	0.149	0.164		0.161	12.24
95)	3,3-dimethyl-1-butanol											
		0.017	0.019	0.025	0.024	0.023	0.027	0.020	0.023		0.022	14.52
96)	dibromochloromethane											
		0.369	0.417	0.531	0.516	0.536	0.521	0.451	0.488	0.428	0.473	12.59
97)	1,2-dibromoethane											
		0.265	0.316	0.384	0.365	0.382	0.381	0.310	0.351	0.291	0.338	13.09
98)	chlorobenzene											
		0.755	0.833	0.978	0.961	1.007	0.966	0.847	0.927	0.783	0.895	10.31
99)	1,1,1,2-tetrachloroethane											
		0.363	0.397	0.451	0.448	0.449	0.441	0.378	0.436		0.420	8.49
100)	ethylbenzene											
		1.188	1.347	1.556	1.544	1.631	1.508	1.357	1.491		1.453	9.93
101)	m,p-xylene											
		0.481	0.530	0.618	0.602	0.642	0.612	0.519	0.586	0.424	0.557	13.08
102)	o-xylene											
		0.447	0.523	0.658	0.641	0.657	0.658	0.553	0.603		0.593	13.16
103)	styrene											
		0.673	0.833	1.088	1.058	1.088	1.076	0.860	0.943		0.952	16.07
104)	butyl acrylate											
											0.000#	-1.00
105)	bromoform											
		0.291	0.338	0.428	0.412	0.414	0.423	0.334	0.365	0.315	0.369	14.04
106)	I 1,4-dichlorobenzene-d	----------ISTD----------										
107)	isopropylbenzene											
		2.088	2.306	2.859	2.815	2.928	2.676	2.351	2.696		2.590	11.72
108)	4-bromofluorobenzene (s)											
		0.817	0.799	0.812	0.792	0.812	0.791	0.804	0.810	0.818	0.806	1.24
109)	cyclohexanone											
		0.020	0.021	0.024	0.024	0.024	0.018	0.027	0.026		0.023	13.49
110)	bromobenzene											
		0.712	0.766	0.899	0.890	0.926	0.841	0.789	0.848	0.782	0.828	8.56
111)	1,1,2,2-tetrachloroethane											
		0.547	0.536	0.686	0.652	0.672	0.656	0.566	0.623	0.590	0.614	9.20
112)	trans-1,4-dichloro-2-butene											
			0.136	0.189	0.186	0.190	0.182	0.138	0.175		0.171	13.89
113)	1,2,3-trichloropropane											

Initial Calibration Summary

Job Number: JB92664 **Sample:** V2B5824-ICC5824
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 2B130302.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

```
            0.164 0.189 0.200 0.201 0.212 0.189 0.181 0.201          0.192    7.77
114)  n-propylbenzene
            2.224 2.590 2.902 2.901 3.062 2.712 2.451 2.843          2.711   10.17
115)  2-chlorotoluene
            0.553 0.659 0.720 0.704 0.732 0.679 0.599 0.679          0.666    9.21
116)  4-chlorotoluene
            1.456 1.712 1.967 1.933 2.034 1.879 1.644 1.894          1.815   10.70
117)  1,3,5-trimethylbenzene
            1.743 1.997 2.316 2.309 2.447 2.163 2.040 2.298          2.164   10.52
118)  tert-butylbenzene
            1.699 1.742 2.213 2.174 2.232 2.102 1.785 2.016          1.995   11.10
119)  pentachloroethane
            0.470 0.520 0.628 0.633 0.663 0.591 0.549 0.607 0.541    0.578   10.80
120)  1,2,4-trimethylbenzene
            1.655 2.162 2.320 2.319 2.424 2.150 2.011 2.306          2.168   11.27
121)  sec-butylbenzene
            2.299 2.514 3.101 3.030 3.167 2.925 2.478 2.923          2.805   11.64
122)  1,3-dichlorobenzene
            1.269 1.437 1.563 1.578 1.697 1.517 1.444 1.507 1.208    1.469   10.39
123)  p-isopropyltoluene
            1.910 2.231 2.751 2.717 2.813 2.590 2.247 2.565          2.478   12.77
124)  1,4-dichlorobenzene
            1.220 1.375 1.587 1.564 1.618 1.539 1.356 1.536 1.218    1.446   10.85
125)  1,2-dichlorobenzene
            1.282 1.297 1.641 1.623 1.675 1.543 1.364 1.556 1.321    1.478   10.85
126)  n-butylbenzene
            0.887 0.969 1.322 1.283 1.276 1.266 0.965 1.139          1.138   15.27
127)  1,2-dibromo-3-chloropropane
                  0.117 0.151 0.146 0.149 0.139 0.116 0.138          0.137   10.75
128)  1,3,5-trichlorobenzene
            1.207 1.332 1.610 1.593 1.571 1.438 1.232 1.431 1.155    1.397   12.48
129)  1,2,4-trichlorobenzene
            0.911 0.979 1.461 1.424 1.361 1.286 1.044 1.223 1.001    1.188   17.53
130)  hexachlorobutadiene
            0.715 0.663 0.818 0.828 0.839 0.726 0.710 0.805          0.763    8.75
131)  naphthalene
                        2.225 2.161 2.063 1.988 1.566 1.828          1.972   12.30
132)  1,2,3-trichlorobenzene
            0.814 0.843 1.216 1.197 1.165 1.028 0.889 1.080 0.829    1.007   16.48
133)  hexachloroethane
                  0.519 0.707 0.689 0.693 0.668 0.557 0.616          0.636   11.57
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           M2B5824.M         Wed Apr 22 10:49:57 2015   MS2B
```

Initial Calibration Verification

Job Number: JB92664 **Sample:** V2B5824-ICV5824
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 2B130307.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\MSDChem\1\DATA\2B130307.D Vial: 14
Acq On : 21 Apr 2015 8:21 pm Operator: BridgetK
Sample : icv5824-50 Inst : MS2B
Misc : ms83338,v2B5824,w,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2B5824.M (RTE Integrator)
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
Last Update : Wed Apr 22 10:47:17 2015
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	110	0.01	8.36
2	M	tertiary butyl alcohol	1.114	1.198	-7.5	115	0.00	8.49
3		ethanol	0.101	0.109	-7.9	112	0.02	6.92
4	M	1,4-dioxane	0.090	0.091	-1.1	109	0.00	12.41
5	I	pentafluorobenzene	1.000	1.000	0.0	110	0.00	10.81
6		freon 143a		----------NA----------				
7		freon 142b		----------NA----------				
8		freon 141b		----------NA----------				
9	M	chlorodifluoromethane	0.341	0.347	-1.8	102	0.00	4.50
10	M	dichlorodifluoromethane	0.504	0.434	13.9	82	0.00	4.48
11	m	chlorotrifluoroethene		----------NA----------				
12	M	chloromethane	0.418	0.427	-2.2	100	0.01	4.88
13	M	vinyl chloride	0.385	0.398	-3.4	103	0.01	5.19
14		1,3-Butadiene		----------NA----------				
15	M	bromomethane	0.285	0.285	0.0	105	0.00	5.91
16	M	chloroethane	0.175	0.207	-18.3	118	0.00	6.11
17		vinyl bromide		----------NA----------				
18	M	trichlorofluoromethane	0.642	0.622	3.1	96	0.00	6.69
19		Pentane		----------NA----------				
20	M	ethyl ether	0.153	0.152	0.7	105	0.00	7.15
21	M	acrolein	0.050	0.057	-14.0	123	0.00	7.38
22		2-chloropropane	0.477	0.415	13.0	93	0.00	7.34
23		1,2-dichloro-1,2,2-triflu		----------NA----------				
24	M	1,1-dichloroethene	0.267	0.226	15.4	90	0.00	7.61
25	M	acetone	0.084	0.083	1.2	108	0.00	7.64
26	M	allyl chloride	0.144	0.152	-5.6	114	0.00	8.20
27	M	acetonitrile	0.015	0.015	0.0	108	0.00	8.10
28	M	iodomethane	0.638	0.539	15.5	88	0.00	7.90
29	M	iso-butyl alcohol	0.004	0.003#	25.0	104	0.00	11.10
30	M	carbon disulfide	0.912	0.649	28.8	74	0.00	8.05
31	M	methylene chloride	0.308	0.288	6.5	102	0.00	8.39
32	M	methyl acetate	0.039	0.042	-7.7	109	0.00	8.18
33		1-chloropropane	0.509	0.454	10.8	96	0.00	8.46
34	M	methyl tert butyl ether	0.877	0.906	-3.3	105	0.00	8.82
35	M	trans-1,2-dichloroethene	0.301	0.270	10.3	96	0.00	8.83
36	M	di-isopropyl ether	0.827	0.918	-11.0	112	0.00	9.49
37	M	2-butanone	0.029	0.029	0.0	104	0.01	10.20
38	M	1,1-dichloroethane	0.527	0.520	1.3	106	0.00	9.44
39	M	chloroprene	0.439	0.426	3.0	99	0.00	9.58
40	M	acrylonitrile	0.089	0.095	-6.7	110	0.00	8.73
41	M	vinyl acetate	0.049	0.055	-12.2	113	0.00	9.44

Initial Calibration Verification

Job Number: JB92664 **Sample:** V2B5824-ICV5824
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 2B130307.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

42	M	ethyl tert-butyl ether	0.907	0.998	-10.0	110	0.00	9.99
43	M	ethyl acetate	0.031	0.032	-3.2	112	0.00	10.25
44	M	2,2-dichloropropane	0.500	0.469	6.2	98	0.00	10.27
45	M	cis-1,2-dichloroethene	0.333	0.334	-0.3	107	0.00	10.23
46	M	propionitrile	0.032	0.034	-6.3	109	0.00	10.28
47	M	bromochloromethane	0.187	0.188	-0.5	107	0.00	10.55
48	M	tetrahydrofuran	0.071	0.067	5.6	105	0.00	10.62
49	M	chloroform	0.570	0.577	-1.2	106	0.00	10.62
50		t-butyl formate	0.235	0.274	-16.6	118	0.00	10.70
51	S	dibromofluoromethane (s)	0.334	0.332	0.6	109	0.00	10.82
52	S	1,2-dichloroethane-d4 (s)	0.395	0.382	3.3	108	0.00	11.26
53	M	freon 113	0.280	0.289	-3.2	110	0.00	7.62
54	M	methacrylonitrile	0.157	0.161	-2.5	109	0.00	10.49
55	M	1,1,1-trichloroethane	0.546	0.550	-0.7	103	0.00	10.92
56	M	Cyclohexane	0.379	0.361	4.7	98	0.00	11.02
57		tert amyl alcohol		----------NA----------				
58	I	1,4-difluorobenzene	1.000	1.000	0.0	110	0.00	11.73
59		tert amyl ethyl ether		----------NA----------				
60	M	Di-isobutylene		----------NA----------				
61	M	epichlorohydrin	0.022	0.025	-13.6	117	0.00	12.90
62	M	n-butyl alcohol	0.005	0.006#	-20.0	121	0.00	11.82
63	M	carbon tetrachloride	0.534	0.523	2.1	102	0.00	11.13
64	M	1,1-dichloropropene	0.379	0.365	3.7	99	0.00	11.10
65	M	hexane	0.332	0.284	14.5	94	0.00	9.22
66	M	benzene	1.009	1.057	-4.8	107	0.00	11.36
67		2,2,4-trimethylpentane	0.852	0.872	-2.3	104	0.00	11.42
68	M	tert-amyl methyl ether	0.814	0.883	-8.5	111	0.00	11.43
69	M	heptane	0.175	0.178	-1.7	110	0.00	11.59
70	M	isopropyl acetate	0.436	0.468	-7.3	110	0.00	11.30
71	M	1,2-dichloroethane	0.453	0.454	-0.2	103	0.00	11.35
72	M	trichloroethene	0.294	0.319	-8.5	110	0.00	12.06
73		ethyl acrylate		----------NA----------				
74	M	2-nitropropane	0.080	0.083	-3.8	115	0.00	12.77
75	M	2-chloroethyl vinyl ether	0.111	0.134	-20.7	128	0.00	12.81
76	M	methyl methacrylate	0.065	0.074	-13.8	119	0.00	12.33
77	M	1,2-dichloropropane	0.257	0.266	-3.5	112	0.00	12.31
78	M	dibromomethane	0.189	0.197	-4.2	107	0.00	12.44
79	M	methylcyclohexane	0.440	0.448	-1.8	107	0.00	12.31
80	M	bromodichloromethane	0.437	0.465	-6.4	108	0.00	12.56
81	M	cis-1,3-dichloropropene	0.461	0.456	1.1	103	0.00	13.01
82	S	toluene-d8 (s)	1.053	1.073	-1.9	112	0.00	13.31
83	M	4-methyl-2-pentanone	0.085	0.091	-7.1	115	0.00	13.11
84	M	toluene	0.641	0.674	-5.1	111	0.00	13.38
85	M	3-methyl-1-butanol	0.008	0.009#	-12.5	111	0.00	13.11
86	M	trans-1,3-dichloropropene	0.427	0.471	-10.3	110	0.00	13.53
87	M	ethyl methacrylate	0.298	0.312	-4.7	108	0.00	13.55
88	M	1,1,2-trichloroethane	0.201	0.216	-7.5	113	0.00	13.73
89	M	2-hexanone	0.072	0.081	-12.5	119	0.00	13.91
90	I	chlorobenzene-d5	1.000	1.000	0.0	114	0.00	14.71
91	m	butyl ether	1.167	1.258	-7.8	111	0.00	14.69
92	M	tetrachloroethene	0.375	0.386	-2.9	111	0.00	13.93
93	M	1,3-dichloropropane	0.480	0.496	-3.3	112	0.00	13.90
94	M	butyl acetate	0.161	0.170	-5.6	115	0.00	13.99
95		3,3-dimethyl-1-butanol	0.022	0.022	0.0	104	0.00	14.06
96	M	dibromochloromethane	0.473	0.497	-5.1	109	0.00	14.15
97	M	1,2-dibromoethane	0.338	0.355	-5.0	111	0.00	14.29
98	M	chlorobenzene	0.895	0.942	-5.3	112	0.00	14.74
99	M	1,1,1,2-tetrachloroethane	0.420	0.424	-1.0	108	0.00	14.79

Initial Calibration Verification

Job Number: JB92664 **Sample:** V2B5824-ICV5824
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 2B130307.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

100	M	ethylbenzene	1.453	1.515	-4.3	112	0.00	14.80
101	M	m,p-xylene	0.557	0.594	-6.6	112	0.00	14.90
102	M	o-xylene	0.593	0.627	-5.7	111	0.00	15.28
103	M	styrene	0.952	1.057	-11.0	114	0.00	15.29
104		butyl acrylate		----------NA----------				
105	M	bromoform	0.369	0.394	-6.8	109	0.00	15.51
106	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	112	0.00	16.86
107	M	isopropylbenzene	2.590	2.792	-7.8	111	0.00	15.61
108	S	4-bromofluorobenzene (s)	0.806	0.805	0.1	113	0.00	15.78
109	M	cyclohexanone	0.023	0.019	17.4	87	0.00	15.73
110	M	bromobenzene	0.828	0.883	-6.6	111	0.00	15.96
111	M	1,1,2,2-tetrachloroethane	0.614	0.633	-3.1	108	0.00	15.85
112	M	trans-1,4-dichloro-2-bute	0.171	0.181	-5.8	109	0.00	15.89
113	M	1,2,3-trichloropropane	0.192	0.190	1.0	106	0.00	15.92
114	M	n-propylbenzene	2.711	2.997	-10.5	115	0.00	15.99
115	M	2-chlorotoluene	0.666	0.684	-2.7	108	0.00	16.11
116	M	4-chlorotoluene	1.815	1.903	-4.8	110	0.00	16.20
117	M	1,3,5-trimethylbenzene	2.164	2.267	-4.8	109	0.00	16.13
118	M	tert-butylbenzene	1.995	2.139	-7.2	110	0.00	16.45
119	M	pentachloroethane	0.578	0.617	-6.7	109	0.00	16.51
120	M	1,2,4-trimethylbenzene	2.168	2.360	-8.9	113	0.00	16.49
121	M	sec-butylbenzene	2.805	2.968	-5.8	109	0.00	16.66
122	M	1,3-dichlorobenzene	1.469	1.567	-6.7	111	0.00	16.81
123	M	p-isopropyltoluene	2.478	2.724	-9.9	112	0.00	16.77
124	M	1,4-dichlorobenzene	1.446	1.549	-7.1	110	0.00	16.89
125	M	1,2-dichlorobenzene	1.478	1.608	-8.8	110	0.00	17.26
126	M	n-butylbenzene	1.138	1.301	-14.3	113	0.00	17.16
127	M	1,2-dibromo-3-chloropropa	0.137	0.137	0.0	105	0.00	18.00
128		1,3,5-trichlorobenzene	1.397	1.616	-15.7	113	0.00	18.23
129	M	1,2,4-trichlorobenzene	1.188	1.406	-18.4	110	0.00	18.86
130	M	hexachlorobutadiene	0.763	0.820	-7.5	110	0.00	19.01
131	M	naphthalene	1.972	2.111	-7.0	109	0.00	19.15
132	M	1,2,3-trichlorobenzene	1.007	1.177	-16.9	110	0.00	19.39
133	M	hexachloroethane	0.636	0.686	-7.9	111	0.00	17.54

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2B130302.D M2B5824.M Wed Apr 22 10:49:57 2015 MS2B

Continuing Calibration Summary

Job Number: JB92664 **Sample:** V2B5826-CC5824
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 2B130337.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\2b\v2b5825-5826\2b130337.d Vial: 27
Acq On : 22 Apr 2015 11:18 pm Operator: BridgetK
Sample : cc5824-50 Inst : MS2B
Misc : ms83969,v2B5826,w,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2B5824.M (RTE Integrator)
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
Last Update : Wed Apr 22 10:47:17 2015
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	84	0.00	8.36
2	M	tertiary butyl alcohol	1.114	1.183	-6.2	86	0.00	8.49
3		ethanol	0.101	0.096	5.0	75	0.01	6.91
4	M	1,4-dioxane	0.090	0.085	5.6	77	0.00	12.41
5	I	pentafluorobenzene	1.000	1.000	0.0	89	0.00	10.82
6		freon 143a		----------NA----------				
7		freon 142b		----------NA----------				
8		freon 141b		----------NA----------				
9	M	chlorodifluoromethane	0.341	0.342	-0.3	81	0.00	4.50
10	M	dichlorodifluoromethane	0.504	0.511	-1.4	77	0.00	4.48
11	m	chlorotrifluoroethene		----------NA----------				
12	M	chloromethane	0.418	0.372	11.0	70	0.01	4.88
13	M	vinyl chloride	0.385	0.354	8.1	74	0.00	5.18
14		1,3-Butadiene		----------NA----------				
15	M	bromomethane	0.285	0.268	6.0	79	0.01	5.91
16	M	chloroethane	0.175	0.173	1.1	79	0.00	6.11
17		vinyl bromide		----------NA----------				
18	M	trichlorofluoromethane	0.642	0.706	-10.0	87	0.00	6.67
19		Pentane		----------NA----------				
20	M	ethyl ether	0.153	0.155	-1.3	86	0.00	7.15
21	M	acrolein	0.050	0.048	4.0	83	0.01	7.38
22		2-chloropropane	0.477	0.490	-2.7	88	0.00	7.35
23		1,2-dichloro-1,2,2-triflu		----------NA----------				
24	M	1,1-dichloroethene	0.267	0.279	-4.5	90	0.00	7.60
25	M	acetone	0.084	0.085	-1.2	88	0.01	7.64
26	M	allyl chloride	0.144	0.143	0.7	86	0.00	8.20
27	M	acetonitrile	0.015	0.015	0.0	87	0.00	8.11
28	M	iodomethane	0.638	0.671	-5.2	88	0.00	7.90
29	M	iso-butyl alcohol	0.004	0.004#	0.0	90	0.00	11.11
30	M	carbon disulfide	0.912	0.914	-0.2	84	0.00	8.05
31	M	methylene chloride	0.308	0.303	1.6	86	0.00	8.39
32	M	methyl acetate	0.039	0.042	-7.7	89	0.00	8.19
33		1-chloropropane	0.509	0.522	-2.6	89	0.00	8.46
34	M	methyl tert butyl ether	0.877	0.966	-10.1	90	0.00	8.82
35	M	trans-1,2-dichloroethene	0.301	0.306	-1.7	88	0.00	8.83
36	M	di-isopropyl ether	0.827	0.883	-6.8	87	0.00	9.50
37	M	2-butanone	0.029	0.030	-3.4	84	0.00	10.20
38	M	1,1-dichloroethane	0.527	0.540	-2.5	88	0.00	9.44
39	M	chloroprene	0.439	0.483	-10.0	90	0.00	9.58
40	M	acrylonitrile	0.089	0.091	-2.2	85	0.00	8.73
41	M	vinyl acetate	0.049	0.051	-4.1	84	0.00	9.45

Continuing Calibration Summary

Job Number: JB92664 **Sample:** V2B5826-CC5824
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 2B130337.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

42	M	ethyl tert-butyl ether	0.907	1.005	-10.8	89	0.00	9.99
43	M	ethyl acetate	0.031	0.031	0.0	87	0.00	10.25
44	M	2,2-dichloropropane	0.500	0.510	-2.0	86	0.00	10.26
45	M	cis-1,2-dichloroethene	0.333	0.339	-1.8	87	0.00	10.23
46	M	propionitrile	0.032	0.032	0.0	83	0.00	10.27
47	M	bromochloromethane	0.187	0.197	-5.3	90	0.00	10.55
48	M	tetrahydrofuran	0.071	0.064	9.9	80	0.00	10.62
49	M	chloroform	0.570	0.622	-9.1	91	0.00	10.62
50		t-butyl formate	0.235	0.268	-14.0	92	0.00	10.70
51	S	dibromofluoromethane (s)	0.334	0.336	-0.6	89	0.00	10.82
52	S	1,2-dichloroethane-d4 (s)	0.395	0.411	-4.1	93	0.00	11.26
53	M	freon 113	0.280	0.286	-2.1	88	0.00	7.61
54	M	methacrylonitrile	0.157	0.154	1.9	83	0.00	10.49
55	M	1,1,1-trichloroethane	0.546	0.615	-12.6	93	0.00	10.92
56	M	Cyclohexane	0.379	0.402	-6.1	87	0.00	11.02
57		tert amyl alcohol		----------NA----------				
58	I	1,4-difluorobenzene	1.000	1.000	0.0	87	0.00	11.73
59		tert amyl ethyl ether		----------NA----------				
60	M	Di-isobutylene		----------NA----------				
61	M	epichlorohydrin	0.022	0.023	-4.5	87	0.00	12.90
62	M	n-butyl alcohol	0.005	0.005#	0.0	80	0.00	11.82
63	M	carbon tetrachloride	0.534	0.604	-13.1	94	0.00	11.14
64	M	1,1-dichloropropene	0.379	0.411	-8.4	88	0.00	11.11
65	M	hexane	0.332	0.319	3.9	84	0.00	9.22
66	M	benzene	1.009	1.101	-9.1	88	0.00	11.36
67		2,2,4-trimethylpentane	0.852	0.876	-2.8	83	0.00	11.42
68	M	tert-amyl methyl ether	0.814	0.903	-10.9	90	0.00	11.43
69	M	heptane	0.175	0.173	1.1	84	0.00	11.59
70	M	isopropyl acetate	0.436	0.472	-8.3	88	0.00	11.30
71	M	1,2-dichloroethane	0.453	0.515	-13.7	92	0.00	11.35
72	M	trichloroethene	0.294	0.332	-12.9	91	0.00	12.06
73		ethyl acrylate		----------NA----------				
74	M	2-nitropropane	0.080	0.088	-10.0	97	0.00	12.77
75	M	2-chloroethyl vinyl ether	0.111	0.120	-8.1	90	0.00	12.81
76	M	methyl methacrylate	0.065	0.074	-13.8	94	0.00	12.33
77	M	1,2-dichloropropane	0.257	0.271	-5.4	90	0.00	12.31
78	M	dibromomethane	0.189	0.210	-11.1	91	0.00	12.44
79	M	methylcyclohexane	0.440	0.454	-3.2	86	0.00	12.31
80	M	bromodichloromethane	0.437	0.501	-14.6	93	0.00	12.56
81	M	cis-1,3-dichloropropene	0.461	0.501	-8.7	90	0.00	13.01
82	S	toluene-d8 (s)	1.053	1.103	-4.7	92	0.00	13.31
83	M	4-methyl-2-pentanone	0.085	0.087	-2.4	88	0.00	13.11
84	M	toluene	0.641	0.708	-10.5	93	0.00	13.38
85	M	3-methyl-1-butanol	0.008	0.009#	-12.5	85	0.00	13.11
86	M	trans-1,3-dichloropropene	0.427	0.499	-16.9	93	0.00	13.53
87	M	ethyl methacrylate	0.298	0.329	-10.4	90	0.00	13.55
88	M	1,1,2-trichloroethane	0.201	0.218	-8.5	90	0.00	13.73
89	M	2-hexanone	0.072	0.075	-4.2	88	0.00	13.91
90	I	chlorobenzene-d5	1.000	1.000	0.0	92	0.00	14.71
91	m	butyl ether	1.167	1.248	-6.9	90	0.00	14.69
92	M	tetrachloroethene	0.375	0.399	-6.4	93	0.00	13.93
93	M	1,3-dichloropropane	0.480	0.495	-3.1	91	0.00	13.90
94	M	butyl acetate	0.161	0.161	0.0	88	0.00	13.99
95		3,3-dimethyl-1-butanol	0.022	0.021	4.5	83	0.00	14.06
96	M	dibromochloromethane	0.473	0.521	-10.1	93	0.00	14.15
97	M	1,2-dibromoethane	0.338	0.361	-6.8	91	0.00	14.29
98	M	chlorobenzene	0.895	0.969	-8.3	93	0.00	14.74
99	M	1,1,1,2-tetrachloroethane	0.420	0.456	-8.6	94	0.00	14.79

Continuing Calibration Summary

Job Number: JB92664 **Sample:** V2B5826-CC5824
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 2B130337.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

100	M	ethylbenzene	1.453	1.554	-7.0	93	0.00	14.80
101	M	m,p-xylene	0.557	0.608	-9.2	93	0.00	14.90
102	M	o-xylene	0.593	0.641	-8.1	92	0.00	15.29
103	M	styrene	0.952	1.058	-11.1	92	0.00	15.29
104		butyl acrylate		----------NA----------				
105	M	bromoform	0.369	0.415	-12.5	93	0.00	15.51
106	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	91	0.00	16.87
107	M	isopropylbenzene	2.590	2.887	-11.5	93	0.00	15.61
108	S	4-bromofluorobenzene (s)	0.806	0.813	-0.9	93	0.00	15.78
109	M	cyclohexanone	0.023	0.014	39.1#	51	0.00	15.73
110	M	bromobenzene	0.828	0.911	-10.0	93	0.00	15.96
111	M	1,1,2,2-tetrachloroethane	0.614	0.655	-6.7	91	0.00	15.85
112	M	trans-1,4-dichloro-2-bute	0.171	0.187	-9.4	91	0.00	15.89
113	M	1,2,3-trichloropropane	0.192	0.207	-7.8	93	0.00	15.92
114	M	n-propylbenzene	2.711	2.958	-9.1	92	0.00	15.99
115	M	2-chlorotoluene	0.666	0.723	-8.6	93	0.00	16.11
116	M	4-chlorotoluene	1.815	1.987	-9.5	93	0.00	16.21
117	M	1,3,5-trimethylbenzene	2.164	2.396	-10.7	94	0.00	16.13
118	M	tert-butylbenzene	1.995	2.249	-12.7	94	0.00	16.45
119	M	pentachloroethane	0.578	0.637	-10.2	91	0.00	16.51
120	M	1,2,4-trimethylbenzene	2.168	2.371	-9.4	93	0.00	16.49
121	M	sec-butylbenzene	2.805	3.107	-10.8	93	0.00	16.66
122	M	1,3-dichlorobenzene	1.469	1.616	-10.0	93	0.00	16.81
123	M	p-isopropyltoluene	2.478	2.792	-12.7	93	0.00	16.77
124	M	1,4-dichlorobenzene	1.446	1.599	-10.6	93	0.00	16.89
125	M	1,2-dichlorobenzene	1.478	1.667	-12.8	93	0.00	17.26
126	M	n-butylbenzene	1.138	1.303	-14.5	92	0.00	17.16
127	M	1,2-dibromo-3-chloropropa	0.137	0.146	-6.6	91	0.00	18.00
128		1,3,5-trichlorobenzene	1.397	1.612	-15.4	92	0.00	18.23
129	M	1,2,4-trichlorobenzene	1.188	1.409	-18.6	90	0.00	18.86
130	M	hexachlorobutadiene	0.763	0.841	-10.2	92	0.00	19.01
131	M	naphthalene	1.972	2.120	-7.5	89	0.00	19.15
132	M	1,2,3-trichlorobenzene	1.007	1.190	-18.2	90	0.00	19.39
133	M	hexachloroethane	0.636	0.701	-10.2	92	0.00	17.54

(#) = Out of Range SPCC's out = 0 CCC's out = 0

2B130302.D M2B5824.M Thu Apr 23 11:56:11 2015 ACC-VOA-CLN-05A

Continuing Calibration Summary

Job Number: JB92664 **Sample:** V2B5827-CC5824
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 2B130359.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\2b\v2b5827\2B130359.D Vial: 4
Acq On : 23 Apr 2015 10:18 am Operator: BridgetK
Sample : cc5824-20 Inst : MS2B
Misc : ms83338,v2B5827,w,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2B5824.M (RTE Integrator)
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
Last Update : Wed Apr 22 10:47:17 2015
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	117	0.00	8.36
2	M	tertiary butyl alcohol	1.114	1.133	-1.7	104	0.00	8.49
3		ethanol		----------NA----------				
4	M	1,4-dioxane	0.090	0.089	1.1	106	0.01	12.42
5	I	pentafluorobenzene	1.000	1.000	0.0	115	0.00	10.82
6		freon 143a		----------NA----------				
7		freon 142b		----------NA----------				
8		freon 141b		----------NA----------				
9	M	chlorodifluoromethane	0.341	0.329	3.5	103	0.00	4.50
10	M	dichlorodifluoromethane	0.504	0.453	10.1	91	0.00	4.48
11	m	chlorotrifluoroethene		----------NA----------				
12	M	chloromethane	0.418	0.418	0.0	106	0.00	4.87
13	M	vinyl chloride	0.385	0.403	-4.7	108	0.00	5.17
14		1,3-Butadiene		----------NA----------				
15	M	bromomethane	0.285	0.295	-3.5	110	0.01	5.91
16	M	chloroethane	0.175	0.190	-8.6	111	0.00	6.11
17		vinyl bromide		----------NA----------				
18	M	trichlorofluoromethane	0.642	0.639	0.5	100	0.00	6.68
19		Pentane		----------NA----------				
20	M	ethyl ether	0.153	0.157	-2.6	109	0.01	7.16
21	M	acrolein	0.050	0.051	-2.0	113	0.02	7.39
22		2-chloropropane	0.477	0.468	1.9	103	0.00	7.35
23		1,2-dichloro-1,2,2-triflu		----------NA----------				
24	M	1,1-dichloroethene	0.267	0.276	-3.4	110	0.00	7.61
25	M	acetone	0.084	0.079	6.0	101	0.00	7.63
26	M	allyl chloride	0.144	0.141	2.1	104	0.00	8.20
27	M	acetonitrile	0.015	0.016	-6.7	116	0.00	8.10
28	M	iodomethane	0.638	0.644	-0.9	106	0.00	7.90
29	M	iso-butyl alcohol	0.004	0.003#	25.0#	96	0.00	11.10
30	M	carbon disulfide	0.912	0.899	1.4	101	0.00	8.05
31	M	methylene chloride	0.308	0.306	0.6	107	0.00	8.39
32	M	methyl acetate	0.039	0.040	-2.6	103	0.01	8.19
33		1-chloropropane	0.509	0.487	4.3	100	0.00	8.46
34	M	methyl tert butyl ether	0.877	0.908	-3.5	106	0.00	8.82
35	M	trans-1,2-dichloroethene	0.301	0.304	-1.0	108	0.01	8.83
36	M	di-isopropyl ether	0.827	0.879	-6.3	107	0.00	9.49
37	M	2-butanone	0.029	0.029	0.0	102	0.01	10.20
38	M	1,1-dichloroethane	0.527	0.512	2.8	103	0.00	9.44
39	M	chloroprene	0.439	0.444	-1.1	104	0.00	9.58
40	M	acrylonitrile	0.089	0.094	-5.6	112	0.00	8.74
41	M	vinyl acetate	0.049	0.050	-2.0	107	0.00	9.45

Continuing Calibration Summary

Job Number: JB92664 **Sample:** V2B5827-CC5824
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 2B130359.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

42	M	ethyl tert-butyl ether	0.907	0.935	-3.1	105	0.00	9.99
43	M	ethyl acetate	0.031	0.033	-6.5	113	0.00	10.25
44	M	2,2-dichloropropane	0.500	0.516	-3.2	106	0.00	10.27
45	M	cis-1,2-dichloroethene	0.333	0.324	2.7	102	0.00	10.23
46	M	propionitrile	0.032	0.034	-6.3	108	0.00	10.28
47	M	bromochloromethane	0.187	0.194	-3.7	108	0.00	10.55
48	M	tetrahydrofuran	0.071	0.068	4.2	109	0.00	10.62
49	M	chloroform	0.570	0.577	-1.2	106	0.00	10.62
50		t-butyl formate	0.235	0.255	-8.5	112	0.00	10.70
51	S	dibromofluoromethane (s)	0.334	0.330	1.2	114	0.00	10.82
52	S	1,2-dichloroethane-d4 (s)	0.395	0.371	6.1	108	0.00	11.26
53	M	freon 113	0.280	0.299	-6.8	111	0.00	7.61
54	M	methacrylonitrile	0.157	0.152	3.2	107	0.00	10.49
55	M	1,1,1-trichloroethane	0.546	0.532	2.6	101	0.00	10.92
56	M	Cyclohexane	0.379	0.390	-2.9	106	0.00	11.02
57		tert amyl alcohol		----------NA----------				
58	I	1,4-difluorobenzene	1.000	1.000	0.0	117	0.00	11.73
59		tert amyl ethyl ether		----------NA----------				
60	M	Di-isobutylene		----------NA----------				
61	M	epichlorohydrin	0.022	0.023	-4.5	111	0.00	12.90
62	M	n-butyl alcohol	0.005	0.005#	0.0	107	0.00	11.82
63	M	carbon tetrachloride	0.534	0.523	2.1	102	0.00	11.14
64	M	1,1-dichloropropene	0.379	0.388	-2.4	107	0.00	11.10
65	M	hexane	0.332	0.332	0.0	109	0.00	9.22
66	M	benzene	1.009	1.059	-5.0	109	0.00	11.36
67		2,2,4-trimethylpentane	0.852	0.891	-4.6	112	0.00	11.42
68	M	tert-amyl methyl ether	0.814	0.838	-2.9	109	0.00	11.42
69	M	heptane	0.175	0.181	-3.4	114	0.01	11.59
70	M	isopropyl acetate	0.436	0.437	-0.2	106	0.00	11.30
71	M	1,2-dichloroethane	0.453	0.435	4.0	100	0.00	11.35
72	M	trichloroethene	0.294	0.289	1.7	103	0.00	12.06
73		ethyl acrylate		----------NA----------				
74	M	2-nitropropane	0.080	0.071	11.3	102	0.00	12.77
75	M	2-chloroethyl vinyl ether	0.111	0.131	-18.0	131	0.00	12.81
76	M	methyl methacrylate	0.065	0.070	-7.7	115	0.00	12.33
77	M	1,2-dichloropropane	0.257	0.261	-1.6	110	0.00	12.31
78	M	dibromomethane	0.189	0.191	-1.1	103	0.00	12.44
79	M	methylcyclohexane	0.440	0.441	-0.2	109	0.00	12.31
80	M	bromodichloromethane	0.437	0.438	-0.2	105	0.00	12.57
81	M	cis-1,3-dichloropropene	0.461	0.460	0.2	107	0.00	13.01
82	S	toluene-d8 (s)	1.053	1.067	-1.3	118	0.00	13.31
83	M	4-methyl-2-pentanone	0.085	0.087	-2.4	112	0.00	13.11
84	M	toluene	0.641	0.661	-3.1	109	0.00	13.38
85	M	3-methyl-1-butanol	0.008	0.009#	-12.5	112	0.00	13.11
86	M	trans-1,3-dichloropropene	0.427	0.447	-4.7	108	0.00	13.53
87	M	ethyl methacrylate	0.298	0.313	-5.0	110	0.00	13.55
88	M	1,1,2-trichloroethane	0.201	0.205	-2.0	111	0.00	13.73
89	M	2-hexanone	0.072	0.071	1.4	108	0.00	13.92
90	I	chlorobenzene-d5	1.000	1.000	0.0	122	0.00	14.71
91	m	butyl ether	1.167	1.185	-1.5	111	0.00	14.69
92	M	tetrachloroethene	0.375	0.375	0.0	105	0.00	13.93
93	M	1,3-dichloropropane	0.480	0.462	3.7	106	0.00	13.90
94	M	butyl acetate	0.161	0.157	2.5	110	0.00	13.99
95		3,3-dimethyl-1-butanol	0.022	0.021	4.5	111	0.00	14.06
96	M	dibromochloromethane	0.473	0.461	2.5	105	0.00	14.15
97	M	1,2-dibromoethane	0.338	0.344	-1.8	110	0.00	14.29
98	M	chlorobenzene	0.895	0.912	-1.9	110	0.00	14.74
99	M	1,1,1,2-tetrachloroethane	0.420	0.404	3.8	109	0.00	14.79

Continuing Calibration Summary

Job Number: JB92664 **Sample:** V2B5827-CC5824
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 2B130359.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

100	M	ethylbenzene	1.453	1.478	-1.7	110	0.00	14.80
101	M	m,p-xylene	0.557	0.581	-4.3	110	0.00	14.90
102	M	o-xylene	0.593	0.594	-0.2	110	0.00	15.28
103	M	styrene	0.952	0.977	-2.6	109	0.00	15.29
104		butyl acrylate		----------NA----------				
105	M	bromoform	0.369	0.358	3.0	105	0.00	15.51
106	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	115	0.00	16.87
107	M	isopropylbenzene	2.590	2.741	-5.8	108	0.00	15.61
108	S	4-bromofluorobenzene (s)	0.806	0.827	-2.6	118	0.00	15.78
109	M	cyclohexanone	0.023	0.013	43.5#	62	0.00	15.74
110	M	bromobenzene	0.828	0.886	-7.0	110	0.00	15.96
111	M	1,1,2,2-tetrachloroethane	0.614	0.666	-8.5	114	0.00	15.85
112	M	trans-1,4-dichloro-2-bute	0.171	0.170	0.6	103	0.00	15.89
113	M	1,2,3-trichloropropane	0.192	0.187	2.6	102	0.00	15.92
114	M	n-propylbenzene	2.711	2.901	-7.0	109	0.00	15.99
115	M	2-chlorotoluene	0.666	0.698	-4.8	110	0.00	16.11
116	M	4-chlorotoluene	1.815	1.887	-4.0	107	0.00	16.21
117	M	1,3,5-trimethylbenzene	2.164	2.302	-6.4	109	0.00	16.13
118	M	tert-butylbenzene	1.995	2.050	-2.8	106	0.00	16.45
119	M	pentachloroethane	0.578	0.607	-5.0	106	0.00	16.51
120	M	1,2,4-trimethylbenzene	2.168	2.319	-7.0	110	0.00	16.49
121	M	sec-butylbenzene	2.805	2.922	-4.2	106	0.00	16.66
122	M	1,3-dichlorobenzene	1.469	1.567	-6.7	107	0.00	16.81
123	M	p-isopropyltoluene	2.478	2.643	-6.7	108	0.00	16.77
124	M	1,4-dichlorobenzene	1.446	1.505	-4.1	107	0.00	16.89
125	M	1,2-dichlorobenzene	1.478	1.545	-4.5	106	0.00	17.27
126	M	n-butylbenzene	1.138	1.208	-6.2	109	0.00	17.16
127	M	1,2-dibromo-3-chloropropa	0.137	0.127	7.3	98	0.00	18.01
128		1,3,5-trichlorobenzene	1.397	1.469	-5.2	108	0.00	18.22
129	M	1,2,4-trichlorobenzene	1.188	1.261	-6.1	107	0.00	18.86
130	M	hexachlorobutadiene	0.763	0.776	-1.7	107	0.00	19.01
131	M	naphthalene	1.972	1.906	3.3	107	0.00	19.15
132	M	1,2,3-trichlorobenzene	1.007	1.044	-3.7	103	0.00	19.39
133	M	hexachloroethane	0.636	0.617	3.0	103	0.00	17.54

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2B130301.D M2B5824.M Thu Apr 23 15:53:33 2015 ACC-VOA-CLN-05A

New Jersey ACCUTEST LABORATORIES

GC/MS Volatiles

Raw Data

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130342.d
Acq On : 23 Apr 2015 1:41 am
Operator : BridgetK
Sample : jb92664-1
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Apr 23 12:10:34 2015
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
QLast Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration

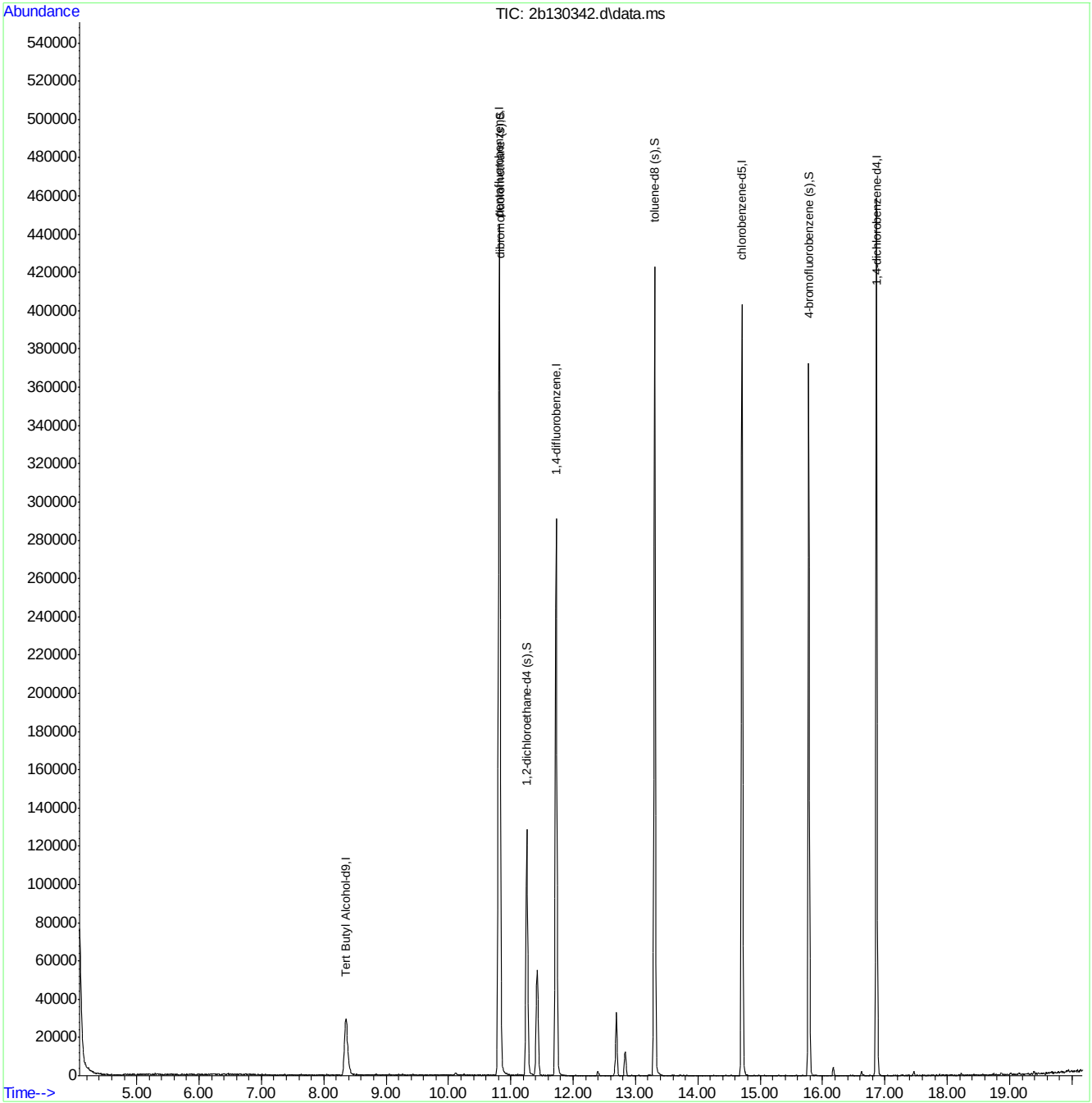
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.358	65	59047	500.00	ug/L	0.00
5) pentafluorobenzene	10.811	168	267207	50.00	ug/L	0.00
58) 1,4-difluorobenzene	11.729	114	246863	50.00	ug/L	0.00
90) chlorobenzene-d5	14.707	117	202387	50.00	ug/L	0.00
106) 1,4-dichlorobenzene-d4	16.867	152	116531	50.00	ug/L	0.00
System Monitoring Compounds						
51) dibromofluoromethane (s)	10.822	113	89348	50.09	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 100.18%			
52) 1,2-dichloroethane-d4 (s)	11.257	65	108383	51.36	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 102.72%			
82) toluene-d8 (s)	13.307	98	263567	50.69	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 101.38%			
108) 4-bromofluorobenzene (s)	15.776	95	95910	51.05	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 102.10%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130342.d
Acq On : 23 Apr 2015 1:41 am
Operator : BridgetK
Sample : jb92664-1
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Apr 23 12:10:34 2015
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
QLast Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130342.d
Acq On : 23 Apr 2015 1:41 am
Operator : BridgetK
Sample : jb92664-1
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 32 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

Signal : TIC: 2b130342.d\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.541	86	88	108	rVB2	495	1952	0.20%	0.041%
2	4.703	116	119	125	rBB2	411	572	0.06%	0.012%
3	5.039	182	183	189	rVB2	767	1070	0.11%	0.022%
4	5.296	230	232	261	rBV2	955	4340	0.44%	0.091%
5	5.553	278	281	284	rVB2	590	803	0.08%	0.017%
6	5.579	285	286	292	rBV2	565	663	0.07%	0.014%
7	5.720	310	313	318	rVB3	569	543	0.06%	0.011%
8	5.841	333	336	339	rBV	637	851	0.09%	0.018%
9	6.156	393	396	417	rVB2	738	3297	0.33%	0.069%
10	6.470	453	456	475	rVB2	654	1274	0.13%	0.027%
11	6.758	480	511	516	rVB2	527	2932	0.30%	0.062%
12	7.141	582	584	590	rVB	524	586	0.06%	0.012%
13	7.293	609	613	623	rBV	526	1065	0.11%	0.022%
14	7.372	623	628	634	rVV2	631	1088	0.11%	0.023%
15	7.424	636	638	645	rBV	724	1285	0.13%	0.027%
16	7.492	645	651	655	rVB2	456	848	0.09%	0.018%
17	7.571	662	666	669	rBV	578	879	0.09%	0.018%
18	7.639	676	679	689	rVV2	616	1393	0.14%	0.029%
19	7.702	689	691	696	rVB	581	814	0.08%	0.017%
20	7.844	716	718	722	rVB2	537	494	0.05%	0.010%
21	7.870	722	723	727	rVB	450	409	0.04%	0.009%
22	7.917	727	732	734	rBV	515	698	0.07%	0.015%
23	8.137	766	774	780	rBV2	619	1906	0.19%	0.040%
24	8.258	790	797	801	rBV	470	715	0.07%	0.015%
25	8.352	801	815	844	rVB3	29357	110551	11.22%	2.324%
26	8.520	846	847	852	rBV2	607	719	0.07%	0.015%
27	8.557	852	854	863	rBV	445	609	0.06%	0.013%
28	8.614	863	865	869	rVB	495	420	0.04%	0.009%
29	8.646	869	871	879	rBV	368	701	0.07%	0.015%
30	8.772	892	895	903	rBV	417	738	0.07%	0.016%
31	8.892	915	918	923	rVB	582	877	0.09%	0.018%
32	8.945	923	928	945	rBV2	522	2121	0.22%	0.045%
33	9.044	945	947	953	rVB	570	610	0.06%	0.013%
34	9.086	953	955	960	rBV2	367	493	0.05%	0.010%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130342.d
Acq On : 23 Apr 2015 1:41 am
Operator : BridgetK
Sample : jb92664-1
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 32 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

35	9.202	973	977	983	rVB	515	691	0.07%	0.015%
36	9.265	987	989	999	rVB	799	1665	0.17%	0.035%
37	9.333	999	1002	1004	rBV	553	607	0.06%	0.013%
38	9.380	1004	1011	1012	rBV	401	581	0.06%	0.012%
39	9.427	1017	1020	1028	rVV2	607	612	0.06%	0.013%
40	9.490	1028	1032	1035	rVB2	394	444	0.05%	0.009%
41	9.553	1035	1044	1048	rBV2	404	865	0.09%	0.018%
42	9.857	1100	1102	1108	rBV2	504	676	0.07%	0.014%
43	10.114	1144	1151	1162	rVB3	1070	2801	0.28%	0.059%
44	10.187	1162	1165	1173	rVV	461	828	0.08%	0.017%
45	10.245	1175	1176	1183	rVV	620	861	0.09%	0.018%
46	10.308	1183	1188	1189	rVB	414	512	0.05%	0.011%
47	10.366	1196	1199	1204	rVB	483	606	0.06%	0.013%
48	10.450	1213	1215	1222	rBV	385	560	0.06%	0.012%
49	10.623	1243	1248	1256	rVB	495	1081	0.11%	0.023%
50	10.712	1262	1265	1270	rVB	387	590	0.06%	0.012%
51	10.817	1274	1285	1313	rBV2	444865	985101	100.00%	20.710%
52	10.974	1313	1315	1321	rBV	703	592	0.06%	0.012%
53	11.068	1331	1333	1339	rVB	488	805	0.08%	0.017%
54	11.110	1339	1341	1344	rBV	777	620	0.06%	0.013%
55	11.257	1357	1369	1389	rBV2	128729	268489	27.25%	5.644%
56	11.425	1391	1401	1417	rVV	55211	127582	12.95%	2.682%
57	11.519	1417	1419	1424	rVB	596	624	0.06%	0.013%
58	11.582	1429	1431	1436	rBB	464	465	0.05%	0.010%
59	11.619	1436	1438	1444	rBV	442	641	0.07%	0.013%
60	11.729	1449	1459	1480	rBV	290927	553479	56.19%	11.636%
61	12.395	1578	1586	1594	rBB	2382	4210	0.43%	0.089%
62	12.694	1632	1643	1653	rBB	33264	59754	6.07%	1.256%
63	12.835	1661	1670	1678	rBB2	12731	22780	2.31%	0.479%
64	13.218	1737	1743	1744	rBB	388	486	0.05%	0.010%
65	13.307	1750	1760	1782	rVB	423017	694082	70.46%	14.592%
66	13.590	1807	1814	1815	rBB	320	428	0.04%	0.009%
67	14.707	2019	2027	2044	rVB	403328	615980	62.53%	12.950%
68	15.776	2221	2231	2245	rBB	372797	541279	54.95%	11.379%
69	16.175	2300	2307	2312	rBB2	4430	6687	0.68%	0.141%
70	16.484	2362	2366	2371	rBB2	257	416	0.04%	0.009%
71	16.626	2385	2393	2402	rBB3	2391	3474	0.35%	0.073%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130342.d
Acq On : 23 Apr 2015 1:41 am
Operator : BridgetK
Sample : jb92664-1
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 32 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

72	16.867	2430	2439	2451	rBB	459060	672258	68.24%	14.133%
73	17.166	2494	2496	2501	rBB	421	457	0.05%	0.010%
74	17.381	2531	2537	2543	rBB	417	709	0.07%	0.015%
75	17.465	2543	2553	2557	rBB4	2345	3097	0.31%	0.065%
76	17.596	2574	2578	2580	rBB4	412	424	0.04%	0.009%
77	17.638	2584	2586	2592	rBB	278	449	0.05%	0.009%
78	17.680	2592	2594	2601	rBV	547	782	0.08%	0.016%
79	17.874	2628	2631	2635	rVB	783	783	0.08%	0.016%
80	17.921	2635	2640	2641	rBB	595	611	0.06%	0.013%
81	17.947	2643	2645	2648	rBV	445	494	0.05%	0.010%
82	18.057	2662	2666	2668	rBV	407	625	0.06%	0.013%
83	18.120	2674	2678	2681	rBV	504	617	0.06%	0.013%
84	18.225	2694	2698	2708	rBV2	1192	1758	0.18%	0.037%
85	18.367	2721	2725	2732	rBV	378	820	0.08%	0.017%
86	18.492	2745	2749	2750	rVB	453	482	0.05%	0.010%
87	18.566	2758	2763	2768	rVB	614	789	0.08%	0.017%
88	18.660	2780	2781	2787	rBV	501	711	0.07%	0.015%
89	18.723	2790	2793	2796	rVV	653	629	0.06%	0.013%
90	18.749	2796	2798	2800	rVB	1024	562	0.06%	0.012%
91	18.870	2815	2821	2826	rBV2	1396	2197	0.22%	0.046%
92	18.928	2830	2832	2834	rBV	689	470	0.05%	0.010%
93	19.017	2842	2849	2853	rVB3	1106	1957	0.20%	0.041%
94	19.153	2871	2875	2881	rVB3	966	1551	0.16%	0.033%
95	19.221	2887	2888	2891	rBV	674	544	0.06%	0.011%
96	19.347	2910	2912	2916	rBV	739	690	0.07%	0.015%
97	19.389	2916	2920	2925	rVV3	1817	2517	0.26%	0.053%
98	19.431	2925	2928	2930	rVB	767	547	0.06%	0.011%
99	19.457	2930	2933	2948	rBV2	761	2165	0.22%	0.046%
100	19.683	2954	2976	2981	rBV3	1489	6768	0.69%	0.142%

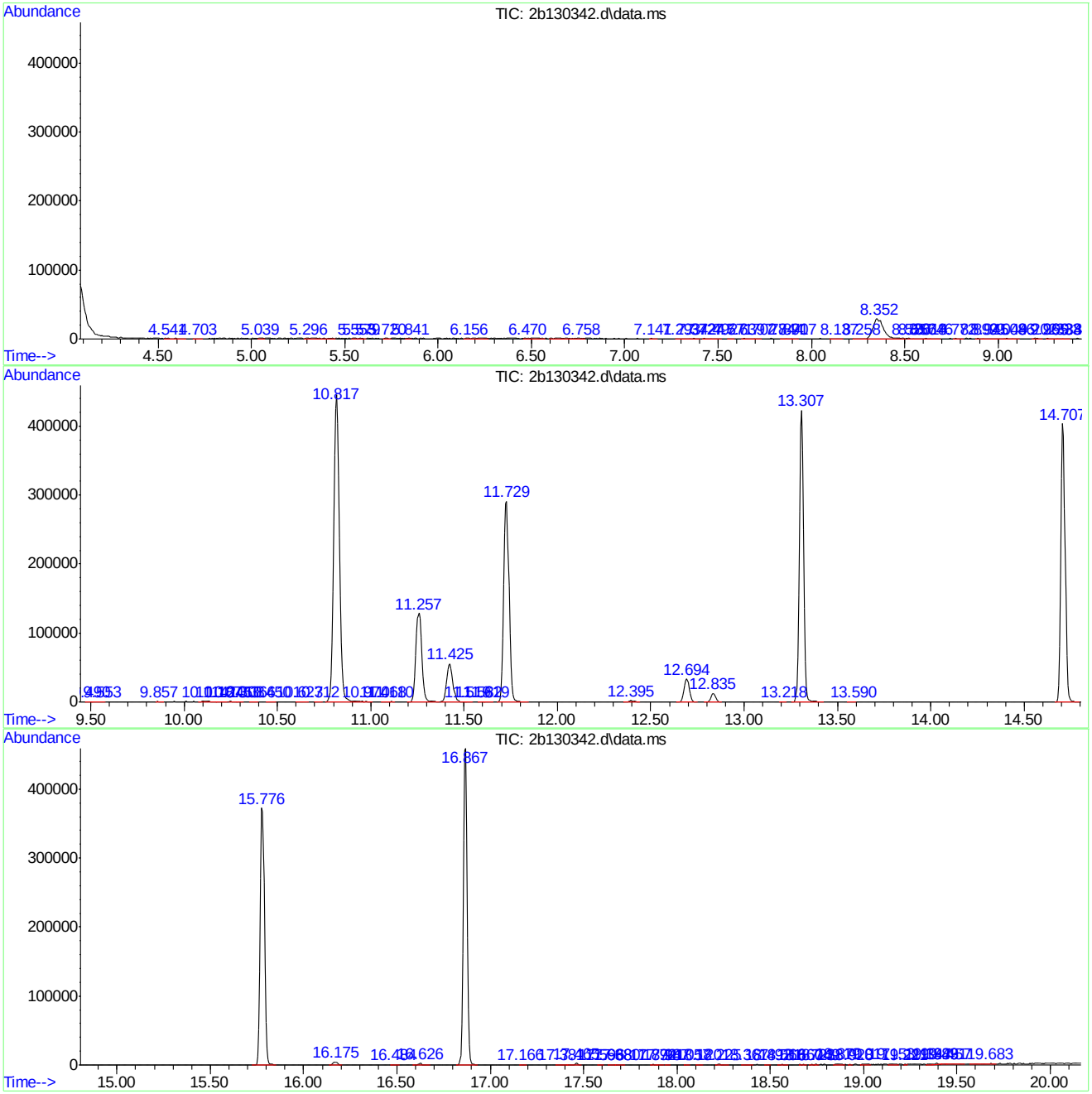
Sum of corrected areas: 4756733

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130342.d
Acq On : 23 Apr 2015 1:41 am
Operator : BridgetK
Sample : jb92664-1
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 32 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130342.d
Acq On : 23 Apr 2015 1:41 am
Operator : BridgetK
Sample : jb92664-1
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 32 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

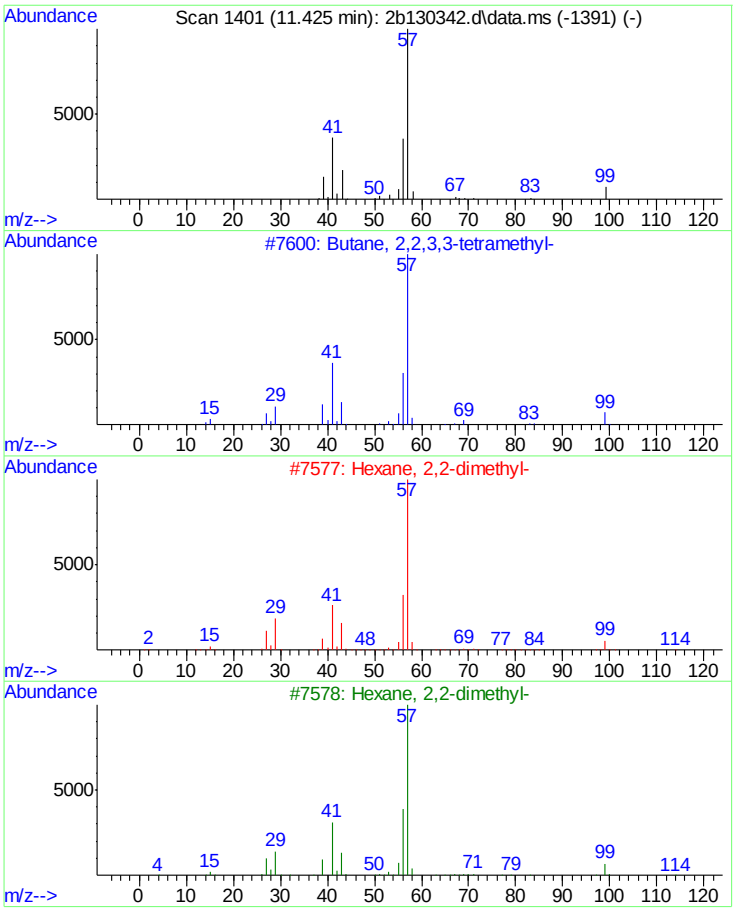
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

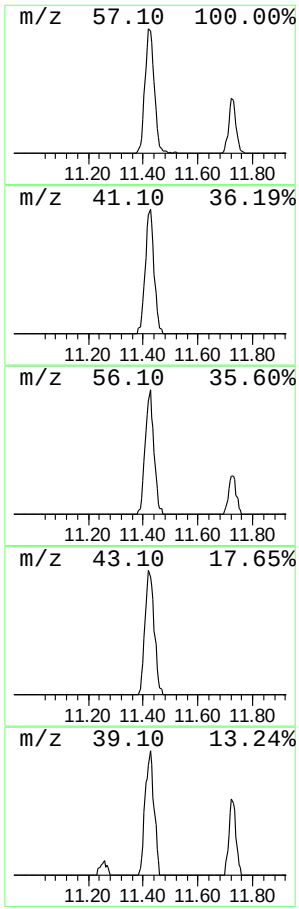
****

Peak Number 1 Butane, 2,2,3,3-tetramethyl- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.425	11.53 ug/L	127582	1,4-difluorobenzene	11.729

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2,2,3,3-tetramethyl-	114	C8H18	000594-82-1	83
2	Hexane, 2,2-dimethyl-	114	C8H18	000590-73-8	78
3	Hexane, 2,2-dimethyl-	114	C8H18	000590-73-8	78
4	Pentane, 2,2,4-trimethyl-	114	C8H18	000540-84-1	78
5	Butane, 2,2,3,3-tetramethyl-	114	C8H18	000594-82-1	78





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130342.d
Acq On : 23 Apr 2015 1:41 am
Operator : BridgetK
Sample : jb92664-1
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 32 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

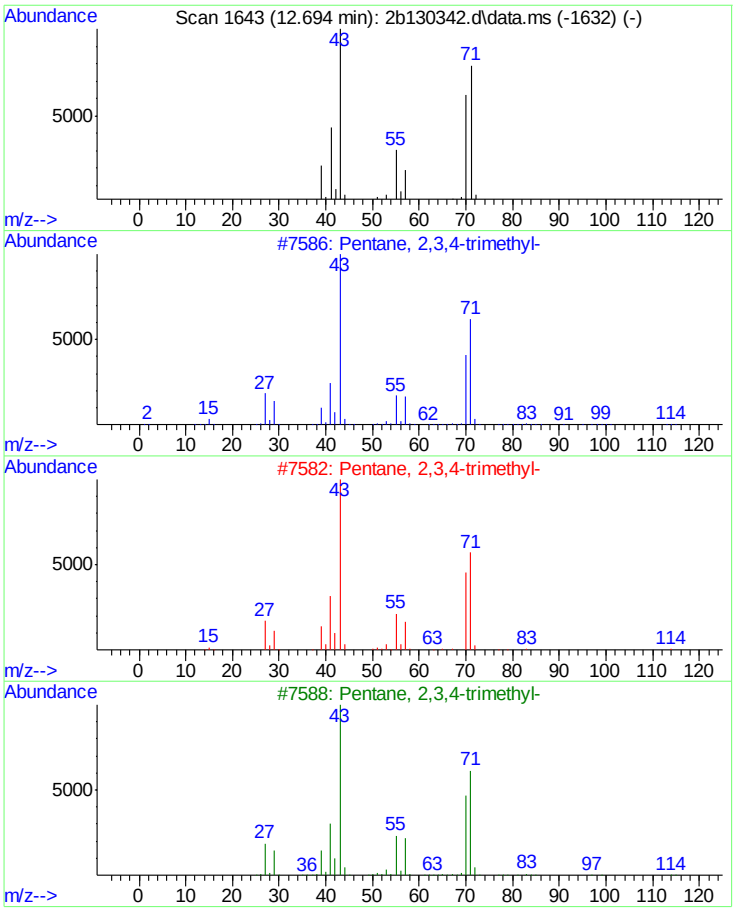
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

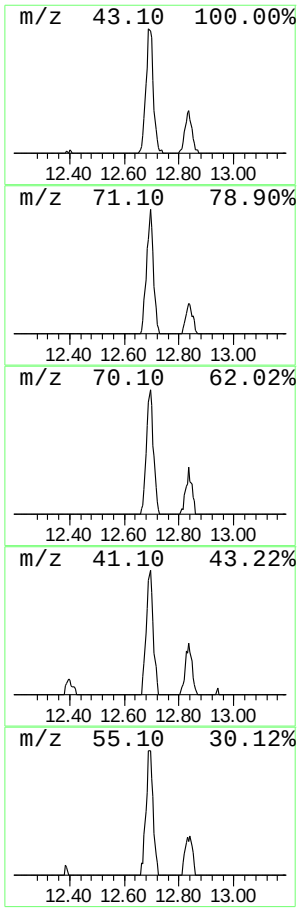
****

Peak Number 2 Pentane, 2,3,4-trimethyl- Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.694	5.40 ug/L	59754	1,4-difluorobenzene	11.729

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	83
2	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	83
3	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	78
4	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	74
5	Hexane, 2,3-dimethyl-	114	C8H18	000584-94-1	45





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130342.d
Acq On : 23 Apr 2015 1:41 am
Operator : BridgetK
Sample : jb92664-1
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 32 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Butane, 2,2,3,3...	11.425	11.5	ug/L	127582	3	11.729	553479	50.0
Pentane, 2,3,4-...	12.694	5.4	ug/L	59754	3	11.729	553479	50.0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130343.d
Acq On : 23 Apr 2015 2:10 am
Operator : BridgetK
Sample : jb92664-2
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Apr 23 15:07:58 2015
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
QLast Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration

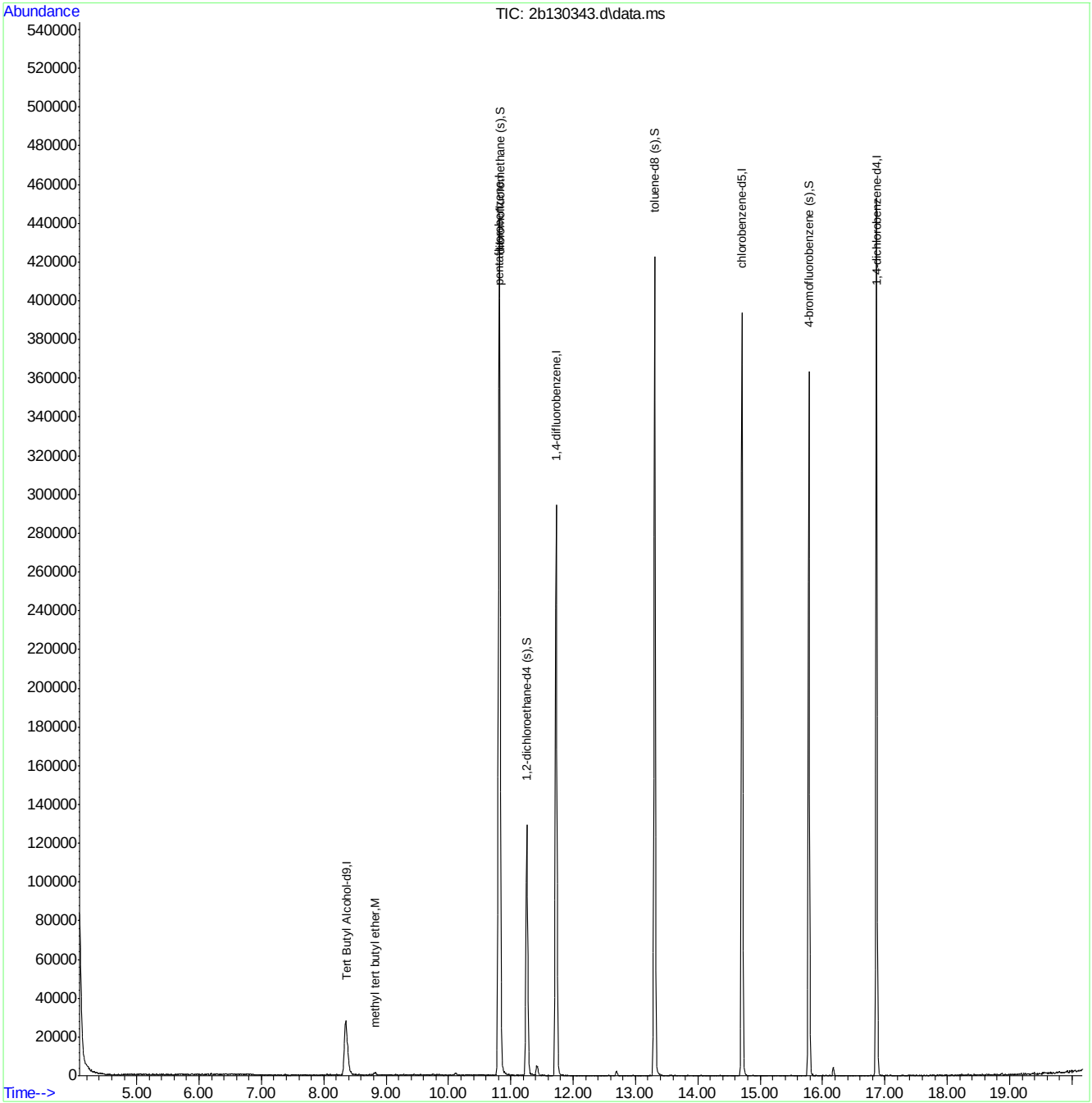
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.363	65	57903	500.00	ug/L	0.01
5) pentafluorobenzene	10.817	168	261644	50.00	ug/L	0.00
58) 1,4-difluorobenzene	11.729	114	244402	50.00	ug/L	0.00
90) chlorobenzene-d5	14.707	117	194821	50.00	ug/L	0.00
106) 1,4-dichlorobenzene-d4	16.867	152	115546	50.00	ug/L	0.00
System Monitoring Compounds						
51) dibromofluoromethane (s)	10.822	113	87119	49.87	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 99.74%			
52) 1,2-dichloroethane-d4 (s)	11.257	65	107171	51.86	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 103.72%			
82) toluene-d8 (s)	13.307	98	256920	49.91	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 99.82%			
108) 4-bromofluorobenzene (s)	15.782	95	90429	48.55	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 97.10%			
Target Compounds						Qvalue
34) methyl tert butyl ether	8.824	73	1641	0.36	ug/L	58

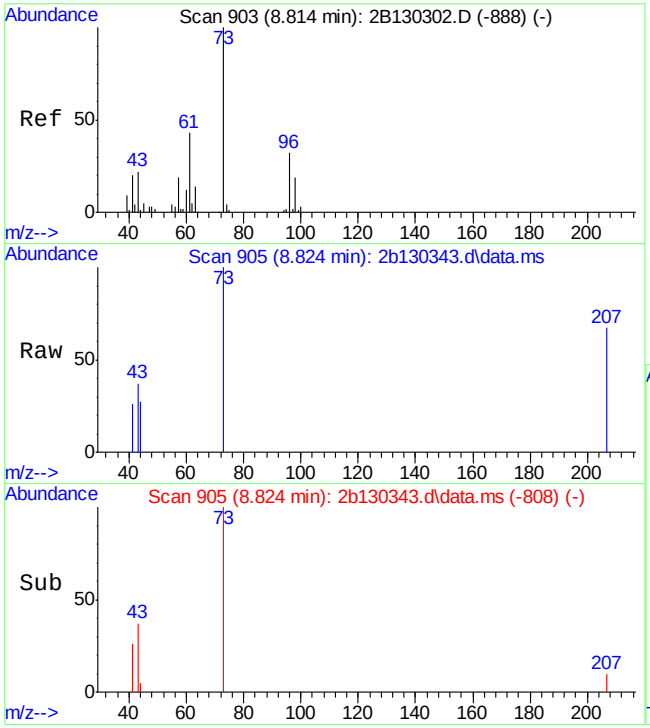
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130343.d
Acq On : 23 Apr 2015 2:10 am
Operator : BridgetK
Sample : jb92664-2
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Apr 23 15:07:58 2015
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
QLast Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration

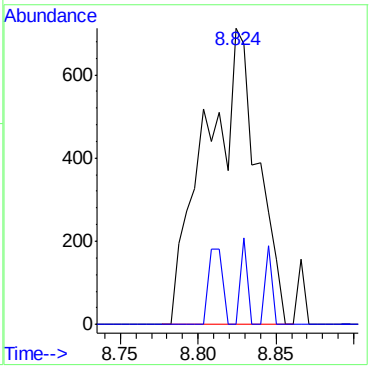




#34
methyl tert butyl ether
Concen: 0.36 ug/L
RT: 8.824 min Scan# 905
Delta R.T. 0.010 min
Lab File: 2b130343.d
Acq: 23 Apr 2015 2:10 am

Tgt Ion: 73 Resp: 1641

Ion	Ratio	Lower	Upper
73	100		
57	0.0	0.0	48.7



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130343.d
Acq On : 23 Apr 2015 2:10 am
Operator : BridgetK
Sample : jb92664-2
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 33 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.4 Max Peaks: 100
Stop Thrs : 0.6 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

Signal : TIC: 2b130343.d\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.394	59	60	69	rVB2	708	1082	0.11%	0.024%
2	4.446	69	70	82	rVB	770	1494	0.15%	0.034%
3	4.556	82	91	93	rBV2	358	573	0.06%	0.013%
4	4.640	104	107	111	rBV	777	541	0.06%	0.012%
5	4.708	119	120	127	rVB2	712	670	0.07%	0.015%
6	4.756	127	129	131	rBV2	581	539	0.06%	0.012%
7	4.887	152	154	164	rBV2	470	1132	0.12%	0.025%
8	5.002	175	176	189	rBV2	505	933	0.10%	0.021%
9	5.144	200	203	210	rVB2	426	798	0.08%	0.018%
10	5.248	219	223	233	rVV2	446	1010	0.10%	0.023%
11	5.400	248	252	255	rBV2	377	538	0.06%	0.012%
12	5.421	255	256	260	rVB	486	547	0.06%	0.012%
13	5.474	260	266	268	rBV2	720	1089	0.11%	0.024%
14	5.647	295	299	301	rVB2	556	524	0.05%	0.012%
15	5.778	322	324	333	rBV	334	584	0.06%	0.013%
16	5.888	339	345	349	rBV2	666	957	0.10%	0.022%
17	6.061	372	378	385	rBV2	567	1579	0.16%	0.035%
18	6.145	390	394	397	rVB2	693	1093	0.11%	0.025%
19	6.176	397	400	403	rBV	656	876	0.09%	0.020%
20	6.197	403	404	409	rBV	892	819	0.08%	0.018%
21	6.287	418	421	429	rVB2	393	751	0.08%	0.017%
22	6.339	429	431	442	rVB2	566	810	0.08%	0.018%
23	6.507	461	463	480	rVB2	496	1244	0.13%	0.028%
24	6.601	480	481	487	rVB2	771	815	0.08%	0.018%
25	6.648	487	490	497	rBV2	546	1357	0.14%	0.030%
26	6.821	521	523	527	rBV2	588	661	0.07%	0.015%
27	6.916	537	541	550	rVB2	426	868	0.09%	0.020%
28	7.042	557	565	566	rVB	423	825	0.09%	0.019%
29	7.068	567	570	576	rVB2	361	710	0.07%	0.016%
30	7.115	576	579	582	rBV2	477	565	0.06%	0.013%
31	7.152	582	586	592	rVB2	598	1425	0.15%	0.032%
32	7.204	592	596	603	rBV2	537	1488	0.15%	0.033%
33	7.262	603	607	609	rBV2	533	628	0.06%	0.014%
34	7.314	613	617	622	rVB2	423	830	0.09%	0.019%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130343.d
Acq On : 23 Apr 2015 2:10 am
Operator : BridgetK
Sample : jb92664-2
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 33 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.4 Max Peaks: 100
Stop Thrs : 0.6 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

35	7.382	627	630	641	rVB2	790	1162	0.12%	0.026%
36	7.587	664	669	674	rVB2	641	1438	0.15%	0.032%
37	7.634	674	678	680	rBV	677	901	0.09%	0.020%
38	7.823	712	714	721	rBV	405	610	0.06%	0.014%
39	8.043	752	756	758	rBV	811	800	0.08%	0.018%
40	8.059	758	759	764	rVB	574	632	0.07%	0.014%
41	8.101	764	767	770	rBV	535	546	0.06%	0.012%
42	8.205	784	787	790	rVB2	721	701	0.07%	0.016%
43	8.358	801	816	845	rBV2	28052	107547	11.13%	2.417%
44	8.567	854	856	862	rVB	557	637	0.07%	0.014%
45	8.604	862	863	869	rVB2	506	580	0.06%	0.013%
46	8.824	898	905	911	rVB	1548	3015	0.31%	0.068%
47	8.997	936	938	949	rBV2	334	783	0.08%	0.018%
48	9.154	967	968	977	rVB	794	1324	0.14%	0.030%
49	9.228	977	982	983	rBV	574	710	0.07%	0.016%
50	9.322	995	1000	1005	rBV	309	645	0.07%	0.014%
51	9.757	1081	1083	1087	rVB	538	614	0.06%	0.014%
52	9.852	1098	1101	1106	rVB	545	576	0.06%	0.013%
53	9.889	1106	1108	1115	rVB	660	1114	0.12%	0.025%
54	9.941	1115	1118	1120	rBV	720	781	0.08%	0.018%
55	10.114	1144	1151	1157	rVB2	1392	2855	0.30%	0.064%
56	10.245	1172	1176	1179	rVB	559	654	0.07%	0.015%
57	10.297	1179	1186	1190	rBV	598	1451	0.15%	0.033%
58	10.334	1190	1193	1202	rVB	503	901	0.09%	0.020%
59	10.408	1202	1207	1210	rBV	442	582	0.06%	0.013%
60	10.817	1271	1285	1310	rBV2	442724	966309	100.00%	21.715%
61	10.953	1310	1311	1317	rVB	683	785	0.08%	0.018%
62	11.257	1359	1369	1389	rVV	129376	265193	27.44%	5.959%
63	11.414	1394	1399	1408	rVB2	5076	11548	1.20%	0.260%
64	11.477	1408	1411	1413	rBV	483	531	0.05%	0.012%
65	11.503	1413	1416	1419	rVB	535	530	0.05%	0.012%
66	11.729	1448	1459	1484	rBB	294692	551649	57.09%	12.396%
67	12.688	1637	1642	1650	rBB2	2504	3926	0.41%	0.088%
68	13.307	1751	1760	1781	rBV	422642	675102	69.86%	15.171%
69	14.707	2018	2027	2047	rBB	393904	594394	61.51%	13.357%
70	15.782	2224	2232	2246	rBB	363451	527191	54.56%	11.847%
71	16.170	2300	2306	2312	rBB	4513	6328	0.65%	0.142%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130343.d
Acq On : 23 Apr 2015 2:10 am
Operator : BridgetK
Sample : jb92664-2
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 33 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.4 Max Peaks: 100
Stop Thrs : 0.6 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

72	16.867	2428	2439	2453	rBB	453149	656479	67.94%	14.752%
73	17.984	2649	2652	2660	rVB	519	895	0.09%	0.020%
74	18.062	2663	2667	2676	rBV	511	1190	0.12%	0.027%
75	18.167	2682	2687	2689	rVV	519	563	0.06%	0.013%
76	18.193	2689	2692	2697	rVV	458	609	0.06%	0.014%
77	18.235	2697	2700	2702	rVV	613	554	0.06%	0.012%
78	18.330	2714	2718	2722	rVB	592	722	0.07%	0.016%
79	18.372	2722	2726	2732	rBV	471	573	0.06%	0.013%
80	18.560	2760	2762	2767	rBV	619	611	0.06%	0.014%
81	18.629	2772	2775	2779	rBV	624	627	0.06%	0.014%
82	18.749	2795	2798	2800	rBV	487	545	0.06%	0.012%
83	18.770	2800	2802	2806	rVB	597	628	0.06%	0.014%
84	18.796	2806	2807	2813	rBV	614	661	0.07%	0.015%
85	18.875	2819	2822	2829	rVB2	944	1047	0.11%	0.024%
86	18.928	2829	2832	2840	rBV2	509	838	0.09%	0.019%
87	19.142	2869	2873	2878	rBV2	544	859	0.09%	0.019%
88	19.184	2878	2881	2887	rVB2	711	771	0.08%	0.017%
89	19.226	2887	2889	2892	rBV2	980	784	0.08%	0.018%
90	19.368	2910	2916	2918	rVV	750	1097	0.11%	0.025%
91	19.399	2918	2922	2924	rVB	994	902	0.09%	0.020%
92	19.473	2932	2936	2941	rBV	644	949	0.10%	0.021%
93	19.614	2948	2963	2968	rVB3	805	2609	0.27%	0.059%
94	19.646	2968	2969	2972	rBV	967	710	0.07%	0.016%
95	19.698	2976	2979	2983	rBV2	1055	874	0.09%	0.020%
96	19.756	2985	2990	2993	rBV2	650	869	0.09%	0.020%
97	19.929	3021	3023	3028	rVB2	1136	985	0.10%	0.022%
98	19.960	3028	3029	3031	rBV	1370	819	0.08%	0.018%
99	19.981	3031	3033	3036	rVB2	1446	1431	0.15%	0.032%
100	20.044	3036	3045	3051	rBV4	1355	4438	0.46%	0.100%

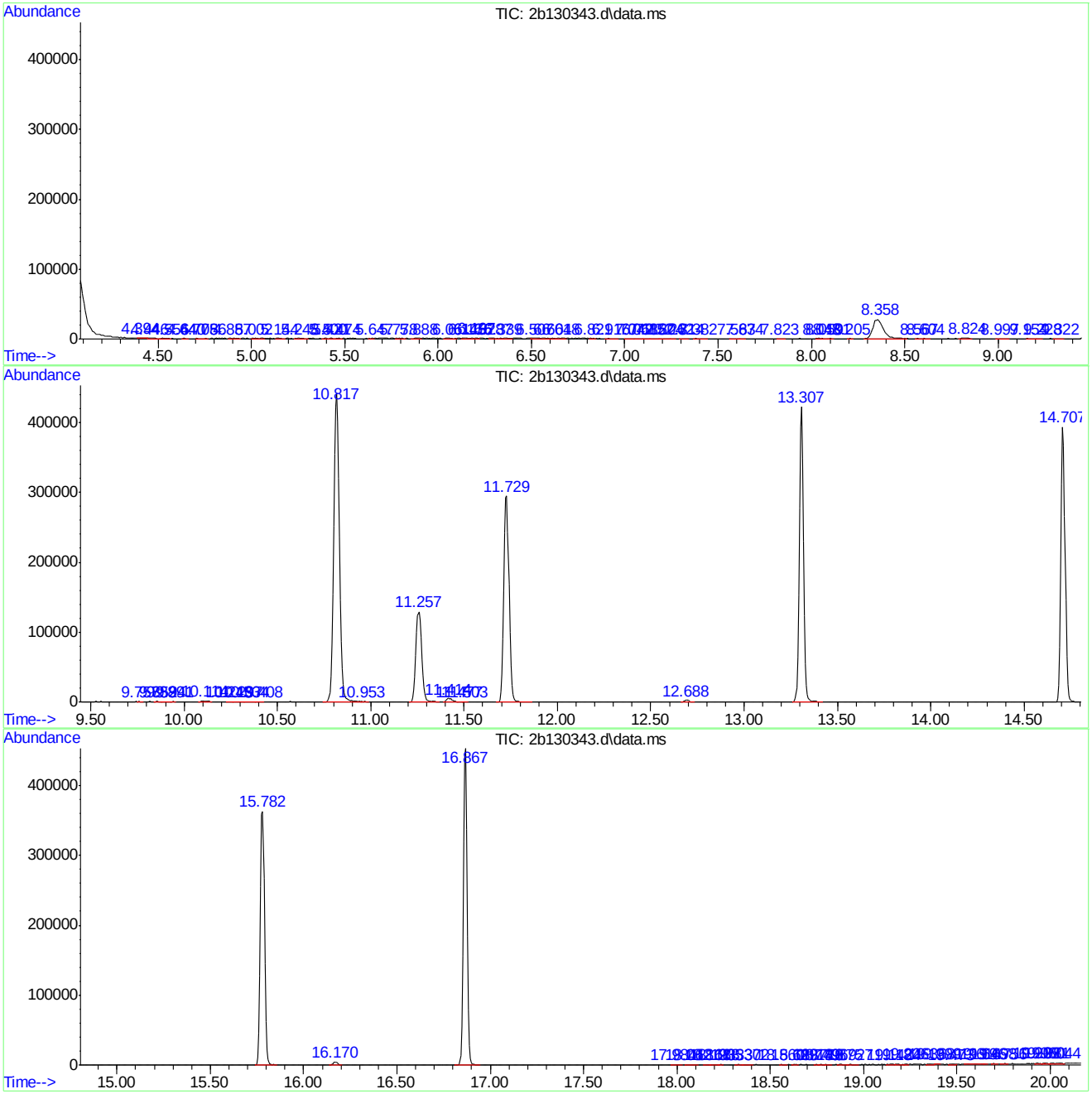
Sum of corrected areas: 4450039

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130343.d
Acq On : 23 Apr 2015 2:10 am
Operator : BridgetK
Sample : jb92664-2
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 33 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p



ACCUTEST LABORATORIES JB92664

Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130343.d
Acq On : 23 Apr 2015 2:10 am
Operator : BridgetK
Sample : jb92664-2
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 33 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	Internal Standard RT	Internal Standard Resp	Internal Standard Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130344.d
Acq On : 23 Apr 2015 2:39 am
Operator : BridgetK
Sample : jb92664-3
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 34 Sample Multiplier: 1

Quant Time: Apr 23 12:18:01 2015
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
QLast Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration

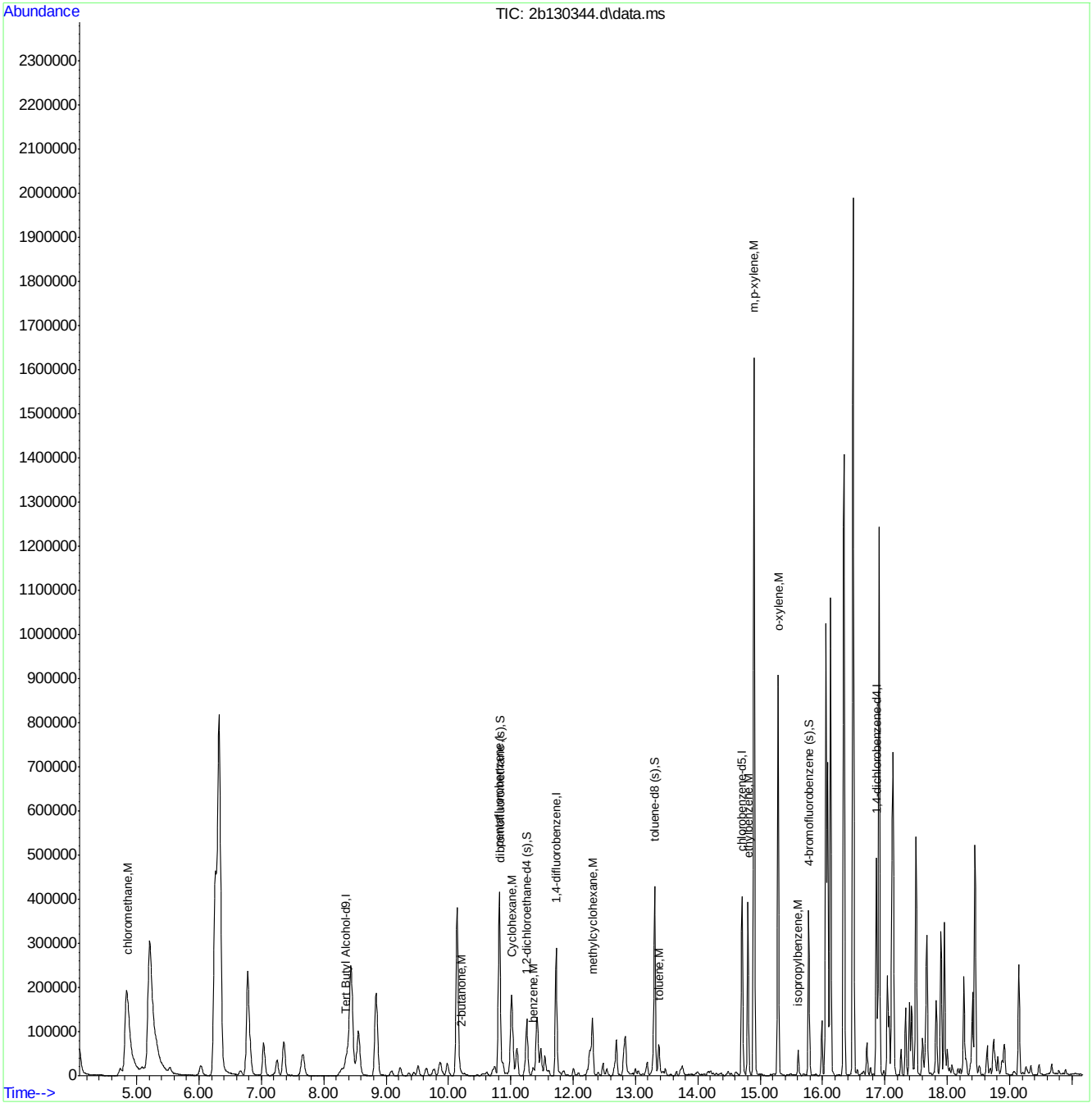
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Tert Butyl Alcohol-d9	8.352	65	58518	500.00	ug/L		0.00
5) pentafluorobenzene	10.817	168	249612	50.00	ug/L		0.00
58) 1,4-difluorobenzene	11.729	114	236679	50.00	ug/L		0.00
90) chlorobenzene-d5	14.707	117	202138	50.00	ug/L		0.00
106) 1,4-dichlorobenzene-d4	16.867	152	125160	50.00	ug/L		0.00
System Monitoring Compounds							
51) dibromofluoromethane (s)	10.822	113	82873	49.73	ug/L		0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 99.46%				
52) 1,2-dichloroethane-d4 (s)	11.257	65	102897	52.20	ug/L		0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 104.40%				
82) toluene-d8 (s)	13.307	98	255847	51.33	ug/L		0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 102.66%				
108) 4-bromofluorobenzene (s)	15.777	95	96471	47.81	ug/L		0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 95.62%				
Target Compounds							Qvalue
12) chloromethane	4.855	50	8786	4.21	ug/L		64
37) 2-butanone	10.203	72	1623	11.12	ug/L	#	65
56) Cyclohexane	11.021	84	60110	31.79	ug/L	#	59
66) benzene	11.362	78	6387	1.34	ug/L		82
79) methylcyclohexane	12.311	83	52043	25.00	ug/L		99
84) toluene	13.375	92	27338	9.01	ug/L		98
100) ethylbenzene	14.801	91	240946	41.02	ug/L		99
101) m,p-xylene	14.901	106	420910	186.93	ug/L		94
102) o-xylene	15.289	106	220629	92.09	ug/L		99
107) isopropylbenzene	15.609	105	32601	5.03	ug/L		95

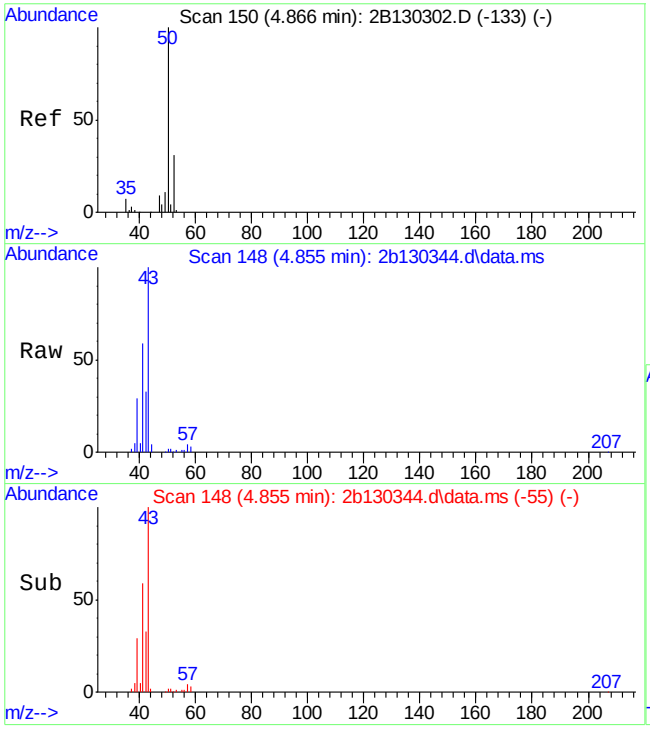
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130344.d
Acq On : 23 Apr 2015 2:39 am
Operator : BridgetK
Sample : jb92664-3
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 34 Sample Multiplier: 1

Quant Time: Apr 23 12:18:01 2015
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
QLast Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration

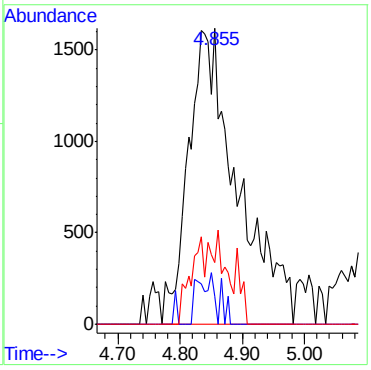


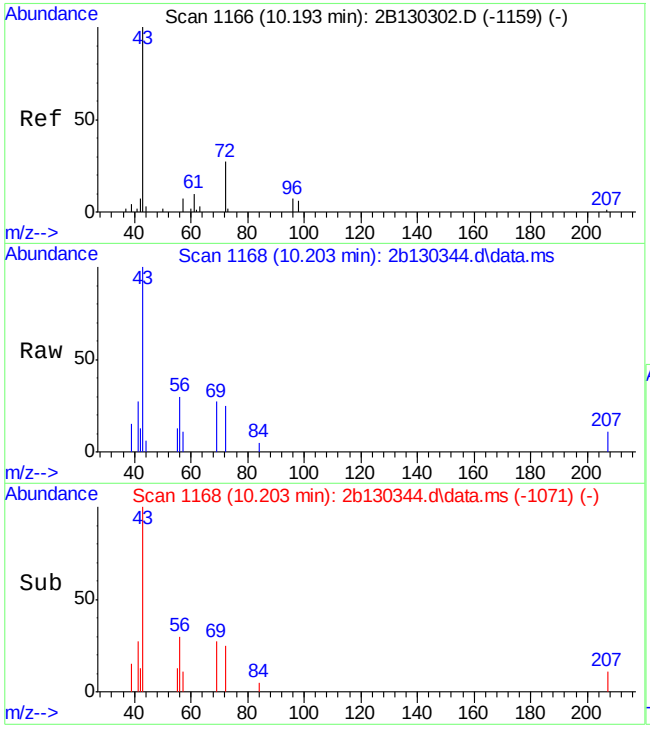


#12
chloromethane
Concen: 4.21 ug/L
RT: 4.855 min Scan# 148
Delta R.T. -0.010 min
Lab File: 2b130344.d
Acq: 23 Apr 2015 2:39 am

Tgt Ion: 50 Resp: 8786

Ion	Ratio	Lower	Upper
50	100		
52	9.6	0.7	60.7
49	20.7	0.0	40.6

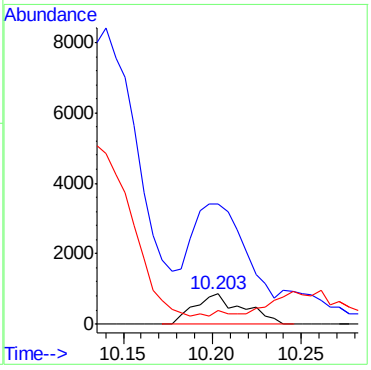


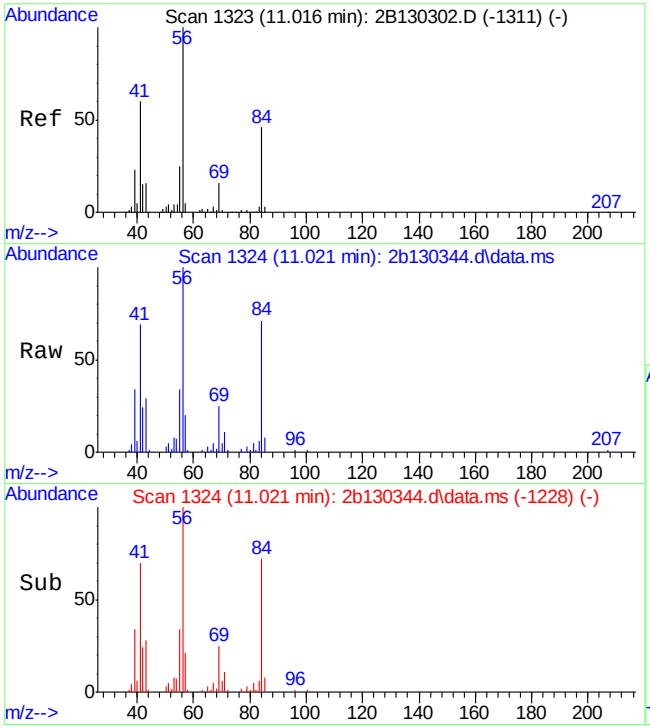


#37
2-butanone
Concen: 11.12 ug/L
RT: 10.203 min Scan# 1168
Delta R.T. 0.011 min
Lab File: 2b130344.d
Acq: 23 Apr 2015 2:39 am

Tgt Ion: 72 Resp: 1623

Ion	Ratio	Lower	Upper
72	100		
43	293.9	338.3	398.3#
57	0.0	0.7	60.7#

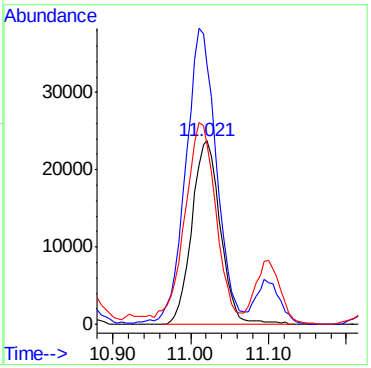


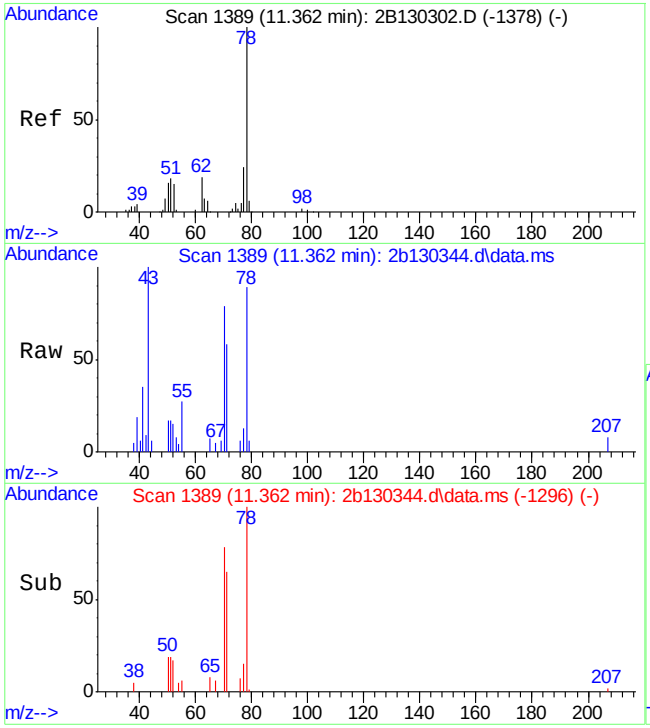


#56
Cyclohexane
Concen: 31.79 ug/L
RT: 11.021 min Scan# 1324
Delta R.T. 0.005 min
Lab File: 2b130344.d
Acq: 23 Apr 2015 2:39 am

Tgt Ion: 84 Resp: 60110

Ion	Ratio	Lower	Upper
84	100		
56	141.3	188.5	248.5#
41	98.1	100.4	160.4#

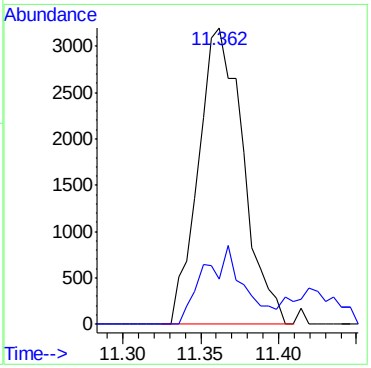


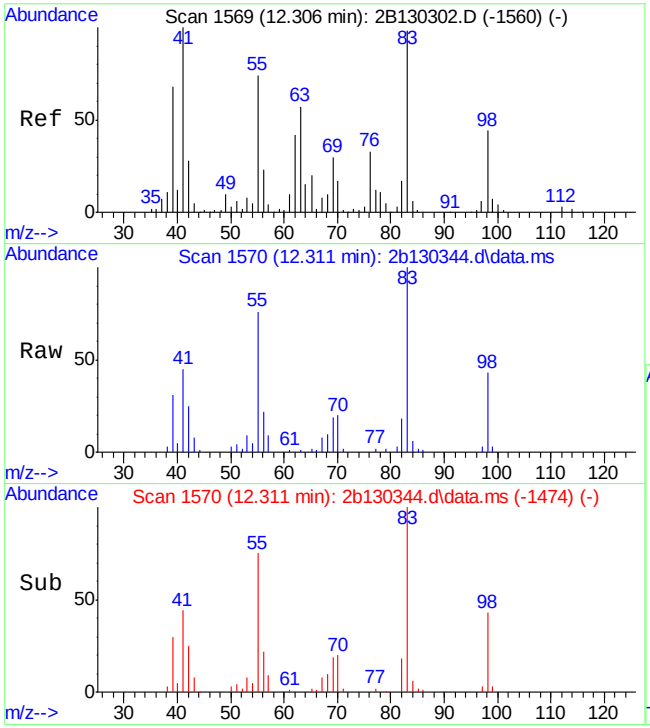


#66
benzene
Concen: 1.34 ug/L
RT: 11.362 min Scan# 1389
Delta R.T. 0.000 min
Lab File: 2b130344.d
Acq: 23 Apr 2015 2:39 am

Tgt Ion: 78 Resp: 6387

Ion	Ratio	Lower	Upper
78	100		
77	15.1	0.0	53.8

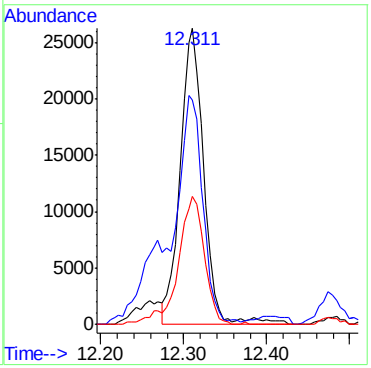


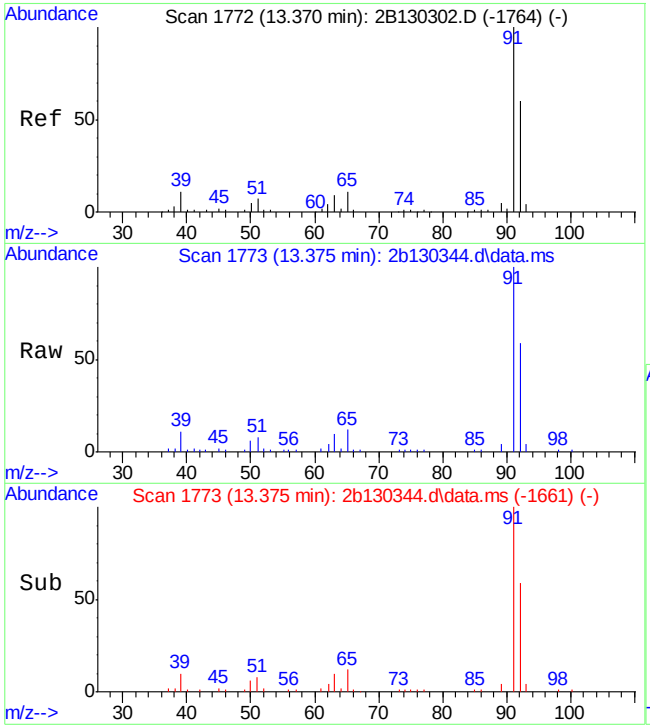


#79
methylcyclohexane
Concen: 25.00 ug/L
RT: 12.311 min Scan# 1570
Delta R.T. 0.005 min
Lab File: 2b130344.d
Acq: 23 Apr 2015 2:39 am

Tgt Ion: 83 Resp: 52043

Ion	Ratio	Lower	Upper
83	100		
55	76.0	45.8	105.8
98	43.2	14.7	74.7

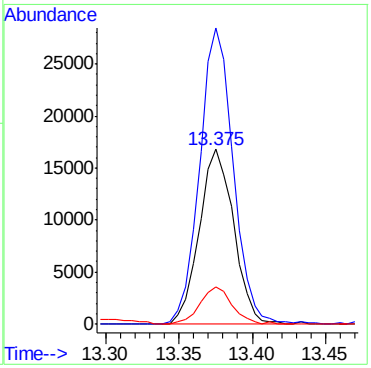


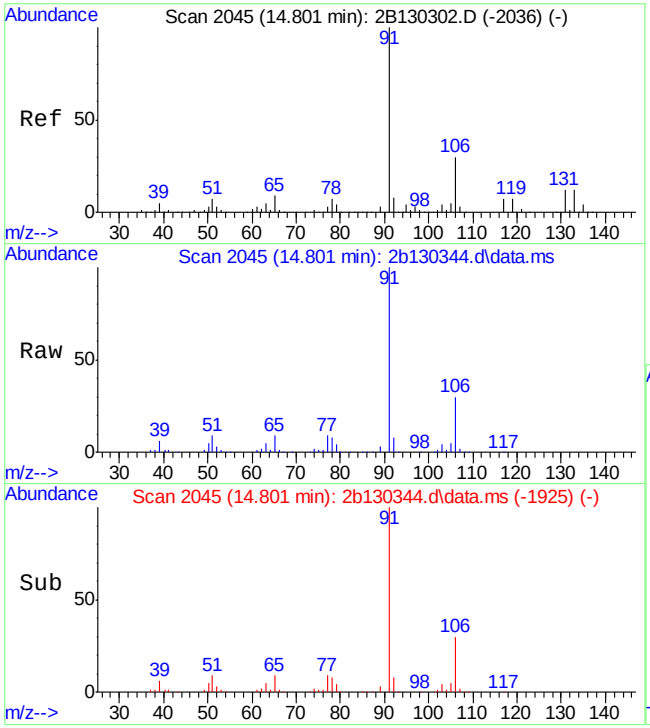


#84
toluene
Concen: 9.01 ug/L
RT: 13.375 min Scan# 1773
Delta R.T. 0.005 min
Lab File: 2b130344.d
Acq: 23 Apr 2015 2:39 am

Tgt Ion: 92 Resp: 27338

Ion	Ratio	Lower	Upper
92	100		
91	169.6	137.0	197.0
65	21.0	0.0	49.0

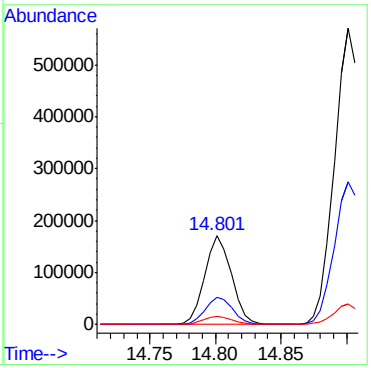


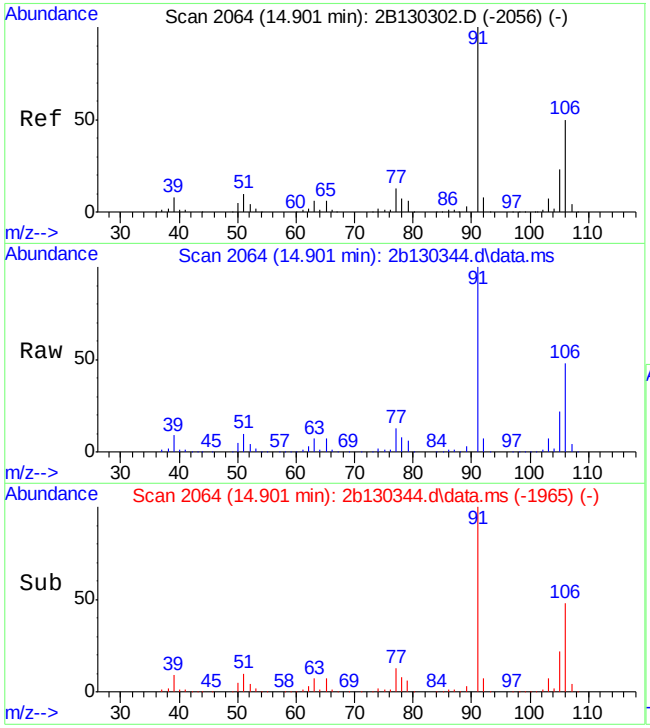


#100
ethylbenzene
Concen: 41.02 ug/L
RT: 14.801 min Scan# 2045
Delta R.T. 0.000 min
Lab File: 2b130344.d
Acq: 23 Apr 2015 2:39 am

Tgt Ion: 91 Resp: 240946

Ion	Ratio	Lower	Upper
91	100		
106	30.0	0.3	60.3
65	9.0	0.0	38.6

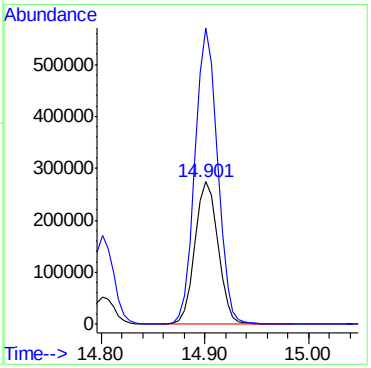


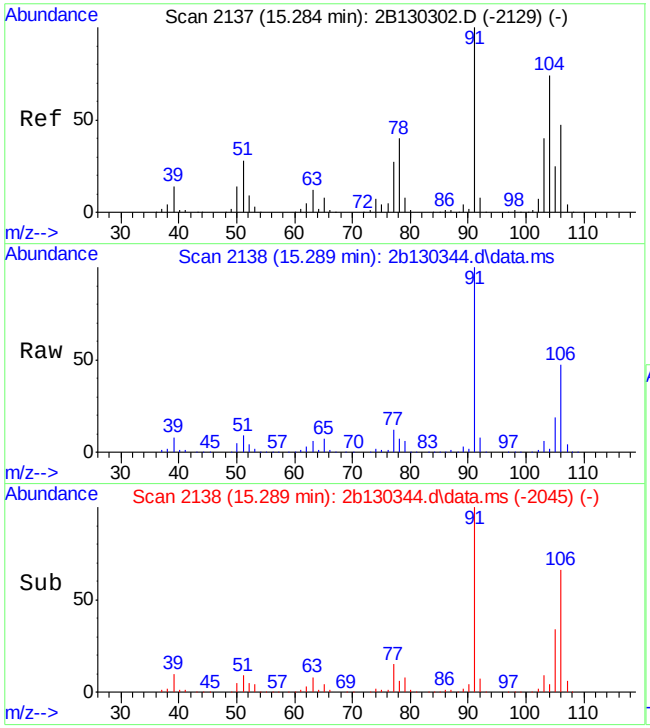


#101
m,p-xylene
Concen: 186.93 ug/L
RT: 14.901 min Scan# 2064
Delta R.T. 0.000 min
Lab File: 2b130344.d
Acq: 23 Apr 2015 2:39 am

Tgt Ion:106 Resp: 420910

Ion	Ratio	Lower	Upper
106	100		
91	207.7	169.4	229.4

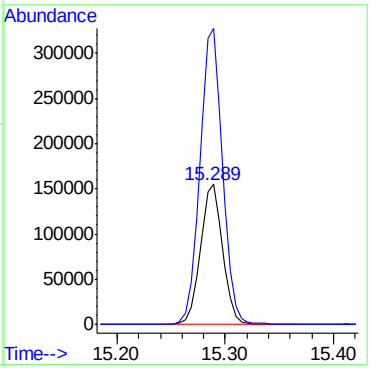


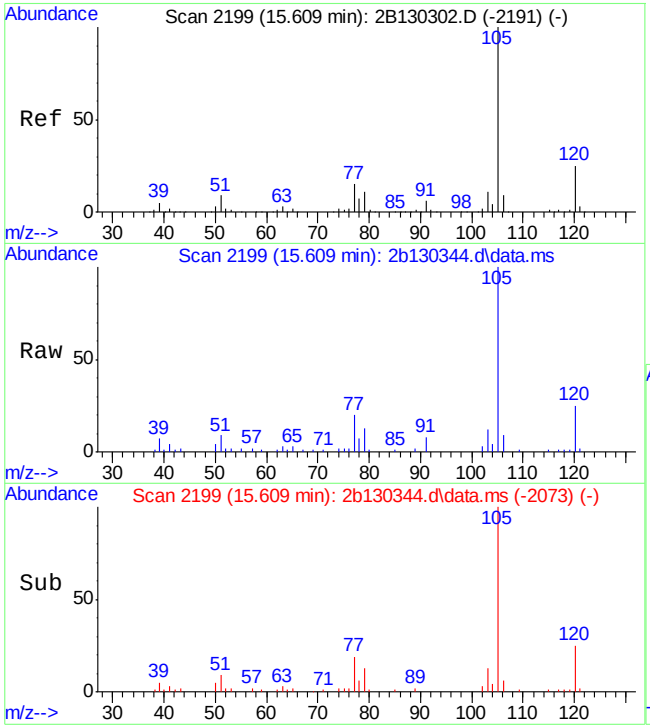


#102
o-xylene
Concen: 92.09 ug/L
RT: 15.289 min Scan# 2138
Delta R.T. 0.005 min
Lab File: 2b130344.d
Acq: 23 Apr 2015 2:39 am

Tgt Ion:106 Resp: 220629

Ion	Ratio	Lower	Upper
106	100		
91	211.7	183.1	243.1

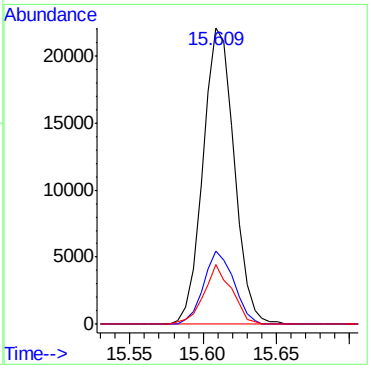




#107
isopropylbenzene
Concen: 5.03 ug/L
RT: 15.609 min Scan# 2199
Delta R.T. 0.000 min
Lab File: 2b130344.d
Acq: 23 Apr 2015 2:39 am

Tgt Ion:105 Resp: 32601

Ion	Ratio	Lower	Upper
105	100		
120	24.8	0.0	55.5
77	20.2	0.0	45.0



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130344.d
Acq On : 23 Apr 2015 2:39 am
Operator : BridgetK
Sample : jb92664-3
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 34 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

Signal : TIC: 2b130344.d\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.740	113	126	132	rBV3	15510	50118	1.64%	0.115%
2	4.840	132	145	186	rVV2	192144	1190554	39.04%	2.724%
3	5.086	186	192	199	rVV10	18512	67431	2.21%	0.154%
4	5.212	199	216	271	rVV2	303777	2061674	67.60%	4.718%
5	5.527	271	276	315	rVV4	17101	76301	2.50%	0.175%
6	6.030	355	372	392	rVB4	21543	80456	2.64%	0.184%
7	6.266	398	417	420	rBV3	464646	1396473	45.79%	3.195%
8	6.323	420	428	483	rVV	818017	3049691	100.00%	6.978%
9	6.664	483	493	503	rVV3	9686	32112	1.05%	0.073%
10	6.780	503	515	550	rVV2	235923	816011	26.76%	1.867%
11	7.037	550	564	585	rVB2	75207	202043	6.63%	0.462%
12	7.251	585	605	616	rBV3	35689	112179	3.68%	0.257%
13	7.362	616	626	645	rVB	76598	221100	7.25%	0.506%
14	7.666	665	684	703	rBV3	48652	180830	5.93%	0.414%
15	8.436	784	831	844	rBV4	248922	1208276	39.62%	2.765%
16	8.557	844	854	880	rVB4	100529	369416	12.11%	0.845%
17	8.840	893	908	934	rBV2	186745	599478	19.66%	1.372%
18	9.087	946	955	966	rVB4	10906	29360	0.96%	0.067%
19	9.228	970	982	997	rBV2	18395	46647	1.53%	0.107%
20	9.511	1029	1036	1052	rVB	22975	55855	1.83%	0.128%
21	9.642	1052	1061	1073	rBV4	16686	44037	1.44%	0.101%
22	9.768	1073	1085	1093	rBV3	14622	43514	1.43%	0.100%
23	9.862	1093	1103	1117	rBV5	28881	90054	2.95%	0.206%
24	9.978	1117	1125	1140	rVB4	28548	80553	2.64%	0.184%
25	10.140	1140	1156	1175	rBV	381194	1011686	33.17%	2.315%
26	10.617	1239	1247	1255	rVB5	7434	20974	0.69%	0.048%
27	10.738	1255	1270	1276	rBV7	21044	71066	2.33%	0.163%
28	10.817	1276	1285	1303	rVV2	415783	974669	31.96%	2.230%
29	11.016	1310	1323	1332	rVV3	182215	511821	16.78%	1.171%
30	11.100	1332	1339	1350	rVB2	62738	144017	4.72%	0.330%
31	11.257	1354	1369	1381	rBV	128144	308856	10.13%	0.707%
32	11.357	1381	1388	1393	rBV4	18104	38470	1.26%	0.088%
33	11.420	1393	1400	1407	rVV3	132395	330335	10.83%	0.756%
34	11.483	1407	1412	1419	rVV2	61068	135972	4.46%	0.311%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130344.d
Acq On : 23 Apr 2015 2:39 am
Operator : BridgetK
Sample : jb92664-3
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 34 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

35	11.546	1419	1424	1450	rVB3	46021	130443	4.28%	0.298%
36	11.729	1450	1459	1475	rBV	290626	570692	18.71%	1.306%
37	11.839	1475	1480	1489	rVB4	9904	24178	0.79%	0.055%
38	12.002	1503	1511	1519	rBV2	16614	34325	1.13%	0.079%
39	12.269	1547	1562	1564	rVV5	56101	129928	4.26%	0.297%
40	12.306	1564	1569	1580	rVB2	129308	277152	9.09%	0.634%
41	12.479	1594	1602	1609	rBV3	28232	56603	1.86%	0.130%
42	12.542	1609	1614	1623	rVB4	16066	30685	1.01%	0.070%
43	12.688	1628	1642	1658	rVB4	81534	188218	6.17%	0.431%
44	12.835	1658	1670	1687	rBV3	89176	266363	8.73%	0.610%
45	12.998	1696	1701	1706	rVV2	14377	24344	0.80%	0.056%
46	13.187	1727	1737	1744	rVB5	28775	62168	2.04%	0.142%
47	13.307	1744	1760	1767	rBV	428417	746248	24.47%	1.708%
48	13.375	1767	1773	1783	rVV	68820	130282	4.27%	0.298%
49	13.475	1789	1792	1803	rVB3	16840	28648	0.94%	0.066%
50	13.753	1832	1845	1857	rBV4	22280	67796	2.22%	0.155%
51	13.999	1880	1892	1901	rBV5	8170	27304	0.90%	0.062%
52	14.487	1972	1985	1990	rBV5	9917	23017	0.75%	0.053%
53	14.602	2002	2007	2019	rBV8	8528	21770	0.71%	0.050%
54	14.707	2019	2027	2039	rBV	406344	633463	20.77%	1.450%
55	14.801	2039	2045	2056	rVB	390953	565482	18.54%	1.294%
56	14.901	2056	2064	2077	rBV	1625798	2454692	80.49%	5.617%
57	15.289	2128	2138	2156	rVB	906938	1327983	43.54%	3.039%
58	15.609	2187	2199	2209	rVB	57847	89754	2.94%	0.205%
59	15.777	2224	2231	2248	rVB	372948	546317	17.91%	1.250%
60	15.986	2261	2271	2277	rBV	124679	175427	5.75%	0.401%
61	16.055	2277	2284	2287	rVV	1021604	1486342	48.74%	3.401%
62	16.081	2287	2289	2293	rVV	708681	869903	28.52%	1.991%
63	16.128	2293	2298	2315	rVB	1082815	1508231	49.46%	3.451%
64	16.343	2331	2339	2355	rVB	1407280	1954609	64.09%	4.473%
65	16.490	2355	2367	2376	rBV	1989360	2735501	89.70%	6.260%
66	16.558	2376	2380	2385	rVB	13518	21338	0.70%	0.049%
67	16.710	2404	2409	2415	rBV	73800	101355	3.32%	0.232%
68	16.768	2415	2420	2425	rVB	18748	24666	0.81%	0.056%
69	16.867	2432	2439	2442	rBV	492426	721339	23.65%	1.651%
70	16.904	2442	2446	2456	rVB	1241642	1772911	58.13%	4.057%
71	17.040	2465	2472	2476	rBV	225849	352986	11.57%	0.808%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130344.d
Acq On : 23 Apr 2015 2:39 am
Operator : BridgetK
Sample : jb92664-3
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 34 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

72	17.066	2476	2477	2481	rVV	131915	132653	4.35%	0.304%
73	17.129	2481	2489	2501	rVB4	733302	1499119	49.16%	3.430%
74	17.260	2501	2514	2521	rVB2	60848	88331	2.90%	0.202%
75	17.334	2521	2528	2534	rBV	152847	229799	7.54%	0.526%
76	17.397	2534	2540	2543	rVV	163336	235998	7.74%	0.540%
77	17.428	2543	2546	2552	rVV	155112	207255	6.80%	0.474%
78	17.496	2552	2559	2573	rVB	541208	795782	26.09%	1.821%
79	17.601	2573	2579	2584	rBV	84091	133278	4.37%	0.305%
80	17.669	2584	2592	2601	rVV2	316053	559197	18.34%	1.280%
81	17.821	2610	2621	2629	rBV	168622	260269	8.53%	0.596%
82	17.900	2629	2636	2641	rVV	324289	453450	14.87%	1.038%
83	17.953	2641	2646	2652	rVV	344599	513213	16.83%	1.174%
84	18.000	2652	2655	2660	rVV	57203	80965	2.65%	0.185%
85	18.078	2666	2670	2682	rVB4	23501	44771	1.47%	0.102%
86	18.167	2682	2687	2691	rBV3	15928	24039	0.79%	0.055%
87	18.267	2698	2706	2719	rVB	223348	396832	13.01%	0.908%
88	18.403	2719	2732	2735	rBV	187374	310529	10.18%	0.711%
89	18.445	2735	2740	2748	rVV	519997	783979	25.71%	1.794%
90	18.514	2748	2753	2760	rVB3	22450	39369	1.29%	0.090%
91	18.639	2769	2777	2782	rBV3	68462	117757	3.86%	0.269%
92	18.744	2790	2797	2806	rVV3	80924	192295	6.31%	0.440%
93	18.812	2806	2810	2816	rVV	41032	59535	1.95%	0.136%
94	18.875	2816	2822	2825	rVV2	32970	56234	1.84%	0.129%
95	18.917	2825	2830	2837	rVV	68778	122077	4.00%	0.279%
96	19.148	2867	2874	2883	rBV	249820	366004	12.00%	0.838%
97	19.258	2890	2895	2906	rVV3	18544	41631	1.37%	0.095%
98	19.342	2906	2911	2928	rVB2	21771	41881	1.37%	0.096%
99	19.468	2928	2935	2948	rBV2	23537	41904	1.37%	0.096%
100	19.677	2968	2975	2985	rVV	22933	38744	1.27%	0.089%

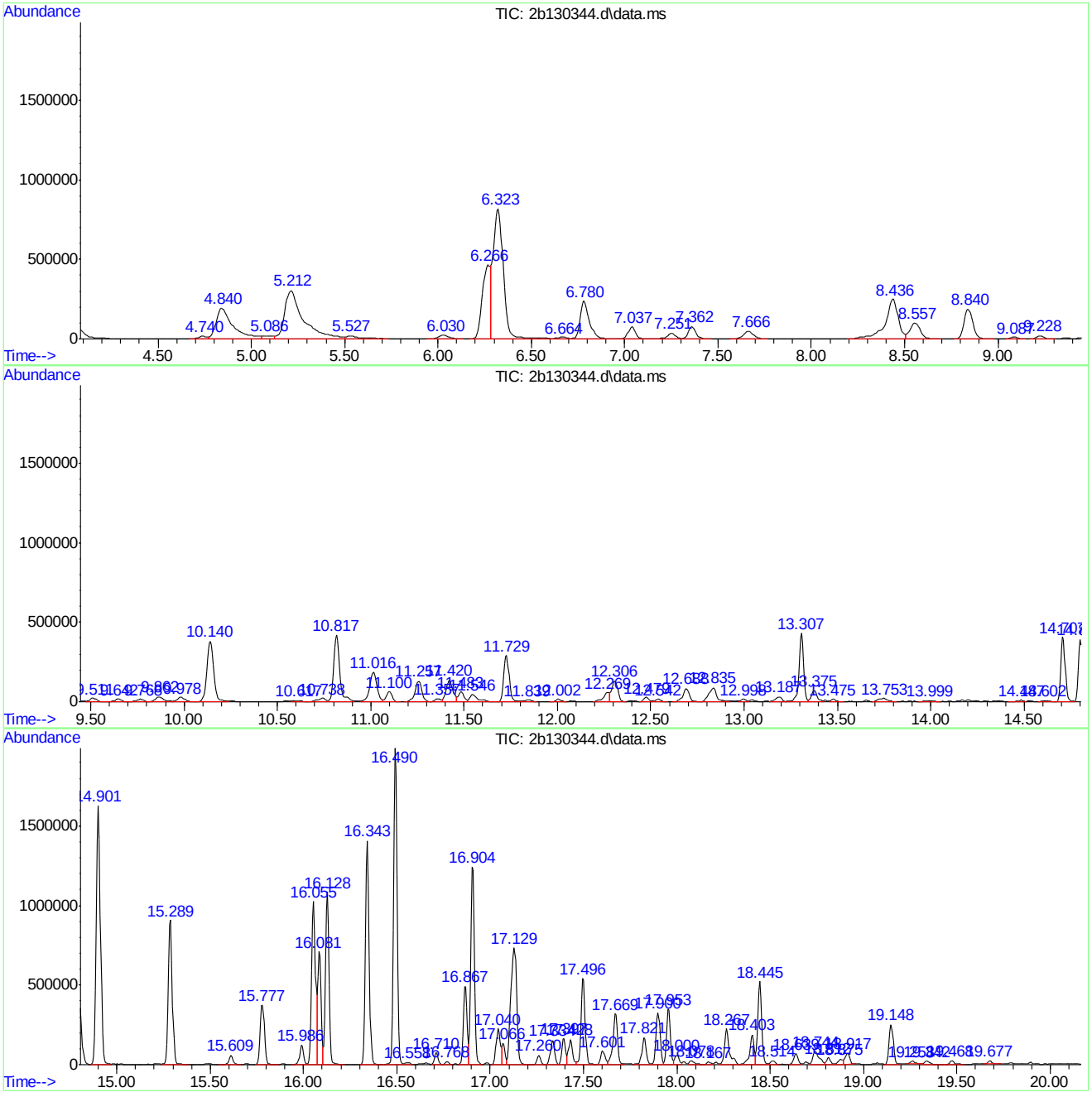
Sum of corrected areas: 43701382

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130344.d
Acq On : 23 Apr 2015 2:39 am
Operator : BridgetK
Sample : jb92664-3
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 34 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130344.d
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ALS Vial : 34 Sample Multiplier: 1

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Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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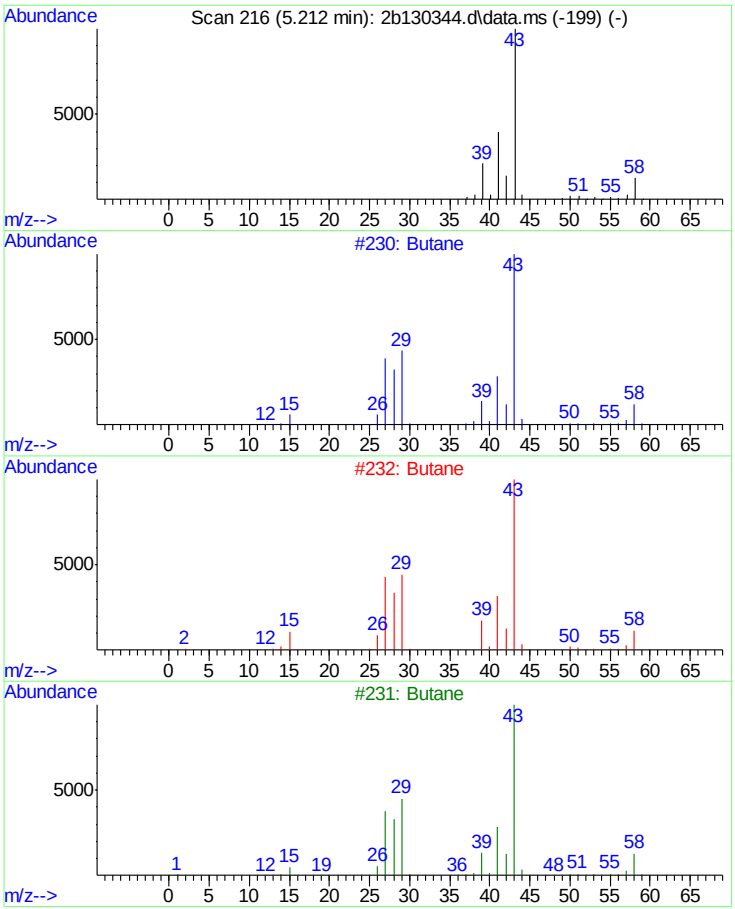
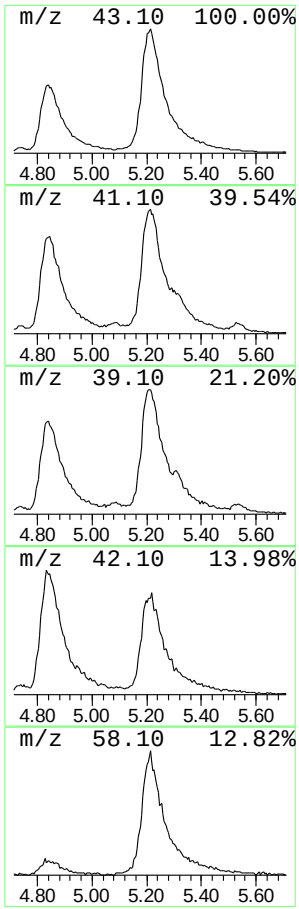
Peak Number 1 Butane Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.212	105.76 ug/L	2061670	pentafluorobenzene	10.817

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	72
2	Butane	58	C4H10	000106-97-8	64
3	Butane	58	C4H10	000106-97-8	59
4	Propane, 2-nitro-	89	C3H7NO2	000079-46-9	9
5	Isopropylsulfonyl chloride	142	C3H7ClO2S	010147-37-2	9





Library Search Compound Report

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Data File : 2b130344.d
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Operator : BridgetK
Sample : jb92664-3
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 34 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

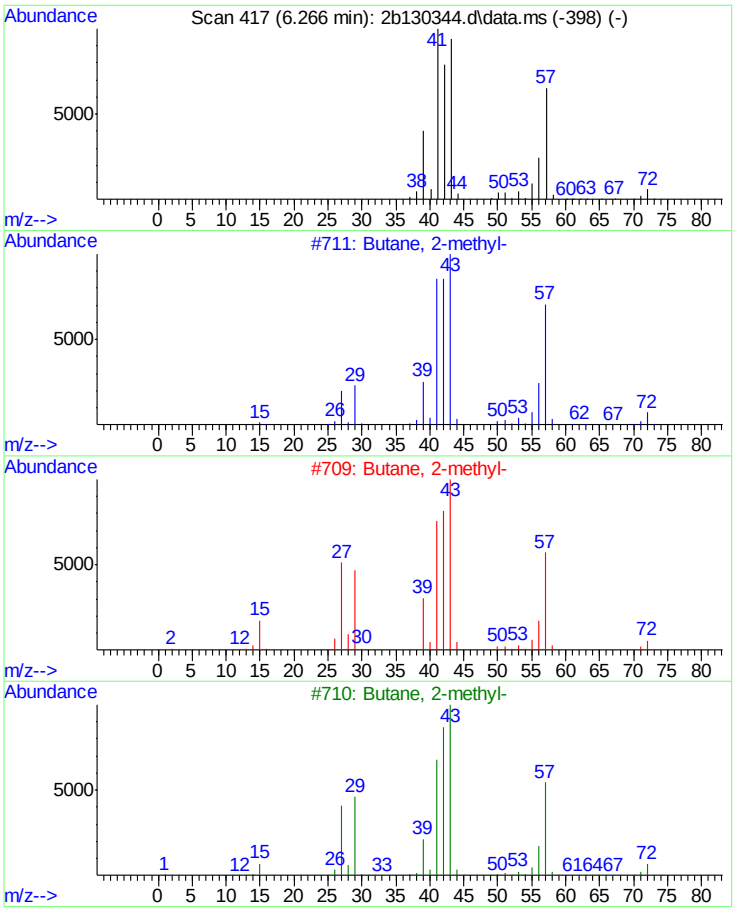
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

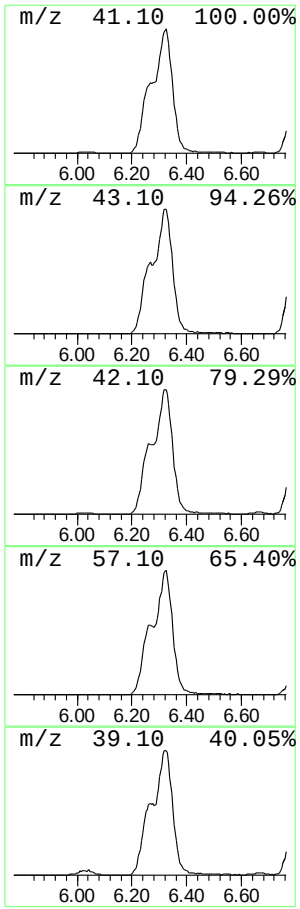
****

Peak Number 2 Butane, 2-methyl- Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.266	71.64 ug/L	1396470	pentafluorobenzene	10.817

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	76
2	Butane, 2-methyl-	72	C5H12	000078-78-4	58
3	Butane, 2-methyl-	72	C5H12	000078-78-4	52
4	3-Buten-1-ol	72	C4H8O	000627-27-0	38
5	1-Propene, 2-methyl-	56	C4H8	000115-11-7	27





Library Search Compound Report

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Data File : 2b130344.d
Acq On : 23 Apr 2015 2:39 am
Operator : BridgetK
Sample : jb92664-3
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 34 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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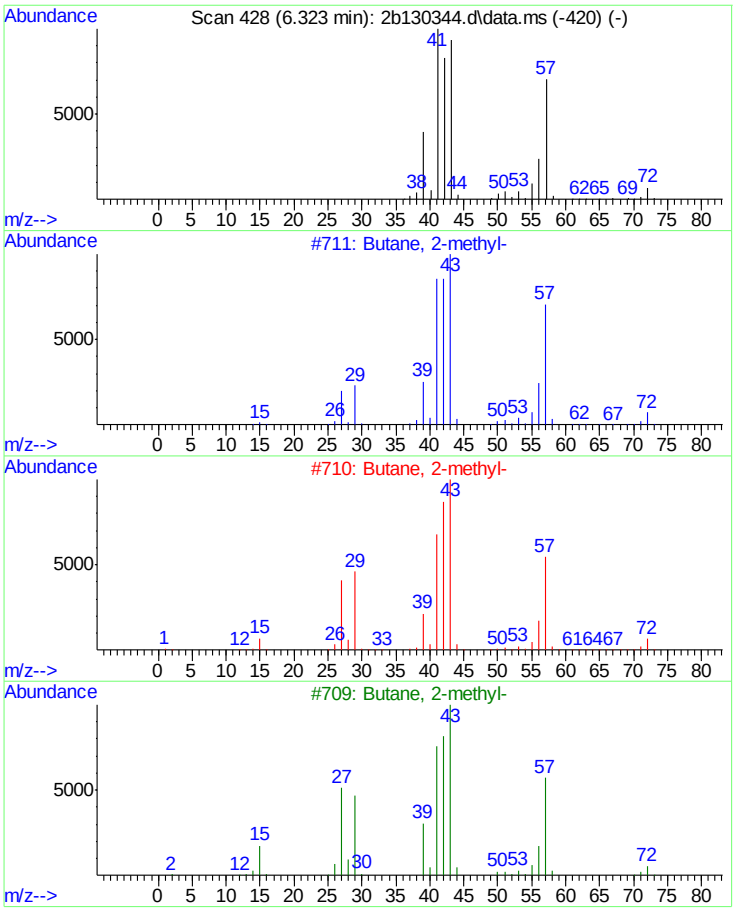
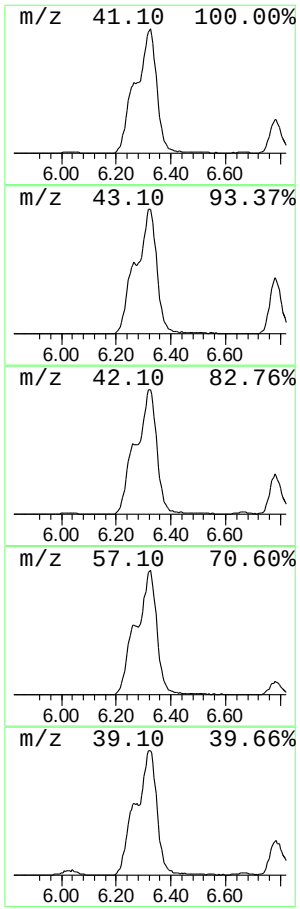
Peak Number 3 Butane, 2-methyl- Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.323	156.45 ug/L	3049690	pentafluorobenzene	10.817

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	64
2	Butane, 2-methyl-	72	C5H12	000078-78-4	58
3	Butane, 2-methyl-	72	C5H12	000078-78-4	42
4	1-Butene	56	C4H8	000106-98-9	27
5	2(3H)-Furanone, dihydro-4-methyl-	100	C5H8O2	001679-49-8	23





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130344.d
Acq On : 23 Apr 2015 2:39 am
Operator : BridgetK
Sample : jb92664-3
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 34 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

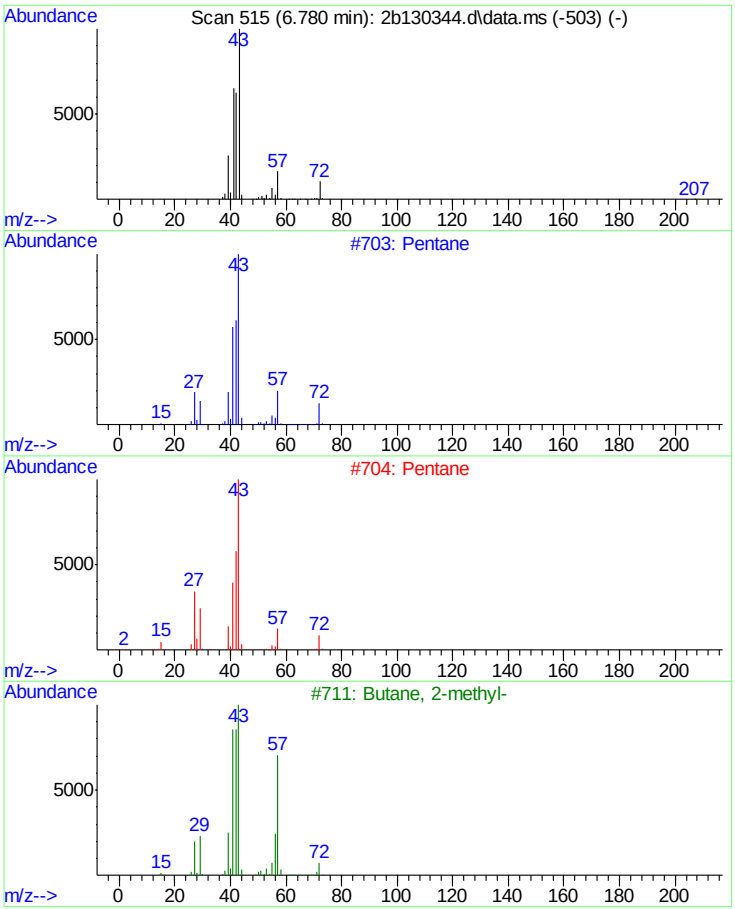
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

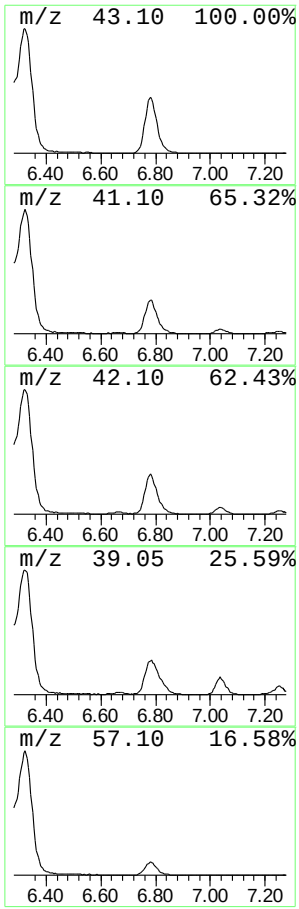
****

Peak Number 4 Pentane Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.780	41.86 ug/L	816011	pentafluorobenzene	10.817

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	86
2	Pentane	72	C5H12	000109-66-0	80
3	Butane, 2-methyl-	72	C5H12	000078-78-4	72
4	Pentane	72	C5H12	000109-66-0	59
5	Pentane	72	C5H12	000109-66-0	53





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130344.d
Acq On : 23 Apr 2015 2:39 am
Operator : BridgetK
Sample : jb92664-3
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 34 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

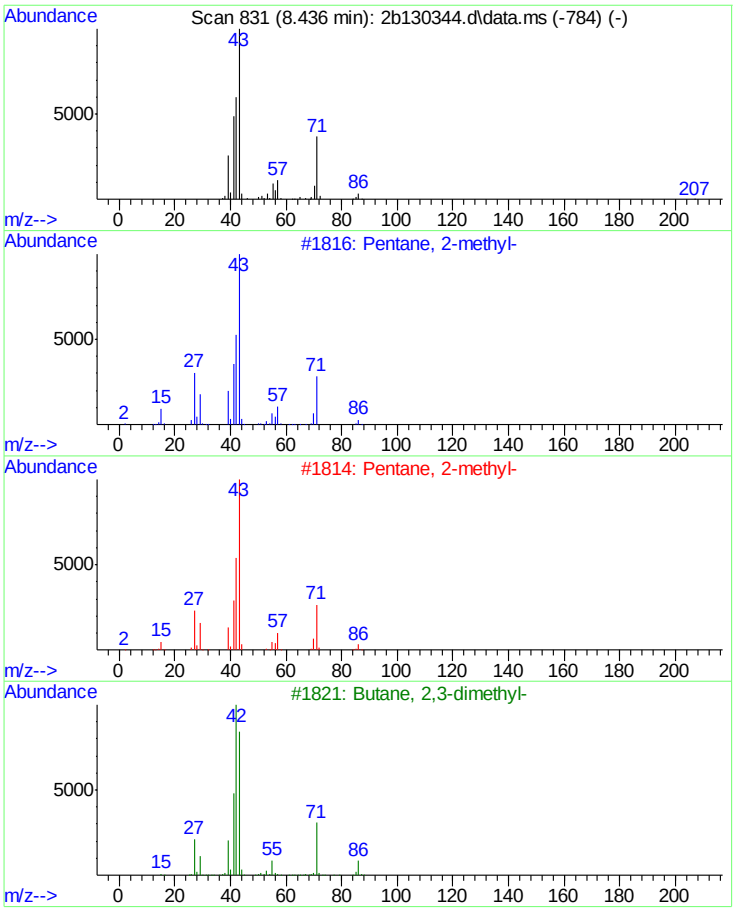
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

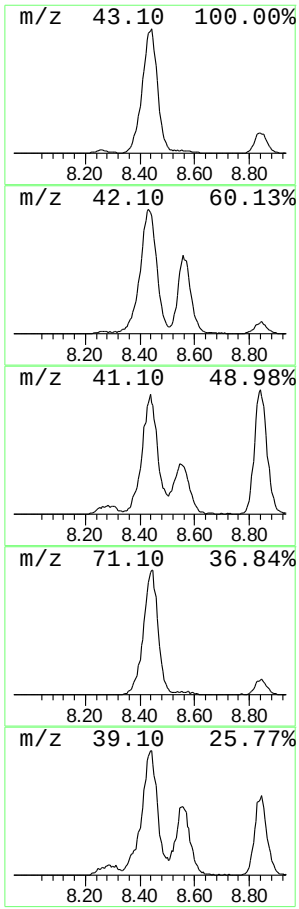
****

Peak Number 5 Pentane, 2-methyl- Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.436	61.98 ug/L	1208280	pentafluorobenzene	10.817

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2-methyl-	86	C6H14	000107-83-5	91
2	Pentane, 2-methyl-	86	C6H14	000107-83-5	90
3	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	64
4	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	59
5	Pentane	72	C5H12	000109-66-0	50





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130344.d
Acq On : 23 Apr 2015 2:39 am
Operator : BridgetK
Sample : jb92664-3
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 34 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

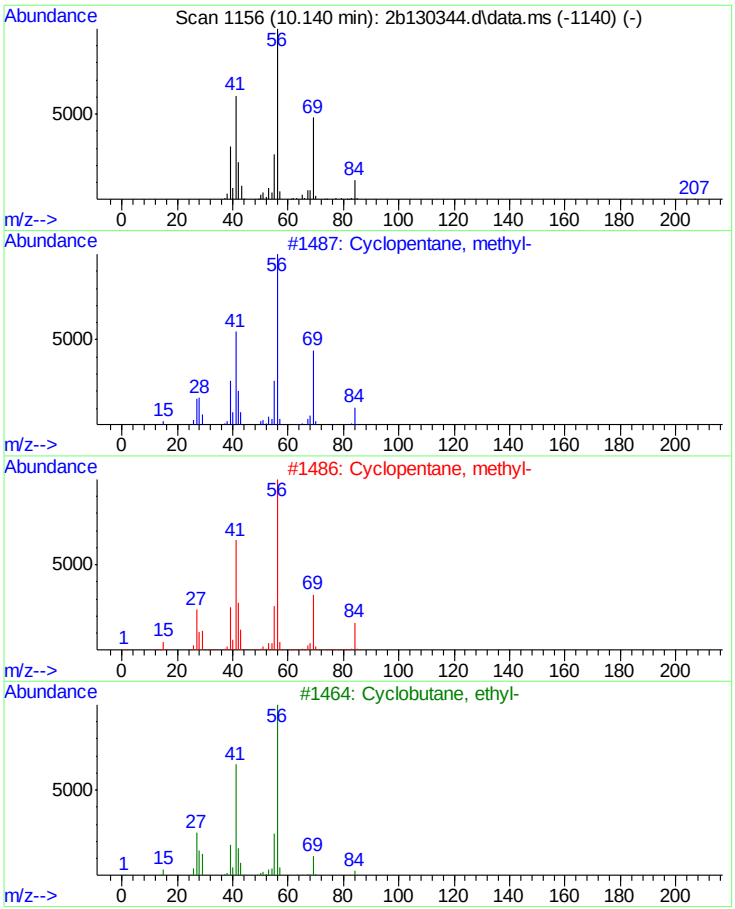
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

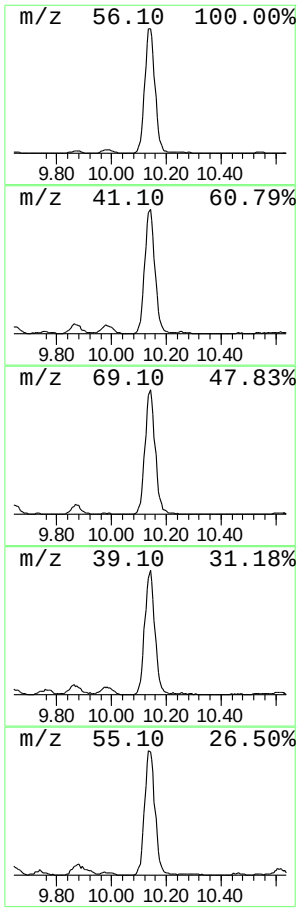
****

Peak Number 6 Cyclopentane, methyl- Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.140	51.90 ug/L	1011690	pentafluorobenzene	10.817

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	94
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	86
3	Cyclobutane, ethyl-	84	C6H12	004806-61-5	72
4	1H-Tetrazole, 5-methyl-	84	C2H4N4	004076-36-2	72
5	Cyclopentane, 1,1-dimethyl-	98	C7H14	001638-26-2	56





Library Search Compound Report

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Data File : 2b130344.d
Acq On : 23 Apr 2015 2:39 am
Operator : BridgetK
Sample : jb92664-3
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 34 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

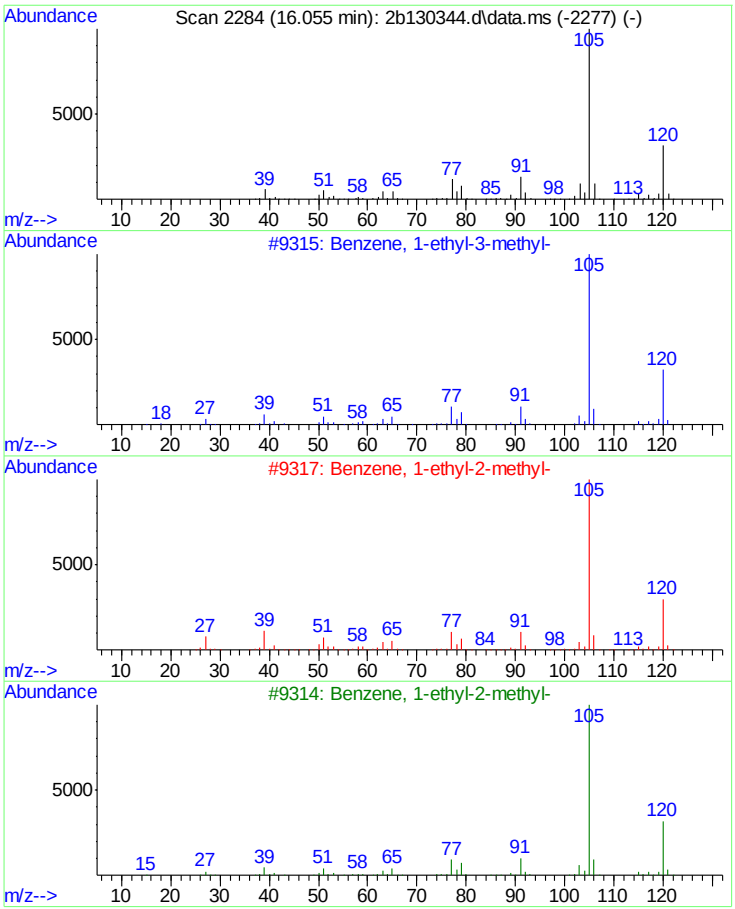
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

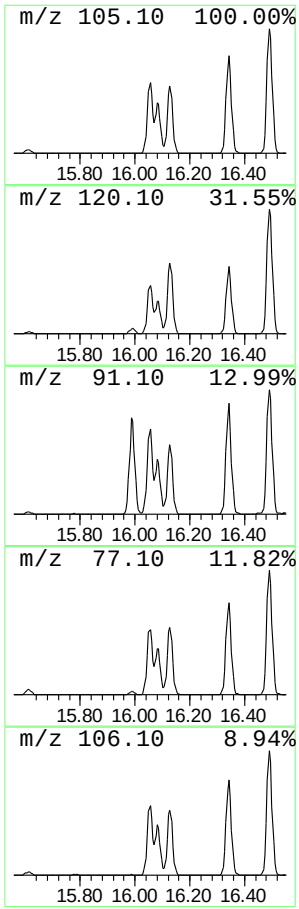
****

Peak Number 7 Benzene, 1-ethyl-3-methyl- Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.055	103.03 ug/L	1486340	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
3	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
4	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	94
5	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	94





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Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 34 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

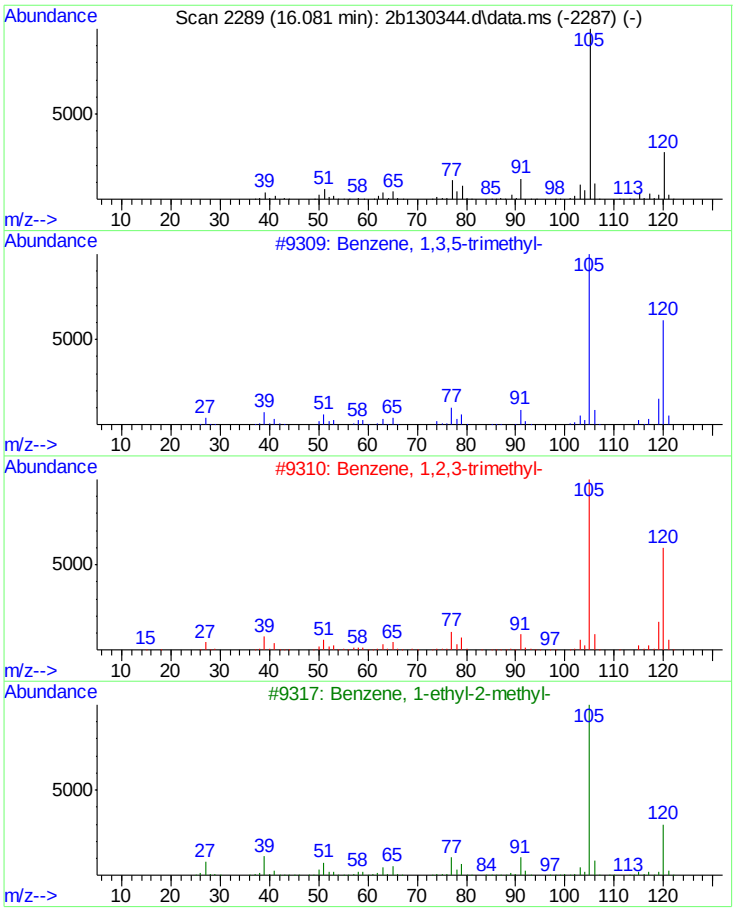
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

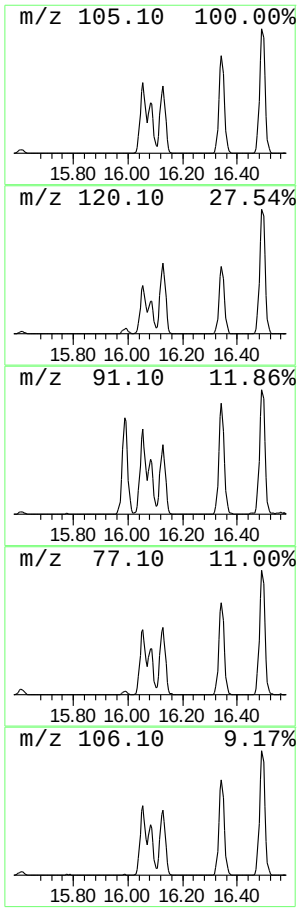
****

Peak Number 8 Benzene, 1,3,5-trimethyl- Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.081	60.30 ug/L	869903	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
2	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	91
3	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	91
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
5	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91





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Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

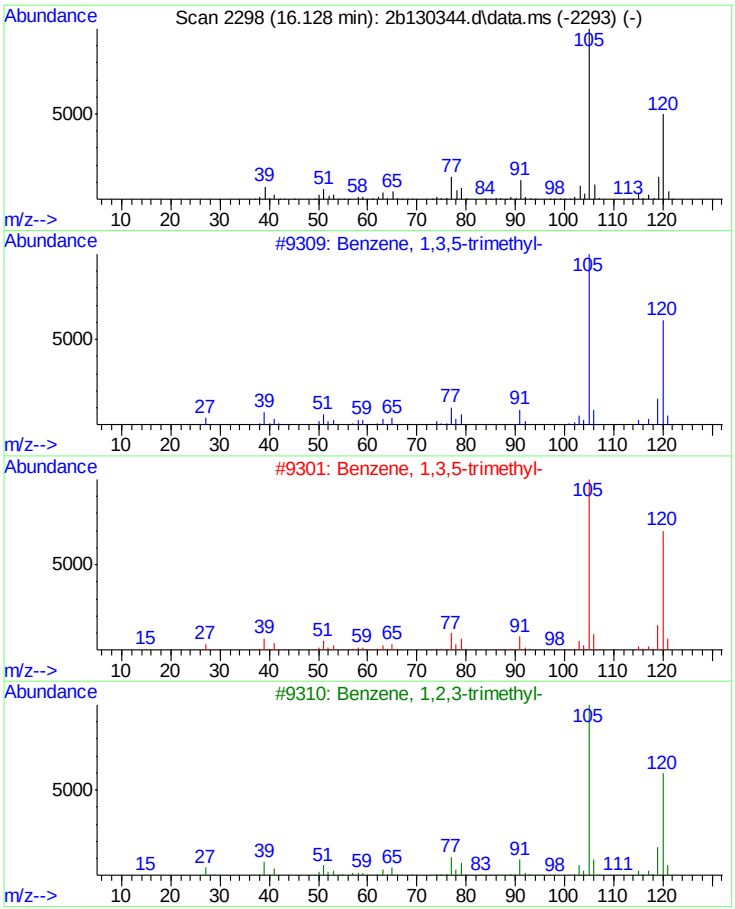
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

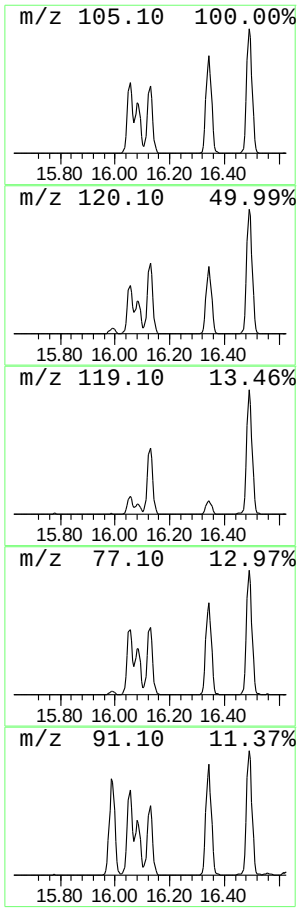
****

Peak Number 9 Benzene, 1,3,5-trimethyl- Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.128	104.54 ug/L	1508230	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	97
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	97
3	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94





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TIC Library : C:\DATABASE\NIST08.L
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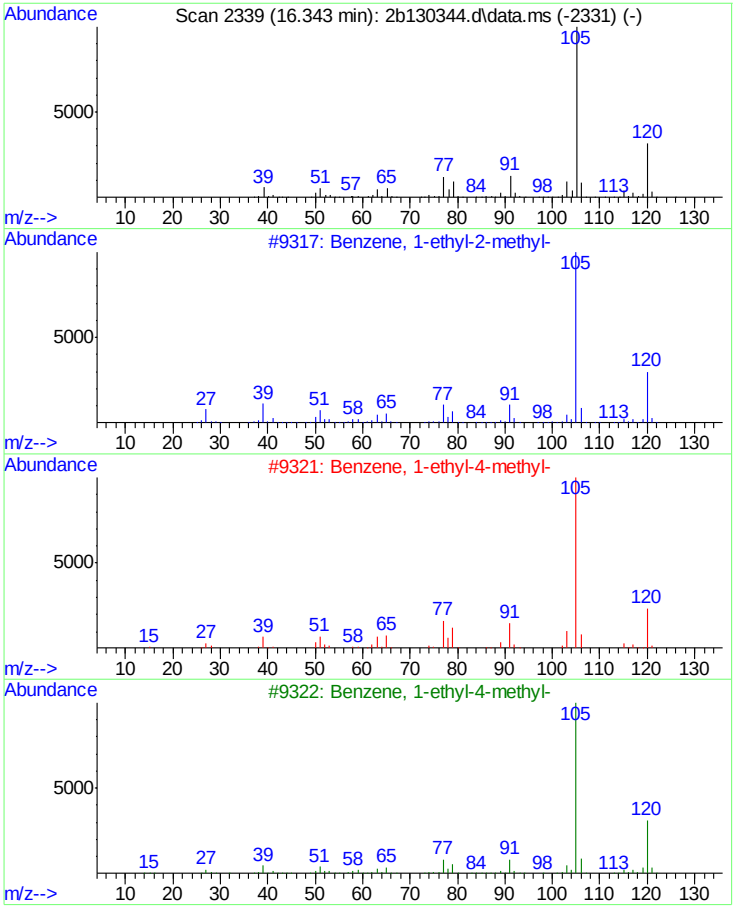
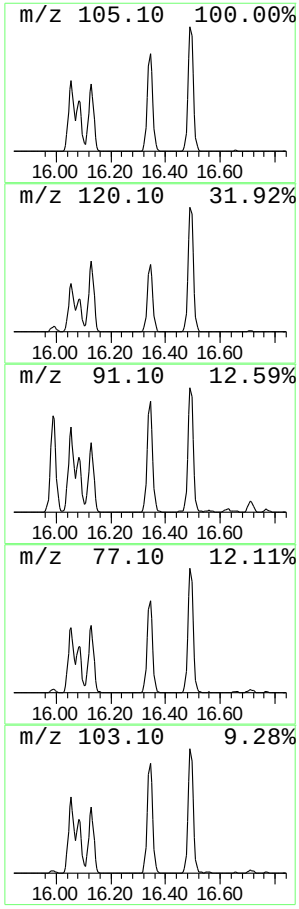
****

Peak Number 10 Benzene, 1-ethyl-2-methyl- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.343	135.49 ug/L	1954610	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
2	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	93
3	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91
4	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	91
5	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130344.d
Acq On : 23 Apr 2015 2:39 am
Operator : BridgetK
Sample : jb92664-3
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 34 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

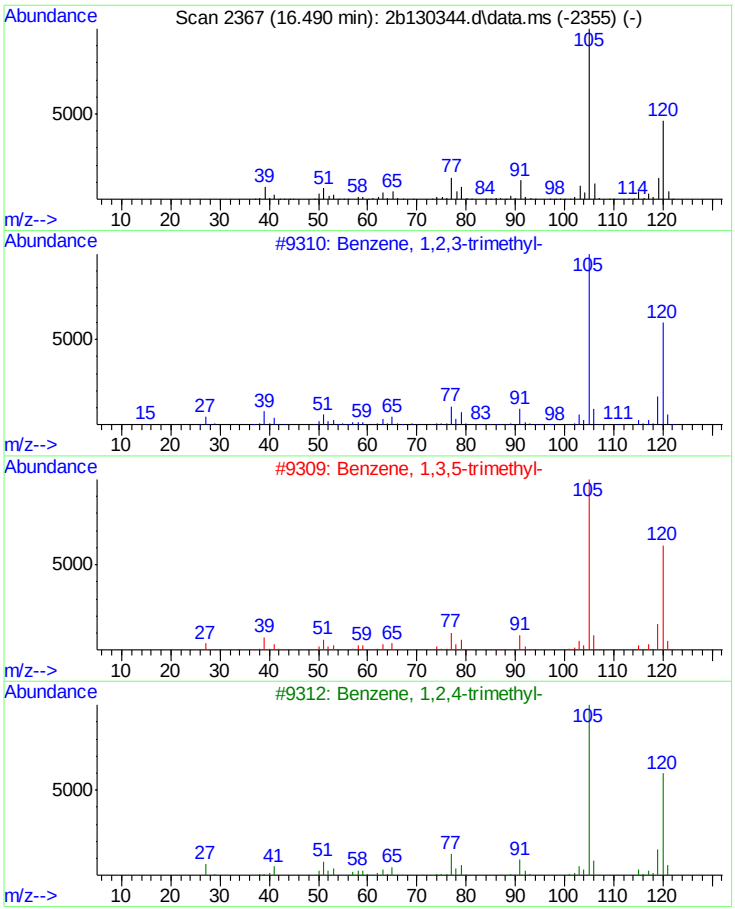
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

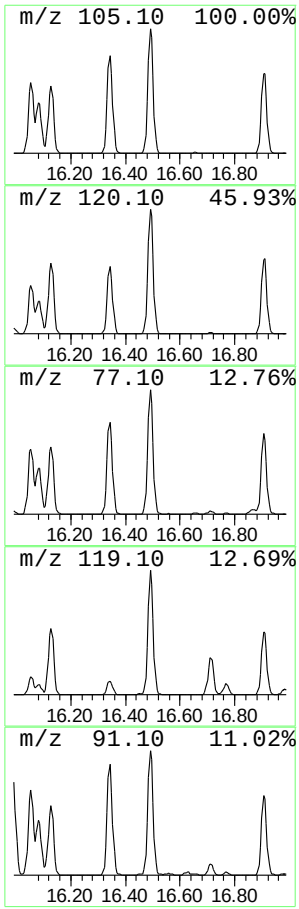
****

Peak Number 11 Benzene, 1,2,3-trimethyl- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.490	189.61 ug/L	2735500	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	97
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
5	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	93





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130344.d
Acq On : 23 Apr 2015 2:39 am
Operator : BridgetK
Sample : jb92664-3
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 34 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

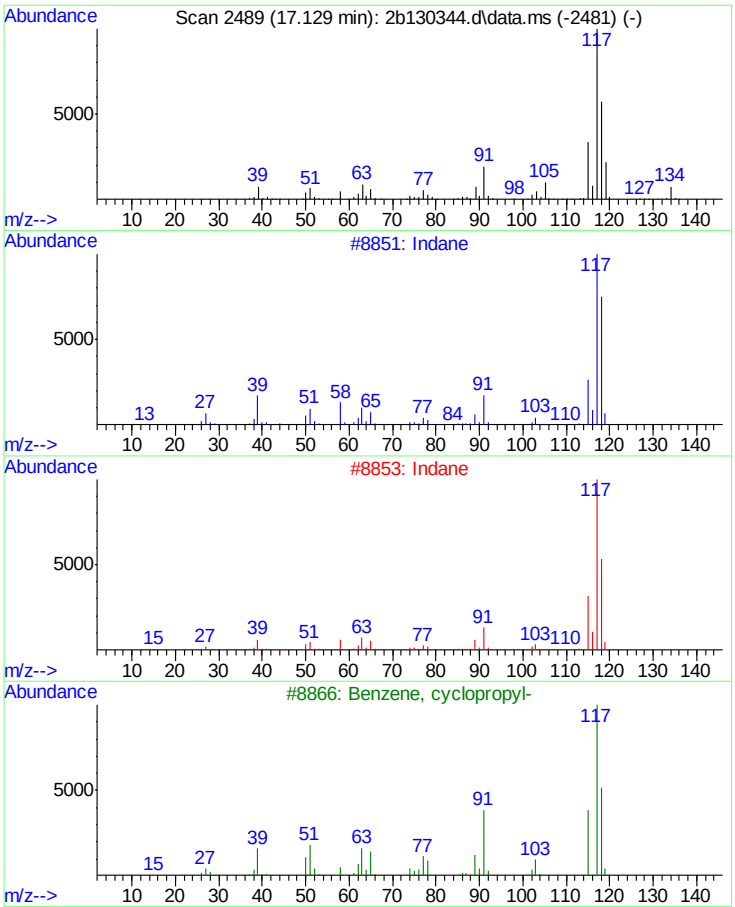
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

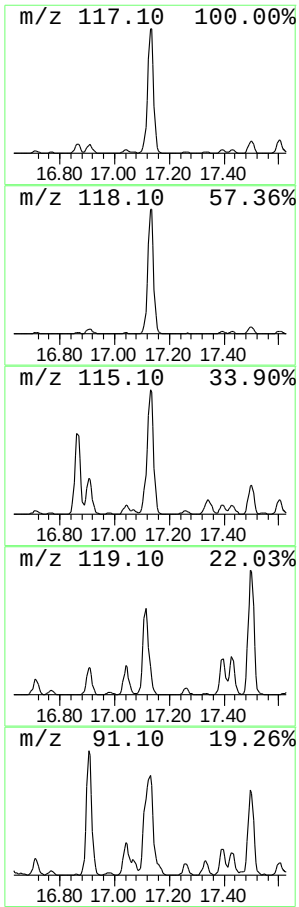
****

Peak Number 12 Indane Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.129	103.91 ug/L	1499120	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indane	118	C9H10	000496-11-7	76
2	Indane	118	C9H10	000496-11-7	70
3	Benzene, cyclopropyl-	118	C9H10	000873-49-4	70
4	Benzene, 1-ethenyl-2-methyl-	118	C9H10	000611-15-4	70
5	Benzene, 1-propenyl-	118	C9H10	000637-50-3	70





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130344.d
Acq On : 23 Apr 2015 2:39 am
Operator : BridgetK
Sample : jb92664-3
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 34 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

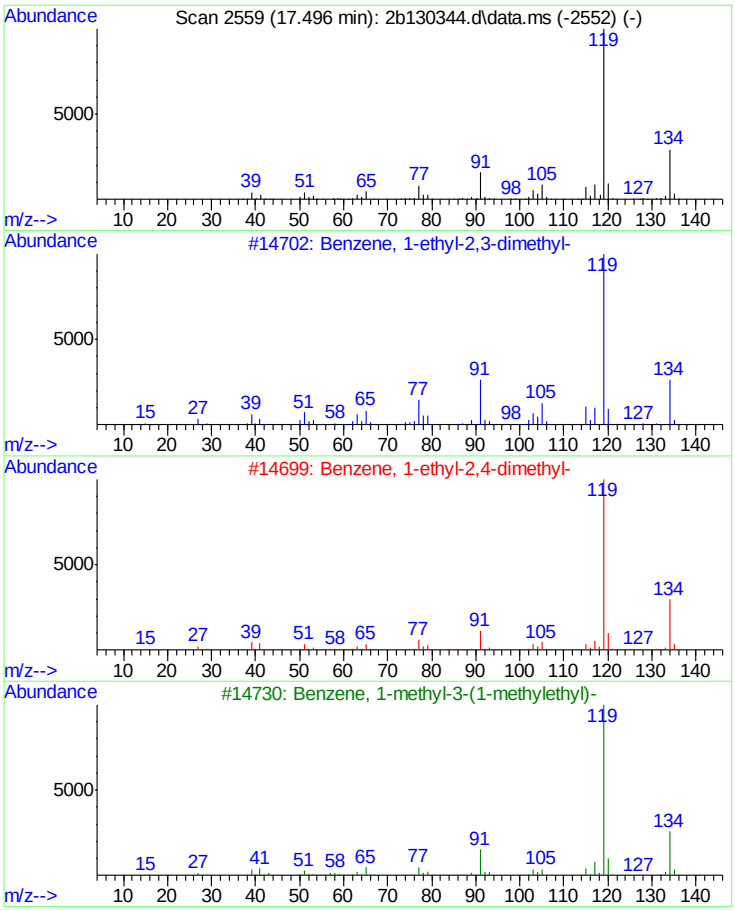
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

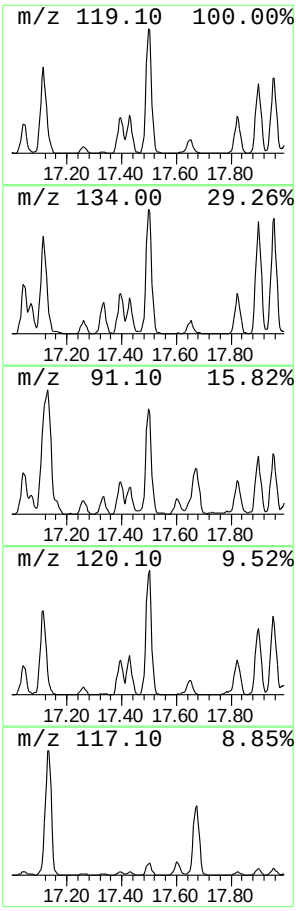
****

Peak Number 13 Benzene, 1-ethyl-2,3-dimethyl- Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.496	55.16 ug/L	795782	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	96
2	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	95
3	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	95
4	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14	002870-04-4	95
5	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	95





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130344.d
Acq On : 23 Apr 2015 2:39 am
Operator : BridgetK
Sample : jb92664-3
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 34 Sample Multiplier: 1

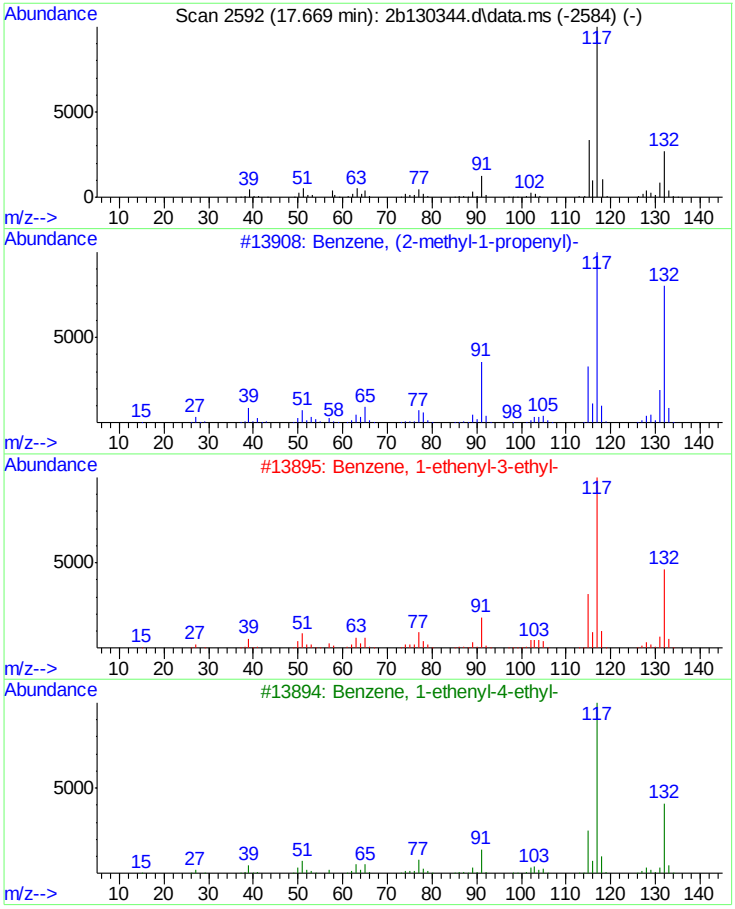
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

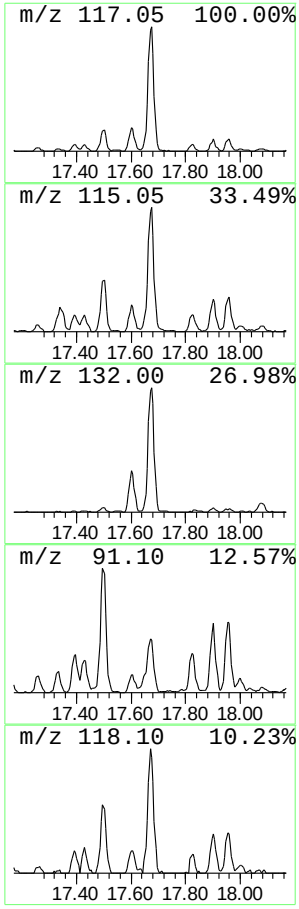
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

****
Peak Number 14 Benzene, (2-methyl-1-propen... Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.669	38.76 ug/L	559197	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, (2-methyl-1-propenyl)-	132	C10H12	000768-49-0	91
2	Benzene, 1-ethenyl-3-ethyl-	132	C10H12	007525-62-4	91
3	Benzene, 1-ethenyl-4-ethyl-	132	C10H12	003454-07-7	91
4	Indan, 1-methyl-	132	C10H12	000767-58-8	90
5	1-Phenyl-1-butene	132	C10H12	000824-90-8	87





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130344.d
Acq On : 23 Apr 2015 2:39 am
Operator : BridgetK
Sample : jb92664-3
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 34 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

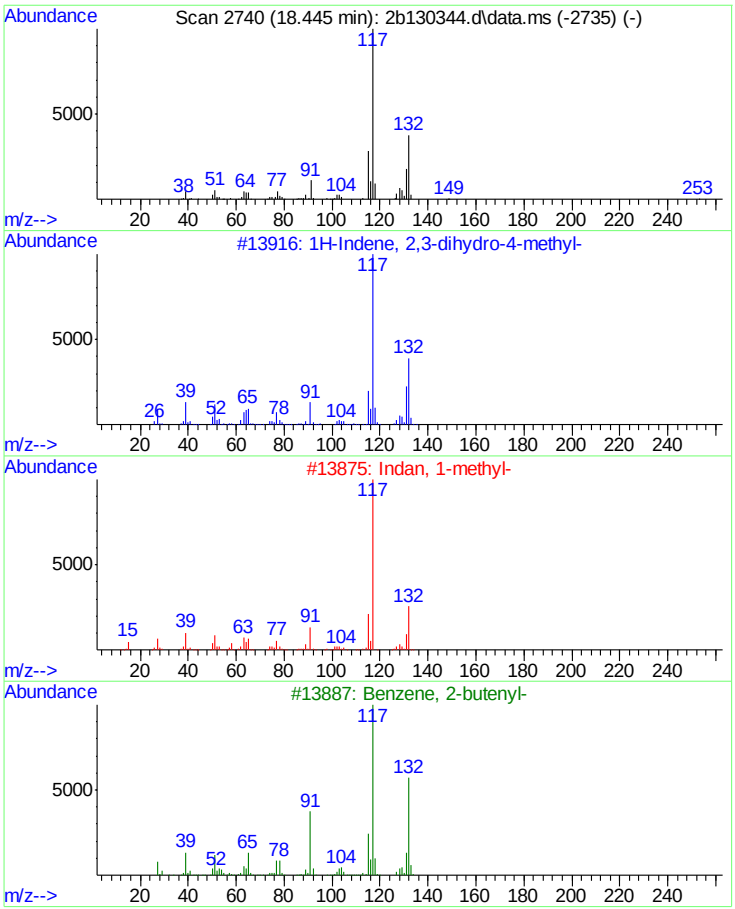
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

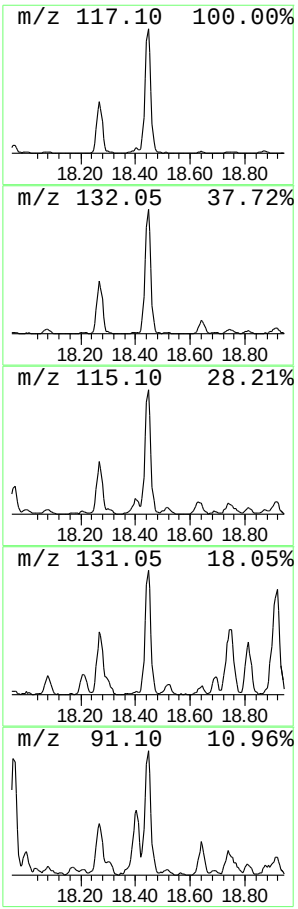
****

Peak Number 15 1H-Indene, 2,3-dihydro-4-me... Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.445	54.34 ug/L	783979	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	90
2	Indan, 1-methyl-	132	C10H12	000767-58-8	87
3	Benzene, 2-butenyl-	132	C10H12	001560-06-1	86
4	Benzene, (2-methyl-1-propenyl)-	132	C10H12	000768-49-0	86
5	Indan, 1-methyl-	132	C10H12	000767-58-8	83





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130344.d
Acq On : 23 Apr 2015 2:39 am
Operator : BridgetK
Sample : jb92664-3
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 34 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Butane	5.212	105.8	ug/L	2061670	2	10.817	974669	50.0
Butane, 2-methyl-	6.266	71.6	ug/L	1396470	2	10.817	974669	50.0
Butane, 2-methyl-	6.323	156.4	ug/L	3049690	2	10.817	974669	50.0
Pentane	6.780	41.9	ug/L	816011	2	10.817	974669	50.0
Pentane, 2-methyl-	8.436	62.0	ug/L	1208280	2	10.817	974669	50.0
Cyclopentane, m...	10.140	51.9	ug/L	1011690	2	10.817	974669	50.0
Benzene, 1-ethy...	16.055	103.0	ug/L	1486340	5	16.867	721339	50.0
Benzene, 1,3,5-...	16.081	60.3	ug/L	869903	5	16.867	721339	50.0
Benzene, 1,3,5-...	16.128	104.5	ug/L	1508230	5	16.867	721339	50.0
Benzene, 1-ethy...	16.343	135.5	ug/L	1954610	5	16.867	721339	50.0
Benzene, 1,2,3-...	16.490	189.6	ug/L	2735500	5	16.867	721339	50.0
Indane	17.129	103.9	ug/L	1499120	5	16.867	721339	50.0
Benzene, 1-ethy...	17.496	55.2	ug/L	795782	5	16.867	721339	50.0
Benzene, (2-met...	17.669	38.8	ug/L	559197	5	16.867	721339	50.0
1H-Indene, 2,3-...	18.445	54.3	ug/L	783979	5	16.867	721339	50.0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130345.d
Acq On : 23 Apr 2015 3:08 am
Operator : BridgetK
Sample : jb92664-4
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Time: Apr 27 14:16:34 2015
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
QLast Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration

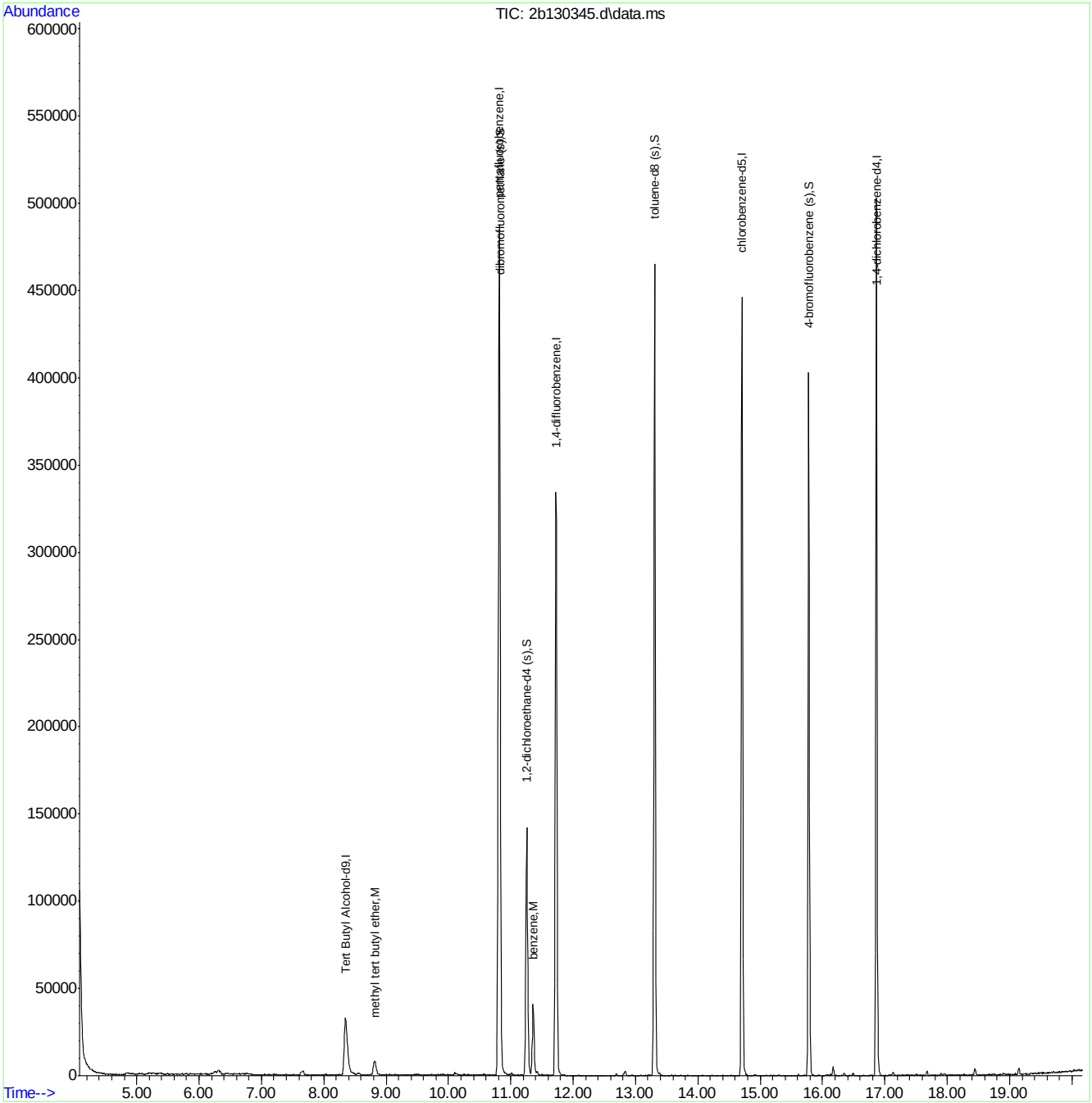
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.352	65	67138	500.00	ug/L	0.00
5) pentafluorobenzene	10.811	168	294947	50.00	ug/L	0.00
58) 1,4-difluorobenzene	11.724	114	278331	50.00	ug/L	0.00
90) chlorobenzene-d5	14.707	117	220922	50.00	ug/L	0.00
106) 1,4-dichlorobenzene-d4	16.867	152	127241	50.00	ug/L	0.00
System Monitoring Compounds						
51) dibromofluoromethane (s)	10.822	113	96538	49.03	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 98.06%			
52) 1,2-dichloroethane-d4 (s)	11.257	65	115621	49.64	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 99.28%			
82) toluene-d8 (s)	13.307	98	287421	49.03	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 98.06%			
108) 4-bromofluorobenzene (s)	15.777	95	103682	50.54	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 101.08%			
Target Compounds						Qvalue
34) methyl tert butyl ether	8.819	73	12833	2.48	ug/L	94
66) benzene	11.362	78	36828	6.56	ug/L	97

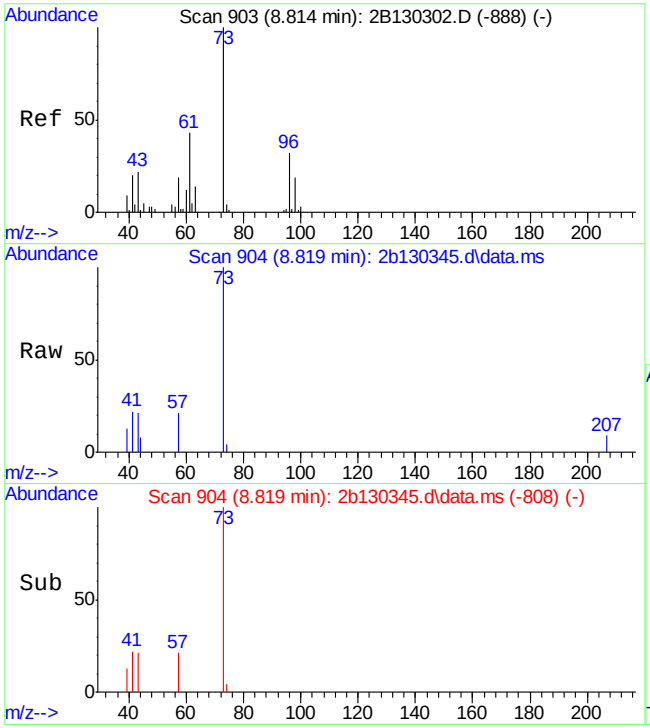
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130345.d
Acq On : 23 Apr 2015 3:08 am
Operator : BridgetK
Sample : jb92664-4
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Time: Apr 27 14:16:34 2015
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
QLast Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration

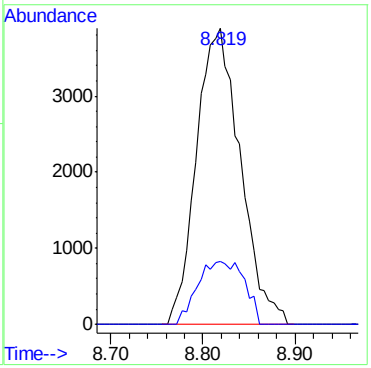


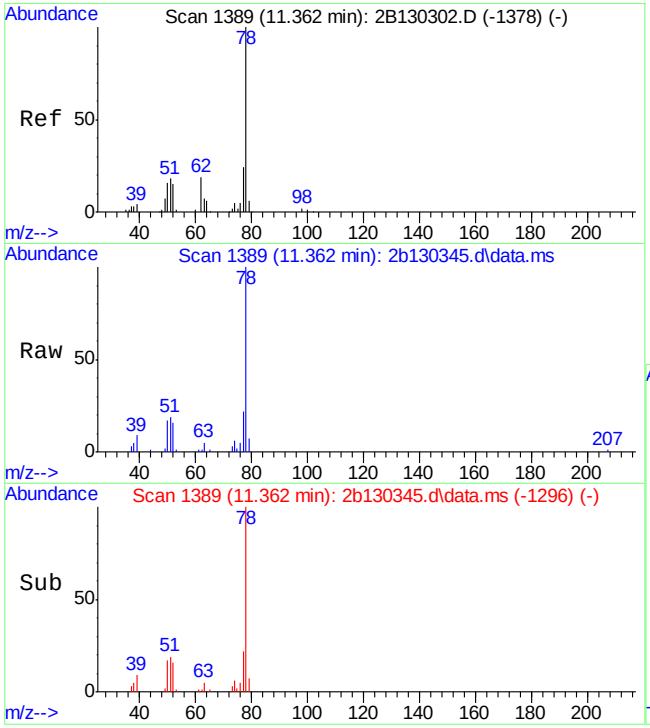


#34
methyl tert butyl ether
Concen: 2.48 ug/L
RT: 8.819 min Scan# 904
Delta R.T. 0.005 min
Lab File: 2b130345.d
Acq: 23 Apr 2015 3:08 am

Tgt Ion: 73 Resp: 12833

Ion	Ratio	Lower	Upper
73	100		
57	21.2	0.0	48.7

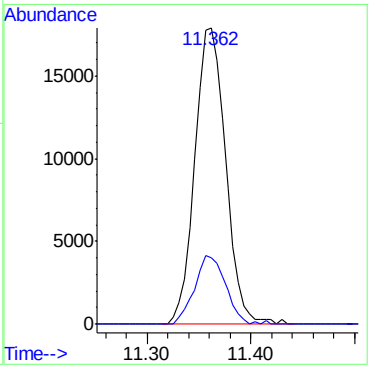




#66
benzene
Concen: 6.56 ug/L
RT: 11.362 min Scan# 1389
Delta R.T. 0.000 min
Lab File: 2b130345.d
Acq: 23 Apr 2015 3:08 am

Tgt Ion: 78 Resp: 36828

Ion	Ratio	Lower	Upper
78	100		
77	22.5	0.0	53.8



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130345.d
Acq On : 23 Apr 2015 3:08 am
Operator : BridgetK
Sample : jb92664-4
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 35 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

Signal : TIC: 2b130345.d\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.520	82	84	89	rVB	482	424	0.04%	0.008%
2	4.577	89	95	113	rVB2	495	1059	0.10%	0.021%
3	4.719	119	122	127	rVB2	407	561	0.05%	0.011%
4	4.866	141	150	152	rBV2	1029	2594	0.24%	0.051%
5	5.196	172	213	223	rBV3	1134	7644	0.71%	0.149%
6	6.030	370	372	411	rBV3	902	3892	0.36%	0.076%
7	6.250	411	414	422	rVV4	1784	4064	0.38%	0.079%
8	6.308	422	425	443	rVB6	2414	7202	0.67%	0.141%
9	6.423	444	447	452	rBV2	540	903	0.08%	0.018%
10	6.654	470	491	493	rBV2	724	2845	0.27%	0.056%
11	7.188	592	593	615	rVB4	969	3304	0.31%	0.065%
12	7.346	615	623	625	rBV2	518	1142	0.11%	0.022%
13	7.367	625	627	632	rVV	588	889	0.08%	0.017%
14	7.403	632	634	643	rVB	730	1155	0.11%	0.023%
15	7.482	647	649	653	rVB2	394	492	0.05%	0.010%
16	7.582	665	668	672	rVB	446	595	0.06%	0.012%
17	7.660	676	683	695	rVB3	2597	7961	0.74%	0.156%
18	7.744	696	699	701	rVB2	498	487	0.05%	0.010%
19	8.085	761	764	783	rBV2	502	2270	0.21%	0.044%
20	8.195	783	785	795	rBV2	477	1104	0.10%	0.022%
21	8.347	801	814	849	rBV	32615	128631	11.99%	2.515%
22	8.557	849	854	865	rVB3	1468	3499	0.33%	0.068%
23	8.651	870	872	876	rVB	499	513	0.05%	0.010%
24	8.814	893	903	919	rBV3	8037	26917	2.51%	0.526%
25	9.055	947	949	954	rVB2	604	453	0.04%	0.009%
26	9.296	989	995	997	rBV	426	449	0.04%	0.009%
27	9.501	1025	1034	1048	rVB2	786	3145	0.29%	0.062%
28	9.836	1096	1098	1103	rVB	615	551	0.05%	0.011%
29	9.873	1103	1105	1109	rBV	710	589	0.05%	0.012%
30	9.993	1124	1128	1140	rVV3	883	962	0.09%	0.019%
31	10.104	1144	1149	1162	rBV4	1680	4761	0.44%	0.093%
32	10.224	1170	1172	1174	rBV	583	503	0.05%	0.010%
33	10.313	1187	1189	1193	rBV	568	464	0.04%	0.009%
34	10.397	1203	1205	1215	rVB	466	661	0.06%	0.013%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130345.d
Acq On : 23 Apr 2015 3:08 am
Operator : BridgetK
Sample : jb92664-4
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 35 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

35	10.497	1221	1224	1232	rVB	405	518	0.05%	0.010%
36	10.570	1232	1238	1248	rVB2	704	1663	0.15%	0.033%
37	10.675	1248	1258	1261	rVB2	371	840	0.08%	0.016%
38	10.743	1266	1271	1273	rVB2	384	514	0.05%	0.010%
39	10.817	1273	1285	1313	rBV2	487607	1073000	100.00%	20.983%
40	11.005	1313	1321	1329	rBV3	1474	3255	0.30%	0.064%
41	11.110	1335	1341	1345	rBV	496	1161	0.11%	0.023%
42	11.142	1345	1347	1356	rBV	283	602	0.06%	0.012%
43	11.257	1358	1369	1380	rBV	142054	289503	26.98%	5.661%
44	11.357	1380	1388	1397	rBV	39995	78890	7.35%	1.543%
45	11.498	1410	1415	1418	rBV2	927	1205	0.11%	0.024%
46	11.556	1423	1426	1431	rVB	497	889	0.08%	0.017%
47	11.598	1431	1434	1439	rBB2	555	832	0.08%	0.016%
48	11.724	1447	1458	1479	rBV	334180	615801	57.39%	12.042%
49	12.473	1596	1601	1608	rBB	240	576	0.05%	0.011%
50	12.688	1639	1642	1650	rBB3	1019	1460	0.14%	0.029%
51	12.835	1659	1670	1676	rBB4	2701	5428	0.51%	0.106%
52	13.239	1741	1747	1748	rVB	381	507	0.05%	0.010%
53	13.307	1749	1760	1781	rBV	465516	755957	70.45%	14.783%
54	13.580	1806	1812	1816	rBB2	504	683	0.06%	0.013%
55	13.726	1832	1840	1842	rBB	404	551	0.05%	0.011%
56	14.592	2003	2005	2017	rBB	267	726	0.07%	0.014%
57	14.707	2019	2027	2047	rBB	446385	665714	62.04%	13.018%
58	14.901	2061	2064	2069	rBB	762	1027	0.10%	0.020%
59	15.614	2194	2200	2203	rBB	855	669	0.06%	0.013%
60	15.777	2222	2231	2249	rBB	402882	590194	55.00%	11.541%
61	16.060	2280	2285	2288	rBV	800	907	0.08%	0.018%
62	16.081	2288	2289	2294	rVB	686	708	0.07%	0.014%
63	16.128	2294	2298	2301	rBV2	1119	1338	0.12%	0.026%
64	16.170	2301	2306	2312	rVB2	5417	7209	0.67%	0.141%
65	16.343	2335	2339	2346	rBB	1433	2016	0.19%	0.039%
66	16.495	2361	2368	2374	rBB2	1852	2132	0.20%	0.042%
67	16.663	2395	2400	2406	rBB2	590	536	0.05%	0.010%
68	16.862	2430	2438	2453	rBV	503177	735536	68.55%	14.384%
69	17.061	2472	2476	2482	rBV2	511	966	0.09%	0.019%
70	17.134	2482	2490	2500	rVB3	2085	4339	0.40%	0.085%
71	17.218	2500	2506	2508	rBV	522	547	0.05%	0.011%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130345.d
Acq On : 23 Apr 2015 3:08 am
Operator : BridgetK
Sample : jb92664-4
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 35 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

72	17.266	2513	2515	2524	rVB	474	995	0.09%	0.019%
73	17.328	2524	2527	2531	rBV	605	858	0.08%	0.017%
74	17.412	2542	2543	2549	rVB	491	712	0.07%	0.014%
75	17.460	2549	2552	2554	rBV	390	393	0.04%	0.008%
76	17.507	2556	2561	2565	rVB	1028	1514	0.14%	0.030%
77	17.559	2570	2571	2576	rVB2	422	589	0.05%	0.012%
78	17.601	2576	2579	2582	rBV	416	452	0.04%	0.009%
79	17.674	2588	2593	2600	rVB2	2739	4006	0.37%	0.078%
80	17.795	2613	2616	2618	rBV2	492	602	0.06%	0.012%
81	17.811	2618	2619	2624	rVB	646	702	0.07%	0.014%
82	17.900	2628	2636	2641	rVV2	1508	2535	0.24%	0.050%
83	17.947	2641	2645	2652	rVB3	1058	1850	0.17%	0.036%
84	17.994	2652	2654	2665	rBV2	624	910	0.08%	0.018%
85	18.152	2681	2684	2691	rVB2	432	784	0.07%	0.015%
86	18.267	2704	2706	2712	rBV2	1024	1072	0.10%	0.021%
87	18.356	2718	2723	2725	rBV	507	469	0.04%	0.009%
88	18.403	2725	2732	2735	rVV2	1045	1516	0.14%	0.030%
89	18.445	2735	2740	2750	rVB2	3716	5200	0.48%	0.102%
90	18.582	2763	2766	2770	rBV	473	634	0.06%	0.012%
91	18.681	2784	2785	2789	rBV	629	395	0.04%	0.008%
92	18.765	2789	2801	2806	rVB3	701	1851	0.17%	0.036%
93	18.802	2806	2808	2813	rBV	380	564	0.05%	0.011%
94	18.854	2813	2818	2825	rBV2	802	1628	0.15%	0.032%
95	18.985	2842	2843	2848	rBV	722	524	0.05%	0.010%
96	19.148	2869	2874	2882	rVB2	3820	6034	0.56%	0.118%
97	19.258	2887	2895	2907	rBV4	843	3238	0.30%	0.063%
98	19.337	2907	2910	2916	rBV2	921	1107	0.10%	0.022%
99	19.436	2927	2929	2932	rBV2	775	507	0.05%	0.010%
100	19.704	2977	2980	2985	rVB	1334	1002	0.09%	0.020%

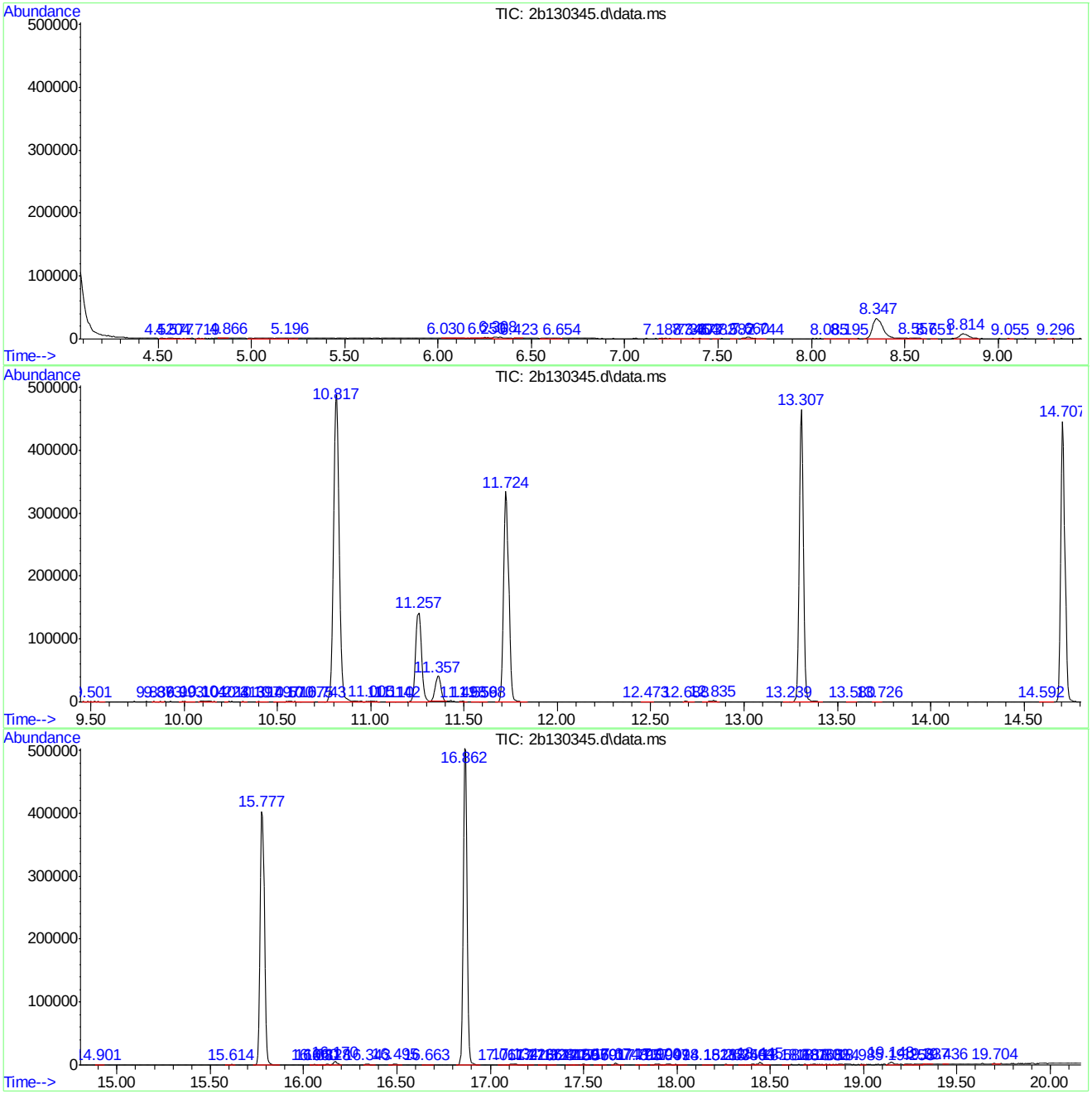
Sum of corrected areas: 5113727

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130345.d
Acq On : 23 Apr 2015 3:08 am
Operator : BridgetK
Sample : jb92664-4
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p



Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130345.d
Acq On : 23 Apr 2015 3:08 am
Operator : BridgetK
Sample : jb92664-4
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	Internal Standard RT	Internal Standard Resp	Internal Standard Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130346.d
Acq On : 23 Apr 2015 3:37 am
Operator : BridgetK
Sample : jb92664-5
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Apr 23 12:26:13 2015
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
QLast Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration

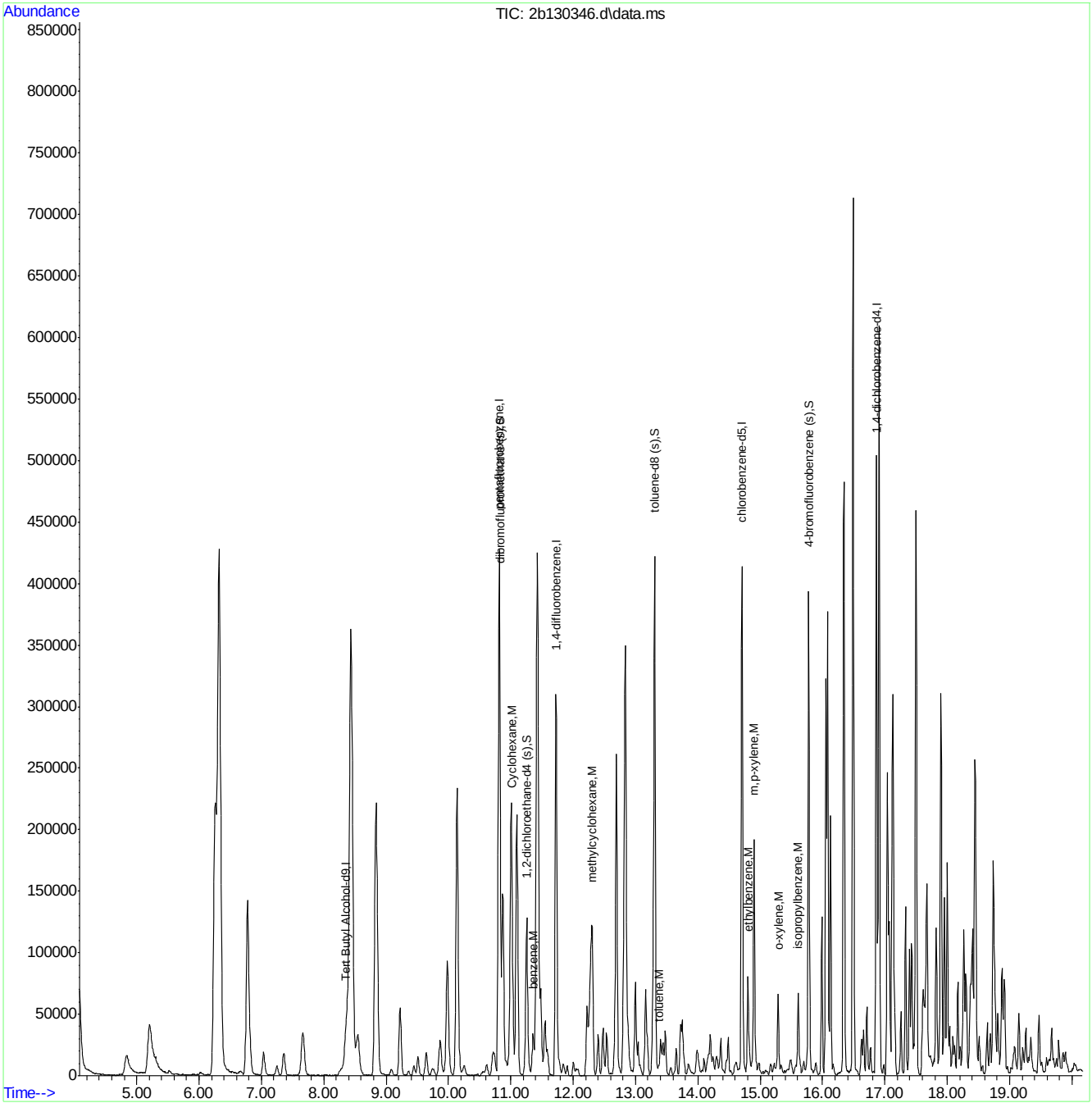
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.352	65	61800	500.00	ug/L	0.00
5) pentafluorobenzene	10.811	168	257780	50.00	ug/L	0.00
58) 1,4-difluorobenzene	11.724	114	241273	50.00	ug/L	0.00
90) chlorobenzene-d5	14.707	117	202410	50.00	ug/L	0.00
106) 1,4-dichlorobenzene-d4	16.867	152	123604	50.00	ug/L	0.00
System Monitoring Compounds						
51) dibromofluoromethane (s)	10.822	113	85435	49.64	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 99.28%			
52) 1,2-dichloroethane-d4 (s)	11.252	65	102622	50.41	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 100.82%			
82) toluene-d8 (s)	13.307	98	251421	49.48	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 98.96%			
108) 4-bromofluorobenzene (s)	15.777	95	98255	49.31	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 98.62%			
Target Compounds						Qvalue
56) Cyclohexane	11.016	84	32079	16.43	ug/L #	11
66) benzene	11.357	78	7526	1.55	ug/L	96
79) methylcyclohexane	12.306	83	38894	18.33	ug/L	95
84) toluene	13.375	92	2604	0.84	ug/L	95
100) ethylbenzene	14.801	91	47438	8.07	ug/L	99
101) m,p-xylene	14.901	106	48318	21.43	ug/L	95
102) o-xylene	15.289	106	14620	6.09	ug/L	89
107) isopropylbenzene	15.609	105	35828	5.60	ug/L	99

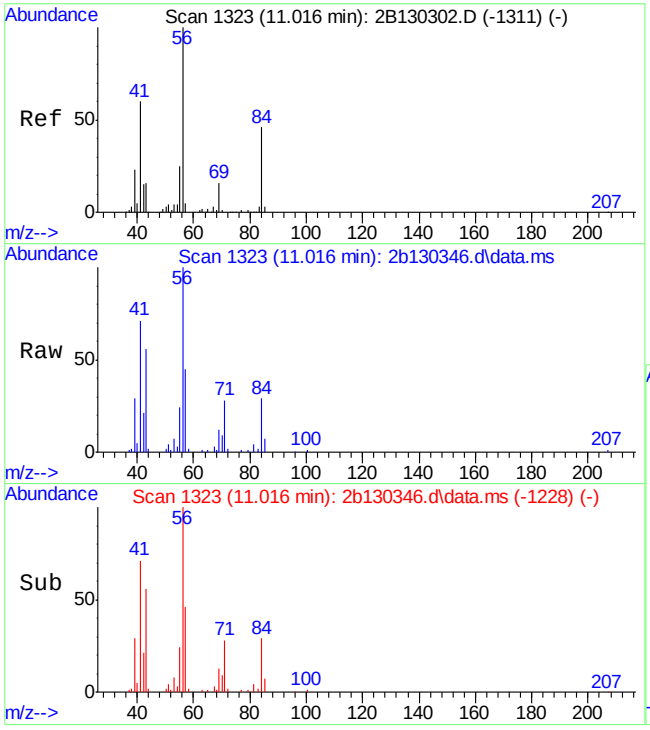
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130346.d
Acq On : 23 Apr 2015 3:37 am
Operator : BridgetK
Sample : jb92664-5
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Apr 23 12:26:13 2015
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
QLast Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration

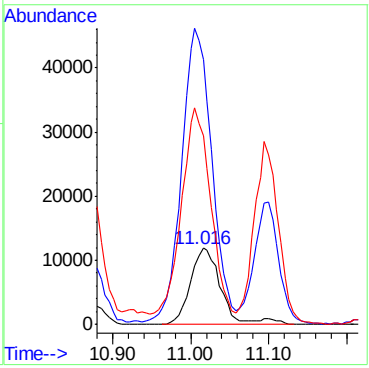


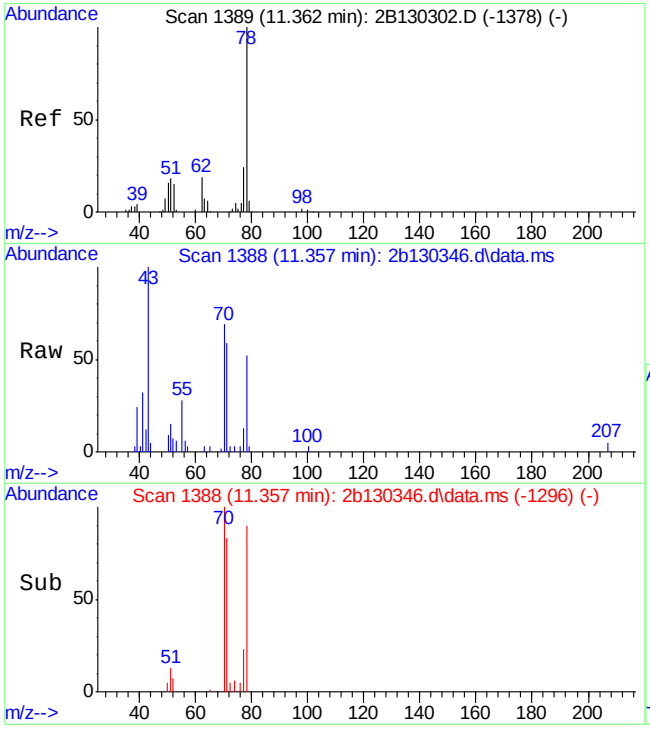


#56
Cyclohexane
Concen: 16.43 ug/L
RT: 11.016 min Scan# 1323
Delta R.T. 0.000 min
Lab File: 2b130346.d
Acq: 23 Apr 2015 3:37 am

Tgt Ion: 84 Resp: 32079

Ion	Ratio	Lower	Upper
84	100		
56	348.1	188.5	248.5#
41	248.5	100.4	160.4#

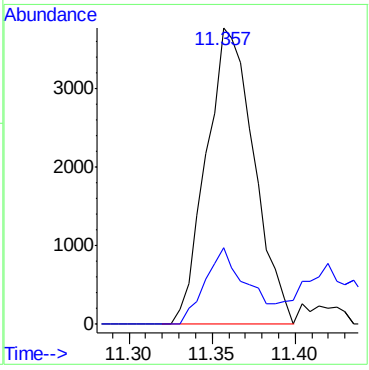


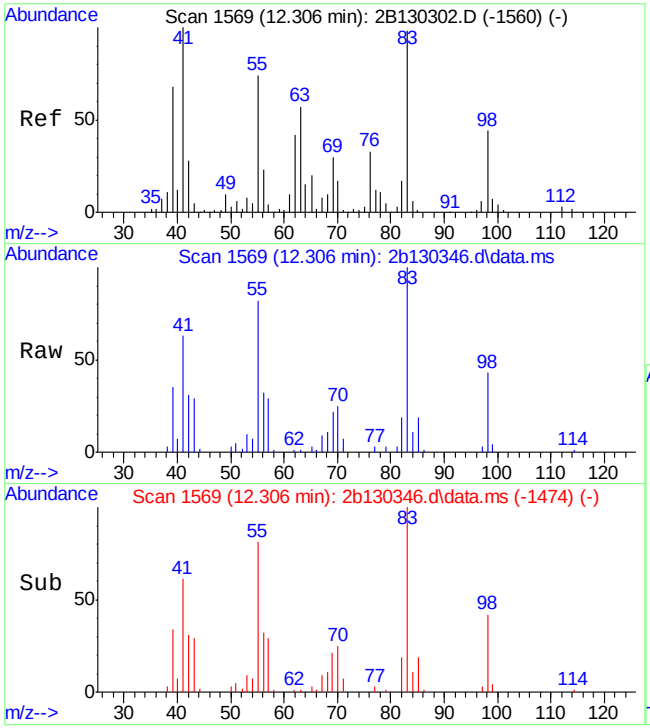


#66
benzene
Concen: 1.55 ug/L
RT: 11.357 min Scan# 1388
Delta R.T. -0.005 min
Lab File: 2b130346.d
Acq: 23 Apr 2015 3:37 am

Tgt Ion: 78 Resp: 7526

Ion	Ratio	Lower	Upper
78	100		
77	25.6	0.0	53.8

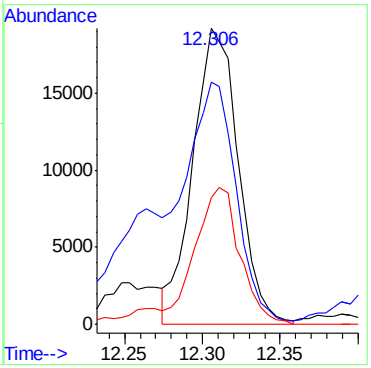


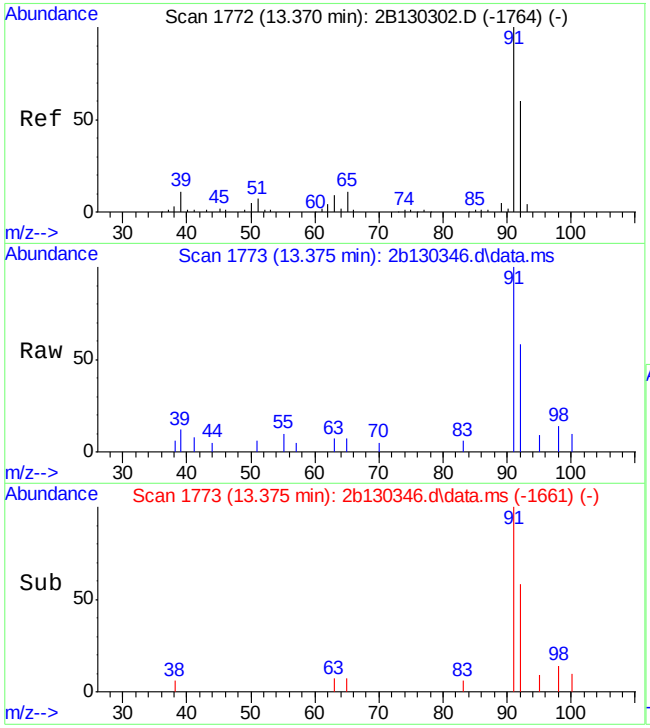


#79
methylcyclohexane
Concen: 18.33 ug/L
RT: 12.306 min Scan# 1569
Delta R.T. 0.000 min
Lab File: 2b130346.d
Acq: 23 Apr 2015 3:37 am

Tgt Ion: 83 Resp: 38894

Ion	Ratio	Lower	Upper
83	100		
55	81.6	45.8	105.8
98	43.5	14.7	74.7

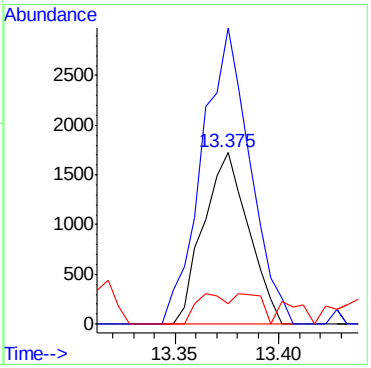


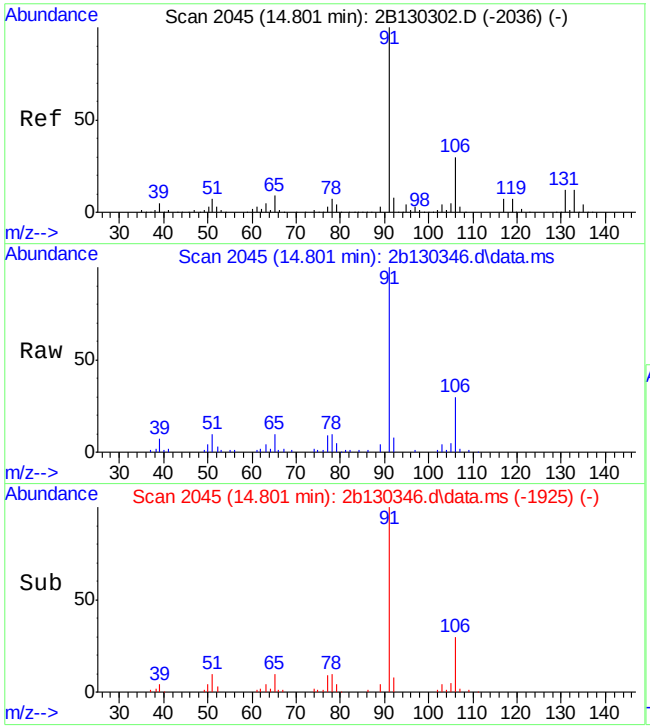


#84
toluene
Concen: 0.84 ug/L
RT: 13.375 min Scan# 1773
Delta R.T. 0.005 min
Lab File: 2b130346.d
Acq: 23 Apr 2015 3:37 am

Tgt Ion: 92 Resp: 2604

Ion	Ratio	Lower	Upper
92	100		
91	171.9	137.0	197.0
65	11.5	0.0	49.0

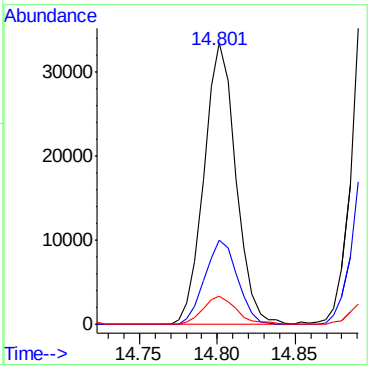


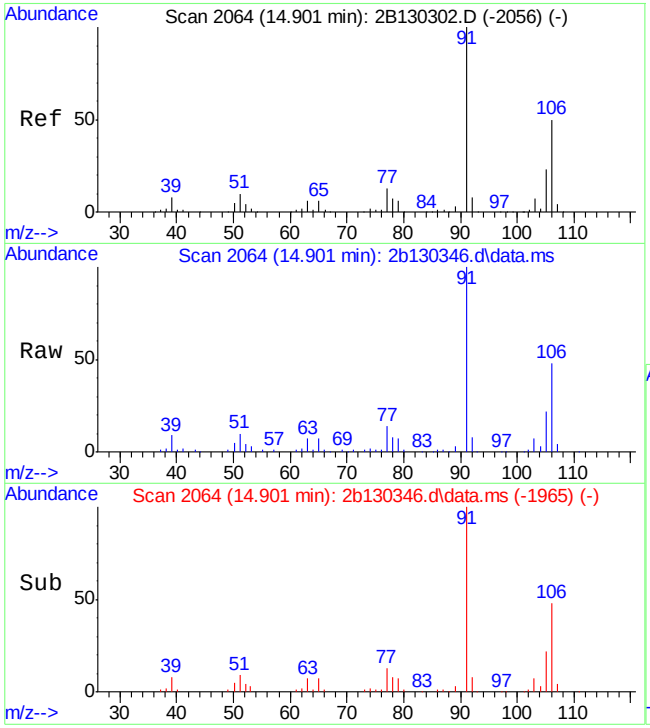


#100
ethylbenzene
Concen: 8.07 ug/L
RT: 14.801 min Scan# 2045
Delta R.T. 0.000 min
Lab File: 2b130346.d
Acq: 23 Apr 2015 3:37 am

Tgt Ion: 91 Resp: 47438

Ion	Ratio	Lower	Upper
91	100		
106	29.9	0.3	60.3
65	9.9	0.0	38.6

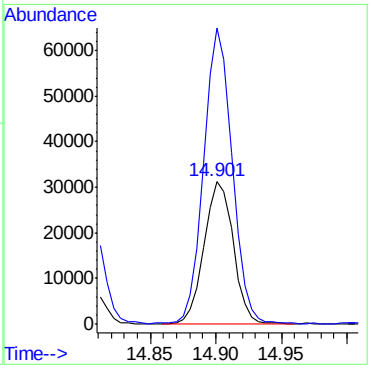


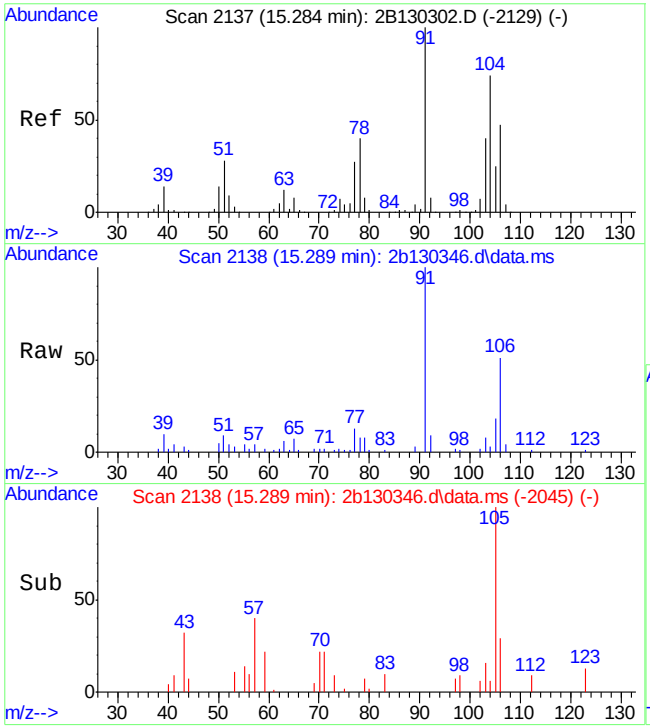


#101
m,p-xylene
Concen: 21.43 ug/L
RT: 14.901 min Scan# 2064
Delta R.T. 0.000 min
Lab File: 2b130346.d
Acq: 23 Apr 2015 3:37 am

Tgt Ion:106 Resp: 48318

Ion	Ratio	Lower	Upper
106	100		
91	206.3	169.4	229.4

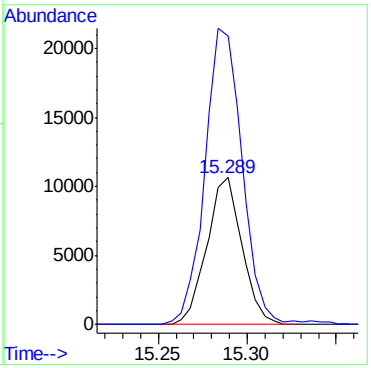


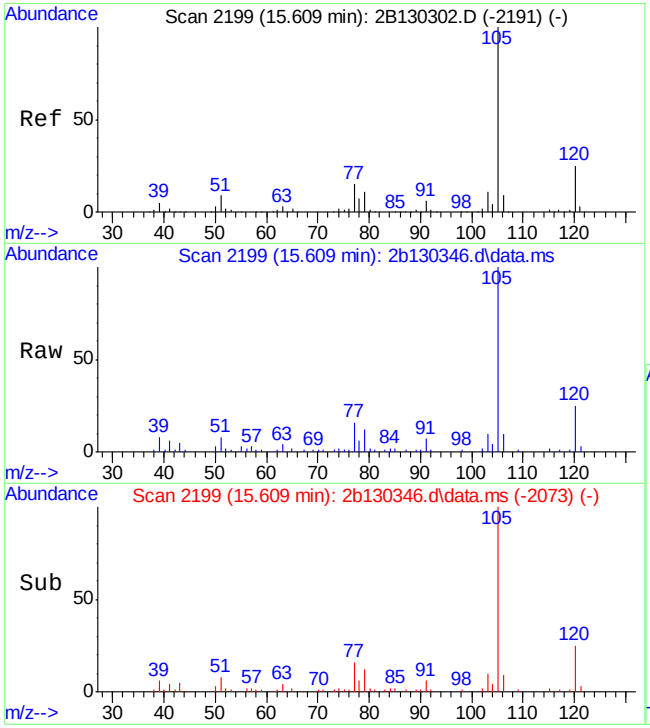


#102
o-xylene
Concen: 6.09 ug/L
RT: 15.289 min Scan# 2138
Delta R.T. 0.005 min
Lab File: 2b130346.d
Acq: 23 Apr 2015 3:37 am

Tgt Ion:106 Resp: 14620

Ion	Ratio	Lower	Upper
106	100		
91	196.1	183.1	243.1

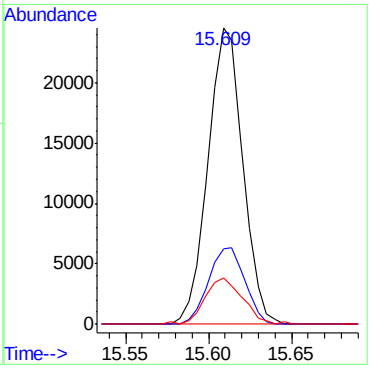




#107
isopropylbenzene
Concen: 5.60 ug/L
RT: 15.609 min Scan# 2199
Delta R.T. 0.000 min
Lab File: 2b130346.d
Acq: 23 Apr 2015 3:37 am

Tgt Ion:105 Resp: 35828

Ion	Ratio	Lower	Upper
105	100		
120	25.4	0.0	55.5
77	15.6	0.0	45.0



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130346.d
Acq On : 23 Apr 2015 3:37 am
Operator : BridgetK
Sample : jb92664-5
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 36 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

Signal : TIC: 2b130346.d\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.845	132	146	178	rVV3	16291	98030	6.31%	0.338%
2	5.212	200	216	261	rVV2	41449	281523	18.13%	0.969%
3	6.260	399	416	420	rVV3	221593	713097	45.91%	2.456%
4	6.323	420	428	467	rVV	427738	1553150	100.00%	5.349%
5	6.774	501	514	547	rVB2	142267	459309	29.57%	1.582%
6	7.036	552	564	578	rVB3	19357	49637	3.20%	0.171%
7	7.356	616	625	641	rVB3	17694	50231	3.23%	0.173%
8	7.666	665	684	707	rVB2	34956	123179	7.93%	0.424%
9	8.436	789	831	846	rBV2	362775	1540407	99.18%	5.305%
10	8.546	846	852	877	rVB2	32962	115227	7.42%	0.397%
11	8.840	890	908	937	rBV3	221507	711748	45.83%	2.451%
12	9.223	969	981	998	rVB2	54762	135327	8.71%	0.466%
13	9.511	1030	1036	1045	rVB3	15496	35089	2.26%	0.121%
14	9.642	1050	1061	1072	rBV3	18582	46462	2.99%	0.160%
15	9.862	1092	1103	1115	rBV4	28567	82768	5.33%	0.285%
16	9.983	1115	1126	1143	rVB3	93216	269182	17.33%	0.927%
17	10.135	1143	1155	1170	rBV	233142	604908	38.95%	2.083%
18	10.722	1256	1267	1276	rBV7	19125	67502	4.35%	0.232%
19	10.817	1276	1285	1291	rVV3	426044	949045	61.10%	3.268%
20	10.869	1291	1295	1310	rVV	145944	330207	21.26%	1.137%
21	11.005	1310	1321	1331	rVV3	220049	600289	38.65%	2.067%
22	11.100	1331	1339	1354	rVB2	211496	473662	30.50%	1.631%
23	11.257	1354	1369	1381	rBV2	128461	291258	18.75%	1.003%
24	11.357	1381	1388	1392	rVV	32360	64718	4.17%	0.223%
25	11.425	1392	1401	1418	rVV	423046	1201665	77.37%	4.138%
26	11.551	1418	1425	1450	rVB3	45152	146228	9.41%	0.504%
27	11.724	1450	1458	1475	rBV	310008	600866	38.69%	2.069%
28	12.222	1545	1553	1557	rBV2	56486	117489	7.56%	0.405%
29	12.300	1557	1568	1579	rVB7	121665	419353	27.00%	1.444%
30	12.400	1579	1587	1594	rBV2	32832	63984	4.12%	0.220%
31	12.479	1594	1602	1608	rBV2	37421	75180	4.84%	0.259%
32	12.536	1608	1613	1623	rVB2	33681	64969	4.18%	0.224%
33	12.694	1629	1643	1656	rBV	260465	525591	33.84%	1.810%
34	12.835	1656	1670	1694	rVV	347200	881809	56.78%	3.037%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130346.d
Acq On : 23 Apr 2015 3:37 am
Operator : BridgetK
Sample : jb92664-5
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 36 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

35	12.998	1694	1701	1706	rVV2	74358	133191	8.58%	0.459%
36	13.040	1706	1709	1723	rVB4	26491	54032	3.48%	0.186%
37	13.160	1723	1732	1745	rBV3	69400	167790	10.80%	0.578%
38	13.307	1745	1760	1770	rBV	421071	809794	52.14%	2.789%
39	13.402	1770	1778	1782	rVV5	27217	57722	3.72%	0.199%
40	13.443	1782	1786	1789	rVV3	24366	42659	2.75%	0.147%
41	13.475	1789	1792	1802	rVB3	36392	61498	3.96%	0.212%
42	13.653	1817	1826	1832	rBV3	21819	38210	2.46%	0.132%
43	13.721	1832	1839	1842	rBV2	40542	71323	4.59%	0.246%
44	13.748	1842	1844	1856	rVB4	43970	77804	5.01%	0.268%
45	13.989	1880	1890	1902	rBV6	19921	55355	3.56%	0.191%
46	14.198	1916	1930	1936	rVV6	32661	99205	6.39%	0.342%
47	14.298	1944	1949	1955	rVV7	14301	33413	2.15%	0.115%
48	14.371	1955	1963	1974	rVV2	29530	59154	3.81%	0.204%
49	14.487	1974	1985	1998	rVB3	31227	72115	4.64%	0.248%
50	14.707	2020	2027	2039	rVV	412536	641678	41.31%	2.210%
51	14.801	2039	2045	2055	rVV	79407	150397	9.68%	0.518%
52	14.901	2055	2064	2074	rVV	190462	316519	20.38%	1.090%
53	15.289	2130	2138	2144	rVV	64494	109622	7.06%	0.378%
54	15.609	2185	2199	2211	rBV	65518	130747	8.42%	0.450%
55	15.777	2221	2231	2245	rVB	391654	575906	37.08%	1.983%
56	15.986	2260	2271	2277	rBV	128420	183753	11.83%	0.633%
57	16.054	2277	2284	2286	rVV	320670	434204	27.96%	1.495%
58	16.081	2286	2289	2294	rVV	375391	499117	32.14%	1.719%
59	16.128	2294	2298	2304	rVV	209250	287071	18.48%	0.989%
60	16.343	2327	2339	2355	rVB	480250	688243	44.31%	2.370%
61	16.490	2360	2367	2384	rVB	712573	977230	62.92%	3.365%
62	16.626	2384	2393	2395	rBV	29167	41211	2.65%	0.142%
63	16.657	2395	2399	2404	rVV	35081	48588	3.13%	0.167%
64	16.710	2404	2409	2415	rVV2	53602	77832	5.01%	0.268%
65	16.862	2432	2438	2442	rBV	501741	714873	46.03%	2.462%
66	16.904	2442	2446	2457	rVB	607300	852140	54.87%	2.935%
67	17.040	2466	2472	2482	rBV2	246030	515965	33.22%	1.777%
68	17.124	2482	2488	2501	rVB4	309519	637778	41.06%	2.196%
69	17.260	2501	2514	2521	rBV2	52023	83458	5.37%	0.287%
70	17.334	2521	2528	2534	rBV	135743	197518	12.72%	0.680%
71	17.397	2534	2540	2543	rVV	100069	149575	9.63%	0.515%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130346.d
Acq On : 23 Apr 2015 3:37 am
Operator : BridgetK
Sample : jb92664-5
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 36 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

72	17.428	2543	2546	2551	rVV	104483	147977	9.53%	0.510%
73	17.496	2551	2559	2570	rVB	458583	699747	45.05%	2.410%
74	17.612	2574	2581	2586	rBV3	69039	171528	11.04%	0.591%
75	17.675	2586	2593	2610	rVV3	152970	334972	21.57%	1.154%
76	17.821	2616	2621	2627	rVV	117225	181977	11.72%	0.627%
77	17.900	2627	2636	2642	rVV	307632	472076	30.39%	1.626%
78	17.952	2642	2646	2650	rVV	141481	205151	13.21%	0.706%
79	18.000	2650	2655	2660	rVV	170334	255249	16.43%	0.879%
80	18.036	2660	2662	2667	rVV	36912	46399	2.99%	0.160%
81	18.089	2667	2672	2676	rVV4	28770	49678	3.20%	0.171%
82	18.167	2682	2687	2692	rVV3	73039	113785	7.33%	0.392%
83	18.267	2698	2706	2710	rVV3	115367	226849	14.61%	0.781%
84	18.299	2710	2712	2719	rVV4	79391	115185	7.42%	0.397%
85	18.403	2719	2732	2735	rVV3	115955	316359	20.37%	1.089%
86	18.445	2735	2740	2749	rVV3	253794	482807	31.09%	1.663%
87	18.513	2749	2753	2758	rVV3	28731	42211	2.72%	0.145%
88	18.639	2768	2777	2782	rBV5	41786	68585	4.42%	0.236%
89	18.692	2782	2787	2790	rVV3	30752	45843	2.95%	0.158%
90	18.739	2790	2796	2806	rVV3	171459	379127	24.41%	1.306%
91	18.812	2806	2810	2816	rVV2	47384	82214	5.29%	0.283%
92	18.875	2816	2822	2826	rVV3	83886	150509	9.69%	0.518%
93	18.917	2826	2830	2837	rVV	74546	125446	8.08%	0.432%
94	19.074	2853	2860	2869	rVV7	20598	50463	3.25%	0.174%
95	19.148	2869	2874	2882	rVV	47472	72745	4.68%	0.251%
96	19.258	2890	2895	2901	rVV4	34910	61981	3.99%	0.213%
97	19.342	2906	2911	2928	rVB3	29422	64936	4.18%	0.224%
98	19.473	2928	2936	2941	rBV	47266	75205	4.84%	0.259%
99	19.677	2970	2975	2984	rVV	34769	69380	4.47%	0.239%
100	19.788	2991	2996	3004	rVV3	25253	40463	2.61%	0.139%

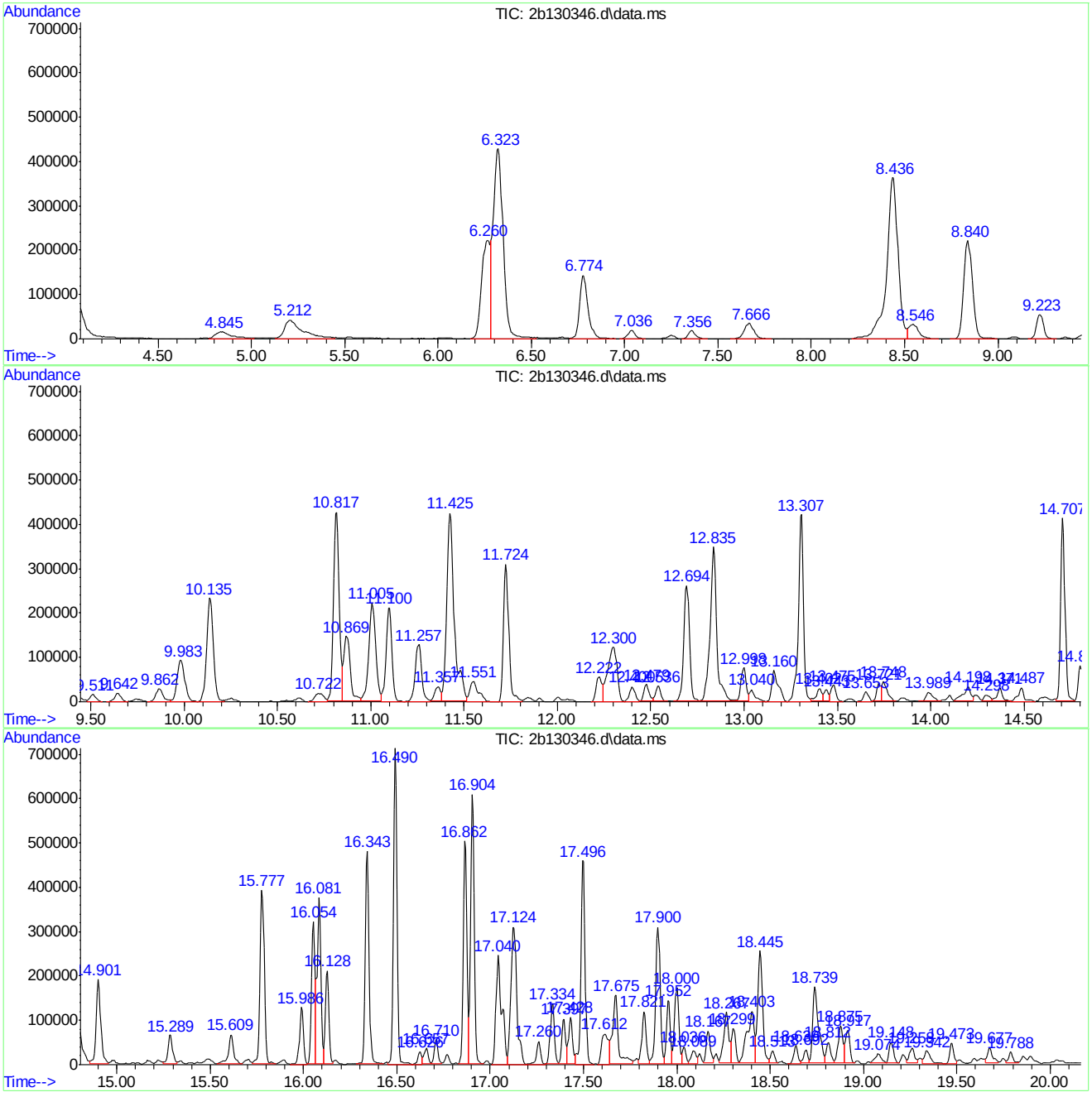
Sum of corrected areas: 29038626

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130346.d
Acq On : 23 Apr 2015 3:37 am
Operator : BridgetK
Sample : jb92664-5
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130346.d
Acq On : 23 Apr 2015 3:37 am
Operator : BridgetK
Sample : jb92664-5
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

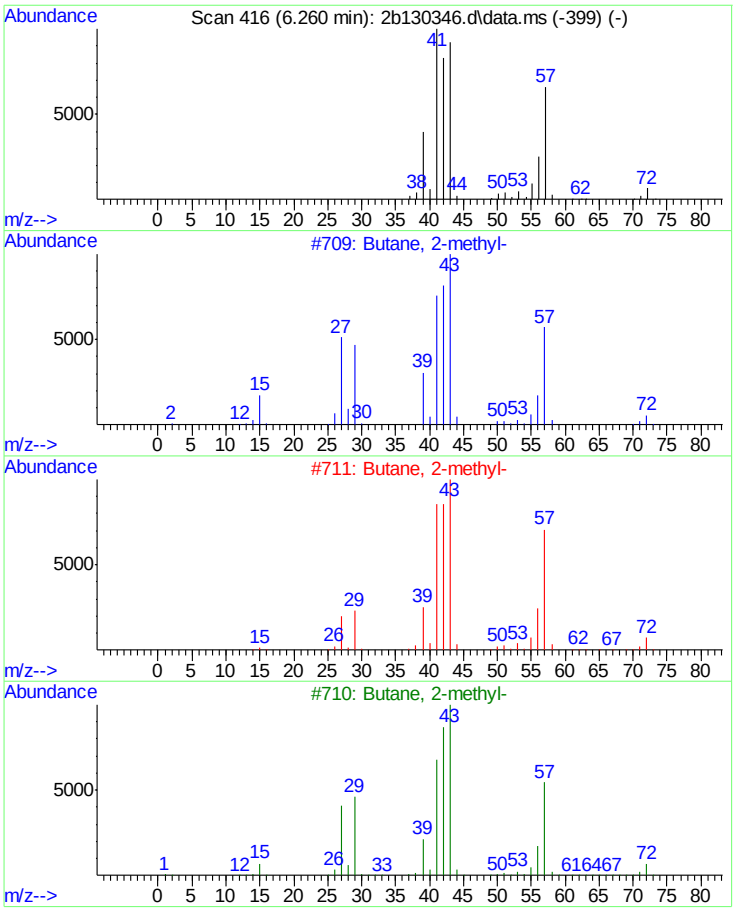
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

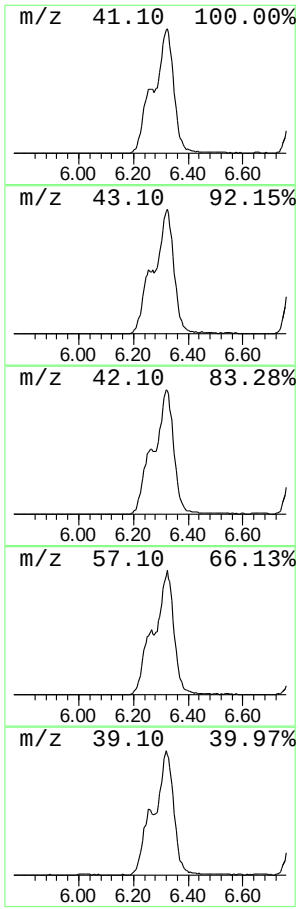
****

Peak Number 1 Butane, 2-methyl- Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.260	37.57 ug/L	713097	pentafluorobenzene	10.811

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	58
2	Butane, 2-methyl-	72	C5H12	000078-78-4	58
3	Butane, 2-methyl-	72	C5H12	000078-78-4	53
4	3-Buten-1-ol	72	C4H8O	000627-27-0	38
5	3-Buten-1-ol	72	C4H8O	000627-27-0	33





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130346.d
Acq On : 23 Apr 2015 3:37 am
Operator : BridgetK
Sample : jb92664-5
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

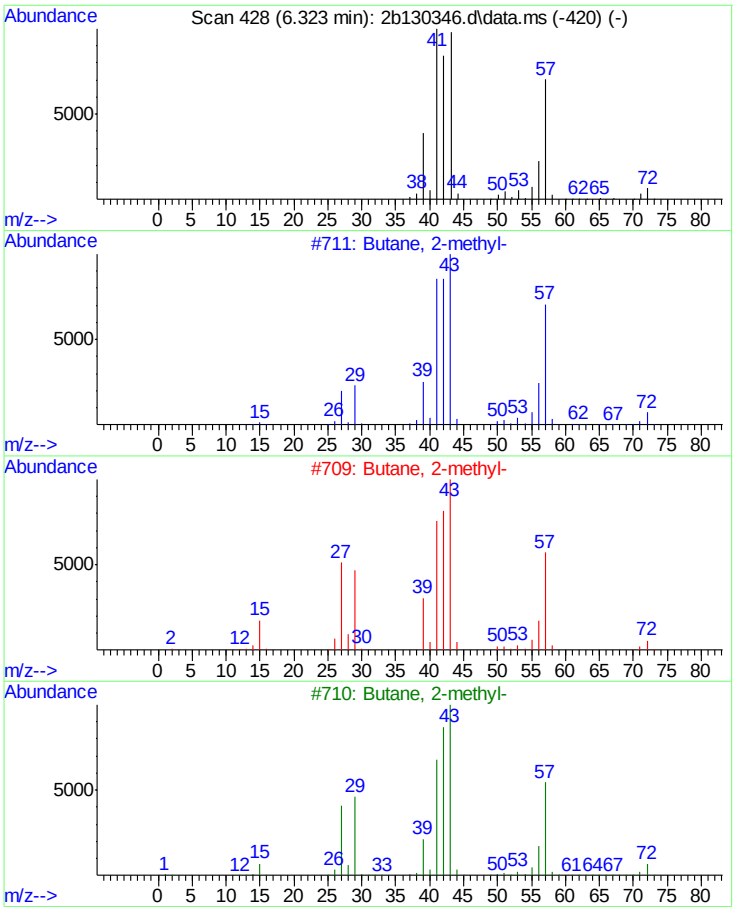
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

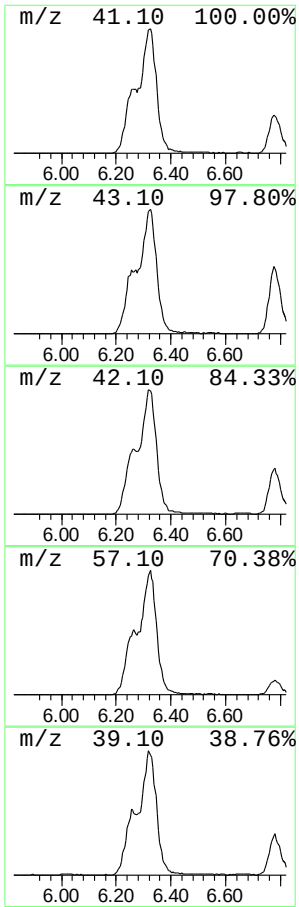
****

Peak Number 2 Butane, 2-methyl- Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.323	81.83 ug/L	1553150	pentafluorobenzene	10.811

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	81
2	Butane, 2-methyl-	72	C5H12	000078-78-4	64
3	Butane, 2-methyl-	72	C5H12	000078-78-4	58
4	3-Buten-1-ol	72	C4H8O	000627-27-0	53
5	Pentane	72	C5H12	000109-66-0	38





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130346.d
Acq On : 23 Apr 2015 3:37 am
Operator : BridgetK
Sample : jb92664-5
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

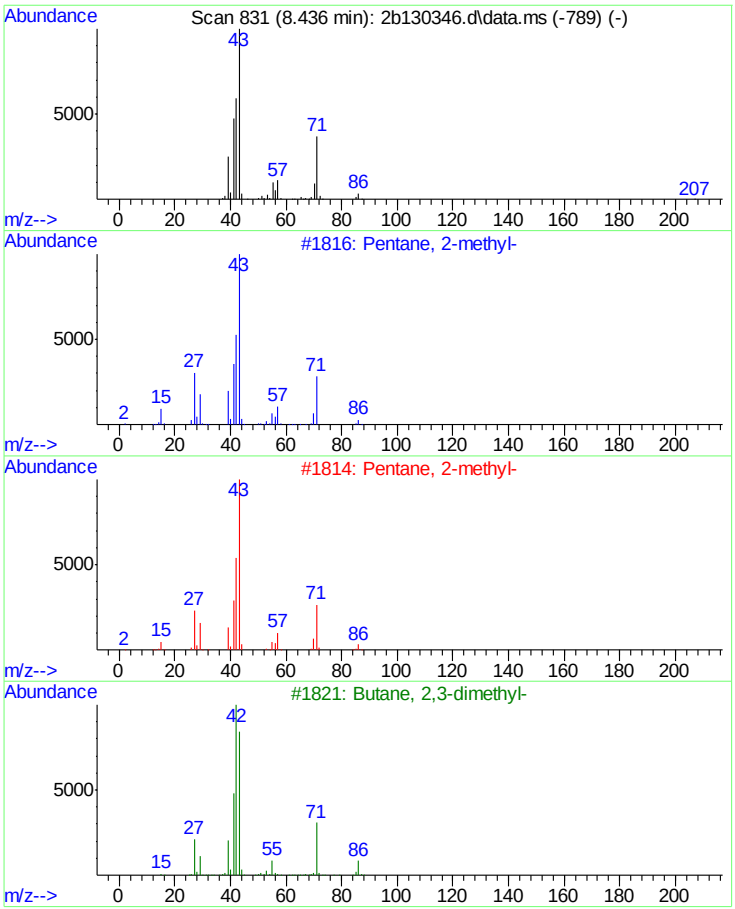
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

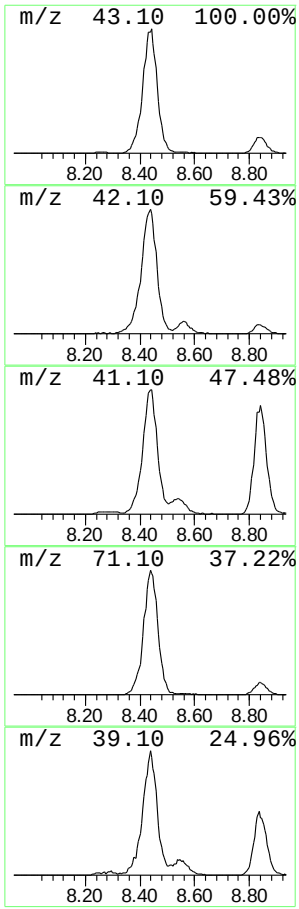
****

Peak Number 3 Pentane, 2-methyl- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.436	81.16 ug/L	1540410	pentafluorobenzene	10.811

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2-methyl-	86	C6H14	000107-83-5	90
2	Pentane, 2-methyl-	86	C6H14	000107-83-5	90
3	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	64
4	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	52
5	Pentane	72	C5H12	000109-66-0	50





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130346.d
Acq On : 23 Apr 2015 3:37 am
Operator : BridgetK
Sample : jb92664-5
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

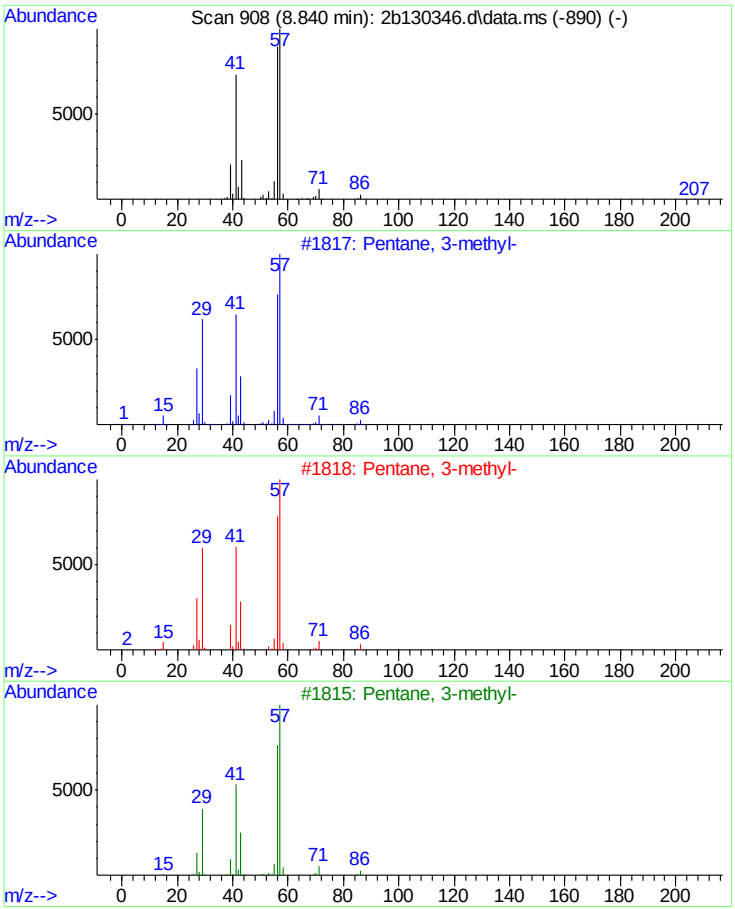
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

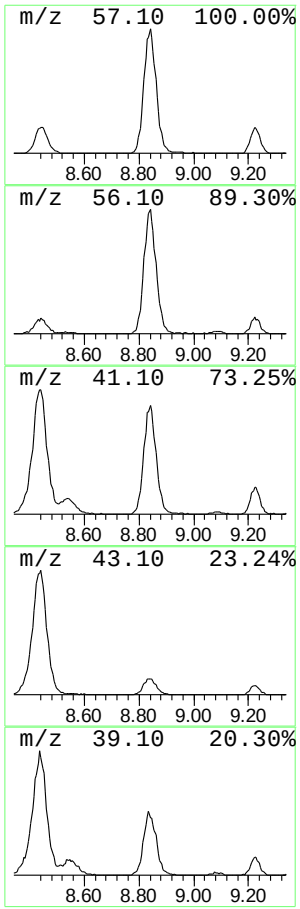
****

Peak Number 4 Pentane, 3-methyl- Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.840	37.50 ug/L	711748	pentafluorobenzene	10.811

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 3-methyl-	86	C6H14	000096-14-0	90
2	Pentane, 3-methyl-	86	C6H14	000096-14-0	90
3	Pentane, 3-methyl-	86	C6H14	000096-14-0	86
4	3,4-Dimethyldihydrofuran-2,5-dione	128	C6H8O3	007475-92-5	53
5	Oxirane, (1-methylethyl)-	86	C5H10O	001438-14-8	39





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130346.d
Acq On : 23 Apr 2015 3:37 am
Operator : BridgetK
Sample : jb92664-5
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

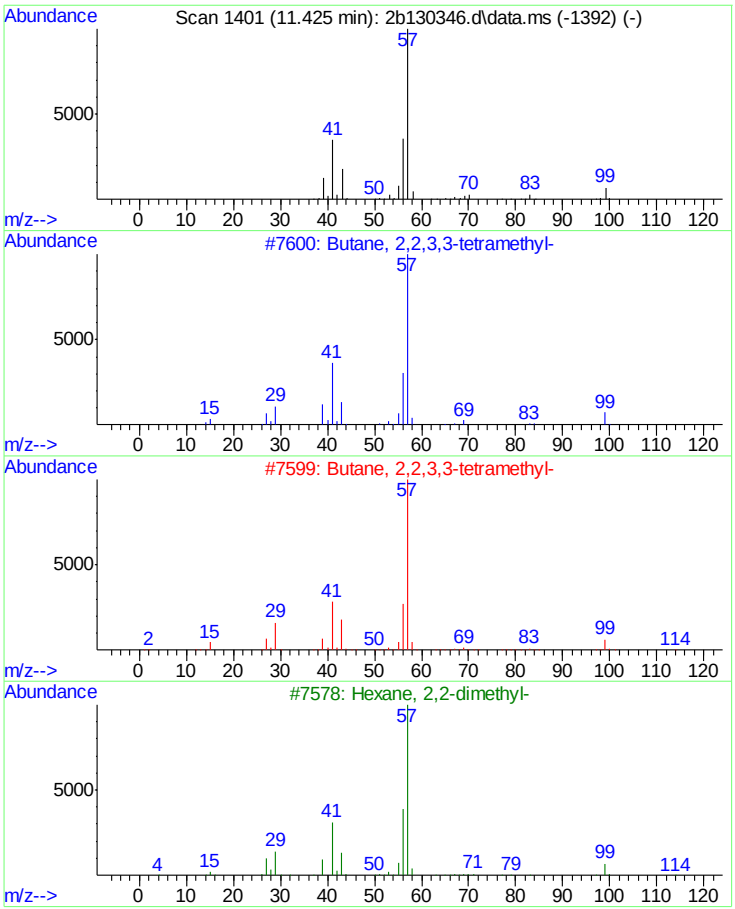
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

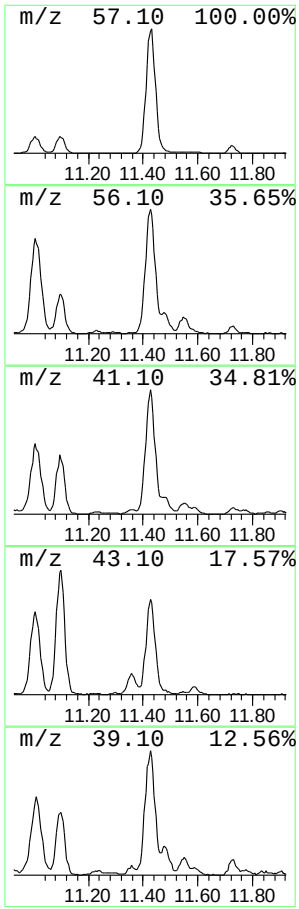
****

Peak Number 5 Butane, 2,2,3,3-tetramethyl- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.425	99.99 ug/L	1201670	1,4-difluorobenzene	11.724

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2,2,3,3-tetramethyl-	114	C8H18	000594-82-1	72
2	Butane, 2,2,3,3-tetramethyl-	114	C8H18	000594-82-1	72
3	Hexane, 2,2-dimethyl-	114	C8H18	000590-73-8	72
4	Pentane, 2,2,4-trimethyl-	114	C8H18	000540-84-1	72
5	Pentane, 2,2,4-trimethyl-	114	C8H18	000540-84-1	64





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130346.d
Acq On : 23 Apr 2015 3:37 am
Operator : BridgetK
Sample : jb92664-5
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

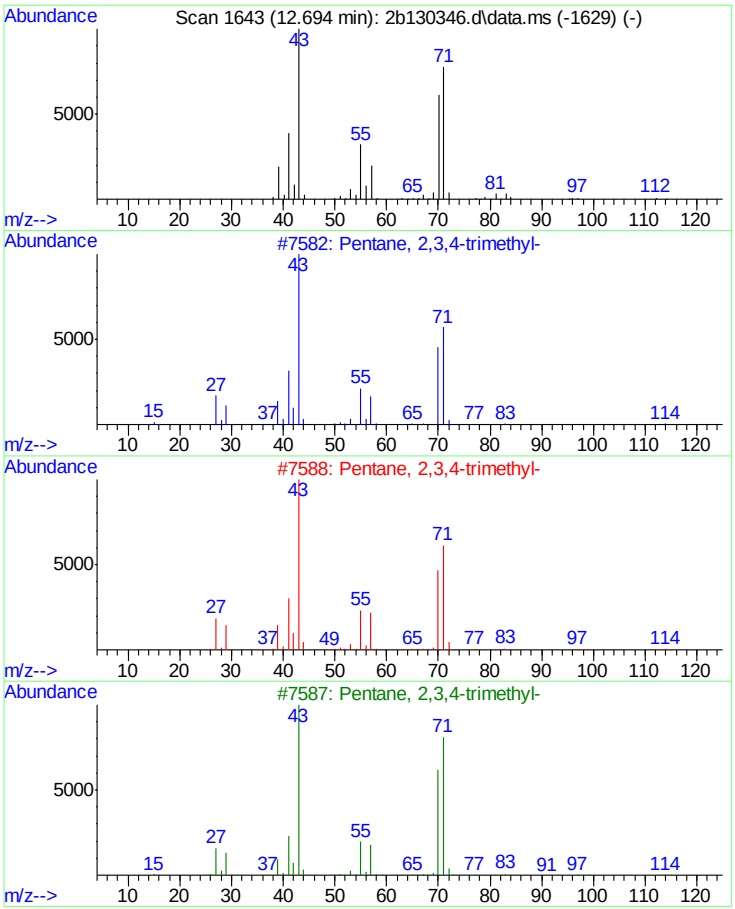
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

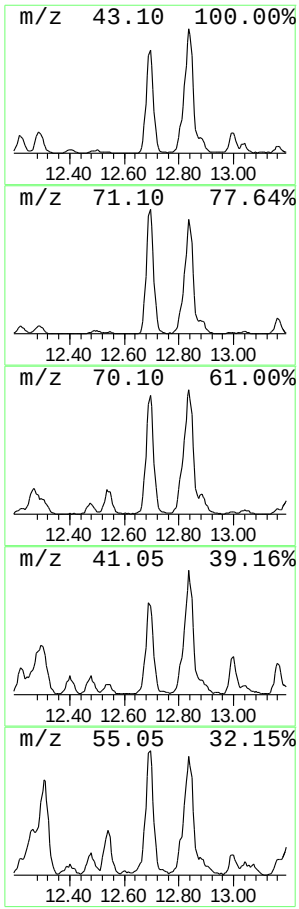
****

Peak Number 6 Pentane, 2,3,4-trimethyl- Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.694	43.74 ug/L	525591	1,4-difluorobenzene	11.724

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	90
2	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	87
3	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	86
4	Hexane, 3-methyl-	100	C7H16	000589-34-4	78
5	Hexane, 3,3,4-trimethyl-	128	C9H20	016747-31-2	64





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130346.d
Acq On : 23 Apr 2015 3:37 am
Operator : BridgetK
Sample : jb92664-5
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

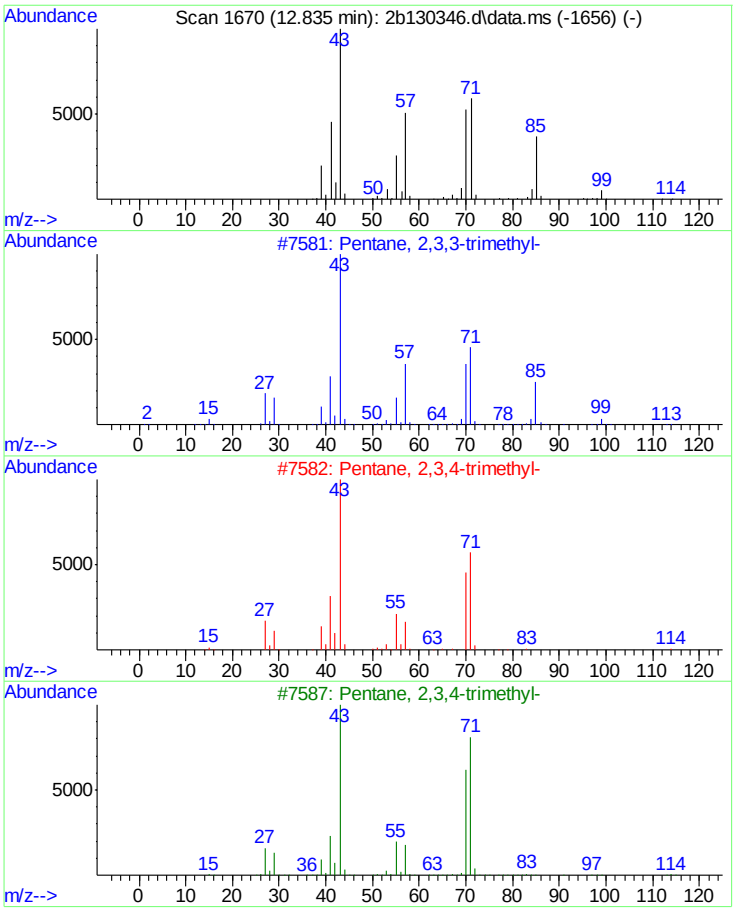
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

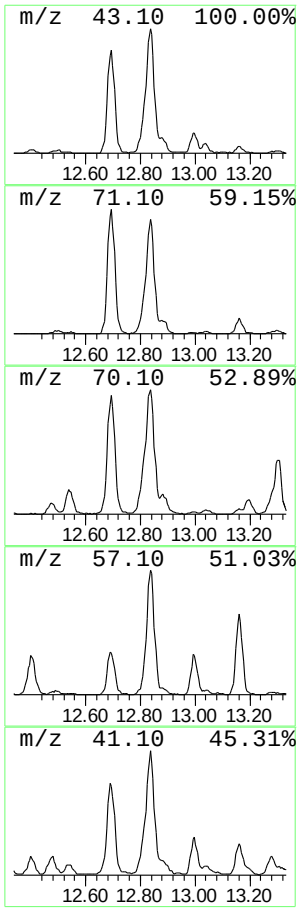
****

Peak Number 7 Pentane, 2,3,3-trimethyl- Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.835	73.38 ug/L	881809	1,4-difluorobenzene	11.724

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	83
2	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	81
3	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	72
4	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	64
5	Heptane, 4-methyl-	114	C8H18	000589-53-7	64





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130346.d
Acq On : 23 Apr 2015 3:37 am
Operator : BridgetK
Sample : jb92664-5
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

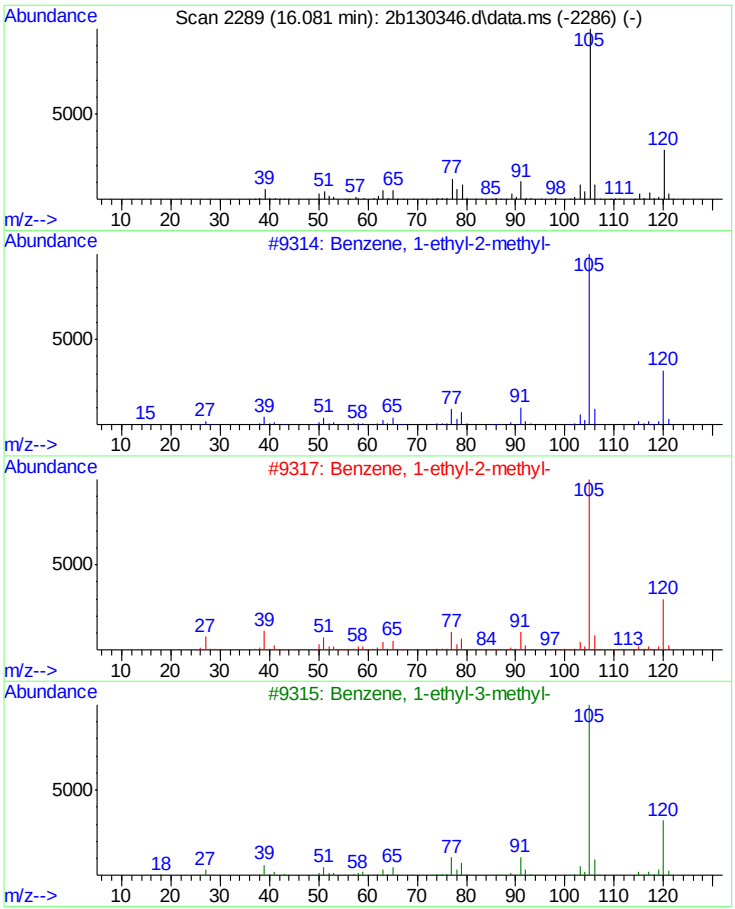
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

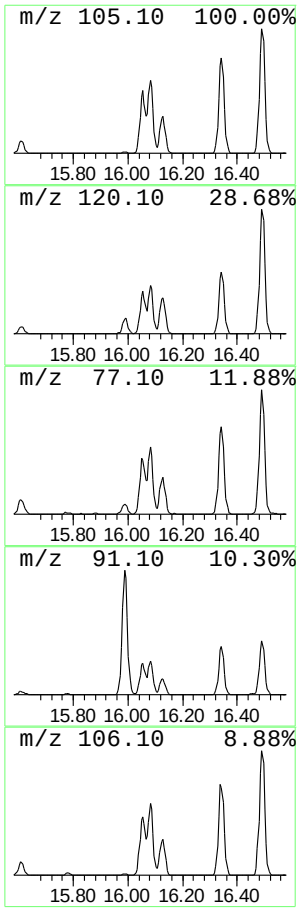
****

Peak Number 8 Benzene, 1-ethyl-2-methyl- Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.081	34.91 ug/L	499117	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	91
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	91
3	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
5	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130346.d
Acq On : 23 Apr 2015 3:37 am
Operator : BridgetK
Sample : jb92664-5
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

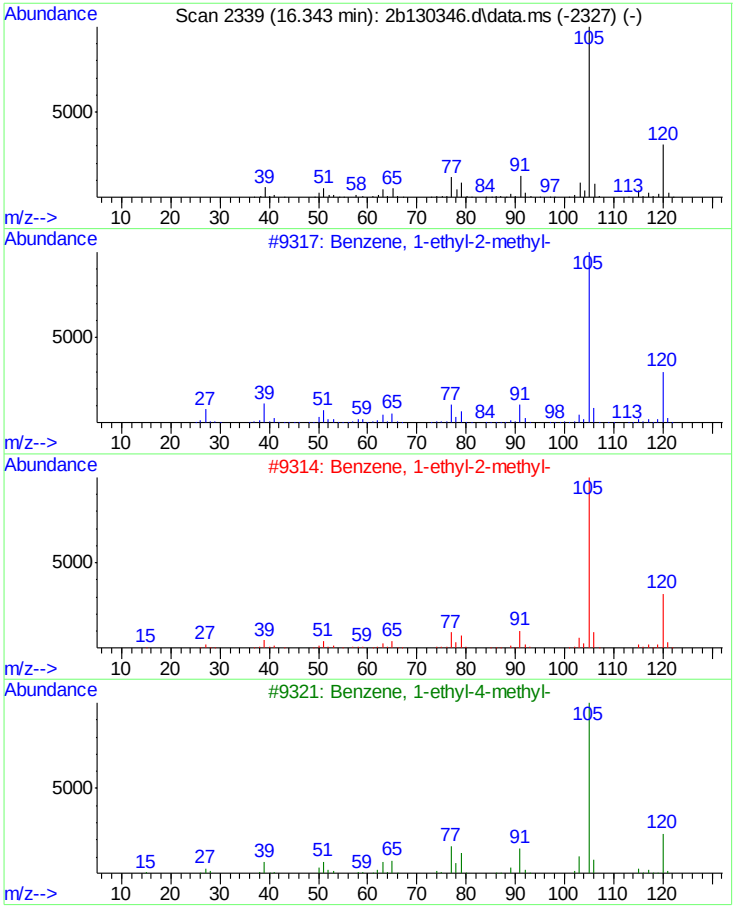
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

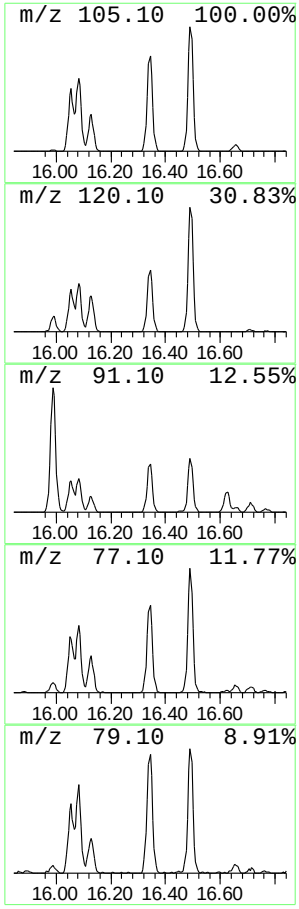
****

Peak Number 9 Benzene, 1-ethyl-2-methyl- Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.343	48.14 ug/L	688243	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
3	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	93
4	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91
5	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91





Library Search Compound Report

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Data File : 2b130346.d
Acq On : 23 Apr 2015 3:37 am
Operator : BridgetK
Sample : jb92664-5
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

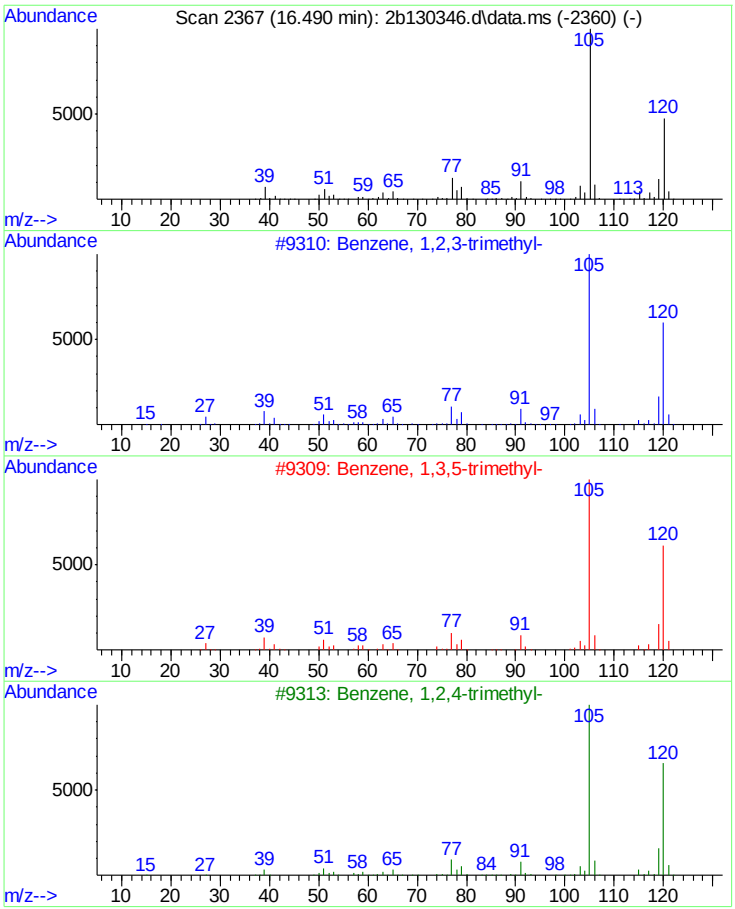
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

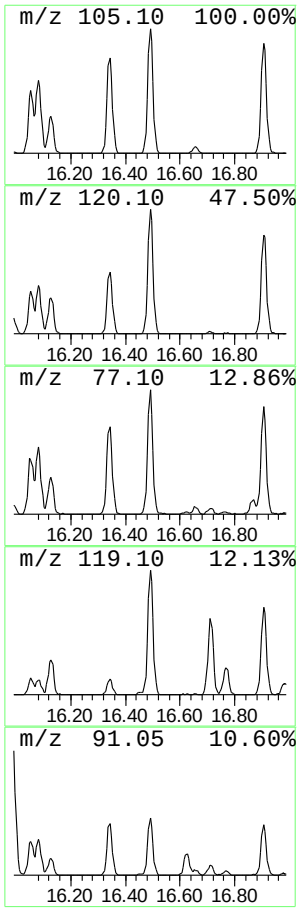
****

Peak Number 10 Benzene, 1,2,3-trimethyl- Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.490	68.35 ug/L	977230	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	97
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
5	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130346.d
Acq On : 23 Apr 2015 3:37 am
Operator : BridgetK
Sample : jb92664-5
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

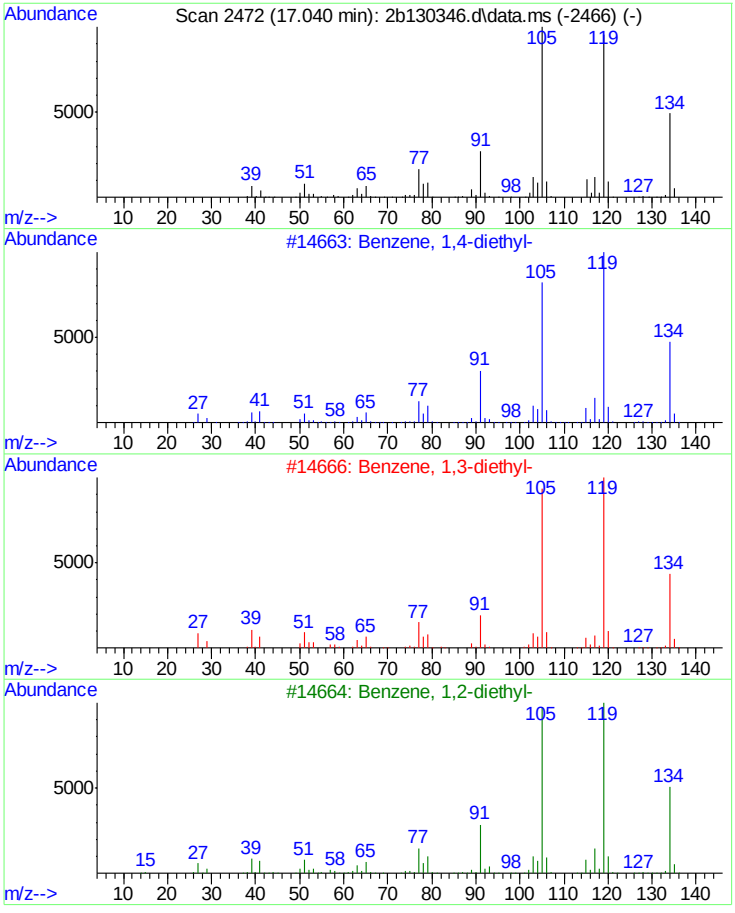
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

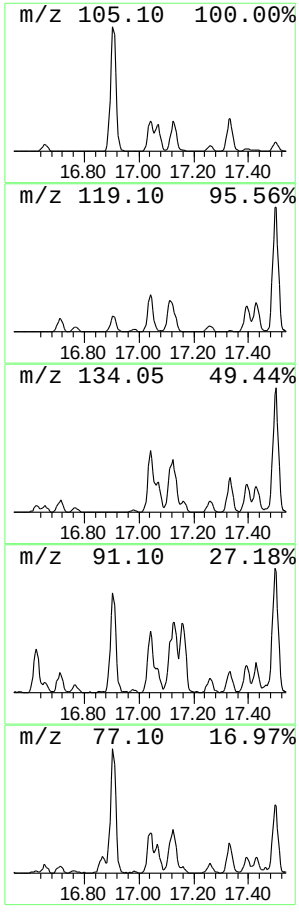
****

Peak Number 11 Benzene, 1,4-diethyl- Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.040	36.09 ug/L	515965	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	97
2	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	96
3	Benzene, 1,2-diethyl-	134	C10H14	000135-01-3	96
4	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	94
5	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130346.d
Acq On : 23 Apr 2015 3:37 am
Operator : BridgetK
Sample : jb92664-5
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

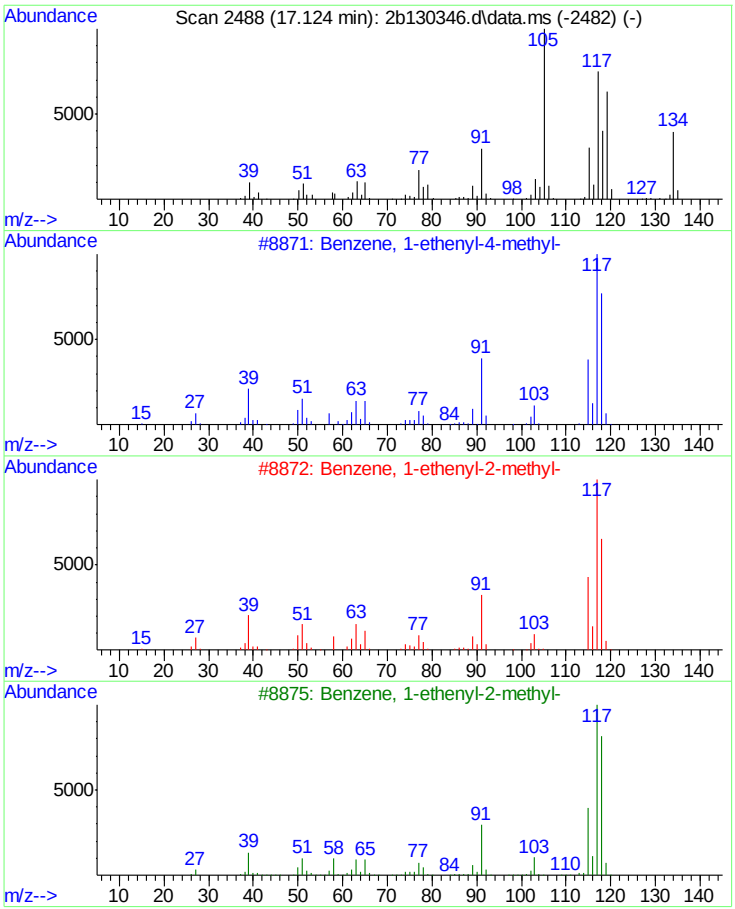
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

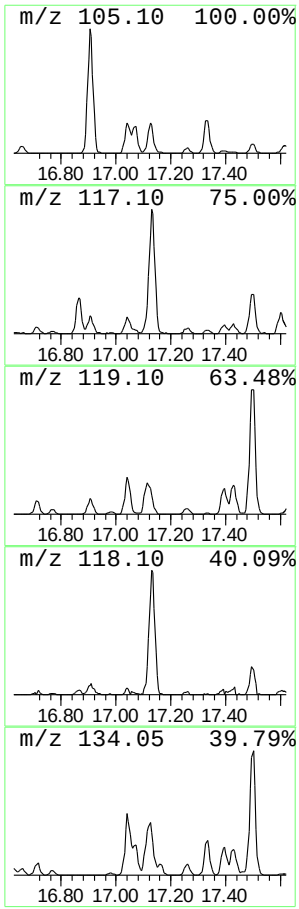
****

Peak Number 12 Benzene, 1-ethenyl-4-methyl- Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.124	44.61 ug/L	637778	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethenyl-4-methyl-	118	C9H10	000622-97-9	95
2	Benzene, 1-ethenyl-2-methyl-	118	C9H10	000611-15-4	86
3	Benzene, 1-ethenyl-2-methyl-	118	C9H10	000611-15-4	64
4	Benzene, 1-ethenyl-2-methyl-	118	C9H10	000611-15-4	50
5	Deltacyclene	118	C9H10	007785-10-6	50





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130346.d
Acq On : 23 Apr 2015 3:37 am
Operator : BridgetK
Sample : jb92664-5
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

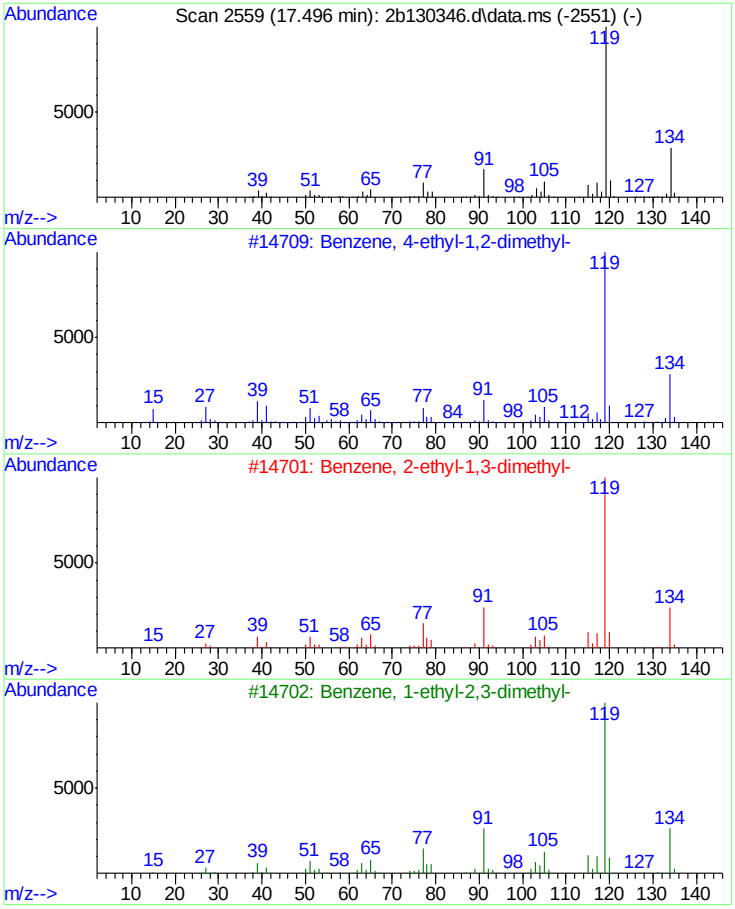
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

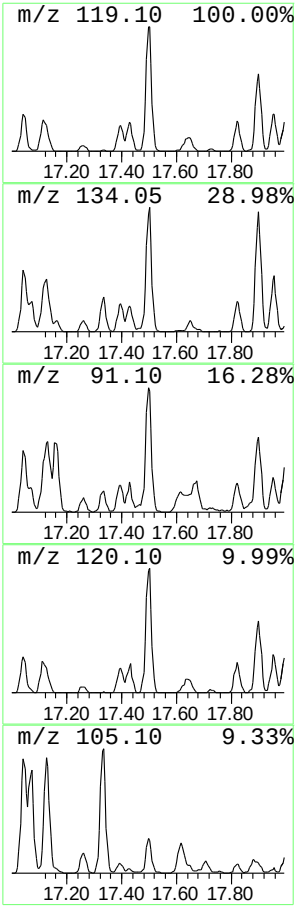
****

Peak Number 13 Benzene, 4-ethyl-1,2-dimethyl- Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.496	48.94 ug/L	699747	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	95
2	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14	002870-04-4	95
3	Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	95
4	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14	002870-04-4	94
5	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130346.d
Acq On : 23 Apr 2015 3:37 am
Operator : BridgetK
Sample : jb92664-5
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

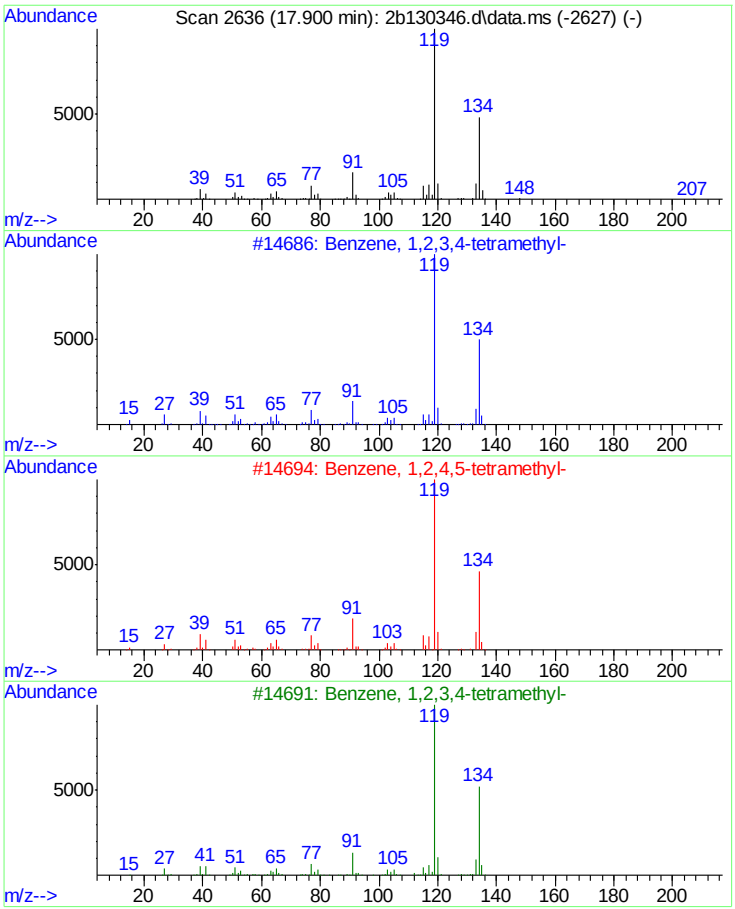
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

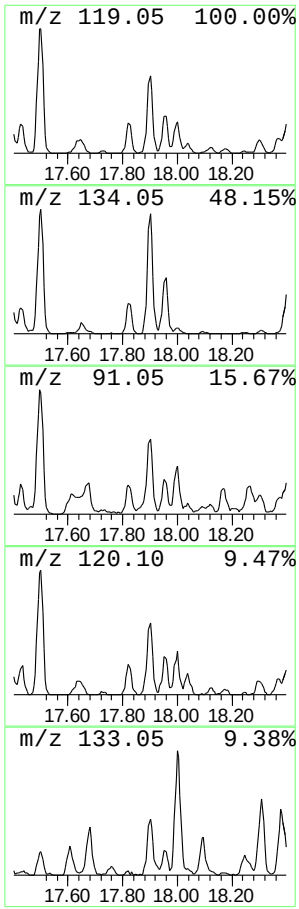
****

Peak Number 14 Benzene, 1,2,3,4-tetramethyl- Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.900	33.02 ug/L	472076	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	97
2	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	97
3	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	97
4	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	95
5	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	95





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130346.d
Acq On : 23 Apr 2015 3:37 am
Operator : BridgetK
Sample : jb92664-5
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

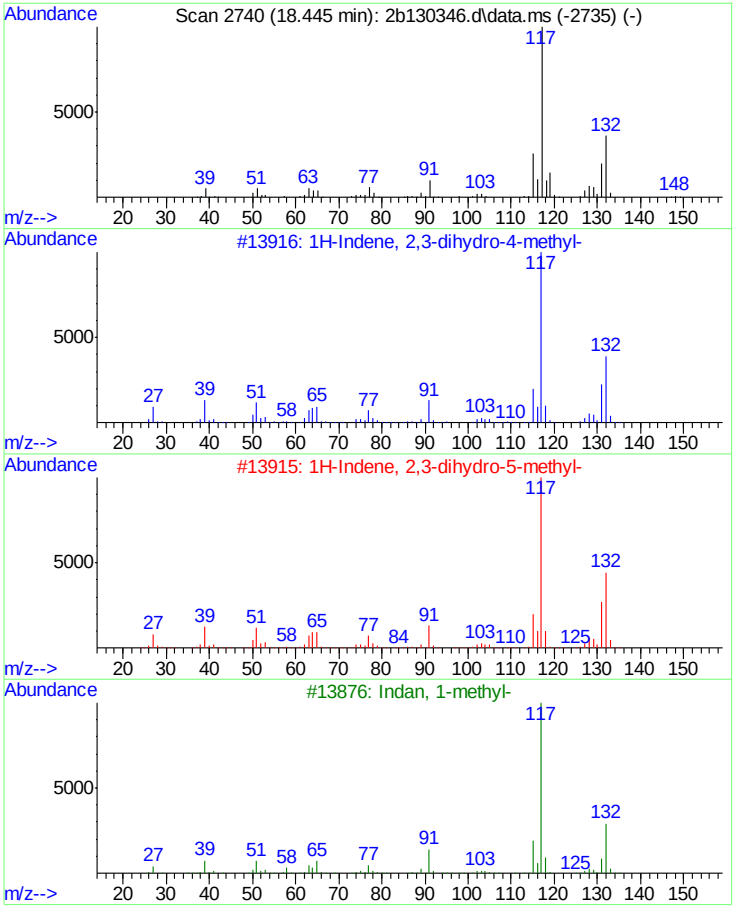
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

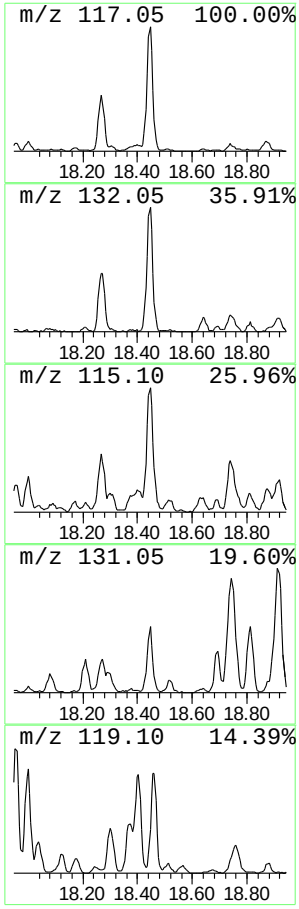
****

Peak Number 15 1H-Indene, 2,3-dihydro-4-me... Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.445	33.77 ug/L	482807	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	81
2	1H-Indene, 2,3-dihydro-5-methyl-	132	C10H12	000874-35-1	81
3	Indan, 1-methyl-	132	C10H12	000767-58-8	74
4	Indan, 1-methyl-	132	C10H12	000767-58-8	68
5	1H-Indene, 2,3-dihydro-2-methyl-	132	C10H12	000824-63-5	64





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130346.d
Acq On : 23 Apr 2015 3:37 am
Operator : BridgetK
Sample : jb92664-5
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Butane, 2-methyl-	6.260	37.6	ug/L	713097	2	10.811	949045	50.0
Butane, 2-methyl-	6.323	81.8	ug/L	1553150	2	10.811	949045	50.0
Pentane, 2-methyl-	8.436	81.2	ug/L	1540410	2	10.811	949045	50.0
Pentane, 3-methyl-	8.840	37.5	ug/L	711748	2	10.811	949045	50.0
Butane, 2,2,3,3...	11.425	100.0	ug/L	1201670	3	11.724	600866	50.0
Pentane, 2,3,4-...	12.694	43.7	ug/L	525591	3	11.724	600866	50.0
Pentane, 2,3,3-...	12.835	73.4	ug/L	881809	3	11.724	600866	50.0
Benzene, 1-ethy...	16.081	34.9	ug/L	499117	5	16.867	714873	50.0
Benzene, 1-ethy...	16.343	48.1	ug/L	688243	5	16.867	714873	50.0
Benzene, 1,2,3-...	16.490	68.3	ug/L	977230	5	16.867	714873	50.0
Benzene, 1,4-di...	17.040	36.1	ug/L	515965	5	16.867	714873	50.0
Benzene, 1-ethe...	17.124	44.6	ug/L	637778	5	16.867	714873	50.0
Benzene, 4-ethy...	17.496	48.9	ug/L	699747	5	16.867	714873	50.0
Benzene, 1,2,3,...	17.900	33.0	ug/L	472076	5	16.867	714873	50.0
1H-Indene, 2,3-...	18.445	33.8	ug/L	482807	5	16.867	714873	50.0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130347.d
Acq On : 23 Apr 2015 4:06 am
Operator : BridgetK
Sample : jb92664-6
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Time: Apr 23 12:31:02 2015
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
QLast Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration

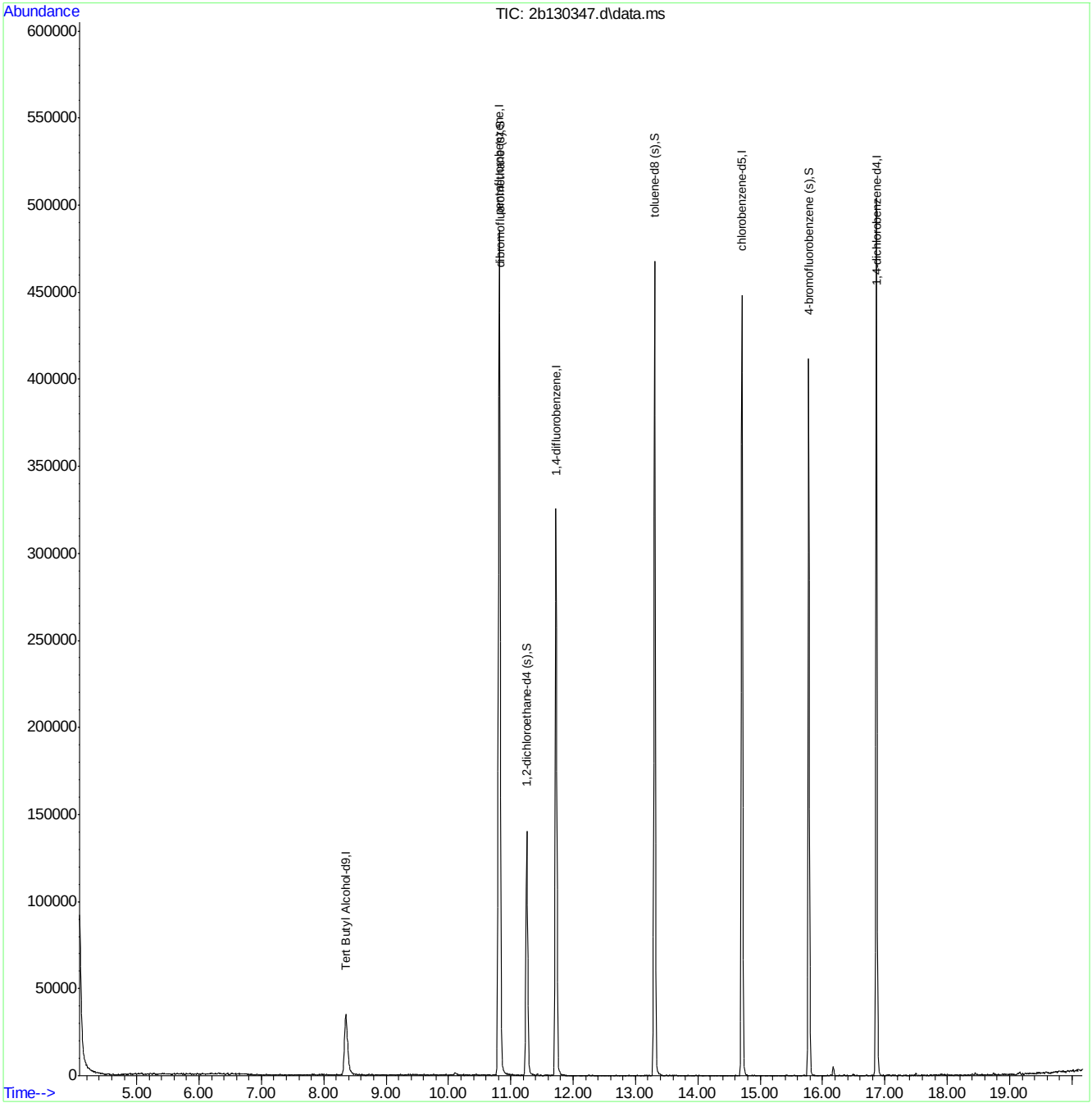
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.352	65	69784	500.00	ug/L	0.00
5) pentafluorobenzene	10.811	168	293283	50.00	ug/L	0.00
58) 1,4-difluorobenzene	11.729	114	273195	50.00	ug/L	0.00
90) chlorobenzene-d5	14.707	117	222363	50.00	ug/L	0.00
106) 1,4-dichlorobenzene-d4	16.867	152	129744	50.00	ug/L	0.00
System Monitoring Compounds						
51) dibromofluoromethane (s)	10.822	113	97852	49.98	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 99.96%			
52) 1,2-dichloroethane-d4 (s)	11.257	65	114936	49.62	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 99.24%			
82) toluene-d8 (s)	13.307	98	289699	50.35	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 100.70%			
108) 4-bromofluorobenzene (s)	15.777	95	104437	49.93	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 99.86%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130347.d
Acq On : 23 Apr 2015 4:06 am
Operator : BridgetK
Sample : jb92664-6
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Time: Apr 23 12:31:02 2015
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
QLast Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130347.d
Acq On : 23 Apr 2015 4:06 am
Operator : BridgetK
Sample : jb92664-6
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 37 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

Signal : TIC: 2b130347.d\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.709	118	120	131	rBV2	540	1277	0.12%	0.026%
2	4.777	131	133	143	rVB2	683	1535	0.14%	0.031%
3	5.076	187	190	214	rVB2	913	3236	0.30%	0.065%
4	5.217	214	217	223	rBV	839	970	0.09%	0.020%
5	5.972	358	361	371	rBV2	932	2162	0.20%	0.044%
6	6.046	371	375	376	rBV2	675	772	0.07%	0.016%
7	6.308	423	425	447	rVB2	1044	2996	0.28%	0.060%
8	6.926	540	543	545	rVB	728	529	0.05%	0.011%
9	7.078	569	572	581	rVB	609	1002	0.09%	0.020%
10	7.173	581	590	602	rBV2	403	1609	0.15%	0.032%
11	7.330	617	620	623	rVB	586	644	0.06%	0.013%
12	7.482	645	649	655	rBV2	735	1843	0.17%	0.037%
13	7.545	659	661	667	rVV2	324	580	0.05%	0.012%
14	7.671	684	685	695	rBV	607	1183	0.11%	0.024%
15	7.734	695	697	704	rVV2	601	914	0.09%	0.018%
16	7.812	704	712	729	rVB2	914	3353	0.31%	0.068%
17	8.012	747	750	754	rBV	512	599	0.06%	0.012%
18	8.043	754	756	769	rVB2	580	1301	0.12%	0.026%
19	8.211	785	788	794	rVB2	583	763	0.07%	0.015%
20	8.352	803	815	853	rVB2	35043	129589	12.14%	2.612%
21	8.567	853	856	863	rVB3	713	813	0.08%	0.016%
22	8.615	863	865	876	rVB	929	2152	0.20%	0.043%
23	8.688	876	879	883	rBV2	740	1166	0.11%	0.023%
24	8.871	911	914	920	rVB2	503	799	0.07%	0.016%
25	9.359	1005	1007	1018	rBV	595	1233	0.12%	0.025%
26	9.433	1018	1021	1026	rVB2	650	804	0.08%	0.016%
27	9.606	1050	1054	1060	rVB2	538	707	0.07%	0.014%
28	9.668	1062	1066	1081	rBV	440	1342	0.13%	0.027%
29	9.763	1081	1084	1099	rVV	454	778	0.07%	0.016%
30	9.946	1116	1119	1121	rVB2	494	476	0.04%	0.010%
31	10.025	1129	1134	1143	rBV	335	660	0.06%	0.013%
32	10.104	1143	1149	1162	rVB4	1484	3807	0.36%	0.077%
33	10.292	1178	1185	1190	rBV2	485	939	0.09%	0.019%
34	10.381	1198	1202	1207	rBV	505	763	0.07%	0.015%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130347.d
Acq On : 23 Apr 2015 4:06 am
Operator : BridgetK
Sample : jb92664-6
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 37 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

35	10.444	1207	1214	1215	rVV2	525	618	0.06%	0.012%
36	10.560	1226	1236	1238	rVB2	405	815	0.08%	0.016%
37	10.623	1245	1248	1261	rVB	490	1102	0.10%	0.022%
38	10.817	1275	1285	1323	rVV2	485456	1067595	100.00%	21.516%
39	11.026	1323	1325	1330	rVB	694	546	0.05%	0.011%
40	11.095	1335	1338	1344	rVB	477	651	0.06%	0.013%
41	11.257	1359	1369	1396	rVB	140448	289702	27.14%	5.839%
42	11.420	1397	1400	1408	rVB3	963	1504	0.14%	0.030%
43	11.472	1408	1410	1419	rVB	525	948	0.09%	0.019%
44	11.535	1419	1422	1424	rBV	538	403	0.04%	0.008%
45	11.561	1424	1427	1434	rBV2	395	558	0.05%	0.011%
46	11.661	1443	1446	1450	rBV	540	711	0.07%	0.014%
47	11.724	1450	1458	1487	rVB	325767	611848	57.31%	12.331%
48	12.085	1523	1527	1533	rBB	274	395	0.04%	0.008%
49	12.248	1556	1558	1567	rBB	312	687	0.06%	0.014%
50	12.688	1638	1642	1646	rBB	535	440	0.04%	0.009%
51	13.218	1738	1743	1751	rBB	481	793	0.07%	0.016%
52	13.307	1752	1760	1787	rBB	467855	756649	70.87%	15.249%
53	14.707	2019	2027	2047	rBB	448170	670116	62.77%	13.505%
54	15.210	2120	2123	2129	rBB	264	423	0.04%	0.009%
55	15.378	2151	2155	2159	rBB	256	402	0.04%	0.008%
56	15.415	2159	2162	2168	rBB	338	544	0.05%	0.011%
57	15.646	2199	2206	2208	rBB	273	402	0.04%	0.008%
58	15.777	2224	2231	2248	rBB	411877	593301	55.57%	11.957%
59	16.054	2280	2284	2287	rBB	242	394	0.04%	0.008%
60	16.133	2296	2299	2302	rBV	425	485	0.05%	0.010%
61	16.170	2302	2306	2316	rVB	5404	7509	0.70%	0.151%
62	16.269	2321	2325	2328	rBB	338	396	0.04%	0.008%
63	16.348	2335	2340	2346	rBB	725	895	0.08%	0.018%
64	16.490	2362	2367	2376	rBB2	973	1600	0.15%	0.032%
65	16.694	2401	2406	2411	rBB2	380	639	0.06%	0.013%
66	16.862	2430	2438	2456	rVB	504205	739096	69.23%	14.895%
67	17.035	2468	2471	2475	rBB	542	616	0.06%	0.012%
68	17.124	2483	2488	2491	rBV	418	742	0.07%	0.015%
69	17.155	2491	2494	2503	rVB	631	975	0.09%	0.020%
70	17.329	2519	2527	2529	rBV	702	724	0.07%	0.015%
71	17.349	2529	2531	2536	rVB	545	488	0.05%	0.010%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130347.d
Acq On : 23 Apr 2015 4:06 am
Operator : BridgetK
Sample : jb92664-6
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 37 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

72	17.391	2536	2539	2545	rBB	482	724	0.07%	0.015%
73	17.439	2545	2548	2551	rBV	409	530	0.05%	0.011%
74	17.496	2557	2559	2567	rVB2	1464	1848	0.17%	0.037%
75	17.543	2567	2568	2572	rBB2	570	431	0.04%	0.009%
76	17.612	2579	2581	2586	rBV2	563	734	0.07%	0.015%
77	17.680	2590	2594	2598	rVB2	567	472	0.04%	0.010%
78	17.737	2604	2605	2611	rVB	493	423	0.04%	0.009%
79	17.790	2611	2615	2618	rBV2	367	545	0.05%	0.011%
80	17.905	2632	2637	2645	rBV3	1280	2765	0.26%	0.056%
81	17.958	2645	2647	2649	rVV	765	685	0.06%	0.014%
82	18.005	2653	2656	2660	rVV	855	996	0.09%	0.020%
83	18.052	2664	2665	2675	rBV	356	657	0.06%	0.013%
84	18.131	2675	2680	2682	rBV	436	570	0.05%	0.011%
85	18.199	2689	2693	2696	rBV	356	433	0.04%	0.009%
86	18.267	2703	2706	2714	rVB2	584	888	0.08%	0.018%
87	18.346	2714	2721	2724	rBV	520	969	0.09%	0.020%
88	18.393	2724	2730	2736	rBV2	977	1303	0.12%	0.026%
89	18.445	2736	2740	2753	rVB4	1256	2358	0.22%	0.048%
90	18.587	2764	2767	2774	rBV	388	606	0.06%	0.012%
91	18.739	2791	2796	2805	rVB3	1333	2694	0.25%	0.054%
92	18.818	2807	2811	2818	rVV	429	700	0.07%	0.014%
93	18.880	2820	2823	2826	rVB	787	998	0.09%	0.020%
94	18.912	2826	2829	2842	rBV3	838	2202	0.21%	0.044%
95	19.059	2851	2857	2866	rBV2	696	1743	0.16%	0.035%
96	19.158	2874	2876	2882	rVB3	1602	2077	0.19%	0.042%
97	19.206	2882	2885	2890	rBV3	884	1090	0.10%	0.022%
98	19.263	2890	2896	2905	rBV4	979	2352	0.22%	0.047%
99	19.436	2927	2929	2932	rBV3	967	1109	0.10%	0.022%

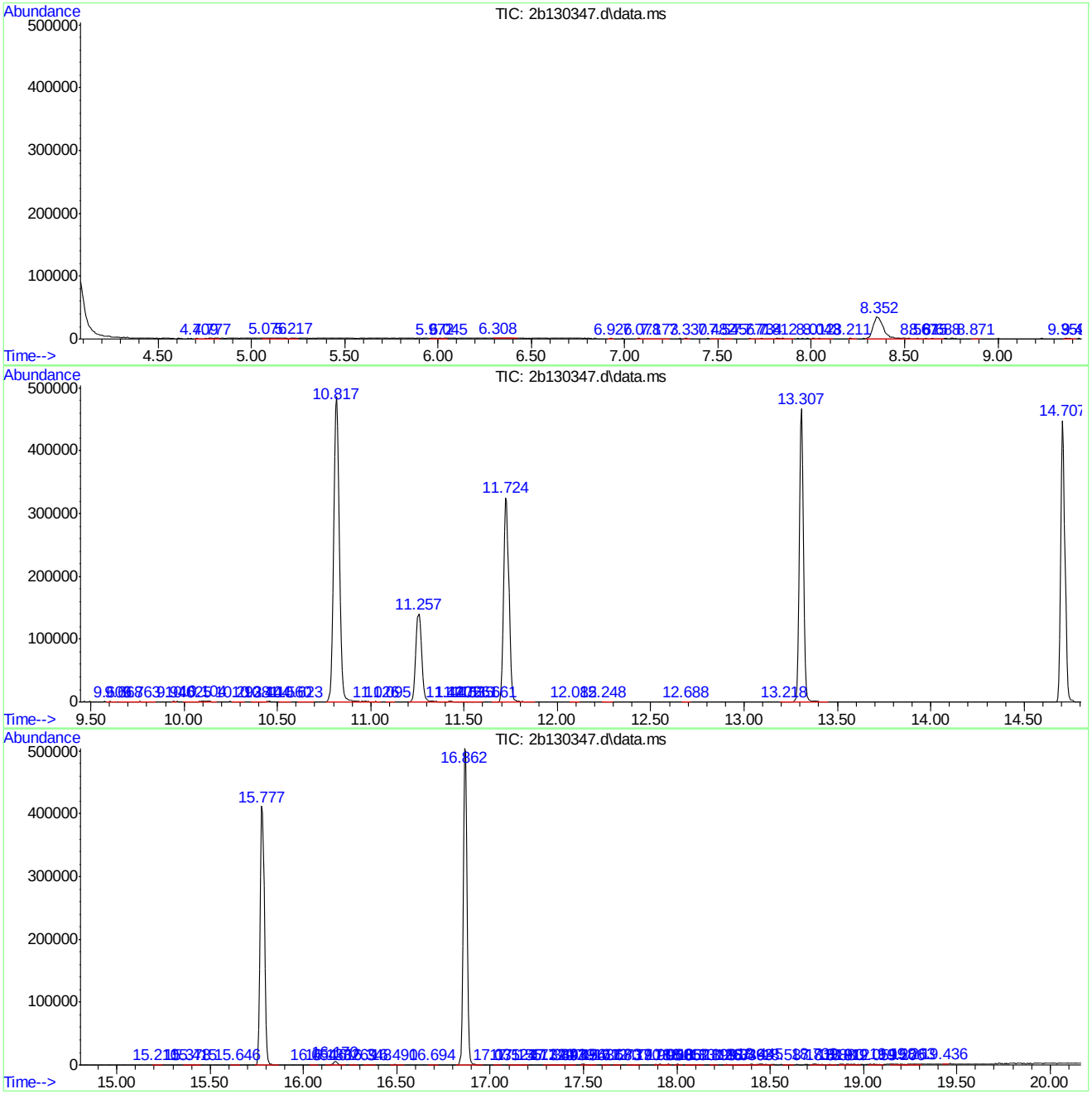
Sum of corrected areas: 4961910

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130347.d
Acq On : 23 Apr 2015 4:06 am
Operator : BridgetK
Sample : jb92664-6
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p



Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130347.d
Acq On : 23 Apr 2015 4:06 am
Operator : BridgetK
Sample : jb92664-6
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	Internal Standard RT	Internal Standard Resp	Internal Standard Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130348.d
Acq On : 23 Apr 2015 4:34 am
Operator : BridgetK
Sample : jb92664-7
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Time: Apr 23 14:19:38 2015
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
QLast Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration

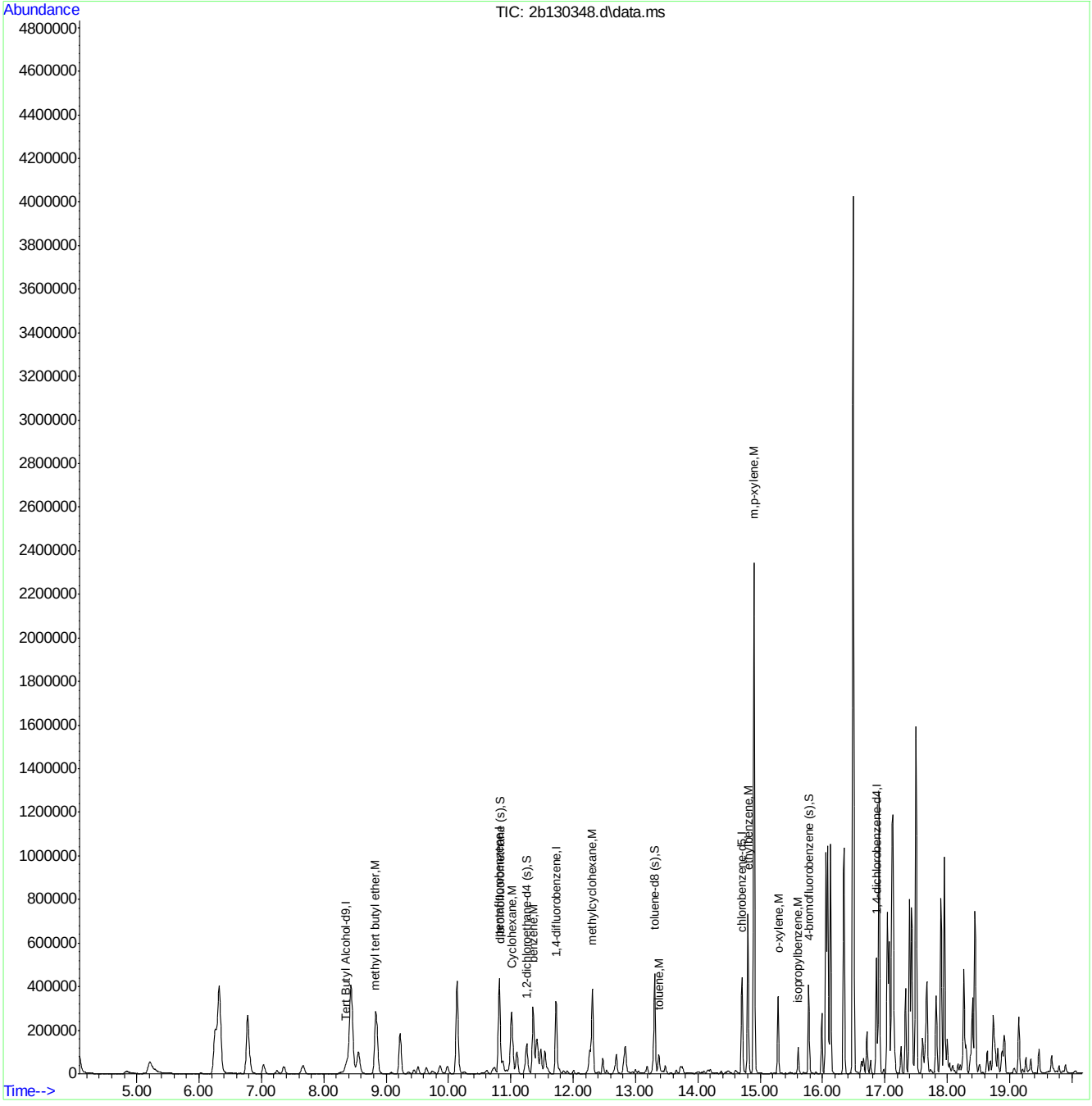
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.352	65	66408	500.00	ug/L	0.00
5) pentafluorobenzene	10.811	168	265398	50.00	ug/L	0.00
58) 1,4-difluorobenzene	11.724	114	250476	50.00	ug/L	0.00
90) chlorobenzene-d5	14.707	117	214144	50.00	ug/L	0.00
106) 1,4-dichlorobenzene-d4	16.867	152	134131	50.00	ug/L	0.00
System Monitoring Compounds						
51) dibromofluoromethane (s)	10.822	113	86328	48.72	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 97.44%			
52) 1,2-dichloroethane-d4 (s)	11.257	65	106242	50.69	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 101.38%			
82) toluene-d8 (s)	13.307	98	270266	51.23	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 102.46%			
108) 4-bromofluorobenzene (s)	15.776	95	105241	48.67	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 97.34%			
Target Compounds						Qvalue
34) methyl tert butyl ether	8.819	73	15413	3.31	ug/L	# 1
56) Cyclohexane	11.016	84	99829	49.66	ug/L	# 65
66) benzene	11.357	78	270371	53.51	ug/L	100
79) methylcyclohexane	12.306	83	170011	77.17	ug/L	100
84) toluene	13.375	92	33032	10.29	ug/L	95
100) ethylbenzene	14.801	91	463555	74.50	ug/L	97
101) m,p-xylene	14.901	106	624957	261.99	ug/L	99
102) o-xylene	15.289	106	86293	34.00	ug/L	94
107) isopropylbenzene	15.609	105	70505	10.15	ug/L	98

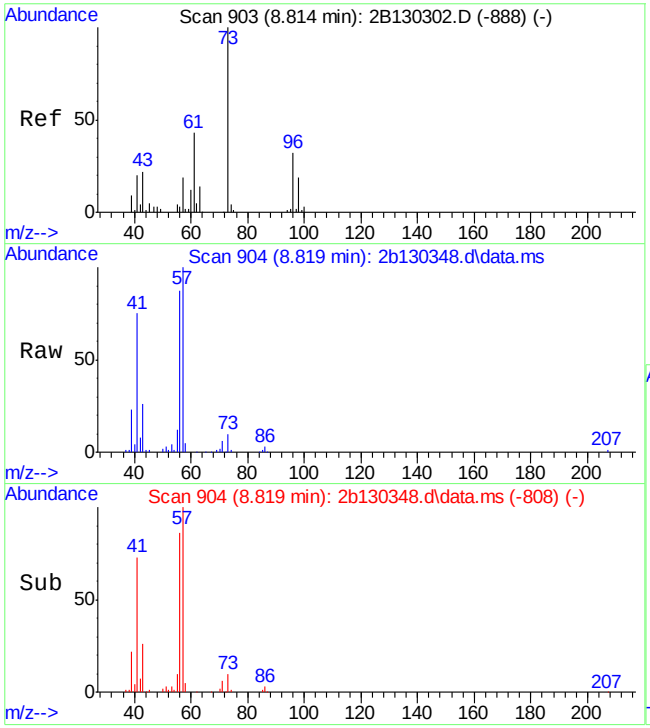
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130348.d
Acq On : 23 Apr 2015 4:34 am
Operator : BridgetK
Sample : jb92664-7
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Time: Apr 23 14:19:38 2015
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
QLast Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration

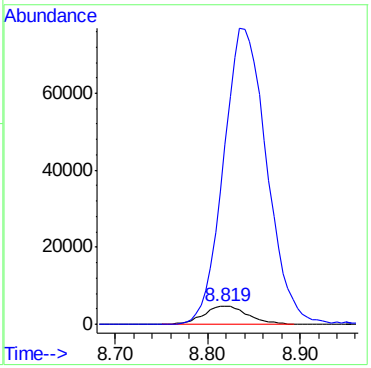


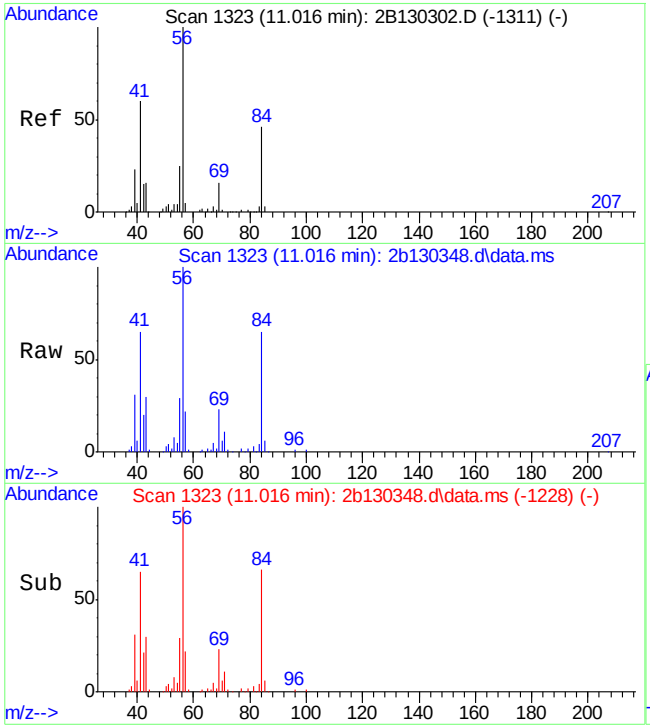


#34
methyl tert butyl ether
Concen: 3.31 ug/L
RT: 8.819 min Scan# 904
Delta R.T. 0.005 min
Lab File: 2b130348.d
Acq: 23 Apr 2015 4:34 am

Tgt Ion: 73 Resp: 15413

Ion	Ratio	Lower	Upper
73	100		
57	982.2	0.0	48.7#

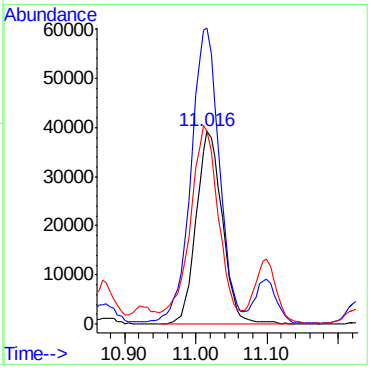


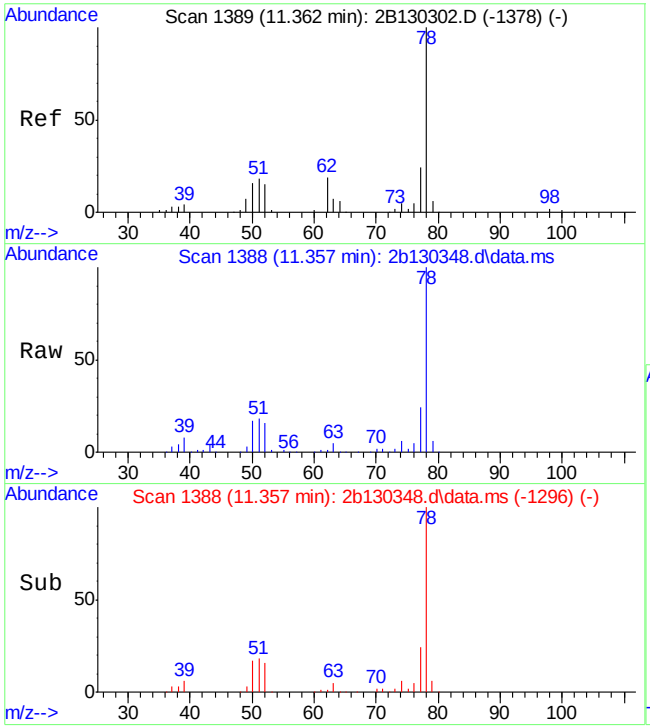


#56
Cyclohexane
Concen: 49.66 ug/L
RT: 11.016 min Scan# 1323
Delta R.T. 0.000 min
Lab File: 2b130348.d
Acq: 23 Apr 2015 4:34 am

Tgt Ion: 84 Resp: 99829

Ion	Ratio	Lower	Upper
84	100		
56	153.1	188.5	248.5#
41	99.7	100.4	160.4#

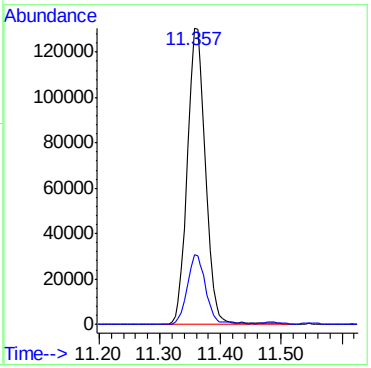


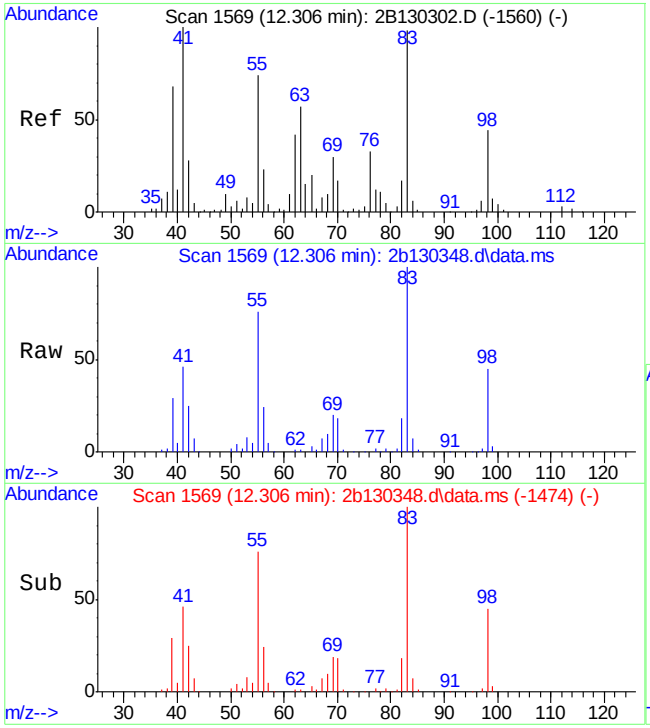


#66
benzene
Concen: 53.51 ug/L
RT: 11.357 min Scan# 1388
Delta R.T. -0.005 min
Lab File: 2b130348.d
Acq: 23 Apr 2015 4:34 am

Tgt Ion: 78 Resp: 270371

Ion	Ratio	Lower	Upper
78	100		
77	23.6	0.0	53.8

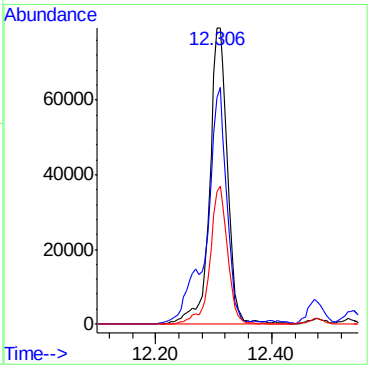


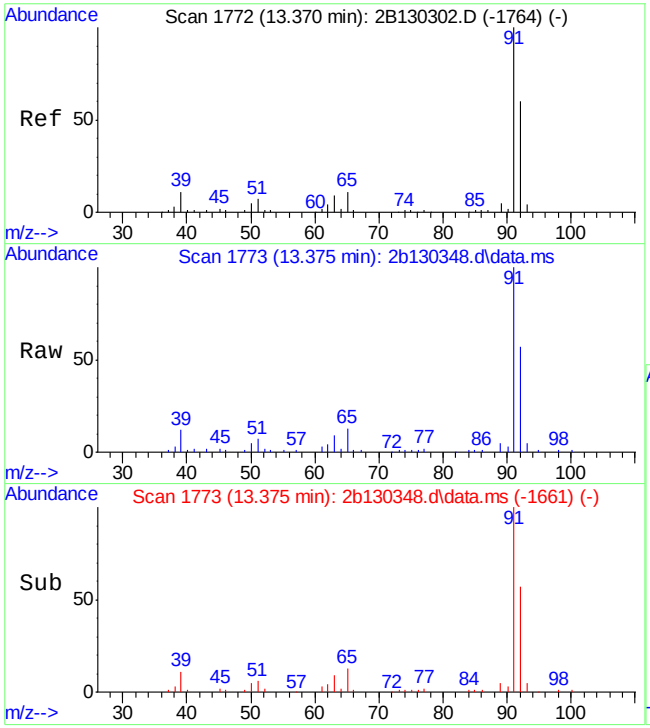


#79
methylcyclohexane
Concen: 77.17 ug/L
RT: 12.306 min Scan# 1569
Delta R.T. 0.000 min
Lab File: 2b130348.d
Acq: 23 Apr 2015 4:34 am

Tgt Ion: 83 Resp: 170011

Ion	Ratio	Lower	Upper
83	100		
55	76.2	45.8	105.8
98	44.6	14.7	74.7

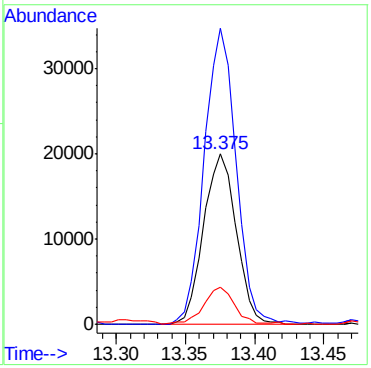


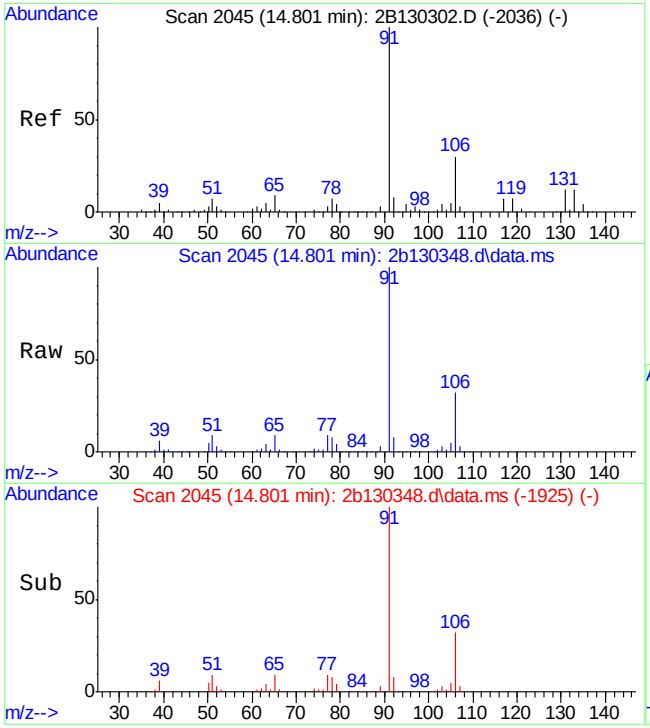


#84
toluene
Concen: 10.29 ug/L
RT: 13.375 min Scan# 1773
Delta R.T. 0.005 min
Lab File: 2b130348.d
Acq: 23 Apr 2015 4:34 am

Tgt Ion: 92 Resp: 33032

Ion	Ratio	Lower	Upper
92	100		
91	174.1	137.0	197.0
65	22.2	0.0	49.0

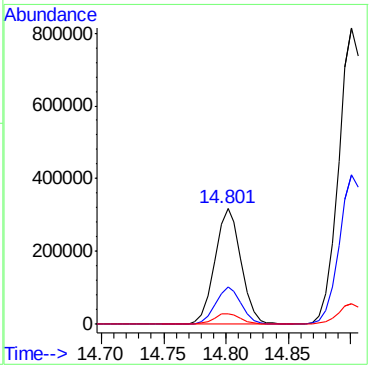


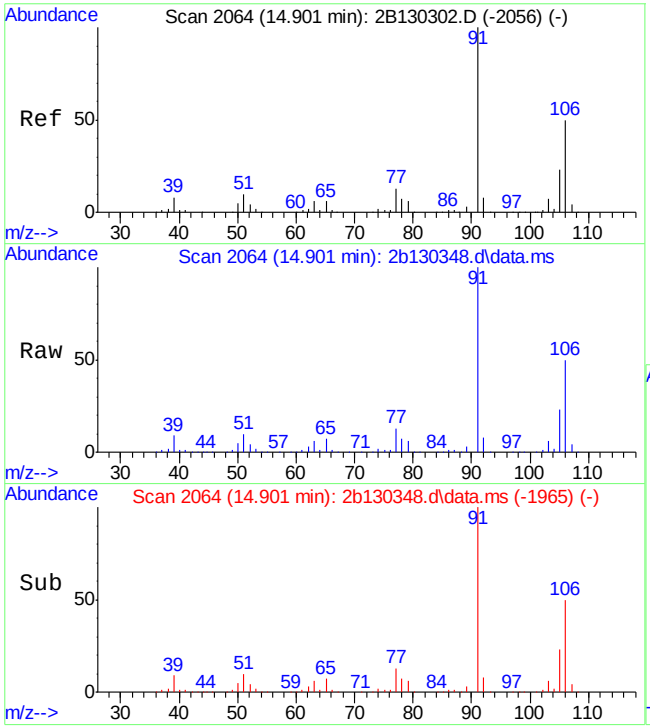


#100
ethylbenzene
Concen: 74.50 ug/L
RT: 14.801 min Scan# 2045
Delta R.T. 0.000 min
Lab File: 2b130348.d
Acq: 23 Apr 2015 4:34 am

Tgt Ion: 91 Resp: 463555

Ion	Ratio	Lower	Upper
91	100		
106	32.1	0.3	60.3
65	8.8	0.0	38.6

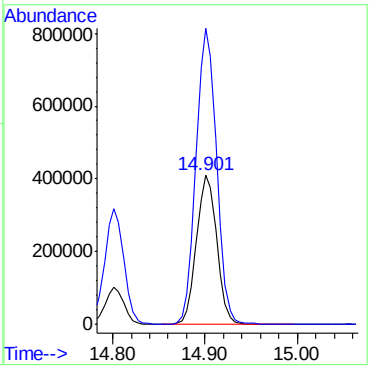


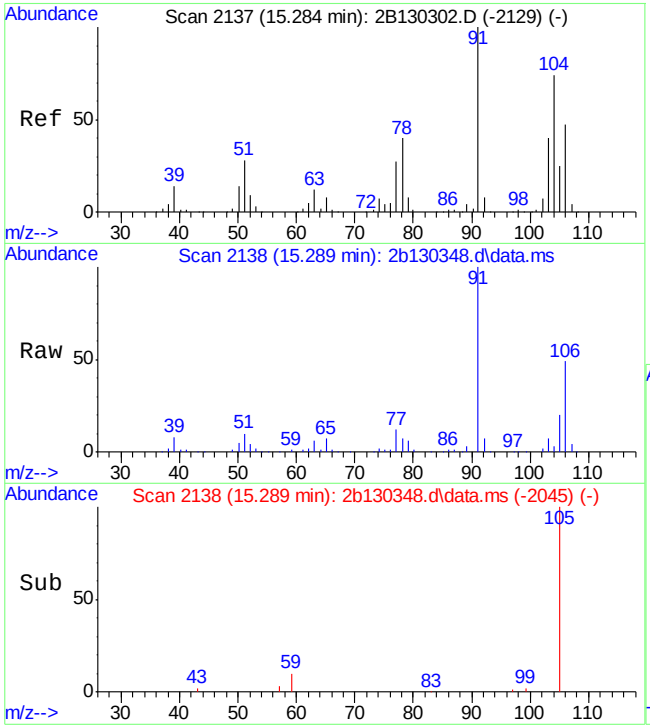


#101
m,p-xylene
Concen: 261.99 ug/L
RT: 14.901 min Scan# 2064
Delta R.T. 0.000 min
Lab File: 2b130348.d
Acq: 23 Apr 2015 4:34 am

Tgt Ion:106 Resp: 624957

Ion	Ratio	Lower	Upper
106	100		
91	198.1	169.4	229.4

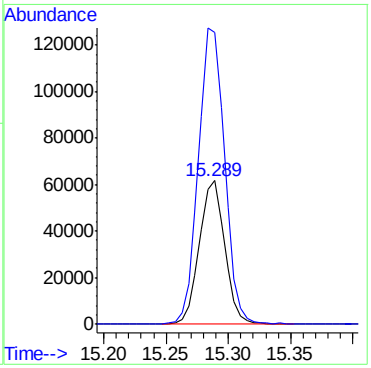


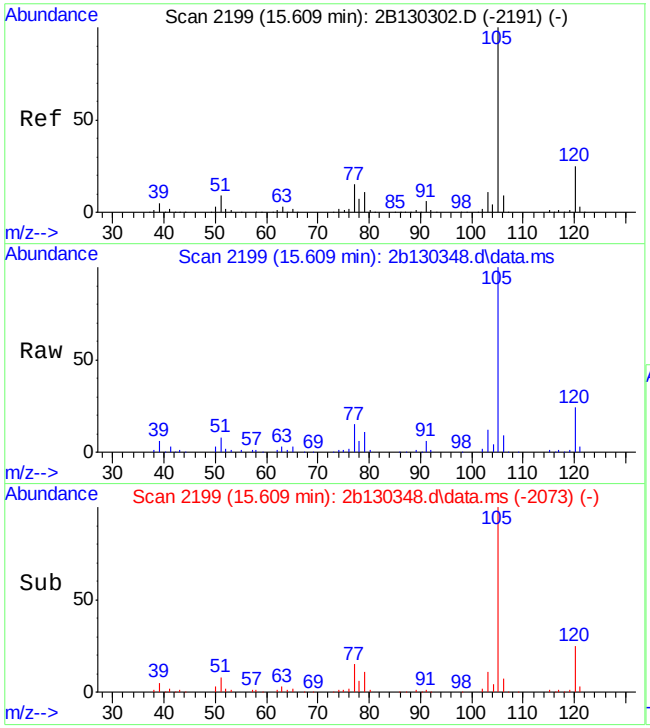


#102
o-xylene
Concen: 34.00 ug/L
RT: 15.289 min Scan# 2138
Delta R.T. 0.005 min
Lab File: 2b130348.d
Acq: 23 Apr 2015 4:34 am

Tgt Ion:106 Resp: 86293

Ion	Ratio	Lower	Upper
106	100		
91	203.8	183.1	243.1

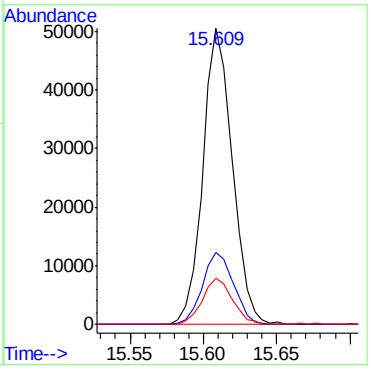




#107
isopropylbenzene
Concen: 10.15 ug/L
RT: 15.609 min Scan# 2199
Delta R.T. 0.000 min
Lab File: 2b130348.d
Acq: 23 Apr 2015 4:34 am

Tgt Ion:105 Resp: 70505

Ion	Ratio	Lower	Upper
105	100		
120	24.3	0.0	55.5
77	15.4	0.0	45.0



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130348.d
Acq On : 23 Apr 2015 4:34 am
Operator : BridgetK
Sample : jb92664-7
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 38 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

Signal : TIC: 2b130348.d\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.840	131	145	174	rBV	11178	66473	1.18%	0.115%
2	5.212	192	216	269	rVV3	54295	365154	6.49%	0.631%
3	6.323	420	428	475	rVB2	404768	1480716	26.33%	2.560%
4	6.779	501	515	542	rVB	270796	883861	15.72%	1.528%
5	7.036	552	564	581	rVB3	42341	113866	2.02%	0.197%
6	7.246	589	604	615	rBV2	14666	41601	0.74%	0.072%
7	7.356	615	625	643	rVB3	32602	96722	1.72%	0.167%
8	7.666	669	684	703	rBV	37594	131580	2.34%	0.228%
9	8.436	787	831	845	rBV3	407084	1744309	31.02%	3.016%
10	8.552	845	853	879	rVV4	99964	362996	6.45%	0.628%
11	8.835	892	907	939	rVV	284479	940503	16.72%	1.626%
12	9.223	966	981	998	rBV	185538	462129	8.22%	0.799%
13	9.453	1015	1025	1030	rVV2	16898	41925	0.75%	0.072%
14	9.511	1030	1036	1049	rVB	32466	75047	1.33%	0.130%
15	9.642	1049	1061	1072	rBV3	27306	69895	1.24%	0.121%
16	9.737	1072	1079	1094	rVV4	10806	38116	0.68%	0.066%
17	9.868	1094	1104	1117	rVV4	37675	104963	1.87%	0.181%
18	9.983	1117	1126	1139	rVB3	35186	99835	1.78%	0.173%
19	10.140	1143	1156	1170	rBV	424471	1102425	19.60%	1.906%
20	10.617	1224	1247	1255	rVB8	15508	52995	0.94%	0.092%
21	10.733	1255	1269	1276	rBV4	28522	99572	1.77%	0.172%
22	10.817	1276	1285	1293	rVV2	437824	987189	17.55%	1.707%
23	10.869	1293	1295	1302	rVV2	59247	104492	1.86%	0.181%
24	10.927	1302	1306	1310	rVV4	17152	36736	0.65%	0.064%
25	11.011	1310	1322	1332	rVV3	281724	807582	14.36%	1.396%
26	11.100	1332	1339	1351	rVB	102147	228608	4.07%	0.395%
27	11.257	1351	1369	1380	rBV	140787	365122	6.49%	0.631%
28	11.357	1380	1388	1394	rVV	305305	632258	11.24%	1.093%
29	11.420	1394	1400	1407	rVV4	158967	424198	7.54%	0.733%
30	11.482	1407	1412	1418	rVV2	113200	243548	4.33%	0.421%
31	11.545	1418	1424	1449	rVB3	104374	290024	5.16%	0.501%
32	11.724	1449	1458	1475	rBV	331747	670875	11.93%	1.160%
33	12.311	1540	1570	1580	rBV2	390111	1036702	18.43%	1.793%
34	12.473	1594	1601	1609	rVV	69093	129337	2.30%	0.224%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130348.d
Acq On : 23 Apr 2015 4:34 am
Operator : BridgetK
Sample : jb92664-7
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 38 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

35	12.688	1627	1642	1657	rBV2	89685	204102	3.63%	0.353%
36	12.835	1657	1670	1687	rBV3	124174	349097	6.21%	0.604%
37	13.192	1727	1738	1745	rVB6	32796	76914	1.37%	0.133%
38	13.307	1745	1760	1767	rBV	457618	817068	14.53%	1.413%
39	13.375	1767	1773	1782	rVV	86988	166501	2.96%	0.288%
40	13.480	1788	1793	1803	rVB3	35698	68545	1.22%	0.119%
41	13.653	1816	1826	1832	rBV5	18215	34812	0.62%	0.060%
42	13.721	1832	1839	1842	rVV	33549	59904	1.07%	0.104%
43	13.747	1842	1844	1855	rVB4	32182	53156	0.95%	0.092%
44	14.162	1916	1923	1927	rBV6	16102	40306	0.72%	0.070%
45	14.487	1979	1985	1999	rVB10	13519	42898	0.76%	0.074%
46	14.607	1999	2008	2020	rBV6	17337	44352	0.79%	0.077%
47	14.707	2020	2027	2038	rBV	442574	672262	11.95%	1.162%
48	14.801	2038	2045	2055	rVV	732160	1083066	19.26%	1.873%
49	14.901	2055	2064	2077	rVV	2340838	3587614	63.79%	6.203%
50	15.284	2130	2137	2154	rVB	354101	532016	9.46%	0.920%
51	15.609	2189	2199	2209	rVB	122475	181350	3.22%	0.314%
52	15.776	2223	2231	2239	rBV	407726	592939	10.54%	1.025%
53	15.986	2259	2271	2277	rBV	277434	381710	6.79%	0.660%
54	16.054	2277	2284	2287	rVV	1012581	1522715	27.08%	2.633%
55	16.081	2287	2289	2294	rVV	1041156	1309093	23.28%	2.264%
56	16.128	2294	2298	2314	rVB	1056139	1437400	25.56%	2.485%
57	16.343	2330	2339	2355	rBV	1035877	1441196	25.63%	2.492%
58	16.490	2355	2367	2385	rVB	4025889	5623749	100.00%	9.724%
59	16.626	2385	2393	2395	rBV	59260	81709	1.45%	0.141%
60	16.657	2395	2399	2404	rVV	69798	96742	1.72%	0.167%
61	16.710	2404	2409	2415	rVV	190558	258521	4.60%	0.447%
62	16.767	2415	2420	2427	rVB	62564	83327	1.48%	0.144%
63	16.862	2432	2438	2442	rBV	533583	773650	13.76%	1.338%
64	16.904	2442	2446	2456	rVB	1287270	1808625	32.16%	3.127%
65	17.040	2465	2472	2475	rBV	741443	1083814	19.27%	1.874%
66	17.066	2475	2477	2481	rVV	603754	745907	13.26%	1.290%
67	17.124	2481	2488	2507	rVB3	1186207	2668714	47.45%	4.615%
68	17.260	2507	2514	2521	rVB	123762	176214	3.13%	0.305%
69	17.334	2521	2528	2534	rBV	392555	566316	10.07%	0.979%
70	17.397	2534	2540	2543	rVV	796771	1181757	21.01%	2.043%
71	17.428	2543	2546	2553	rVV	760547	1019523	18.13%	1.763%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130348.d
Acq On : 23 Apr 2015 4:34 am
Operator : BridgetK
Sample : jb92664-7
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 38 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

72	17.496	2553	2559	2573	rVB	1593207	2304130	40.97%	3.984%
73	17.601	2573	2579	2584	rBV2	163048	271933	4.84%	0.470%
74	17.669	2584	2592	2600	rVV2	419912	811336	14.43%	1.403%
75	17.821	2611	2621	2629	rVV	357165	546852	9.72%	0.946%
76	17.900	2629	2636	2641	rVV	802754	1157715	20.59%	2.002%
77	17.952	2641	2646	2652	rVV	991414	1467965	26.10%	2.538%
78	18.000	2652	2655	2659	rVV	158789	210813	3.75%	0.365%
79	18.036	2659	2662	2666	rVV	45692	63124	1.12%	0.109%
80	18.089	2666	2672	2682	rVB5	35820	81781	1.45%	0.141%
81	18.167	2682	2687	2691	rBV3	42932	66346	1.18%	0.115%
82	18.209	2691	2695	2698	rVV2	39326	56972	1.01%	0.099%
83	18.267	2698	2706	2719	rVV2	477876	966616	17.19%	1.671%
84	18.403	2719	2732	2735	rVV	347822	662196	11.77%	1.145%
85	18.445	2735	2740	2748	rVV	741142	1193326	21.22%	2.063%
86	18.519	2748	2754	2759	rVV3	38634	64230	1.14%	0.111%
87	18.639	2768	2777	2782	rBV3	105963	170213	3.03%	0.294%
88	18.692	2782	2787	2790	rVV	56968	86193	1.53%	0.149%
89	18.739	2790	2796	2806	rVV3	266925	635739	11.30%	1.099%
90	18.812	2806	2810	2816	rVV	113624	173146	3.08%	0.299%
91	18.875	2816	2822	2825	rVV2	101331	177017	3.15%	0.306%
92	18.917	2825	2830	2846	rVB	176478	328042	5.83%	0.567%
93	19.069	2853	2859	2868	rBV4	20976	44603	0.79%	0.077%
94	19.148	2868	2874	2881	rVV	259908	383104	6.81%	0.662%
95	19.258	2890	2895	2902	rVV2	73620	117598	2.09%	0.203%
96	19.342	2902	2911	2929	rVB	65006	133304	2.37%	0.231%
97	19.473	2929	2936	2952	rBV	111790	180790	3.21%	0.313%
98	19.672	2968	2974	2985	rVV	79328	161039	2.86%	0.278%
99	19.793	2992	2997	3005	rVV	33098	52118	0.93%	0.090%
100	19.892	3012	3016	3034	rVB2	39567	64933	1.15%	0.112%

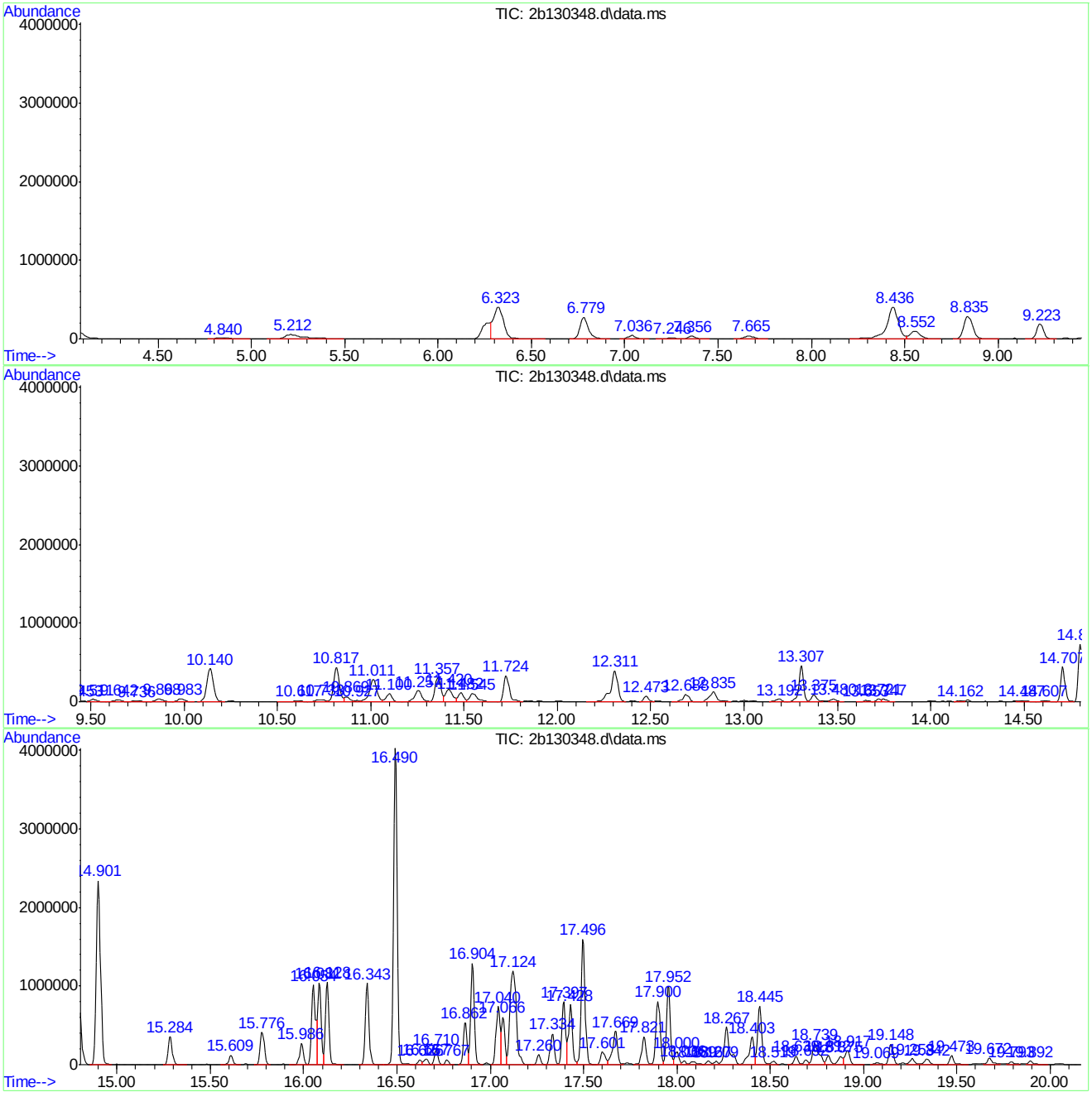
Sum of corrected areas: 57832112

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130348.d
Acq On : 23 Apr 2015 4:34 am
Operator : BridgetK
Sample : jb92664-7
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130348.d
Acq On : 23 Apr 2015 4:34 am
Operator : BridgetK
Sample : jb92664-7
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

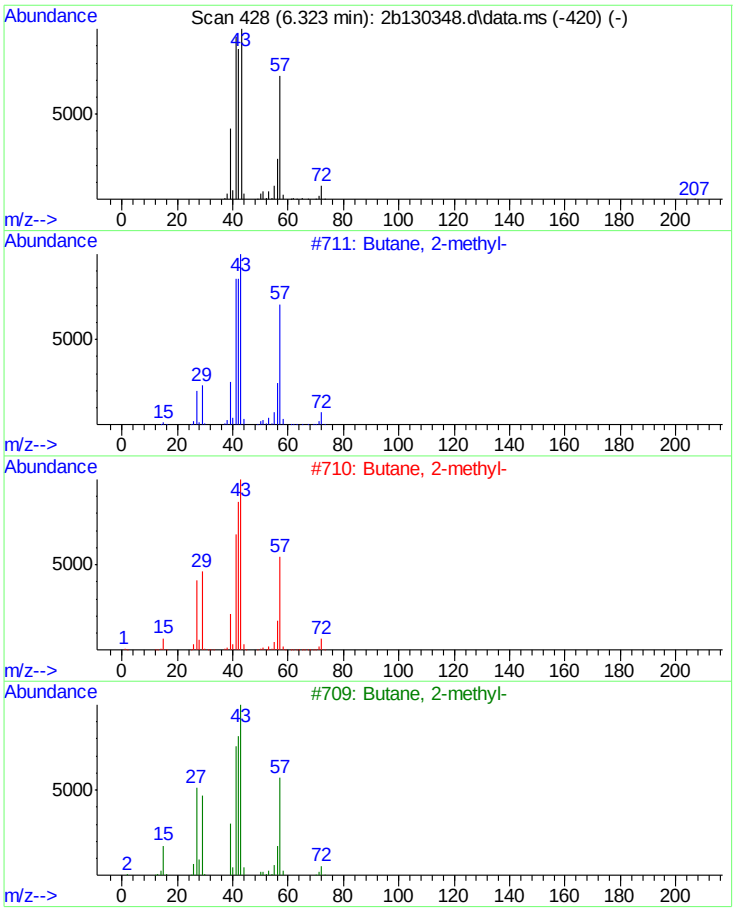
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

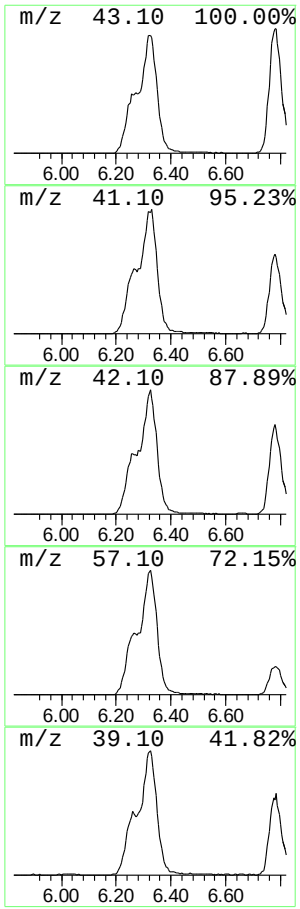
****

Peak Number 1 Butane, 2-methyl- Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.323	75.00 ug/L	1480720	pentafluorobenzene	10.811

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	81
2	Butane, 2-methyl-	72	C5H12	000078-78-4	72
3	Butane, 2-methyl-	72	C5H12	000078-78-4	64
4	3-Buten-1-ol	72	C4H8O	000627-27-0	33
5	3-Buten-1-ol	72	C4H8O	000627-27-0	32





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130348.d
Acq On : 23 Apr 2015 4:34 am
Operator : BridgetK
Sample : jb92664-7
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

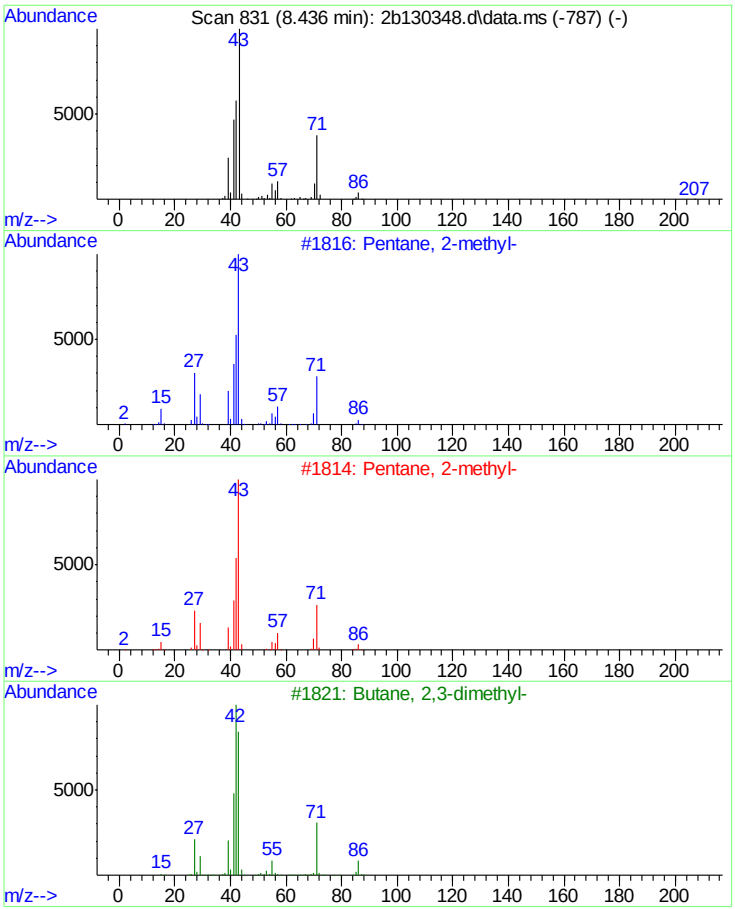
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

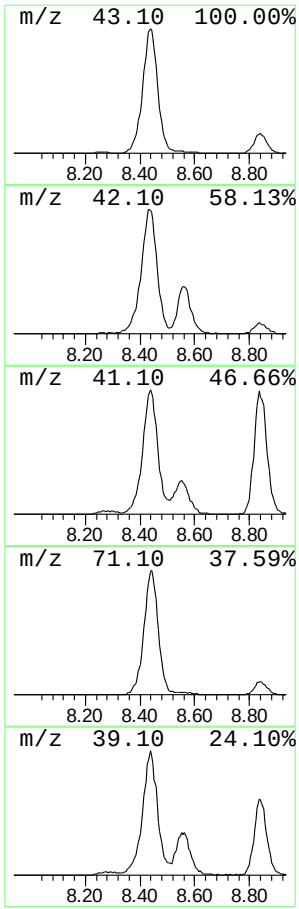
****

Peak Number 2 Pentane, 2-methyl- Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.436	88.35 ug/L	1744310	pentafluorobenzene	10.811

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2-methyl-	86	C6H14	000107-83-5	91
2	Pentane, 2-methyl-	86	C6H14	000107-83-5	86
3	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	58
4	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	58
5	1-Butanol, 2,3-dimethyl-	102	C6H14O	019550-30-2	38





Library Search Compound Report

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Acq On : 23 Apr 2015 4:34 am
Operator : BridgetK
Sample : jb92664-7
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

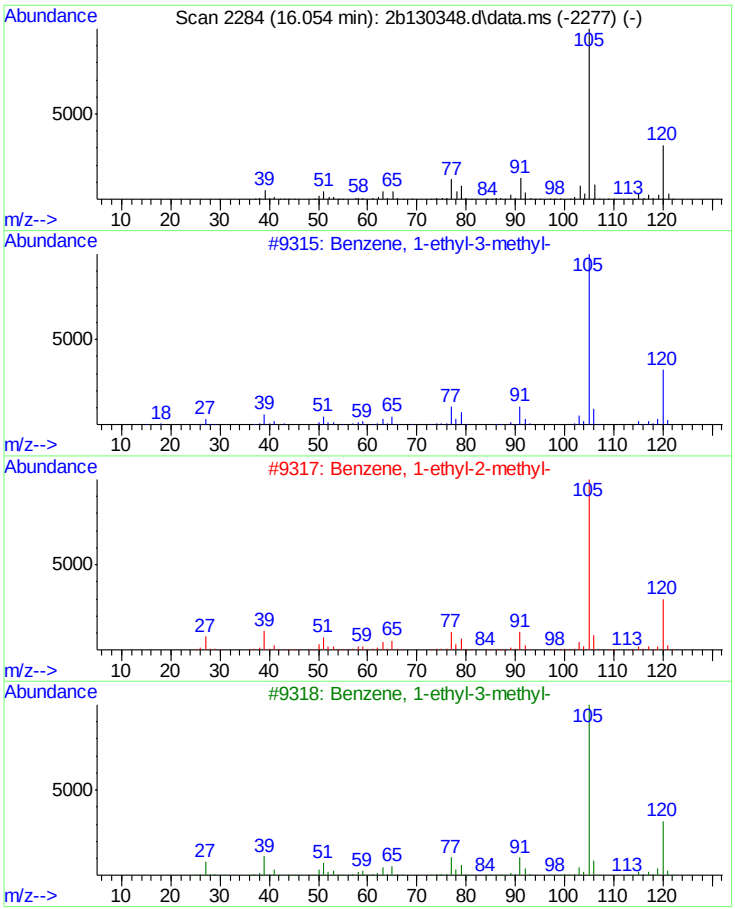
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

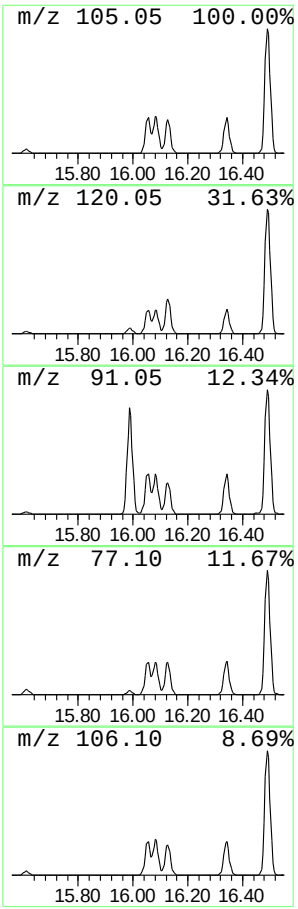
****

Peak Number 3 Benzene, 1-ethyl-3-methyl- Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.054	98.41 ug/L	1522720	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
3	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	94
4	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
5	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	91





Library Search Compound Report

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Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

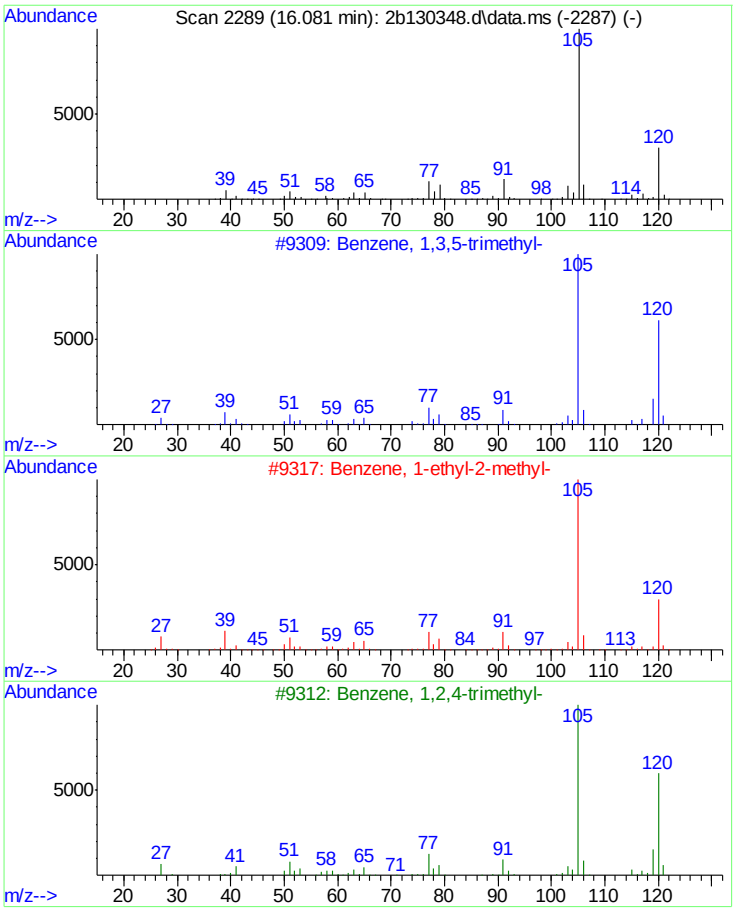
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

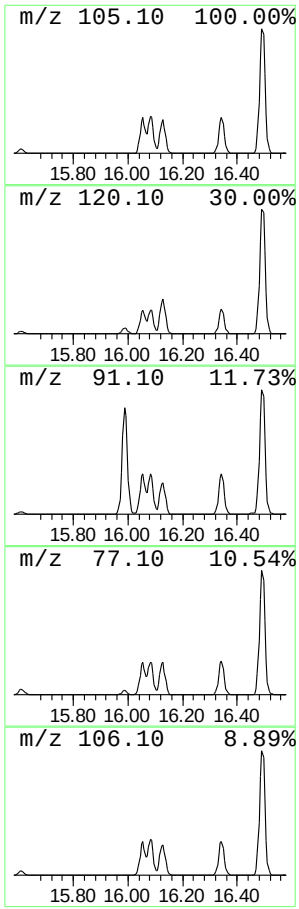
****

Peak Number 4 Benzene, 1,3,5-trimethyl- Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.081	84.61 ug/L	1309090	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	91
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	91
4	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	91
5	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	91





Library Search Compound Report

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Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

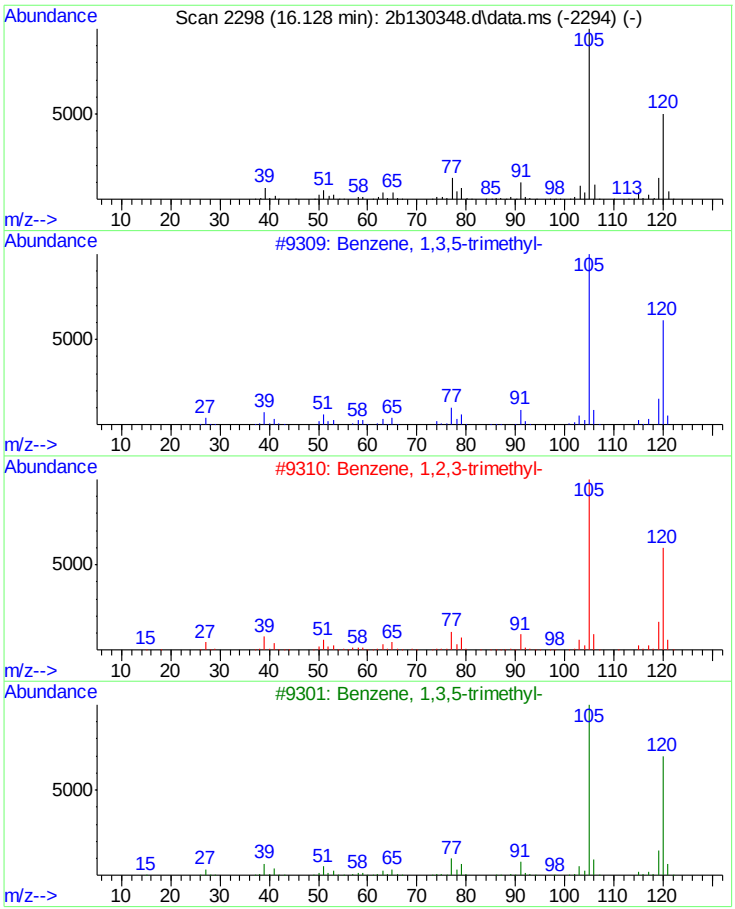
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

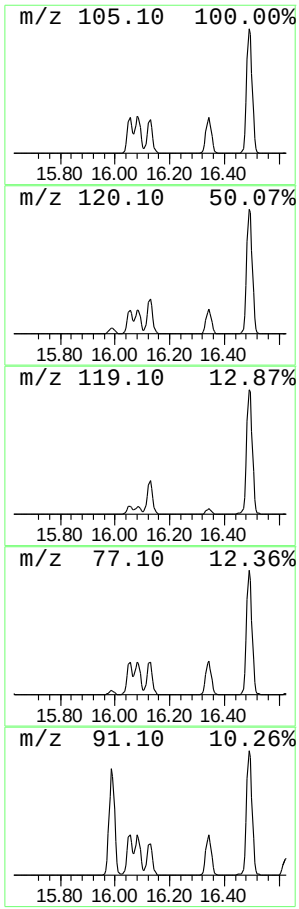
****

Peak Number 5 Benzene, 1,3,5-trimethyl- Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.128	92.90 ug/L	1437400	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	97
2	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	97
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94





Library Search Compound Report

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Acq On : 23 Apr 2015 4:34 am
Operator : BridgetK
Sample : jb92664-7
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

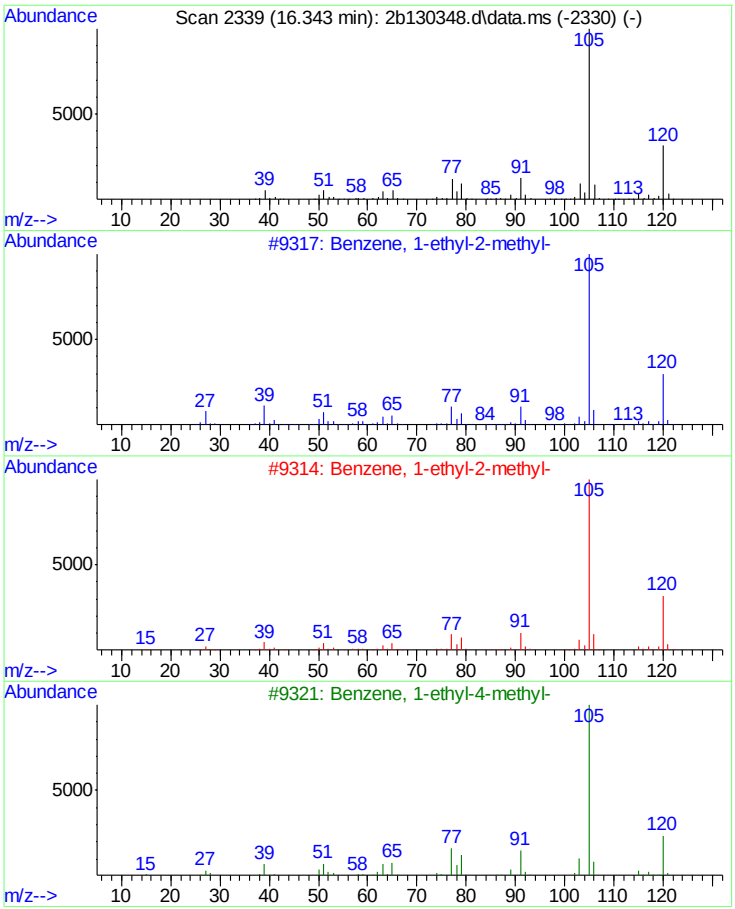
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

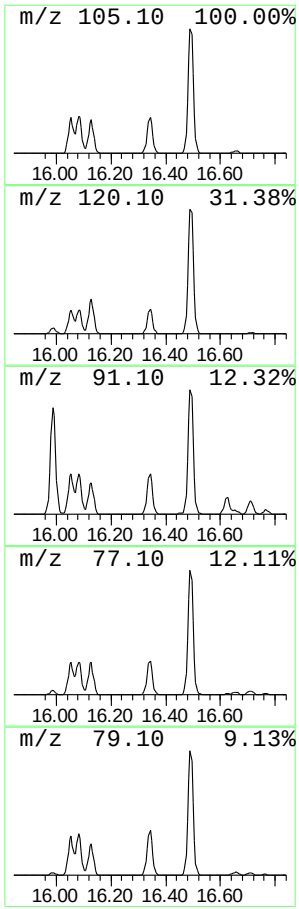
****

Peak Number 6 Benzene, 1-ethyl-2-methyl- Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.343	93.14 ug/L	1441200	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	93
4	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91
5	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91





Library Search Compound Report

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Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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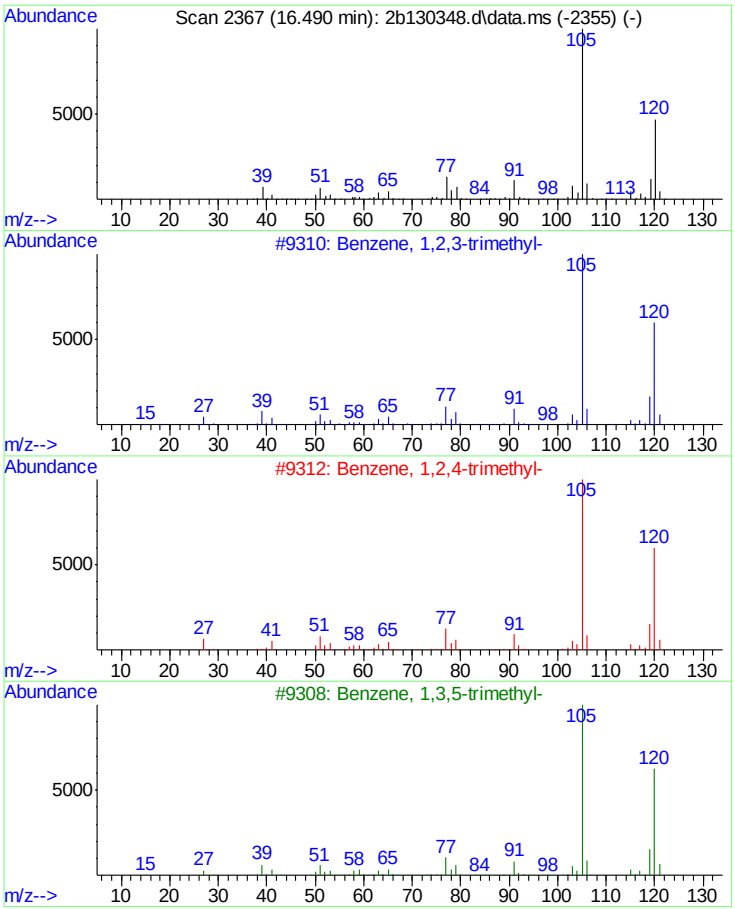
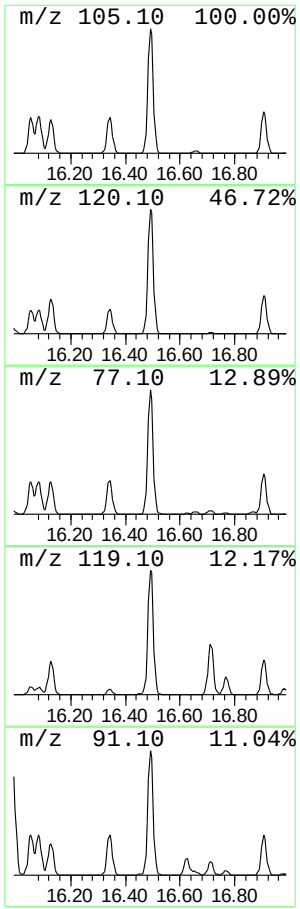
Peak Number 7 Benzene, 1,2,3-trimethyl- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.490	363.46 ug/L	5623750	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
5	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	93





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Sample : jb92664-7
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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Peak Number 8 Benzene, 1,2-diethyl- Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.040	70.05 ug/L	1083810	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2-diethyl-	134	C10H14	000135-01-3	96
2	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	96
3	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	95
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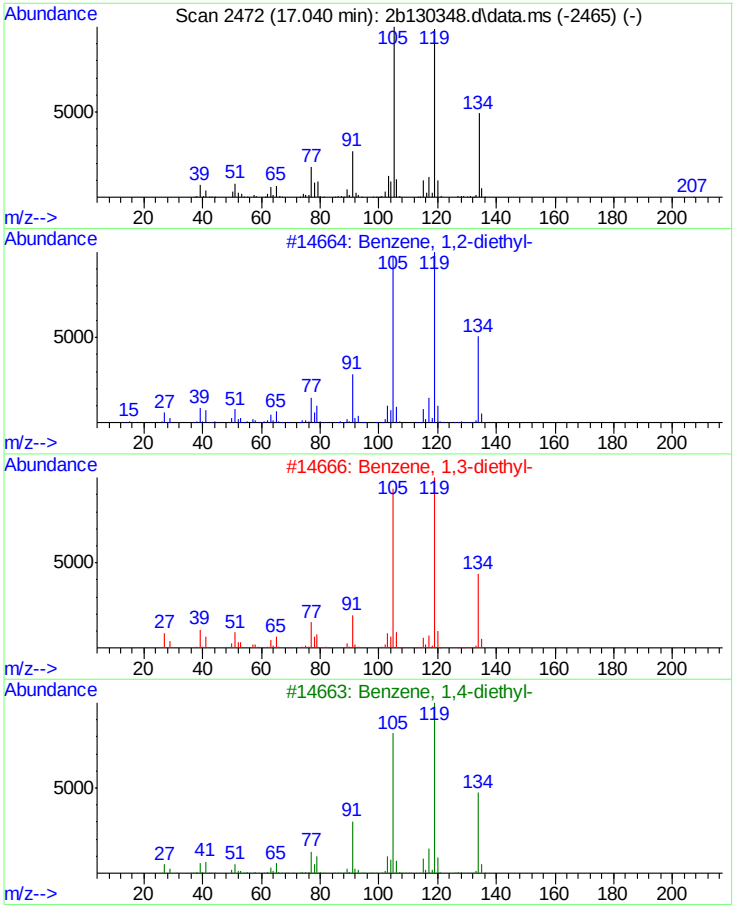

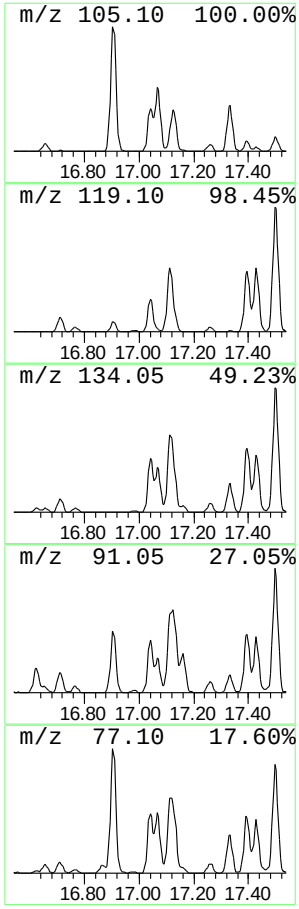

Library Search Compound Report

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Sample : jb92664-7
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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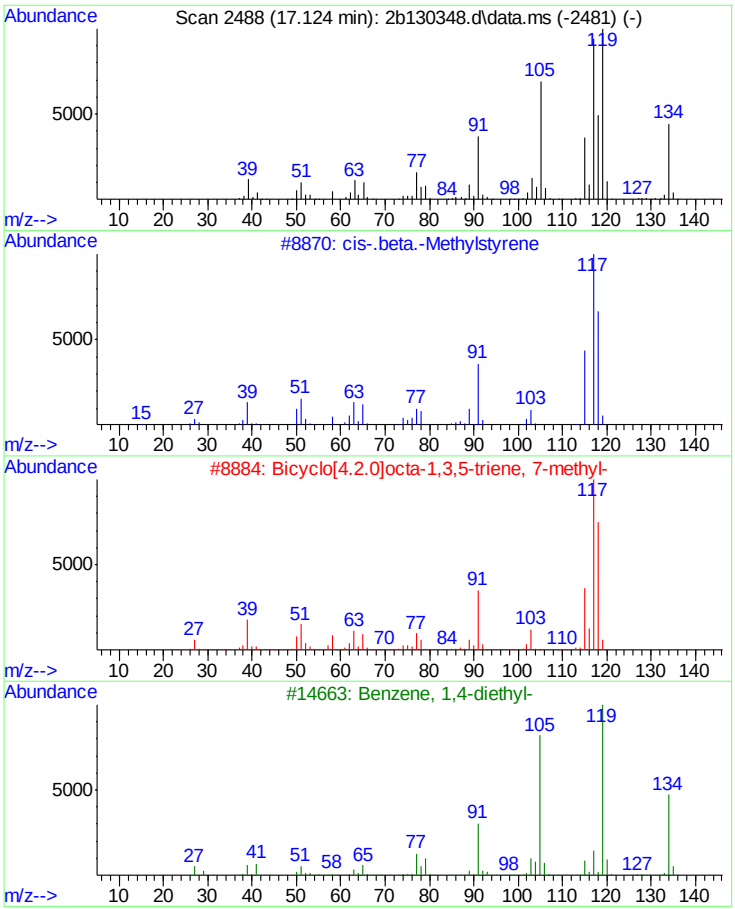
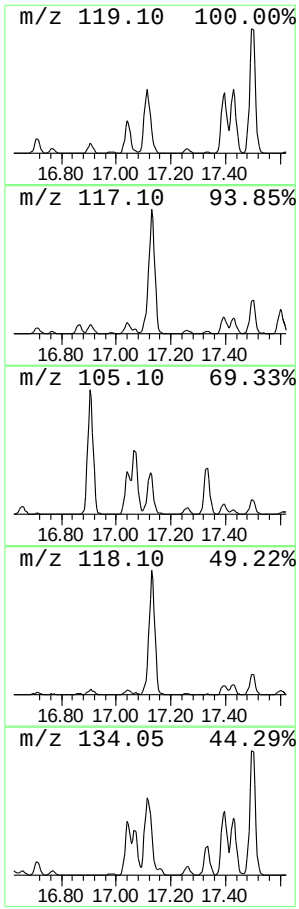
Peak Number 9 cis-.beta.-Methylstyrene Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.124	172.48 ug/L	2668710	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	cis-.beta.-Methylstyrene	118	C9H10	000766-90-5	62
2	Bicyclo[4.2.0]octa-1,3,5-triene,...	118	C9H10	055337-80-9	62
3	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	55
4	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	55
5	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	55





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Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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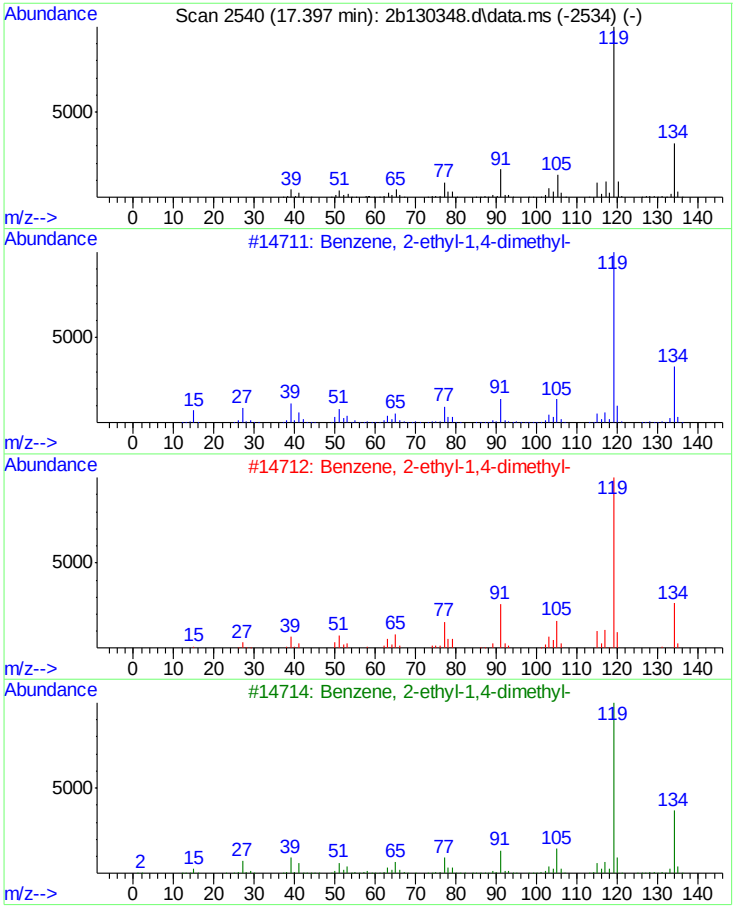
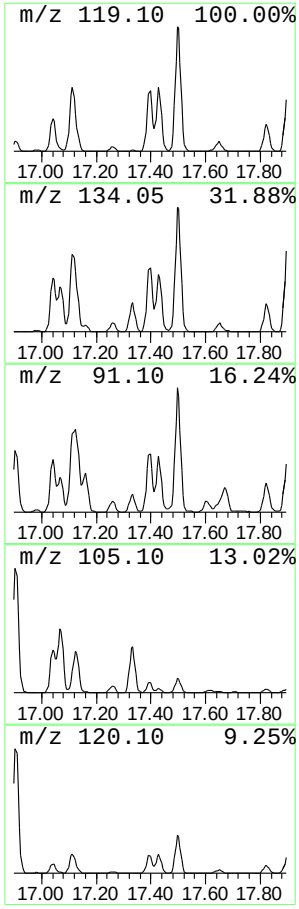
Peak Number 10 Benzene, 2-ethyl-1,4-dimethyl- Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.397	76.38 ug/L	1181760	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	97
2	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	96
3	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	95
4	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	95
5	Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	95





Library Search Compound Report

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ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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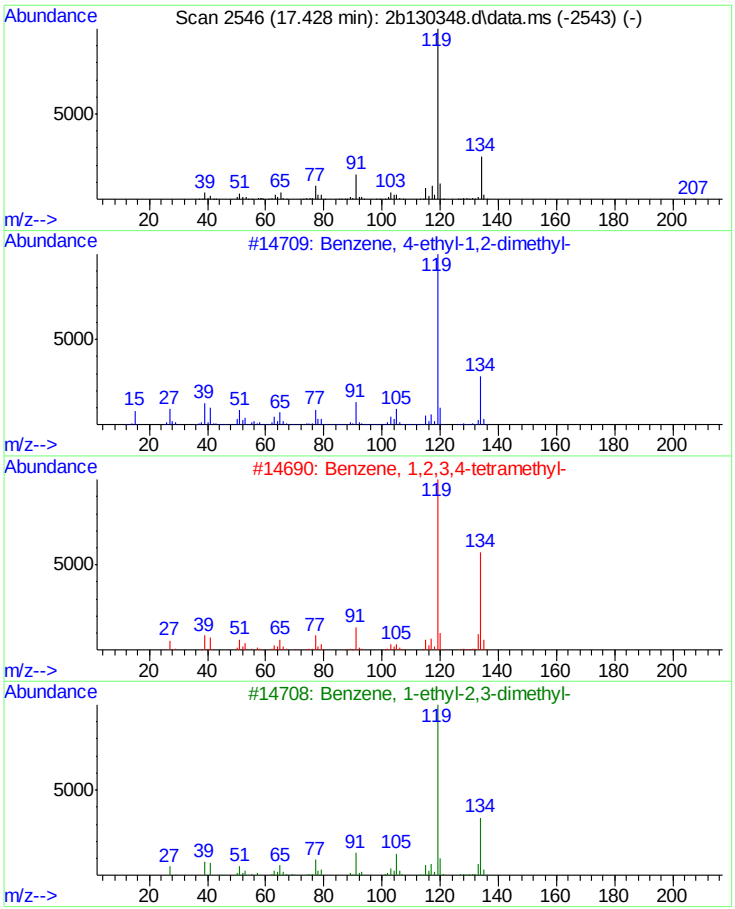
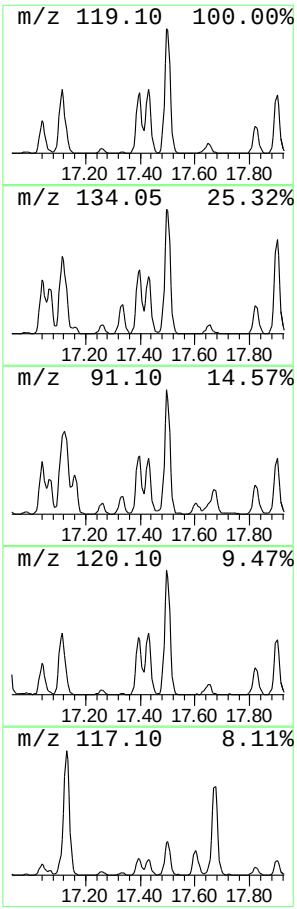
Peak Number 11 Benzene, 4-ethyl-1,2-dimethyl- Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.428	65.89 ug/L	1019520	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	91
2	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	91
3	Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	91
4	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14	002870-04-4	91
5	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	91





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ALS Vial : 38 Sample Multiplier: 1

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Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

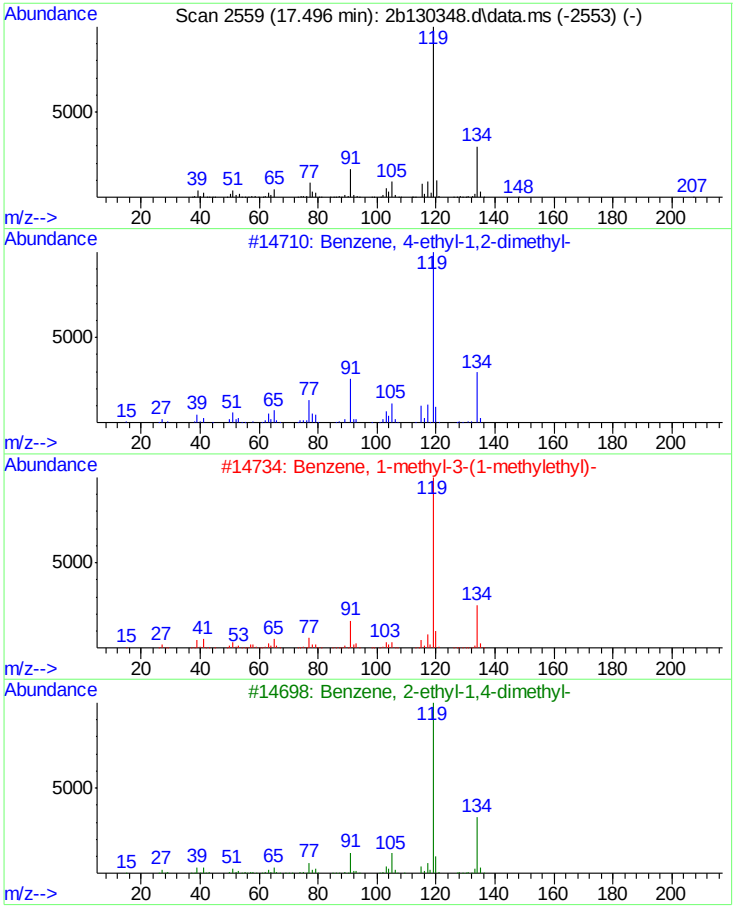
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

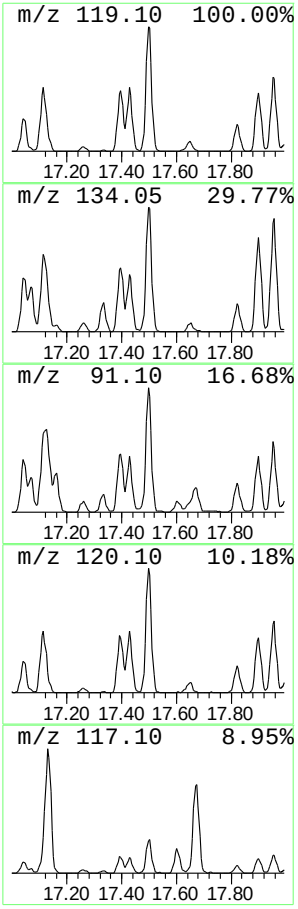
****

Peak Number 12 Benzene, 4-ethyl-1,2-dimethyl- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.496	148.91 ug/L	2304130	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	96
2	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	95
3	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	95
4	Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	95
5	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14	002870-04-4	95





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ALS Vial : 38 Sample Multiplier: 1

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Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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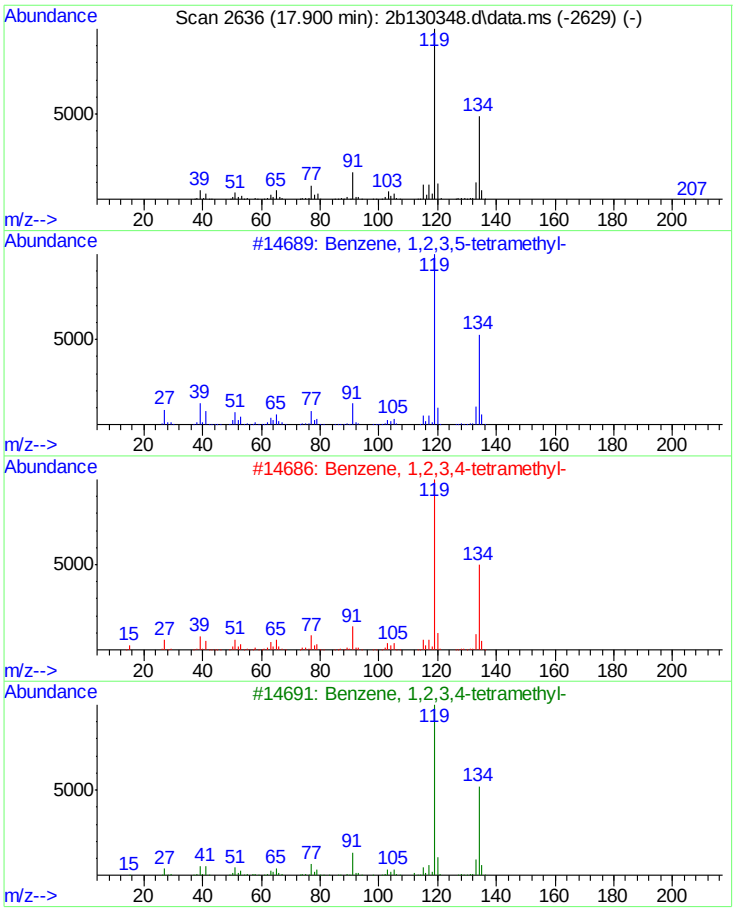
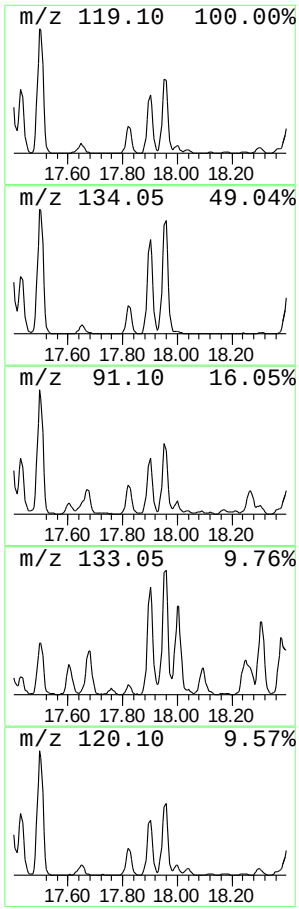
Peak Number 13 Benzene, 1,2,3,5-tetramethyl- Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.900	74.82 ug/L	1157720	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	97
2	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	97
3	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	97
4	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	97
5	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	95





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130348.d
Acq On : 23 Apr 2015 4:34 am
Operator : BridgetK
Sample : jb92664-7
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

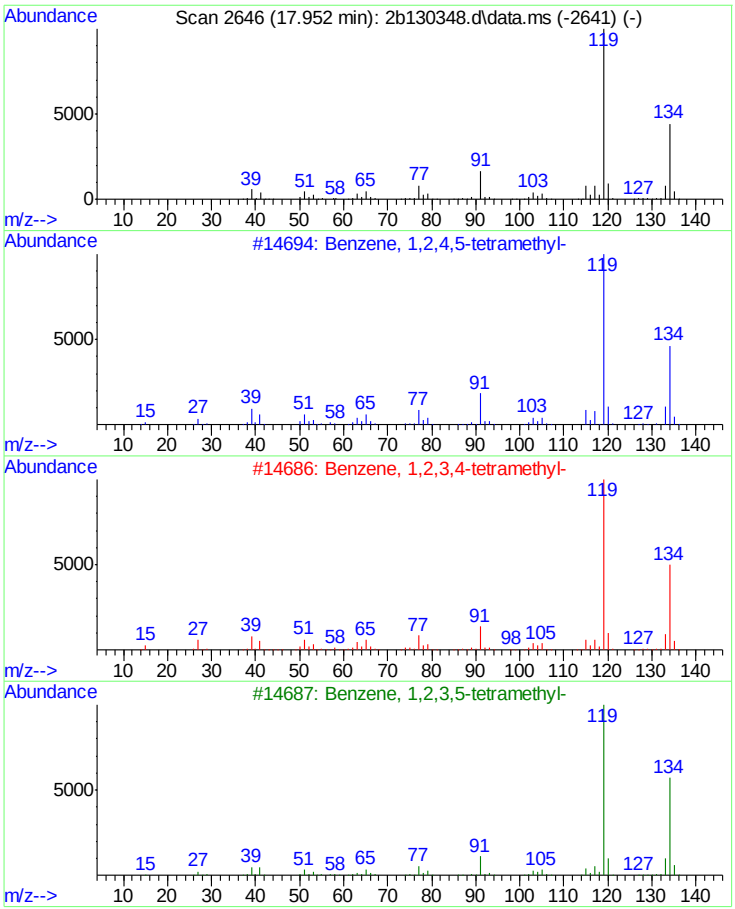
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

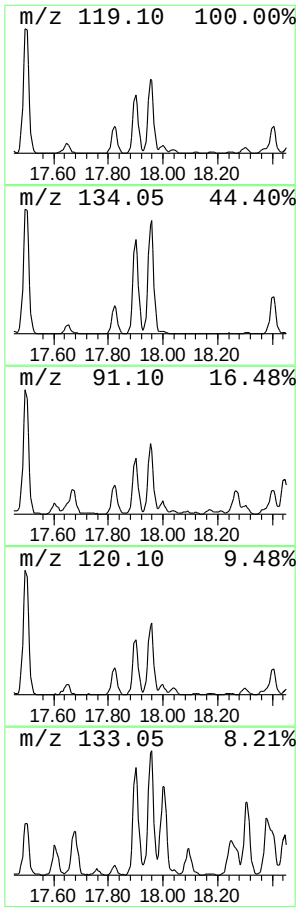
****

Peak Number 14 Benzene, 1,2,4,5-tetramethyl- Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.952	94.87 ug/L	1467970	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	97
2	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	97
3	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	95
4	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	95
5	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	95





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130348.d
Acq On : 23 Apr 2015 4:34 am
Operator : BridgetK
Sample : jb92664-7
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

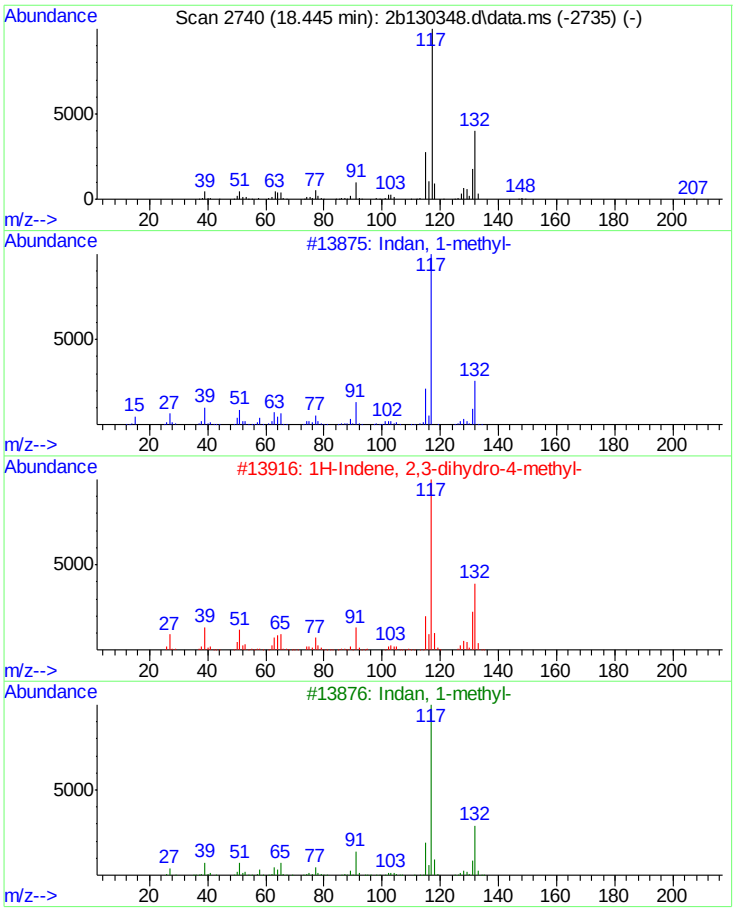
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

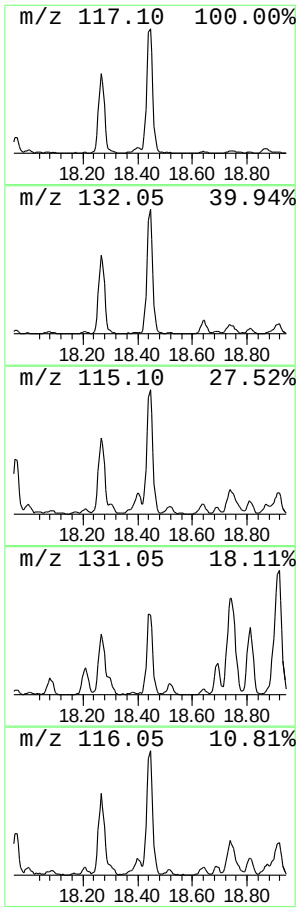
****

Peak Number 15 Indan, 1-methyl- Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.445	77.12 ug/L	1193330	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indan, 1-methyl-	132	C10H12	000767-58-8	90
2	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	90
3	Indan, 1-methyl-	132	C10H12	000767-58-8	90
4	Benzene, 1-ethenyl-4-ethyl-	132	C10H12	003454-07-7	87
5	Benzene, (1-methyl-1-propenyl)-,...	132	C10H12	000768-00-3	87





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130348.d
Acq On : 23 Apr 2015 4:34 am
Operator : BridgetK
Sample : jb92664-7
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Butane, 2-methyl-	6.323	75.0	ug/L	1480720	2	10.811	987189	50.0
Pentane, 2-methyl-	8.436	88.3	ug/L	1744310	2	10.811	987189	50.0
Benzene, 1-ethy...	16.054	98.4	ug/L	1522720	5	16.867	773650	50.0
Benzene, 1,3,5-...	16.081	84.6	ug/L	1309090	5	16.867	773650	50.0
Benzene, 1,3,5-...	16.128	92.9	ug/L	1437400	5	16.867	773650	50.0
Benzene, 1-ethy...	16.343	93.1	ug/L	1441200	5	16.867	773650	50.0
Benzene, 1,2,3-...	16.490	363.5	ug/L	5623750	5	16.867	773650	50.0
Benzene, 1,2-di...	17.040	70.0	ug/L	1083810	5	16.867	773650	50.0
cis-.beta.-Meth...	17.124	172.5	ug/L	2668710	5	16.867	773650	50.0
Benzene, 2-ethy...	17.397	76.4	ug/L	1181760	5	16.867	773650	50.0
Benzene, 4-ethy...	17.428	65.9	ug/L	1019520	5	16.867	773650	50.0
Benzene, 4-ethy...	17.496	148.9	ug/L	2304130	5	16.867	773650	50.0
Benzene, 1,2,3,...	17.900	74.8	ug/L	1157720	5	16.867	773650	50.0
Benzene, 1,2,4,...	17.952	94.9	ug/L	1467970	5	16.867	773650	50.0
Indan, 1-methyl-	18.445	77.1	ug/L	1193330	5	16.867	773650	50.0

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130349.d
Acq On : 23 Apr 2015 5:03 am
Operator : BridgetK
Sample : jb92664-8
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 39 Sample Multiplier: 1

Quant Time: Apr 29 09:19:39 2015
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
QLast Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.358	65	89087	500.00	ug/L	0.00
5) pentafluorobenzene	10.811	168	323413	50.00	ug/L	0.00
58) 1,4-difluorobenzene	11.724	114	308018	50.00	ug/L	0.00
90) chlorobenzene-d5	14.707	117	260103	50.00	ug/L	0.00
106) 1,4-dichlorobenzene-d4	16.867	152	150747	50.00	ug/L	0.00
System Monitoring Compounds						
51) dibromofluoromethane (s)	10.822	113	106017	49.10	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 98.20%			
52) 1,2-dichloroethane-d4 (s)	11.252	65	121036	47.39	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 94.78%			
82) toluene-d8 (s)	13.307	98	333352	51.39	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 102.78%			
108) 4-bromofluorobenzene (s)	15.777	95	122739	50.51	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 101.02%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	8.478	59	4105	20.67	ug/L #	1
34) methyl tert butyl ether	8.819	73	24395	4.30	ug/L #	1
37) 2-butanone	10.203	72	1391	7.36	ug/L #	41
56) Cyclohexane	11.016	84	56895	23.23	ug/L #	48
66) benzene	11.357	78	1135982	182.82	ug/L	99
79) methylcyclohexane	12.311	83	29969	11.06	ug/L	95
84) toluene	13.375	92	141565	35.86	ug/L	98
100) ethylbenzene	14.801	91	141003	18.66	ug/L	97
101) m,p-xylene	14.906	106	108835	37.56	ug/L	97
102) o-xylene	15.289	106	46972	15.24	ug/L	95
107) isopropylbenzene	15.609	105	41000	5.25	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

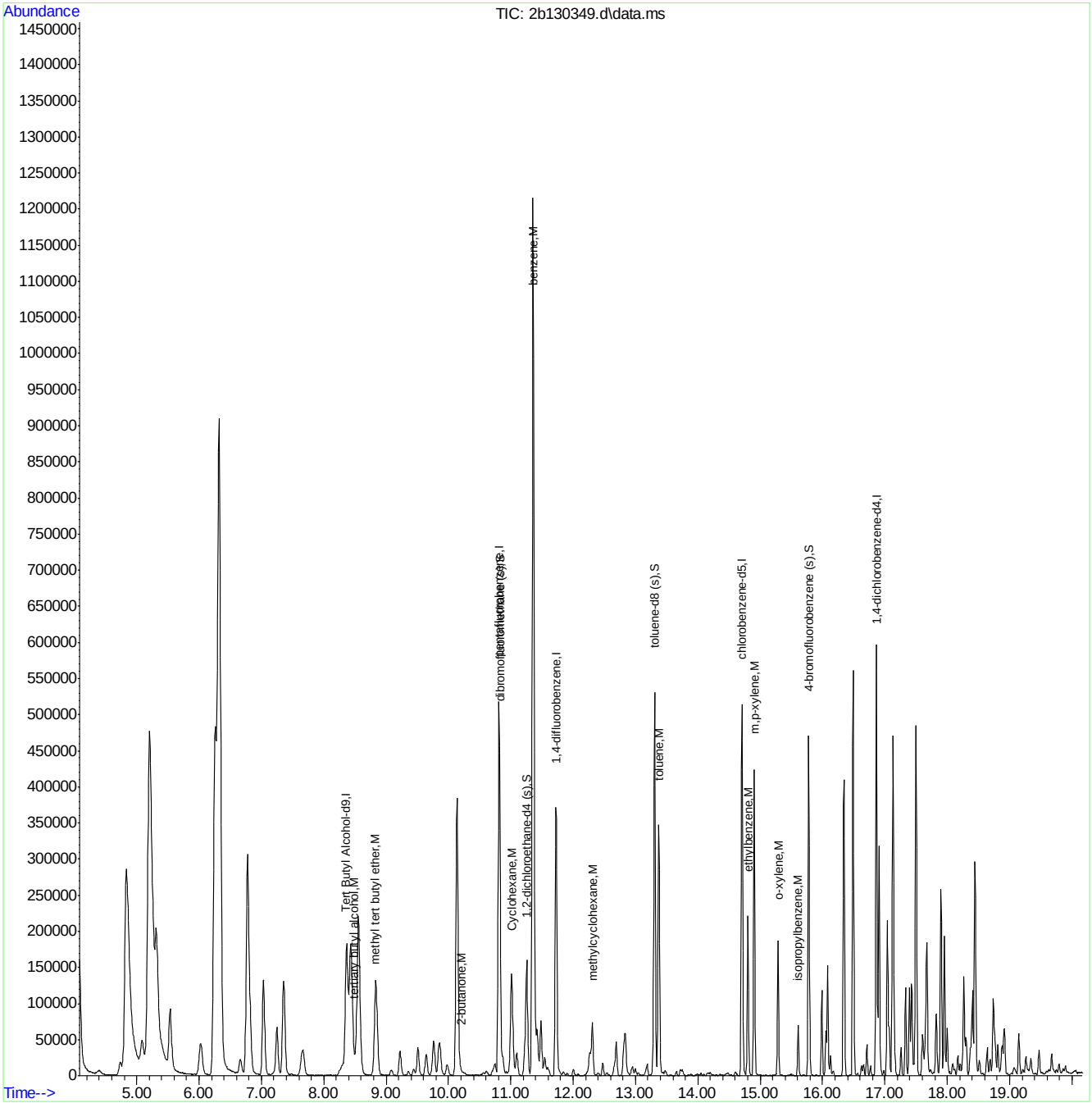
7.1.15

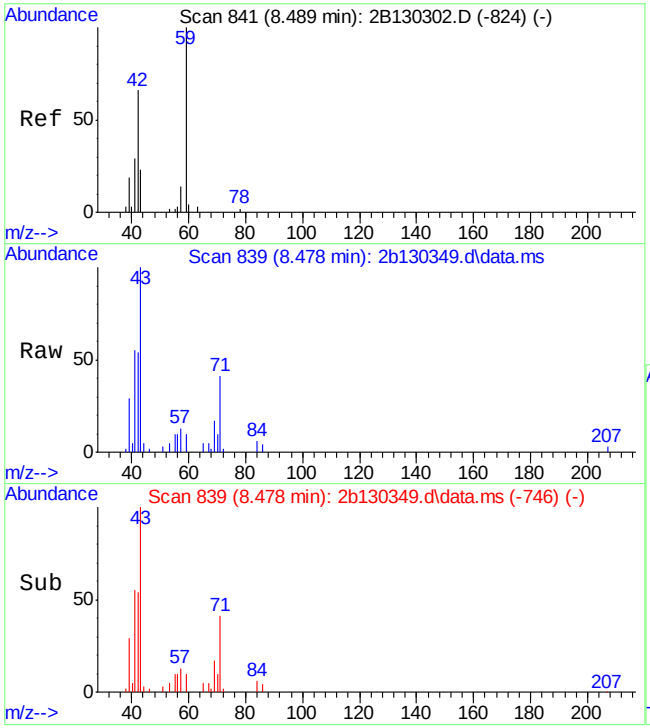
7

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130349.d
Acq On : 23 Apr 2015 5:03 am
Operator : BridgetK
Sample : jb92664-8
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 39 Sample Multiplier: 1

Quant Time: Apr 29 09:19:39 2015
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
QLast Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration

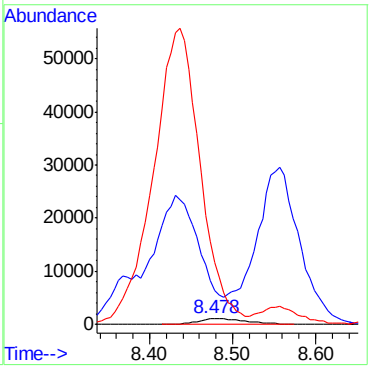


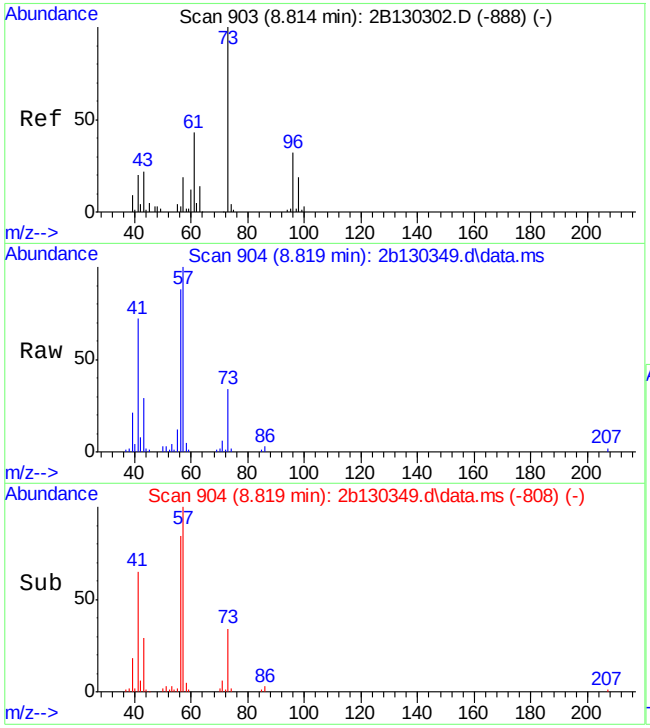


#2
tertiary butyl alcohol
Concen: 20.67 ug/L
RT: 8.478 min Scan# 839
Delta R.T. -0.010 min
Lab File: 2b130349.d
Acq: 23 Apr 2015 5:03 am

Tgt Ion: 59 Resp: 4105

Ion	Ratio	Lower	Upper
59	100		
41	0.0	7.8	67.8#
43	832.3	0.0	56.1#

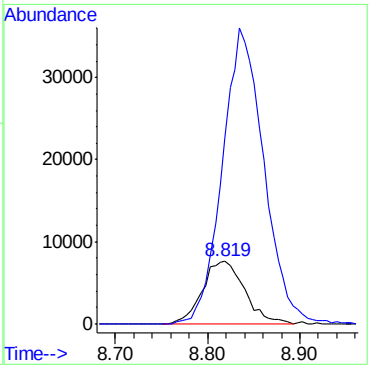


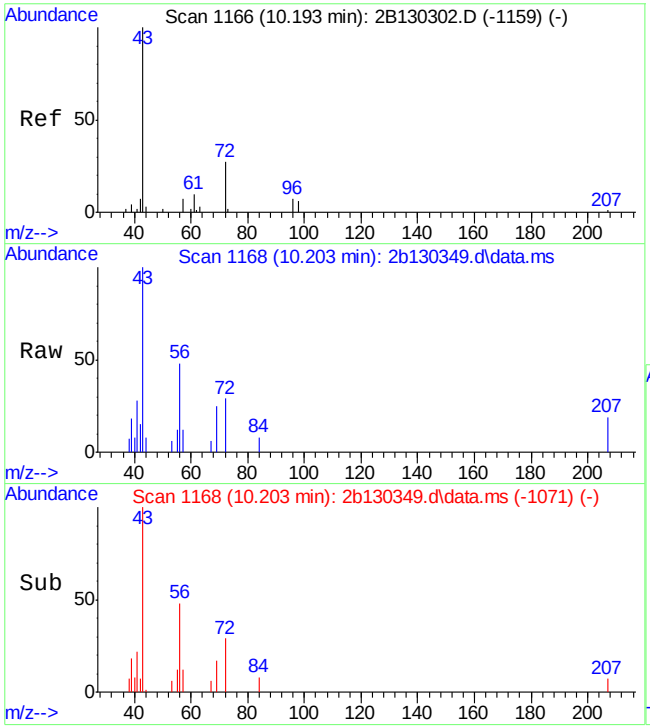


#34
methyl tert butyl ether
Concen: 4.30 ug/L
RT: 8.819 min Scan# 904
Delta R.T. 0.005 min
Lab File: 2b130349.d
Acq: 23 Apr 2015 5:03 am

Tgt Ion: 73 Resp: 24395

Ion	Ratio	Lower	Upper
73	100		
57	294.5	0.0	48.7#

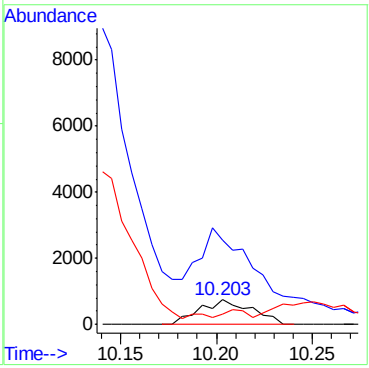


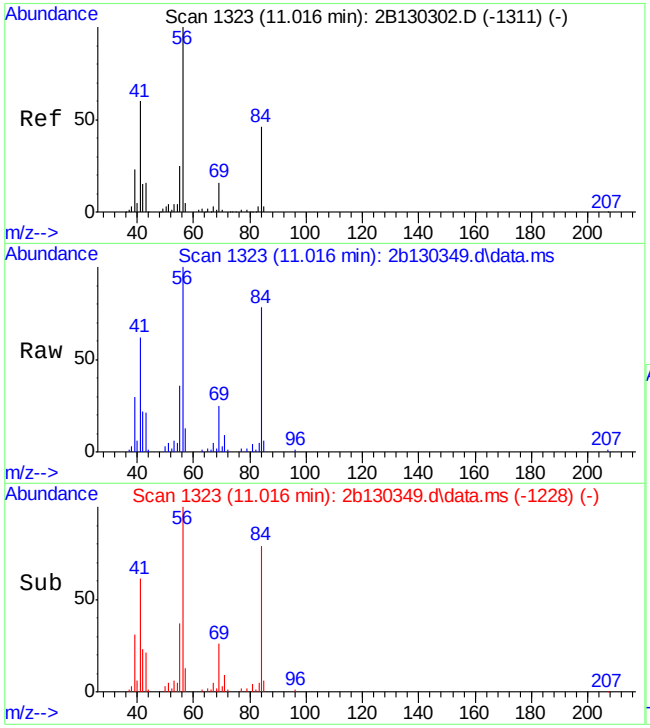


#37
2-butanone
Concen: 7.36 ug/L
RT: 10.203 min Scan# 1168
Delta R.T. 0.011 min
Lab File: 2b130349.d
Acq: 23 Apr 2015 5:03 am

Tgt Ion: 72 Resp: 1391

Ion	Ratio	Lower	Upper
72	100		
43	234.3	338.3	398.3#
57	0.0	0.7	60.7#

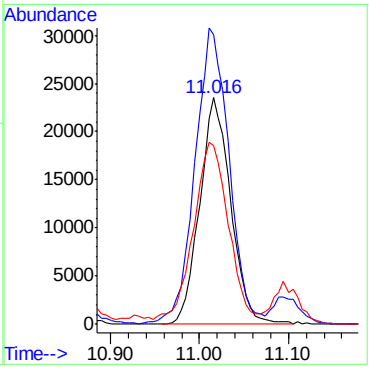


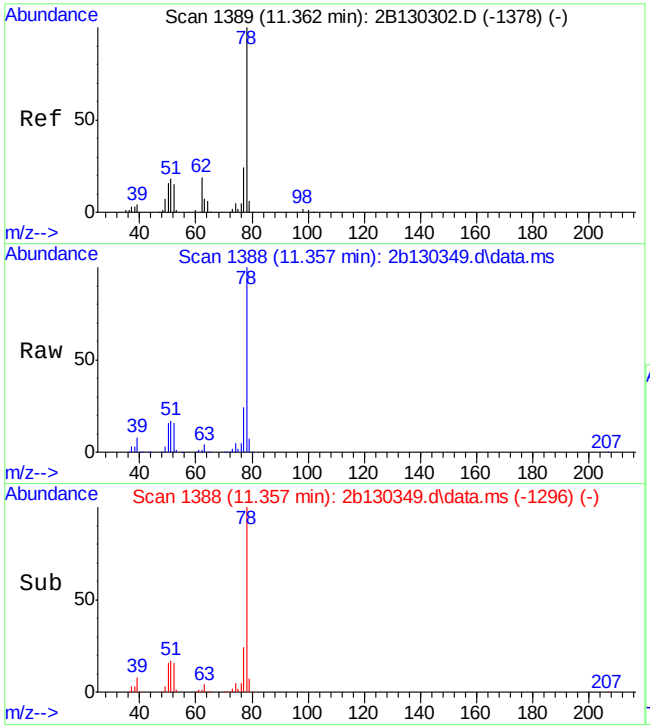


#56
Cyclohexane
Concen: 23.23 ug/L
RT: 11.016 min Scan# 1323
Delta R.T. 0.000 min
Lab File: 2b130349.d
Acq: 23 Apr 2015 5:03 am

Tgt Ion: 84 Resp: 56895

Ion	Ratio	Lower	Upper
84	100		
56	127.8	188.5	248.5#
41	78.6	100.4	160.4#

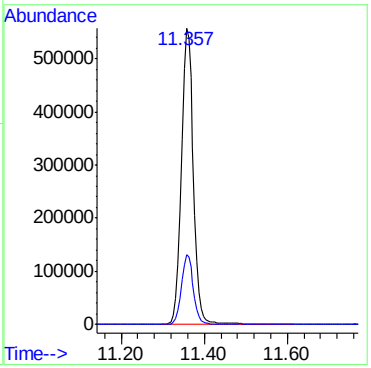


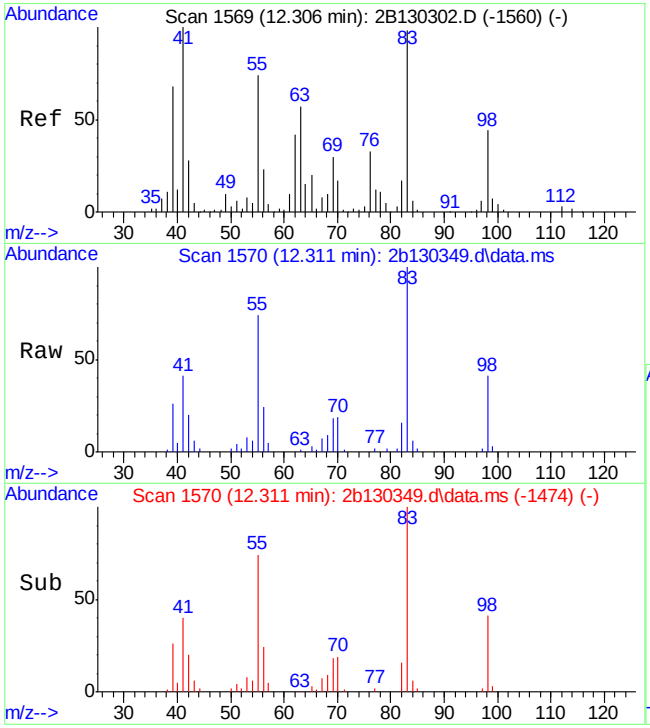


#66
benzene
Concen: 182.82 ug/L
RT: 11.357 min Scan# 1388
Delta R.T. -0.005 min
Lab File: 2b130349.d
Acq: 23 Apr 2015 5:03 am

Tgt Ion: 78 Resp: 1135982

Ion	Ratio	Lower	Upper
78	100		
77	23.5	0.0	53.8

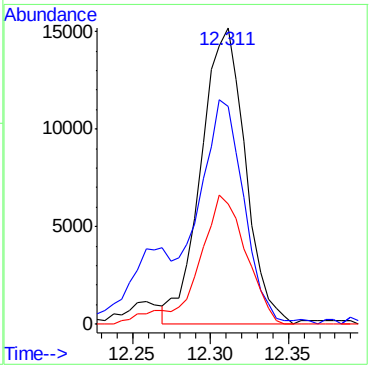


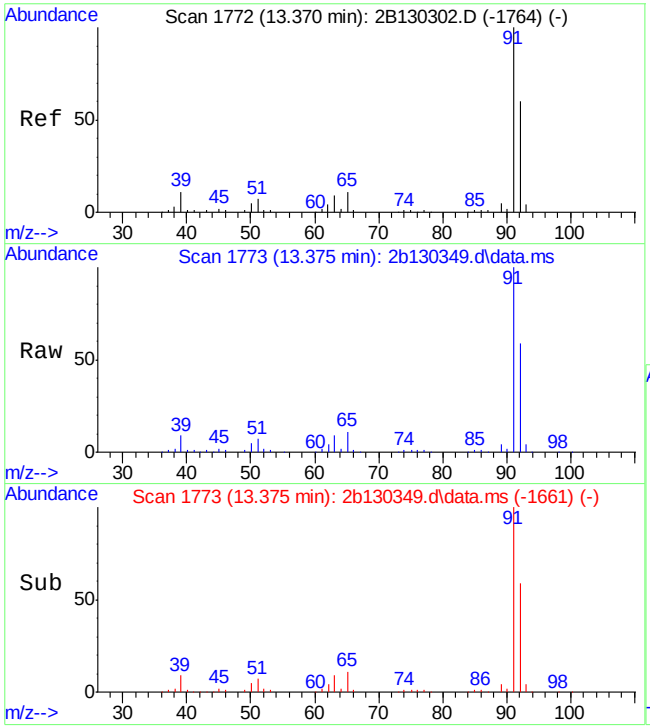


#79
methylcyclohexane
Concen: 11.06 ug/L
RT: 12.311 min Scan# 1570
Delta R.T. 0.005 min
Lab File: 2b130349.d
Acq: 23 Apr 2015 5:03 am

Tgt Ion: 83 Resp: 29969

Ion	Ratio	Lower	Upper
83	100		
55	72.3	45.8	105.8
98	40.7	14.7	74.7

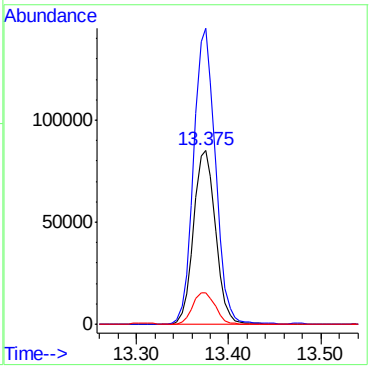


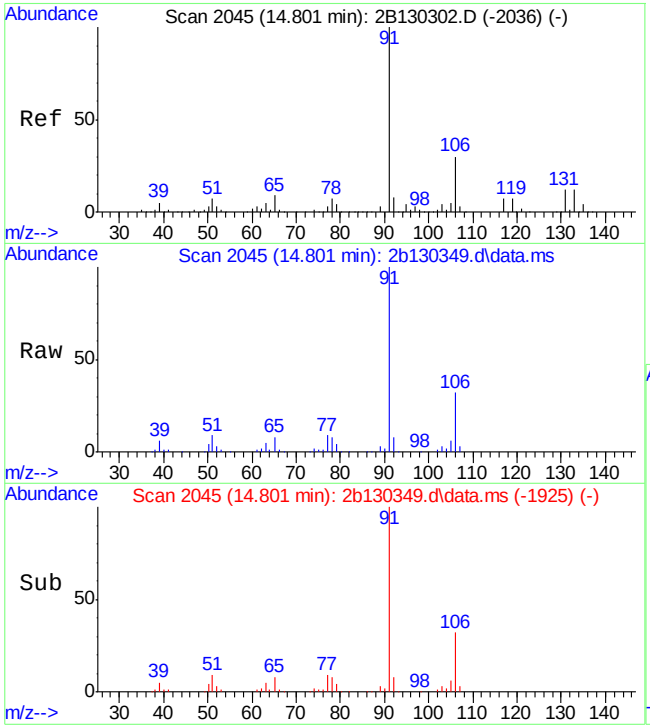


#84
toluene
Concen: 35.86 ug/L
RT: 13.375 min Scan# 1773
Delta R.T. 0.005 min
Lab File: 2b130349.d
Acq: 23 Apr 2015 5:03 am

Tgt Ion: 92 Resp: 141565

Ion	Ratio	Lower	Upper
92	100		
91	169.8	137.0	197.0
65	17.9	0.0	49.0

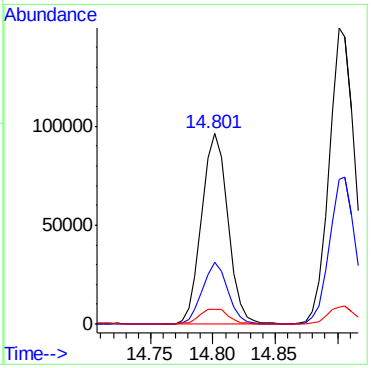


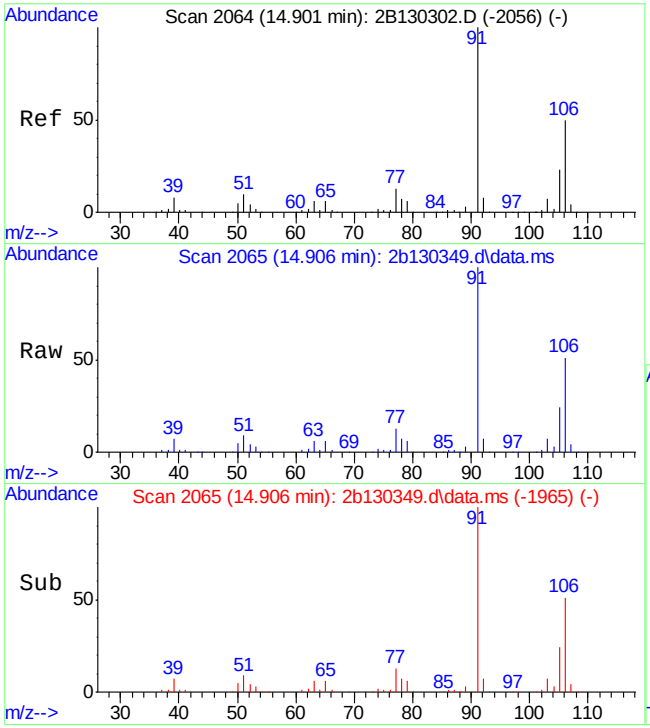


#100
ethylbenzene
Concen: 18.66 ug/L
RT: 14.801 min Scan# 2045
Delta R.T. 0.000 min
Lab File: 2b130349.d
Acq: 23 Apr 2015 5:03 am

Tgt Ion: 91 Resp: 141003

Ion	Ratio	Lower	Upper
91	100		
106	32.4	0.3	60.3
65	7.9	0.0	38.6

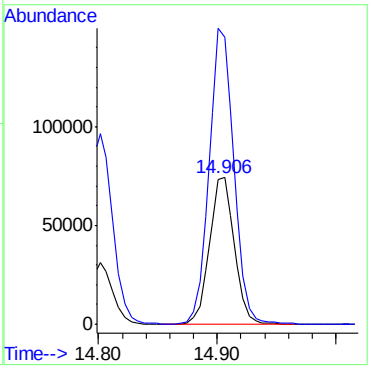


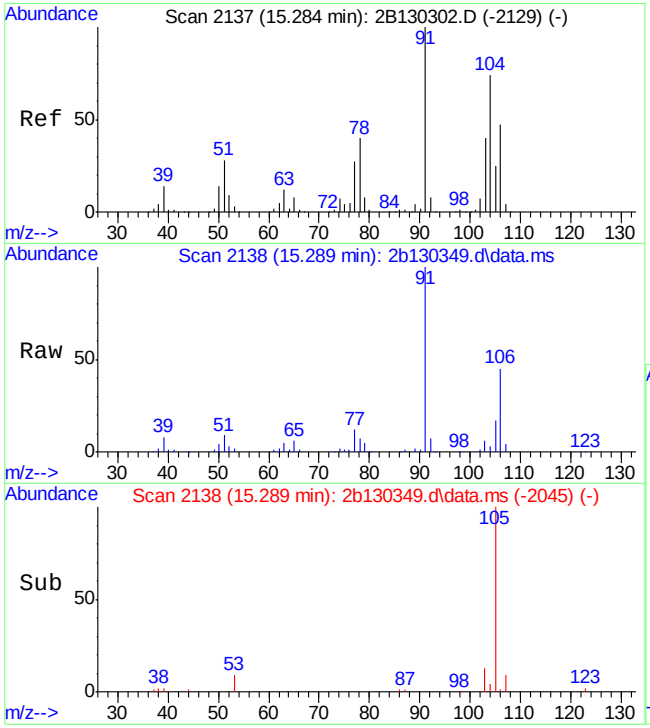


#101
m,p-xylene
Concen: 37.56 ug/L
RT: 14.906 min Scan# 2065
Delta R.T. 0.005 min
Lab File: 2b130349.d
Acq: 23 Apr 2015 5:03 am

Tgt Ion:106 Resp: 108835

Ion	Ratio	Lower	Upper
106	100		
91	195.1	169.4	229.4

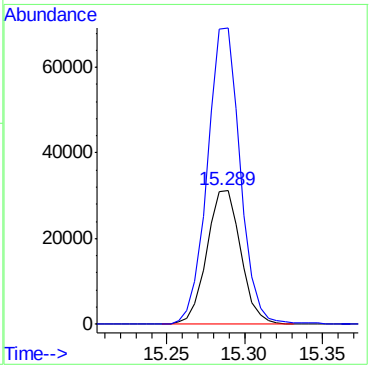


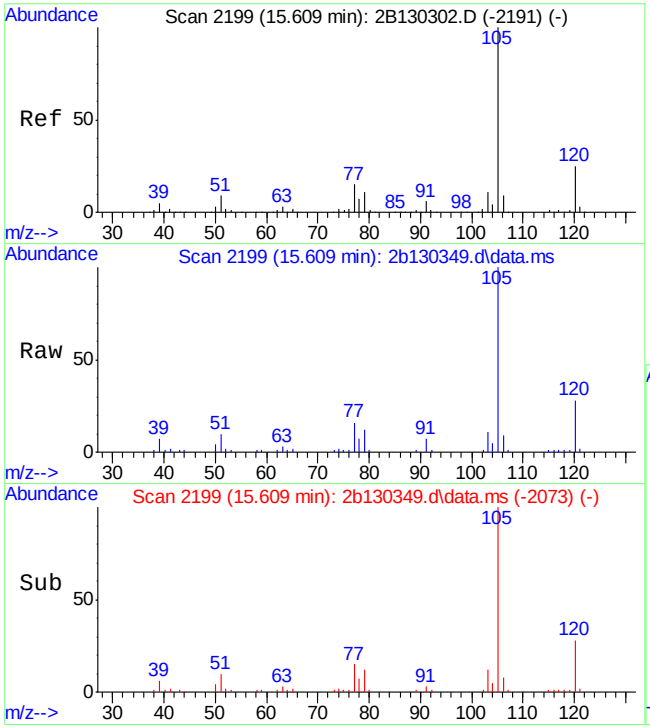


#102
o-xylene
Concen: 15.24 ug/L
RT: 15.289 min Scan# 2138
Delta R.T. 0.005 min
Lab File: 2b130349.d
Acq: 23 Apr 2015 5:03 am

Tgt Ion:106 Resp: 46972

Ion	Ratio	Lower	Upper
106	100		
91	220.9	183.1	243.1

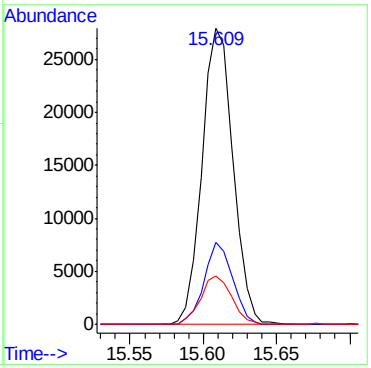




#107
isopropylbenzene
Concen: 5.25 ug/L
RT: 15.609 min Scan# 2199
Delta R.T. 0.000 min
Lab File: 2b130349.d
Acq: 23 Apr 2015 5:03 am

Tgt Ion:105 Resp: 41000

Ion	Ratio	Lower	Upper
105	100		
120	27.6	0.0	55.5
77	16.5	0.0	45.0



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130349.d
Acq On : 23 Apr 2015 5:03 am
Operator : BridgetK
Sample : jb92664-8
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 39 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

Signal : TIC: 2b130349.d\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.399	48	61	93	rVB6	6163	36885	1.05%	0.101%
2	4.735	113	125	130	rBV2	17938	52510	1.50%	0.144%
3	4.834	130	144	183	rVV3	283240	1744527	49.73%	4.769%
4	5.086	183	192	200	rVV2	46545	177658	5.06%	0.486%
5	5.207	200	215	232	rVV2	473861	2567806	73.21%	7.020%
6	5.311	232	235	269	rVV3	200026	836232	23.84%	2.286%
7	5.537	269	278	302	rVB2	87637	296211	8.44%	0.810%
8	6.025	357	371	398	rVB3	43561	164278	4.68%	0.449%
9	6.260	398	416	419	rBV	482063	1407766	40.13%	3.849%
10	6.323	419	428	468	rVV	908552	3507654	100.00%	9.589%
11	6.659	482	492	503	rVV3	21279	65183	1.86%	0.178%
12	6.780	503	515	552	rVB2	305091	1076628	30.69%	2.943%
13	7.031	552	563	583	rVB	131913	351456	10.02%	0.961%
14	7.251	586	605	615	rBV2	65517	184157	5.25%	0.503%
15	7.356	615	625	644	rVB2	130277	372520	10.62%	1.018%
16	7.666	666	684	701	rBV5	35634	139756	3.98%	0.382%
17	8.368	787	818	824	rBV2	182915	630936	17.99%	1.725%
18	8.436	824	831	844	rVV	180795	653756	18.64%	1.787%
19	8.557	844	854	887	rVB	220449	758419	21.62%	2.073%
20	8.835	892	907	932	rVB3	131231	431799	12.31%	1.180%
21	9.081	946	954	966	rVB5	7511	18800	0.54%	0.051%
22	9.223	969	981	995	rBV2	33537	82884	2.36%	0.227%
23	9.448	1016	1024	1028	rBV4	8780	20417	0.58%	0.056%
24	9.506	1028	1035	1050	rVB2	38367	95373	2.72%	0.261%
25	9.642	1050	1061	1071	rBV2	29199	75921	2.16%	0.208%
26	9.763	1071	1084	1092	rBV2	46834	127762	3.64%	0.349%
27	9.857	1092	1102	1117	rVV4	43784	136676	3.90%	0.374%
28	9.983	1117	1126	1139	rVB3	14541	42039	1.20%	0.115%
29	10.135	1143	1155	1190	rBV	384218	1022306	29.15%	2.795%
30	10.748	1255	1272	1276	rBV4	16175	47744	1.36%	0.131%
31	10.811	1276	1284	1304	rVV2	517348	1194468	34.05%	3.265%
32	11.011	1309	1322	1333	rVV2	139898	384911	10.97%	1.052%
33	11.095	1333	1338	1350	rVB3	31598	67043	1.91%	0.183%
34	11.257	1350	1369	1379	rBV2	160417	400962	11.43%	1.096%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130349.d
Acq On : 23 Apr 2015 5:03 am
Operator : BridgetK
Sample : jb92664-8
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 39 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

35	11.357	1379	1388	1397	rVV	1214340	2465651	70.29%	6.741%
36	11.414	1397	1399	1406	rVV3	63708	128391	3.66%	0.351%
37	11.488	1406	1413	1419	rVV3	74671	165374	4.71%	0.452%
38	11.545	1419	1424	1430	rVV3	24686	52870	1.51%	0.145%
39	11.587	1430	1432	1444	rVB6	11070	25608	0.73%	0.070%
40	11.724	1449	1458	1475	rBV	370903	704668	20.09%	1.926%
41	12.269	1537	1562	1564	rBV6	32471	78220	2.23%	0.214%
42	12.306	1564	1569	1579	rVB2	72677	147395	4.20%	0.403%
43	12.473	1593	1601	1608	rBV2	18126	32444	0.92%	0.089%
44	12.688	1629	1642	1652	rBV4	46735	107614	3.07%	0.294%
45	12.835	1656	1670	1683	rBV3	59109	180076	5.13%	0.492%
46	12.951	1683	1692	1697	rVV3	11584	25644	0.73%	0.070%
47	13.186	1724	1737	1744	rBV4	15826	34764	0.99%	0.095%
48	13.307	1744	1760	1767	rBV	529875	896795	25.57%	2.452%
49	13.375	1767	1773	1783	rVV	346161	577766	16.47%	1.579%
50	14.707	2019	2027	2039	rBV	514385	777839	22.18%	2.126%
51	14.801	2039	2045	2057	rVB	220505	322201	9.19%	0.881%
52	14.901	2057	2064	2077	rBV	423686	617718	17.61%	1.689%
53	15.284	2127	2137	2146	rVV	186803	274495	7.83%	0.750%
54	15.609	2192	2199	2211	rVB	69992	100915	2.88%	0.276%
55	15.777	2223	2231	2248	rBV	471025	685209	19.53%	1.873%
56	15.986	2262	2271	2278	rBV	118679	166497	4.75%	0.455%
57	16.054	2278	2284	2286	rVV	62289	88358	2.52%	0.242%
58	16.081	2286	2289	2294	rVV	152549	200888	5.73%	0.549%
59	16.128	2294	2298	2302	rVV2	27635	37548	1.07%	0.103%
60	16.343	2331	2339	2355	rBB	410287	576382	16.43%	1.576%
61	16.490	2355	2367	2376	rBV	561247	763014	21.75%	2.086%
62	16.626	2387	2393	2395	rBV	13946	18535	0.53%	0.051%
63	16.652	2395	2398	2404	rVB	15333	21797	0.62%	0.060%
64	16.710	2404	2409	2415	rBV	42492	56262	1.60%	0.154%
65	16.862	2431	2438	2443	rBV	596784	857764	24.45%	2.345%
66	16.904	2443	2446	2456	rVV	317434	435330	12.41%	1.190%
67	17.040	2465	2472	2482	rBV	214810	383690	10.94%	1.049%
68	17.129	2482	2489	2504	rVB	471007	737985	21.04%	2.017%
69	17.260	2507	2514	2520	rBV2	39452	56426	1.61%	0.154%
70	17.334	2520	2528	2534	rBV	122143	182861	5.21%	0.500%
71	17.397	2534	2540	2543	rVV	121009	181484	5.17%	0.496%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130349.d
Acq On : 23 Apr 2015 5:03 am
Operator : BridgetK
Sample : jb92664-8
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 39 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

72	17.428	2543	2546	2552	rVV	126369	177384	5.06%	0.485%
73	17.496	2552	2559	2571	rVB	483983	701057	19.99%	1.917%
74	17.601	2573	2579	2584	rBV3	56061	100661	2.87%	0.275%
75	17.669	2584	2592	2600	rVV2	183450	348689	9.94%	0.953%
76	17.821	2616	2621	2628	rVV	83564	129374	3.69%	0.354%
77	17.900	2628	2636	2641	rVV	256458	371754	10.60%	1.016%
78	17.952	2641	2646	2651	rVV	191664	281848	8.04%	0.771%
79	18.000	2651	2655	2666	rVV2	64566	96792	2.76%	0.265%
80	18.083	2666	2671	2676	rVV5	14849	26439	0.75%	0.072%
81	18.167	2682	2687	2691	rBV3	26506	39989	1.14%	0.109%
82	18.209	2691	2695	2698	rVV	14332	20115	0.57%	0.055%
83	18.267	2698	2706	2710	rVV	135159	234763	6.69%	0.642%
84	18.298	2710	2712	2719	rVB2	52054	74924	2.14%	0.205%
85	18.403	2719	2732	2735	rBV2	116955	238669	6.80%	0.652%
86	18.445	2735	2740	2748	rVV2	294426	477802	13.62%	1.306%
87	18.513	2748	2753	2759	rVB4	19430	30562	0.87%	0.084%
88	18.639	2769	2777	2782	rBV3	38519	66526	1.90%	0.182%
89	18.686	2782	2786	2790	rVV	19822	27880	0.79%	0.076%
90	18.739	2790	2796	2806	rVV3	104838	241073	6.87%	0.659%
91	18.812	2806	2810	2816	rVV	40803	61200	1.74%	0.167%
92	18.875	2816	2822	2825	rVV2	39427	67230	1.92%	0.184%
93	18.912	2825	2829	2837	rVB2	62379	113145	3.23%	0.309%
94	19.069	2853	2859	2869	rBV9	8756	21084	0.60%	0.058%
95	19.148	2869	2874	2881	rBV	55637	82095	2.34%	0.224%
96	19.263	2891	2896	2906	rVV4	22992	48037	1.37%	0.131%
97	19.342	2906	2911	2921	rVB2	21919	39192	1.12%	0.107%
98	19.473	2930	2936	2942	rBV	33733	50983	1.45%	0.139%
99	19.677	2968	2975	2985	rVV	27089	49700	1.42%	0.136%
100	19.793	2992	2997	3004	rVV3	12855	20655	0.59%	0.056%

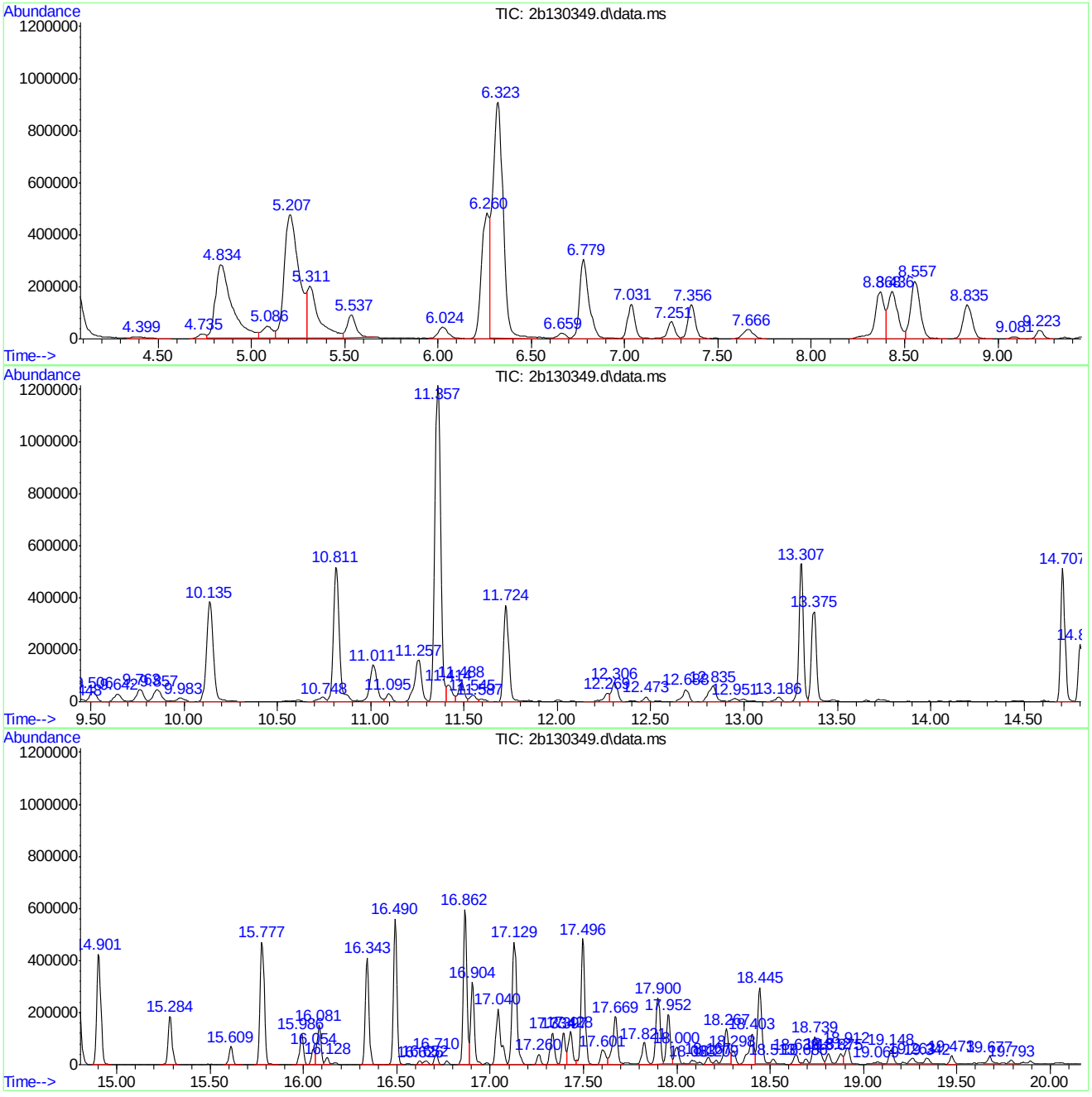
Sum of corrected areas: 36579543

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130349.d
Acq On : 23 Apr 2015 5:03 am
Operator : BridgetK
Sample : jb92664-8
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 39 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130349.d
Acq On : 23 Apr 2015 5:03 am
Operator : BridgetK
Sample : jb92664-8
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 39 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

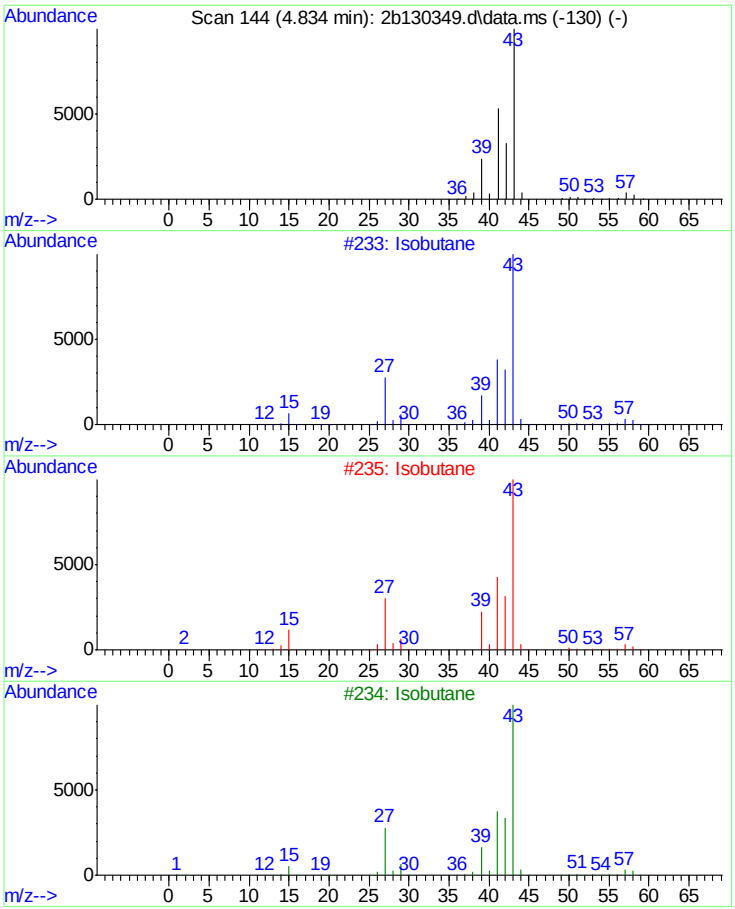
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

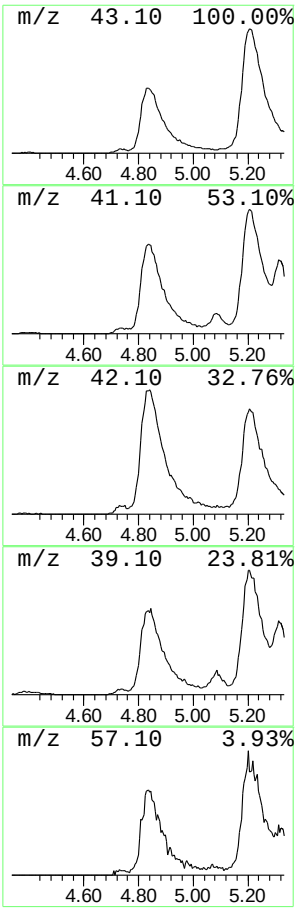
****

Peak Number 1 Isobutane Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.834	73.03 ug/L	1744530	pentafluorobenzene	10.811

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Isobutane	58	C4H10	000075-28-5	72
2	Isobutane	58	C4H10	000075-28-5	64
3	Isobutane	58	C4H10	000075-28-5	64
4	Isobutane	58	C4H10	000075-28-5	45
5	Propane, 2-nitro-	89	C3H7NO2	000079-46-9	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130349.d
Acq On : 23 Apr 2015 5:03 am
Operator : BridgetK
Sample : jb92664-8
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 39 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

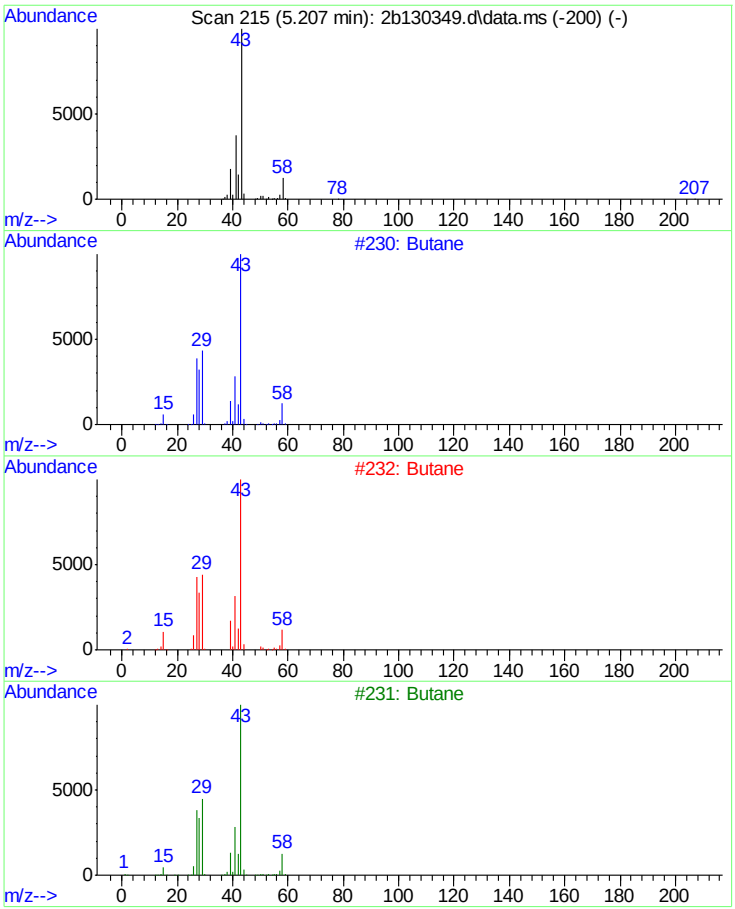
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

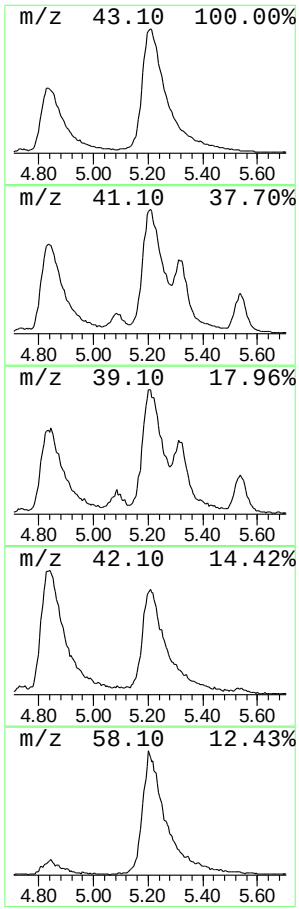
****

Peak Number 2 Butane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.207	107.49 ug/L	2567810	pentafluorobenzene	10.811

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	72
2	Butane	58	C4H10	000106-97-8	59
3	Butane	58	C4H10	000106-97-8	59
4	Isobutane	58	C4H10	000075-28-5	9
5	Propane, 1-nitro-	89	C3H7NO2	000108-03-2	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130349.d
Acq On : 23 Apr 2015 5:03 am
Operator : BridgetK
Sample : jb92664-8
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 39 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

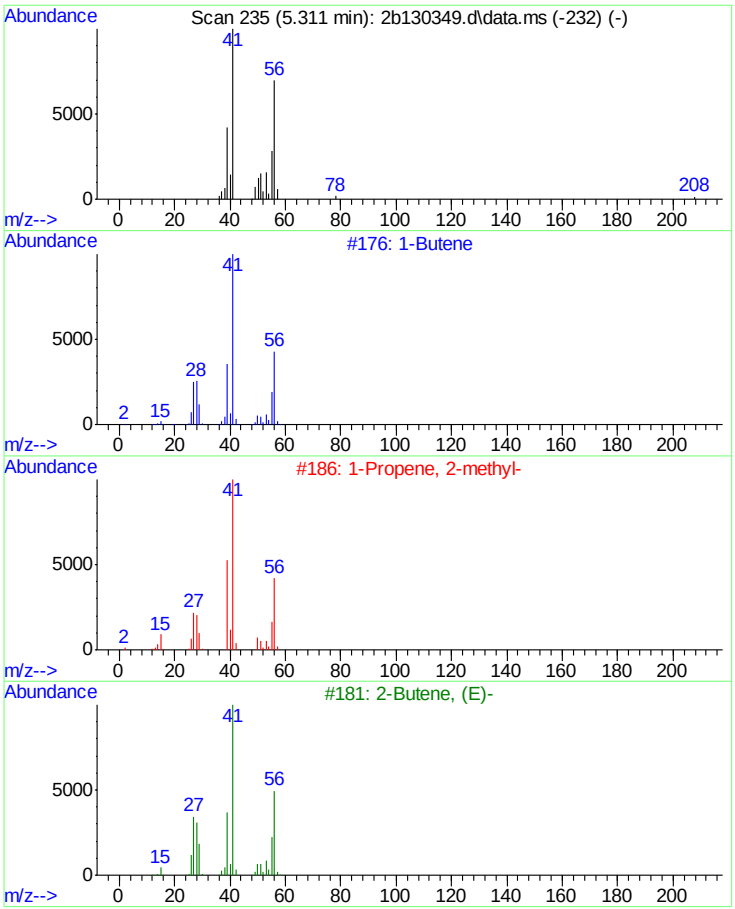
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

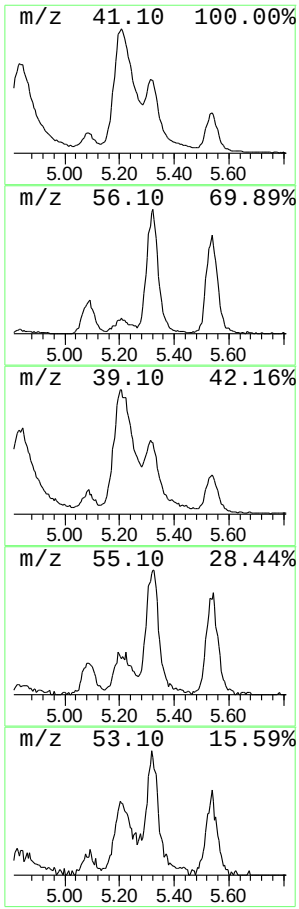
****

Peak Number 3 1-Butene Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.311	35.00 ug/L	836232	pentafluorobenzene	10.811

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Butene	56	C4H8	000106-98-9	72
2	1-Propene, 2-methyl-	56	C4H8	000115-11-7	59
3	2-Butene, (E)-	56	C4H8	000624-64-6	59
4	1-Propene, 2-methyl-	56	C4H8	000115-11-7	59
5	2-Butene, (Z)-	56	C4H8	000590-18-1	59





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130349.d
Acq On : 23 Apr 2015 5:03 am
Operator : BridgetK
Sample : jb92664-8
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 39 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

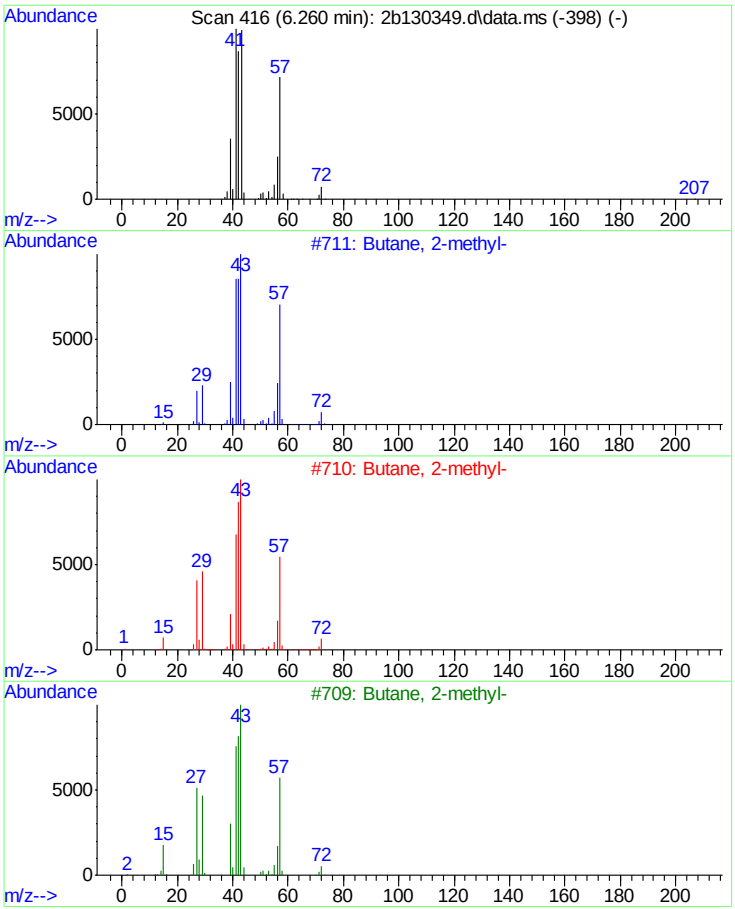
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

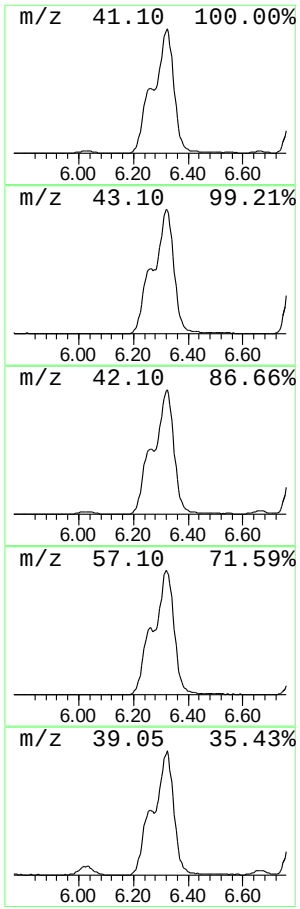
****

Peak Number 4 Butane, 2-methyl- Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.260	58.93 ug/L	1407770	pentafluorobenzene	10.811

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	94
2	Butane, 2-methyl-	72	C5H12	000078-78-4	90
3	Butane, 2-methyl-	72	C5H12	000078-78-4	86
4	3-Buten-1-ol	72	C4H8O	000627-27-0	47
5	Oxirane, trimethyl-	86	C5H10O	005076-19-7	36





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130349.d
Acq On : 23 Apr 2015 5:03 am
Operator : BridgetK
Sample : jb92664-8
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 39 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

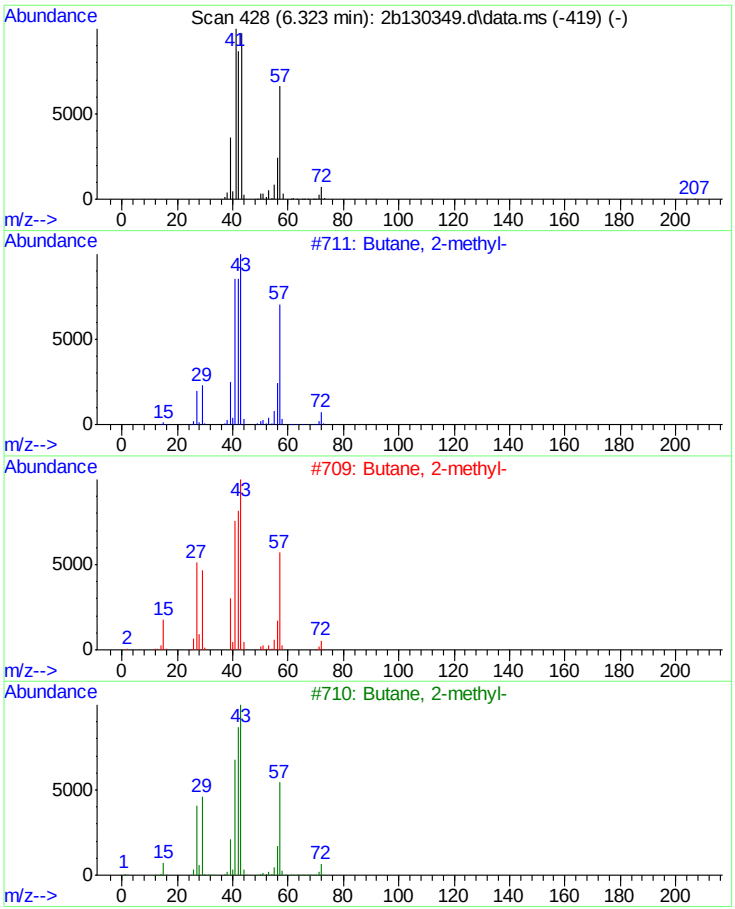
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

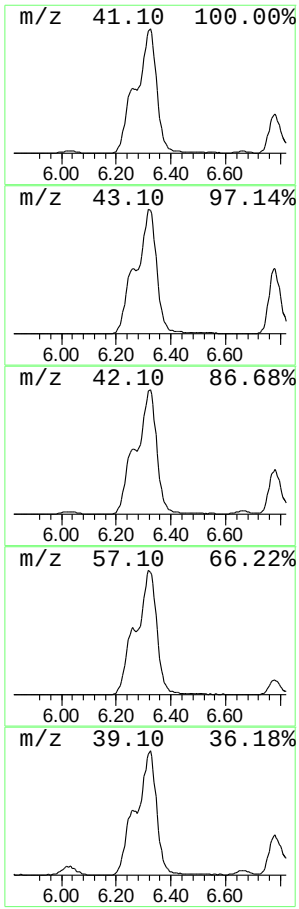
****

Peak Number 5 Butane, 2-methyl- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.323	146.83 ug/L	3507650	pentafluorobenzene	10.811

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	91
2	Butane, 2-methyl-	72	C5H12	000078-78-4	86
3	Butane, 2-methyl-	72	C5H12	000078-78-4	72
4	3-Buten-1-ol	72	C4H8O	000627-27-0	38
5	Pentane	72	C5H12	000109-66-0	36





Library Search Compound Report

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Data File : 2b130349.d
Acq On : 23 Apr 2015 5:03 am
Operator : BridgetK
Sample : jb92664-8
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 39 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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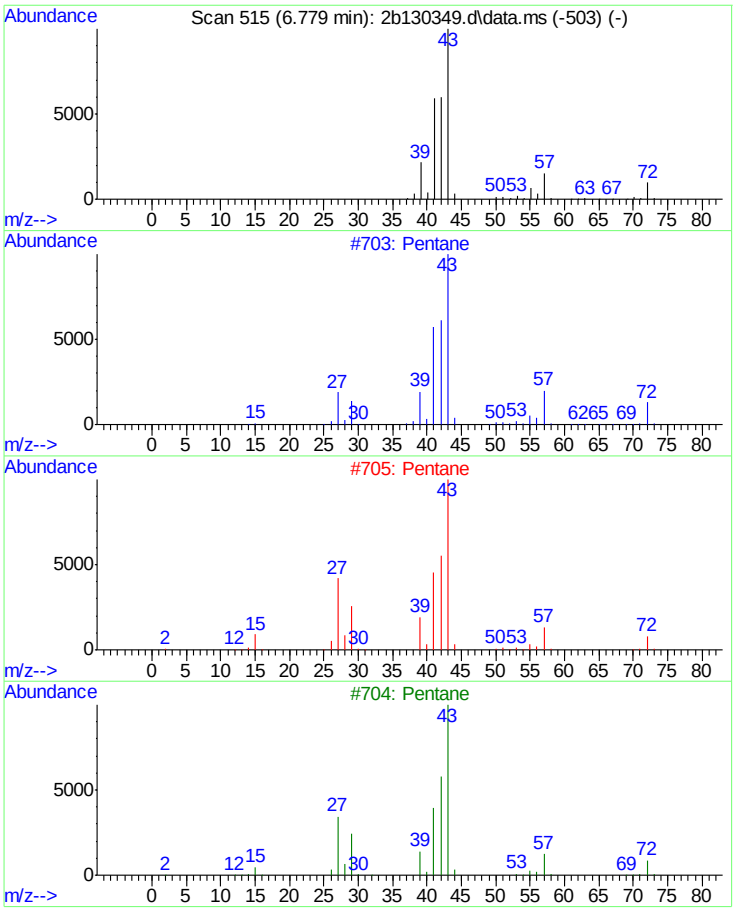
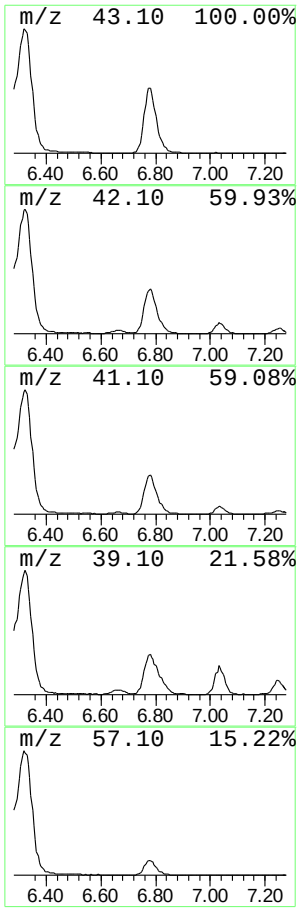
Peak Number 6 Pentane Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.779	45.07 ug/L	1076630	pentafluorobenzene	10.811

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	90
2	Pentane	72	C5H12	000109-66-0	86
3	Pentane	72	C5H12	000109-66-0	80
4	Pentane	72	C5H12	000109-66-0	59
5	Oxirane, ethyl-	72	C4H8O	000106-88-7	40





Library Search Compound Report

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Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 39 Sample Multiplier: 1

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Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

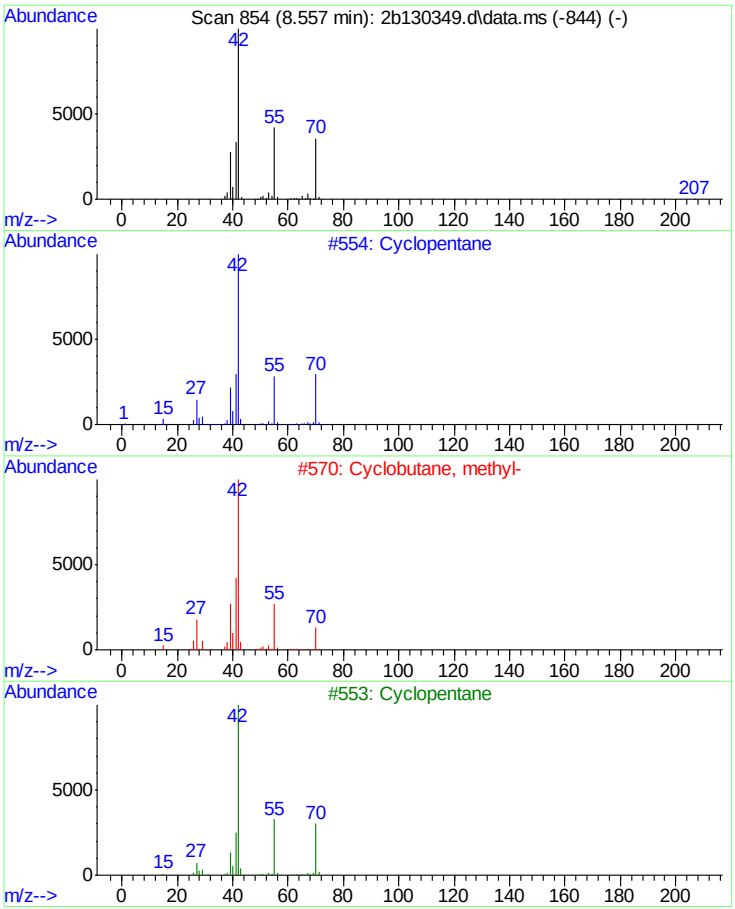
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

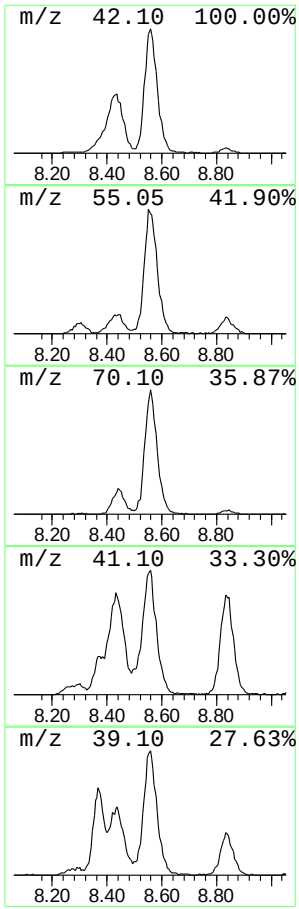
****

Peak Number 7 Cyclopentane Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.557	31.75 ug/L	758419	pentafluorobenzene	10.811

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane	70	C5H10	000287-92-3	86
2	Cyclobutane, methyl-	70	C5H10	000598-61-8	78
3	Cyclopentane	70	C5H10	000287-92-3	72
4	1-Pentene	70	C5H10	000109-67-1	64
5	Cyclobutanone	70	C4H6O	001191-95-3	50





Library Search Compound Report

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Operator : BridgetK
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Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 39 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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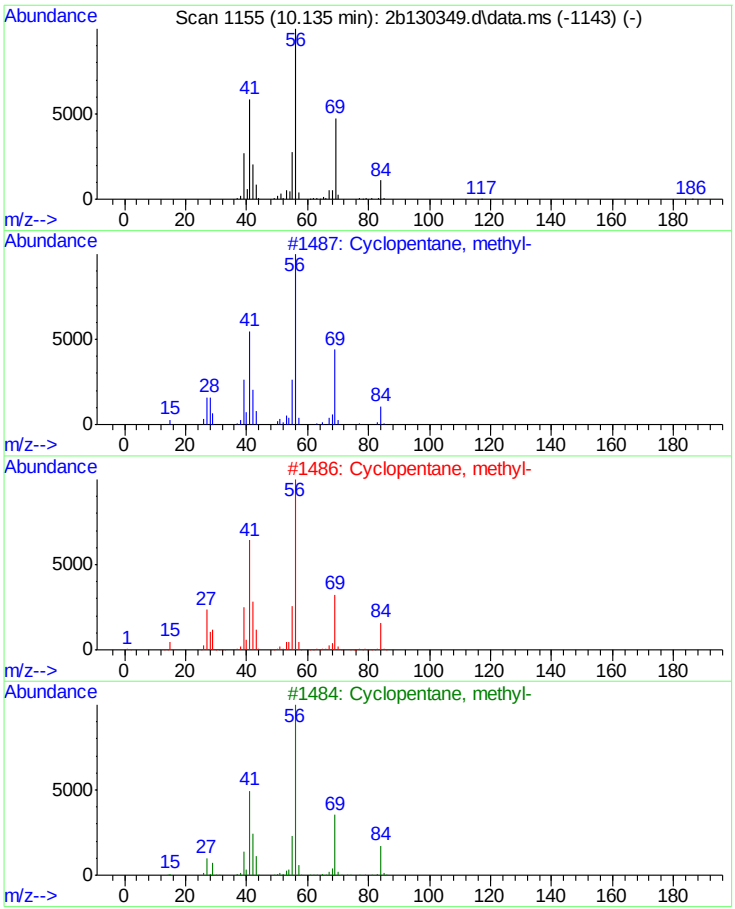
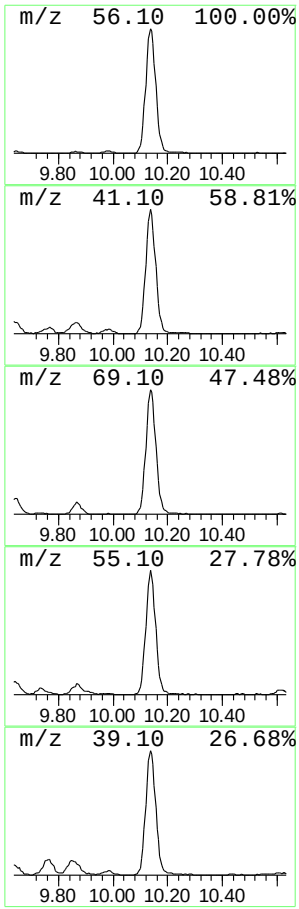
Peak Number 8 Cyclopentane, methyl- Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.135	42.79 ug/L	1022310	pentafluorobenzene	10.811

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	94
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	86
3	Cyclopentane, methyl-	84	C6H12	000096-37-7	78
4	Cyclobutane, ethyl-	84	C6H12	004806-61-5	72
5	Propane, 2-cyclopropyl-	84	C6H12	003638-35-5	64





Library Search Compound Report

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Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 39 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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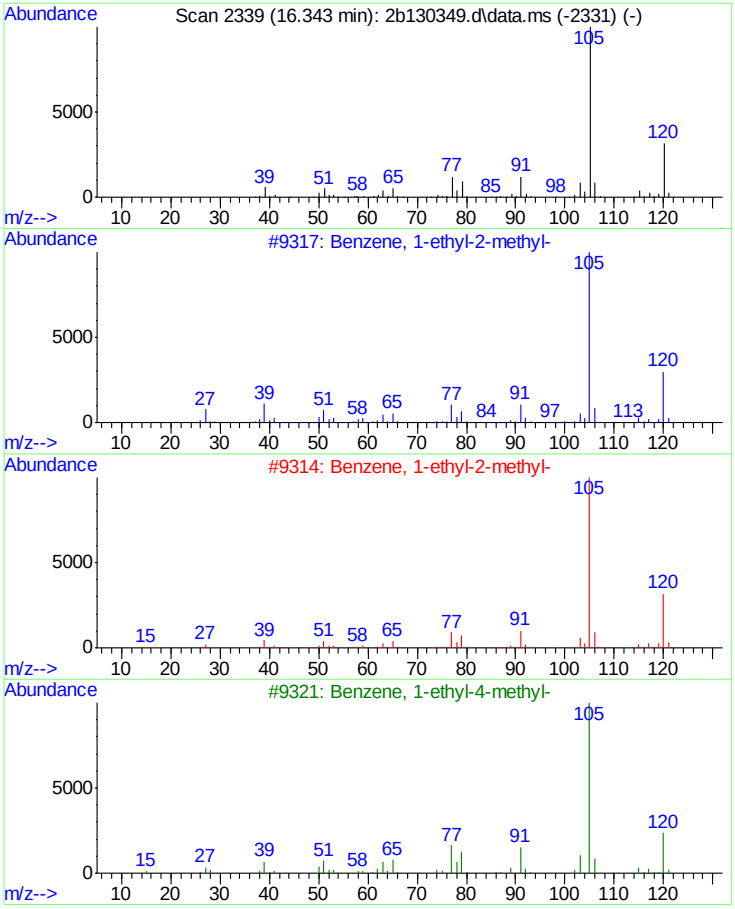
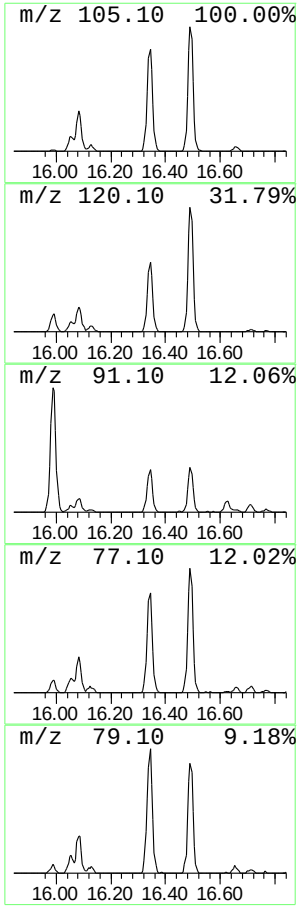
Peak Number 9 Benzene, 1-ethyl-2-methyl- Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.343	33.60 ug/L	576382	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
3	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	93
4	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91





Library Search Compound Report

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Acq On : 23 Apr 2015 5:03 am
Operator : BridgetK
Sample : jb92664-8
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 39 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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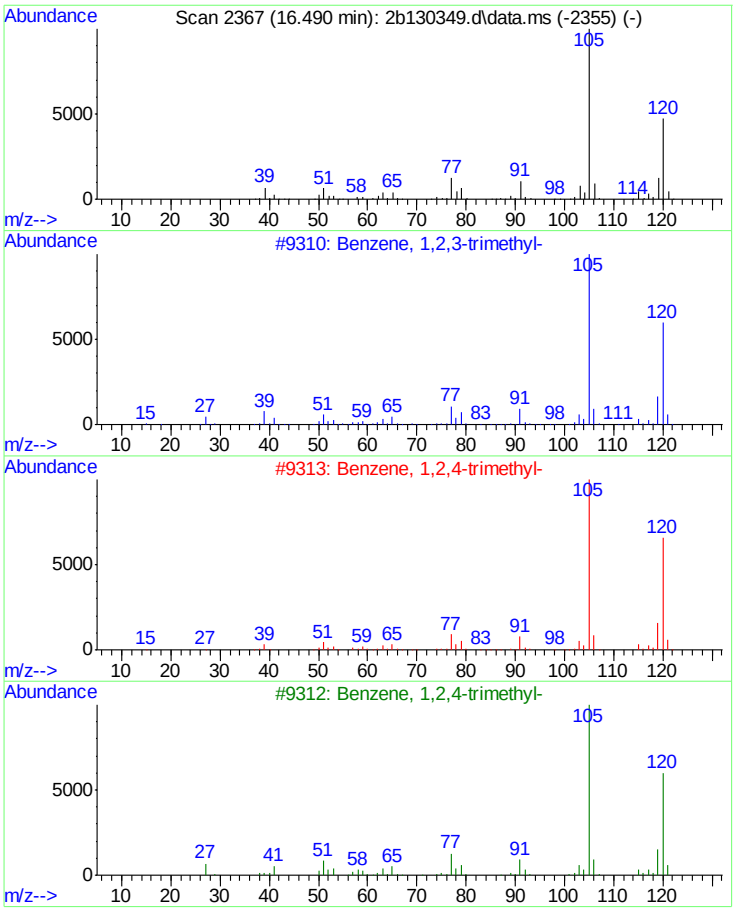
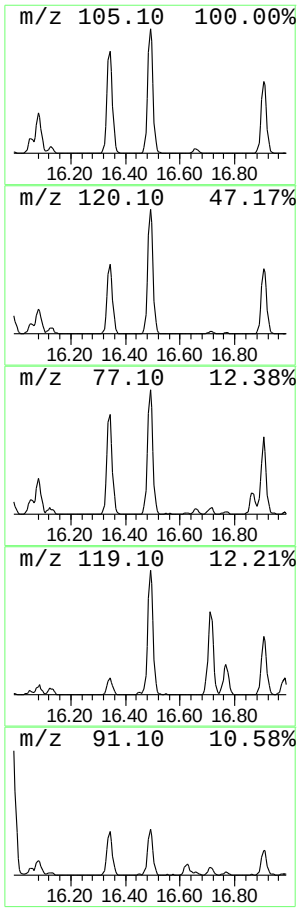
Peak Number 10 Benzene, 1,2,3-trimethyl- Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.490	44.48 ug/L	763014	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94





Library Search Compound Report

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Data File : 2b130349.d
Acq On : 23 Apr 2015 5:03 am
Operator : BridgetK
Sample : jb92664-8
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 39 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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Peak Number 11 Benzene, 1,4-diethyl- Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.040	22.37 ug/L	383690	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	97
2	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	97
3	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	97
4	Benzene, 1,2-diethyl-	134	C10H14	000135-01-3	96
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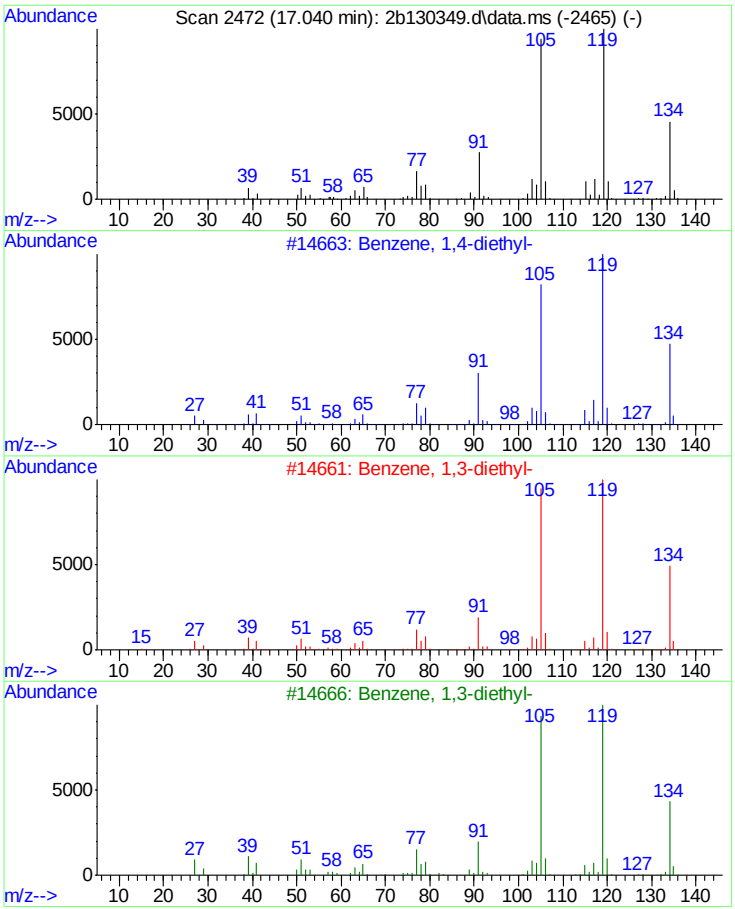

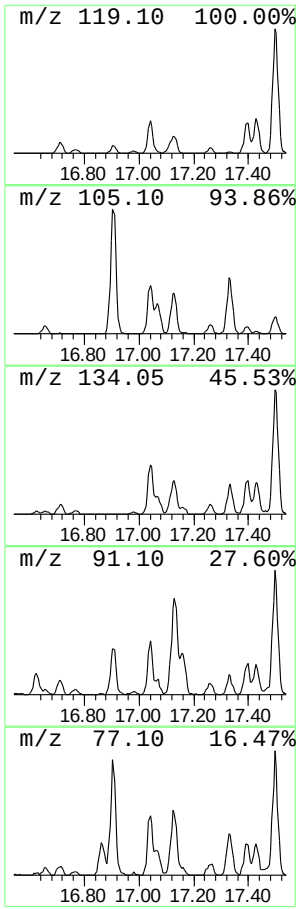

Library Search Compound Report

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Acq On : 23 Apr 2015 5:03 am
Operator : BridgetK
Sample : jb92664-8
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 39 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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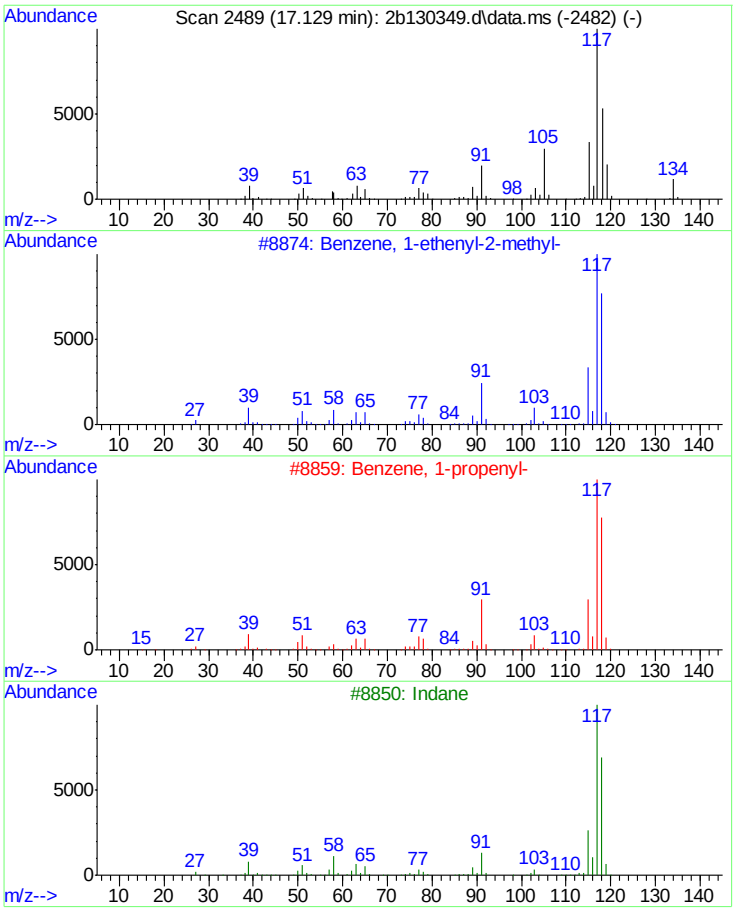
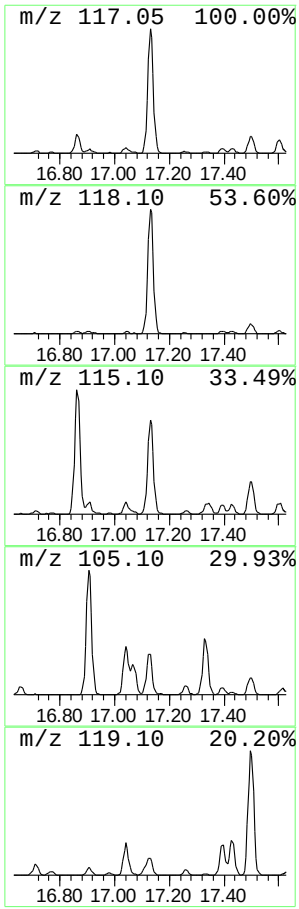
Peak Number 12 Benzene, 1-ethenyl-2-methyl- Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.129	43.02 ug/L	737985	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethenyl-2-methyl-	118	C9H10	000611-15-4	91
2	Benzene, 1-propenyl-	118	C9H10	000637-50-3	64
3	Indane	118	C9H10	000496-11-7	64
4	Deltacyclene	118	C9H10	007785-10-6	64
5	Indane	118	C9H10	000496-11-7	64





Library Search Compound Report

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Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 39 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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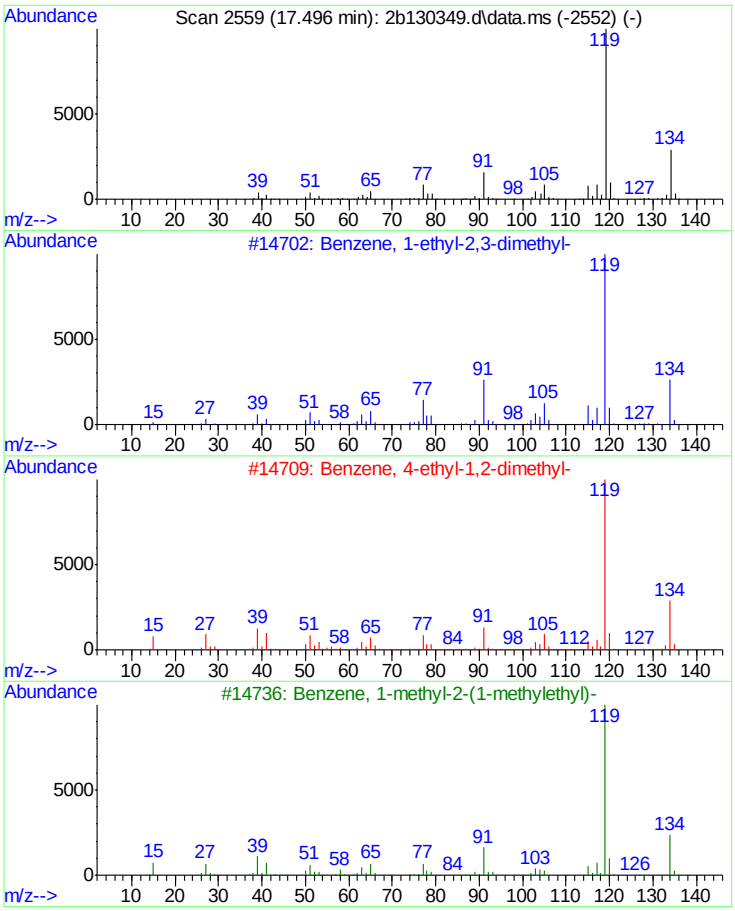
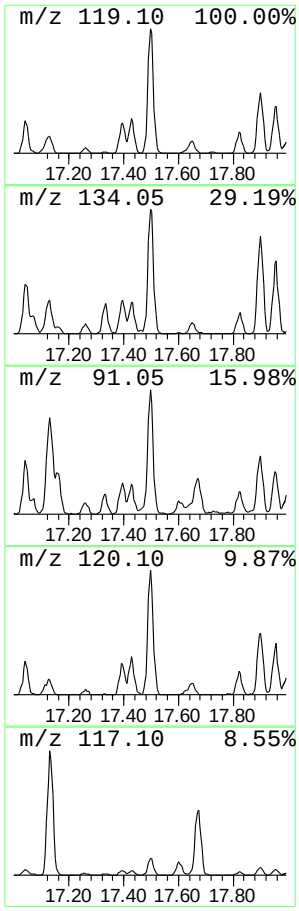
Peak Number 13 Benzene, 1-ethyl-2,3-dimethyl- Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.496	40.87 ug/L	701057	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	96
2	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	95
3	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	95
4	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	95
5	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	95





Library Search Compound Report

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Sample : jb92664-8
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 39 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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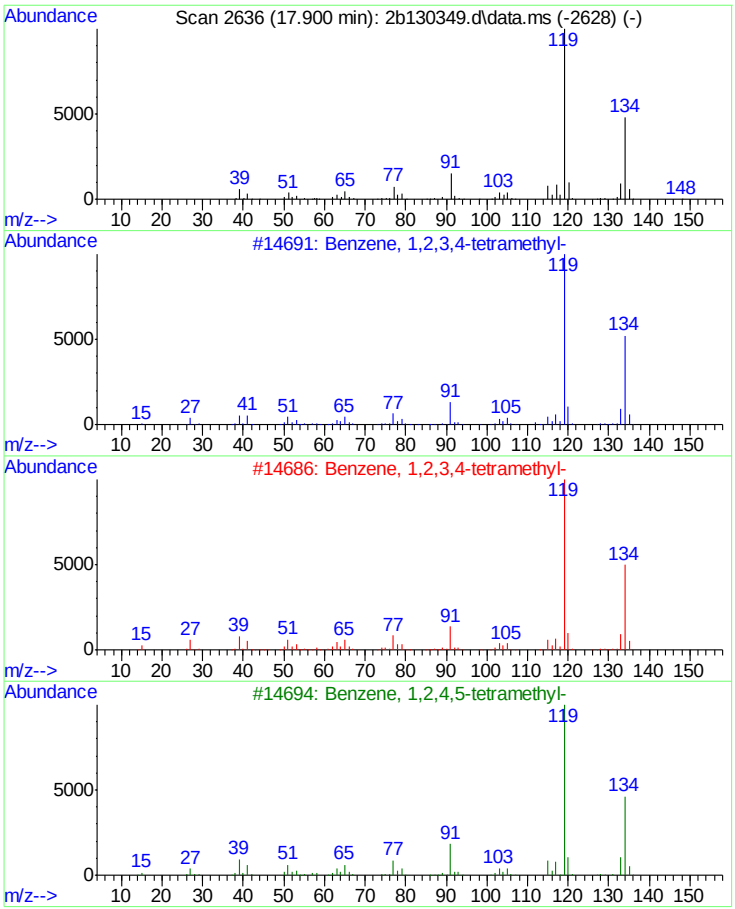
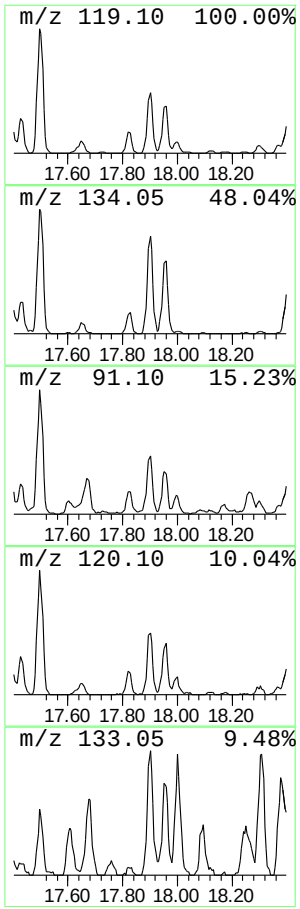
Peak Number 14 Benzene, 1,2,3,4-tetramethyl- Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.900	21.67 ug/L	371754	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	97
2	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	97
3	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	97
4	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	97
5	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	95





Library Search Compound Report

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Sample : jb92664-8
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 39 Sample Multiplier: 1

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Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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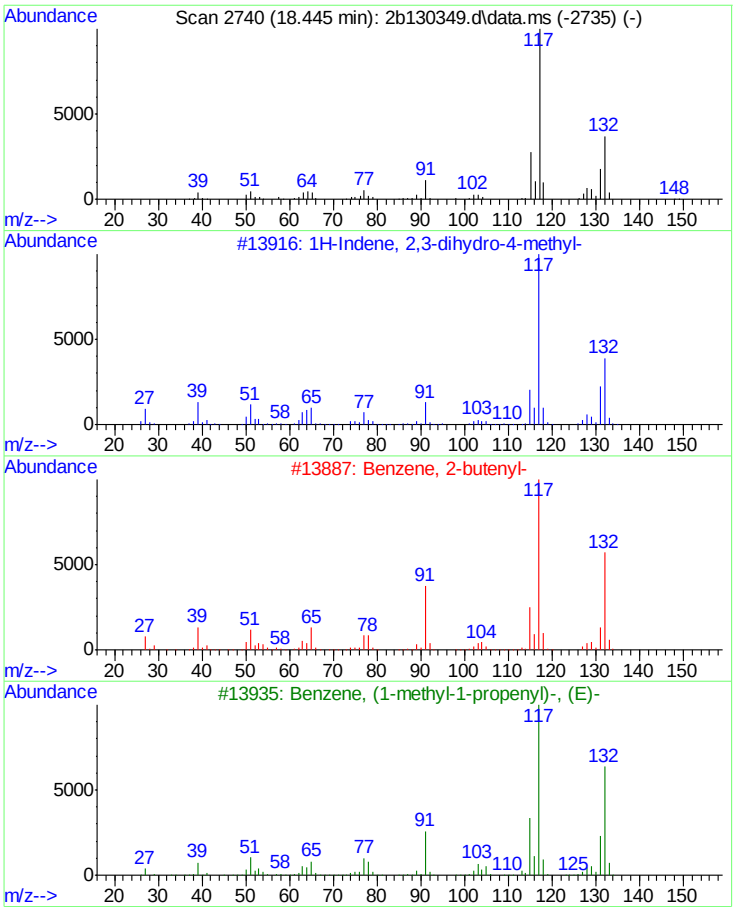
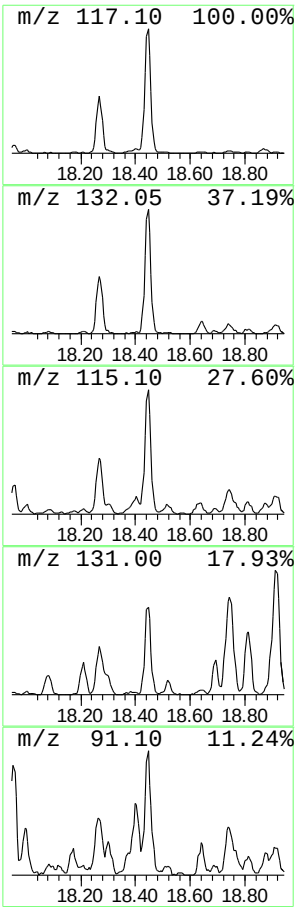
Peak Number 15 1H-Indene, 2,3-dihydro-4-me... Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.445	27.85 ug/L	477802	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	90
2	Benzene, 2-butenyl-	132	C10H12	001560-06-1	90
3	Benzene, (1-methyl-1-propenyl)-,...	132	C10H12	000768-00-3	90
4	Benzene, 1-ethenyl-4-ethyl-	132	C10H12	003454-07-7	87
5	Indan, 1-methyl-	132	C10H12	000767-58-8	87





Tentatively Identified Compound (LSC) summary

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Data File : 2b130349.d
Acq On : 23 Apr 2015 5:03 am
Operator : BridgetK
Sample : jb92664-8
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 39 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

					Internal Standard		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Isobutane	4.834	73.0	ug/L	1744530	2	10.811	1194470	50.0
Butane	5.207	107.5	ug/L	2567810	2	10.811	1194470	50.0
1-Butene	5.311	35.0	ug/L	836232	2	10.811	1194470	50.0
Butane, 2-methyl-	6.260	58.9	ug/L	1407770	2	10.811	1194470	50.0
Butane, 2-methyl-	6.323	146.8	ug/L	3507650	2	10.811	1194470	50.0
Pentane	6.779	45.1	ug/L	1076630	2	10.811	1194470	50.0
Cyclopentane	8.557	31.7	ug/L	758419	2	10.811	1194470	50.0
Cyclopentane, m...	10.135	42.8	ug/L	1022310	2	10.811	1194470	50.0
Benzene, 1-ethy...	16.343	33.6	ug/L	576382	5	16.867	857764	50.0
Benzene, 1,2,3-...	16.490	44.5	ug/L	763014	5	16.867	857764	50.0
Benzene, 1,4-di...	17.040	22.4	ug/L	383690	5	16.867	857764	50.0
Benzene, 1-ethe...	17.129	43.0	ug/L	737985	5	16.867	857764	50.0
Benzene, 1-ethy...	17.496	40.9	ug/L	701057	5	16.867	857764	50.0
Benzene, 1,2,3,...	17.900	21.7	ug/L	371754	5	16.867	857764	50.0
1H-Indene, 2,3-...	18.445	27.9	ug/L	477802	5	16.867	857764	50.0

Manual Integrations APPROVED (compounds with "m" flag)
Mei Chen
04/29/15 12:03

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130350.d
Acq On : 23 Apr 2015 5:32 am
Operator : BridgetK
Sample : jb92664-9
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Time: Apr 29 11:58:55 2015
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
QLast Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.363	65	100746	500.00	ug/L	0.01
5) pentafluorobenzene	10.811	168	352719	50.00	ug/L	0.00
58) 1,4-difluorobenzene	11.729	114	341344	50.00	ug/L	0.00
90) chlorobenzene-d5	14.707	117	296800	50.00	ug/L	0.00
106) 1,4-dichlorobenzene-d4	16.862	152	174029	50.00	ug/L	0.00
System Monitoring Compounds						
51) dibromofluoromethane (s)	10.822	113	114880	48.79	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 97.58%			
52) 1,2-dichloroethane-d4 (s)	11.257	65	127929	45.92	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 91.84%			
82) toluene-d8 (s)	13.307	98	371448	51.67	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 103.34%			
108) 4-bromofluorobenzene (s)	15.776	95	138471	49.36	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 98.72%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	8.489	59	10495	46.74	ug/L	# 1
34) methyl tert butyl ether	8.819	73	27308m	4.42	ug/L	
56) Cyclohexane	11.021	84	120761	45.20	ug/L	# 58
66) benzene	11.362	78	1951544	283.41	ug/L	99
79) methylcyclohexane	12.311	83	103770m	34.56	ug/L	
84) toluene	13.375	92	236830	54.13	ug/L	99
100) ethylbenzene	14.801	91	1363764	158.14	ug/L	98
101) m,p-xylene	14.901	106	1212238	366.67	ug/L	96
102) o-xylene	15.284	106	300920	85.54	ug/L	98
107) isopropylbenzene	15.609	105	234915	26.06	ug/L	99

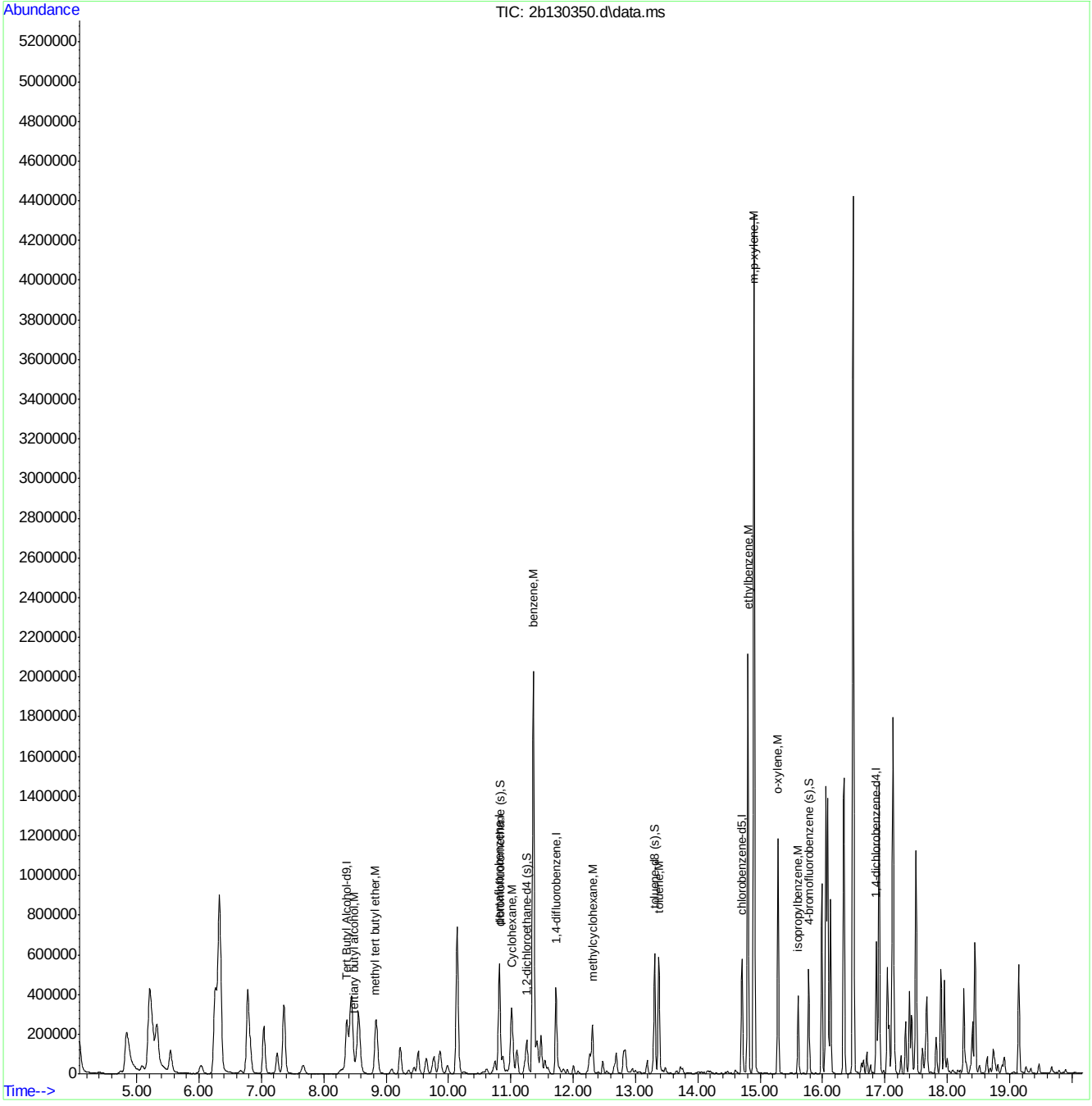
(#) = qualifier out of range (m) = manual integration (+) = signals summed

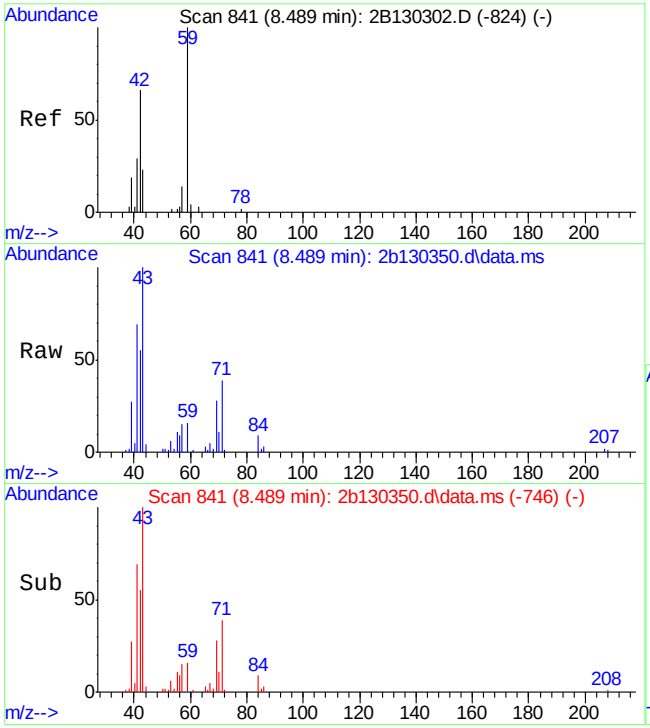
7.1.17
7

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130350.d
Acq On : 23 Apr 2015 5:32 am
Operator : BridgetK
Sample : jb92664-9
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Time: Apr 29 11:58:55 2015
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
QLast Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration

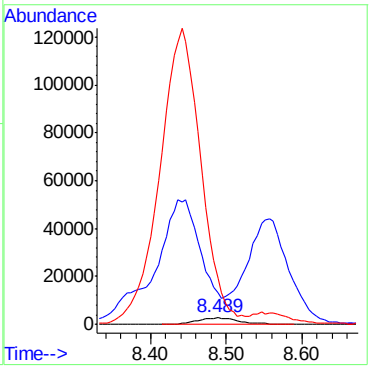


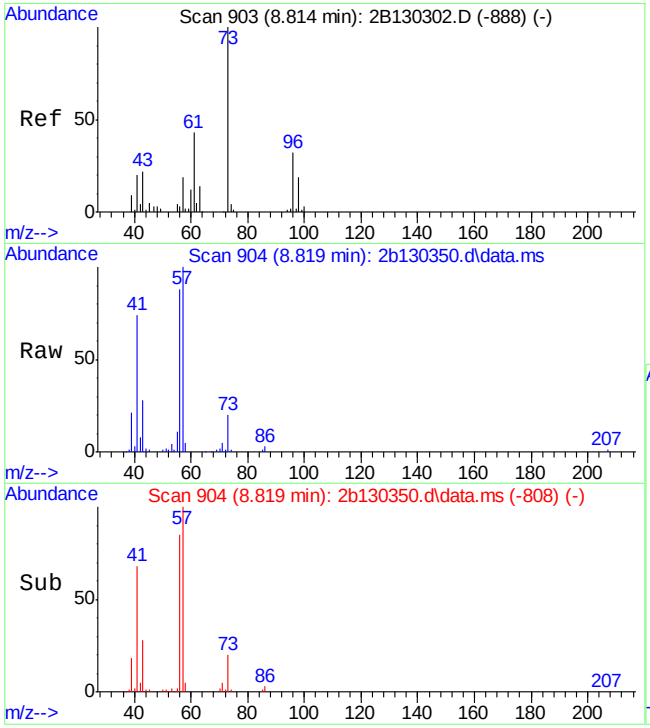


#2
tertiary butyl alcohol
Concen: 46.74 ug/L
RT: 8.489 min Scan# 841
Delta R.T. 0.000 min
Lab File: 2b130350.d
Acq: 23 Apr 2015 5:32 am

Tgt Ion: 59 Resp: 10495

Ion	Ratio	Lower	Upper
59	100		
41	0.0	7.8	67.8#
43	566.1	0.0	56.1#

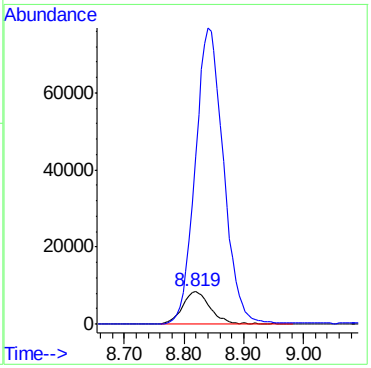


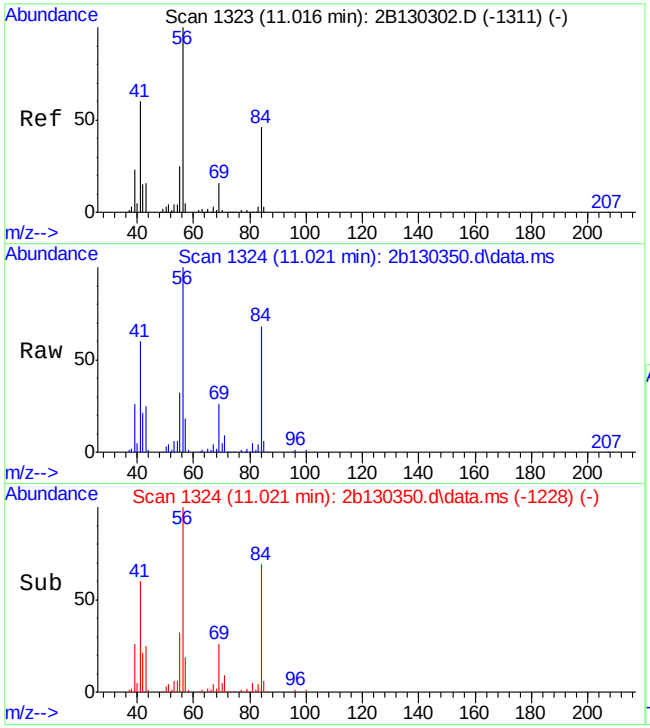


#34
methyl tert butyl ether
Concen: 4.42 ug/L m
RT: 8.819 min Scan# 904
Delta R.T. 0.005 min
Lab File: 2b130350.d
Acq: 23 Apr 2015 5:32 am

Tgt Ion: 73 Resp: 27308

Ion	Ratio	Lower	Upper
73	100		
57	511.6	0.0	48.7#

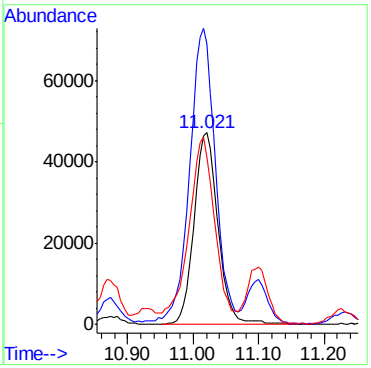


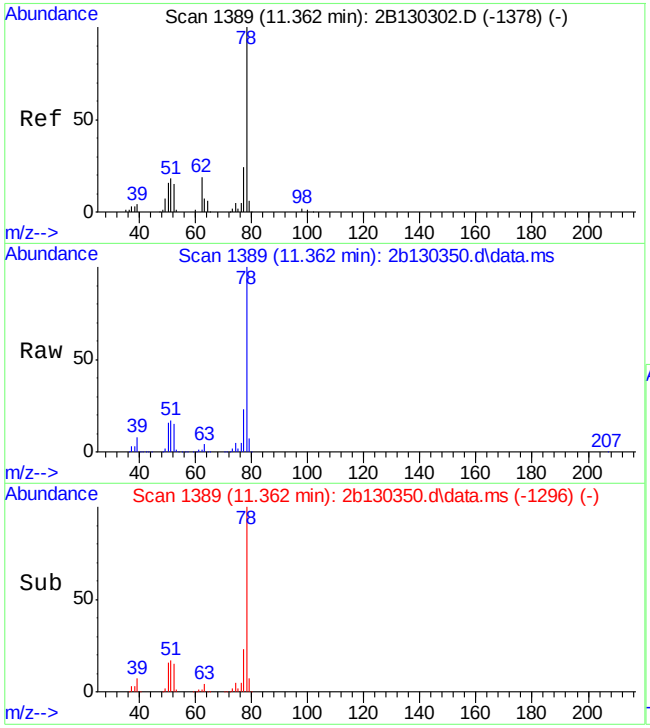


#56
Cyclohexane
Concen: 45.20 ug/L
RT: 11.021 min Scan# 1324
Delta R.T. 0.005 min
Lab File: 2b130350.d
Acq: 23 Apr 2015 5:32 am

Tgt Ion: 84 Resp: 120761

Ion	Ratio	Lower	Upper
84	100		
56	146.6	188.5	248.5#
41	87.4	100.4	160.4#

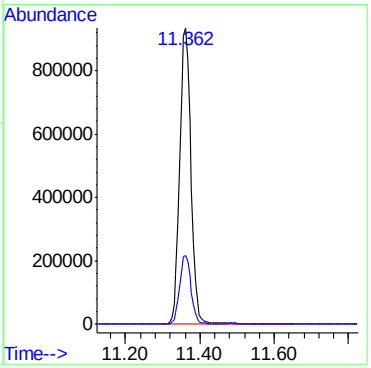


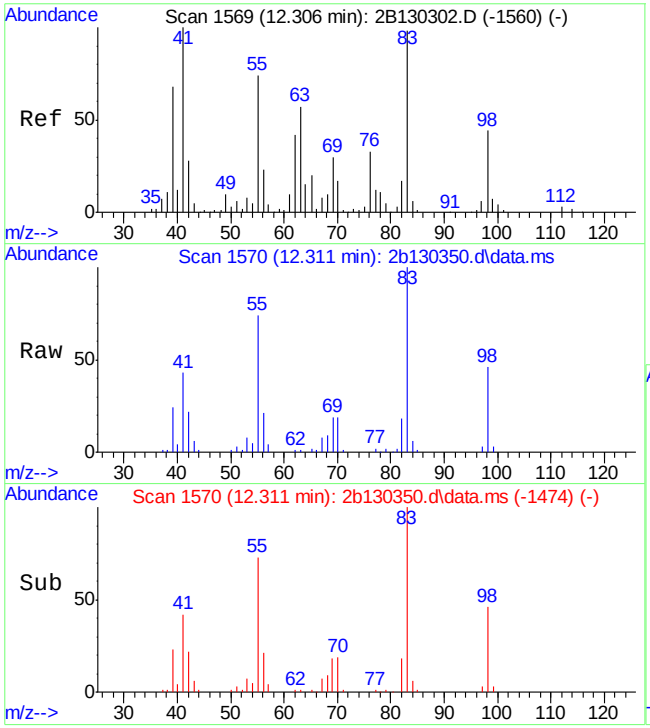


#66
benzene
Concen: 283.41 ug/L
RT: 11.362 min Scan# 1389
Delta R.T. 0.000 min
Lab File: 2b130350.d
Acq: 23 Apr 2015 5:32 am

Tgt Ion: 78 Resp: 1951544

Ion	Ratio	Lower	Upper
78	100		
77	23.3	0.0	53.8

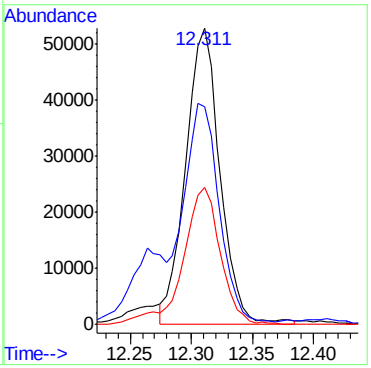


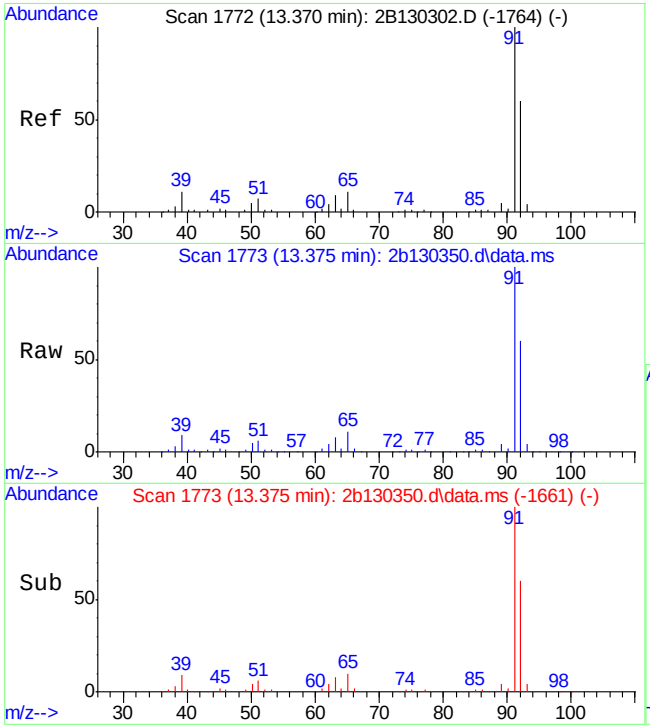


#79
methylcyclohexane
Concen: 34.56 ug/L m
RT: 12.311 min Scan# 1570
Delta R.T. 0.005 min
Lab File: 2b130350.d
Acq: 23 Apr 2015 5:32 am

Tgt Ion: 83 Resp: 103770

Ion	Ratio	Lower	Upper
83	100		
55	73.6	45.8	105.8
98	46.2	14.7	74.7

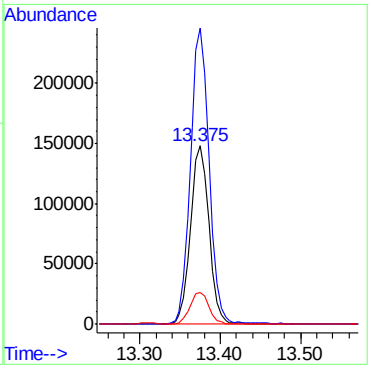


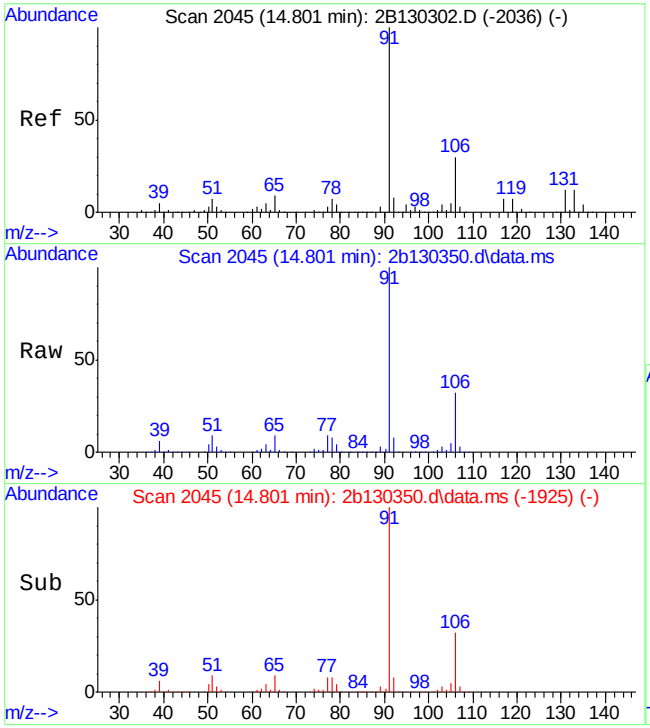


#84
toluene
Concen: 54.13 ug/L
RT: 13.375 min Scan# 1773
Delta R.T. 0.005 min
Lab File: 2b130350.d
Acq: 23 Apr 2015 5:32 am

Tgt Ion: 92 Resp: 236830

Ion	Ratio	Lower	Upper
92	100		
91	166.2	137.0	197.0
65	17.4	0.0	49.0

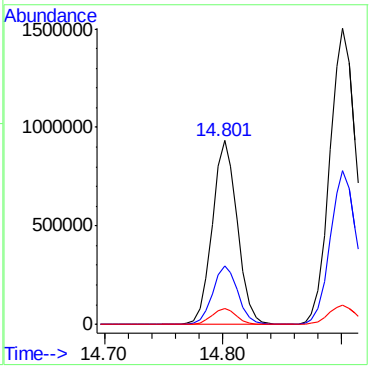


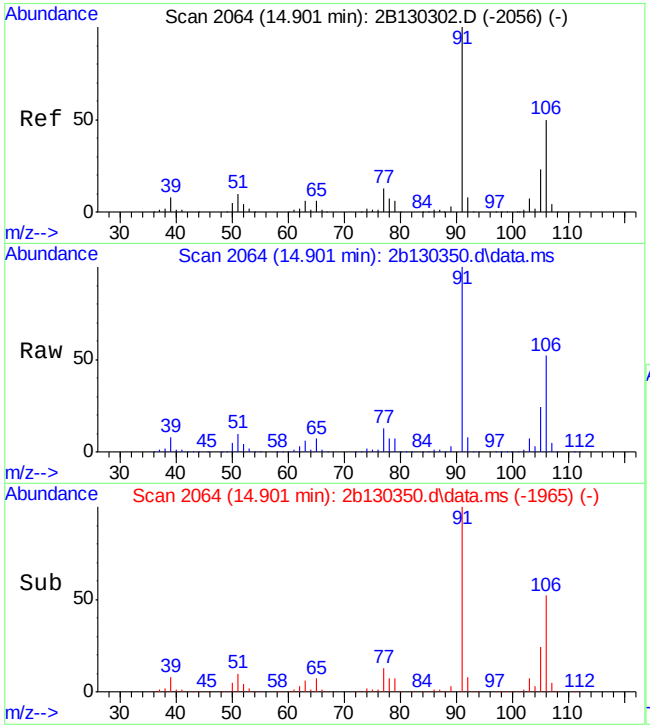


#100
ethylbenzene
Concen: 158.14 ug/L
RT: 14.801 min Scan# 2045
Delta R.T. 0.000 min
Lab File: 2b130350.d
Acq: 23 Apr 2015 5:32 am

Tgt Ion: 91 Resp: 1363764

Ion	Ratio	Lower	Upper
91	100		
106	31.8	0.3	60.3
65	8.6	0.0	38.6

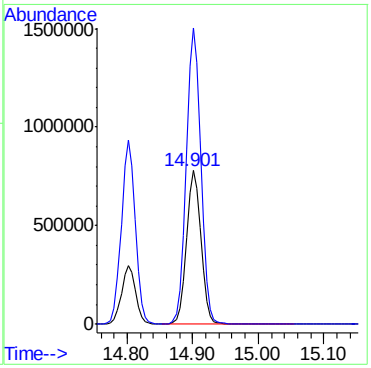


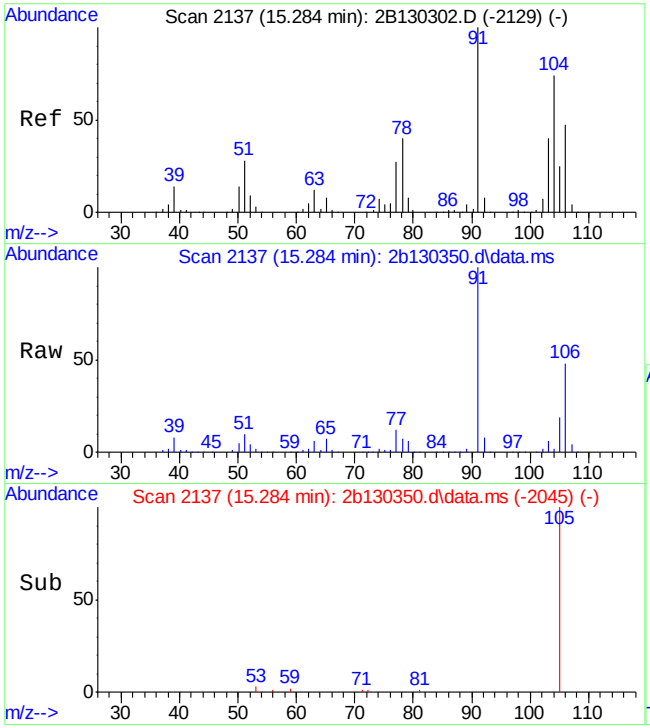


#101
m,p-xylene
Concen: 366.67 ug/L
RT: 14.901 min Scan# 2064
Delta R.T. 0.000 min
Lab File: 2b130350.d
Acq: 23 Apr 2015 5:32 am

Tgt Ion:106 Resp: 1212238

Ion	Ratio	Lower	Upper
106	100		
91	192.9	169.4	229.4

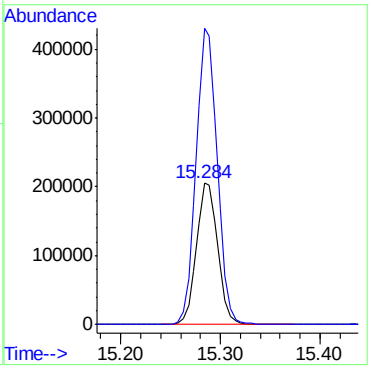


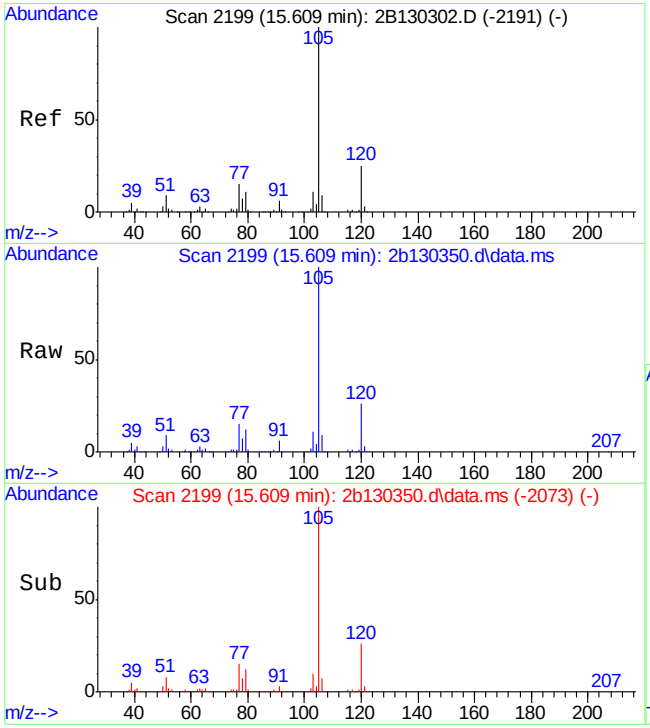


#102
o-xylene
Concen: 85.54 ug/L
RT: 15.284 min Scan# 2137
Delta R.T. -0.000 min
Lab File: 2b130350.d
Acq: 23 Apr 2015 5:32 am

Tgt Ion:106 Resp: 300920

Ion	Ratio	Lower	Upper
106	100		
91	210.0	183.1	243.1

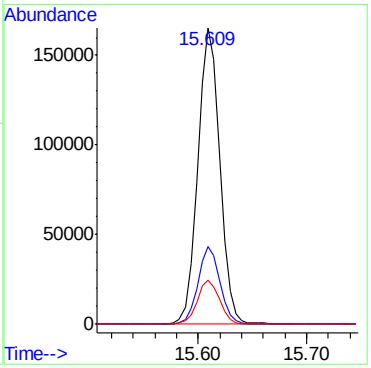




#107
isopropylbenzene
Concen: 26.06 ug/L
RT: 15.609 min Scan# 2199
Delta R.T. -0.000 min
Lab File: 2b130350.d
Acq: 23 Apr 2015 5:32 am

Tgt Ion:105 Resp: 234915

Ion	Ratio	Lower	Upper
105	100		
120	26.1	0.0	55.5
77	14.9	0.0	45.0



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130350.d
Acq On : 23 Apr 2015 5:32 am
Operator : BridgetK
Sample : jb92664-9
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 40 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

Signal : TIC: 2b130350.d\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.839	131	145	183	rVV3	206117	1277303	18.91%	1.564%
2	5.081	183	191	200	rVV3	38256	153262	2.27%	0.188%
3	5.212	200	216	231	rVV2	426773	2249154	33.29%	2.755%
4	5.327	231	238	269	rVV	249475	1114177	16.49%	1.365%
5	5.542	269	279	321	rVV	116439	431097	6.38%	0.528%
6	6.035	355	373	394	rVB3	39218	153275	2.27%	0.188%
7	6.266	399	417	420	rBV2	435971	1323550	19.59%	1.621%
8	6.329	420	429	484	rVV	899667	3432447	50.81%	4.204%
9	6.669	484	494	502	rVV3	15184	44454	0.66%	0.054%
10	6.779	502	515	552	rVB2	422746	1553657	23.00%	1.903%
11	7.042	552	565	588	rBV	240010	640894	9.49%	0.785%
12	7.257	588	606	615	rVV	104214	290940	4.31%	0.356%
13	7.361	615	626	648	rVV2	344376	988544	14.63%	1.211%
14	7.665	667	684	705	rVB2	42712	153621	2.27%	0.188%
15	8.373	785	819	824	rBV2	272626	920035	13.62%	1.127%
16	8.441	824	832	844	rVV2	393454	1434852	21.24%	1.757%
17	8.557	844	854	887	rVB3	311701	1150202	17.03%	1.409%
18	8.840	893	908	937	rVB2	273849	921181	13.64%	1.128%
19	9.086	945	955	968	rVB4	24416	64357	0.95%	0.079%
20	9.223	968	981	997	rBV2	136083	345256	5.11%	0.423%
21	9.359	997	1007	1016	rBV4	18502	46975	0.70%	0.058%
22	9.448	1016	1024	1029	rBV2	32053	74393	1.10%	0.091%
23	9.516	1029	1037	1051	rVB	115685	279981	4.14%	0.343%
24	9.642	1051	1061	1072	rBV2	79818	203230	3.01%	0.249%
25	9.768	1072	1085	1094	rVV4	84623	252591	3.74%	0.309%
26	9.868	1094	1104	1117	rVV4	112432	334285	4.95%	0.409%
27	9.978	1117	1125	1142	rVB3	42977	124321	1.84%	0.152%
28	10.140	1142	1156	1171	rBV	739670	1929378	28.56%	2.363%
29	10.617	1224	1247	1257	rBV5	24857	89434	1.32%	0.110%
30	10.743	1257	1271	1277	rBV3	63518	171864	2.54%	0.210%
31	10.817	1277	1285	1293	rVV2	552213	1265342	18.73%	1.550%
32	10.869	1293	1295	1303	rVV	85605	157507	2.33%	0.193%
33	11.016	1310	1323	1333	rVV3	329960	957113	14.17%	1.172%
34	11.100	1333	1339	1353	rVB2	121246	266932	3.95%	0.327%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130350.d
Acq On : 23 Apr 2015 5:32 am
Operator : BridgetK
Sample : jb92664-9
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 40 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

35	11.257	1353	1369	1380	rBV2	169176	493196	7.30%	0.604%
36	11.362	1380	1389	1397	rVV	2025380	4257267	63.02%	5.214%
37	11.419	1397	1400	1407	rVV4	162755	359741	5.33%	0.441%
38	11.488	1407	1413	1420	rVV2	190766	423727	6.27%	0.519%
39	11.545	1420	1424	1431	rVV	68559	157236	2.33%	0.193%
40	11.587	1431	1432	1448	rVB6	34082	63588	0.94%	0.078%
41	11.724	1448	1458	1475	rBV	434020	904293	13.39%	1.108%
42	11.844	1475	1481	1488	rVV6	20644	53018	0.78%	0.065%
43	12.001	1502	1511	1520	rBV3	39716	82262	1.22%	0.101%
44	12.269	1544	1562	1564	rBV2	100515	220531	3.26%	0.270%
45	12.311	1564	1570	1580	rVV	241164	505999	7.49%	0.620%
46	12.473	1595	1601	1608	rBV2	65823	121063	1.79%	0.148%
47	12.688	1628	1642	1657	rBV4	107141	269200	3.98%	0.330%
48	12.830	1657	1669	1684	rBV2	119466	424304	6.28%	0.520%
49	12.950	1684	1692	1697	rVV2	23953	54680	0.81%	0.067%
50	13.186	1722	1737	1745	rVB3	69049	131910	1.95%	0.162%
51	13.307	1745	1760	1767	rBV	608188	1066239	15.78%	1.306%
52	13.375	1767	1773	1782	rVV	584835	965793	14.30%	1.183%
53	13.475	1788	1792	1803	rVB2	31830	66159	0.98%	0.081%
54	13.721	1833	1839	1853	rVB4	36003	104816	1.55%	0.128%
55	14.602	1999	2007	2020	rBV4	19075	42633	0.63%	0.052%
56	14.707	2020	2027	2038	rBV	576126	885788	13.11%	1.085%
57	14.801	2038	2045	2056	rVV	2115520	3088611	45.72%	3.783%
58	14.901	2056	2064	2080	rVV	4329641	6755432	100.00%	8.274%
59	15.284	2125	2137	2154	rVB	1187463	1744935	25.83%	2.137%
60	15.609	2192	2199	2210	rVB	392884	558975	8.27%	0.685%
61	15.776	2223	2231	2239	rBV	527892	760190	11.25%	0.931%
62	15.986	2259	2271	2278	rBV	960512	1346954	19.94%	1.650%
63	16.054	2278	2284	2287	rVV	1445296	2179368	32.26%	2.669%
64	16.081	2287	2289	2294	rVV	1388367	1736369	25.70%	2.127%
65	16.128	2294	2298	2315	rVB	880239	1192865	17.66%	1.461%
66	16.343	2331	2339	2355	rBV	1493204	2101426	31.11%	2.574%
67	16.490	2355	2367	2378	rBV	4422639	6212490	91.96%	7.609%
68	16.626	2385	2393	2396	rBV2	54257	86191	1.28%	0.106%
69	16.657	2396	2399	2404	rVB	66489	86284	1.28%	0.106%
70	16.710	2404	2409	2415	rVB	108883	143550	2.12%	0.176%
71	16.767	2415	2420	2425	rBV	42278	56261	0.83%	0.069%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130350.d
Acq On : 23 Apr 2015 5:32 am
Operator : BridgetK
Sample : jb92664-9
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 40 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

72	16.862	2432	2438	2442	rBV	665659	967692	14.32%	1.185%
73	16.904	2442	2446	2457	rVV	1470467	2120813	31.39%	2.598%
74	17.040	2465	2472	2481	rBV	538652	1079837	15.98%	1.323%
75	17.129	2481	2489	2507	rVB3	1797573	3038255	44.97%	3.721%
76	17.260	2507	2514	2520	rVB	90431	129145	1.91%	0.158%
77	17.334	2520	2528	2534	rBV2	261986	405698	6.01%	0.497%
78	17.391	2534	2539	2543	rVV	414464	611941	9.06%	0.749%
79	17.428	2543	2546	2552	rVV	293676	403670	5.98%	0.494%
80	17.496	2552	2559	2573	rVB	1123784	1606791	23.79%	1.968%
81	17.601	2573	2579	2584	rBV3	127280	202528	3.00%	0.248%
82	17.669	2584	2592	2602	rVV2	387877	702014	10.39%	0.860%
83	17.821	2612	2621	2629	rBV	183457	278361	4.12%	0.341%
84	17.900	2629	2636	2641	rVV	523255	757194	11.21%	0.927%
85	17.952	2641	2646	2652	rVV	470273	690242	10.22%	0.845%
86	18.000	2652	2655	2660	rVV	74143	101515	1.50%	0.124%
87	18.267	2698	2706	2720	rVB	429919	723715	10.71%	0.886%
88	18.403	2720	2732	2735	rBV	260672	444593	6.58%	0.545%
89	18.445	2735	2740	2748	rVV	656917	1010817	14.96%	1.238%
90	18.513	2748	2753	2760	rVB2	39547	67690	1.00%	0.083%
91	18.639	2768	2777	2782	rBV5	85457	156304	2.31%	0.191%
92	18.739	2790	2796	2806	rVV4	122480	294330	4.36%	0.360%
93	18.812	2806	2810	2816	rVV2	43416	65418	0.97%	0.080%
94	18.875	2816	2822	2825	rVV3	42903	74830	1.11%	0.092%
95	18.912	2825	2829	2838	rVB	81731	146093	2.16%	0.179%
96	19.148	2867	2874	2883	rBV	547607	806334	11.94%	0.988%
97	19.258	2890	2895	2906	rVV2	33430	72052	1.07%	0.088%
98	19.342	2906	2911	2920	rVB	26850	43949	0.65%	0.054%
99	19.473	2928	2936	2954	rBV	51146	81613	1.21%	0.100%
100	19.672	2967	2974	2984	rVV	33378	64428	0.95%	0.079%

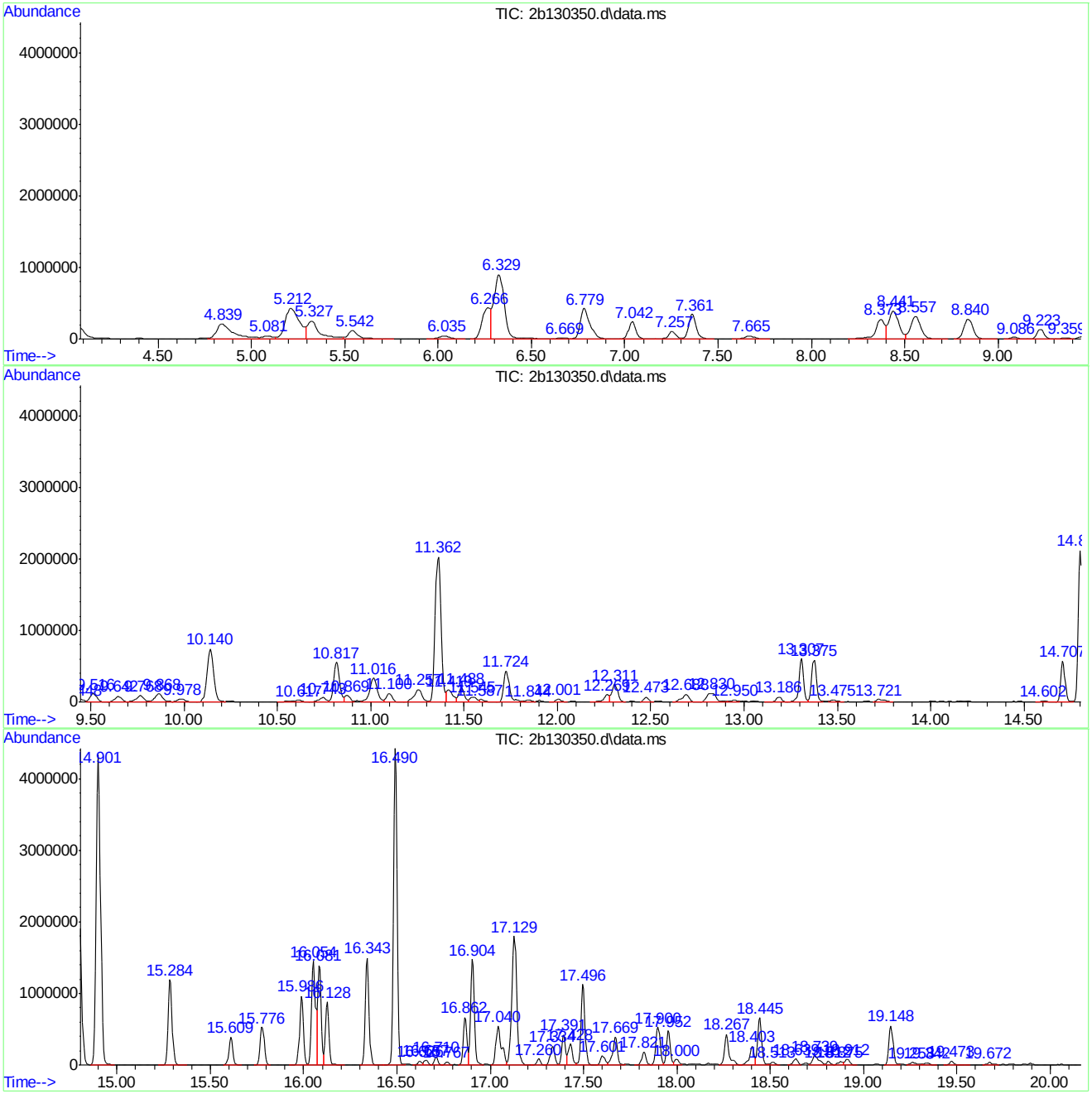
Sum of corrected areas: 81646810

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130350.d
Acq On : 23 Apr 2015 5:32 am
Operator : BridgetK
Sample : jb92664-9
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130350.d
Acq On : 23 Apr 2015 5:32 am
Operator : BridgetK
Sample : jb92664-9
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

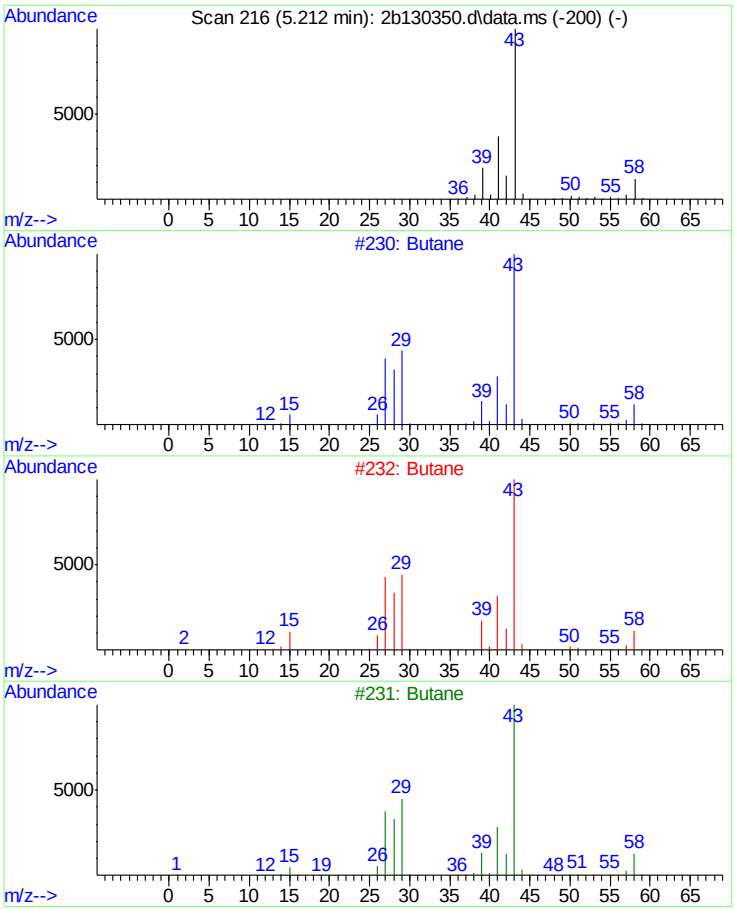
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

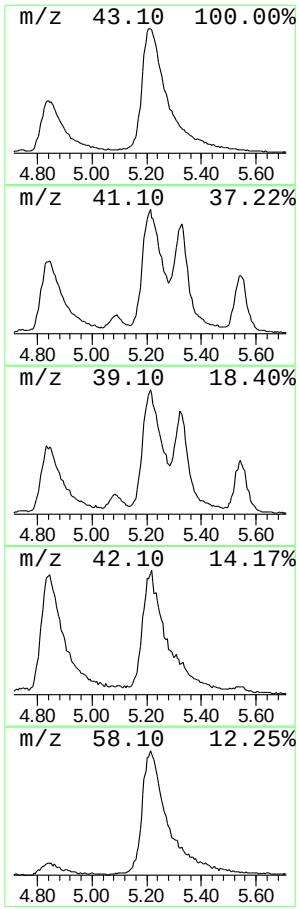
****

Peak Number 1 Butane Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.212	88.88 ug/L	2249150	pentafluorobenzene	10.811

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	72
2	Butane	58	C4H10	000106-97-8	64
3	Butane	58	C4H10	000106-97-8	59
4	Isopropylsulfonyl chloride	142	C3H7ClO2S	010147-37-2	9
5	Isobutane	58	C4H10	000075-28-5	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130350.d
Acq On : 23 Apr 2015 5:32 am
Operator : BridgetK
Sample : jb92664-9
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

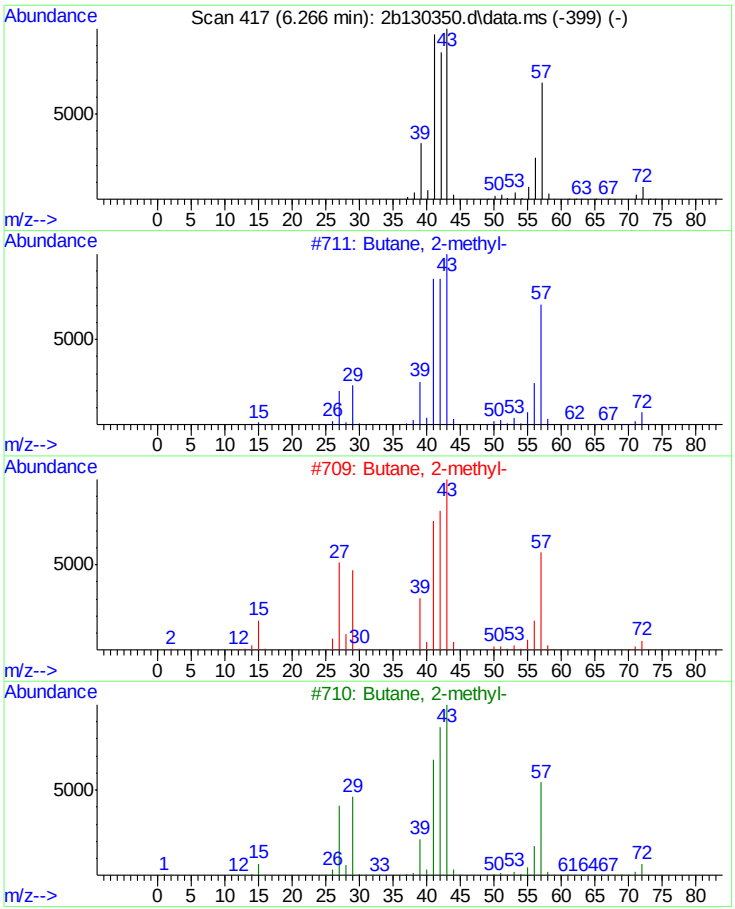
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

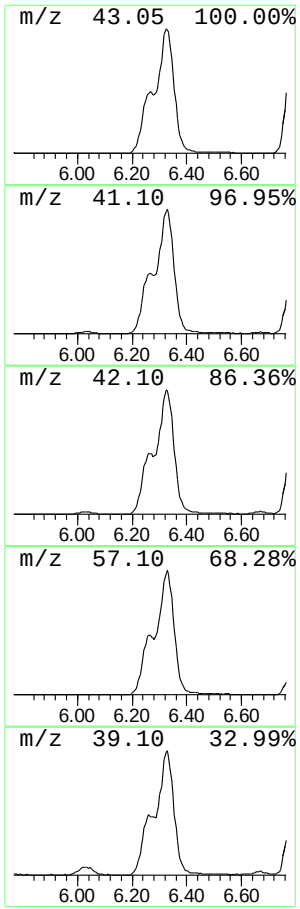
****

Peak Number 2 Butane, 2-methyl- Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.266	52.30 ug/L	1323550	pentafluorobenzene	10.811

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	94
2	Butane, 2-methyl-	72	C5H12	000078-78-4	86
3	Butane, 2-methyl-	72	C5H12	000078-78-4	80
4	3-Buten-1-ol	72	C4H8O	000627-27-0	47
5	Pentane	72	C5H12	000109-66-0	36





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130350.d
Acq On : 23 Apr 2015 5:32 am
Operator : BridgetK
Sample : jb92664-9
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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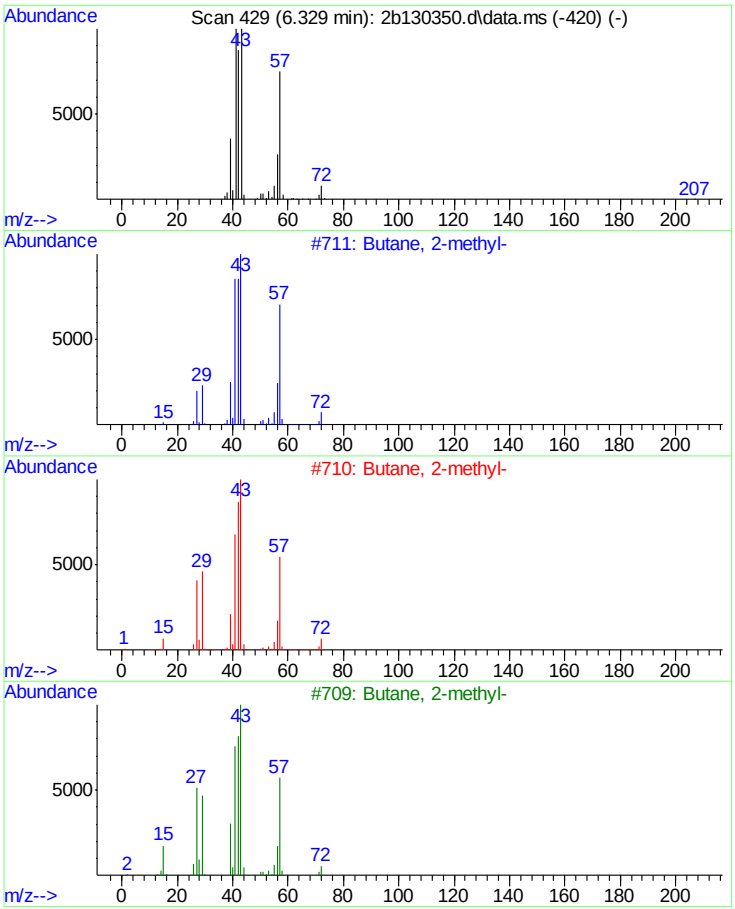
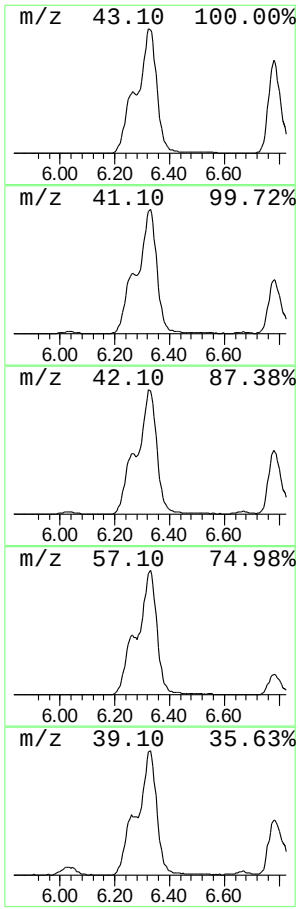
Peak Number 3 Butane, 2-methyl- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.329	135.63 ug/L	3432450	pentafluorobenzene	10.811

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	91
2	Butane, 2-methyl-	72	C5H12	000078-78-4	86
3	Butane, 2-methyl-	72	C5H12	000078-78-4	80
4	3-Buten-1-ol	72	C4H8O	000627-27-0	37
5	Pentane	72	C5H12	000109-66-0	33





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130350.d
Acq On : 23 Apr 2015 5:32 am
Operator : BridgetK
Sample : jb92664-9
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

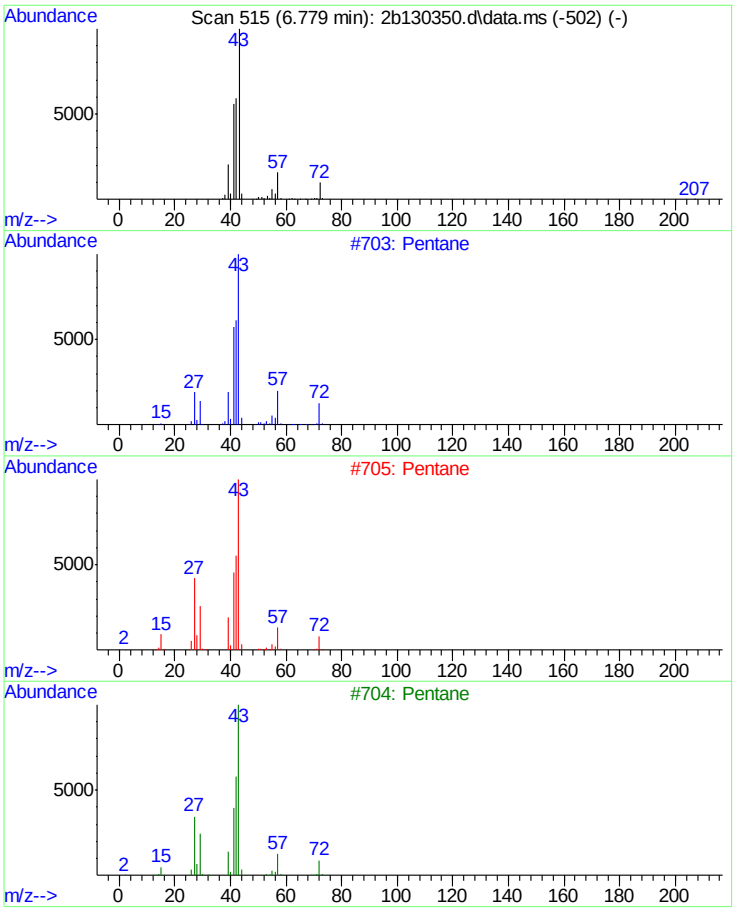
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

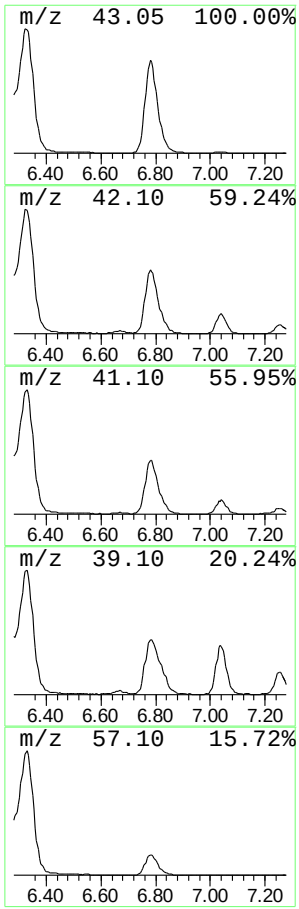
****

Peak Number 4 Pentane Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.779	61.39 ug/L	1553660	pentafluorobenzene	10.811

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	91
2	Pentane	72	C5H12	000109-66-0	90
3	Pentane	72	C5H12	000109-66-0	86
4	Pentane	72	C5H12	000109-66-0	59
5	Butane, 2-methyl-	72	C5H12	000078-78-4	45





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130350.d
Acq On : 23 Apr 2015 5:32 am
Operator : BridgetK
Sample : jb92664-9
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

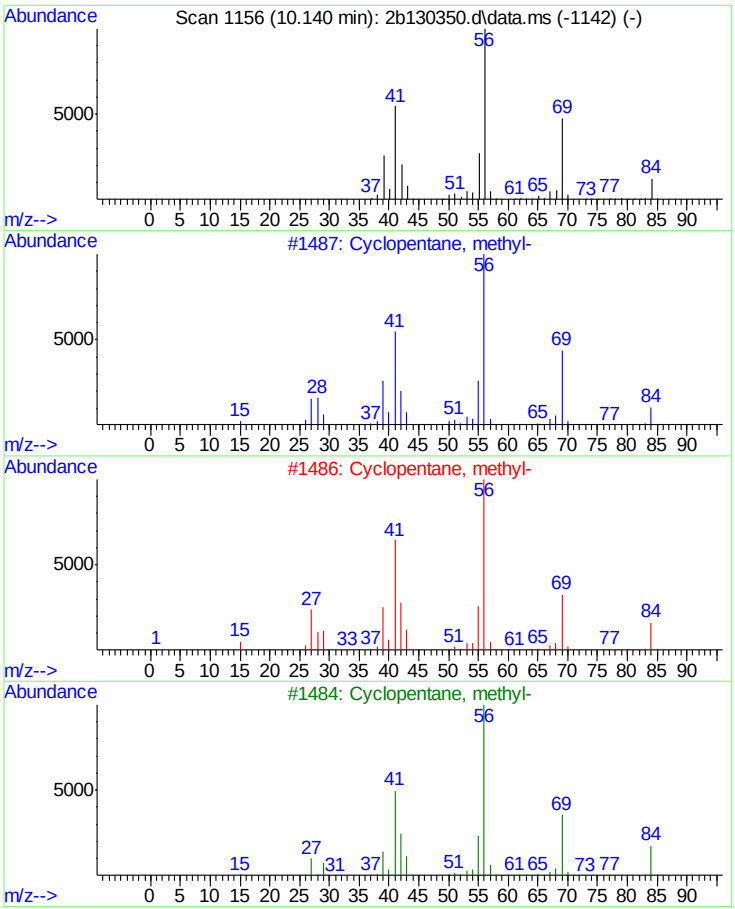
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

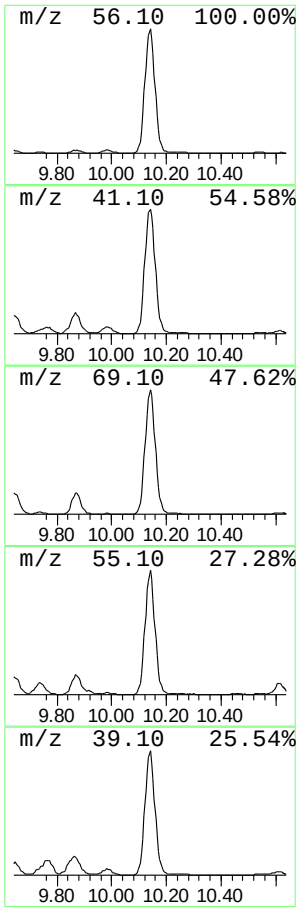
****

Peak Number 5 Cyclopentane, methyl- Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.140	76.24 ug/L	1929380	pentafluorobenzene	10.811

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	94
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	91
3	Cyclopentane, methyl-	84	C6H12	000096-37-7	86
4	Cyclobutane, ethyl-	84	C6H12	004806-61-5	72
5	1H-Tetrazole, 5-methyl-	84	C2H4N4	004076-36-2	64





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130350.d
Acq On : 23 Apr 2015 5:32 am
Operator : BridgetK
Sample : jb92664-9
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

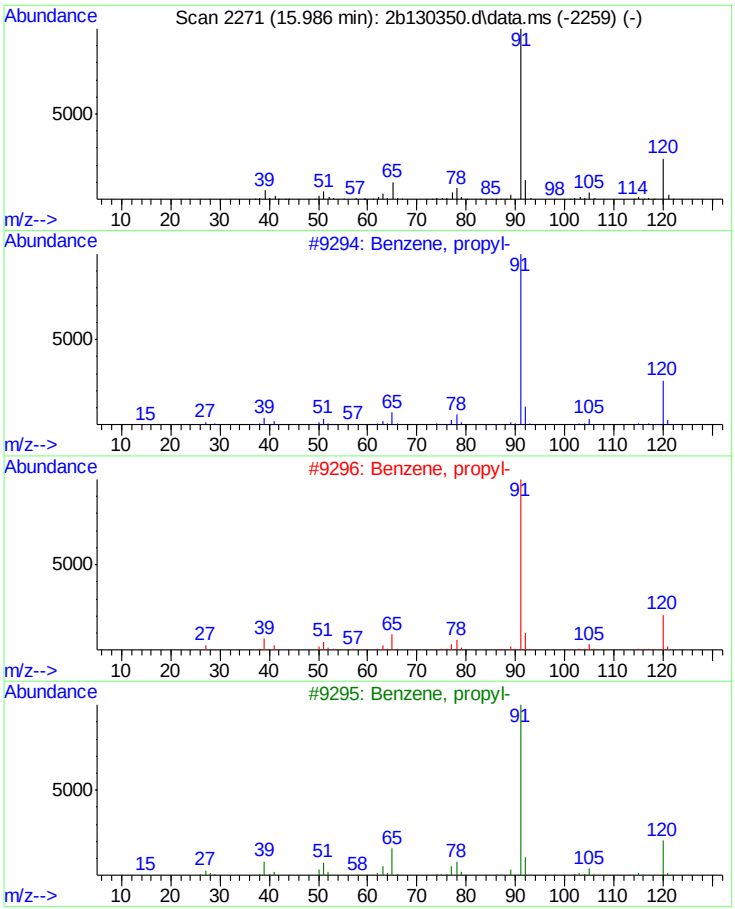
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

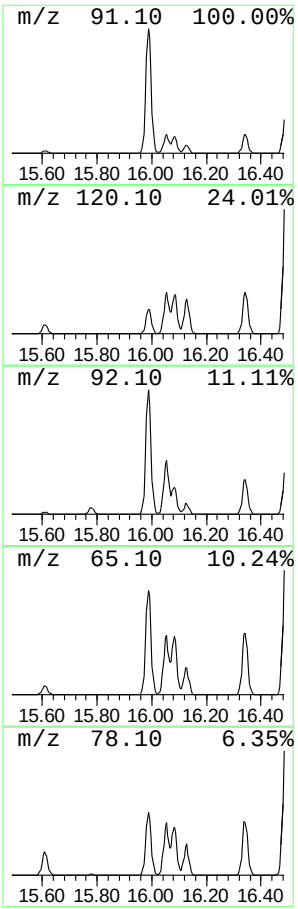
****

Peak Number 6 Benzene, propyl- Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.986	69.60 ug/L	1346950	1,4-dichlorobenzene-d4	16.862

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, propyl-	120	C9H12	000103-65-1	91
2	Benzene, propyl-	120	C9H12	000103-65-1	91
3	Benzene, propyl-	120	C9H12	000103-65-1	91
4	N-Benzyl-2-phenethylamine	211	C15H17N	003647-71-0	83
5	N-Benzyl-2-phenethylamine	211	C15H17N	003647-71-0	74





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130350.d
Acq On : 23 Apr 2015 5:32 am
Operator : BridgetK
Sample : jb92664-9
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

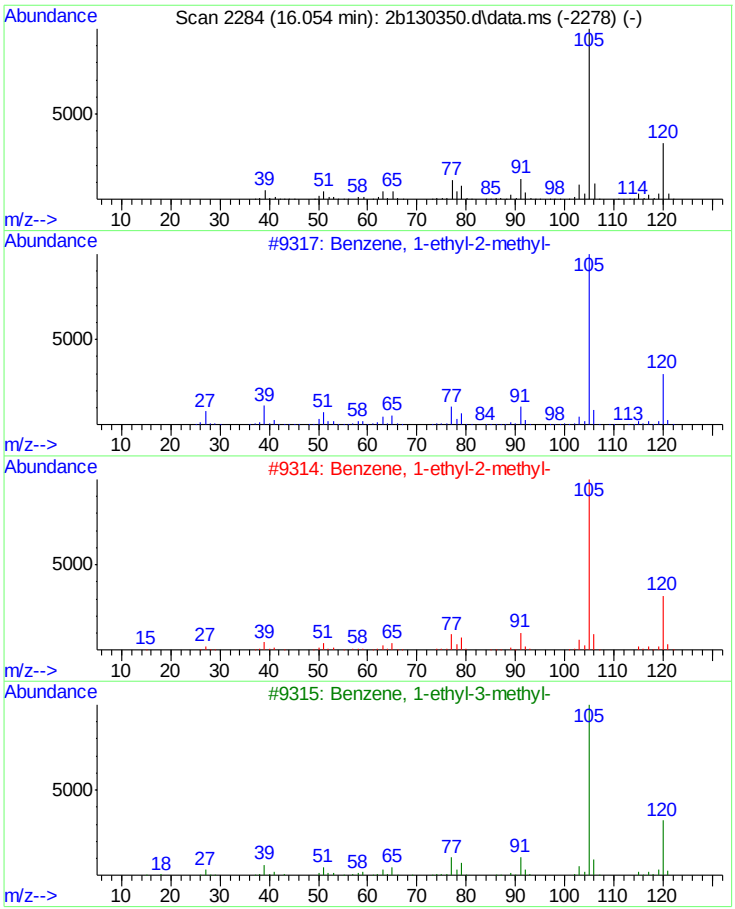
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

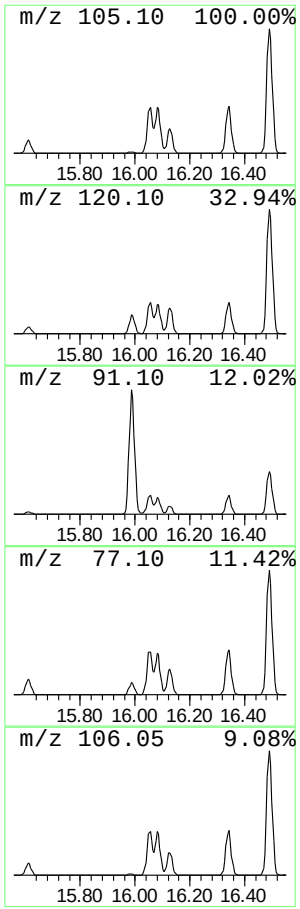
****

Peak Number 7 Benzene, 1-ethyl-2-methyl- Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.054	112.61 ug/L	2179370	1,4-dichlorobenzene-d4	16.862

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
3	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	95
4	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	94
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130350.d
Acq On : 23 Apr 2015 5:32 am
Operator : BridgetK
Sample : jb92664-9
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

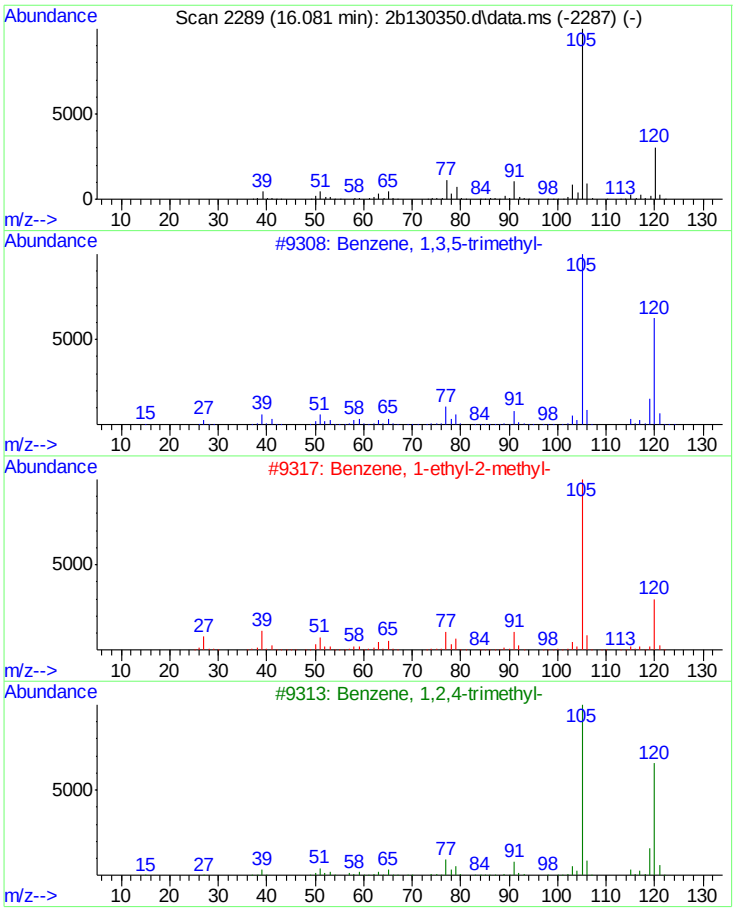
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

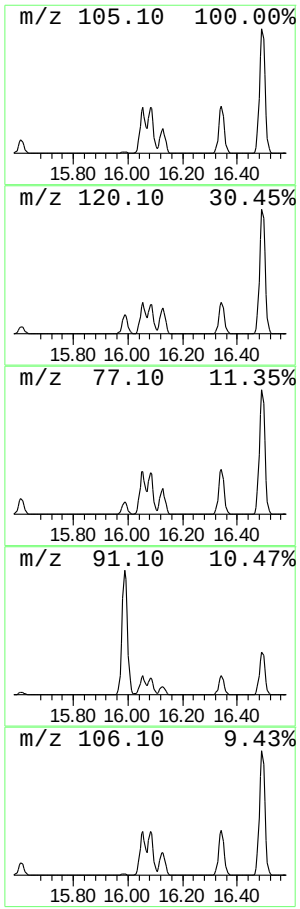
****

Peak Number 8 Benzene, 1,3,5-trimethyl- Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.081	89.72 ug/L	1736370	1,4-dichlorobenzene-d4	16.862

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	91
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	91
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
5	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130350.d
Acq On : 23 Apr 2015 5:32 am
Operator : BridgetK
Sample : jb92664-9
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

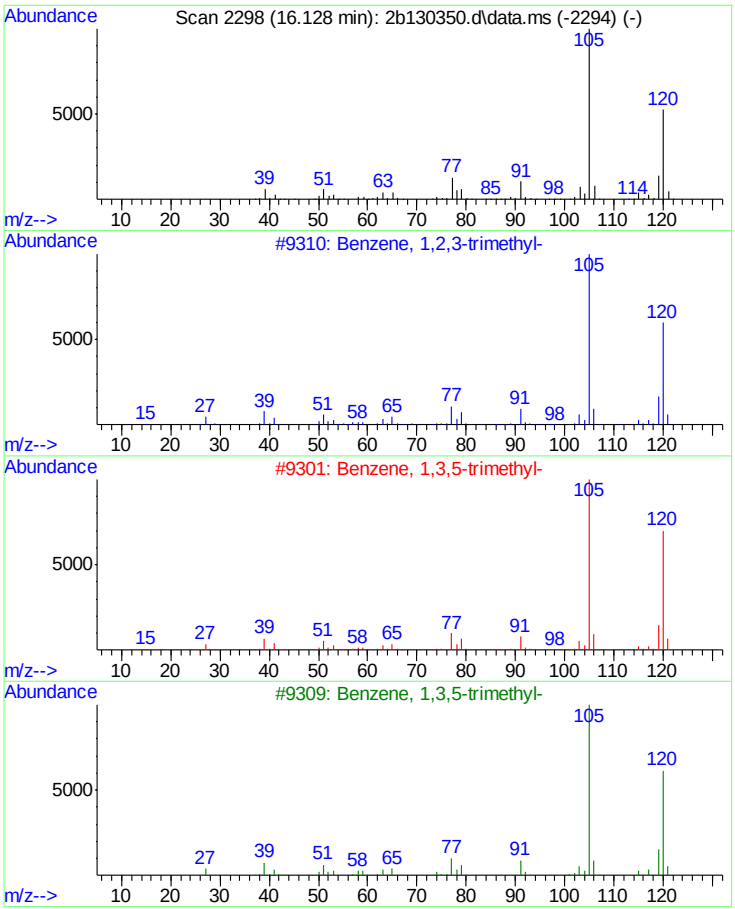
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

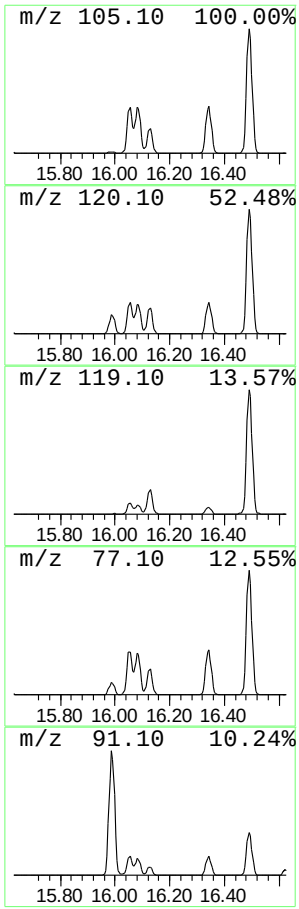
****

Peak Number 9 Benzene, 1,2,3-trimethyl- Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.128	61.63 ug/L	1192870	1,4-dichlorobenzene-d4	16.862

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	97
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
5	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130350.d
Acq On : 23 Apr 2015 5:32 am
Operator : BridgetK
Sample : jb92664-9
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

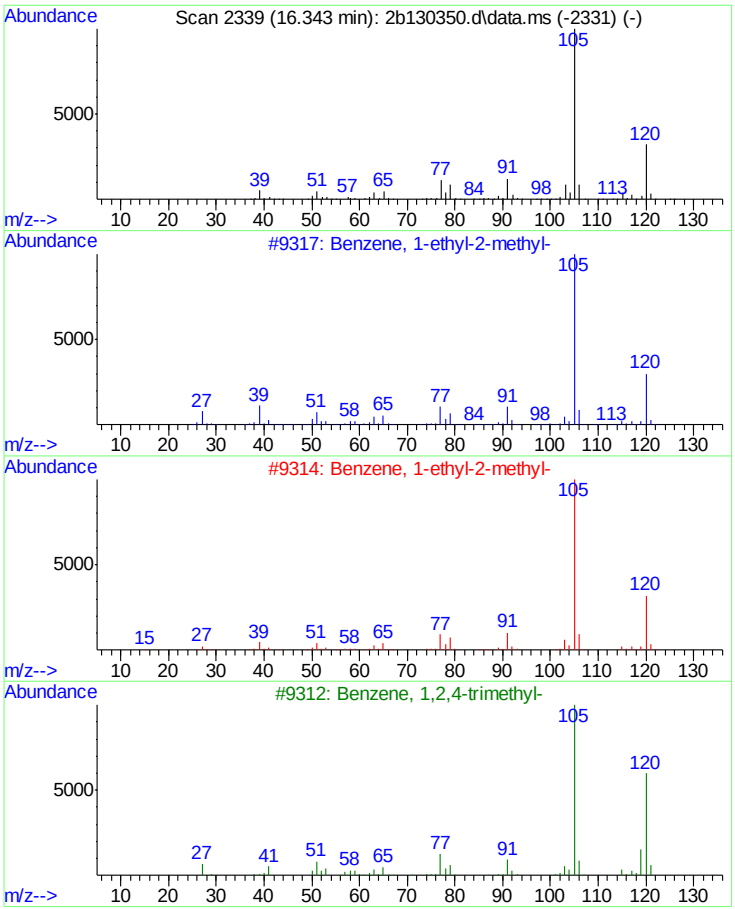
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

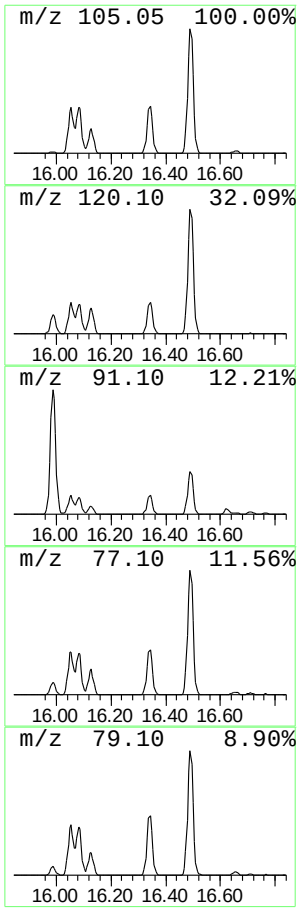
****

Peak Number 10 Benzene, 1-ethyl-2-methyl- Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.343	108.58 ug/L	2101430	1,4-dichlorobenzene-d4	16.862

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	91
4	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91
5	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130350.d
Acq On : 23 Apr 2015 5:32 am
Operator : BridgetK
Sample : jb92664-9
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

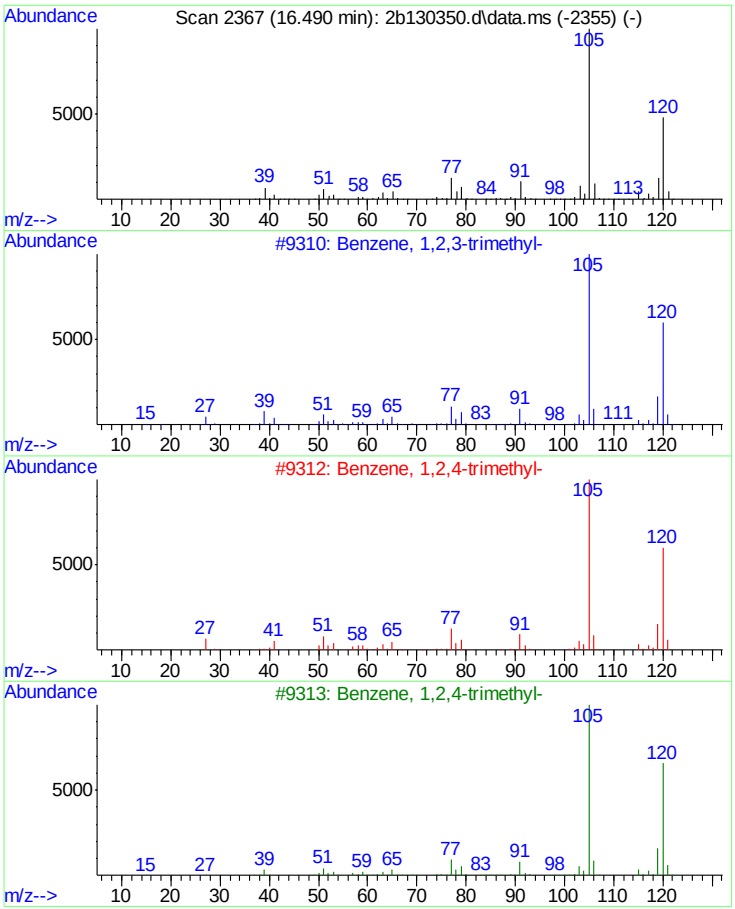
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

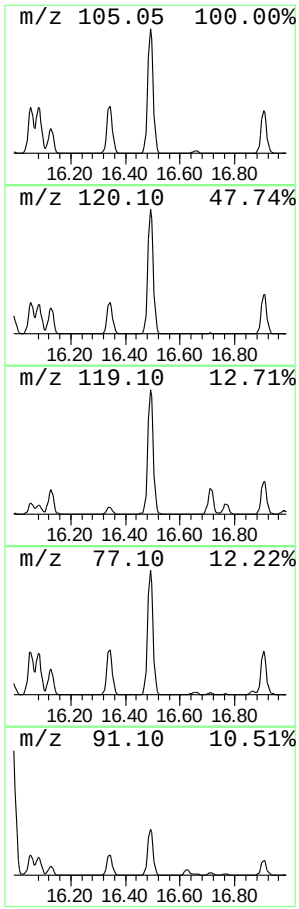
****

Peak Number 11 Benzene, 1,2,3-trimethyl- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.490	321.00 ug/L	6212490	1,4-dichlorobenzene-d4	16.862

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
5	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130350.d
Acq On : 23 Apr 2015 5:32 am
Operator : BridgetK
Sample : jb92664-9
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

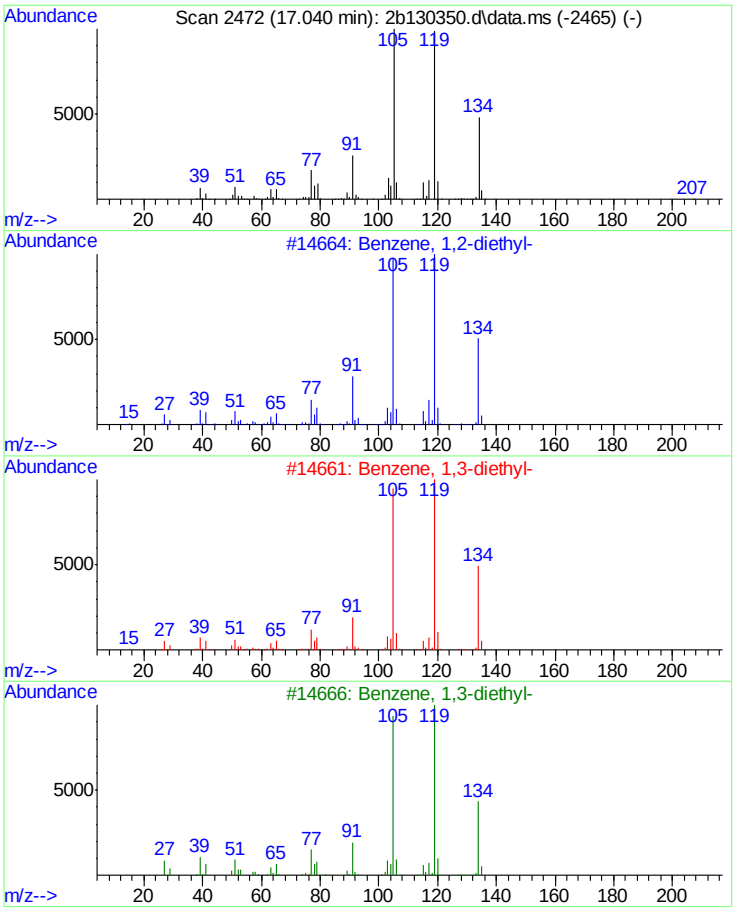
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

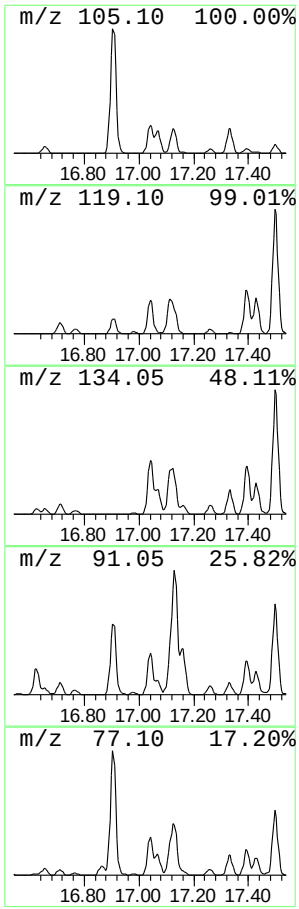
****

Peak Number 12 Benzene, 1,2-diethyl- Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.040	55.79 ug/L	1079840	1,4-dichlorobenzene-d4	16.862

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2-diethyl-	134	C10H14	000135-01-3	97
2	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	96
3	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	95
4	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	94
5	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130350.d
Acq On : 23 Apr 2015 5:32 am
Operator : BridgetK
Sample : jb92664-9
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

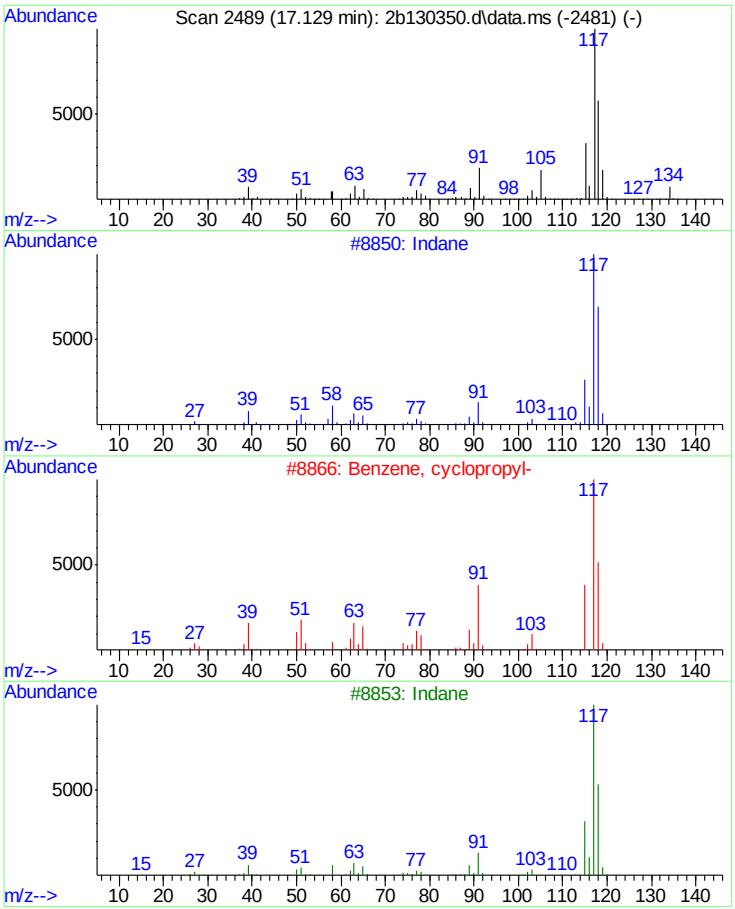
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

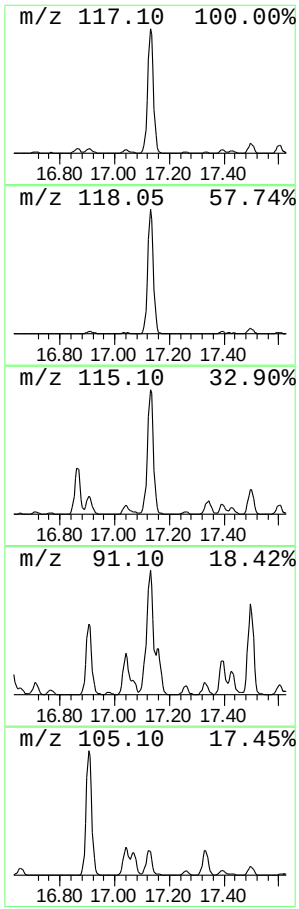
****

Peak Number 13 Indane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.129	156.99 ug/L	3038260	1,4-dichlorobenzene-d4	16.862

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indane	118	C9H10	000496-11-7	76
2	Benzene, cyclopropyl-	118	C9H10	000873-49-4	76
3	Indane	118	C9H10	000496-11-7	76
4	Benzene, cyclopropyl-	118	C9H10	000873-49-4	76
5	Indane	118	C9H10	000496-11-7	76





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130350.d
Acq On : 23 Apr 2015 5:32 am
Operator : BridgetK
Sample : jb92664-9
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

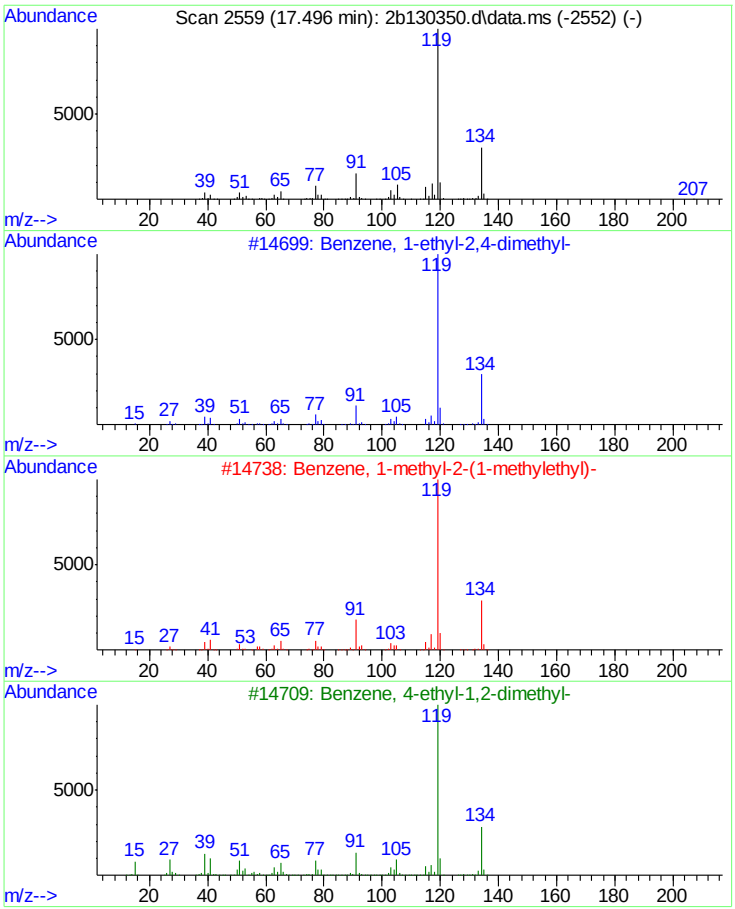
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

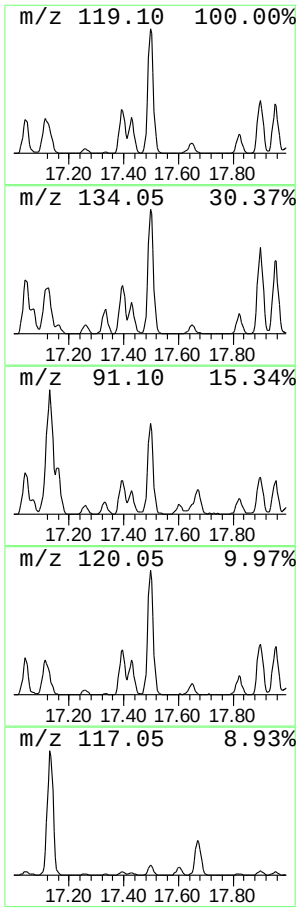
****

Peak Number 14 Benzene, 1-ethyl-2,4-dimethyl- Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.496	83.02 ug/L	1606790	1,4-dichlorobenzene-d4	16.862

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	95
2	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	95
3	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	95
4	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	95
5	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	95





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130350.d
Acq On : 23 Apr 2015 5:32 am
Operator : BridgetK
Sample : jb92664-9
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

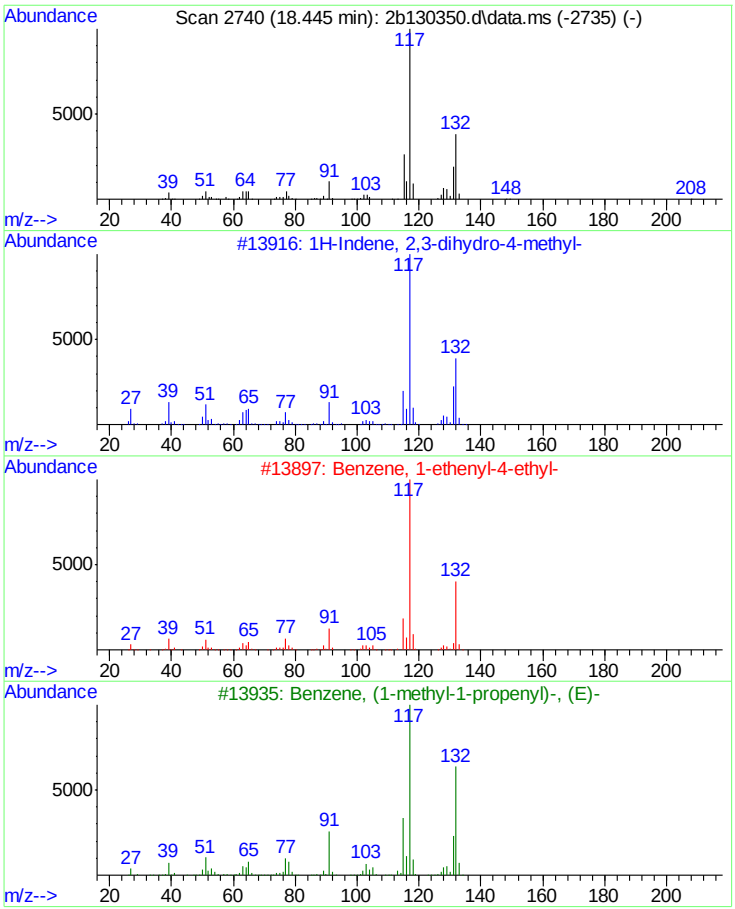
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

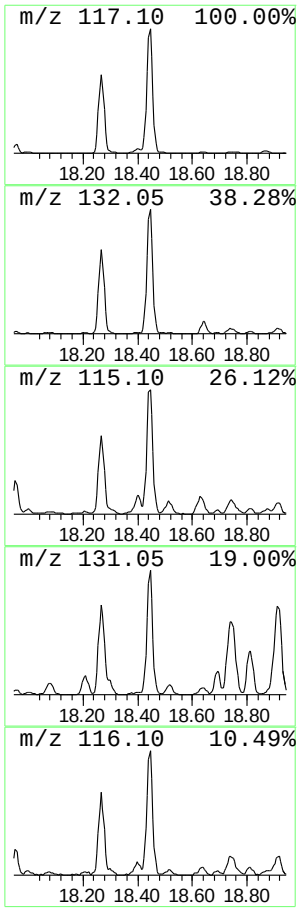
****

Peak Number 15 1H-Indene, 2,3-dihydro-4-me... Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.445	52.23 ug/L	1010820	1,4-dichlorobenzene-d4	16.862

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	90
2	Benzene, 1-ethenyl-4-ethyl-	132	C10H12	003454-07-7	87
3	Benzene, (1-methyl-1-propenyl)-,...	132	C10H12	000768-00-3	87
4	Benzene, (2-methyl-1-propenyl)-	132	C10H12	000768-49-0	86
5	Benzene, 1-ethenyl-4-ethyl-	132	C10H12	003454-07-7	83





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130350.d
Acq On : 23 Apr 2015 5:32 am
Operator : BridgetK
Sample : jb92664-9
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Butane	5.212	88.9	ug/L	2249150	2	10.811	1265340	50.0
Butane, 2-methyl-	6.266	52.3	ug/L	1323550	2	10.811	1265340	50.0
Butane, 2-methyl-	6.329	135.6	ug/L	3432450	2	10.811	1265340	50.0
Pentane	6.779	61.4	ug/L	1553660	2	10.811	1265340	50.0
Cyclopentane, m...	10.140	76.2	ug/L	1929380	2	10.811	1265340	50.0
Benzene, propyl-	15.986	69.6	ug/L	1346950	5	16.862	967692	50.0
Benzene, 1-ethy...	16.054	112.6	ug/L	2179370	5	16.862	967692	50.0
Benzene, 1,3,5-...	16.081	89.7	ug/L	1736370	5	16.862	967692	50.0
Benzene, 1,2,3-...	16.128	61.6	ug/L	1192870	5	16.862	967692	50.0
Benzene, 1-ethy...	16.343	108.6	ug/L	2101430	5	16.862	967692	50.0
Benzene, 1,2,3-...	16.490	321.0	ug/L	6212490	5	16.862	967692	50.0
Benzene, 1,2-di...	17.040	55.8	ug/L	1079840	5	16.862	967692	50.0
Indane	17.129	157.0	ug/L	3038260	5	16.862	967692	50.0
Benzene, 1-ethy...	17.496	83.0	ug/L	1606790	5	16.862	967692	50.0
1H-Indene, 2,3-...	18.445	52.2	ug/L	1010820	5	16.862	967692	50.0

Manual Integrations APPROVED (compounds with "m" flag)
Mei Chen
04/29/15 12:03

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2b\v2b5827-5828\
Data File : 2B130380.D
Acq On : 23 Apr 2015 8:33 pm
Operator : BridgetK
Sample : jb92664-9
Misc : ms83932,v2B5827,w,,,,10
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Apr 24 14:23:45 2015
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
QLast Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration

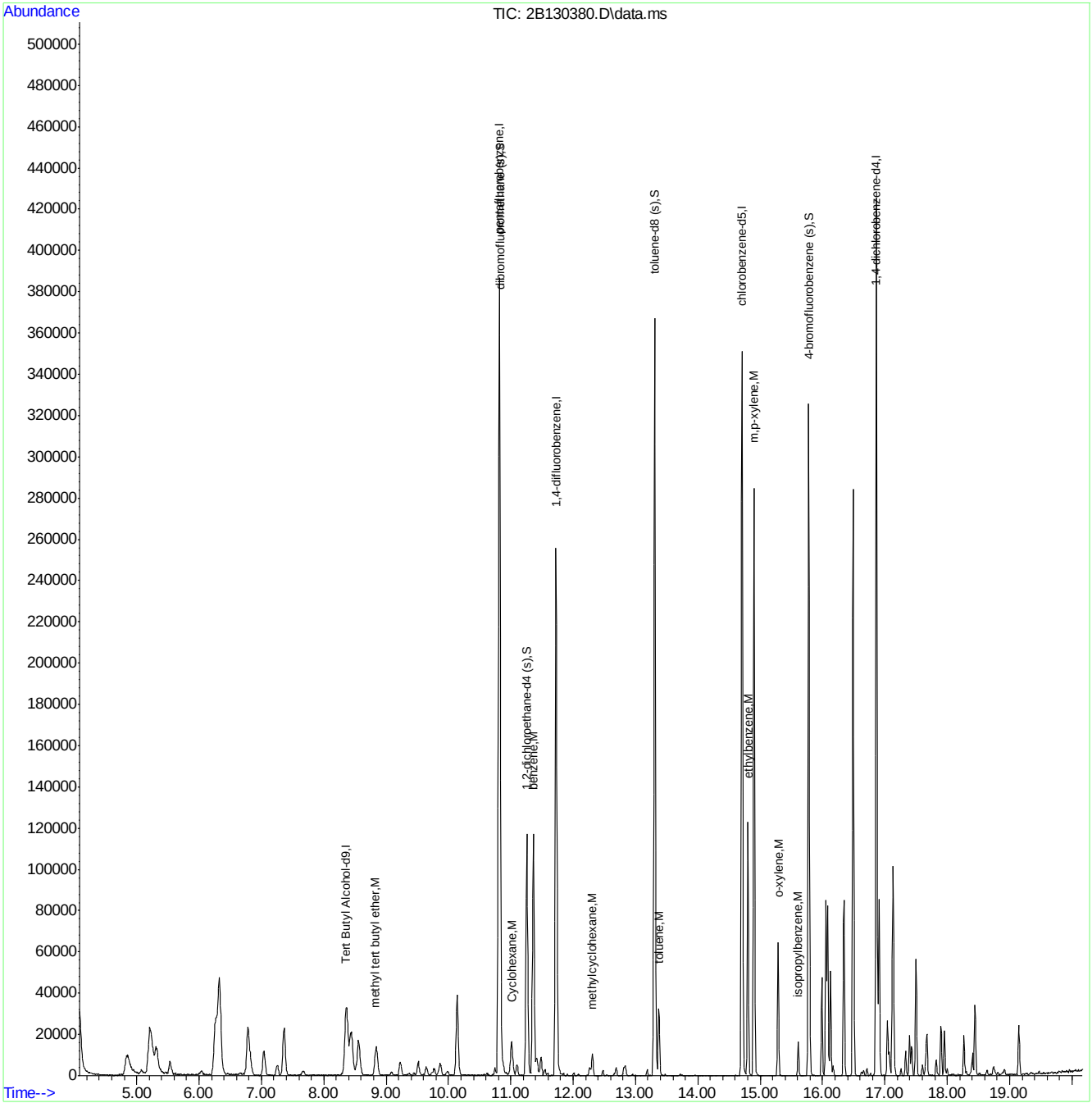
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.358	65	50792	500.00	ug/L	0.00
5) pentafluorobenzene	10.817	168	228288	50.00	ug/L	0.00
58) 1,4-difluorobenzene	11.729	114	210982	50.00	ug/L	0.00
90) chlorobenzene-d5	14.707	117	170698	50.00	ug/L	0.00
106) 1,4-dichlorobenzene-d4	16.862	152	104078	50.00	ug/L	0.00
System Monitoring Compounds						
51) dibromofluoromethane (s)	10.822	113	75241	49.37	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 98.74%			
52) 1,2-dichloroethane-d4 (s)	11.257	65	96186	53.35	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 106.70%			
82) toluene-d8 (s)	13.307	98	222560	50.09	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 100.18%			
108) 4-bromofluorobenzene (s)	15.777	95	81881	48.80	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 97.60%			
Target Compounds						Qvalue
34) methyl tert butyl ether	8.829	73	1464m	0.37	ug/L	
56) Cyclohexane	11.021	84	5380	3.11	ug/L #	56
66) benzene	11.362	78	104270	24.50	ug/L	100
79) methylcyclohexane	12.306	83	4435	2.39	ug/L	99
84) toluene	13.375	92	12316	4.55	ug/L	92
100) ethylbenzene	14.801	91	74823	15.09	ug/L	98
101) m,p-xylene	14.901	106	74411	39.13	ug/L	88
102) o-xylene	15.289	106	15874	7.85	ug/L	97
107) isopropylbenzene	15.609	105	10977	2.04	ug/L	96

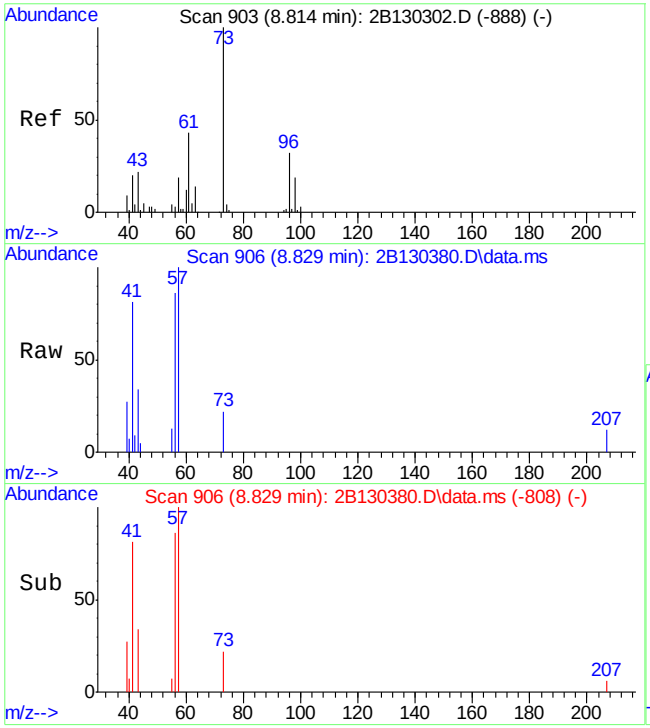
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2b\v2b5827-5828\
Data File : 2B130380.D
Acq On : 23 Apr 2015 8:33 pm
Operator : BridgetK
Sample : jb92664-9
Misc : ms83932,v2B5827,w,,,,10
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Apr 24 14:23:45 2015
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
QLast Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration

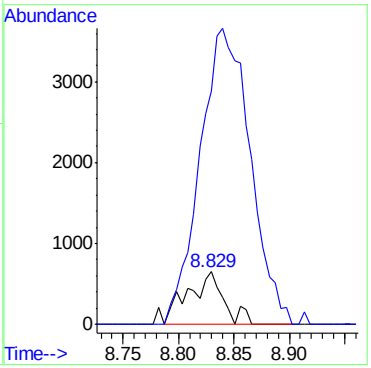


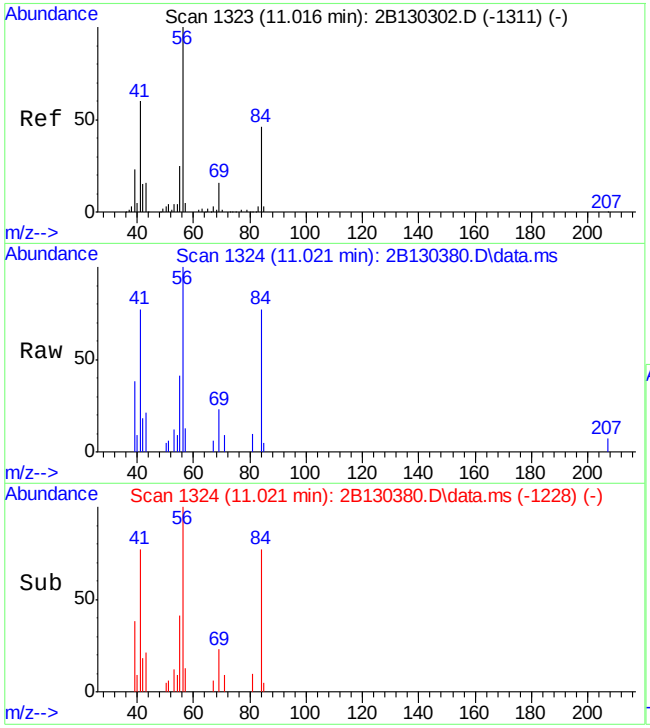


#34
methyl tert butyl ether
Concen: 0.37 ug/L m
RT: 8.829 min Scan# 906
Delta R.T. 0.016 min
Lab File: 2B130380.D
Acq: 23 Apr 2015 8:33 pm

Tgt Ion: 73 Resp: 1464

Ion	Ratio	Lower	Upper
73	100		
57	445.4	0.0	48.7#

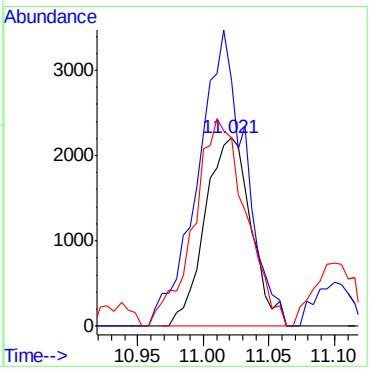


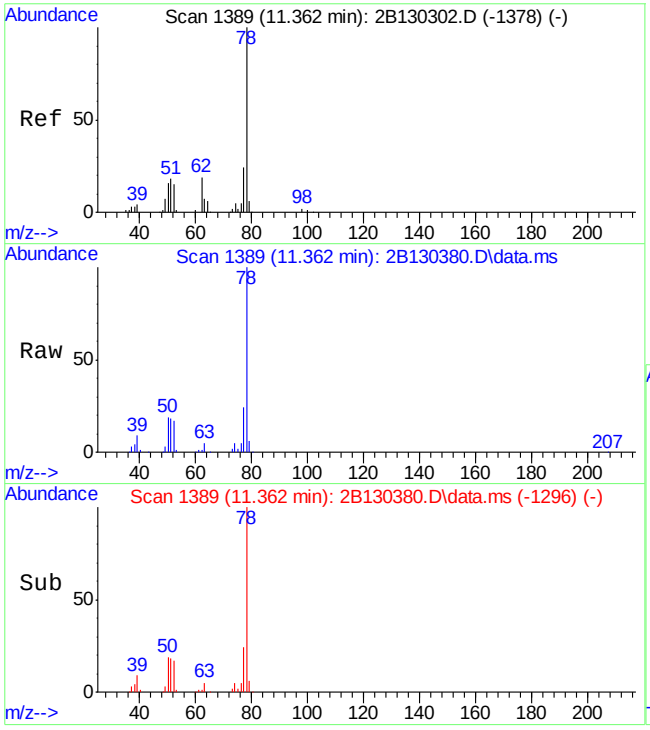


#56
Cyclohexane
Concen: 3.11 ug/L
RT: 11.021 min Scan# 1324
Delta R.T. 0.005 min
Lab File: 2B130380.D
Acq: 23 Apr 2015 8:33 pm

Tgt Ion: 84 Resp: 5380

Ion	Ratio	Lower	Upper
84	100		
56	130.2	188.5	248.5#
41	100.1	100.4	160.4#

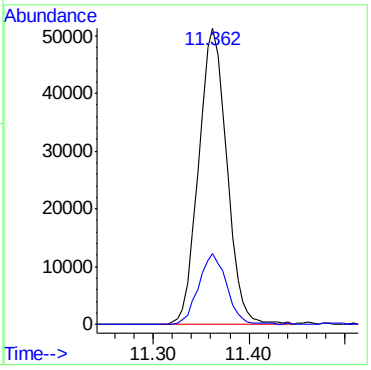


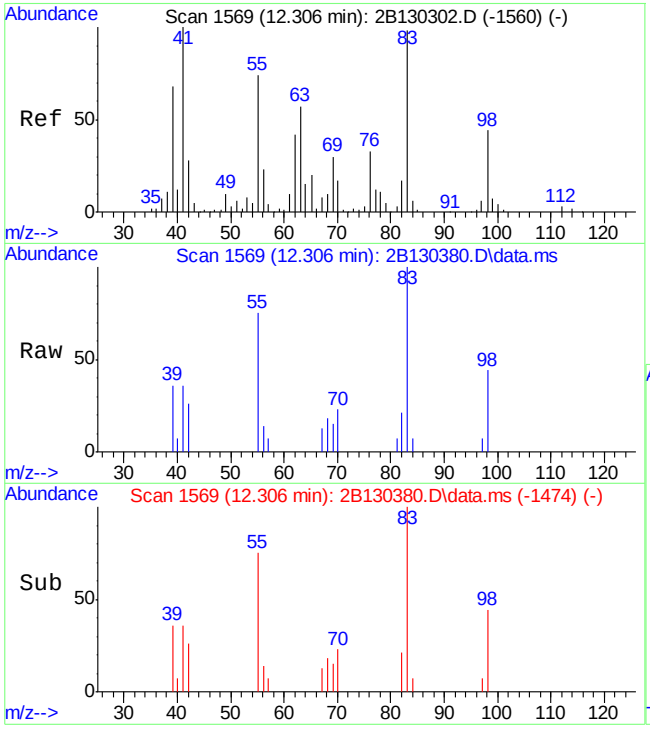


#66
benzene
Concen: 24.50 ug/L
RT: 11.362 min Scan# 1389
Delta R.T. 0.000 min
Lab File: 2B130380.D
Acq: 23 Apr 2015 8:33 pm

Tgt Ion: 78 Resp: 104270

Ion	Ratio	Lower	Upper
78	100		
77	23.7	0.0	53.8

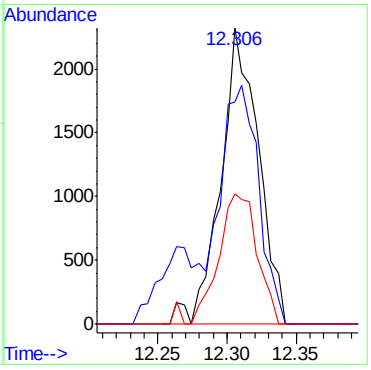


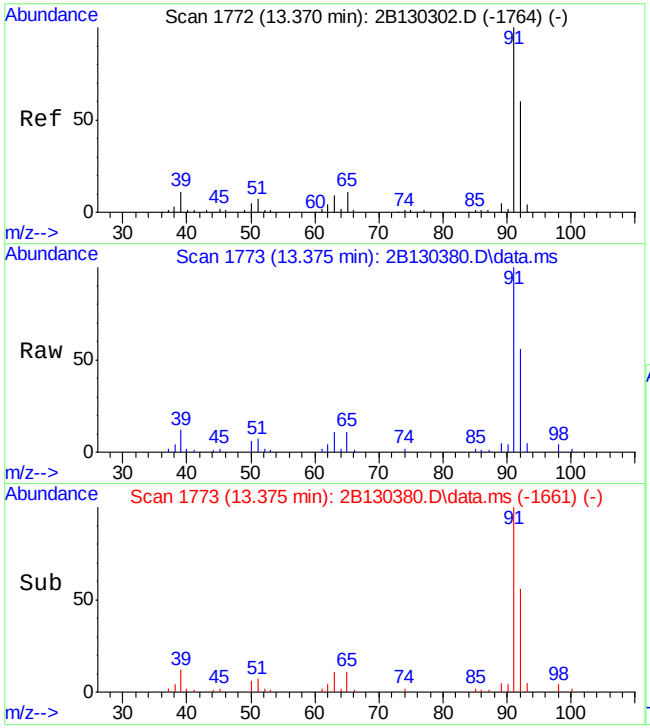


#79
methylcyclohexane
Concen: 2.39 ug/L
RT: 12.306 min Scan# 1569
Delta R.T. 0.000 min
Lab File: 2B130380.D
Acq: 23 Apr 2015 8:33 pm

Tgt Ion: 83 Resp: 4435

Ion	Ratio	Lower	Upper
83	100		
55	74.9	45.8	105.8
98	43.8	14.7	74.7

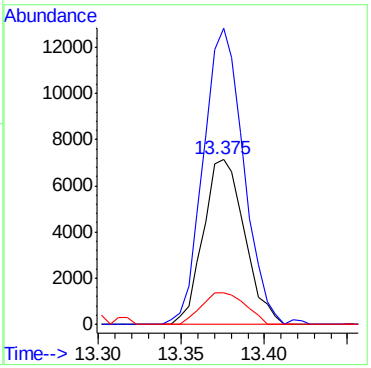


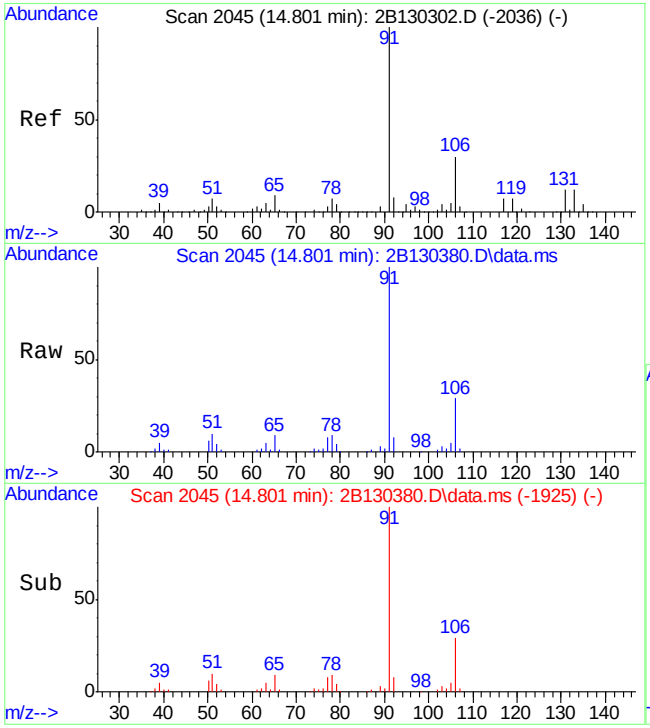


#84
toluene
Concen: 4.55 ug/L
RT: 13.375 min Scan# 1773
Delta R.T. 0.005 min
Lab File: 2B130380.D
Acq: 23 Apr 2015 8:33 pm

Tgt Ion: 92 Resp: 12316

Ion	Ratio	Lower	Upper
92	100		
91	179.5	137.0	197.0
65	19.2	0.0	49.0

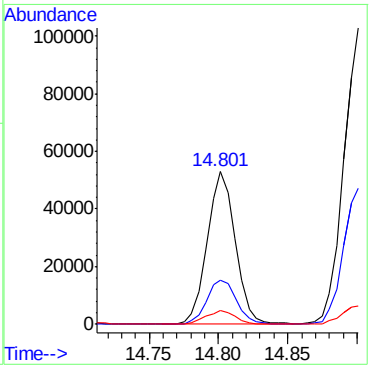


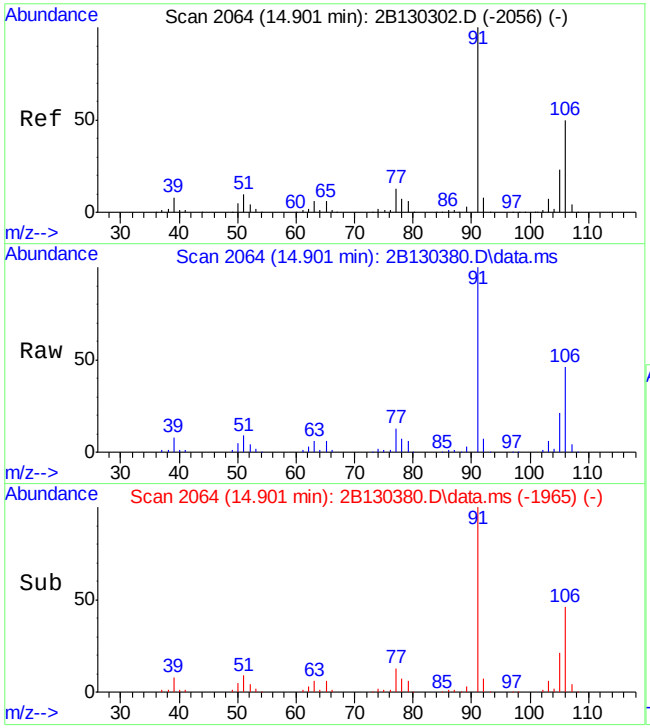


#100
ethylbenzene
Concen: 15.09 ug/L
RT: 14.801 min Scan# 2045
Delta R.T. 0.000 min
Lab File: 2B130380.D
Acq: 23 Apr 2015 8:33 pm

Tgt Ion: 91 Resp: 74823

Ion	Ratio	Lower	Upper
91	100		
106	28.8	0.3	60.3
65	9.0	0.0	38.6

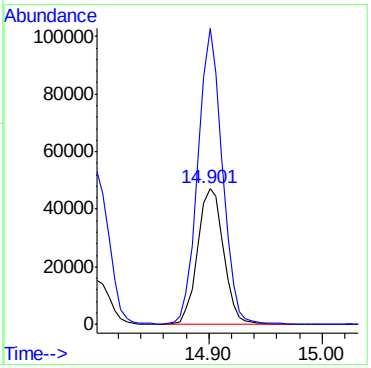


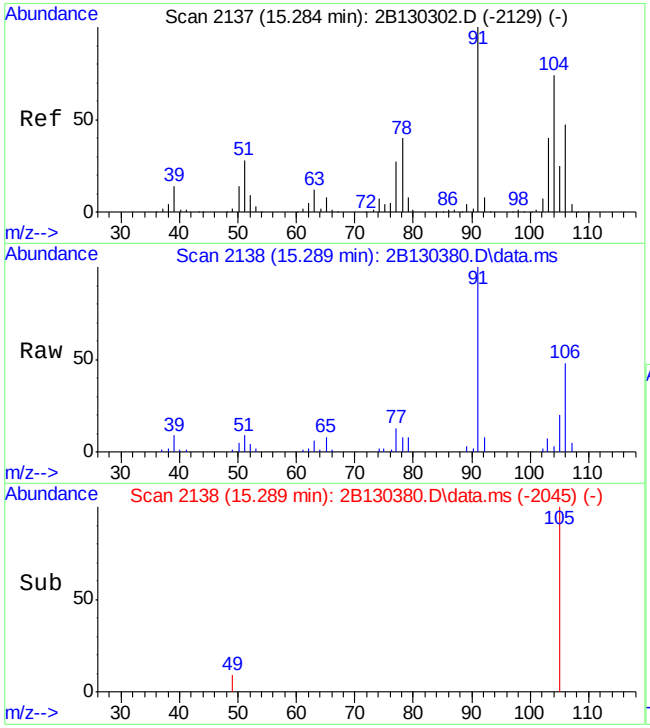


#101
m,p-xylene
Concen: 39.13 ug/L
RT: 14.901 min Scan# 2064
Delta R.T. 0.000 min
Lab File: 2B130380.D
Acq: 23 Apr 2015 8:33 pm

Tgt Ion:106 Resp: 74411

Ion	Ratio	Lower	Upper
106	100		
91	218.0	169.4	229.4

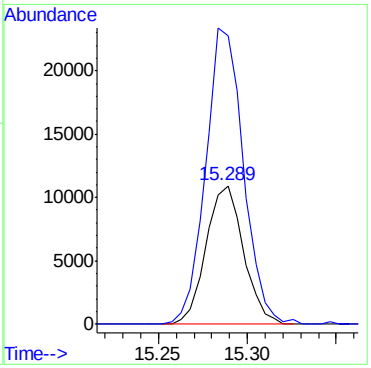


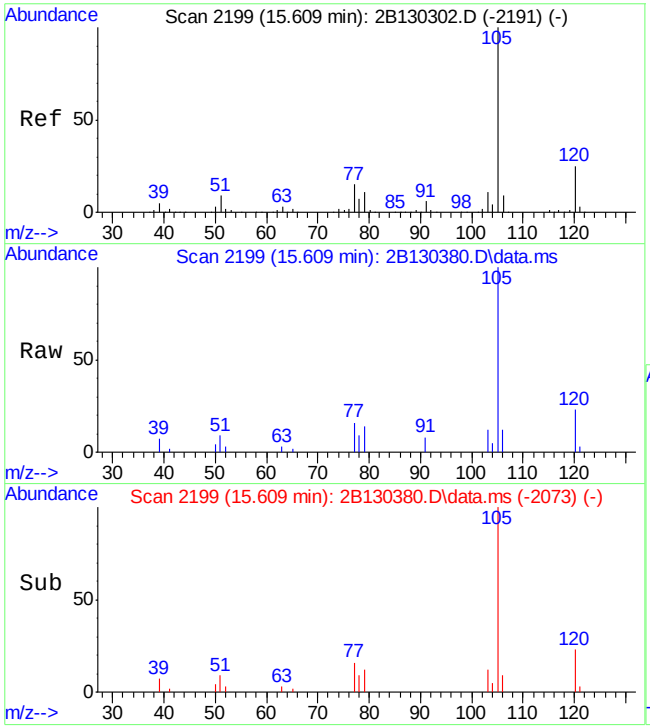


#102
o-xylene
Concen: 7.85 ug/L
RT: 15.289 min Scan# 2138
Delta R.T. 0.005 min
Lab File: 2B130380.D
Acq: 23 Apr 2015 8:33 pm

Tgt Ion:106 Resp: 15874

Ion	Ratio	Lower	Upper
106	100		
91	208.3	183.1	243.1

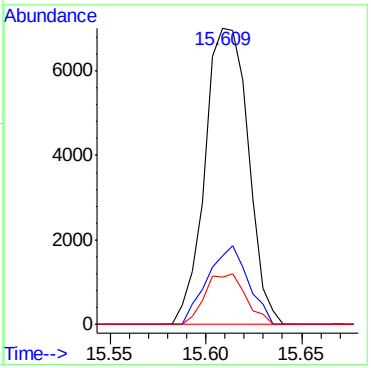




#107
isopropylbenzene
Concen: 2.04 ug/L
RT: 15.609 min Scan# 2199
Delta R.T. 0.000 min
Lab File: 2B130380.D
Acq: 23 Apr 2015 8:33 pm

Tgt Ion:105 Resp: 10977

Ion	Ratio	Lower	Upper
105	100		
120	23.1	0.0	55.5
77	15.9	0.0	45.0



Manual Integrations APPROVED (compounds with "m" flag)
Kanya Veerawat 04/29/15 01:38

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130351.d
Acq On : 23 Apr 2015 6:01 am
Operator : BridgetK
Sample : jb92664-10
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 41 Sample Multiplier: 1

Quant Time: Apr 23 14:48:09 2015
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
QLast Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration

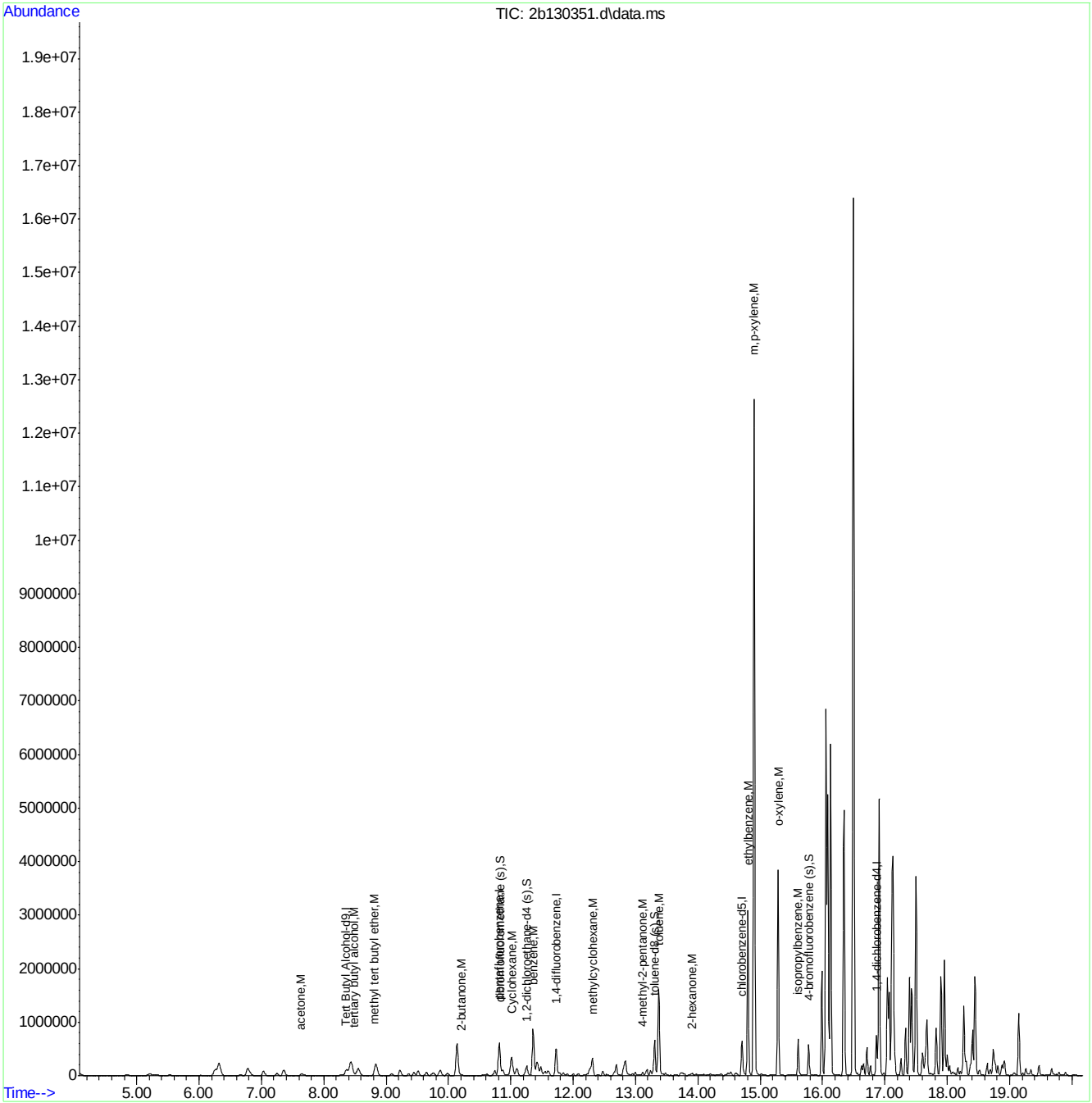
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.358	65	105023	500.00	ug/L	0.00
5) pentafluorobenzene	10.811	168	393022	50.00	ug/L	0.00
58) 1,4-difluorobenzene	11.724	114	381761	50.00	ug/L	0.00
90) chlorobenzene-d5	14.707	117	326912	50.00	ug/L	0.00
106) 1,4-dichlorobenzene-d4	16.867	152	196521	50.00	ug/L	0.00
System Monitoring Compounds						
51) dibromofluoromethane (s)	10.822	113	127881	48.74	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 97.48%			
52) 1,2-dichloroethane-d4 (s)	11.257	65	137666	44.35	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 88.70%			
82) toluene-d8 (s)	13.307	98	409047	50.88	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 101.76%			
108) 4-bromofluorobenzene (s)	15.777	95	153733	48.52	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 97.04%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	8.484	59	5064	21.63	ug/L #	1
25) acetone	7.634	43	47389	72.05	ug/L	97
34) methyl tert butyl ether	8.814	73	63958	9.28	ug/L #	1
37) 2-butanone	10.203	72	4256	18.53	ug/L #	60
56) Cyclohexane	11.016	84	114648	38.51	ug/L #	71
66) benzene	11.357	78	834377	108.34	ug/L	99
79) methylcyclohexane	12.311	83	133128m	39.65	ug/L	
83) 4-methyl-2-pentanone	13.113	58	18630	28.62	ug/L #	52
84) toluene	13.375	92	652291	133.31	ug/L	99
89) 2-hexanone	13.910	58	11519	20.93	ug/L	96
100) ethylbenzene	14.801	91	2010402	211.65	ug/L	97
101) m,p-xylene	14.901	106	3779153	1037.80	ug/L	88
102) o-xylene	15.289	106	1034865	267.08	ug/L	93
107) isopropylbenzene	15.609	105	410616	40.34	ug/L	99

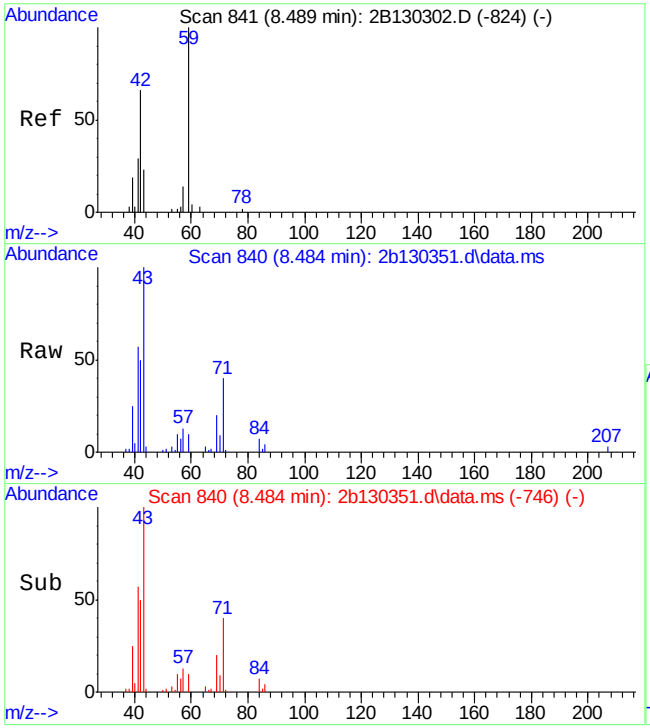
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130351.d
Acq On : 23 Apr 2015 6:01 am
Operator : BridgetK
Sample : jb92664-10
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 41 Sample Multiplier: 1

Quant Time: Apr 23 14:48:09 2015
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
QLast Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration

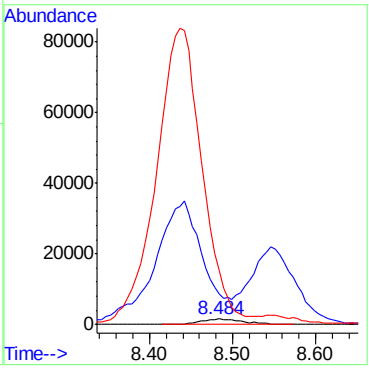


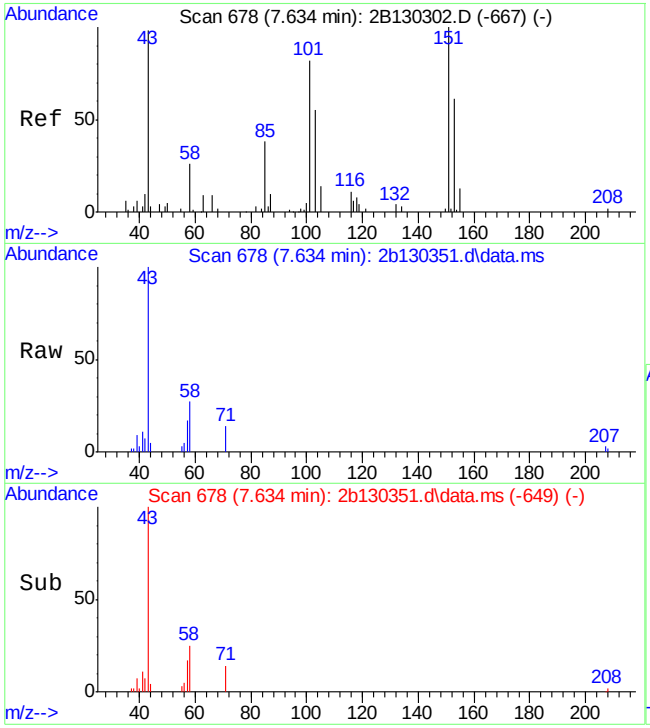


#2
tertiary butyl alcohol
Concen: 21.63 ug/L
RT: 8.484 min Scan# 840
Delta R.T. -0.005 min
Lab File: 2b130351.d
Acq: 23 Apr 2015 6:01 am

Tgt Ion: 59 Resp: 5064

Ion	Ratio	Lower	Upper
59	100		
41	0.0	7.8	67.8#
43	923.0	0.0	56.1#

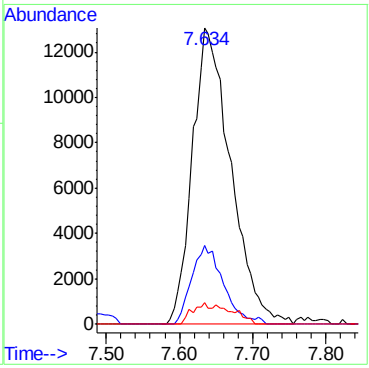


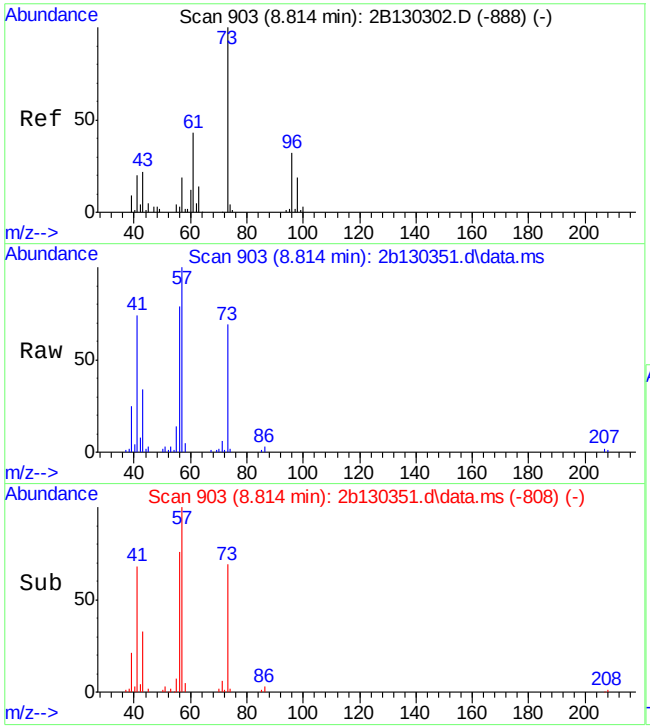


#25
acetone
Concen: 72.05 ug/L
RT: 7.634 min Scan# 678
Delta R.T. 0.000 min
Lab File: 2b130351.d
Acq: 23 Apr 2015 6:01 am

Tgt Ion: 43 Resp: 47389

Ion	Ratio	Lower	Upper
43	100		
58	26.5	0.0	55.6
42	7.1	0.0	39.8

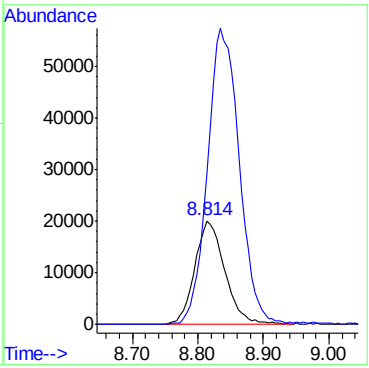


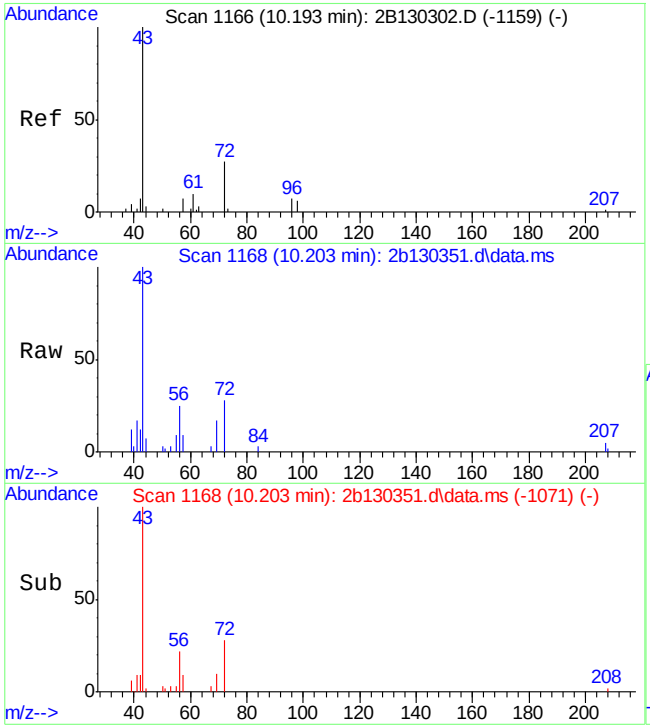


#34
methyl tert butyl ether
Concen: 9.28 ug/L
RT: 8.814 min Scan# 903
Delta R.T. 0.000 min
Lab File: 2b130351.d
Acq: 23 Apr 2015 6:01 am

Tgt Ion: 73 Resp: 63958

Ion	Ratio	Lower	Upper
73	100		
57	144.8	0.0	48.7#

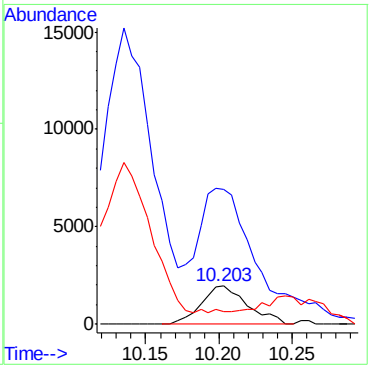


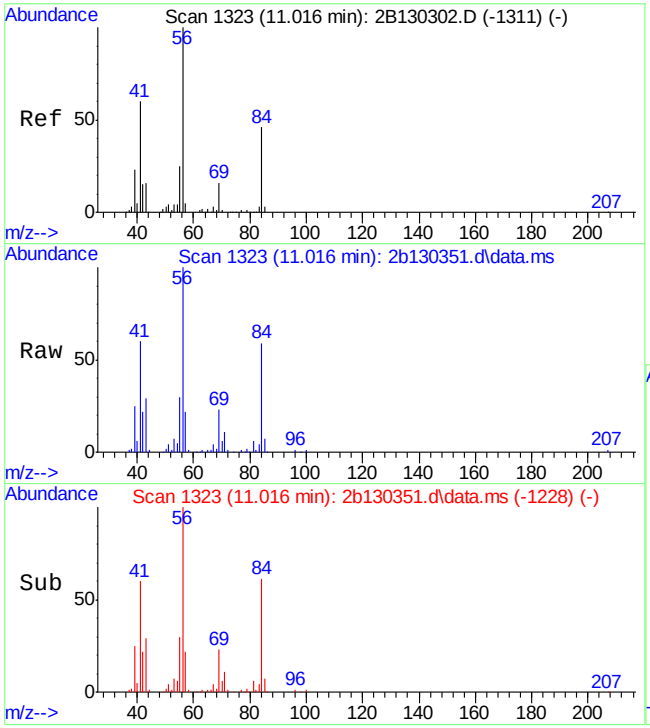


#37
2-butanone
Concen: 18.53 ug/L
RT: 10.203 min Scan# 1168
Delta R.T. 0.011 min
Lab File: 2b130351.d
Acq: 23 Apr 2015 6:01 am

Tgt Ion: 72 Resp: 4256

Ion	Ratio	Lower	Upper
72	100		
43	282.2	338.3	398.3#
57	0.0	0.7	60.7#

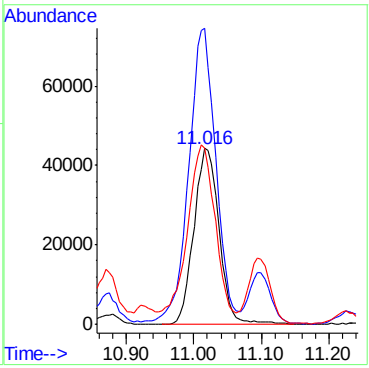


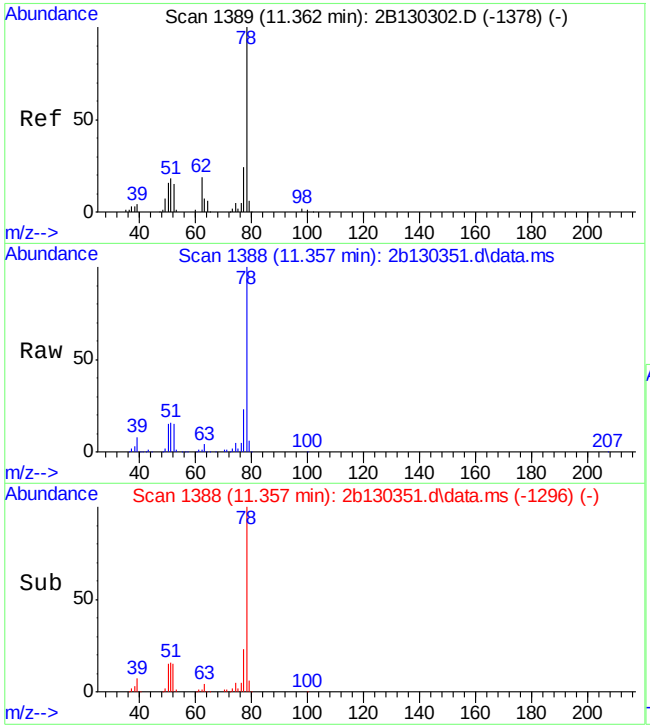


#56
Cyclohexane
Concen: 38.51 ug/L
RT: 11.016 min Scan# 1323
Delta R.T. 0.000 min
Lab File: 2b130351.d
Acq: 23 Apr 2015 6:01 am

Tgt Ion: 84 Resp: 114648

Ion	Ratio	Lower	Upper
84	100		
56	168.5	188.5	248.5#
41	100.5	100.4	160.4

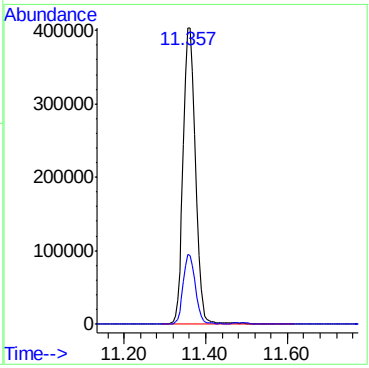


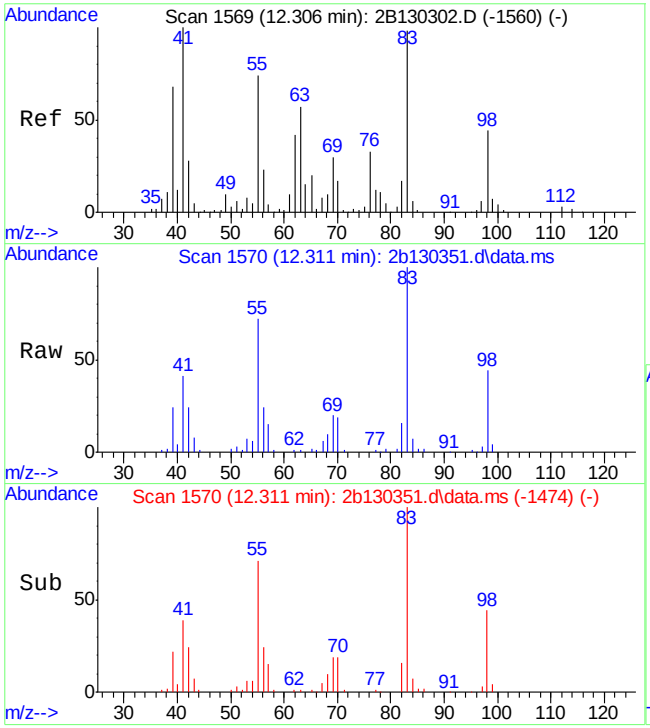


#66
benzene
Concen: 108.34 ug/L
RT: 11.357 min Scan# 1388
Delta R.T. -0.005 min
Lab File: 2b130351.d
Acq: 23 Apr 2015 6:01 am

Tgt Ion: 78 Resp: 834377

Ion	Ratio	Lower	Upper
78	100		
77	23.3	0.0	53.8

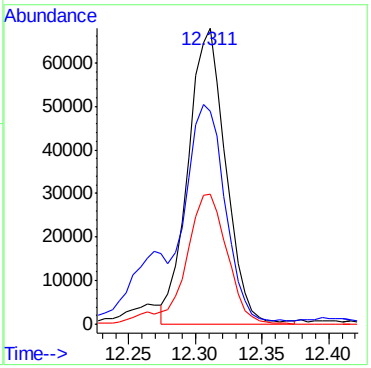


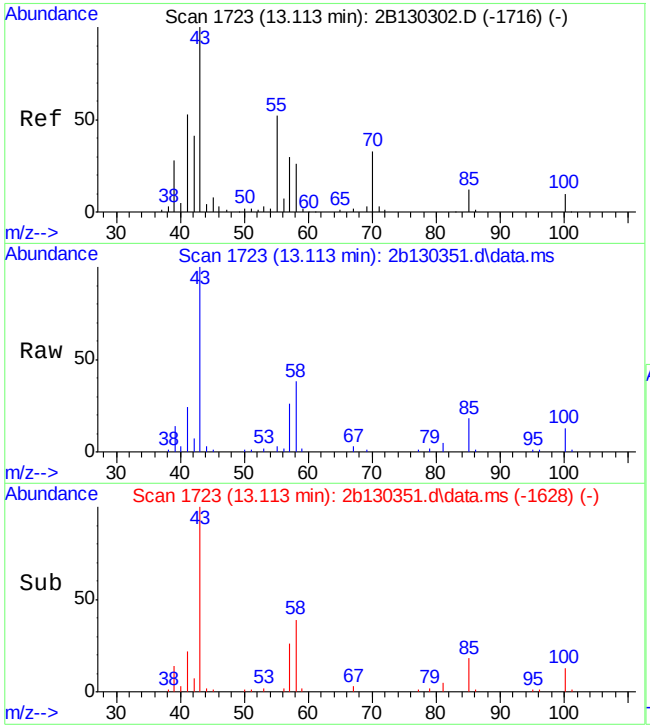


#79
methylcyclohexane
Concen: 39.65 ug/L m
RT: 12.311 min Scan# 1570
Delta R.T. 0.005 min
Lab File: 2b130351.d
Acq: 23 Apr 2015 6:01 am

Tgt Ion: 83 Resp: 133128

Ion	Ratio	Lower	Upper
83	100		
55	72.1	45.8	105.8
98	44.0	14.7	74.7

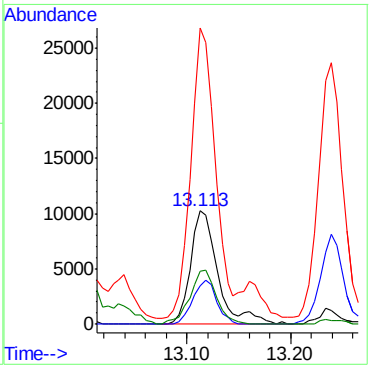


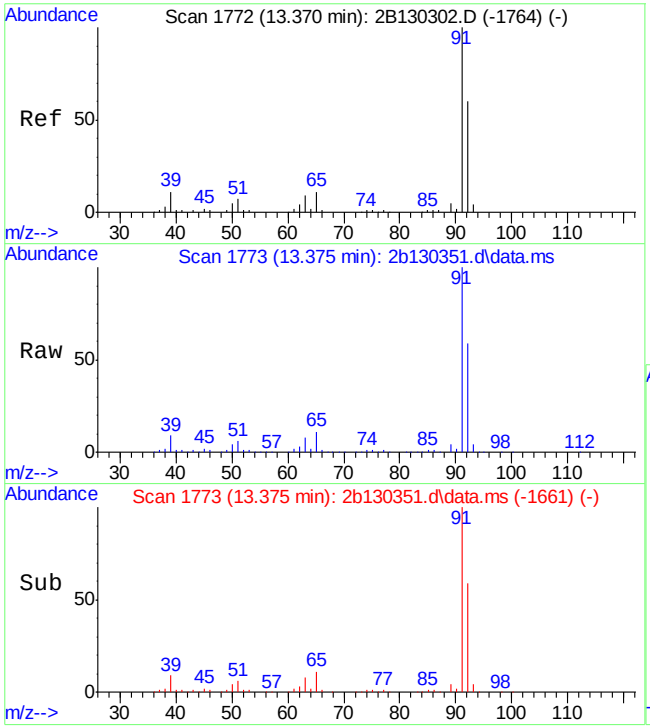


#83
4-methyl-2-pentanone
Concen: 28.62 ug/L
RT: 13.113 min Scan# 1723
Delta R.T. 0.000 min
Lab File: 2b130351.d
Acq: 23 Apr 2015 6:01 am

Tgt Ion: 58 Resp: 18630

Ion	Ratio	Lower	Upper
58	100		
100	34.0	9.9	69.9
43	256.9	361.6	421.6#
85	46.8	18.1	78.1

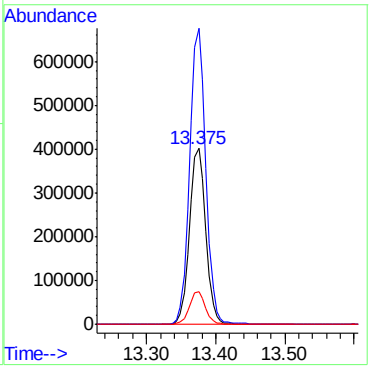


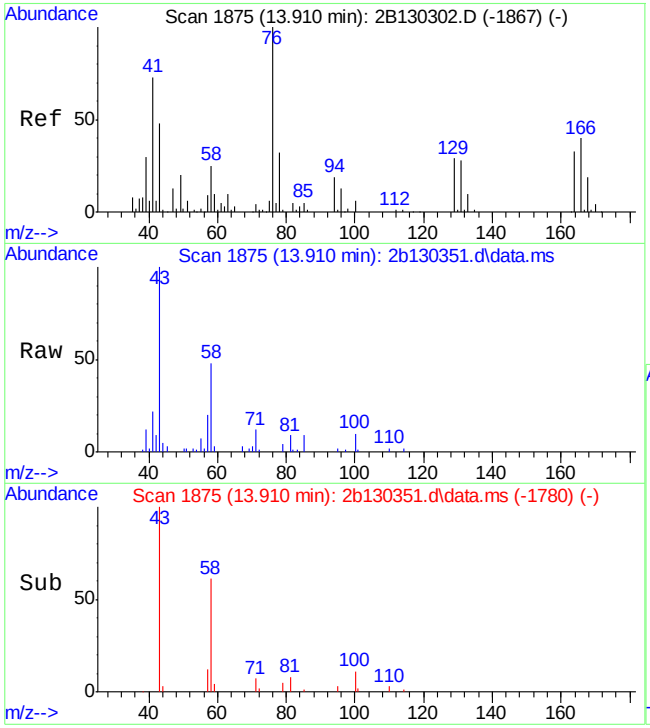


#84
toluene
Concen: 133.31 ug/L
RT: 13.375 min Scan# 1773
Delta R.T. 0.005 min
Lab File: 2b130351.d
Acq: 23 Apr 2015 6:01 am

Tgt Ion: 92 Resp: 652291

Ion	Ratio	Lower	Upper
92	100		
91	168.4	137.0	197.0
65	18.5	0.0	49.0

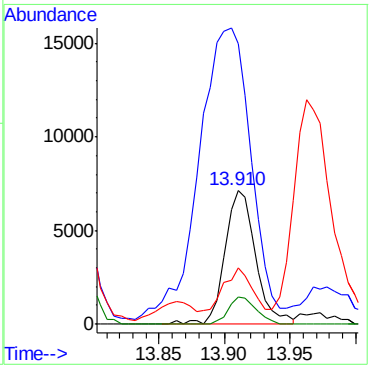


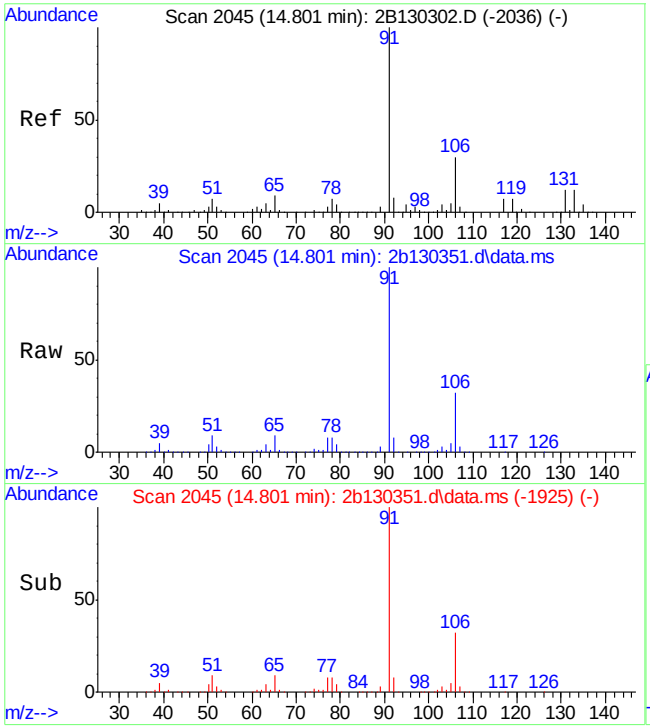


#89
2-hexanone
Concen: 20.93 ug/L
RT: 13.910 min Scan# 1875
Delta R.T. 0.000 min
Lab File: 2b130351.d
Acq: 23 Apr 2015 6:01 am

Tgt Ion: 58 Resp: 11519

Ion	Ratio	Lower	Upper
58	100		
43	196.5	163.3	223.3
57	29.1	5.8	65.8
100	20.2	0.0	52.2

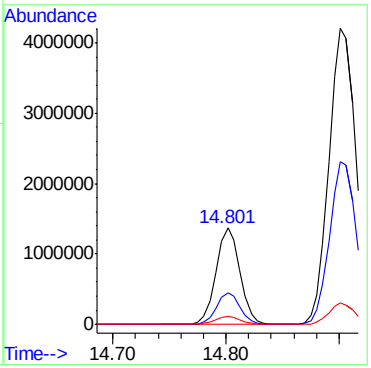


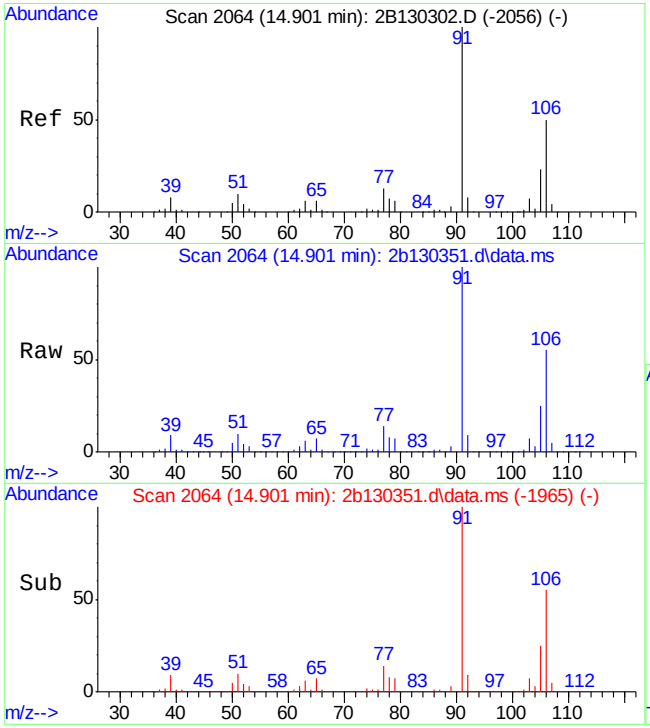


#100
ethylbenzene
Concen: 211.65 ug/L
RT: 14.801 min Scan# 2045
Delta R.T. 0.000 min
Lab File: 2b130351.d
Acq: 23 Apr 2015 6:01 am

Tgt Ion: 91 Resp: 2010402

Ion	Ratio	Lower	Upper
91	100		
106	32.3	0.3	60.3
65	8.7	0.0	38.6

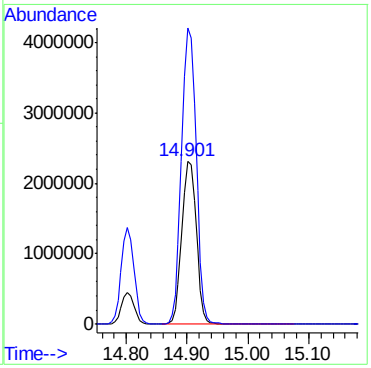


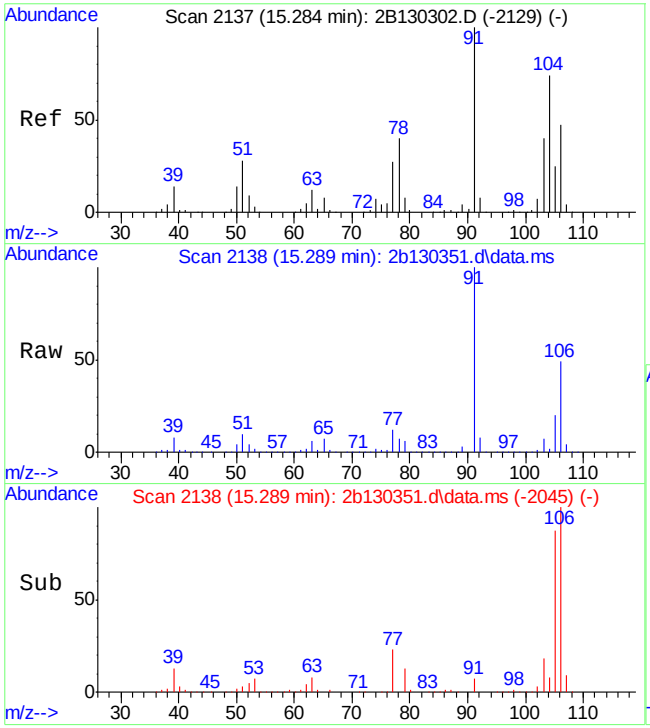


#101
m,p-xylene
Concen: 1037.80 ug/L
RT: 14.901 min Scan# 2064
Delta R.T. 0.000 min
Lab File: 2b130351.d
Acq: 23 Apr 2015 6:01 am

Tgt Ion:106 Resp: 3779153

Ion	Ratio	Lower	Upper
106	100		
91	181.6	169.4	229.4

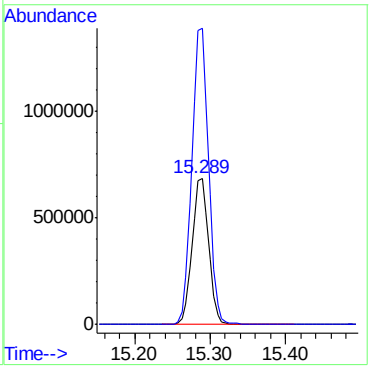


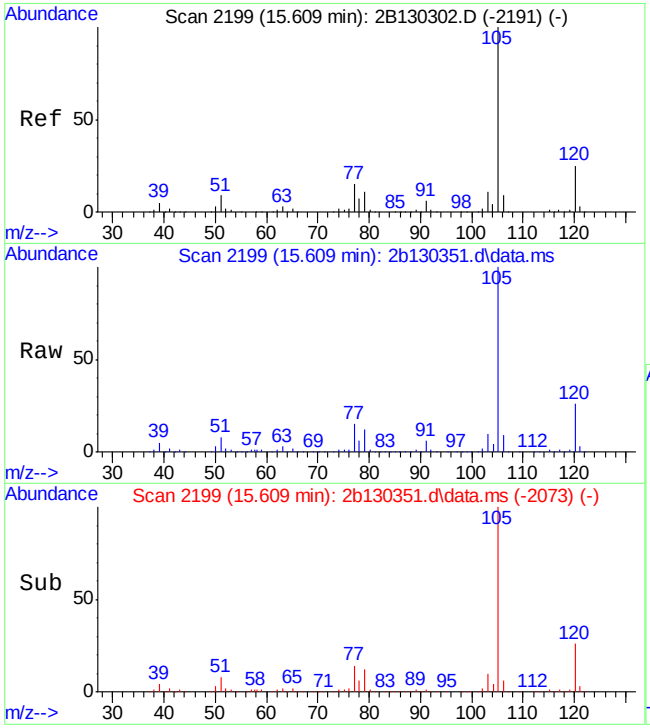


#102
o-xylene
Concen: 267.08 ug/L
RT: 15.289 min Scan# 2138
Delta R.T. 0.005 min
Lab File: 2b130351.d
Acq: 23 Apr 2015 6:01 am

Tgt Ion:106 Resp: 1034865

Ion	Ratio	Lower	Upper
106	100		
91	202.8	183.1	243.1

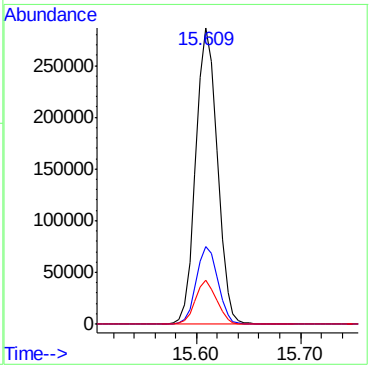




#107
isopropylbenzene
Concen: 40.34 ug/L
RT: 15.609 min Scan# 2199
Delta R.T. 0.000 min
Lab File: 2b130351.d
Acq: 23 Apr 2015 6:01 am

Tgt Ion:105 Resp: 410616

Ion	Ratio	Lower	Upper
105	100		
120	26.1	0.0	55.5
77	14.8	0.0	45.0



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130351.d
Acq On : 23 Apr 2015 6:01 am
Operator : BridgetK
Sample : jb92664-10
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 41 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

Signal : TIC: 2b130351.d\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	5.207	200	215	227	rVV3	31904	149631	0.62%	0.084%
2	5.312	227	235	266	rVV3	23694	99861	0.42%	0.056%
3	6.266	400	417	420	rBV3	120279	381951	1.59%	0.215%
4	6.318	420	427	459	rVV2	240318	851686	3.55%	0.479%
5	6.780	502	515	546	rVV3	145700	558797	2.33%	0.315%
6	7.036	550	564	584	rVB2	90499	245631	1.02%	0.138%
7	7.251	587	605	615	rBV2	46269	133501	0.56%	0.075%
8	7.356	615	625	644	rVV	103082	295994	1.23%	0.167%
9	7.655	667	682	705	rBV4	31492	127259	0.53%	0.072%
10	8.368	785	818	822	rBV3	113035	418256	1.74%	0.235%
11	8.436	822	831	843	rVV2	265214	1005023	4.19%	0.566%
12	8.552	843	853	885	rVB3	137203	524378	2.19%	0.295%
13	8.835	891	907	927	rBV3	217797	750121	3.13%	0.422%
14	9.087	942	955	968	rVB2	37064	97932	0.41%	0.055%
15	9.223	968	981	996	rBV	105986	267551	1.12%	0.151%
16	9.443	1015	1023	1030	rBV2	61248	141982	0.59%	0.080%
17	9.511	1030	1036	1051	rVB2	91831	222459	0.93%	0.125%
18	9.642	1051	1061	1071	rBV2	60193	158487	0.66%	0.089%
19	9.758	1071	1083	1092	rBV6	45256	160862	0.67%	0.091%
20	9.868	1092	1104	1117	rBV4	101279	267573	1.12%	0.151%
21	9.983	1117	1126	1140	rVB2	46842	127440	0.53%	0.072%
22	10.135	1140	1155	1192	rVB	602100	1637531	6.83%	0.922%
23	10.743	1257	1271	1277	rBV4	94877	241627	1.01%	0.136%
24	10.817	1277	1285	1292	rVV2	601297	1344668	5.60%	0.757%
25	10.869	1293	1295	1303	rVV	94410	150500	0.63%	0.085%
26	11.011	1310	1322	1332	rVV3	323154	894213	3.73%	0.503%
27	11.100	1332	1339	1353	rVB2	141402	321298	1.34%	0.181%
28	11.257	1353	1369	1380	rBV2	184682	502579	2.09%	0.283%
29	11.357	1380	1388	1395	rBV	861800	1773090	7.39%	0.998%
30	11.420	1395	1400	1407	rVV3	236598	610935	2.55%	0.344%
31	11.483	1407	1412	1419	rVV3	153030	321158	1.34%	0.181%
32	11.551	1419	1425	1428	rVV2	60831	121360	0.51%	0.068%
33	11.593	1428	1433	1448	rVB4	85666	260380	1.09%	0.147%
34	11.724	1448	1458	1475	rBV	502409	1114640	4.65%	0.628%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130351.d
Acq On : 23 Apr 2015 6:01 am
Operator : BridgetK
Sample : jb92664-10
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 41 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

35	12.306	1548	1569	1581	rVB3	322162	990935	4.13%	0.558%
36	12.474	1594	1601	1608	rBV2	84514	157413	0.66%	0.089%
37	12.688	1629	1642	1656	rBV3	207891	513250	2.14%	0.289%
38	12.835	1656	1670	1686	rBV2	271055	825281	3.44%	0.465%
39	13.113	1718	1723	1728	rBV	62450	98164	0.41%	0.055%
40	13.187	1728	1737	1742	rVB4	97981	214801	0.90%	0.121%
41	13.239	1742	1747	1751	rBV2	82199	124977	0.52%	0.070%
42	13.307	1751	1760	1765	rVV	637945	1102143	4.59%	0.621%
43	13.375	1765	1773	1789	rVB	1584144	2700531	11.26%	1.520%
44	13.910	1859	1875	1881	rBV5	39034	105764	0.44%	0.060%
45	14.529	1988	1993	2000	rVB2	69468	117162	0.49%	0.066%
46	14.607	2000	2008	2019	rVB4	50839	112880	0.47%	0.064%
47	14.707	2019	2027	2038	rBV	643712	1088684	4.54%	0.613%
48	14.801	2038	2045	2055	rVB	3079608	4522710	18.85%	2.546%
49	14.901	2055	2064	2082	rBV	12616268	20562082	85.71%	11.576%
50	15.289	2128	2138	2163	rVB	3834002	5890808	24.55%	3.317%
51	15.609	2189	2199	2210	rVB	682323	1001278	4.17%	0.564%
52	15.777	2223	2231	2238	rVB	569441	823144	3.43%	0.463%
53	15.986	2260	2271	2277	rBV	1951645	2784692	11.61%	1.568%
54	16.055	2277	2284	2287	rVV	6819553	9952305	41.48%	5.603%
55	16.086	2287	2290	2294	rVV	5218737	6829651	28.47%	3.845%
56	16.128	2294	2298	2315	rVB	6182789	8528050	35.55%	4.801%
57	16.343	2330	2339	2355	rBV	4963001	7057528	29.42%	3.973%
58	16.495	2355	2368	2378	rBV	16391199	23991144	100.00%	13.507%
59	16.626	2385	2393	2395	rBV	174979	244131	1.02%	0.137%
60	16.657	2395	2399	2404	rVV	214999	314288	1.31%	0.177%
61	16.710	2404	2409	2415	rVV	518193	718333	2.99%	0.404%
62	16.768	2415	2420	2426	rVV	172260	231633	0.97%	0.130%
63	16.862	2432	2438	2442	rBV	748549	1136768	4.74%	0.640%
64	16.904	2442	2446	2457	rVV	5156351	7674912	31.99%	4.321%
65	17.040	2465	2472	2475	rBV	1835014	2735014	11.40%	1.540%
66	17.066	2475	2477	2481	rVV	1559372	1997063	8.32%	1.124%
67	17.124	2481	2488	2504	rVV3	4085505	9390814	39.14%	5.287%
68	17.260	2504	2514	2520	rVB	315711	463037	1.93%	0.261%
69	17.334	2520	2528	2534	rBV	888610	1318135	5.49%	0.742%
70	17.397	2534	2540	2543	rVV	1834781	2787624	11.62%	1.569%
71	17.428	2543	2546	2553	rVV	1619080	2244785	9.36%	1.264%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130351.d
Acq On : 23 Apr 2015 6:01 am
Operator : BridgetK
Sample : jb92664-10
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 41 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

72	17.496	2553	2559	2573	rVB	3728182	5496271	22.91%	3.094%
73	17.601	2573	2579	2584	rBV3	430551	721775	3.01%	0.406%
74	17.675	2584	2593	2600	rVV2	1030061	2011546	8.38%	1.133%
75	17.821	2611	2621	2628	rVV	883982	1341942	5.59%	0.756%
76	17.900	2628	2636	2641	rVV	1846007	2720542	11.34%	1.532%
77	17.952	2641	2646	2652	rVV	2159797	3258050	13.58%	1.834%
78	18.000	2652	2655	2659	rVV	384297	538026	2.24%	0.303%
79	18.036	2659	2662	2667	rVV	179612	255307	1.06%	0.144%
80	18.089	2667	2672	2676	rVV4	64815	135734	0.57%	0.076%
81	18.167	2682	2687	2692	rVV3	142690	223397	0.93%	0.126%
82	18.209	2692	2695	2698	rVV	70572	93891	0.39%	0.053%
83	18.267	2698	2706	2719	rVV2	1303528	2499282	10.42%	1.407%
84	18.403	2719	2732	2735	rVV	852486	1601375	6.67%	0.902%
85	18.445	2735	2740	2748	rVV	1841249	2956485	12.32%	1.665%
86	18.514	2748	2753	2759	rVV2	94703	164474	0.69%	0.093%
87	18.639	2768	2777	2782	rBV3	241524	388985	1.62%	0.219%
88	18.692	2782	2787	2790	rVV	109810	169379	0.71%	0.095%
89	18.739	2790	2796	2806	rVV2	492391	1187227	4.95%	0.668%
90	18.812	2806	2810	2816	rVV	177718	277309	1.16%	0.156%
91	18.875	2816	2822	2825	rVV2	197766	332332	1.39%	0.187%
92	18.912	2825	2829	2837	rVV	265210	489888	2.04%	0.276%
93	19.069	2852	2859	2867	rVV4	42932	99857	0.42%	0.056%
94	19.148	2867	2874	2882	rVV	1167790	1749374	7.29%	0.985%
95	19.258	2890	2895	2906	rVV2	138134	277984	1.16%	0.157%
96	19.342	2906	2911	2929	rVB	108745	196125	0.82%	0.110%
97	19.473	2929	2936	2952	rBV	184612	313840	1.31%	0.177%
98	19.672	2969	2974	2985	rVV	128068	261637	1.09%	0.147%
99	19.793	2992	2997	3004	rVV2	67937	107341	0.45%	0.060%
100	19.898	3012	3017	3033	rVB	67513	118293	0.49%	0.067%

Sum of corrected areas: 177619936

LSC Report - Integrated Chromatogram

```
Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130351.d
Acq On    : 23 Apr 2015   6:01 am
Operator  : BridgetK
Sample    : jb92664-10
Misc      : ms83932,v2B5826,w,,,,1
ALS Vial  : 41   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title  : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library   : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p
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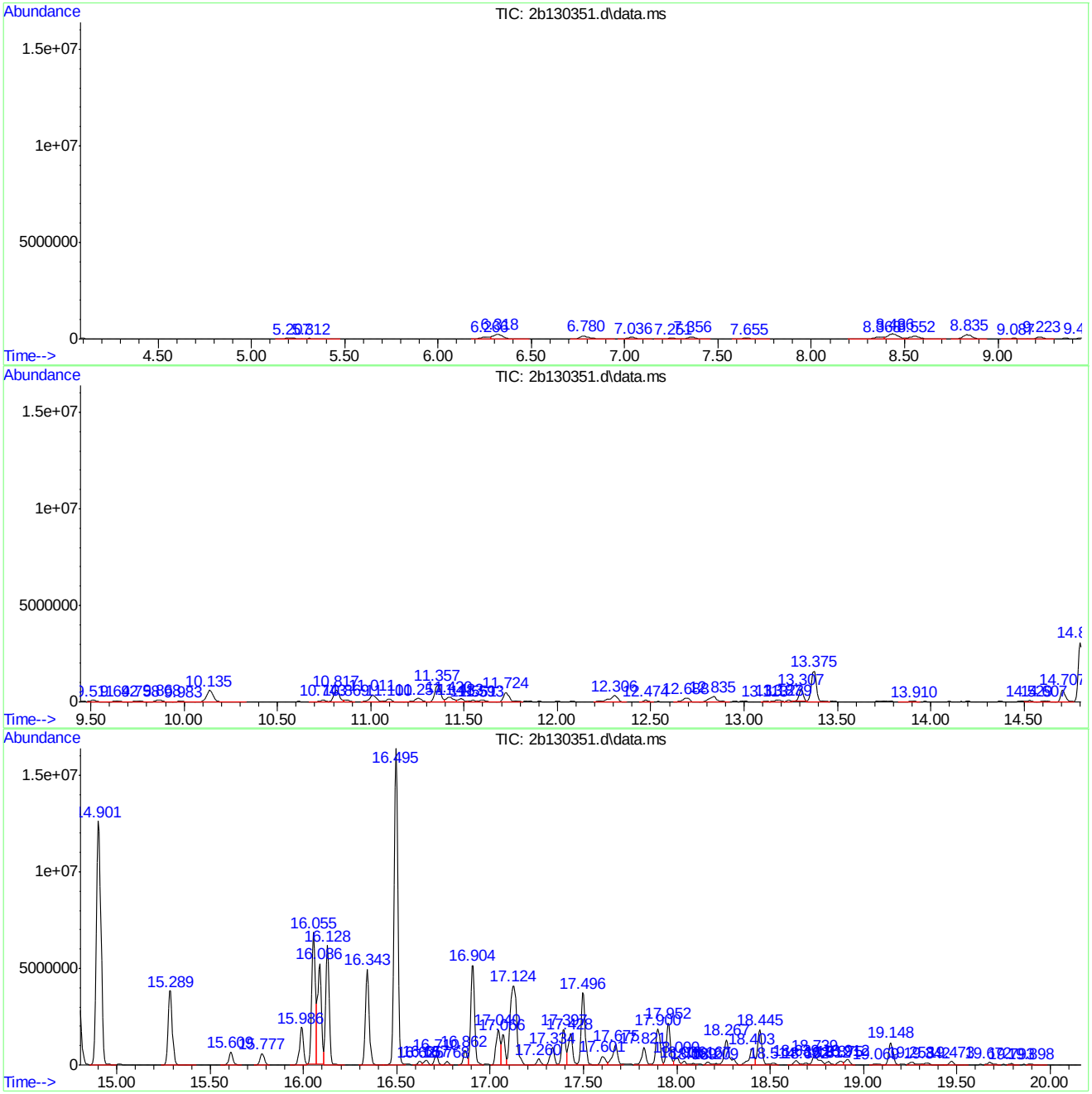


Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130351.d
Acq On : 23 Apr 2015 6:01 am
Operator : BridgetK
Sample : jb92664-10
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 41 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

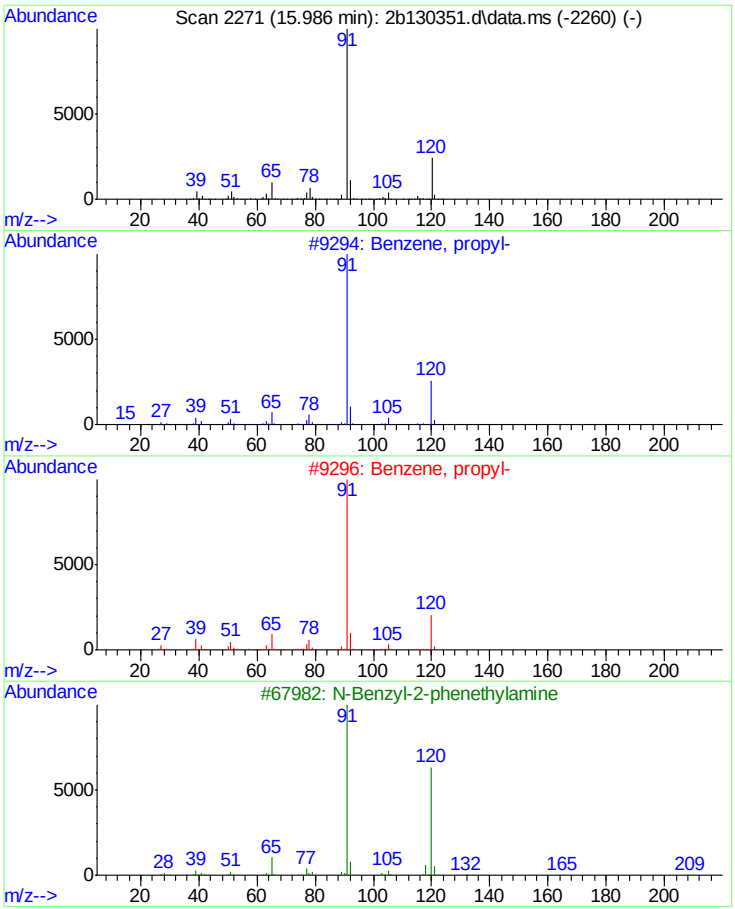
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

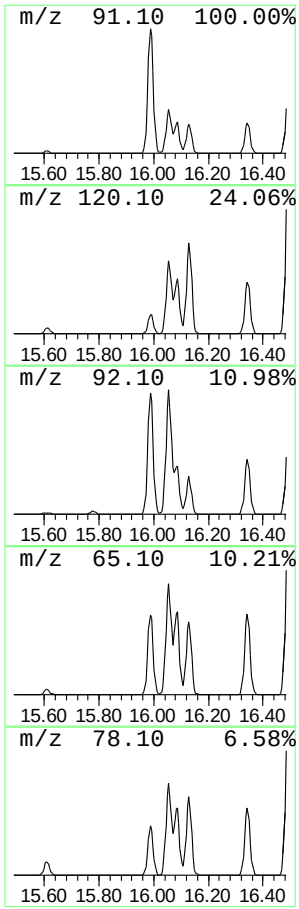
****

Peak Number 1 Benzene, propyl- Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.986	122.48 ug/L	2784690	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, propyl-	120	C9H12	000103-65-1	91
2	Benzene, propyl-	120	C9H12	000103-65-1	91
3	N-Benzyl-2-phenethylamine	211	C15H17N	003647-71-0	78
4	N-Benzyl-2-phenethylamine	211	C15H17N	003647-71-0	72
5	Propanenitrile, 3-[(phenylmethyl...	160	C10H12N2	000706-03-6	72





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130351.d
Acq On : 23 Apr 2015 6:01 am
Operator : BridgetK
Sample : jb92664-10
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 41 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

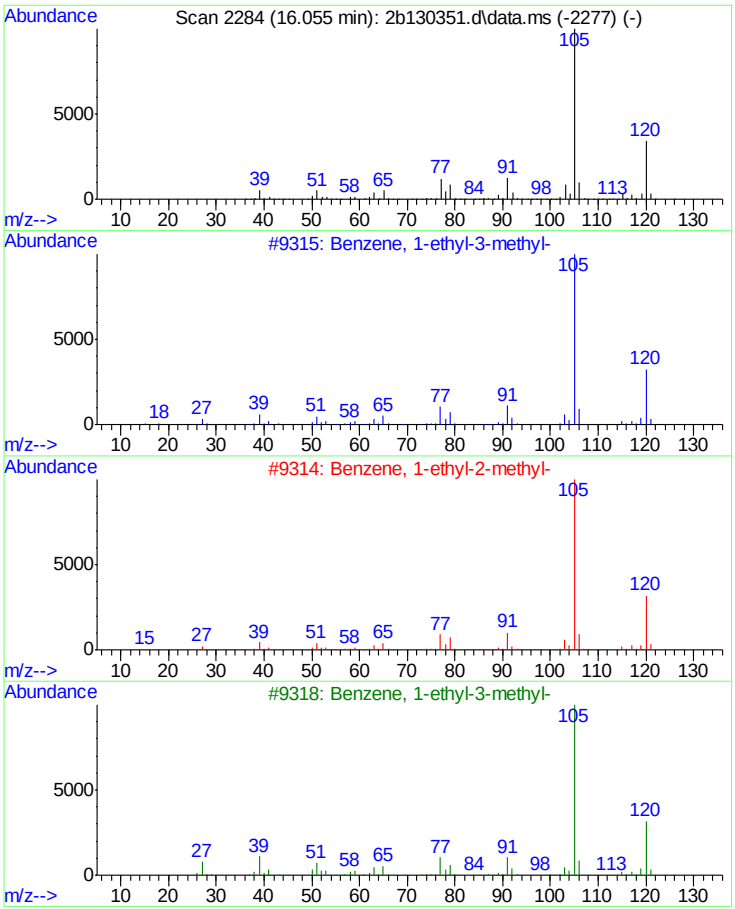
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

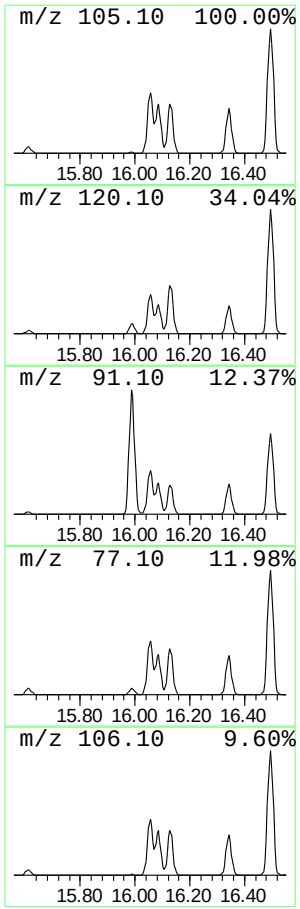
****

Peak Number 2 Benzene, 1-ethyl-3-methyl- Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.055	437.75 ug/L	9952310	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	97
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
3	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	95
4	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130351.d
Acq On : 23 Apr 2015 6:01 am
Operator : BridgetK
Sample : jb92664-10
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 41 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

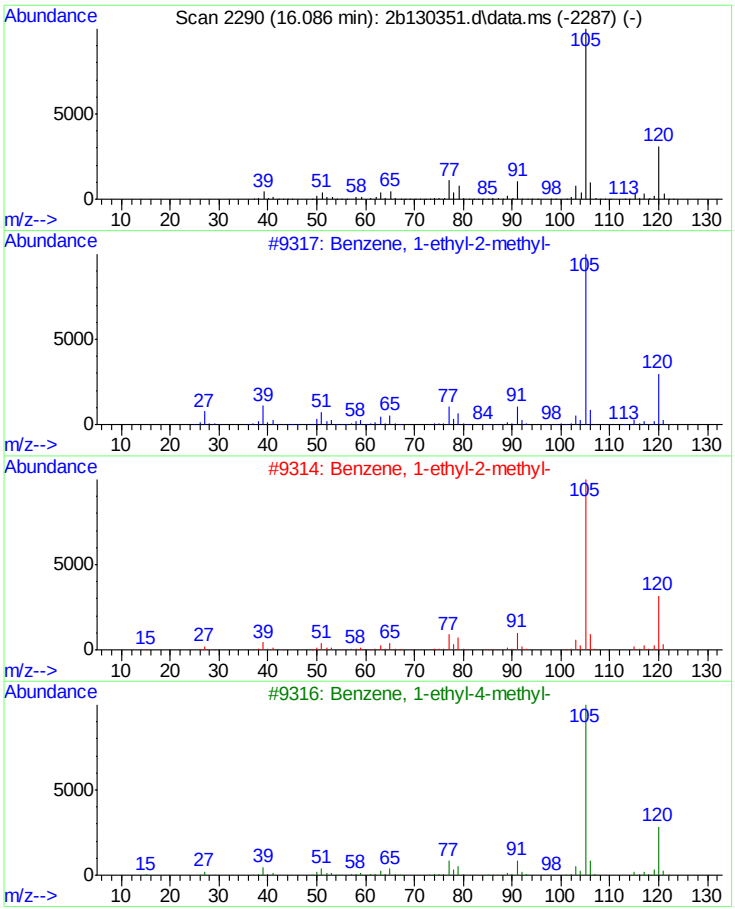
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

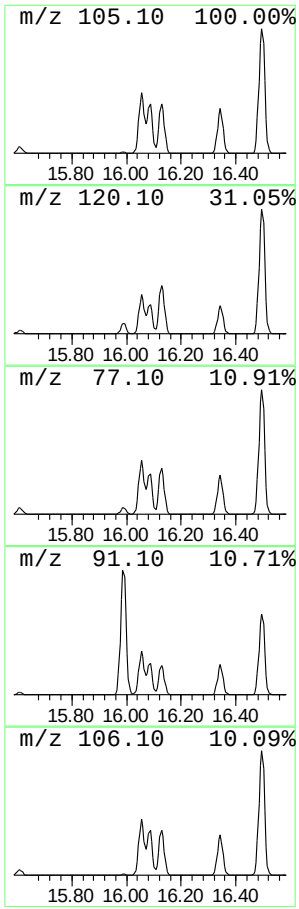
****

Peak Number 3 Benzene, 1-ethyl-2-methyl- Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.086	300.40 ug/L	6829650	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	91
5	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130351.d
Acq On : 23 Apr 2015 6:01 am
Operator : BridgetK
Sample : jb92664-10
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 41 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

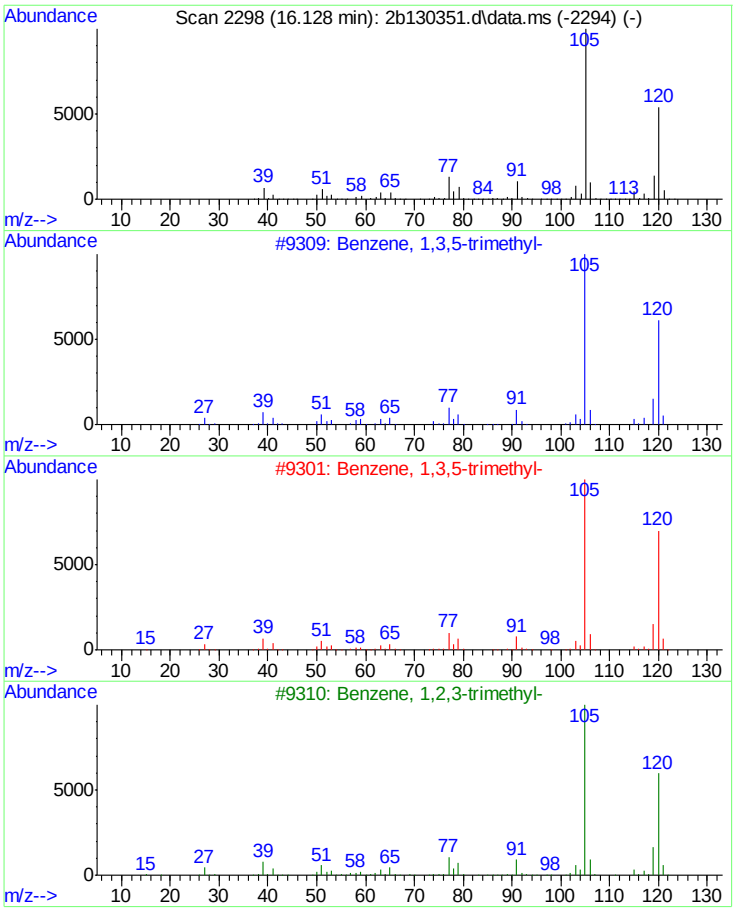
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

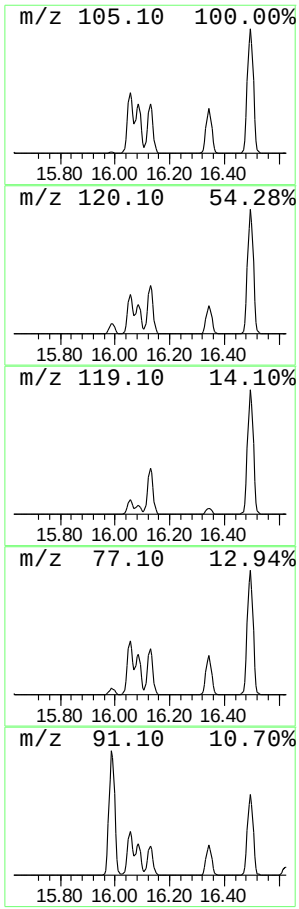
****

Peak Number 4 Benzene, 1,3,5-trimethyl- Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.128	375.10 ug/L	8528050	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	97
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	97
3	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
5	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95





Library Search Compound Report

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Data File : 2b130351.d
Acq On : 23 Apr 2015 6:01 am
Operator : BridgetK
Sample : jb92664-10
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 41 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

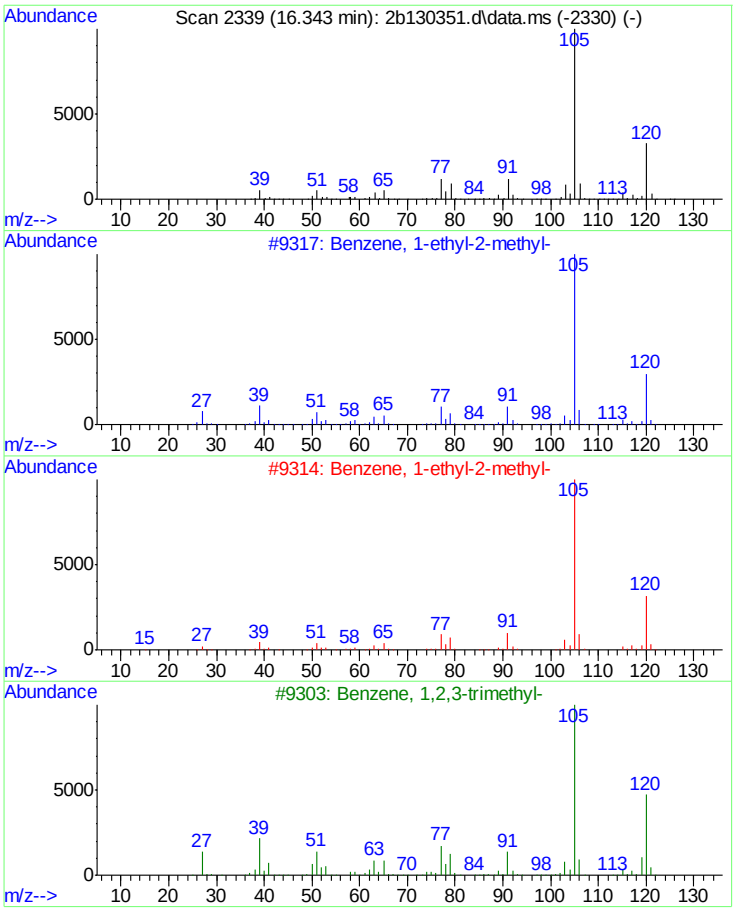
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

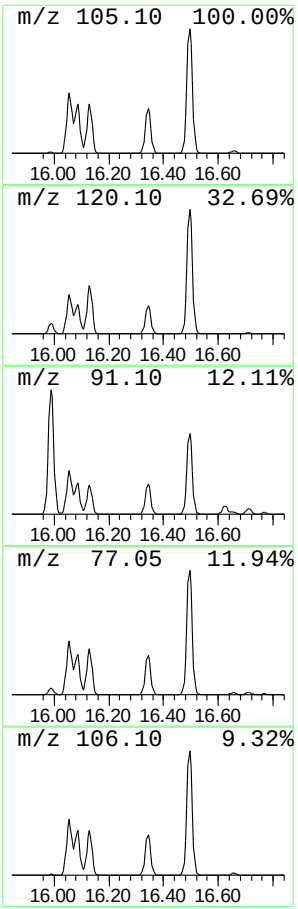
****

Peak Number 5 Benzene, 1-ethyl-2-methyl- Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.343	310.42 ug/L	7057530	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	91
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
5	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91





Library Search Compound Report

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Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 41 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

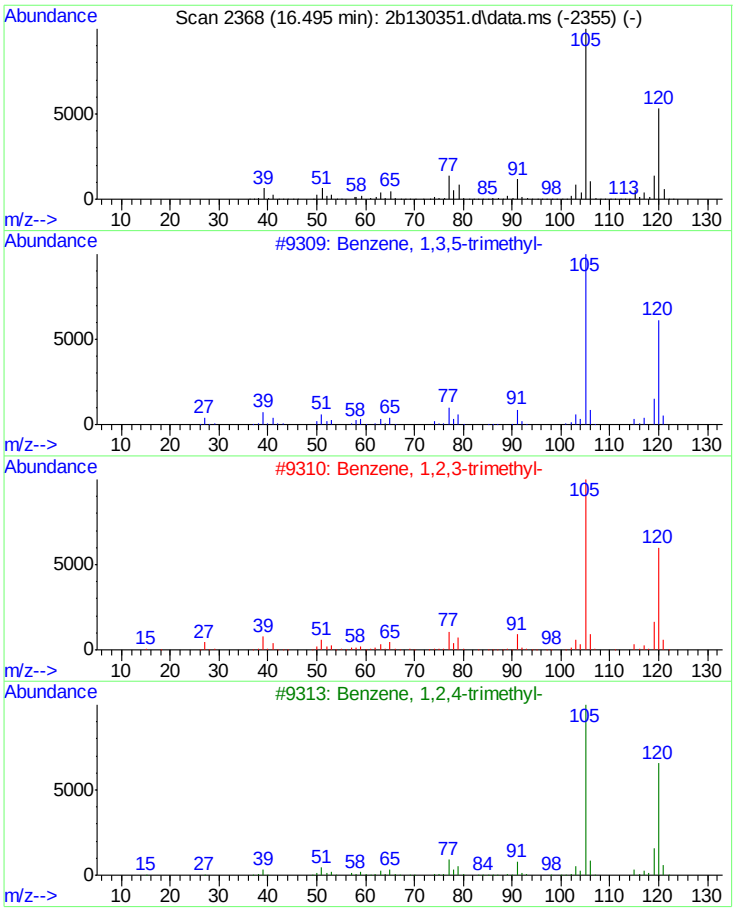
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

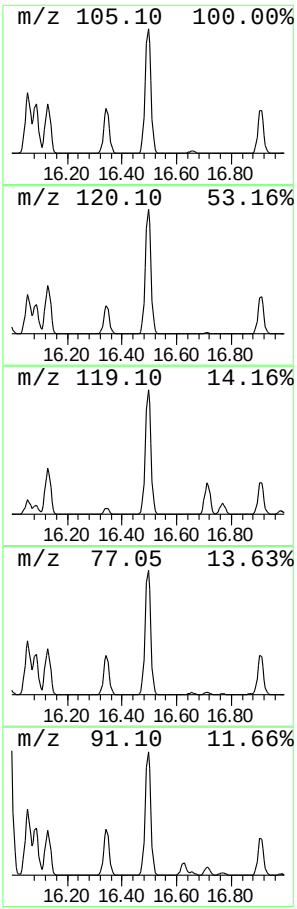
****

Peak Number 6 Benzene, 1,3,5-trimethyl- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.495	1055.23 ug/L	23991100	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	97
2	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95





Library Search Compound Report

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Acq On : 23 Apr 2015 6:01 am
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Sample : jb92664-10
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 41 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

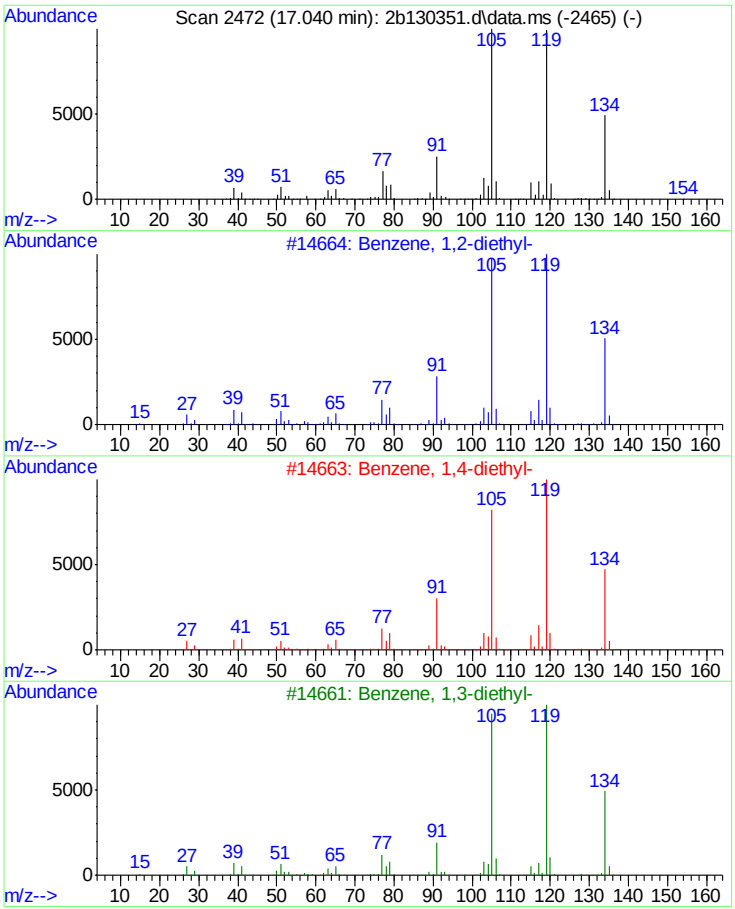
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

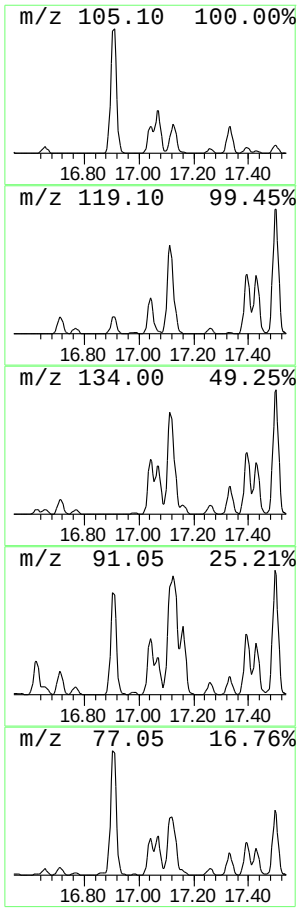
****

Peak Number 7 Benzene, 1,2-diethyl- Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.040	120.30 ug/L	2735010	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2-diethyl-	134	C10H14	000135-01-3	96
2	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	95
3	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	95
4	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	94
5	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	94





Library Search Compound Report

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Acq On : 23 Apr 2015 6:01 am
Operator : BridgetK
Sample : jb92664-10
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 41 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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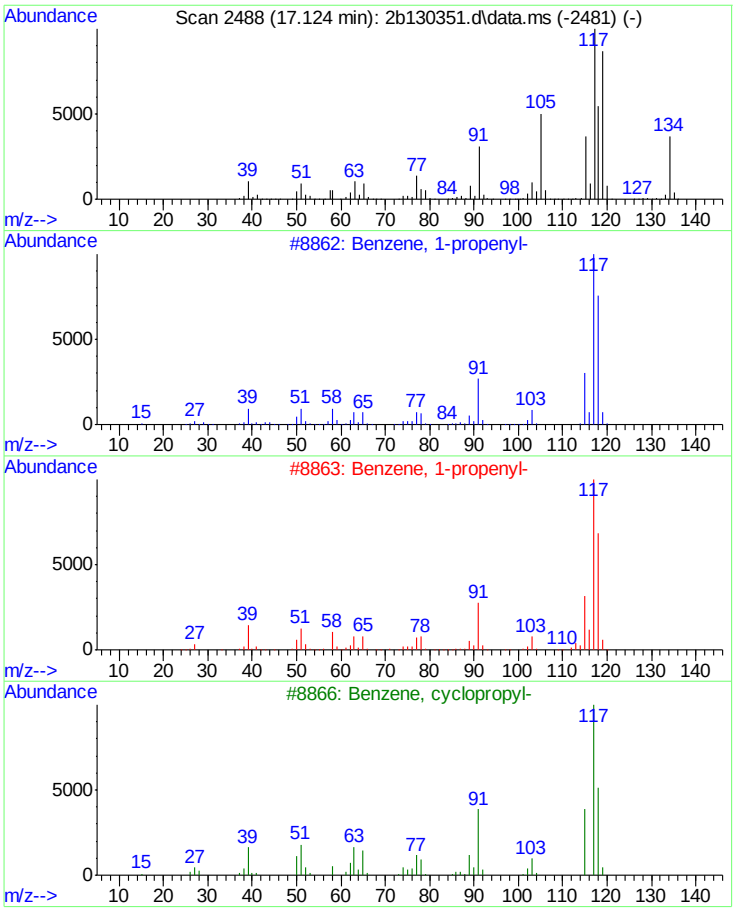
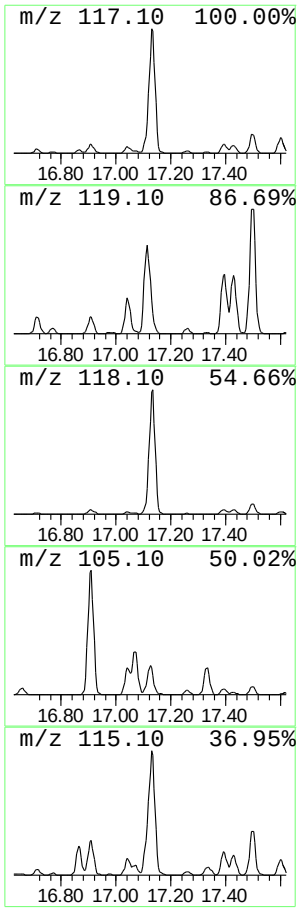
Peak Number 8 Benzene, 1-propenyl- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.124	413.05 ug/L	9390810	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-propenyl-	118	C9H10	000637-50-3	50
2	Benzene, 1-propenyl-	118	C9H10	000637-50-3	50
3	Benzene, cyclopropyl-	118	C9H10	000873-49-4	50
4	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	50
5	Indane	118	C9H10	000496-11-7	50





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Acq On : 23 Apr 2015 6:01 am
Operator : BridgetK
Sample : jb92664-10
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 41 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

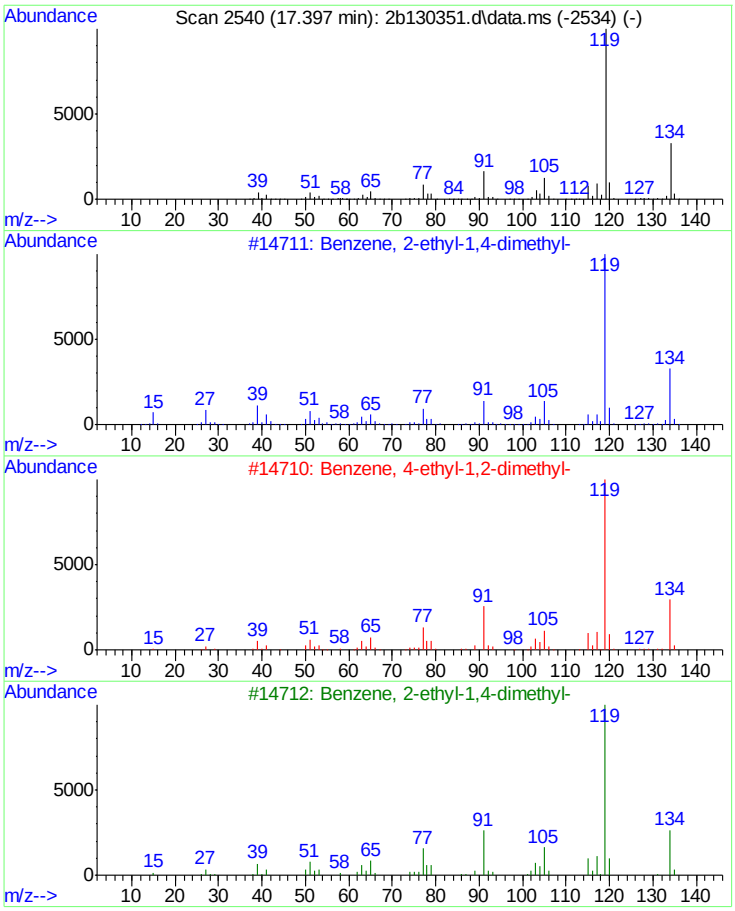
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

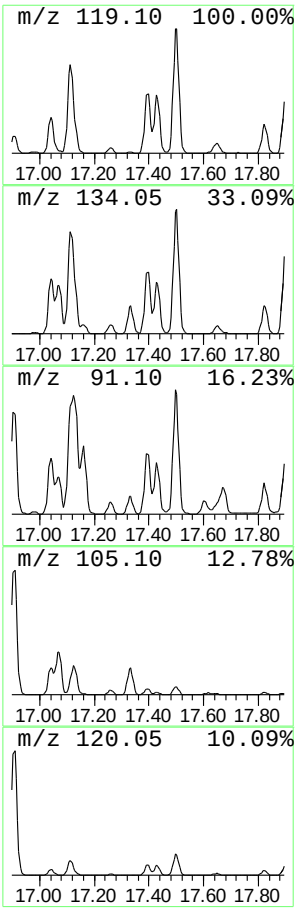
****

Peak Number 9 Benzene, 2-ethyl-1,4-dimethyl- Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.397	122.61 ug/L	2787620	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	97
2	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	96
3	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	96
4	Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	96
5	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	95





Library Search Compound Report

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Acq On : 23 Apr 2015 6:01 am
Operator : BridgetK
Sample : jb92664-10
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 41 Sample Multiplier: 1

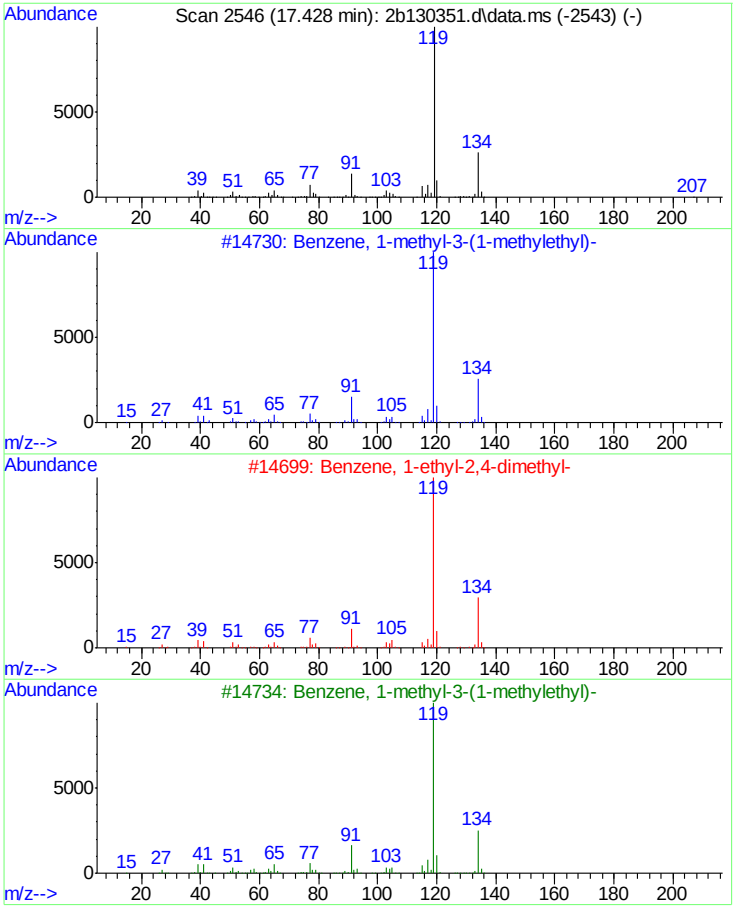
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

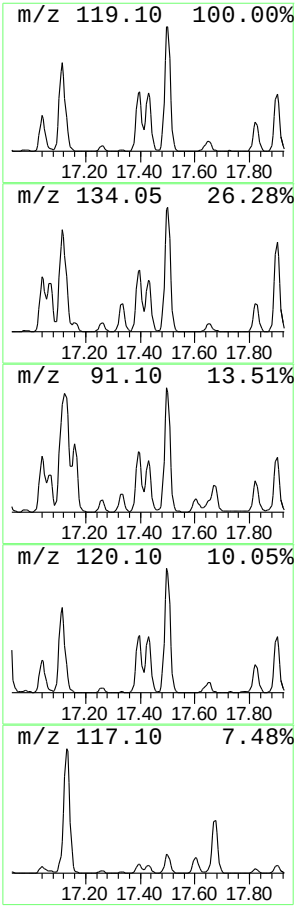
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

****
Peak Number 10 Benzene, 1-methyl-3-(1-meth... Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.428	98.74 ug/L	2244790	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	94
2	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	94
3	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	94
4	Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	91
5	1,3-Cyclopentadiene, 1,2,3,4-tet...	134	C10H14	076089-59-3	91





Library Search Compound Report

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Acq On : 23 Apr 2015 6:01 am
Operator : BridgetK
Sample : jb92664-10
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 41 Sample Multiplier: 1

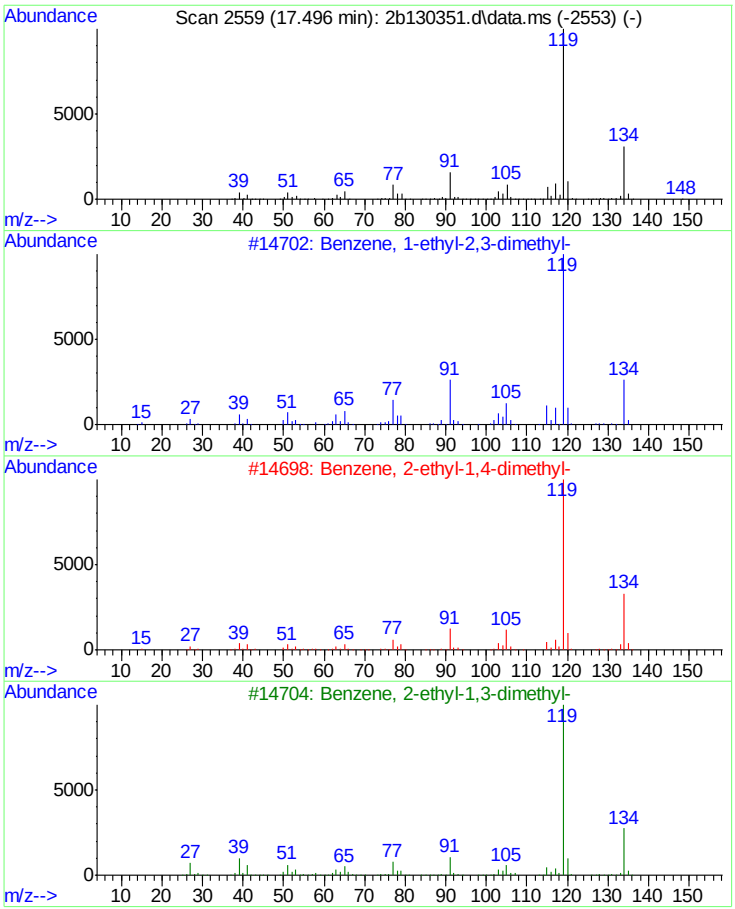
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

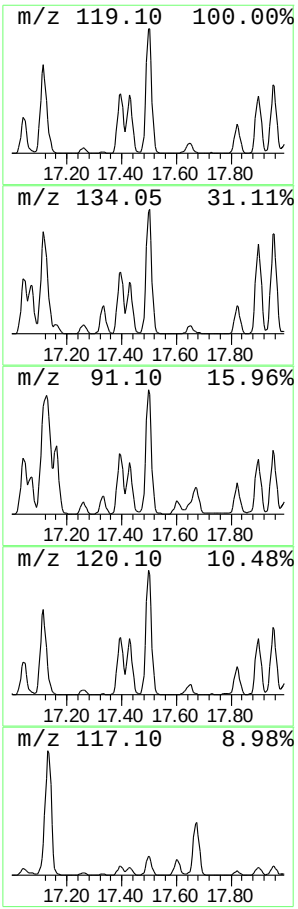
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

****
Peak Number 11 Benzene, 1-ethyl-2,3-dimethyl- Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.496	241.75 ug/L	5496270	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	96
2	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	95
3	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14	002870-04-4	95
4	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	95
5	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	95





Library Search Compound Report

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Acq On : 23 Apr 2015 6:01 am
Operator : BridgetK
Sample : jb92664-10
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 41 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

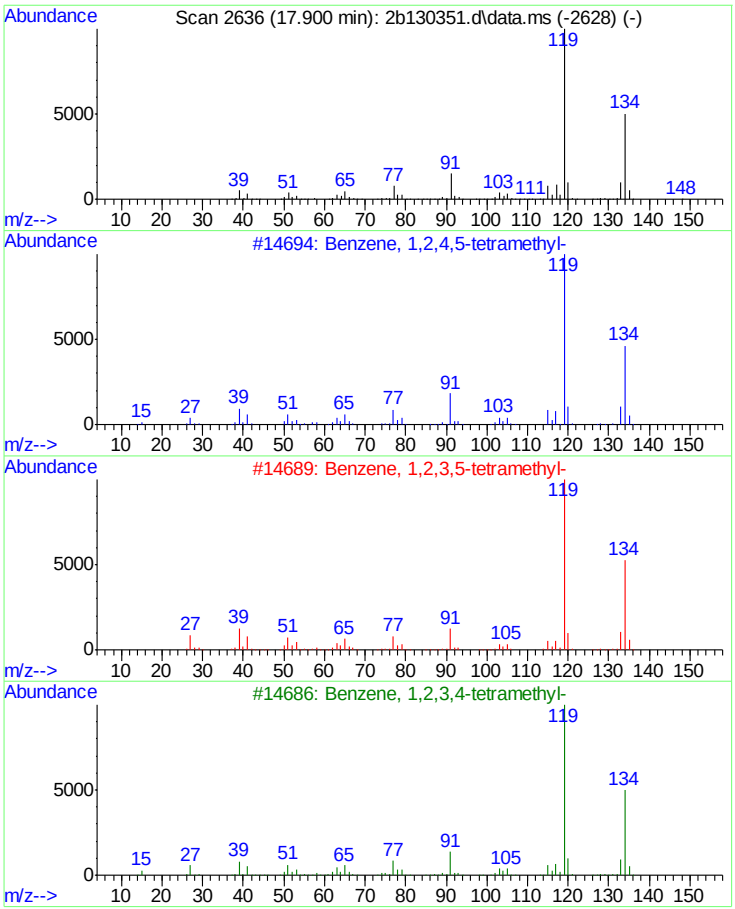
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

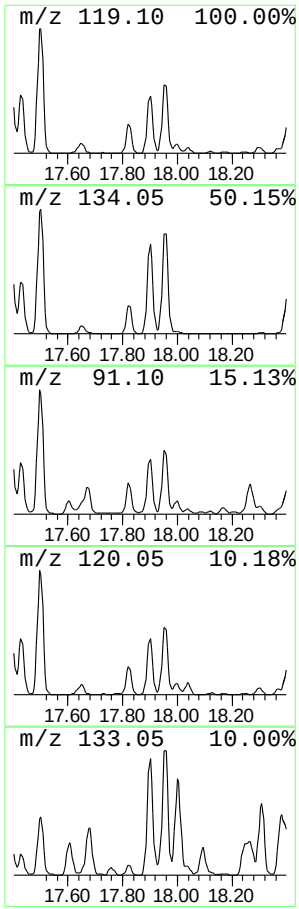
****

Peak Number 12 Benzene, 1,2,4,5-tetramethyl- Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.900	119.66 ug/L	2720540	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	97
2	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	97
3	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	97
4	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	97
5	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	95





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Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 41 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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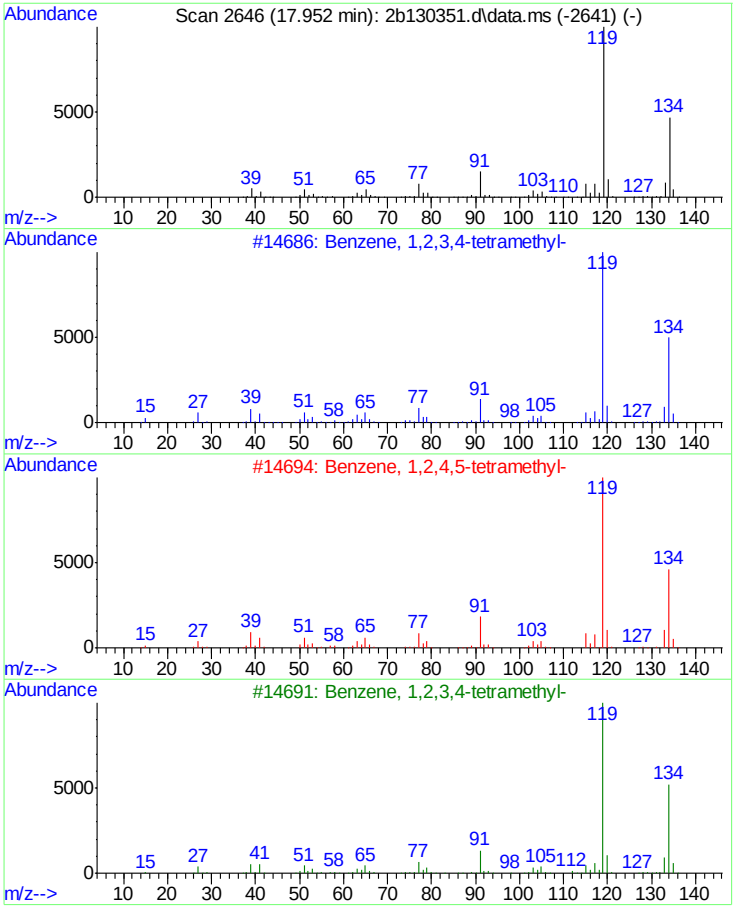
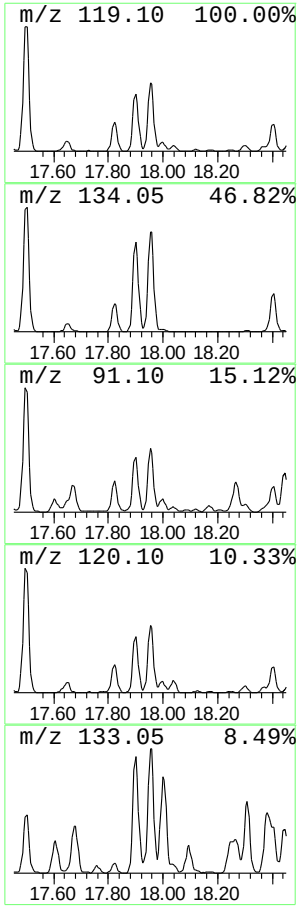
Peak Number 13 Benzene, 1,2,3,4-tetramethyl- Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.953	143.30 ug/L	3258050	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	97
2	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	97
3	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	97
4	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	97
5	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	96





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ALS Vial : 41 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

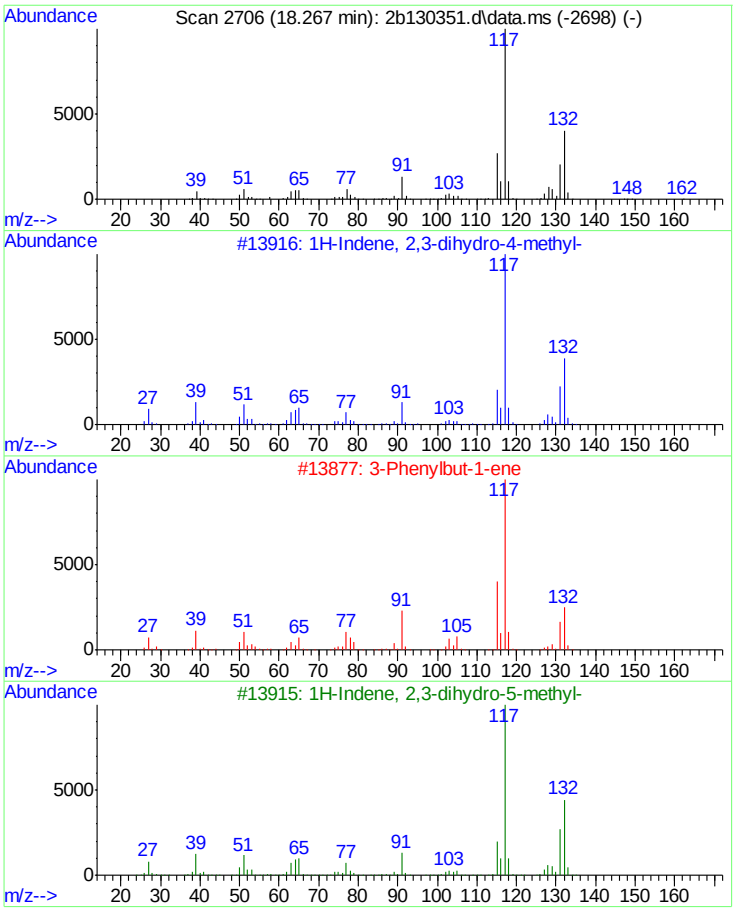
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

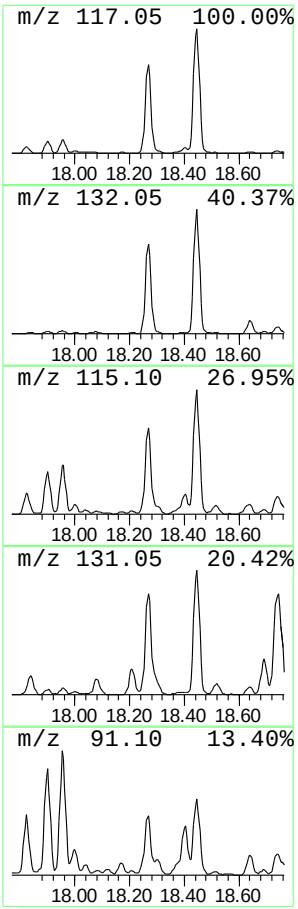
****

Peak Number 14 1H-Indene, 2,3-dihydro-4-me... Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.267	109.93 ug/L	2499280	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	90
2	3-Phenylbut-1-ene	132	C10H12	000934-10-1	90
3	1H-Indene, 2,3-dihydro-5-methyl-	132	C10H12	000874-35-1	90
4	Benzene, (1-methyl-1-propenyl)-,...	132	C10H12	000768-00-3	87
5	Indan, 1-methyl-	132	C10H12	000767-58-8	87





Library Search Compound Report

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ALS Vial : 41 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

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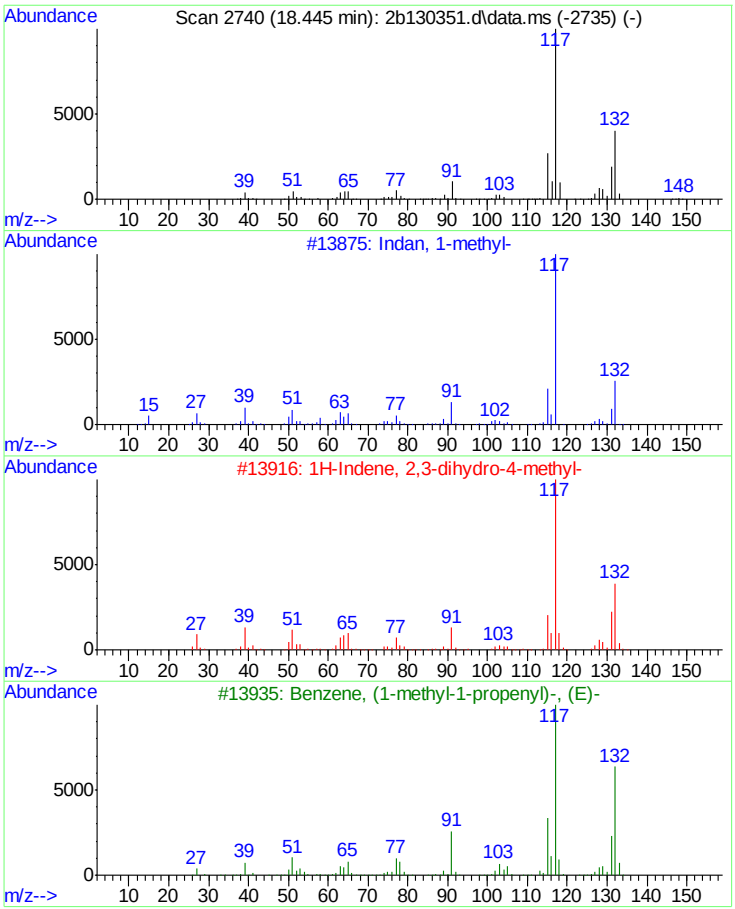
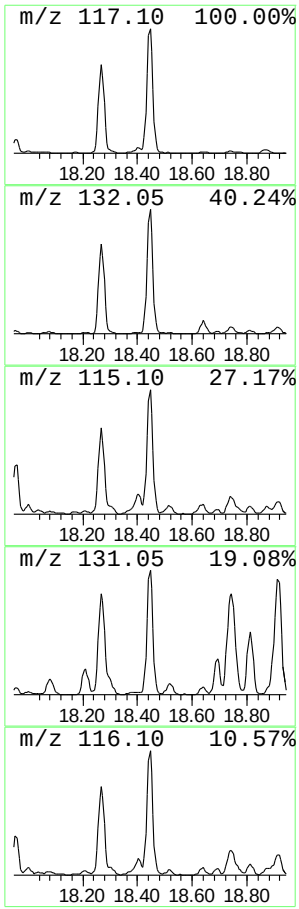
Peak Number 15 Indan, 1-methyl- Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.445	130.04 ug/L	2956490	1,4-dichlorobenzene-d4	16.867

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indan, 1-methyl-	132	C10H12	000767-58-8	90
2	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	90
3	Benzene, (1-methyl-1-propenyl)-,...	132	C10H12	000768-00-3	87
4	Benzene, 1-methyl-2-(2-propenyl)-	132	C10H12	001587-04-8	87
5	1H-Indene, 2,3-dihydro-5-methyl-	132	C10H12	000874-35-1	86





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130351.d
Acq On : 23 Apr 2015 6:01 am
Operator : BridgetK
Sample : jb92664-10
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 41 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

					Internal Standard		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Benzene, propyl-	15.986	122.5	ug/L	2784690	5	16.867	1136770	50.0
Benzene, 1-ethy...	16.055	437.7	ug/L	9952310	5	16.867	1136770	50.0
Benzene, 1-ethy...	16.086	300.4	ug/L	6829650	5	16.867	1136770	50.0
Benzene, 1,3,5-...	16.128	375.1	ug/L	8528050	5	16.867	1136770	50.0
Benzene, 1-ethy...	16.343	310.4	ug/L	7057530	5	16.867	1136770	50.0
Benzene, 1,3,5-...	16.495	1055.2	ug/L	23991100	5	16.867	1136770	50.0
Benzene, 1,2-di...	17.040	120.3	ug/L	2735010	5	16.867	1136770	50.0
Benzene, 1-prop...	17.124	413.0	ug/L	9390810	5	16.867	1136770	50.0
Benzene, 2-ethy...	17.397	122.6	ug/L	2787620	5	16.867	1136770	50.0
Benzene, 1-meth...	17.428	98.7	ug/L	2244790	5	16.867	1136770	50.0
Benzene, 1-ethy...	17.496	241.8	ug/L	5496270	5	16.867	1136770	50.0
Benzene, 1,2,4,...	17.900	119.7	ug/L	2720540	5	16.867	1136770	50.0
Benzene, 1,2,3,...	17.953	143.3	ug/L	3258050	5	16.867	1136770	50.0
1H-Indene, 2,3-...	18.267	109.9	ug/L	2499280	5	16.867	1136770	50.0
Indan, 1-methyl-	18.445	130.0	ug/L	2956490	5	16.867	1136770	50.0

Manual Integrations APPROVED (compounds with "m" flag)
Kanya Veerawat 04/29/15 01:38

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2b\v2b5827-5828\
Data File : 2B130381.D
Acq On : 23 Apr 2015 9:02 pm
Operator : BridgetK
Sample : jb92664-10
Misc : ms83932,v2B5827,w,,,,10
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Apr 24 14:35:44 2015
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
QLast Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration

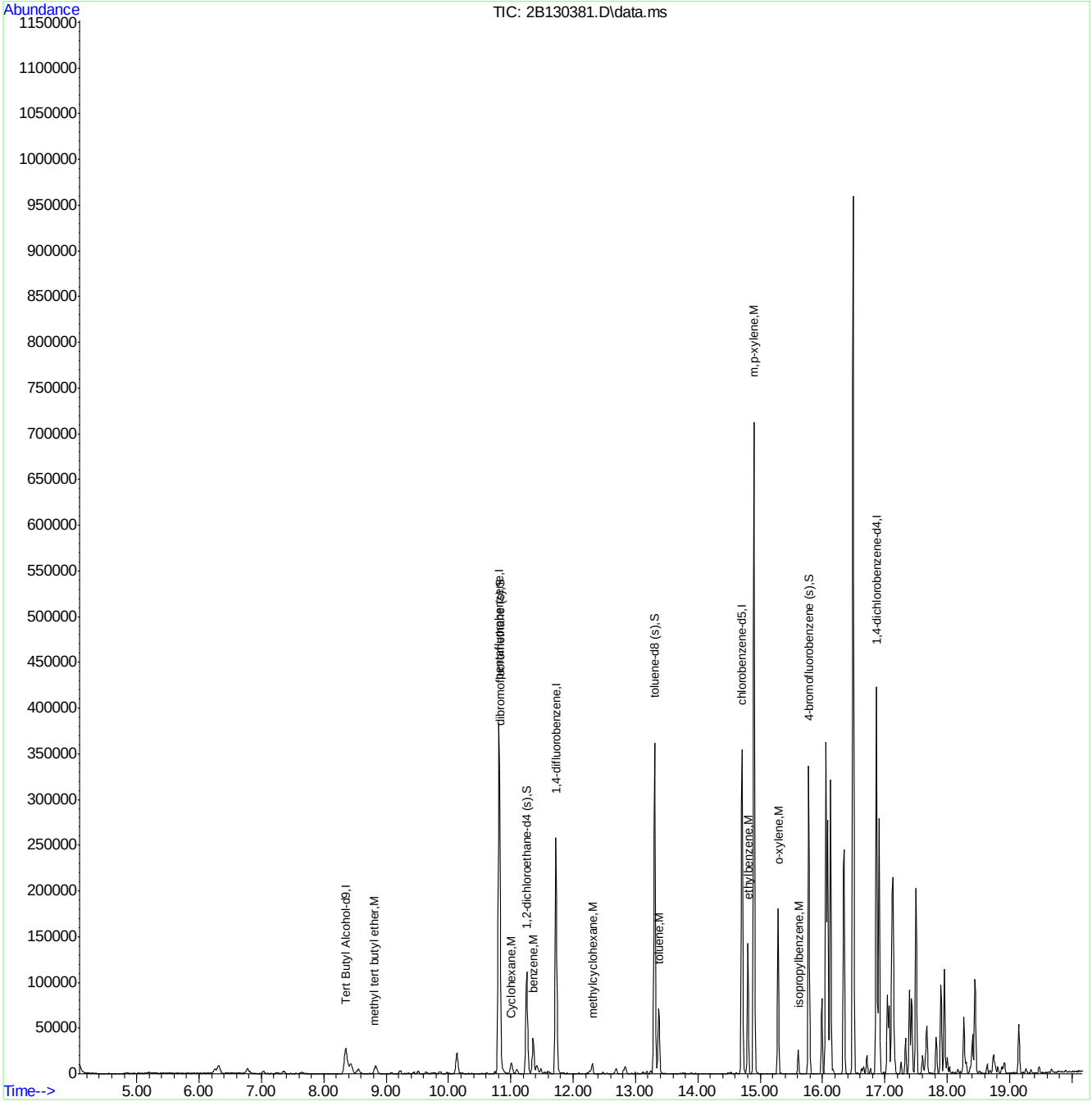
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.358	65	50531	500.00	ug/L	0.00
5) pentafluorobenzene	10.811	168	226128	50.00	ug/L	0.00
58) 1,4-difluorobenzene	11.724	114	208449	50.00	ug/L	0.00
90) chlorobenzene-d5	14.707	117	174529	50.00	ug/L	0.00
106) 1,4-dichlorobenzene-d4	16.867	152	106398	50.00	ug/L	0.00
System Monitoring Compounds						
51) dibromofluoromethane (s)	10.822	113	76066	50.39	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 100.78%			
52) 1,2-dichloroethane-d4 (s)	11.252	65	95326	53.38	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 106.76%			
82) toluene-d8 (s)	13.307	98	223096	50.82	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 101.64%			
108) 4-bromofluorobenzene (s)	15.777	95	82042	47.83	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 95.66%			
Target Compounds						Qvalue
34) methyl tert butyl ether	8.803	73	3141m	0.79	ug/L	
56) Cyclohexane	11.011	84	3805	2.22	ug/L #	57
66) benzene	11.357	78	34370	8.17	ug/L	99
79) methylcyclohexane	12.311	83	4271	2.33	ug/L	94
84) toluene	13.375	92	27585	10.33	ug/L	95
100) ethylbenzene	14.801	91	89144	17.58	ug/L	100
101) m,p-xylene	14.901	106	181175	93.19	ug/L	95
102) o-xylene	15.289	106	42811	20.70	ug/L	92
107) isopropylbenzene	15.614	105	15266	2.77	ug/L	96

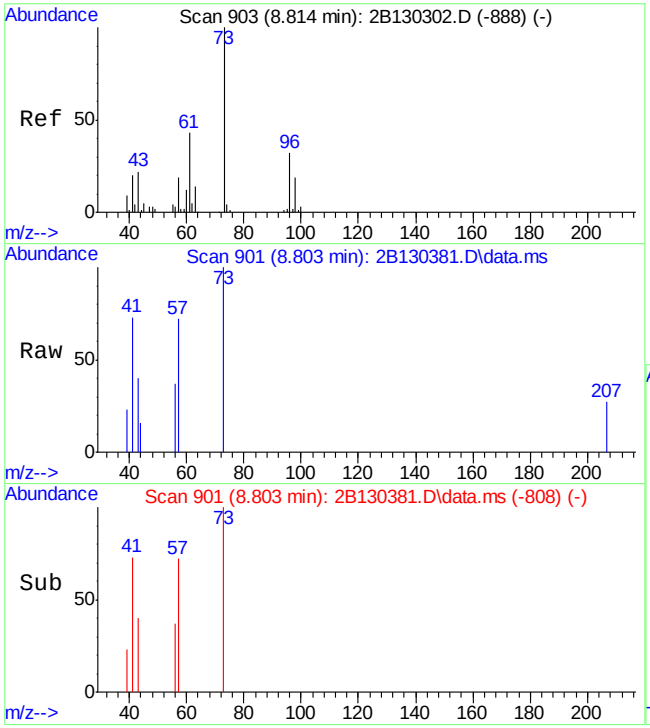
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2b\v2b5827-5828\
Data File : 2B130381.D
Acq On : 23 Apr 2015 9:02 pm
Operator : BridgetK
Sample : jb92664-10
Misc : ms83932,v2B5827,w,,,,10
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Apr 24 14:35:44 2015
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
QLast Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration

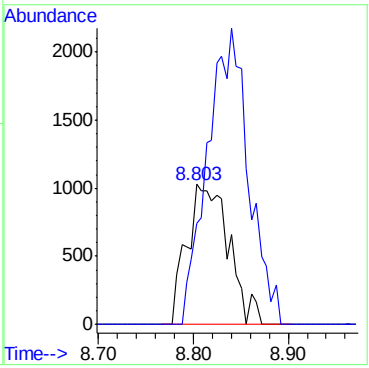


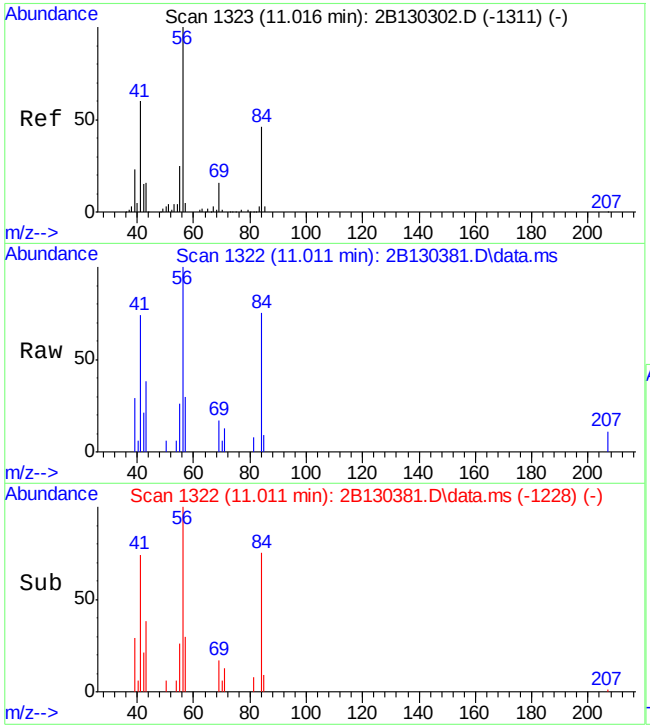


#34
methyl tert butyl ether
Concen: 0.79 ug/L m
RT: 8.803 min Scan# 901
Delta R.T. -0.010 min
Lab File: 2B130381.D
Acq: 23 Apr 2015 9:02 pm

Tgt Ion: 73 Resp: 3141

Ion	Ratio	Lower	Upper
73	100		
57	72.2	0.0	48.7#

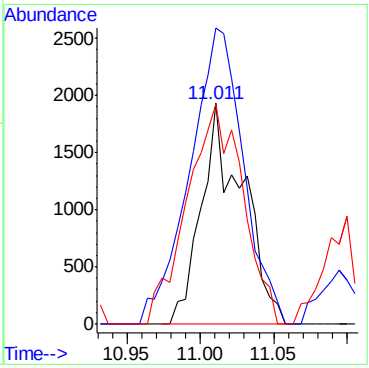


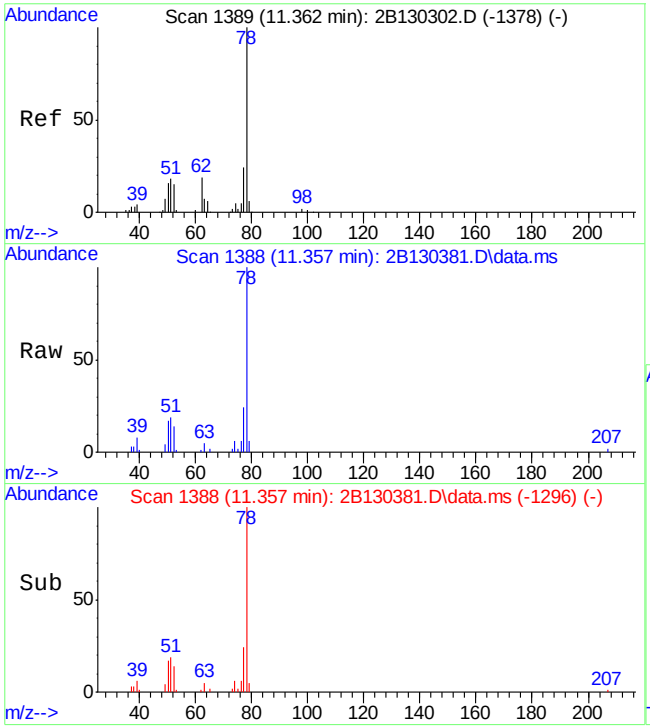


#56
Cyclohexane
Concen: 2.22 ug/L
RT: 11.011 min Scan# 1322
Delta R.T. -0.005 min
Lab File: 2B130381.D
Acq: 23 Apr 2015 9:02 pm

Tgt Ion: 84 Resp: 3805

Ion	Ratio	Lower	Upper
84	100		
56	134.1	188.5	248.5#
41	99.8	100.4	160.4#

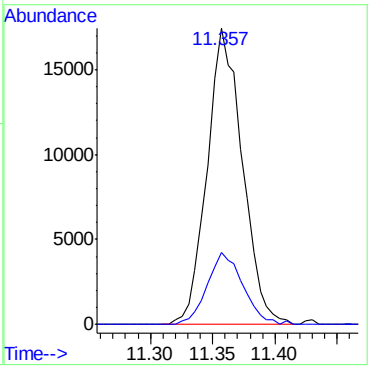


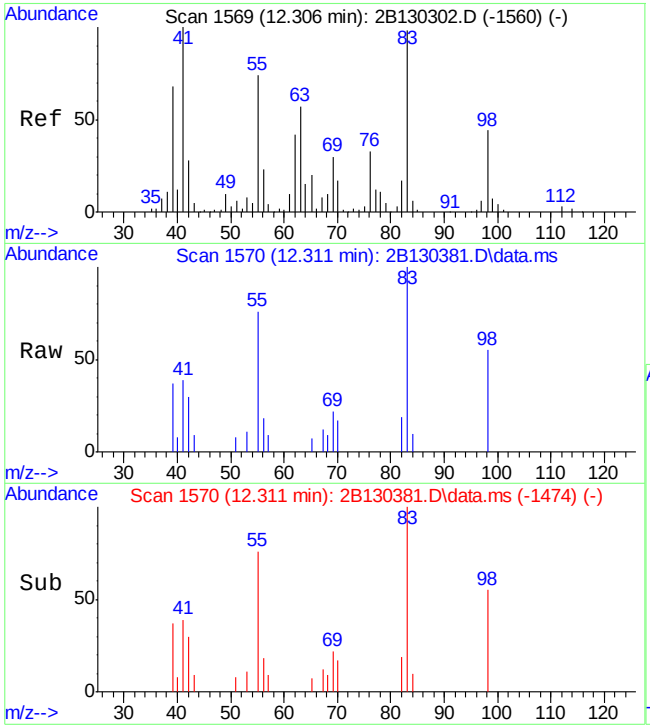


#66
benzene
Concen: 8.17 ug/L
RT: 11.357 min Scan# 1388
Delta R.T. -0.005 min
Lab File: 2B130381.D
Acq: 23 Apr 2015 9:02 pm

Tgt Ion: 78 Resp: 34370

Ion	Ratio	Lower	Upper
78	100		
77	24.1	0.0	53.8

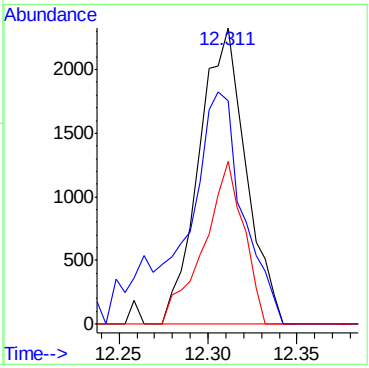


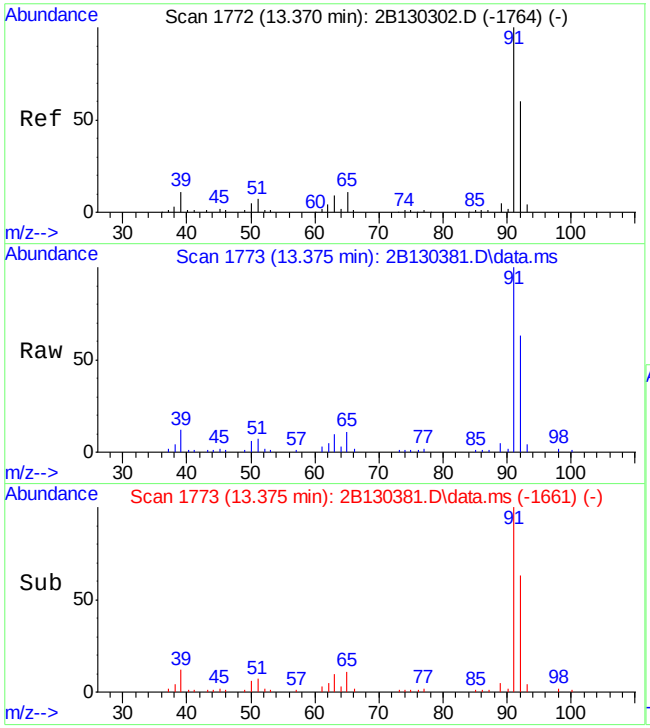


#79
methylcyclohexane
Concen: 2.33 ug/L
RT: 12.311 min Scan# 1570
Delta R.T. 0.005 min
Lab File: 2B130381.D
Acq: 23 Apr 2015 9:02 pm

Tgt Ion: 83 Resp: 4271

Ion	Ratio	Lower	Upper
83	100		
55	75.5	45.8	105.8
98	54.8	14.7	74.7

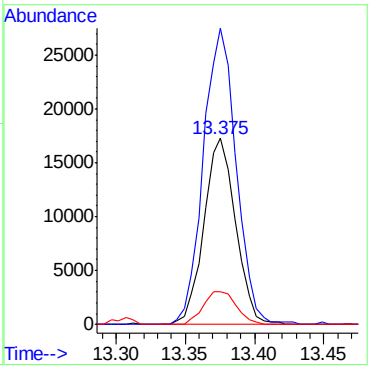


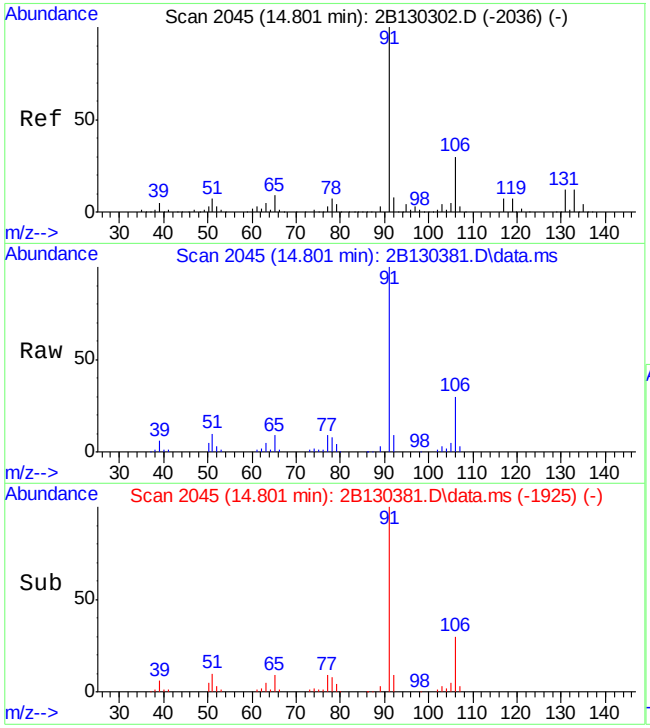


#84
toluene
Concen: 10.33 ug/L
RT: 13.375 min Scan# 1773
Delta R.T. 0.005 min
Lab File: 2B130381.D
Acq: 23 Apr 2015 9:02 pm

Tgt Ion: 92 Resp: 27585

Ion	Ratio	Lower	Upper
92	100		
91	159.1	137.0	197.0
65	17.8	0.0	49.0

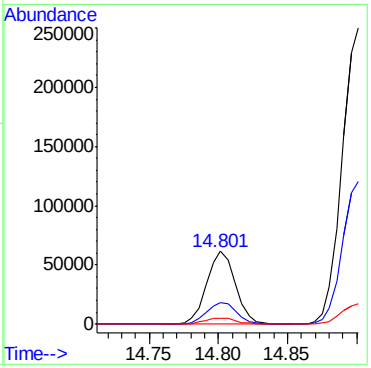


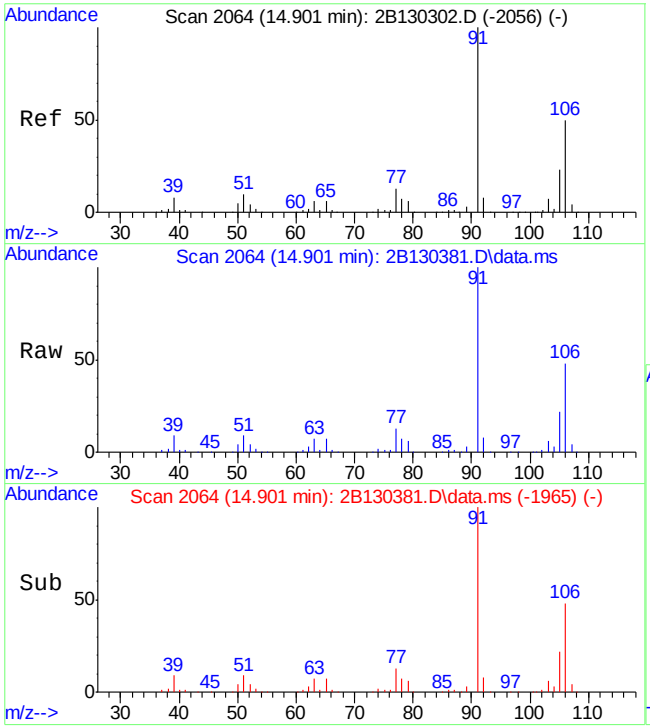


#100
ethylbenzene
Concen: 17.58 ug/L
RT: 14.801 min Scan# 2045
Delta R.T. 0.000 min
Lab File: 2B130381.D
Acq: 23 Apr 2015 9:02 pm

Tgt Ion: 91 Resp: 89144

Ion	Ratio	Lower	Upper
91	100		
106	30.0	0.3	60.3
65	8.6	0.0	38.6

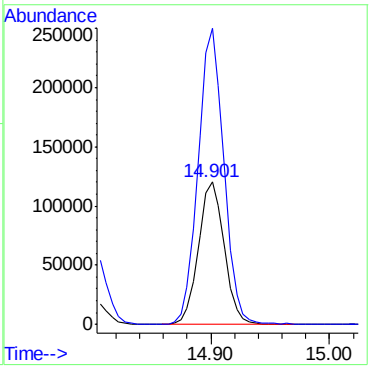


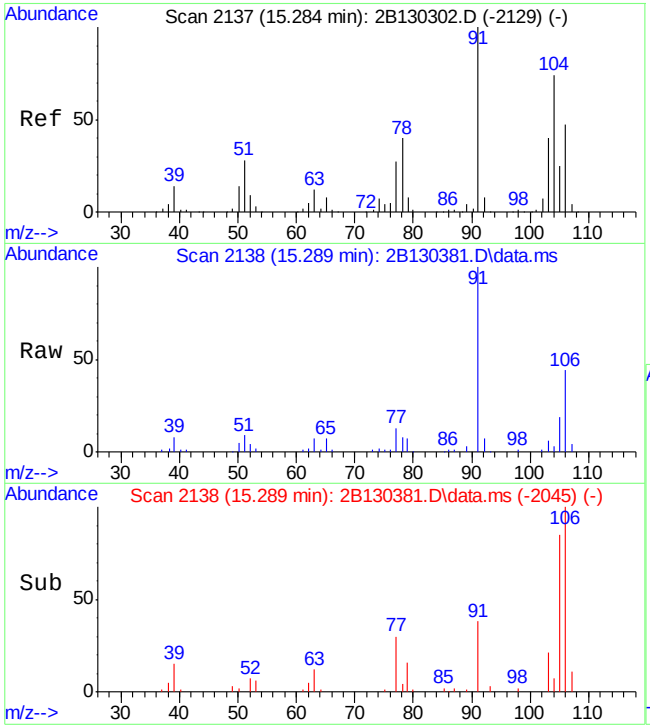


#101
m,p-xylene
Concen: 93.19 ug/L
RT: 14.901 min Scan# 2064
Delta R.T. 0.000 min
Lab File: 2B130381.D
Acq: 23 Apr 2015 9:02 pm

Tgt Ion:106 Resp: 181175

Ion	Ratio	Lower	Upper
106	100		
91	207.7	169.4	229.4

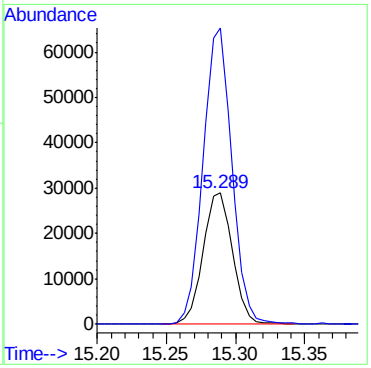


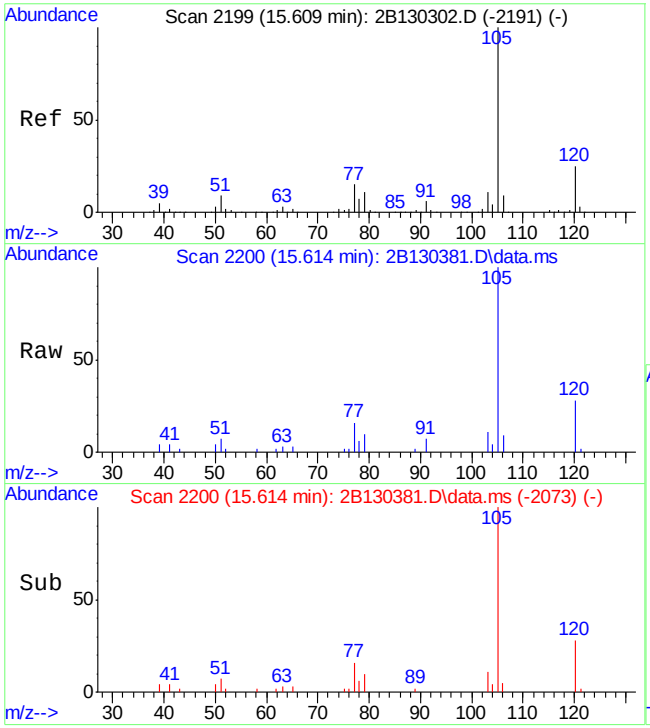


#102
o-xylene
Concen: 20.70 ug/L
RT: 15.289 min Scan# 2138
Delta R.T. 0.005 min
Lab File: 2B130381.D
Acq: 23 Apr 2015 9:02 pm

Tgt Ion:106 Resp: 42811

Ion	Ratio	Lower	Upper
106	100		
91	226.1	183.1	243.1

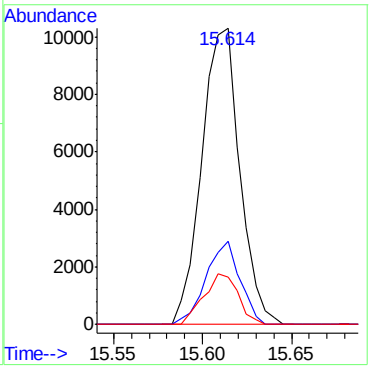




#107
isopropylbenzene
Concen: 2.77 ug/L
RT: 15.614 min Scan# 2200
Delta R.T. 0.005 min
Lab File: 2B130381.D
Acq: 23 Apr 2015 9:02 pm

Tgt Ion:105 Resp: 15266

Ion	Ratio	Lower	Upper
105	100		
120	28.0	0.0	55.5
77	15.8	0.0	45.0



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130339.d
Acq On : 23 Apr 2015 12:15 am
Operator : BridgetK
Sample : mb
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Apr 23 12:06:11 2015
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
QLast Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration

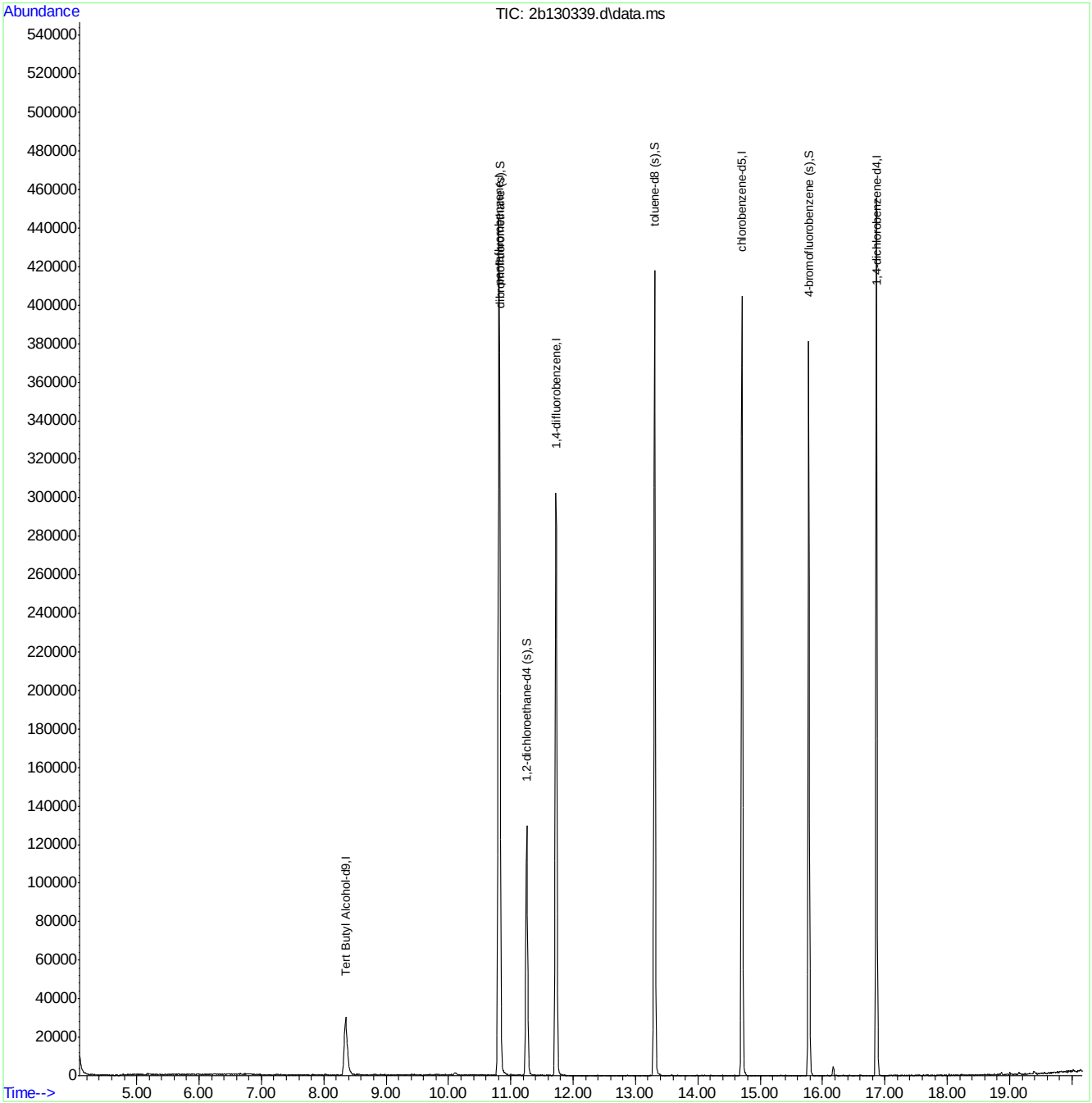
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.347	65	59400	500.00	ug/L	0.00
5) pentafluorobenzene	10.811	168	266694	50.00	ug/L	0.00
58) 1,4-difluorobenzene	11.724	114	247863	50.00	ug/L	0.00
90) chlorobenzene-d5	14.707	117	199642	50.00	ug/L	0.00
106) 1,4-dichlorobenzene-d4	16.867	152	115602	50.00	ug/L	0.00
System Monitoring Compounds						
51) dibromofluoromethane (s)	10.822	113	88789	49.87	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 99.74%			
52) 1,2-dichloroethane-d4 (s)	11.257	65	106876	50.74	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 101.48%			
82) toluene-d8 (s)	13.307	98	261725	50.14	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 100.28%			
108) 4-bromofluorobenzene (s)	15.777	95	94202	50.55	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 101.10%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130339.d
Acq On : 23 Apr 2015 12:15 am
Operator : BridgetK
Sample : mb
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Apr 23 12:06:11 2015
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
QLast Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130339.d
Acq On : 23 Apr 2015 12:15 am
Operator : BridgetK
Sample : mb
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 29 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

Signal : TIC: 2b130339.d\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.279	36	38	61	rVB2	795	2606	0.26%	0.058%
2	4.562	89	92	95	rBV	473	419	0.04%	0.009%
3	4.619	102	103	107	rBV	478	516	0.05%	0.011%
4	4.661	109	111	116	rVB	613	861	0.09%	0.019%
5	4.782	132	134	142	rBV2	521	1011	0.10%	0.022%
6	4.903	154	157	159	rBV2	454	411	0.04%	0.009%
7	5.180	209	210	232	rVB2	625	1137	0.12%	0.025%
8	5.516	260	274	283	rBV2	723	3173	0.32%	0.070%
9	5.741	314	317	340	rBV2	812	3497	0.36%	0.077%
10	5.930	340	353	359	rVB	586	2060	0.21%	0.046%
11	6.266	408	417	426	rBV3	734	2169	0.22%	0.048%
12	6.617	482	484	490	rVB2	555	882	0.09%	0.020%
13	6.659	490	492	506	rBV2	794	1695	0.17%	0.038%
14	6.979	543	553	555	rBV2	610	1292	0.13%	0.029%
15	7.078	569	572	577	rBV2	472	755	0.08%	0.017%
16	7.115	577	579	589	rVB2	476	1346	0.14%	0.030%
17	7.262	606	607	626	rVB2	478	1219	0.12%	0.027%
18	7.503	649	653	655	rVB	453	529	0.05%	0.012%
19	7.524	655	657	662	rVV	504	643	0.07%	0.014%
20	7.577	664	667	670	rVB2	517	548	0.06%	0.012%
21	7.702	684	691	702	rVB2	491	1513	0.15%	0.033%
22	7.791	706	708	712	rBV2	413	492	0.05%	0.011%
23	7.823	712	714	720	rBV2	484	601	0.06%	0.013%
24	7.923	720	733	739	rVV2	444	1231	0.13%	0.027%
25	8.017	746	751	753	rBV	524	767	0.08%	0.017%
26	8.106	767	768	773	rBV	682	741	0.08%	0.016%
27	8.174	777	781	784	rVV	522	754	0.08%	0.017%
28	8.200	784	786	795	rVV	591	1191	0.12%	0.026%
29	8.269	796	799	802	rVV	556	728	0.07%	0.016%
30	8.352	802	815	844	rVB2	30465	110991	11.27%	2.456%
31	8.525	845	848	851	rVB	672	616	0.06%	0.014%
32	8.735	885	888	897	rBV2	395	879	0.09%	0.019%
33	8.913	914	922	925	rVB	519	738	0.07%	0.016%
34	8.982	930	935	939	rVB	550	711	0.07%	0.016%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130339.d
Acq On : 23 Apr 2015 12:15 am
Operator : BridgetK
Sample : mb
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 29 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

35	9.024	939	943	950	rBV	461	904	0.09%	0.020%
36	9.076	950	953	959	rBV	374	603	0.06%	0.013%
37	9.207	972	978	984	rVB	423	859	0.09%	0.019%
38	9.249	984	986	991	rBV	384	383	0.04%	0.008%
39	9.412	1015	1017	1034	rBV	594	1237	0.13%	0.027%
40	9.616	1054	1056	1063	rBV2	461	716	0.07%	0.016%
41	9.815	1092	1094	1097	rBV	503	451	0.05%	0.010%
42	9.841	1097	1099	1105	rVB	631	422	0.04%	0.009%
43	9.910	1111	1112	1118	rVB	423	470	0.05%	0.010%
44	9.952	1118	1120	1126	rBV	541	671	0.07%	0.015%
45	10.051	1136	1139	1141	rVB	670	425	0.04%	0.009%
46	10.109	1141	1150	1161	rBV3	1319	3969	0.40%	0.088%
47	10.219	1170	1171	1174	rBV	476	400	0.04%	0.009%
48	10.245	1174	1176	1181	rVV	502	610	0.06%	0.014%
49	10.282	1181	1183	1187	rVB	429	405	0.04%	0.009%
50	10.345	1192	1195	1208	rVB2	330	898	0.09%	0.020%
51	10.455	1214	1216	1222	rVB2	563	980	0.10%	0.022%
52	10.544	1222	1233	1237	rBV2	601	2020	0.21%	0.045%
53	10.638	1248	1251	1256	rVB2	702	1051	0.11%	0.023%
54	10.691	1256	1261	1262	rBV	572	833	0.08%	0.018%
55	10.811	1273	1284	1314	rVV2	444361	984762	100.00%	21.795%
56	10.995	1314	1319	1323	rVB	598	648	0.07%	0.014%
57	11.257	1358	1369	1389	rVV	129636	265114	26.92%	5.868%
58	11.378	1389	1392	1400	rVB	673	1204	0.12%	0.027%
59	11.446	1400	1405	1408	rBB	285	485	0.05%	0.011%
60	11.467	1408	1409	1413	rBB	559	466	0.05%	0.010%
61	11.566	1425	1428	1431	rBB	438	424	0.04%	0.009%
62	11.593	1431	1433	1437	rBV	416	509	0.05%	0.011%
63	11.724	1446	1458	1481	rBV	302436	557231	56.59%	12.333%
64	13.307	1750	1760	1785	rBB	418029	684459	69.51%	15.149%
65	13.585	1808	1813	1817	rBB	445	560	0.06%	0.012%
66	14.707	2019	2027	2045	rBB	404705	605642	61.50%	13.404%
67	15.556	2184	2189	2194	rBB	253	467	0.05%	0.010%
68	15.777	2224	2231	2246	rBB	381065	542402	55.08%	12.005%
69	16.170	2298	2306	2317	rBB3	4997	7355	0.75%	0.163%
70	16.867	2431	2439	2452	rBB	455720	669059	67.94%	14.808%
71	17.166	2492	2496	2499	rBB	381	517	0.05%	0.011%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130339.d
Acq On : 23 Apr 2015 12:15 am
Operator : BridgetK
Sample : mb
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 29 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

72	17.386	2533	2538	2540	rBB	505	436	0.04%	0.010%
73	17.538	2565	2567	2576	rVB	407	684	0.07%	0.015%
74	17.622	2580	2583	2585	rBB2	429	468	0.05%	0.010%
75	17.685	2590	2595	2601	rVB	438	1017	0.10%	0.023%
76	17.769	2609	2611	2615	rBV	452	447	0.05%	0.010%
77	17.795	2615	2616	2621	rVB	452	418	0.04%	0.009%
78	17.900	2632	2636	2643	rBV	530	955	0.10%	0.021%
79	17.979	2650	2651	2658	rVB	523	667	0.07%	0.015%
80	18.021	2658	2659	2665	rBB	831	714	0.07%	0.016%
81	18.057	2665	2666	2670	rBB	465	518	0.05%	0.011%
82	18.099	2670	2674	2678	rBV	669	866	0.09%	0.019%
83	18.199	2690	2693	2698	rBV	565	1029	0.10%	0.023%
84	18.230	2698	2699	2704	rBV	624	526	0.05%	0.012%
85	18.403	2729	2732	2737	rVB	406	481	0.05%	0.011%
86	18.435	2737	2738	2744	rBV	302	417	0.04%	0.009%
87	18.513	2748	2753	2758	rBV	472	900	0.09%	0.020%
88	18.561	2758	2762	2767	rVV2	357	405	0.04%	0.009%
89	18.681	2781	2785	2794	rBV2	433	822	0.08%	0.018%
90	18.760	2794	2800	2806	rVB	719	1057	0.11%	0.023%
91	18.833	2811	2814	2817	rVV	529	604	0.06%	0.013%
92	18.870	2817	2821	2826	rVV3	1419	1967	0.20%	0.044%
93	18.954	2826	2837	2843	rVV2	533	1505	0.15%	0.033%
94	19.006	2843	2847	2871	rVV	1702	4070	0.41%	0.090%
95	19.153	2871	2875	2888	rVB2	1380	3498	0.36%	0.077%
96	19.389	2916	2920	2930	rVB2	1875	4171	0.42%	0.092%
97	19.452	2930	2932	2937	rBV3	880	1294	0.13%	0.029%

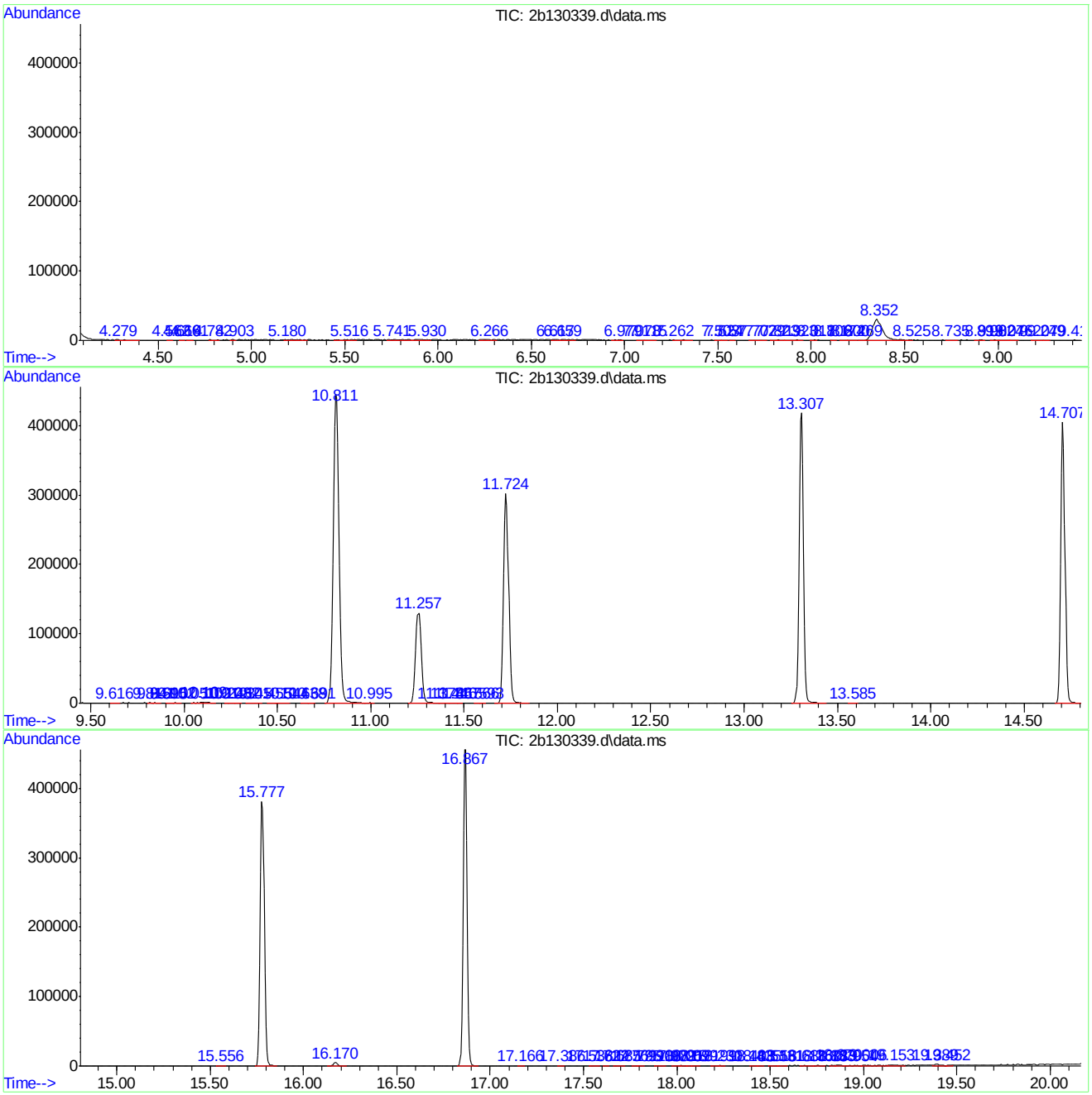
Sum of corrected areas: 4518269

LSC Report - Integrated Chromatogram

```
Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130339.d
Acq On    : 23 Apr 2015  12:15 am
Operator  : BridgetK
Sample    : mb
Misc      : ms83932,v2B5826,w,,,,1
ALS Vial  : 29   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title  : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library   : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p
```



Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\2b\v2b5825-5826\
Data File : 2b130339.d
Acq On : 23 Apr 2015 12:15 am
Operator : BridgetK
Sample : mb
Misc : ms83932,v2B5826,w,,,,1
ALS Vial : 29 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	Internal Standard RT	Internal Standard Resp	Internal Standard Conc

No Library Search Compounds Detected

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2b\v2b5827\
Data File : 2B130361.D
Acq On : 23 Apr 2015 11:22 am
Operator : BridgetK
Sample : mb
Misc : ms84099,v2B5827,w,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 23 15:55:11 2015
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
QLast Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration

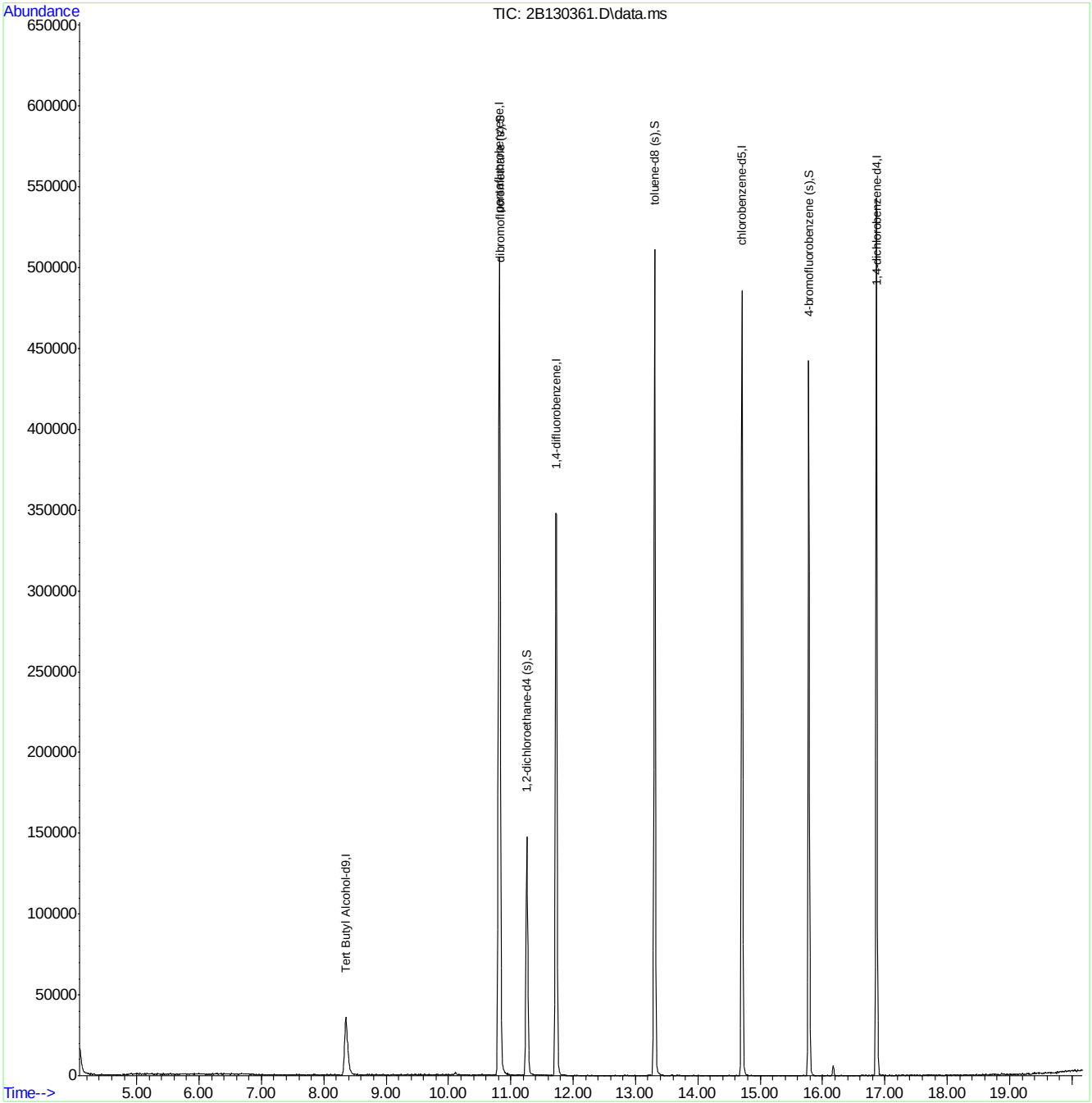
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.358	65	72900	500.00	ug/L	0.00
5) pentafluorobenzene	10.817	168	317495	50.00	ug/L	0.00
58) 1,4-difluorobenzene	11.729	114	300314	50.00	ug/L	0.00
90) chlorobenzene-d5	14.707	117	249538	50.00	ug/L	0.00
106) 1,4-dichlorobenzene-d4	16.867	152	140580	50.00	ug/L	0.00
System Monitoring Compounds						
51) dibromofluoromethane (s)	10.822	113	104923	49.50	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 99.00%			
52) 1,2-dichloroethane-d4 (s)	11.257	65	121940	48.63	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 97.26%			
82) toluene-d8 (s)	13.307	98	316949	50.11	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 100.22%			
108) 4-bromofluorobenzene (s)	15.777	95	114853	50.68	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 101.36%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2b\v2b5827\
Data File : 2B130361.D
Acq On : 23 Apr 2015 11:22 am
Operator : BridgetK
Sample : mb
Misc : ms84099,v2B5827,w,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 23 15:55:11 2015
Quant Method : C:\MSDCHEM\1\METHODS\M2B5824.M
Quant Title : SW-846 Method 8260, db624, 60mx0.25mmx1.4um
QLast Update : Wed Apr 22 10:47:17 2015
Response via : Initial Calibration



New Jersey ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA36523
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:12	MA36523-STD1	1		STDA
09:18	MA36523-STD2	1		STDB
09:25	ZZZZZZ	1		
09:31	ZZZZZZ	1		
09:37	ZZZZZZ	1		
09:44	MA36523-ICV1	1		
09:58	MA36523-ICB1	1		
10:03	MA36523-ICCV1	1		
10:21	MA36523-CCB1	1		
10:26	MA36523-CRI1	1		
10:32	MA36523-CRID1	1		See rerun
10:38	MA36523-CRIA1	1		
10:44	MA36523-ICSA1	1		
10:51	MA36523-ICSAB1	1		
10:57	ZZZZZZ	1		
11:03	ZZZZZZ	1		
11:09	MA36523-CCV1	1		
11:15	MA36523-CCB2	1		
11:21	MA36523-CRID2	1		
11:27	MP86033-MB1	1		Batch to reanalysis for TLNJ, analytical problems.
11:34	MP86033-B1	1		
11:40	MP86033-S1	1		
11:46	MP86033-S2	1		
11:52	JB93186-1	1		(sample used for QC only; not part of login JB92664)
11:58	MP86033-SD1	5		
12:04	ZZZZZZ	1		
12:10	ZZZZZZ	1		
12:16	MA36523-CCV2	1		
12:22	MA36523-CCB3	1		
12:28	MP86019-MB1	1		
12:34	MP86019-B1	1		
12:40	MP86019-S1	1		
12:46	MP86019-S2	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA36523
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:52	JB92353-1	1		(sample used for QC only; not part of login JB92664)
12:59	MP86019-SD1	5		
13:05	ZZZZZZ	1		
13:11	ZZZZZZ	1		
13:17	ZZZZZZ	1		
13:23	MA36523-CCV3	1		
13:29	MA36523-CCB4	1		
13:35	ZZZZZZ	1		
13:41	ZZZZZZ	1		
13:48	ZZZZZZ	1		
13:54	ZZZZZZ	1		
14:00	ZZZZZZ	1		
14:06	ZZZZZZ	1		
14:12	ZZZZZZ	1		
14:18	ZZZZZZ	1		
14:24	ZZZZZZ	1		
14:30	MA36523-CCV4	1		
14:36	MA36523-CCB5	1		
14:42	ZZZZZZ	1		
14:49	ZZZZZZ	1		
14:55	ZZZZZZ	1		
15:01	ZZZZZZ	1		
15:07	ZZZZZZ	1		
15:14	ZZZZZZ	1		
15:20	ZZZZZZ	1		
15:26	ZZZZZZ	1		
15:32	ZZZZZZ	1		
15:38	MA36523-CCV5	1		
15:44	MA36523-CCB6	1		
15:50	ZZZZZZ	1		
15:56	ZZZZZZ	1		
16:03	ZZZZZZ	1		
16:09	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA36523
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:15	MP86019-B1	1		Confirmation.
16:21	ZZZZZZ	1		
16:27	ZZZZZZ	10		
16:33	ZZZZZZ	10		
16:39	MA36523-CCV6	1		
16:45	MA36523-CCB7	1		
16:51	MA36523-CRI2	1		
16:57	MA36523-CRID3	1		TlNJ out.
17:04	MA36523-CRIA2	1		
17:10	MA36523-ICSA2	1		
17:16	MA36523-ICSAB2	1		
17:22	MA36523-CCV7	1		
17:28	MA36523-CCB8	1		
17:34	MP86013-MB1	1		
17:40	MP86013-B1	1		
17:46	MP86013-S1	1		
17:52	MP86013-S2	1		
17:59	JB92664-10	1		
18:05	MP86013-SD1	5		
18:11	JB92664-1	1		
18:17	JB92664-2	1		
18:23	JB92664-3	1		
18:29	MA36523-CCV8	1		
18:35	MA36523-CCB9	1		
18:41	JB92664-4	1		
18:47	JB92664-5	1		
18:53	JB92664-6	1		
18:59	JB92664-7	1		
19:06	JB92664-8	1		
19:12	JB92664-9	1		
---------->	Last reportable sample/prep for job JB92664			
19:18	MP86017-MB1	1		
19:24	MP86017-B1	1		
19:30	MP86017-S1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA36523
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
19:36	MA36523-CCV9	1		
19:42	MA36523-CCB10	1		
19:48	MP86017-S2	1		
19:54	JB92515-11	1		(sample used for QC only; not part of login JB92664)
20:00	MP86017-SD1	5		
20:06	ZZZZZZ	1		
20:12	ZZZZZZ	1		
20:18	ZZZZZZ	1		
20:24	ZZZZZZ	1		
20:30	ZZZZZZ	1		
20:36	ZZZZZZ	1		
20:42	MA36523-CCV10	1		
20:48	MA36523-CCB11	1		
20:54	ZZZZZZ	1		
21:00	ZZZZZZ	1		
21:06	ZZZZZZ	1		
21:12	ZZZZZZ	1		
21:18	ZZZZZZ	1		
21:24	ZZZZZZ	1		
21:31	ZZZZZZ	1		
21:37	ZZZZZZ	1		
21:43	ZZZZZZ	1		
21:49	MA36523-CCV11	1		
21:55	MA36523-CCB12	1		
22:01	ZZZZZZ	1		
22:07	ZZZZZZ	1		
22:13	ZZZZZZ	1		
22:19	ZZZZZZ	1		
22:25	MA36523-CCV12	1		
22:31	MA36523-CCB13	1		
22:37	MA36523-CRI3	1		
22:43	MA36523-CRID4	1		
22:50	MA36523-CRIA3	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA36523
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
22:56	ZZZZZZ	1		
23:02	MA36523-CCV13	1		
23:08	MA36523-CCB14	1		
---------->	Last reportable CCB for job JB92664			
23:14	ZZZZZZ	1		
23:20	ZZZZZZ	1		
23:26	ZZZZZZ	1		
23:33	ZZZZZZ	1		
23:39	ZZZZZZ	1		
23:45	ZZZZZZ	1		
23:51	ZZZZZZ	1		
23:57	ZZZZZZ	1		
00:04	ZZZZZZ	1		
00:10	ZZZZZZ	1		
00:16	ZZZZZZ	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA36523
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
09:12	MA36523-STD1	1898 R	89205 R	25979 R	3635 R
09:18	MA36523-STD2	1815	81107	25300	3655
09:25	ZZZZZZ	1849	83403	25485	3662
09:31	ZZZZZZ	1912	87807	26077	3656
09:37	ZZZZZZ	1858	84575	25530	3670
09:44	MA36523-ICV1	1868	83731	25508	3690
09:58	MA36523-ICB1	1891	87291	25856	3644
10:03	MA36523-ICCV1	1833	82258	25385	3649
10:21	MA36523-CCB1	1868	86478	25692	3615
10:26	MA36523-CRI1	1859	85215	25488	3611
10:32	MA36523-CRID1	No results reported for the elements associated with this internal standard.			
10:38	MA36523-CRIA1	1851	85430	25451	3597
10:44	MA36523-ICSA1	1675	75533	24389	3430
10:51	MA36523-ICSAB1	1648	74889	24339	3387
10:57	ZZZZZZ	1818	83545	25501	3666
11:03	ZZZZZZ	1793	85040	25691	3565
11:09	MA36523-CCV1	1769	80635	25103	3580
11:15	MA36523-CCB2	1801	84594	25588	3533
11:21	MA36523-CRID2	1797	84018	25312	3550
11:27	MP86033-MB1	1796	84140	25602	3538
11:34	MP86033-B1	1760	80166	25245	3574
11:40	MP86033-S1	1721	75580	24433	3534
11:46	MP86033-S2	1713	76658	24684	3502
11:52	JB93186-1	1725	76772	24760	3505
11:58	MP86033-SD1	1704	79769	25642	3448
12:04	ZZZZZZ	1727	80376	25398	3481
12:10	ZZZZZZ	1703	78705	25039	3464
12:16	MA36523-CCV2	1697	77233	24806	3469
12:22	MA36523-CCB3	1770	81849	25275	3484
12:28	MP86019-MB1	1706	80338	25558	3390
12:34	MP86019-B1	1652	74544	25216	3400
12:40	MP86019-S1	1639	74809	24950	3398
12:46	MP86019-S2	1620	74227	24832	3370

INTERNAL STANDARD SUMMARY

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA36523
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
12:52	JB92353-1	1675	76784	24949	3420
12:59	MP86019-SD1	1706	78501	25084	3424
13:05	ZZZZZZ	1672	76510	25121	3426
13:11	ZZZZZZ	1676	76307	24540	3429
13:17	ZZZZZZ	1691	77262	24910	3445
13:23	MA36523-CCV3	1681	75842	24617	3447
13:29	MA36523-CCB4	1770	79793	25190	3498
13:35	ZZZZZZ	1698	77480	24810	3423
13:41	ZZZZZZ	1694	76595	24759	3448
13:48	ZZZZZZ	1705	77597	999999 !a	3465
13:54	ZZZZZZ	1711	79016	25291	3432
14:00	ZZZZZZ	1720	78279	26542	3440
14:06	ZZZZZZ	1683	75741	24448	3439
14:12	ZZZZZZ	1657	77949	24909	3387
14:18	ZZZZZZ	1699	78848	25225	3448
14:24	ZZZZZZ	1657	73438	24580	3422
14:30	MA36523-CCV4	1685	75852	24484	3475
14:36	MA36523-CCB5	1747	80517	25088	3473
14:42	ZZZZZZ	1783	74054	25314	3279
14:49	ZZZZZZ	1701	73646	23657	3461
14:55	ZZZZZZ	1714	80237	24924	3420
15:01	ZZZZZZ	1770	74875	25585	3263
15:07	ZZZZZZ	1694	74034	24232	3457
15:14	ZZZZZZ	1722	80229	25186	3420
15:20	ZZZZZZ	1718	80267	25304	3423
15:26	ZZZZZZ	1677	76994	24285	3440
15:32	ZZZZZZ	1672	76863	25098	3439
15:38	MA36523-CCV5	1661	75646	24456	3429
15:44	MA36523-CCB6	1701	80093	25109	3390
15:50	ZZZZZZ	1680	77433	25116	3444
15:56	ZZZZZZ	1671	77033	25101	3428
16:03	ZZZZZZ	1675	76542	24979	3432
16:09	ZZZZZZ	1653	76552	25048	3394

INTERNAL STANDARD SUMMARY

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA36523
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
16:15	MP86019-B1	1620	72116	25083	3365
16:21	ZZZZZZ	1654	76331	25009	3407
16:27	ZZZZZZ	1709	77113	24725	3446
16:33	ZZZZZZ	1718	77387	23783	3469
16:39	MA36523-CCV6	1658	75984	24519	3438
16:45	MA36523-CCB7	1711	80863	25087	3435
16:51	MA36523-CRI2	1705	79370	24850	3445
16:57	MA36523-CRID3	1715	80060	24791	3442
17:04	MA36523-CRIA2	1707	79743	24931	3423
17:10	MA36523-ICSA2	1550	70431	23479	3273
17:16	MA36523-ICSAB2	1544	69986	23346	3261
17:22	MA36523-CCV7	1671	76079	24373	3450
17:28	MA36523-CCB8	1742	80492	24812	3474
17:34	MP86013-MB1	1678	79937	25282	3377
17:40	MP86013-B1	1646	76749	25055	3434
17:46	MP86013-S1	1551	71386	24162	3283
17:52	MP86013-S2	1544	71139	24130	3260
17:59	JB92664-10	1575	71797	23898	3295
18:05	MP86013-SD1	1660	76538	24462	3400
18:11	JB92664-1	1653	77583	24983	3413
18:17	JB92664-2	1645	75509	24733	3413
18:23	JB92664-3	1635	76935	24937	3381
18:29	MA36523-CCV8	1666	76033	24386	3450
18:35	MA36523-CCB9	1738	80223	25015	3481
18:41	JB92664-4	1761	81353	27143	3420
18:47	JB92664-5	1648	75733	25248	3399
18:53	JB92664-6	1649	78080	24392	3398
18:59	JB92664-7	1642	77426	25172	3399
19:06	JB92664-8	1623	75853	24634	3392
19:12	JB92664-9	1638	76501	24892	3422
19:18	MP86017-MB1	1705	80189	24793	3445
19:24	MP86017-B1	1695	77701	24587	3504
19:30	MP86017-S1	1698	77922	24934	3523

INTERNAL STANDARD SUMMARY

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA36523
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
19:36	MA36523-CCV9	1675	76844	24533	3490
19:42	MA36523-CCB10	1728	80885	24974	3470
19:48	MP86017-S2	1709	77470	24879	3545
19:54	JB92515-11	1722	80290	25304	3523
20:00	MP86017-SD1	1712	80722	25046	3462
20:06	ZZZZZZ	1732	80305	25384	3519
20:12	ZZZZZZ	1746	80407	25182	3550
20:18	ZZZZZZ	1710	79856	25421	3513
20:24	ZZZZZZ	1712	80175	25523	3513
20:30	ZZZZZZ	1734	80220	25411	3543
20:36	ZZZZZZ	1734	80393	25320	3552
20:42	MA36523-CCV10	1701	77590	24444	3535
20:48	MA36523-CCB11	1811	81952	24998	3609
20:54	ZZZZZZ	1755	81414	25410	3585
21:00	ZZZZZZ	1786	82929	25716	3611
21:06	ZZZZZZ	1822	83802	25873	3657
21:12	ZZZZZZ	1801	83077	25486	3648
21:18	ZZZZZZ	1798	83380	25498	3636
21:24	ZZZZZZ	1797	84202	25490	3618
21:31	ZZZZZZ	1805	84412	25825	3642
21:37	ZZZZZZ	1821	84896	25709	3667
21:43	ZZZZZZ	1832	85215	25841	3686
21:49	MA36523-CCV11	1773	81572	24917	3649
21:55	MA36523-CCB12	1826	86357	25446	3622
22:01	ZZZZZZ	1827	85953	25938	3672
22:07	ZZZZZZ	1829	85691	26095	3672
22:13	ZZZZZZ	1820	85584	26196	3667
22:19	ZZZZZZ	1838	86168	25791	3697
22:25	MA36523-CCV12	1785	82730	25140	3658
22:31	MA36523-CCB13	1846	86608	25503	3641
22:37	MA36523-CRI3	1842	86081	25538	3656
22:43	MA36523-CRID4	1843	86762	25904	3641
22:50	MA36523-CRIA3	1837	86779	25604	3633

INTERNAL STANDARD SUMMARY

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
Analyst: BS Run ID: MA36523
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
22:56	ZZZZZZ	1850	86870	25637	3666
23:02	MA36523-CCV13	1804	83356	25319	3679
23:08	MA36523-CCB14	1851	87109	25579	3642
23:14	ZZZZZZ	1854	87768	25682	3642
23:20	ZZZZZZ	1853	87798	25723	3641
23:26	ZZZZZZ	1854	87617	25624	3645
23:33	ZZZZZZ	1856	87238	25627	3645
23:39	ZZZZZZ	1787	80645	24519	3582
23:45	ZZZZZZ	1857	87940	25849	3646
23:51	ZZZZZZ	1848	87012	25618	3626
23:57	ZZZZZZ	1851	84153	26430	3683
00:04	ZZZZZZ	1774	80633	24502	3578
00:10	ZZZZZZ	1851	87626	25806	3640
00:16	ZZZZZZ	1855	87739	25853	3654

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

(a) No samples reported for the elements associated with this internal standard.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA36523 Units: ug/l

Time:			09:58		10:21		11:15		12:22	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	anr							
Antimony	6.0	1.1	anr							
Arsenic	3.0	1.2	anr							
Barium	200	.2	anr							
Beryllium	1.0	.2	anr							
Bismuth	20	1.1								
Boron	100	.7								
Cadmium	3.0	.2	anr							
Calcium	5000	8.6	anr							
Chromium	10	.4	anr							
Cobalt	50	.2	anr							
Copper	10	.6	anr							
Iron	100	4.4	-1.3	<100	1.2	<100	1.1	<100	2.8	<100
Lead	3.0	1.2	anr							
Lithium	20	1								
Magnesium	5000	36	anr							
Manganese	15	.1	anr							
Molybdenum	20	.2								
Nickel	10	.4	anr							
Palladium	50	1.6								
Potassium	10000	16	anr							
Selenium	10	1.9	anr							
Silicon	200	2.9								
Silver	10	.6	anr							
Sodium	10000	5.7	anr							
Sulfur	50	4.1	anr							
Strontium	10	.1								
Thallium	2.0	1.8	anr							
Tin	10	1								
Titanium	10	.3								
Tungsten	50	1.2								
Vanadium	50	.4	anr							
Zinc	20	.6	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA36523 Units: ug/l

Time: / Sample ID:			09:58 ICB1		10:21 CCB1		11:15 CCB2		12:22 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.2								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA36523 Units: ug/l

Time:			13:29		14:36		15:44		16:45	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	anr							
Antimony	6.0	1.1	anr							
Arsenic	3.0	1.2	anr							
Barium	200	.2	anr							
Beryllium	1.0	.2	anr							
Bismuth	20	1.1								
Boron	100	.7								
Cadmium	3.0	.2	anr							
Calcium	5000	8.6	anr							
Chromium	10	.4	anr							
Cobalt	50	.2	anr							
Copper	10	.6	anr							
Iron	100	4.4	2.7	<100	0.70	<100	1.4	<100	0.30	<100
Lead	3.0	1.2	anr							
Lithium	20	1								
Magnesium	5000	36	anr							
Manganese	15	.1	anr							
Molybdenum	20	.2								
Nickel	10	.4	anr							
Palladium	50	1.6								
Potassium	10000	16	anr							
Selenium	10	1.9	anr							
Silicon	200	2.9								
Silver	10	.6	anr							
Sodium	10000	5.7	anr							
Sulfur	50	4.1	anr							
Strontium	10	.1								
Thallium	2.0	1.8	anr							
Tin	10	1								
Titanium	10	.3								
Tungsten	50	1.2								
Vanadium	50	.4	anr							
Zinc	20	.6	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA36523 Units: ug/l

Time: / Sample ID:			13:29 CCB4		14:36 CCB5		15:44 CCB6		16:45 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.2								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA36523 Units: ug/l

Time:			17:28		18:35		19:42		20:48	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	anr							
Antimony	6.0	1.1	anr							
Arsenic	3.0	1.2	anr							
Barium	200	.2	anr							
Beryllium	1.0	.2	anr							
Bismuth	20	1.1								
Boron	100	.7								
Cadmium	3.0	.2	anr							
Calcium	5000	8.6	anr							
Chromium	10	.4	anr							
Cobalt	50	.2	anr							
Copper	10	.6	anr							
Iron	100	4.4	1.9	<100	2.2	<100	3.2	<100	1.8	<100
Lead	3.0	1.2	anr							
Lithium	20	1								
Magnesium	5000	36	anr							
Manganese	15	.1	anr							
Molybdenum	20	.2								
Nickel	10	.4	anr							
Palladium	50	1.6								
Potassium	10000	16	anr							
Selenium	10	1.9	anr							
Silicon	200	2.9								
Silver	10	.6	anr							
Sodium	10000	5.7	anr							
Sulfur	50	4.1	anr							
Strontium	10	.1								
Thallium	2.0	1.8	anr							
Tin	10	1								
Titanium	10	.3								
Tungsten	50	1.2								
Vanadium	50	.4	anr							
Zinc	20	.6	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA36523 Units: ug/l

Time:			17:28		18:35		19:42		20:48	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.2								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA36523 Units: ug/l

Time:			21:55		22:31		23:08	
Sample ID:			CCB12		CCB13		CCB14	
Metal	RL	IDL	raw	final	raw	final	raw	final
Aluminum	200	11	anr					
Antimony	6.0	1.1	anr					
Arsenic	3.0	1.2	anr					
Barium	200	.2	anr					
Beryllium	1.0	.2	anr					
Bismuth	20	1.1						
Boron	100	.7						
Cadmium	3.0	.2	anr					
Calcium	5000	8.6	anr					
Chromium	10	.4	anr					
Cobalt	50	.2	anr					
Copper	10	.6	anr					
Iron	100	4.4	2.5	<100	0.60	<100	3.7	<100
Lead	3.0	1.2	anr					
Lithium	20	1						
Magnesium	5000	36	anr					
Manganese	15	.1	anr					
Molybdenum	20	.2						
Nickel	10	.4	anr					
Palladium	50	1.6						
Potassium	10000	16	anr					
Selenium	10	1.9	anr					
Silicon	200	2.9						
Silver	10	.6	anr					
Sodium	10000	5.7	anr					
Sulfur	50	4.1	anr					
Strontium	10	.1						
Thallium	2.0	1.8	anr					
Tin	10	1						
Titanium	10	.3						
Tungsten	50	1.2						
Vanadium	50	.4	anr					
Zinc	20	.6	anr					

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA36523 Units: ug/l

Time:			21:55		22:31		23:08	
Sample ID:			CCB12		CCB13		CCB14	
Metal	RL	IDL	raw	final	raw	final	raw	final
Zirconium	10	.2						

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA36523 Units: ug/l

Time:		10:03	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	anr		
Beryllium	anr		
Bismuth			
Boron			
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	40000	40600	101.5
Lead	anr		
Lithium			
Magnesium	anr		
Manganese	anr		
Molybdenum			
Nickel	anr		
Palladium			
Potassium	anr		
Selenium	anr		
Silicon			
Silver	anr		
Sodium	anr		
Sulfur	anr		
Strontium			
Thallium	anr		
Tin			
Titanium			
Tungsten			
Vanadium	anr		
Zinc	anr		

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA36523 Units: ug/l

Time:		10:03	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec

Zirconium

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA36523 Units: ug/l

Time:		09:44			11:09			12:16	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron									
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40300	100.8	40000	39500	98.8	40000	38600	96.5
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA36523 Units: ug/l

Time:		09:44			11:09			12:16	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA36523 Units: ug/l

Time:		13:23			14:30			15:38	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron									
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	38100	95.3	40000	38200	95.5	40000	38400	96.0
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA36523 Units: ug/l

Time:		13:23			14:30			15:38	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA36523 Units: ug/l

Time:		16:39			17:22			18:29	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron									
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	38200	95.5	40000	38600	96.5	40000	38500	96.3
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA36523 Units: ug/l

Time:		16:39			17:22			18:29	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA36523 Units: ug/l

Time:		19:36			20:42			21:49	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron									
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	38400	96.0	40000	38500	96.3	40000	39600	99.0
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA36523 Units: ug/l

Time:		19:36			20:42			21:49	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA36523 Units: ug/l

Time:		22:25			23:02	
Sample ID:	CCV	CCV12		CCV	CCV13	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum	anr					
Antimony	anr					
Arsenic	anr					
Barium	anr					
Beryllium	anr					
Bismuth						
Boron						
Cadmium	anr					
Calcium	anr					
Chromium	anr					
Cobalt	anr					
Copper	anr					
Iron	40000	40000	100.0	40000	40100	100.3
Lead	anr					
Lithium						
Magnesium	anr					
Manganese	anr					
Molybdenum						
Nickel	anr					
Palladium						
Potassium	anr					
Selenium	anr					
Silicon						
Silver	anr					
Sodium	anr					
Sulfur	anr					
Strontium						
Thallium	anr					
Tin						
Titanium						
Tungsten						
Vanadium	anr					
Zinc	anr					

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA36523 Units: ug/l

Time:		22:25			23:02	
Sample ID:	CCV	CCV12		CCV	CCV13	
Metal	True	Results	% Rec	True	Results	% Rec
Zirconium						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA36523 Units: ug/l

Time:				10:26		10:38		11:21	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		102	102.0	546	109.2		
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	anr					
Molybdenum	20								
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50			anr					
Strontium	10								
Thallium	10		2.0	anr					
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA36523 Units: ug/l

Time:				10:26		10:38		11:21	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10								

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA36523 Units: ug/l

Time:				16:51		16:57		17:04	
Sample ID:	CRI	CRIA	CRID	CRI2		CRID3		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		98.7	98.7			514	102.8
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	anr					
Molybdenum	20								
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50			anr					
Strontium	10								
Thallium	10		2.0	anr					
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA36523 Units: ug/l

Time:				16:51		16:57		17:04	
Sample ID:	CRI	CRIA	CRID	CRI2		CRID3		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10								

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA36523 Units: ug/l

Time:				22:37		22:43		22:50	
Sample ID:	CRI	CRIA	CRID	CRI3		CRID4		CRIA3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		104	104.0			542	108.4
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	anr					
Molybdenum	20								
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50			anr					
Strontium	10								
Thallium	10		2.0	anr					
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA36523 Units: ug/l

Time:				22:37		22:43		22:50	
Sample ID:	CRI	CRIA	CRID	CRI3		CRID4		CRIA3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10								

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA36523 Units: ug/l

Time:			10:44		10:51		17:10		17:16	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	494000	98.8	515000	103.0	499000	99.8	513000	102.6
Antimony		1000	3.8		1040	104.0	1.4		1070	107.0
Arsenic		1000	-1.9		906	90.6	-2.9		938	93.8
Barium		500	-1.5		503	100.6	-1.6		529	105.8
Beryllium		500	0.0		496	99.2	0.0		513	102.6
Bismuth		500	-18		515	103.0	-18		533	106.6
Boron			0.10		2.3		1.7		1.7	
Cadmium		1000	1.9		1050	105.0	1.9		1070	107.0
Calcium	400000	400000	371000	92.8	365000	91.3	355000	88.8	352000	88.0
Chromium		500	-0.80		473	94.6	-0.90		458	91.6
Cobalt		500	2.5		492	98.4	2.7		490	98.0
Copper		500	-3.7		497	99.4	-1.4		509	101.8
Iron	200000	200000	192000	96.0	188000	94.0	186000	93.0	183000	91.5
Lead		1000	3.8		979	97.9	5.5		983	98.3
Lithium		500	9.7		561	112.2	10.6		585	117.0
Magnesium	500000	500000	493000	98.6	502000	100.4	478000	95.6	491000	98.2
Manganese		500	2.0		487	97.4	2.0		486	97.2
Molybdenum		500	-0.90		516	103.2	-2.0		531	106.2
Nickel		1000	1.4		972	97.2	1.5		970	97.0
Palladium		500	-3.7		562	112.4	-4.6		578	115.6
Potassium			213		233		200		208	
Selenium		1000	-2.7		1040	104.0	-6.0		1080	108.0
Silicon			6.4		1.2		6.2		2.6	
Silver		1000	-3.7		1060	106.0	-4.3		1050	105.0
Sodium			-2.2		9.7		32.7		21.3	
Sulfur		500	-7.1		521	104.2	-3.0		551	110.2
Strontium			-4.9		-4.8		-4.5		-4.5	
Thallium		1000	-2.0		964	96.4	-3.9		975	97.5
Tin			-1.5		-3.7		-2.9		-2.3	
Titanium			-0.10		0.20		0.20		0.0	
Tungsten		500	7.0		520	104.0	4.9		527	105.4
Vanadium		500	1.7		490	98.0	1.8		510	102.0
Zinc		1000	-1.2		954	95.4	-1.5		940	94.0

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SD042715M1.ICP Date Analyzed: 04/27/15 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA36523 Units: ug/l

Time:			10:44		10:51		17:10		17:16	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	2.8		482	96.4	2.7		472	94.4

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP86013
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 04/24/15

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	11	18		
Antimony	6.0	1.1	1.8		
Arsenic	3.0	1.2	1.9		
Barium	200	.2	.65		
Beryllium	1.0	.2	.28		
Bismuth	20	1.1	2.2		
Boron	100	.7	2.6		
Cadmium	3.0	.2	.36		
Calcium	5000	8.6	28		
Chromium	10	.4	.64		
Cobalt	50	.2	.31		
Copper	10	.6	1.5		
Iron	100	4.4	32	1.0	<100
Lead	3.0	1.2	2		
Lithium	20	1	4.2		
Magnesium	5000	36	48		
Manganese	15	.1	.54		
Molybdenum	20	.2	1.6		
Nickel	10	.4	.48		
Palladium	50	1.6	4.5		
Potassium	10000	16	54		
Selenium	10	1.9	2.9		
Silicon	200	2.9	8.8		
Silver	10	.6	1.9		
Sodium	10000	5.7	24		
Sulfur	50	4.1	6.1		
Strontium	10	.1	.3		
Thallium	2.0	1.8	1.2		
Tin	10	1	.83		
Titanium	10	.3	1		
Tungsten	50	1.2	4.1		
Vanadium	50	.4	.68		
Zinc	20	.6	3.1		

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP86013
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 04/24/15

Metal	RL	IDL	MDL	MB raw	final
Zirconium	10	.2	1.2		

Associated samples MP86013: JB92664-1, JB92664-2, JB92664-3, JB92664-4, JB92664-5, JB92664-6, JB92664-7, JB92664-8, JB92664-9, JB92664-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP86013
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 04/24/15

Metal	JB92664-10 Original MS		Spikelot MPSPK	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Bismuth					
Boron					
Cadmium					
Calcium					
Chromium					
Cobalt					
Copper					
Iron	404	24100	25000	94.8	70-130
Lead					
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Palladium					
Potassium					
Selenium					
Silicon					
Silver					
Sodium					
Sulfur					
Strontium					
Thallium					
Tin					
Titanium					
Tungsten					
Vanadium					
Zinc					

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP86013
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 04/24/15

Metal	JB92664-10 Original MS	Spikelot MPSPK	% Rec	QC Limits
Zirconium				

Associated samples MP86013: JB92664-1, JB92664-2, JB92664-3, JB92664-4, JB92664-5, JB92664-6, JB92664-7, JB92664-8, JB92664-9, JB92664-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP86013 Methods: EPA 200.7
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 04/24/15

Metal	JB92664-10 Original	MSD	Spikelot MPSPK	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Bismuth						
Boron						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron	404	24000	25000	94.4	0.4	16
Lead						
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Palladium						
Potassium						
Selenium						
Silicon						
Silver						
Sodium						
Sulfur						
Strontium						
Thallium						
Tin						
Titanium						
Tungsten						
Vanadium						
Zinc						

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP86013 Methods: EPA 200.7
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 04/24/15

Metal	JB92664-10 Original MSD	Spikelot MPSPK	% Rec	MSD RPD	QC Limit
Zirconium					

Associated samples MP86013: JB92664-1, JB92664-2, JB92664-3, JB92664-4, JB92664-5, JB92664-6, JB92664-7, JB92664-8, JB92664-9, JB92664-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP86013
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 04/24/15

Metal	BSP Result	Spikelot MPSPK	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Bismuth				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron	24500	25000	98.0	85-115
Lead				
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Palladium				
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Sulfur				
Strontium				
Thallium				
Tin				
Titanium				
Tungsten				
Vanadium				
Zinc				

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP86013
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 04/24/15

Metal	BSP Result	Spikelot MPSPK	% Rec	QC Limits
Zirconium				

Associated samples MP86013: JB92664-1, JB92664-2, JB92664-3, JB92664-4, JB92664-5, JB92664-6, JB92664-7, JB92664-8, JB92664-9, JB92664-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP86013
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 04/24/15

Metal	JB92664-10 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Bismuth				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron	404	424	4.9	0-10
Lead				
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Palladium				
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Sulfur				
Strontium				
Thallium				
Tin				
Titanium				
Tungsten				
Vanadium				
Zinc				

SERIAL DILUTION RESULTS SUMMARY

Login Number: JB92664
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP86013
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 04/24/15

Metal	JB92664-10 Original SDL 1:5	%DIF	QC Limits
Zirconium			

Associated samples MP86013: JB92664-1, JB92664-2, JB92664-3, JB92664-4, JB92664-5, JB92664-6, JB92664-7, JB92664-8, JB92664-9, JB92664-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SGS ACCUTEST IS PART OF SGS, THE WORLD'S LEADING INSPECTION, VERIFICATION, TESTING AND CERTIFICATION COMPANY.

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Automated Report

Technical Report for

Atlantic Richfield Company

ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

SGS Accutest Job Number: JC6703

Sampling Date: 10/20/15

Report to:

EnviroTrac, Ltd

melaniep@envirotrac.com

ATTN: Melanie Pingoy

Total number of pages in report: **43**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Kelly Patterson 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TN, TX, VA, WV, DoD ELAP (L-A-B L2248)

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Sample Summary

Atlantic Richfield Company

Job No: JC6703

ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JC6703-1	10/20/15	10:20		10/21/15	AQ	Ground Water	MW-1
JC6703-2	10/20/15	10:45		10/21/15	AQ	Ground Water	MW-2
JC6703-3	10/20/15	11:09		10/21/15	AQ	Ground Water	MW-3
JC6703-4	10/20/15	13:40		10/21/15	AQ	Ground Water	MW-11
JC6703-5	10/20/15	13:14		10/21/15	AQ	Ground Water	MW-12
JC6703-6	10/20/15	12:43		10/21/15	AQ	Ground Water	MW-14
JC6703-7	10/20/15	14:10		10/21/15	AQ	Ground Water	MW-16R
JC6703-8	10/20/15	12:15		10/21/15	AQ	Ground Water	MW-18R
JC6703-9	10/20/15	11:30		10/21/15	AQ	Ground Water	MW-19

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Atlantic Richfield Company	**Job No**	JC6703
Site:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ	**Report Date**	11/4/2015 12:12:21 P

On 10/21/2015, 9 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a maximum corrected temperature of 2.4 C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of JC6703 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

Volatiles by GCMS By Method SW846 8260C

Matrix: AQ **Batch ID:** V1A6687

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC6948-1MS, JC6948-1MSD were used as the QC samples indicated.

Matrix: AQ **Batch ID:** V3A6312

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC6703-7MS, JC6703-7MSD were used as the QC samples indicated.
- JC6703-8: Diluted due to high concentration of non-target compound.

Metals By Method EPA 200.7

Matrix: AQ **Batch ID:** MP89800

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC6703-8MS, JC6703-8MSD, JC6703-8SDL were used as the QC samples for metals.
- JC6703-7 for Iron: Elevated sample detection limit due to difficult sample matrix.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

Summary of Hits

Job Number: JC6703
Account: Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Collected: 10/20/15

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC6703-1	**MW-1**					
Iron		15000	100		ug/l	EPA 200.7
JC6703-2	**MW-2**					
Benzene		0.48 J	0.50	0.24	ug/l	SW846 8260C
Cyclohexane		0.31 J	5.0	0.28	ug/l	SW846 8260C
Methyl Tert Butyl Ether		0.74 J	1.0	0.24	ug/l	SW846 8260C
Total TIC, Volatile		8.6 J			ug/l	
Total Alkanes		22 J			ug/l	
Iron		882	100		ug/l	EPA 200.7
JC6703-3	**MW-3**					
Acetone		4.5 J	10	3.3	ug/l	SW846 8260C
Benzene		23.1	0.50	0.24	ug/l	SW846 8260C
Cyclohexane		6.7	5.0	0.28	ug/l	SW846 8260C
Isopropylbenzene		3.2	1.0	0.23	ug/l	SW846 8260C
Methylcyclohexane		4.5 J	5.0	0.22	ug/l	SW846 8260C
Tert Butyl Alcohol		8.3 J	10	2.8	ug/l	SW846 8260C
Toluene		0.63 J	1.0	0.16	ug/l	SW846 8260C
m,p-Xylene		1.0	1.0	0.38	ug/l	SW846 8260C
Xylene (total)		1.0	1.0	0.17	ug/l	SW846 8260C
Total TIC, Volatile		69 J			ug/l	
Total Alkanes		138 J			ug/l	
Iron		1490	100		ug/l	EPA 200.7
JC6703-4	**MW-11**					
Acetone		37.8	10	3.3	ug/l	SW846 8260C
Benzene		0.53	0.50	0.24	ug/l	SW846 8260C
2-Butanone (MEK)		21.5	10	5.6	ug/l	SW846 8260C
Cyclohexane		5.6	5.0	0.28	ug/l	SW846 8260C
Ethylbenzene		1.2	1.0	0.27	ug/l	SW846 8260C
Methylcyclohexane		5.2	5.0	0.22	ug/l	SW846 8260C
4-Methyl-2-pentanone(MIBK)		45.4	5.0	1.0	ug/l	SW846 8260C
Tert Butyl Alcohol		153	10	2.8	ug/l	SW846 8260C
Toluene		1.3	1.0	0.16	ug/l	SW846 8260C
m,p-Xylene		14.3	1.0	0.38	ug/l	SW846 8260C
o-Xylene		10.3	1.0	0.17	ug/l	SW846 8260C
Xylene (total)		24.6	1.0	0.17	ug/l	SW846 8260C
Total TIC, Volatile		71.7 J			ug/l	
Total Alkanes		319.5 J			ug/l	
Iron		3300	100		ug/l	EPA 200.7

Summary of Hits

Job Number: JC6703
Account: Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Collected: 10/20/15

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC6703-5	**MW-12**					
Acetone		8.4 J	10	3.3	ug/l	SW846 8260C
Benzene		26.1	0.50	0.24	ug/l	SW846 8260C
Cyclohexane		9.8	5.0	0.28	ug/l	SW846 8260C
Ethylbenzene		24.7	1.0	0.27	ug/l	SW846 8260C
Isopropylbenzene		5.2	1.0	0.23	ug/l	SW846 8260C
Methylcyclohexane		14.8	5.0	0.22	ug/l	SW846 8260C
Methyl Tert Butyl Ether		0.53 J	1.0	0.24	ug/l	SW846 8260C
4-Methyl-2-pentanone(MIBK)		9.1	5.0	1.0	ug/l	SW846 8260C
Tert Butyl Alcohol		10.7	10	2.8	ug/l	SW846 8260C
Toluene		17.6	1.0	0.16	ug/l	SW846 8260C
m,p-Xylene		172	1.0	0.38	ug/l	SW846 8260C
o-Xylene		85.3	1.0	0.17	ug/l	SW846 8260C
Xylene (total)		257	1.0	0.17	ug/l	SW846 8260C
Total TIC, Volatile		1886 J			ug/l	
Total Alkanes		96 J			ug/l	
Iron		11800	100		ug/l	EPA 200.7
JC6703-6	**MW-14**					
Benzene		12.4	0.50	0.24	ug/l	SW846 8260C
Cyclohexane		14.2	5.0	0.28	ug/l	SW846 8260C
Ethylbenzene		6.3	1.0	0.27	ug/l	SW846 8260C
Isopropylbenzene		2.5	1.0	0.23	ug/l	SW846 8260C
Methylcyclohexane		15.7	5.0	0.22	ug/l	SW846 8260C
4-Methyl-2-pentanone(MIBK)		1.2 J	5.0	1.0	ug/l	SW846 8260C
Tert Butyl Alcohol		11.6	10	2.8	ug/l	SW846 8260C
Toluene		0.84 J	1.0	0.16	ug/l	SW846 8260C
m,p-Xylene		12.8	1.0	0.38	ug/l	SW846 8260C
o-Xylene		2.6	1.0	0.17	ug/l	SW846 8260C
Xylene (total)		15.4	1.0	0.17	ug/l	SW846 8260C
Total TIC, Volatile		310 J			ug/l	
Total Alkanes		85 J			ug/l	
Iron		1320	100		ug/l	EPA 200.7
JC6703-7	**MW-16R**					
Acetone		41.0 J	50	17	ug/l	SW846 8260C
Benzene		311	2.5	1.2	ug/l	SW846 8260C
Cyclohexane		33.4	25	1.4	ug/l	SW846 8260C
Ethylbenzene		566	5.0	1.3	ug/l	SW846 8260C
Isopropylbenzene		55.3	5.0	1.2	ug/l	SW846 8260C
Methylcyclohexane		42.1	25	1.1	ug/l	SW846 8260C

Summary of Hits

Job Number: JC6703
Account: Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Collected: 10/20/15

Lab Sample ID / Client Sample ID / Analyte	Result/ Qual	RL	MDL	Units	Method
Methyl Tert Butyl Ether	5.8	5.0	1.2	ug/l	SW846 8260C
4-Methyl-2-pentanone(MIBK)	8.6 J	25	5.1	ug/l	SW846 8260C
Tert Butyl Alcohol	52.9	50	14	ug/l	SW846 8260C
Toluene	783	5.0	0.81	ug/l	SW846 8260C
m,p-Xylene	3150	25	9.4	ug/l	SW846 8260C
o-Xylene	1690	25	4.1	ug/l	SW846 8260C
Xylene (total)	4840	25	4.1	ug/l	SW846 8260C
Total TIC, Volatile	10010 J			ug/l	
Iron [a]	72400	200		ug/l	EPA 200.7
JC6703-8 MW-18R					
Acetone [b]	77.3	50	17	ug/l	SW846 8260C
Benzene [b]	38.2	2.5	1.2	ug/l	SW846 8260C
Cyclohexane [b]	7.2 J	25	1.4	ug/l	SW846 8260C
Ethylbenzene [b]	45.7	5.0	1.3	ug/l	SW846 8260C
2-Hexanone [b]	11.0 J	25	8.7	ug/l	SW846 8260C
Isopropylbenzene [b]	19.5	5.0	1.2	ug/l	SW846 8260C
Methylcyclohexane [b]	5.9 J	25	1.1	ug/l	SW846 8260C
4-Methyl-2-pentanone(MIBK) [b]	12.4 J	25	5.1	ug/l	SW846 8260C
Tert Butyl Alcohol [b]	22.8 J	50	14	ug/l	SW846 8260C
Toluene [b]	23.0	5.0	0.81	ug/l	SW846 8260C
m,p-Xylene [b]	425	5.0	1.9	ug/l	SW846 8260C
o-Xylene [b]	109	5.0	0.83	ug/l	SW846 8260C
Xylene (total) [b]	535	5.0	0.83	ug/l	SW846 8260C
Total TIC, Volatile	1890 J			ug/l	
Iron	269	100		ug/l	EPA 200.7
JC6703-9 MW-19					
Methyl Tert Butyl Ether	0.31 J	1.0	0.24	ug/l	SW846 8260C
Iron	3160	100		ug/l	EPA 200.7

(a) Elevated sample detection limit due to difficult sample matrix.
(b) Diluted due to high concentration of non-target compound.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: MW-1
Lab Sample ID: JC6703-1
Matrix: AQ - Ground Water
Method: SW846 8260C
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Date Sampled: 10/20/15
Date Received: 10/21/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A145998.D	1	10/24/15	TK	n/a	n/a	V3A6312
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
123-91-1	1,4-Dioxane	ND	130	41	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	JC6703-1	**Date Sampled:**	10/20/15
Matrix:	AQ - Ground Water	**Date Received:**	10/21/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		76-120%
17060-07-0	1,2-Dichloroethane-D4	102%		73-122%
2037-26-5	Toluene-D8	103%		84-119%
460-00-4	4-Bromofluorobenzene	99%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	
	Total Alkanes		0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	JC6703-1	**Date Sampled:**	10/20/15
Matrix:	AQ - Ground Water	**Date Received:**	10/21/15
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	15000	100	ug/l	1	10/22/15	10/30/15	MS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA37898
(2) Prep QC Batch: MP89800

RL = Reporting Limit

Report of Analysis

Client Sample ID: MW-2
Lab Sample ID: JC6703-2
Matrix: AQ - Ground Water
Method: SW846 8260C
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Date Sampled: 10/20/15
Date Received: 10/21/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A145999.D	1	10/24/15	TK	n/a	n/a	V3A6312
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	0.48	0.50	0.24	ug/l	J
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	0.31	5.0	0.28	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
123-91-1	1,4-Dioxane	ND	130	41	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-2
Lab Sample ID: JC6703-2 **Date Sampled:** 10/20/15
Matrix: AQ - Ground Water **Date Received:** 10/21/15
Method: SW846 8260C **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.74	1.0	0.24	ug/l	J
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		76-120%
17060-07-0	1,2-Dichloroethane-D4	104%		73-122%
2037-26-5	Toluene-D8	104%		84-119%
460-00-4	4-Bromofluorobenzene	101%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
496-11-7	Indane	17.89	8.6	ug/l	JN
	Total TIC, Volatile		8.6	ug/l	J
	Total Alkanes		22	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-2		
Lab Sample ID:	JC6703-2	**Date Sampled:**	10/20/15
Matrix:	AQ - Ground Water	**Date Received:**	10/21/15
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	882	100	ug/l	1	10/22/15	10/30/15	MS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA37898
(2) Prep QC Batch: MP89800

RL = Reporting Limit

Report of Analysis

Client Sample ID: MW-3
Lab Sample ID: JC6703-3 **Date Sampled:** 10/20/15
Matrix: AQ - Ground Water **Date Received:** 10/21/15
Method: SW846 8260C **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A146000.D	1	10/24/15	TK	n/a	n/a	V3A6312
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	4.5	10	3.3	ug/l	J
71-43-2	Benzene	23.1	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	6.7	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
123-91-1	1,4-Dioxane	ND	130	41	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	JC6703-3	**Date Sampled:**	10/20/15
Matrix:	AQ - Ground Water	**Date Received:**	10/21/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	3.2	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	4.5	5.0	0.22	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	8.3	10	2.8	ug/l	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	0.63	1.0	0.16	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	1.0	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	1.0	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		76-120%
17060-07-0	1,2-Dichloroethane-D4	103%		73-122%
2037-26-5	Toluene-D8	107%		84-119%
460-00-4	4-Bromofluorobenzene	103%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
96-37-7	Cyclopentane, methyl-	10.09	26	ug/l	JN
103-65-1	Benzene, propyl-	16.56	9.4	ug/l	JN
496-11-7	Indane	17.89	12	ug/l	JN
	C4 alkyl benzene	18.27	7.1	ug/l	J
	1H-Indene-dihydro-methyl- isomer	18.49	5.7	ug/l	J
	1H-Indene-dihydro-methyl- isomer	19.33	8.8	ug/l	J
	Total TIC, Volatile		69	ug/l	J
	Total Alkanes		138	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	JC6703-3	**Date Sampled:**	10/20/15
Matrix:	AQ - Ground Water	**Date Received:**	10/21/15
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	1490	100	ug/l	1	10/22/15	10/30/15	MS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA37898
(2) Prep QC Batch: MP89800

RL = Reporting Limit

Report of Analysis

Client Sample ID: MW-11
Lab Sample ID: JC6703-4 **Date Sampled:** 10/20/15
Matrix: AQ - Ground Water **Date Received:** 10/21/15
Method: SW846 8260C **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A155587.D	1	10/30/15	VC	n/a	n/a	V1A6687
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	37.8	10	3.3	ug/l	
71-43-2	Benzene	0.53	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	21.5	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	5.6	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
123-91-1	1,4-Dioxane	ND	130	41	ug/l	
100-41-4	Ethylbenzene	1.2	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-11
Lab Sample ID: JC6703-4 **Date Sampled:** 10/20/15
Matrix: AQ - Ground Water **Date Received:** 10/21/15
Method: SW846 8260C **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	5.2	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	45.4	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	153	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	1.3	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	14.3	1.0	0.38	ug/l	
95-47-6	o-Xylene	10.3	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	24.6	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		76-120%
17060-07-0	1,2-Dichloroethane-D4	103%		73-122%
2037-26-5	Toluene-D8	98%		84-119%
460-00-4	4-Bromofluorobenzene	100%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	alkene	7.09	6.5	ug/l	J
	alkene	7.41	7.5	ug/l	J
96-37-7	Cyclopentane, methyl-	10.21	14	ug/l	JN
	C3 alkyl benzene	16.81	9.4	ug/l	J
	C3 alkyl benzene	17.06	14	ug/l	J
	C3 alkyl benzene	17.24	12	ug/l	J
496-11-7	Indane	17.97	8.3	ug/l	JN
	Total TIC, Volatile		71.7	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-11		
Lab Sample ID:	JC6703-4	**Date Sampled:**	10/20/15
Matrix:	AQ - Ground Water	**Date Received:**	10/21/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total Alkanes		319.5	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-11		
Lab Sample ID:	JC6703-4	**Date Sampled:**	10/20/15
Matrix:	AQ - Ground Water	**Date Received:**	10/21/15
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	3300	100	ug/l	1	10/22/15	10/30/15	MS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA37898
(2) Prep QC Batch: MP89800

RL = Reporting Limit

Report of Analysis

Client Sample ID: MW-12
Lab Sample ID: JC6703-5 **Date Sampled:** 10/20/15
Matrix: AQ - Ground Water **Date Received:** 10/21/15
Method: SW846 8260C **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A155589.D	1	10/30/15	VC	n/a	n/a	V1A6687
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	8.4	10	3.3	ug/l	J
71-43-2	Benzene	26.1	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	9.8	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
123-91-1	1,4-Dioxane	ND	130	41	ug/l	
100-41-4	Ethylbenzene	24.7	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-12
Lab Sample ID: JC6703-5 **Date Sampled:** 10/20/15
Matrix: AQ - Ground Water **Date Received:** 10/21/15
Method: SW846 8260C **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	5.2	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	14.8	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.53	1.0	0.24	ug/l	J
108-10-1	4-Methyl-2-pentanone(MIBK)	9.1	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	10.7	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	17.6	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	172	1.0	0.38	ug/l	
95-47-6	o-Xylene	85.3	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	257	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		76-120%
17060-07-0	1,2-Dichloroethane-D4	101%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	98%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	C3 alkyl benzene	16.73	110	ug/l	J
	C3 alkyl benzene	16.76	98	ug/l	J
	C3 alkyl benzene	16.81	120	ug/l	J
	C3 alkyl benzene	17.06	200	ug/l	J
	C3 alkyl benzene	17.24	380	ug/l	J
	C4 alkyl benzene	17.86	120	ug/l	J
496-11-7	Indane	17.97	200	ug/l	JN
	C4 alkyl benzene	18.38	170	ug/l	J

ND = Not detected MDL = Method Detection Limit
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J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-12		
Lab Sample ID:	JC6703-5	**Date Sampled:**	10/20/15
Matrix:	AQ - Ground Water	**Date Received:**	10/21/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	C4 alkyl benzene	18.82	100	ug/l	J
	C4 alkyl benzene	18.88	84	ug/l	J
	1H-indene-dihydro-methyl- isomer	19.23	66	ug/l	J
	1H-Indene-dihydro-methyl- isomer	19.42	110	ug/l	J
	C5 alkyl benzene	19.73	59	ug/l	J
91-20-3	Naphthalene	20.20	69	ug/l	JN
	Total TIC, Volatile		1886	ug/l	J
	Total Alkanes		96	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-12		
Lab Sample ID:	JC6703-5	**Date Sampled:**	10/20/15
Matrix:	AQ - Ground Water	**Date Received:**	10/21/15
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	11800	100	ug/l	1	10/22/15	10/30/15	MS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA37898
(2) Prep QC Batch: MP89800

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	JC6703-6	**Date Sampled:**	10/20/15
Matrix:	AQ - Ground Water	**Date Received:**	10/21/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A146002.D	1	10/24/15	TK	n/a	n/a	V3A6312
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	12.4	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	14.2	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
123-91-1	1,4-Dioxane	ND	130	41	ug/l	
100-41-4	Ethylbenzene	6.3	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-14
Lab Sample ID: JC6703-6 **Date Sampled:** 10/20/15
Matrix: AQ - Ground Water **Date Received:** 10/21/15
Method: SW846 8260C **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	2.5	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	15.7	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	1.2	5.0	1.0	ug/l	J
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	11.6	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	0.84	1.0	0.16	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	12.8	1.0	0.38	ug/l	
95-47-6	o-Xylene	2.6	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	15.4	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		76-120%
17060-07-0	1,2-Dichloroethane-D4	106%		73-122%
2037-26-5	Toluene-D8	107%		84-119%
460-00-4	4-Bromofluorobenzene	104%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
96-37-7	Cyclopentane, methyl-	10.09	27	ug/l	JN
	alcohols	13.11	21	ug/l	J
	C3 alkyl benzene	16.71	17	ug/l	J
	C3 alkyl benzene	16.97	25	ug/l	J
	C3 alkyl benzene	17.13	49	ug/l	J
	C4 alkyl benzene	17.75	20	ug/l	J
	C4 alkyl benzene	17.83	18	ug/l	J
	C4 alkyl benzene	18.27	44	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	JC6703-6	**Date Sampled:**	10/20/15
Matrix:	AQ - Ground Water	**Date Received:**	10/21/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	C4 alkyl benzene	18.63	18	ug/l	J
	C4 alkyl benzene	18.77	28	ug/l	J
	1H-indene-dihydro-methyl- isomer	19.33	22	ug/l	J
	dihydro-dimethylindene + C5 alkylbenzene	19.63	21	ug/l	J
	Total TIC, Volatile		310	ug/l	J
	Total Alkanes		85	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	JC6703-6	**Date Sampled:**	10/20/15
Matrix:	AQ - Ground Water	**Date Received:**	10/21/15
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	1320	100	ug/l	1	10/22/15	10/30/15	MS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA37898
(2) Prep QC Batch: MP89800

RL = Reporting Limit

Report of Analysis

Client Sample ID: MW-16R
Lab Sample ID: JC6703-7 **Date Sampled:** 10/20/15
Matrix: AQ - Ground Water **Date Received:** 10/21/15
Method: SW846 8260C **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A155588.D	5	10/30/15	VC	n/a	n/a	V1A6687
Run #2	3A145987.D	25	10/24/15	TK	n/a	n/a	V3A6312

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	41.0	50	17	ug/l	J
71-43-2	Benzene	311	2.5	1.2	ug/l	
74-97-5	Bromochloromethane	ND	5.0	1.9	ug/l	
75-27-4	Bromodichloromethane	ND	5.0	1.1	ug/l	
75-25-2	Bromoform	ND	5.0	1.2	ug/l	
74-83-9	Bromomethane	ND	10	2.1	ug/l	
78-93-3	2-Butanone (MEK)	ND	50	28	ug/l	
75-15-0	Carbon disulfide	ND	10	1.3	ug/l	
56-23-5	Carbon tetrachloride	ND	5.0	1.1	ug/l	
108-90-7	Chlorobenzene	ND	5.0	0.93	ug/l	
75-00-3	Chloroethane	ND	5.0	1.7	ug/l	
67-66-3	Chloroform	ND	5.0	0.94	ug/l	
74-87-3	Chloromethane	ND	5.0	2.0	ug/l	
110-82-7	Cyclohexane	33.4	25	1.4	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	5.0	0.77	ug/l	
106-93-4	1,2-Dibromoethane	ND	5.0	1.2	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.0	0.93	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.1	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.4	ug/l	
75-71-8	Dichlorodifluoromethane	ND	10	4.5	ug/l	
75-34-3	1,1-Dichloroethane	ND	5.0	0.86	ug/l	
107-06-2	1,2-Dichloroethane	ND	5.0	0.90	ug/l	
75-35-4	1,1-Dichloroethene	ND	5.0	2.6	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	5.0	1.4	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	3.2	ug/l	
78-87-5	1,2-Dichloropropane	ND	5.0	2.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	0.93	ug/l	
123-91-1	1,4-Dioxane	ND	630	200	ug/l	
100-41-4	Ethylbenzene	566	5.0	1.3	ug/l	
76-13-1	Freon 113	ND	25	2.6	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-16R
Lab Sample ID: JC6703-7 **Date Sampled:** 10/20/15
Matrix: AQ - Ground Water **Date Received:** 10/21/15
Method: SW846 8260C **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	25	8.7	ug/l	
98-82-8	Isopropylbenzene	55.3	5.0	1.2	ug/l	
79-20-9	Methyl Acetate	ND	25	9.4	ug/l	
108-87-2	Methylcyclohexane	42.1	25	1.1	ug/l	
1634-04-4	Methyl Tert Butyl Ether	5.8	5.0	1.2	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	8.6	25	5.1	ug/l	J
75-09-2	Methylene chloride	ND	10	3.6	ug/l	
100-42-5	Styrene	ND	5.0	1.4	ug/l	
75-65-0	Tert Butyl Alcohol	52.9	50	14	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	5.0	2.0	ug/l	
108-88-3	Toluene	783	5.0	0.81	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.1	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.3	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.1	ug/l	
79-01-6	Trichloroethene	ND	5.0	1.1	ug/l	
75-69-4	Trichlorofluoromethane	ND	10	2.1	ug/l	
75-01-4	Vinyl chloride	ND	5.0	0.74	ug/l	
	m,p-Xylene	3150 [a]	25	9.4	ug/l	
95-47-6	o-Xylene	1690 [a]	25	4.1	ug/l	
1330-20-7	Xylene (total)	4840 [a]	25	4.1	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	103%	76-120%
17060-07-0	1,2-Dichloroethane-D4	104%	101%	73-122%
2037-26-5	Toluene-D8	99%	109%	84-119%
460-00-4	4-Bromofluorobenzene	99%	103%	78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	C3 alkyl benzene	16.66	240	ug/l	J
	C3 alkyl benzene	16.73	1300	ug/l	J
	C3 alkyl benzene	16.76	560	ug/l	J
	C3 alkyl benzene	16.81	700	ug/l	J
	C3 alkyl benzene	17.06	860	ug/l	J
	C3 alkyl benzene	17.24	3100	ug/l	J
	C4 alkyl benzene	17.86	210	ug/l	J
496-11-7	Indane	17.97	1000	ug/l	JN

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-16R		
Lab Sample ID:	JC6703-7	**Date Sampled:**	10/20/15
Matrix:	AQ - Ground Water	**Date Received:**	10/21/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	C4 alkyl benzene	18.26	210	ug/l	J
	C4 alkyl benzene	18.38	460	ug/l	J
	C4 alkyl benzene	18.82	220	ug/l	J
	C4 alkyl benzene	18.88	290	ug/l	J
	1H-Indene-dihydro-methyl- isomer	19.23	220	ug/l	J
	1H-Indene-dihydro-methyl- isomer	19.42	310	ug/l	J
91-20-3	Naphthalene	20.20	330	ug/l	JN
	Total TIC, Volatile		10010	ug/l	J
	Total Alkanes		0	ug/l	

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-16R		
Lab Sample ID:	JC6703-7	**Date Sampled:**	10/20/15
Matrix:	AQ - Ground Water	**Date Received:**	10/21/15
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron [a]	72400	200	ug/l	1	10/22/15	10/30/15	MS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA37898
(2) Prep QC Batch: MP89800

(a) Elevated sample detection limit due to difficult sample matrix.

RL = Reporting Limit

Report of Analysis

Client Sample ID: MW-18R
Lab Sample ID: JC6703-8 **Date Sampled:** 10/20/15
Matrix: AQ - Ground Water **Date Received:** 10/21/15
Method: SW846 8260C **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3A145988.D	5	10/24/15	TK	n/a	n/a	V3A6312
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	77.3	50	17	ug/l	
71-43-2	Benzene	38.2	2.5	1.2	ug/l	
74-97-5	Bromochloromethane	ND	5.0	1.9	ug/l	
75-27-4	Bromodichloromethane	ND	5.0	1.1	ug/l	
75-25-2	Bromoform	ND	5.0	1.2	ug/l	
74-83-9	Bromomethane	ND	10	2.1	ug/l	
78-93-3	2-Butanone (MEK)	ND	50	28	ug/l	
75-15-0	Carbon disulfide	ND	10	1.3	ug/l	
56-23-5	Carbon tetrachloride	ND	5.0	1.1	ug/l	
108-90-7	Chlorobenzene	ND	5.0	0.93	ug/l	
75-00-3	Chloroethane	ND	5.0	1.7	ug/l	
67-66-3	Chloroform	ND	5.0	0.94	ug/l	
74-87-3	Chloromethane	ND	5.0	2.0	ug/l	
110-82-7	Cyclohexane	7.2	25	1.4	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	5.0	0.77	ug/l	
106-93-4	1,2-Dibromoethane	ND	5.0	1.2	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.0	0.93	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.1	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.4	ug/l	
75-71-8	Dichlorodifluoromethane	ND	10	4.5	ug/l	
75-34-3	1,1-Dichloroethane	ND	5.0	0.86	ug/l	
107-06-2	1,2-Dichloroethane	ND	5.0	0.90	ug/l	
75-35-4	1,1-Dichloroethene	ND	5.0	2.6	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	5.0	1.4	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	3.2	ug/l	
78-87-5	1,2-Dichloropropane	ND	5.0	2.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	0.93	ug/l	
123-91-1	1,4-Dioxane	ND	630	200	ug/l	
100-41-4	Ethylbenzene	45.7	5.0	1.3	ug/l	
76-13-1	Freon 113	ND	25	2.6	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-18R
Lab Sample ID: JC6703-8 **Date Sampled:** 10/20/15
Matrix: AQ - Ground Water **Date Received:** 10/21/15
Method: SW846 8260C **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	11.0	25	8.7	ug/l	J
98-82-8	Isopropylbenzene	19.5	5.0	1.2	ug/l	
79-20-9	Methyl Acetate	ND	25	9.4	ug/l	
108-87-2	Methylcyclohexane	5.9	25	1.1	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.2	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	12.4	25	5.1	ug/l	J
75-09-2	Methylene chloride	ND	10	3.6	ug/l	
100-42-5	Styrene	ND	5.0	1.4	ug/l	
75-65-0	Tert Butyl Alcohol	22.8	50	14	ug/l	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	5.0	2.0	ug/l	
108-88-3	Toluene	23.0	5.0	0.81	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.1	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.3	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.1	ug/l	
79-01-6	Trichloroethene	ND	5.0	1.1	ug/l	
75-69-4	Trichlorofluoromethane	ND	10	2.1	ug/l	
75-01-4	Vinyl chloride	ND	5.0	0.74	ug/l	
	m,p-Xylene	425	5.0	1.9	ug/l	
95-47-6	o-Xylene	109	5.0	0.83	ug/l	
1330-20-7	Xylene (total)	535	5.0	0.83	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		76-120%
17060-07-0	1,2-Dichloroethane-D4	102%		73-122%
2037-26-5	Toluene-D8	106%		84-119%
460-00-4	4-Bromofluorobenzene	105%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	C3 alkyl benzene	16.63	170	ug/l	J
108-67-8	Benzene, 1,3,5-trimethyl-	16.71	190	ug/l	JN
	C3 alkyl benzene	16.97	130	ug/l	J
95-63-6	Benzene, 1,2,4-trimethyl-	17.13	490	ug/l	JN
	C4 alkyl benzene	17.75	63	ug/l	J
	C4 alkyl benzene	17.83	99	ug/l	J
496-11-7	Indane	17.89	62	ug/l	JN
	C4 alkyl benzene	18.15	72	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-18R		
Lab Sample ID:	JC6703-8	**Date Sampled:**	10/20/15
Matrix:	AQ - Ground Water	**Date Received:**	10/21/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	C4 alkyl benzene	18.19	57	ug/l	J
	C4 alkyl benzene	18.27	160	ug/l	J
	C4 alkyl benzene	18.71	79	ug/l	J
	C4 alkyl benzene	18.77	110	ug/l	J
	1H-Indene-dihydro-methyl- isomer	19.13	64	ug/l	J
	1H-Indene-dihydro-methyl- isomer	19.33	88	ug/l	J
91-20-3	Naphthalene	20.12	56	ug/l	JN
	Total TIC, Volatile		1890	ug/l	J
	Total Alkanes		0	ug/l	

(a) Diluted due to high concentration of non-target compound.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-18R		
Lab Sample ID:	JC6703-8	**Date Sampled:**	10/20/15
Matrix:	AQ - Ground Water	**Date Received:**	10/21/15
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	269	100	ug/l	1	10/22/15	10/30/15	MS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA37898
(2) Prep QC Batch: MP89800

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-19		
Lab Sample ID:	JC6703-9	**Date Sampled:**	10/20/15
Matrix:	AQ - Ground Water	**Date Received:**	10/21/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A146001.D	1	10/24/15	TK	n/a	n/a	V3A6312
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
123-91-1	1,4-Dioxane	ND	130	41	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-19		
Lab Sample ID:	JC6703-9	**Date Sampled:**	10/20/15
Matrix:	AQ - Ground Water	**Date Received:**	10/21/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.31	1.0	0.24	ug/l	J
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		76-120%
17060-07-0	1,2-Dichloroethane-D4	103%		73-122%
2037-26-5	Toluene-D8	106%		84-119%
460-00-4	4-Bromofluorobenzene	101%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	
	Total Alkanes		0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-19		
Lab Sample ID:	JC6703-9	**Date Sampled:**	10/20/15
Matrix:	AQ - Ground Water	**Date Received:**	10/21/15
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	3160	100	ug/l	1	10/22/15	10/30/15	MS	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA37898
(2) Prep QC Batch: MP89800

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

GW

ACCUTEST Laboratories
Mid Atlantic
2235 Route 130, Dayton, NJ 08810
Tel. (732) 329-0200 Fax: (732) 329-3499/3480

Chain Of Custody Record

10/04

☐ SCIENCE & ENGINEERING
☐ TECHNICAL SERVICES
☑ MILL CONSULTANT

Accutest Job #
Accutest Quote #

DATE: October 2015
PAGE: 1 of 1

CONSULTANT: EnviroTrac Ltd.
ADDRESS: 400 E Corporate Court
CITY: South Plainfield, NJ 07080
TELEPHONE: (908) 757-1900 FAX: (908) 757-0017 E-MAIL: christineh@envirotrac.com

SITE ADDRESS (Street and City): 945 Pleasant Vally Way, West Orange
PROJECT NAME: BP 84849
PROJECT CONTACT (Report to): Christine Hahn
CONSULTANT PROJECT NO.
LAB JOB NUMBER (SDG): JC6703

TURNAROUND TIME (BUSINESS DAYS): ☑ STANDARD ☐ 7 DAYS ☐ 4 DAYS ☐ 3 DAYS ☐ 24 HOURS
DATA DELIVERABLES (CHECK ONE): ☐ COMMA ☐ COMMB ☑ NJ REDT2 ☐ FULL T1 ☐ OTHER

SPECIAL INSTRUCTIONS OR NOTES :

REQUESTED ANALYSIS if more than one method is listed, circle one

LAB Sample #	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VOA+15, MTBE,TBA via 8260	Total Iron 200.7	Container PID Readings or Laboratory Notes
1	MW-1	10/20/15	10:20	GW	3	1				4	X	X	
2	MW-2		10:45	GW	3	1				4	X	X	A25
3	MW-3		11:09	GW	3	1				4	X	X	V547
~~4~~	~~MW-6~~			GW	3	1				4	X	X	
4	MW-11		13:40	GW	3	1				4	X	X	
5	MW-12		13:14	GW	3	1				4	X	X	
6	MW-14		12:43	GW	3	1				4	X	X	
7	MW-16R		~~12:55~~ 14:10	GW	3	1				4	X	X	
~~8~~	~~MW-17R~~			GW	3	1				4	X	X	
8	MW-18R		12:15	GW	3	1				4	X	X	
9	MW-19		11:30	GW	3	1				4	X	X	

10-21-15 54m
ALL SAMPLES RECEIVED
PRESERVED AS APPLICABLE
INITIAL ASSESSMENT ~~AM 24~~
LABEL VERIFICATION KW

Relinquished by: (Sampler Signature) Brad Reichert	Received by: (Signature)	Date: 10/21/15	Time: 09:45
Relinquished by: (Signature)	Received by: (Signature)	Date: 10/21/15	Time: 9:50
Relinquished by: (Signature)	Received by: (Signature)	Date: 10/21/15	Time: 1041

SAMPLE RECEIVED @ LAB ☐ ICE ☐ NO
SAMPLE TEMP UPON RECEIPT: 2-4 Degrees C

Lab # 48 ACCUTEST
FM

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JC6703 **Client:** **Project:**

Date / Time Received: 10/21/2015 10:41:00 AM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (2.4);

Cooler Temps (Corrected) °C: Cooler 1: (2.6);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Accutest Laboratories
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Dayton, New Jersey
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e-Hardcopy 2.0
Automated Report

Technical Report for

Atlantic Richfield Company

ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

SGS Accutest Job Number: JC18196

Sampling Date: 04/12/16

Report to:

Envirotrac
400 E Corporate Court
South Plainfield, NJ 07080
Christineh@envirotrac.com

ATTN: Christine Hahn

Total number of pages in report: **265**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Kelly Patterson 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TN, TX, VA, WV, DoD ELAP (L-A-B L2248)

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Test results relate only to samples analyzed.

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Sample Summary

Atlantic Richfield Company

Job No: JC18196

ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC18196-1	04/12/16	14:10	KCM	04/13/16	AQ	Ground Water	MW-11
JC18196-2	04/12/16	13:48	KCM	04/13/16	AQ	Ground Water	MW-12
JC18196-3	04/12/16	13:20	KCM	04/13/16	AQ	Ground Water	MW-14
JC18196-4	04/12/16	12:32	KCM	04/13/16	AQ	Ground Water	MW-16R
JC18196-5	04/12/16	12:49	KCM	04/13/16	AQ	Ground Water	MW-17R
JC18196-6	04/12/16	12:13	KCM	04/13/16	AQ	Ground Water	MW-18R
JC18196-7	04/12/16	11:48	KCM	04/13/16	AQ	Ground Water	MW-19

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Atlantic Richfield Company	**Job No**	JC18196
Site:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ	**Report Date**	4/26/2016 10:32:32 A

On 04/13/2016, 7 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a maximum corrected temperature of 3 C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of JC18196 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

Volatiles by GCMS By Method SW846 8260C

Matrix: AQ **Batch ID:** VC7691

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC18164-7MS, JC18164-7MSD were used as the QC samples indicated.
- VC7691-MB2: corr-raw data in PDF

Matrix: AQ **Batch ID:** VC7692

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC18328-1DUP, JC18328-2MS were used as the QC samples indicated.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

Summary of Hits

Job Number: JC18196
Account: Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Collected: 04/12/16

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC18196-1	**MW-11**					
Acetone		11.3	10	3.3	ug/l	SW846 8260C
Benzene		3.6	0.50	0.24	ug/l	SW846 8260C
Cyclohexane		34.9	5.0	0.28	ug/l	SW846 8260C
Ethylbenzene		92.0	1.0	0.27	ug/l	SW846 8260C
Isopropylbenzene		9.9	1.0	0.23	ug/l	SW846 8260C
Methylcyclohexane		30.4	5.0	0.22	ug/l	SW846 8260C
Methyl Tert Butyl Ether		0.44 J	1.0	0.24	ug/l	SW846 8260C
Tert Butyl Alcohol		7.5 J	10	2.8	ug/l	SW846 8260C
Toluene		13.3	1.0	0.16	ug/l	SW846 8260C
m,p-Xylene		295	1.0	0.38	ug/l	SW846 8260C
o-Xylene		104	1.0	0.17	ug/l	SW846 8260C
Xylene (total)		399	1.0	0.17	ug/l	SW846 8260C
Total TIC, Volatile		510 J			ug/l	
Total Alkanes		1711 J			ug/l	
JC18196-2	**MW-12**					
Benzene		1.3	0.50	0.24	ug/l	SW846 8260C
Cyclohexane		20.5	5.0	0.28	ug/l	SW846 8260C
Ethylbenzene		0.66 J	1.0	0.27	ug/l	SW846 8260C
Isopropylbenzene		7.8	1.0	0.23	ug/l	SW846 8260C
Methylcyclohexane		30.8	5.0	0.22	ug/l	SW846 8260C
Toluene		0.25 J	1.0	0.16	ug/l	SW846 8260C
m,p-Xylene		26.4	1.0	0.38	ug/l	SW846 8260C
o-Xylene		36.2	1.0	0.17	ug/l	SW846 8260C
Xylene (total)		62.6	1.0	0.17	ug/l	SW846 8260C
Total TIC, Volatile		142 J			ug/l	
Total Alkanes		1036 J			ug/l	
JC18196-3	**MW-14**					
Benzene		42.1	0.50	0.24	ug/l	SW846 8260C
Cyclohexane		111	5.0	0.28	ug/l	SW846 8260C
Ethylbenzene		37.7	1.0	0.27	ug/l	SW846 8260C
Isopropylbenzene		19.6	1.0	0.23	ug/l	SW846 8260C
Methylcyclohexane		83.1	5.0	0.22	ug/l	SW846 8260C
Methyl Tert Butyl Ether		2.5	1.0	0.24	ug/l	SW846 8260C
Toluene		7.0	1.0	0.16	ug/l	SW846 8260C
m,p-Xylene		195	1.0	0.38	ug/l	SW846 8260C
o-Xylene		31.5	1.0	0.17	ug/l	SW846 8260C
Xylene (total)		226	1.0	0.17	ug/l	SW846 8260C
Total TIC, Volatile		564 J			ug/l	
Total Alkanes		1434 J			ug/l	

Summary of Hits

Job Number: JC18196
Account: Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Collected: 04/12/16

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC18196-4	**MW-16R**					
Benzene		22.1	0.50	0.24	ug/l	SW846 8260C
Cyclohexane		5.9	5.0	0.28	ug/l	SW846 8260C
Ethylbenzene		12.9	1.0	0.27	ug/l	SW846 8260C
Isopropylbenzene		2.4	1.0	0.23	ug/l	SW846 8260C
Methylcyclohexane		4.9 J	5.0	0.22	ug/l	SW846 8260C
Methyl Tert Butyl Ether		2.1	1.0	0.24	ug/l	SW846 8260C
Tert Butyl Alcohol		10.9	10	2.8	ug/l	SW846 8260C
Toluene		9.0	1.0	0.16	ug/l	SW846 8260C
m,p-Xylene		69.1	1.0	0.38	ug/l	SW846 8260C
o-Xylene		70.7	1.0	0.17	ug/l	SW846 8260C
Xylene (total)		140	1.0	0.17	ug/l	SW846 8260C
Total TIC, Volatile		324 J			ug/l	
Total Alkanes		61 J			ug/l	
JC18196-5	**MW-17R**					
Benzene		348	5.0	2.4	ug/l	SW846 8260C
Cyclohexane		102	50	2.8	ug/l	SW846 8260C
Ethylbenzene		772	10	2.7	ug/l	SW846 8260C
Isopropylbenzene		137	10	2.3	ug/l	SW846 8260C
Methylcyclohexane		215	50	2.2	ug/l	SW846 8260C
Methyl Tert Butyl Ether		6.6 J	10	2.4	ug/l	SW846 8260C
Tert Butyl Alcohol		65.7 J	100	28	ug/l	SW846 8260C
Toluene		288	10	1.6	ug/l	SW846 8260C
m,p-Xylene		3350	10	3.8	ug/l	SW846 8260C
o-Xylene		1230	10	1.7	ug/l	SW846 8260C
Xylene (total)		4590	10	1.7	ug/l	SW846 8260C
Total TIC, Volatile		4850 J			ug/l	
Total Alkanes		1670 J			ug/l	
JC18196-6	**MW-18R**					
Acetone		34.1	10	3.3	ug/l	SW846 8260C
Benzene		13.3	0.50	0.24	ug/l	SW846 8260C
2-Butanone (MEK)		9.4 J	10	5.6	ug/l	SW846 8260C
Cyclohexane		11.7	5.0	0.28	ug/l	SW846 8260C
Ethylbenzene		14.9	1.0	0.27	ug/l	SW846 8260C
2-Hexanone		2.5 J	5.0	1.7	ug/l	SW846 8260C
Isopropylbenzene		4.3	1.0	0.23	ug/l	SW846 8260C
Methylcyclohexane		10.1	5.0	0.22	ug/l	SW846 8260C
Methyl Tert Butyl Ether		3.0	1.0	0.24	ug/l	SW846 8260C
4-Methyl-2-pentanone(MIBK)		4.5 J	5.0	1.0	ug/l	SW846 8260C

Summary of Hits

Job Number: JC18196
Account: Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Collected: 04/12/16

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Tert Butyl Alcohol		10.1	10	2.8	ug/l	SW846 8260C
Toluene		15.6	1.0	0.16	ug/l	SW846 8260C
m,p-Xylene		142	1.0	0.38	ug/l	SW846 8260C
o-Xylene		58.1	1.0	0.17	ug/l	SW846 8260C
Xylene (total)		200	1.0	0.17	ug/l	SW846 8260C
Total TIC, Volatile		451 J			ug/l	
Total Alkanes		42 J			ug/l	
JC18196-7	**MW-19**					
Benzene		18.7	0.50	0.24	ug/l	SW846 8260C
Toluene		0.22 J	1.0	0.16	ug/l	SW846 8260C
Methyl Tert Butyl Ether		3.8	1.0	0.24	ug/l	SW846 8260C
Tert Butyl Alcohol		9.4 J	10	2.8	ug/l	SW846 8260C

Sample Results

Report of Analysis

SGS Accutest

Report of Analysis

Client Sample ID: MW-11
Lab Sample ID: JC18196-1 **Date Sampled:** 04/12/16
Matrix: AQ - Ground Water **Date Received:** 04/13/16
Method: SW846 8260C **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C209097.D	1	04/15/16	VC	n/a	n/a	VC7691
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	11.3	10	3.3	ug/l	
71-43-2	Benzene	3.6	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	34.9	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
123-91-1	1,4-Dioxane	ND	130	41	ug/l	
100-41-4	Ethylbenzene	92.0	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-11		
Lab Sample ID:	JC18196-1	**Date Sampled:**	04/12/16
Matrix:	AQ - Ground Water	**Date Received:**	04/13/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	9.9	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	30.4	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.44	1.0	0.24	ug/l	J
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	7.5	10	2.8	ug/l	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	13.3	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	295	1.0	0.38	ug/l	
95-47-6	o-Xylene	104	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	399	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		76-120%
17060-07-0	1,2-Dichloroethane-D4	100%		73-122%
2037-26-5	Toluene-D8	101%		84-119%
460-00-4	4-Bromofluorobenzene	106%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	alkene	6.52	45	ug/l	J
	alkene	6.86	63	ug/l	J
	alkene	9.67	23	ug/l	J
96-37-7	Cyclopentane, methyl-	9.96	150	ug/l	JN
	C3 alkyl benzene	16.03	75	ug/l	J
108-67-8	Benzene, 1,3,5-trimethyl-	16.09	24	ug/l	JN
	C3 alkyl benzene	16.30	38	ug/l	J
95-63-6	Benzene, 1,2,4-trimethyl-	16.43	92	ug/l	JN

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-11		
Lab Sample ID:	JC18196-1	**Date Sampled:**	04/12/16
Matrix:	AQ - Ground Water	**Date Received:**	04/13/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		510	ug/l	J
	Total Alkanes		1711	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS Accutest

Report of Analysis

Client Sample ID:	MW-12		
Lab Sample ID:	JC18196-2	**Date Sampled:**	04/12/16
Matrix:	AQ - Ground Water	**Date Received:**	04/13/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C209098.D	1	04/15/16	VC	n/a	n/a	VC7691
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	1.3	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	20.5	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
123-91-1	1,4-Dioxane	ND	130	41	ug/l	
100-41-4	Ethylbenzene	0.66	1.0	0.27	ug/l	J
76-13-1	Freon 113	ND	5.0	0.52	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-12		
Lab Sample ID:	JC18196-2	**Date Sampled:**	04/12/16
Matrix:	AQ - Ground Water	**Date Received:**	04/13/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	7.8	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	30.8	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	0.25	1.0	0.16	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	26.4	1.0	0.38	ug/l	
95-47-6	o-Xylene	36.2	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	62.6	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		76-120%
17060-07-0	1,2-Dichloroethane-D4	102%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	106%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
96-37-7	Cyclopentane, methyl-	9.96	84	ug/l	JN
	cyclopentane, dimethyl- isomer	11.44	18	ug/l	J
	C3 alkyl benzene	16.05	17	ug/l	J
	C3 alkyl benzene	16.29	23	ug/l	J
	Total TIC, Volatile		142	ug/l	J
	Total Alkanes		1036	ug/l	J

ND = Not detected MDL = Method Detection Limit
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E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS Accutest

Report of Analysis

Client Sample ID: MW-14
Lab Sample ID: JC18196-3 **Date Sampled:** 04/12/16
Matrix: AQ - Ground Water **Date Received:** 04/13/16
Method: SW846 8260C **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C209099.D	1	04/15/16	VC	n/a	n/a	VC7691
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	42.1	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	111	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
123-91-1	1,4-Dioxane	ND	130	41	ug/l	
100-41-4	Ethylbenzene	37.7	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	JC18196-3	**Date Sampled:**	04/12/16
Matrix:	AQ - Ground Water	**Date Received:**	04/13/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	19.6	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	83.1	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2.5	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	7.0	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	195	1.0	0.38	ug/l	
95-47-6	o-Xylene	31.5	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	226	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		76-120%
17060-07-0	1,2-Dichloroethane-D4	101%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	108%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	alkene	9.68	19	ug/l	J
96-37-7	Cyclopentane, methyl-	9.96	300	ug/l	JN
	alkene	11.45	26	ug/l	J
	unknown	12.80	22	ug/l	J
	C3 alkyl benzene	16.05	47	ug/l	J
108-67-8	Benzene, 1,3,5-trimethyl-	16.08	20	ug/l	JN
	C3 alkyl benzene	16.29	30	ug/l	J
95-63-6	Benzene, 1,2,4-trimethyl-	16.42	100	ug/l	JN

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	JC18196-3	**Date Sampled:**	04/12/16
Matrix:	AQ - Ground Water	**Date Received:**	04/13/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		564	ug/l	J
	Total Alkanes		1434	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS Accutest

Report of Analysis

Client Sample ID: MW-16R
Lab Sample ID: JC18196-4 **Date Sampled:** 04/12/16
Matrix: AQ - Ground Water **Date Received:** 04/13/16
Method: SW846 8260C **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C209101.D	1	04/15/16	VC	n/a	n/a	VC7691
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	22.1	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	5.9	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
123-91-1	1,4-Dioxane	ND	130	41	ug/l	
100-41-4	Ethylbenzene	12.9	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-16R		
Lab Sample ID:	JC18196-4	**Date Sampled:**	04/12/16
Matrix:	AQ - Ground Water	**Date Received:**	04/13/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	2.4	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	4.9	5.0	0.22	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	2.1	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	10.9	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	9.0	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	69.1	1.0	0.38	ug/l	
95-47-6	o-Xylene	70.7	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	140	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		76-120%
17060-07-0	1,2-Dichloroethane-D4	98%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	108%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	unknown	7.98	17	ug/l	J
96-37-7	Cyclopentane, methyl-	9.96	19	ug/l	JN
	C3 alkyl benzene	16.05	27	ug/l	J
108-67-8	Benzene, 1,3,5-trimethyl-	16.09	27	ug/l	JN
	C3 alkyl benzene	16.30	34	ug/l	J
95-63-6	Benzene, 1,2,4-trimethyl-	16.43	71	ug/l	JN
	C4 alkyl benzene	16.90	17	ug/l	J
	C4 alkyl benzene	16.96	21	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-16R		
Lab Sample ID:	JC18196-4	**Date Sampled:**	04/12/16
Matrix:	AQ - Ground Water	**Date Received:**	04/13/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
496-11-7	Indane	17.01	13	ug/l	JN
	C4 alkyl benzene	17.20	14	ug/l	J
	C4 alkyl benzene	17.29	26	ug/l	J
	C4 alkyl benzene	17.66	22	ug/l	J
	1H-Indene-dihydro-methyl- isomer	18.08	16	ug/l	J
	Total TIC, Volatile		324	ug/l	J
	Total Alkanes		61	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS Accutest

Report of Analysis

Client Sample ID: MW-17R
Lab Sample ID: JC18196-5 **Date Sampled:** 04/12/16
Matrix: AQ - Ground Water **Date Received:** 04/13/16
Method: SW846 8260C **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C209103.D	10	04/15/16	VC	n/a	n/a	VC7691
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	100	33	ug/l	
71-43-2	Benzene	348	5.0	2.4	ug/l	
74-97-5	Bromochloromethane	ND	10	3.7	ug/l	
75-27-4	Bromodichloromethane	ND	10	2.3	ug/l	
75-25-2	Bromoform	ND	10	2.3	ug/l	
74-83-9	Bromomethane	ND	20	4.2	ug/l	
78-93-3	2-Butanone (MEK)	ND	100	56	ug/l	
75-15-0	Carbon disulfide	ND	20	2.5	ug/l	
56-23-5	Carbon tetrachloride	ND	10	2.2	ug/l	
108-90-7	Chlorobenzene	ND	10	1.9	ug/l	
75-00-3	Chloroethane	ND	10	3.4	ug/l	
67-66-3	Chloroform	ND	10	1.9	ug/l	
74-87-3	Chloromethane	ND	10	4.1	ug/l	
110-82-7	Cyclohexane	102	50	2.8	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	20	9.9	ug/l	
124-48-1	Dibromochloromethane	ND	10	1.5	ug/l	
106-93-4	1,2-Dibromoethane	ND	10	2.3	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	10	1.9	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	10	2.3	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	10	2.7	ug/l	
75-71-8	Dichlorodifluoromethane	ND	20	9.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	10	1.7	ug/l	
107-06-2	1,2-Dichloroethane	ND	10	1.8	ug/l	
75-35-4	1,1-Dichloroethene	ND	10	5.1	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	10	2.7	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	10	6.5	ug/l	
78-87-5	1,2-Dichloropropane	ND	10	3.9	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	10	2.1	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	10	1.9	ug/l	
123-91-1	1,4-Dioxane	ND	1300	410	ug/l	
100-41-4	Ethylbenzene	772	10	2.7	ug/l	
76-13-1	Freon 113	ND	50	5.2	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-17R		
Lab Sample ID:	JC18196-5	**Date Sampled:**	04/12/16
Matrix:	AQ - Ground Water	**Date Received:**	04/13/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	50	17	ug/l	
98-82-8	Isopropylbenzene	137	10	2.3	ug/l	
79-20-9	Methyl Acetate	ND	50	19	ug/l	
108-87-2	Methylcyclohexane	215	50	2.2	ug/l	
1634-04-4	Methyl Tert Butyl Ether	6.6	10	2.4	ug/l	J
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	50	10	ug/l	
75-09-2	Methylene chloride	ND	20	7.3	ug/l	
100-42-5	Styrene	ND	10	2.7	ug/l	
75-65-0	Tert Butyl Alcohol	65.7	100	28	ug/l	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	10	2.1	ug/l	
127-18-4	Tetrachloroethene	ND	10	4.0	ug/l	
108-88-3	Toluene	288	10	1.6	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	10	2.3	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	10	2.1	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	10	2.5	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	10	2.1	ug/l	
79-01-6	Trichloroethene	ND	10	2.2	ug/l	
75-69-4	Trichlorofluoromethane	ND	20	4.3	ug/l	
75-01-4	Vinyl chloride	ND	10	1.5	ug/l	
	m,p-Xylene	3350	10	3.8	ug/l	
95-47-6	o-Xylene	1230	10	1.7	ug/l	
1330-20-7	Xylene (total)	4590	10	1.7	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		76-120%
17060-07-0	1,2-Dichloroethane-D4	98%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	106%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	alkene	6.86	230	ug/l	J
96-37-7	Cyclopentane, methyl-	9.96	370	ug/l	JN
	C3 alkyl benzene	16.02	1000	ug/l	J
108-67-8	Benzene, 1,3,5-trimethyl-	16.08	430	ug/l	JN
	C3 alkyl benzene	16.29	350	ug/l	J
95-63-6	Benzene, 1,2,4-trimethyl-	16.43	1200	ug/l	JN
	C4 alkyl benzene	16.92	320	ug/l	J
	C4 alkyl benzene	16.96	380	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-17R		
Lab Sample ID:	JC18196-5	**Date Sampled:**	04/12/16
Matrix:	AQ - Ground Water	**Date Received:**	04/13/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	C4 alkyl benzene	17.29	330	ug/l	J
	C4 alkyl benzene	17.66	240	ug/l	J
	Total TIC, Volatile		4850	ug/l	J
	Total Alkanes		1670	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS Accutest

Report of Analysis

Client Sample ID: MW-18R
Lab Sample ID: JC18196-6 **Date Sampled:** 04/12/16
Matrix: AQ - Ground Water **Date Received:** 04/13/16
Method: SW846 8260C **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C209122.D	1	04/15/16	VC	n/a	n/a	VC7692
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	34.1	10	3.3	ug/l	
71-43-2	Benzene	13.3	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	9.4	10	5.6	ug/l	J
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	11.7	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
123-91-1	1,4-Dioxane	ND	130	41	ug/l	
100-41-4	Ethylbenzene	14.9	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-18R		
Lab Sample ID:	JC18196-6	**Date Sampled:**	04/12/16
Matrix:	AQ - Ground Water	**Date Received:**	04/13/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	2.5	5.0	1.7	ug/l	J
98-82-8	Isopropylbenzene	4.3	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	10.1	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	3.0	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	4.5	5.0	1.0	ug/l	J
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	10.1	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	15.6	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	142	1.0	0.38	ug/l	
95-47-6	o-Xylene	58.1	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	200	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		76-120%
17060-07-0	1,2-Dichloroethane-D4	101%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	105%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
96-37-7	Cyclopentane, methyl-	9.96	33	ug/l	JN
	C3 alkyl benzene	16.03	73	ug/l	J
108-67-8	Benzene, 1,3,5-trimethyl-	16.09	41	ug/l	JN
	C3 alkyl benzene	16.30	35	ug/l	J
95-63-6	Benzene, 1,2,4-trimethyl-	16.43	77	ug/l	JN
	C4 alkyl benzene	16.91	34	ug/l	J
	C4 alkyl benzene	16.96	34	ug/l	J
	Indane	17.02	14	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-18R		
Lab Sample ID:	JC18196-6	**Date Sampled:**	04/12/16
Matrix:	AQ - Ground Water	**Date Received:**	04/13/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	C4 alkyl benzene	17.20	17	ug/l	J
	C4 alkyl benzene	17.29	36	ug/l	J
	C4 alkyl benzene	17.61	14	ug/l	J
	C4 alkyl benzene	17.66	26	ug/l	J
	1H-Indene-dihydro-methyl- isomer	18.08	17	ug/l	J
	Total TIC, Volatile		451	ug/l	J
	Total Alkanes		42	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS Accutest

Report of Analysis

Client Sample ID:	MW-19		
Lab Sample ID:	JC18196-7	**Date Sampled:**	04/12/16
Matrix:	AQ - Ground Water	**Date Received:**	04/13/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C209121.D	1	04/15/16	VC	n/a	n/a	VC7692
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, MTBE, TBA

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	18.7	0.50	0.24	ug/l	
108-88-3	Toluene	0.22	1.0	0.16	ug/l	J
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	
1634-04-4	Methyl Tert Butyl Ether	3.8	1.0	0.24	ug/l	
75-65-0	Tert Butyl Alcohol	9.4	10	2.8	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		76-120%
17060-07-0	1,2-Dichloroethane-D4	101%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	104%		78-117%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

GW

JC18196
10/04

ACCUTEST Laboratories
Mid Atlantic
2235 Route 130, Dayton, NJ 08810
Tel. (732) 329-0200 Fax: (732) 329-3499/3480

Chain Of Custody Record

☐ SCIENCE & ENGINEERING
☐ TECHNICAL SERVICES
☑ BILL CONSULTANT

Accutest Job #
Accutest Quote #

DATE: April 2016
PAGE: 1 of 1

CONSULTANT: EnviroTrac Ltd.
ADDRESS: 400 E Corporate Court
CITY: South Plainfield, NJ 07080
TELEPHONE: (908) 757-1900 FAX: (908) 757-0017 E-MAIL: christineh@envirotrac.com

SITE ADDRESS (Street and City): 945 Pleasant Vally Way, West Orange
PROJECT NAME: BP 84849
PROJECT CONTACT (Report to): Christine Hahn
CONSULTANT PROJECT NO.
LAB JOB NUMBER (SDG)

Kevin C. Muller

TURNAROUND TIME (BUSINESS DAYS): ☑ STANDARD ☐ 7 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS

DATA DELIVERABLES (CHECK ONE) ☐ COMMA ☐ COMMB ☑ NJ REDT2 ☐ FULL T1 ☐ OTHER

SPECIAL INSTRUCTIONS OR NOTES :

REQUESTED ANALYSIS if more than one method is listed, circle one

LAB Sample #	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VO+15, MTBE, TBA via 8260	BTEX, MTBE, TBA via 8260	Container PID Readings or Laboratory Notes
~~1~~	~~MW-6~~ KOM	~~4/12/16~~	—	~~GW~~	3					3	X		
1	MW-11	4/12/16	1410	GW	3					3	X		
2	MW-12		1348	GW	3					3	X		
3	MW-14		1320	GW	3					3	X		
4	MW-16R		1232	GW	3					3	X		
5	MW-17R		1249	GW	3					3	X		
6	MW-18R		1213	GW	3					3	X		
7	MW-19	↓	1148	GW	3					3		X	

VIOAD

INITIAL ASESSMENT SAC
LABEL VERIFICATION AMO

Relinquished by: (Sampler Signature)	Received by: (Signature)	Date: 4/13/16	Time: 10:40
Relinquished by: (Signature)	Received by: (Signature)	Date: 4/13/16	Time: 1110
Relinquished by: (Signature)	Received by: (Signature)	Date: 4/13/16	Time: 1240

#8360

SAMPLE RECEIVED @ LAB: ☑ ICE ☐ NO
SAMPLE TEMP UPON RECEIPT: 3.0 Degrees C

5.1.5

SGS Accutest Sample Receipt Summary

Job Number: JC18196 **Client:** _____ **Project:** _____

Date / Time Received: 4/13/2016 12:40:00 PM **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Raw Measured) °C: Cooler 1: (3.0);

Cooler Temps (Corrected) °C: Cooler 1: (2.9);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Bar Therm		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Internal Sample Tracking Chronicle

Atlantic Richfield Company

Job No: JC18196

ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC18196-1 MW-11	Collected: 12-APR-16 14:10 By: KCM		Received: 13-APR-16 By: AS			
JC18196-1	SW846 8260C	15-APR-16 02:39	VC			V8260TCL11+
JC18196-2 MW-12	Collected: 12-APR-16 13:48 By: KCM		Received: 13-APR-16 By: AS			
JC18196-2	SW846 8260C	15-APR-16 03:08	VC			V8260TCL11+
JC18196-3 MW-14	Collected: 12-APR-16 13:20 By: KCM		Received: 13-APR-16 By: AS			
JC18196-3	SW846 8260C	15-APR-16 03:37	VC			V8260TCL11+
JC18196-4 MW-16R	Collected: 12-APR-16 12:32 By: KCM		Received: 13-APR-16 By: AS			
JC18196-4	SW846 8260C	15-APR-16 04:34	VC			V8260TCL11+
JC18196-5 MW-17R	Collected: 12-APR-16 12:49 By: KCM		Received: 13-APR-16 By: AS			
JC18196-5	SW846 8260C	15-APR-16 05:32	VC			V8260TCL11+
JC18196-6 MW-18R	Collected: 12-APR-16 12:13 By: KCM		Received: 13-APR-16 By: AS			
JC18196-6	SW846 8260C	15-APR-16 16:36	VC			V8260TCL11+
JC18196-7 MW-19	Collected: 12-APR-16 11:48 By: KCM		Received: 13-APR-16 By: AS			
JC18196-7	SW846 8260C	15-APR-16 16:08	VC			V8260BTXMT

SGS Accutest Internal Chain of Custody

Job Number: JC18196
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Received: 04/13/16

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC18196-1.2	Secured Storage	Vianna Chau	04/14/16 12:15	Retrieve from Storage
JC18196-1.2	Vianna Chau	GCMSC	04/14/16 12:15	Load on Instrument
JC18196-1.2	GCMSC	Vianna Chau	04/15/16 14:18	Unload from Instrument
JC18196-1.2	Vianna Chau	Secured Storage	04/15/16 14:18	Return to Storage
JC18196-2.1	Secured Storage	Vianna Chau	04/14/16 12:15	Retrieve from Storage
JC18196-2.1	Vianna Chau	GCMSC	04/14/16 12:15	Load on Instrument
JC18196-2.1	GCMSC	Vianna Chau	04/15/16 14:18	Unload from Instrument
JC18196-2.1	Vianna Chau	Secured Storage	04/15/16 14:18	Return to Storage
JC18196-3.1	Secured Storage	Vianna Chau	04/14/16 12:15	Retrieve from Storage
JC18196-3.1	Vianna Chau	GCMSC	04/14/16 12:15	Load on Instrument
JC18196-3.1	GCMSC	Vianna Chau	04/15/16 14:18	Unload from Instrument
JC18196-3.1	Vianna Chau	Secured Storage	04/15/16 14:18	Return to Storage
JC18196-4.1	Secured Storage	Vianna Chau	04/14/16 12:15	Retrieve from Storage
JC18196-4.1	Vianna Chau	GCMSC	04/14/16 12:15	Load on Instrument
JC18196-4.1	GCMSC	Vianna Chau	04/15/16 14:18	Unload from Instrument
JC18196-4.1	Vianna Chau	Secured Storage	04/15/16 14:18	Return to Storage
JC18196-5.1	Secured Storage	Vianna Chau	04/14/16 12:15	Retrieve from Storage
JC18196-5.1	Vianna Chau	GCMSC	04/14/16 12:15	Load on Instrument
JC18196-5.1	GCMSC	Vianna Chau	04/15/16 14:18	Unload from Instrument
JC18196-5.1	Vianna Chau	Secured Storage	04/15/16 14:18	Return to Storage
JC18196-6.1	Secured Storage	Vianna Chau	04/14/16 12:15	Retrieve from Storage
JC18196-6.1	Vianna Chau	GCMSC	04/14/16 12:15	Load on Instrument
JC18196-6.1	GCMSC	Vianna Chau	04/15/16 14:18	Unload from Instrument
JC18196-6.1	Vianna Chau	Secured Storage	04/15/16 14:18	Return to Storage
JC18196-6.2	Secured Storage	Vianna Chau	04/15/16 14:19	Retrieve from Storage
JC18196-6.2	Vianna Chau	GCMSC	04/15/16 14:19	Load on Instrument
JC18196-6.2	GCMSC	Vianna Chau	04/16/16 14:33	Unload from Instrument
JC18196-6.2	Vianna Chau	Secured Storage	04/16/16 14:33	Return to Storage
JC18196-7.1	Secured Storage	Vianna Chau	04/15/16 14:19	Retrieve from Storage
JC18196-7.1	Vianna Chau	GCMSC	04/15/16 14:19	Load on Instrument
JC18196-7.1	GCMSC	Vianna Chau	04/16/16 14:33	Unload from Instrument
JC18196-7.1	Vianna Chau	Secured Storage	04/16/16 14:33	Return to Storage
JC18196-7.2	Secured Storage	Vianna Chau	04/14/16 12:15	Retrieve from Storage
JC18196-7.2	Vianna Chau	GCMSC	04/14/16 12:15	Load on Instrument
JC18196-7.2	GCMSC	Vianna Chau	04/15/16 14:18	Unload from Instrument
JC18196-7.2	Vianna Chau	Secured Storage	04/15/16 14:18	Return to Storage

GC/MS Volatiles

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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: JC18196
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC7691-MB2 [a]	C209089.D	1	04/14/16	VC	n/a	n/a	VC7691

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC18196-1, JC18196-2, JC18196-3, JC18196-4, JC18196-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
123-91-1	1,4-Dioxane	ND	130	41	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	

Method Blank Summary

Job Number: JC18196
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC7691-MB2 [a]	C209089.D	1	04/14/16	VC	n/a	n/a	VC7691

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC18196-1, JC18196-2, JC18196-3, JC18196-4, JC18196-5

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	96%	76-120%
17060-07-0	1,2-Dichloroethane-D4	97%	73-122%
2037-26-5	Toluene-D8	100%	84-119%
460-00-4	4-Bromofluorobenzene	103%	78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile			ug/l	

(a) corr-raw data in PDF

Method Blank Summary

Job Number: JC18196
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC7692-MB	C209115.D	1	04/15/16	VC	n/a	n/a	VC7692

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC18196-6, JC18196-7

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
123-91-1	1,4-Dioxane	ND	130	41	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	

Method Blank Summary

Job Number: JC18196
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC7692-MB	C209115.D	1	04/15/16	VC	n/a	n/a	VC7692

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC18196-6, JC18196-7

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	98%	76-120%
17060-07-0	1,2-Dichloroethane-D4	99%	73-122%
2037-26-5	Toluene-D8	101%	84-119%
460-00-4	4-Bromofluorobenzene	104%	78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JC18196
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC7691-MB	C209065.D	1	04/14/16	VC	n/a	n/a	VC7691

The QC reported here applies to the following samples: **Method:** SW846 8260C

VC7691-BS, JC18164-7MS, JC18164-7MSD

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
123-91-1	1,4-Dioxane	ND	130	41	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	

Method Blank Summary

Job Number: JC18196
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC7691-MB	C209065.D	1	04/14/16	VC	n/a	n/a	VC7691

The QC reported here applies to the following samples: **Method:** SW846 8260C

VC7691-BS, JC18164-7MS, JC18164-7MSD

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	2.8	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	96%	76-120%
17060-07-0	1,2-Dichloroethane-D4	97%	73-122%
2037-26-5	Toluene-D8	100%	84-119%
460-00-4	4-Bromofluorobenzene	104%	78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: JC18196
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC7691-BS	C209066.D	1	04/14/16	VC	n/a	n/a	VC7691

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC18196-1, JC18196-2, JC18196-3, JC18196-4, JC18196-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	49.5	99	47-144
71-43-2	Benzene	50	47.2	94	81-119
74-97-5	Bromochloromethane	50	48.0	96	84-120
75-27-4	Bromodichloromethane	50	47.8	96	81-125
75-25-2	Bromoform	50	48.1	96	74-128
74-83-9	Bromomethane	50	43.6	87	52-146
78-93-3	2-Butanone (MEK)	50	51.4	103	68-130
75-15-0	Carbon disulfide	50	44.1	88	71-129
56-23-5	Carbon tetrachloride	50	48.0	96	77-140
108-90-7	Chlorobenzene	50	45.9	92	84-116
75-00-3	Chloroethane	50	46.8	94	70-148
67-66-3	Chloroform	50	47.1	94	81-120
74-87-3	Chloromethane	50	49.8	100	50-143
110-82-7	Cyclohexane	50	54.7	109	77-125
96-12-8	1,2-Dibromo-3-chloropropane	50	47.5	95	66-132
124-48-1	Dibromochloromethane	50	46.7	93	81-122
106-93-4	1,2-Dibromoethane	50	46.3	93	81-120
95-50-1	1,2-Dichlorobenzene	50	44.9	90	80-117
541-73-1	1,3-Dichlorobenzene	50	44.2	88	81-116
106-46-7	1,4-Dichlorobenzene	50	43.4	87	80-115
75-71-8	Dichlorodifluoromethane	50	57.3	115	36-169
75-34-3	1,1-Dichloroethane	50	47.4	95	80-125
107-06-2	1,2-Dichloroethane	50	47.7	95	78-131
75-35-4	1,1-Dichloroethene	50	49.0	98	73-127
156-59-2	cis-1,2-Dichloroethene	50	45.8	92	77-118
156-60-5	trans-1,2-Dichloroethene	50	47.1	94	75-118
78-87-5	1,2-Dichloropropane	50	47.7	95	80-124
10061-01-5	cis-1,3-Dichloropropene	50	50.8	102	72-121
10061-02-6	trans-1,3-Dichloropropene	50	49.3	99	73-122
123-91-1	1,4-Dioxane	1250	1220	98	63-145
100-41-4	Ethylbenzene	50	45.6	91	80-118
76-13-1	Freon 113	50	69.3	139	76-140
591-78-6	2-Hexanone	50	49.2	98	66-128
98-82-8	Isopropylbenzene	50	46.0	92	78-125
79-20-9	Methyl Acetate	50	52.5	105	63-120
108-87-2	Methylcyclohexane	50	60.5	121	69-132

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC18196
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC7691-BS	C209066.D	1	04/14/16	VC	n/a	n/a	VC7691

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC18196-1, JC18196-2, JC18196-3, JC18196-4, JC18196-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	100	99.0	99	73-122
108-10-1	4-Methyl-2-pentanone(MIBK)	50	50.7	101	73-129
75-09-2	Methylene chloride	50	47.4	95	75-122
100-42-5	Styrene	50	46.8	94	81-121
75-65-0	Tert Butyl Alcohol	250	252	101	79-121
79-34-5	1,1,2,2-Tetrachloroethane	50	43.8	88	69-116
127-18-4	Tetrachloroethene	50	48.2	96	69-138
108-88-3	Toluene	50	46.2	92	80-122
87-61-6	1,2,3-Trichlorobenzene	50	47.3	95	74-137
120-82-1	1,2,4-Trichlorobenzene	50	47.4	95	75-135
71-55-6	1,1,1-Trichloroethane	50	48.9	98	80-131
79-00-5	1,1,2-Trichloroethane	50	44.7	89	78-122
79-01-6	Trichloroethene	50	48.0	96	83-122
75-69-4	Trichlorofluoromethane	50	54.0	108	66-143
75-01-4	Vinyl chloride	50	51.3	103	57-138
	m,p-Xylene	100	93.0	93	82-119
95-47-6	o-Xylene	50	47.6	95	82-119
1330-20-7	Xylene (total)	150	141	94	82-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	76-120%
17060-07-0	1,2-Dichloroethane-D4	97%	73-122%
2037-26-5	Toluene-D8	100%	84-119%
460-00-4	4-Bromofluorobenzene	102%	78-117%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC18196
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC7692-BS	C209116.D	1	04/15/16	VC	n/a	n/a	VC7692

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC18196-6, JC18196-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	53.1	106	47-144
71-43-2	Benzene	50	50.8	102	81-119
74-97-5	Bromochloromethane	50	51.4	103	84-120
75-27-4	Bromodichloromethane	50	51.3	103	81-125
75-25-2	Bromoform	50	50.0	100	74-128
74-83-9	Bromomethane	50	42.2	84	52-146
78-93-3	2-Butanone (MEK)	50	53.1	106	68-130
75-15-0	Carbon disulfide	50	48.9	98	71-129
56-23-5	Carbon tetrachloride	50	50.4	101	77-140
108-90-7	Chlorobenzene	50	48.4	97	84-116
75-00-3	Chloroethane	50	42.9	86	70-148
67-66-3	Chloroform	50	50.6	101	81-120
74-87-3	Chloromethane	50	45.4	91	50-143
110-82-7	Cyclohexane	50	56.0	112	77-125
96-12-8	1,2-Dibromo-3-chloropropane	50	48.5	97	66-132
124-48-1	Dibromochloromethane	50	49.1	98	81-122
106-93-4	1,2-Dibromoethane	50	49.0	98	81-120
95-50-1	1,2-Dichlorobenzene	50	46.2	92	80-117
541-73-1	1,3-Dichlorobenzene	50	45.7	91	81-116
106-46-7	1,4-Dichlorobenzene	50	44.9	90	80-115
75-71-8	Dichlorodifluoromethane	50	46.9	94	36-169
75-34-3	1,1-Dichloroethane	50	52.2	104	80-125
107-06-2	1,2-Dichloroethane	50	50.9	102	78-131
75-35-4	1,1-Dichloroethene	50	53.6	107	73-127
156-59-2	cis-1,2-Dichloroethene	50	49.1	98	77-118
156-60-5	trans-1,2-Dichloroethene	50	50.9	102	75-118
78-87-5	1,2-Dichloropropane	50	51.3	103	80-124
10061-01-5	cis-1,3-Dichloropropene	50	53.6	107	72-121
10061-02-6	trans-1,3-Dichloropropene	50	52.1	104	73-122
123-91-1	1,4-Dioxane	1250	1180	94	63-145
100-41-4	Ethylbenzene	50	48.2	96	80-118
76-13-1	Freon 113	50	58.5	117	76-140
591-78-6	2-Hexanone	50	52.4	105	66-128
98-82-8	Isopropylbenzene	50	47.9	96	78-125
79-20-9	Methyl Acetate	50	46.5	93	63-120
108-87-2	Methylcyclohexane	50	50.6	101	69-132

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC18196
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC7692-BS	C209116.D	1	04/15/16	VC	n/a	n/a	VC7692

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC18196-6, JC18196-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	100	97.3	97	73-122
108-10-1	4-Methyl-2-pentanone(MIBK)	50	53.0	106	73-129
75-09-2	Methylene chloride	50	51.2	102	75-122
100-42-5	Styrene	50	49.7	99	81-121
75-65-0	Tert Butyl Alcohol	250	225	90	79-121
79-34-5	1,1,2,2-Tetrachloroethane	50	45.6	91	69-116
127-18-4	Tetrachloroethene	50	50.2	100	69-138
108-88-3	Toluene	50	49.5	99	80-122
87-61-6	1,2,3-Trichlorobenzene	50	47.8	96	74-137
120-82-1	1,2,4-Trichlorobenzene	50	47.7	95	75-135
71-55-6	1,1,1-Trichloroethane	50	52.1	104	80-131
79-00-5	1,1,2-Trichloroethane	50	48.0	96	78-122
79-01-6	Trichloroethene	50	51.0	102	83-122
75-69-4	Trichlorofluoromethane	50	48.1	96	66-143
75-01-4	Vinyl chloride	50	45.4	91	57-138
	m,p-Xylene	100	98.8	99	82-119
95-47-6	o-Xylene	50	50.1	100	82-119
1330-20-7	Xylene (total)	150	149	99	82-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	76-120%
17060-07-0	1,2-Dichloroethane-D4	99%	73-122%
2037-26-5	Toluene-D8	101%	84-119%
460-00-4	4-Bromofluorobenzene	103%	78-117%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JC18196
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC18328-2MS	C209123.D	1	04/15/16	VC	n/a	n/a	VC7692
JC18328-2	C209119.D	1	04/15/16	VC	n/a	n/a	VC7692

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC18196-6, JC18196-7

CAS No.	Compound	JC18328-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
67-64-1	Acetone	ND		50	46.4	93	33-158
71-43-2	Benzene	ND		50	45.3	91	43-138
74-97-5	Bromochloromethane	ND		50	46.9	94	75-127
75-27-4	Bromodichloromethane	ND		50	46.8	94	72-128
75-25-2	Bromoform	ND		50	45.4	91	70-131
74-83-9	Bromomethane	ND		50	48.4	97	47-142
78-93-3	2-Butanone (MEK)	ND		50	47.7	95	56-146
75-15-0	Carbon disulfide	ND		50	40.9	82	38-136
56-23-5	Carbon tetrachloride	ND		50	43.1	86	45-149
108-90-7	Chlorobenzene	ND		50	43.9	88	70-124
75-00-3	Chloroethane	ND		50	45.8	92	47-139
67-66-3	Chloroform	ND		50	46.3	93	66-126
74-87-3	Chloromethane	ND		50	44.7	89	41-140
110-82-7	Cyclohexane	ND		50	48.3	97	30-148
96-12-8	1,2-Dibromo-3-chloropropane	ND		50	44.2	88	64-136
124-48-1	Dibromochloromethane	ND		50	44.7	89	75-126
106-93-4	1,2-Dibromoethane	ND		50	44.3	89	77-124
95-50-1	1,2-Dichlorobenzene	ND		50	41.6	83	71-124
541-73-1	1,3-Dichlorobenzene	ND		50	41.4	83	69-125
106-46-7	1,4-Dichlorobenzene	ND		50	40.5	81	69-122
75-71-8	Dichlorodifluoromethane	ND		50	51.9	104	24-161
75-34-3	1,1-Dichloroethane	ND		50	46.9	94	60-129
107-06-2	1,2-Dichloroethane	ND		50	46.3	93	72-133
75-35-4	1,1-Dichloroethene	ND		50	45.2	90	40-137
156-59-2	cis-1,2-Dichloroethene	ND		50	44.9	90	57-128
156-60-5	trans-1,2-Dichloroethene	ND		50	45.0	90	53-128
78-87-5	1,2-Dichloropropane	ND		50	46.8	94	69-127
10061-01-5	cis-1,3-Dichloropropene	ND		50	49.4	99	67-129
10061-02-6	trans-1,3-Dichloropropene	ND		50	48.2	96	68-130
123-91-1	1,4-Dioxane	ND		1250	940	75	56-146
100-41-4	Ethylbenzene	ND		50	42.8	86	38-139
76-13-1	Freon 113	ND		50	53.2	106	34-154
591-78-6	2-Hexanone	ND		50	48.4	97	55-148
98-82-8	Isopropylbenzene	ND		50	42.6	85	54-137
79-20-9	Methyl Acetate	ND		50	43.9	88	60-137
108-87-2	Methylcyclohexane	ND		50	45.2	90	30-152

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JC18196
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC18328-2MS	C209123.D	1	04/15/16	VC	n/a	n/a	VC7692
JC18328-2	C209119.D	1	04/15/16	VC	n/a	n/a	VC7692

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC18196-6, JC18196-7

CAS No.	Compound	JC18328-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
1634-04-4	Methyl Tert Butyl Ether	ND		100	91.0	91	64-132
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		50	49.2	98	68-139
75-09-2	Methylene chloride	ND		50	46.4	93	63-128
100-42-5	Styrene	ND		50	44.7	89	61-134
75-65-0	Tert Butyl Alcohol	ND		250	222	89	67-138
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	42.5	85	67-126
127-18-4	Tetrachloroethene	ND		50	43.4	87	43-145
108-88-3	Toluene	ND		50	44.4	89	51-136
87-61-6	1,2,3-Trichlorobenzene	ND		50	41.9	84	66-140
120-82-1	1,2,4-Trichlorobenzene	ND		50	42.0	84	65-138
71-55-6	1,1,1-Trichloroethane	ND		50	45.6	91	51-141
79-00-5	1,1,2-Trichloroethane	ND		50	44.2	88	71-127
79-01-6	Trichloroethene	ND		50	45.3	91	55-136
75-69-4	Trichlorofluoromethane	ND		50	48.0	96	33-157
75-01-4	Vinyl chloride	ND		50	45.1	90	34-147
	m,p-Xylene	ND		100	87.2	87	42-139
95-47-6	o-Xylene	ND		50	44.8	90	56-134
1330-20-7	Xylene (total)	ND		150	132	88	46-137

CAS No.	Surrogate Recoveries	MS	JC18328-2	Limits
1868-53-7	Dibromofluoromethane	100%	98%	76-120%
17060-07-0	1,2-Dichloroethane-D4	99%	100%	73-122%
2037-26-5	Toluene-D8	101%	100%	84-119%
460-00-4	4-Bromofluorobenzene	103%	104%	78-117%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC18196
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC18164-7MS	C209074.D	10	04/14/16	VC	n/a	n/a	VC7691
JC18164-7MSD	C209075.D	10	04/14/16	VC	n/a	n/a	VC7691
JC18164-7	C209070.D	10	04/14/16	VC	n/a	n/a	VC7691

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC18196-1, JC18196-2, JC18196-3, JC18196-4, JC18196-5

CAS No.	Compound	JC18164-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		500	467	93	500	470	94	1	33-158/19
71-43-2	Benzene	ND		500	476	95	500	467	93	2	43-138/12
74-97-5	Bromochloromethane	ND		500	481	96	500	478	96	1	75-127/12
75-27-4	Bromodichloromethane	ND		500	486	97	500	481	96	1	72-128/13
75-25-2	Bromoform	ND		500	486	97	500	493	99	1	70-131/12
74-83-9	Bromomethane	ND		500	491	98	500	477	95	3	47-142/16
78-93-3	2-Butanone (MEK)	ND		500	481	96	500	477	95	1	56-146/12
75-15-0	Carbon disulfide	ND		500	445	89	500	429	86	4	38-136/17
56-23-5	Carbon tetrachloride	ND		500	485	97	500	466	93	4	45-149/17
108-90-7	Chlorobenzene	ND		500	463	93	500	463	93	0	70-124/12
75-00-3	Chloroethane	ND		500	488	98	500	468	94	4	47-139/15
67-66-3	Chloroform	ND		500	468	94	500	457	91	2	66-126/13
74-87-3	Chloromethane	ND		500	455	91	500	402	80	12	41-140/15
110-82-7	Cyclohexane	ND		500	527	105	500	494	99	6	30-148/17
96-12-8	1,2-Dibromo-3-chloropropane	ND		500	470	94	500	478	96	2	64-136/14
124-48-1	Dibromochloromethane	ND		500	468	94	500	471	94	1	75-126/12
106-93-4	1,2-Dibromoethane	ND		500	460	92	500	460	92	0	77-124/11
95-50-1	1,2-Dichlorobenzene	ND		500	448	90	500	455	91	2	71-124/12
541-73-1	1,3-Dichlorobenzene	ND		500	447	89	500	451	90	1	69-125/12
106-46-7	1,4-Dichlorobenzene	ND		500	435	87	500	436	87	0	69-122/12
75-71-8	Dichlorodifluoromethane	ND		500	525	105	500	485	97	8	24-161/20
75-34-3	1,1-Dichloroethane	ND		500	468	94	500	466	93	0	60-129/13
107-06-2	1,2-Dichloroethane	ND		500	475	95	500	473	95	0	72-133/12
75-35-4	1,1-Dichloroethene	ND		500	489	98	500	469	94	4	40-137/17
156-59-2	cis-1,2-Dichloroethene	ND		500	457	91	500	447	89	2	57-128/13
156-60-5	trans-1,2-Dichloroethene	ND		500	467	93	500	456	91	2	53-128/15
78-87-5	1,2-Dichloropropane	ND		500	480	96	500	472	94	2	69-127/12
10061-01-5	cis-1,3-Dichloropropene	ND		500	509	102	500	502	100	1	67-129/14
10061-02-6	trans-1,3-Dichloropropene	ND		500	495	99	500	489	98	1	68-130/14
123-91-1	1,4-Dioxane	ND		12500	10400	83	12500	10400	83	0	56-146/21
100-41-4	Ethylbenzene	237		500	676	88	500	665	86	2	38-139/12
76-13-1	Freon 113	ND		500	592	118	500	569	114	4	34-154/18
591-78-6	2-Hexanone	ND		500	485	97	500	485	97	0	55-148/15
98-82-8	Isopropylbenzene	52.0		500	508	91	500	505	91	1	54-137/15
79-20-9	Methyl Acetate	ND		500	516	103	500	513	103	1	60-137/13
108-87-2	Methylcyclohexane	25.0	J	500	543	104	500	511	97	6	30-152/17

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC18196
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC18164-7MS	C209074.D	10	04/14/16	VC	n/a	n/a	VC7691
JC18164-7MSD	C209075.D	10	04/14/16	VC	n/a	n/a	VC7691
JC18164-7	C209070.D	10	04/14/16	VC	n/a	n/a	VC7691

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC18196-1, JC18196-2, JC18196-3, JC18196-4, JC18196-5

CAS No.	Compound	JC18164-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	ND		1000	933	93	1000	924	92	1	64-132/13
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		500	497	99	500	495	99	0	68-139/12
75-09-2	Methylene chloride	ND		500	465	93	500	460	92	1	63-128/13
100-42-5	Styrene	ND		500	477	95	500	471	94	1	61-134/13
75-65-0	Tert Butyl Alcohol	ND		2500	2380	95	2500	2390	96	0	67-138/14
79-34-5	1,1,2,2-Tetrachloroethane	ND		500	428	86	500	435	87	2	67-126/13
127-18-4	Tetrachloroethene	ND		500	500	100	500	489	98	2	43-145/15
108-88-3	Toluene	9.4	J	500	481	94	500	473	93	2	51-136/13
87-61-6	1,2,3-Trichlorobenzene	ND		500	477	95	500	482	96	1	66-140/14
120-82-1	1,2,4-Trichlorobenzene	ND		500	471	94	500	482	96	2	65-138/15
71-55-6	1,1,1-Trichloroethane	ND		500	493	99	500	479	96	3	51-141/16
79-00-5	1,1,2-Trichloroethane	ND		500	455	91	500	449	90	1	71-127/12
79-01-6	Trichloroethene	ND		500	486	97	500	484	97	0	55-136/14
75-69-4	Trichlorofluoromethane	ND		500	529	106	500	502	100	5	33-157/21
75-01-4	Vinyl chloride	ND		500	521	104	500	491	98	6	34-147/17
	m,p-Xylene	472		1000	1360	89	1000	1340	87	1	42-139/13
95-47-6	o-Xylene	72.0		500	547	95	500	540	94	1	56-134/13
1330-20-7	Xylene (total)	544		1500	1910	91	1500	1880	89	2	46-137/12

CAS No.	Surrogate Recoveries	MS	MSD	JC18164-7	Limits
1868-53-7	Dibromofluoromethane	97%	96%	98%	76-120%
17060-07-0	1,2-Dichloroethane-D4	94%	93%	98%	73-122%
2037-26-5	Toluene-D8	100%	100%	100%	84-119%
460-00-4	4-Bromofluorobenzene	103%	104%	104%	78-117%

* = Outside of Control Limits.

Duplicate Summary

Job Number: JC18196
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC18328-1DUP	C209125.D	1	04/15/16	VC	n/a	n/a	VC7692
JC18328-1	C209118.D	1	04/15/16	VC	n/a	n/a	VC7692

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC18196-6, JC18196-7

CAS No.	Compound	JC18328-1 ug/l	Q	DUP ug/l	Q	RPD	Limits
67-64-1	Acetone	ND		ND		nc	30
71-43-2	Benzene	ND		ND		nc	30
74-97-5	Bromochloromethane	ND		ND		nc	30
75-27-4	Bromodichloromethane	ND		ND		nc	30
75-25-2	Bromoform	ND		ND		nc	30
74-83-9	Bromomethane	ND		ND		nc	30
78-93-3	2-Butanone (MEK)	ND		ND		nc	30
75-15-0	Carbon disulfide	ND		ND		nc	30
56-23-5	Carbon tetrachloride	ND		ND		nc	30
108-90-7	Chlorobenzene	ND		ND		nc	30
75-00-3	Chloroethane	ND		ND		nc	30
67-66-3	Chloroform	ND		ND		nc	30
74-87-3	Chloromethane	ND		ND		nc	30
110-82-7	Cyclohexane	ND		ND		nc	30
96-12-8	1,2-Dibromo-3-chloropropane	ND		ND		nc	30
124-48-1	Dibromochloromethane	ND		ND		nc	30
106-93-4	1,2-Dibromoethane	ND		ND		nc	30
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	30
541-73-1	1,3-Dichlorobenzene	ND		ND		nc	30
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	30
75-71-8	Dichlorodifluoromethane	ND		ND		nc	30
75-34-3	1,1-Dichloroethane	ND		ND		nc	30
107-06-2	1,2-Dichloroethane	ND		ND		nc	30
75-35-4	1,1-Dichloroethene	ND		ND		nc	30
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	30
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	30
78-87-5	1,2-Dichloropropane	ND		ND		nc	30
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	30
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	30
123-91-1	1,4-Dioxane	ND		ND		nc	30
100-41-4	Ethylbenzene	ND		ND		nc	30
76-13-1	Freon 113	ND		ND		nc	30
591-78-6	2-Hexanone	ND		ND		nc	30
98-82-8	Isopropylbenzene	ND		ND		nc	30
79-20-9	Methyl Acetate	ND		ND		nc	30
108-87-2	Methylcyclohexane	ND		ND		nc	30

* = Outside of Control Limits.

Duplicate Summary

Job Number: JC18196
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC18328-1DUP	C209125.D	1	04/15/16	VC	n/a	n/a	VC7692
JC18328-1	C209118.D	1	04/15/16	VC	n/a	n/a	VC7692

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC18196-6, JC18196-7

CAS No.	Compound	JC18328-1 ug/l	Q	DUP ug/l	Q	RPD	Limits
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	30
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		ND		nc	30
75-09-2	Methylene chloride	ND		ND		nc	30
100-42-5	Styrene	ND		ND		nc	30
75-65-0	Tert Butyl Alcohol	ND		ND		nc	30
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	30
127-18-4	Tetrachloroethene	1.9		2.3		19	30
108-88-3	Toluene	ND		ND		nc	30
87-61-6	1,2,3-Trichlorobenzene	ND		ND		nc	30
120-82-1	1,2,4-Trichlorobenzene	ND		ND		nc	30
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	30
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	30
79-01-6	Trichloroethene	ND		ND		nc	30
75-69-4	Trichlorofluoromethane	ND		ND		nc	30
75-01-4	Vinyl chloride	ND		ND		nc	30
	m,p-Xylene	ND		ND		nc	30
95-47-6	o-Xylene	ND		ND		nc	30
1330-20-7	Xylene (total)	ND		ND		nc	30

CAS No.	Surrogate Recoveries	DUP	JC18328-1	Limits
1868-53-7	Dibromofluoromethane	98%	97%	76-120%
17060-07-0	1,2-Dichloroethane-D4	99%	99%	73-122%
2037-26-5	Toluene-D8	100%	100%	84-119%
460-00-4	4-Bromofluorobenzene	104%	104%	78-117%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JC18196
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample: VC7650-BFB
Lab File ID: C207905.D
Instrument ID: GCMSC
Injection Date: 02/25/16
Injection Time: 16:47

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	26650	19.4		Pass
75	30.0 - 60.0% of mass 95	66016	48.0		Pass
95	Base peak, 100% relative abundance	137437	100.0		Pass
96	5.0 - 9.0% of mass 95	9506	6.92		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	87176	63.4		Pass
175	5.0 - 9.0% of mass 174	6782	4.93	(7.78) [a]	Pass
176	95.0 - 101.0% of mass 174	85477	62.2	(98.1) [a]	Pass
177	5.0 - 9.0% of mass 176	5499	4.00	(6.43) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VC7650-IC7650	C207906.D	02/25/16	17:21	00:34	Initial cal 0.2
VC7650-IC7650	C207907.D	02/25/16	17:50	01:03	Initial cal 0.5
VC7650-IC7650	C207908.D	02/25/16	18:19	01:32	Initial cal 1
VC7650-IC7650	C207909.D	02/25/16	18:48	02:01	Initial cal 2
VC7650-IC7650	C207910.D	02/25/16	19:17	02:30	Initial cal 5
VC7650-IC7650	C207911.D	02/25/16	19:46	02:59	Initial cal 10
VC7650-IC7650	C207912.D	02/25/16	20:15	03:28	Initial cal 20
VC7650-ICC7650	C207913.D	02/25/16	20:44	03:57	Initial cal 50
VC7650-IC7650	C207914.D	02/25/16	21:13	04:26	Initial cal 100
VC7650-IC7650	C207915.D	02/25/16	21:42	04:55	Initial cal 200
VC7650-ICV7650	C207918.D	02/25/16	23:09	06:22	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC18196
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample: VC7651-BFB
Lab File ID: C207920.D
Instrument ID: GCMSC
Injection Date: 02/26/16
Injection Time: 11:41

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	27800	20.4		Pass
75	30.0 - 60.0% of mass 95	66693	48.8		Pass
95	Base peak, 100% relative abundance	136562	100.0		Pass
96	5.0 - 9.0% of mass 95	9646	7.06		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	83242	61.0		Pass
175	5.0 - 9.0% of mass 174	6289	4.61	(7.56) [a]	Pass
176	95.0 - 101.0% of mass 174	79877	58.5	(96.0) [a]	Pass
177	5.0 - 9.0% of mass 176	5338	3.91	(6.68) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VC7651-IC7650	C207921.D	02/26/16	12:12	00:31	Initial cal 2
VC7651-IC7650	C207922.D	02/26/16	12:41	01:00	Initial cal 5
VC7651-IC7650	C207923.D	02/26/16	13:10	01:29	Initial cal 10
VC7651-IC7650	C207924.D	02/26/16	13:39	01:58	Initial cal 20
VC7651-IC7650	C207925.D	02/26/16	14:08	02:27	Initial cal 50
VC7651-IC7650	C207926.D	02/26/16	14:37	02:56	Initial cal 100
VC7651-IC7650	C207927.D	02/26/16	15:06	03:25	Initial cal 200
VC7651-ICV7650	C207929.D	02/26/16	16:04	04:23	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC18196
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample: VC7691-BFB
Lab File ID: C209062.D
Instrument ID: GCMSC
Injection Date: 04/14/16
Injection Time: 09:33

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	32496	20.0		Pass
75	30.0 - 60.0% of mass 95	79474	48.9		Pass
95	Base peak, 100% relative abundance	162517	100.0		Pass
96	5.0 - 9.0% of mass 95	11346	6.98		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	98258	60.5		Pass
175	5.0 - 9.0% of mass 174	7649	4.71	(7.78) [a]	Pass
176	95.0 - 101.0% of mass 174	95640	58.8	(97.3) [a]	Pass
177	5.0 - 9.0% of mass 176	6503	4.00	(6.80) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VC7691-CC7650	C209063.D	04/14/16	10:04	00:31	Continuing cal 50
VC7691-CC7650	C209064.D	04/14/16	10:39	01:06	Continuing cal 1
VC7691-MB	C209065.D	04/14/16	11:08	01:35	Method Blank
VC7691-BS	C209066.D	04/14/16	11:41	02:08	Blank Spike
ZZZZZZ	C209068.D	04/14/16	12:39	03:06	(unrelated sample)
ZZZZZZ	C209069.D	04/14/16	13:09	03:36	(unrelated sample)
JC18164-7	C209070.D	04/14/16	13:38	04:05	(used for QC only; not part of job JC18196)
ZZZZZZ	C209071.D	04/14/16	14:07	04:34	(unrelated sample)
ZZZZZZ	C209072.D	04/14/16	14:35	05:02	(unrelated sample)
JC18164-7MS	C209074.D	04/14/16	15:34	06:01	Matrix Spike
JC18164-7MSD	C209075.D	04/14/16	16:03	06:30	Matrix Spike Duplicate
ZZZZZZ	C209076.D	04/14/16	16:31	06:58	(unrelated sample)
ZZZZZZ	C209078.D	04/14/16	17:30	07:57	(unrelated sample)
ZZZZZZ	C209079.D	04/14/16	17:59	08:26	(unrelated sample)
ZZZZZZ	C209080.D	04/14/16	18:28	08:55	(unrelated sample)
ZZZZZZ	C209081.D	04/14/16	18:57	09:24	(unrelated sample)
ZZZZZZ	C209082.D	04/14/16	19:26	09:53	(unrelated sample)
ZZZZZZ	C209083.D	04/14/16	19:54	10:21	(unrelated sample)
ZZZZZZ	C209084.D	04/14/16	20:23	10:50	(unrelated sample)
ZZZZZZ	C209085.D	04/14/16	20:52	11:19	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JC18196
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample:	VC7691-BFB2	**Injection Date:**	04/14/16
Lab File ID:	C209086.D	**Injection Time:**	21:21
Instrument ID:	GCMSC		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	33160	19.9		Pass
75	30.0 - 60.0% of mass 95	80280	48.2		Pass
95	Base peak, 100% relative abundance	166698	100.0		Pass
96	5.0 - 9.0% of mass 95	11290	6.77		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	103304	62.0		Pass
175	5.0 - 9.0% of mass 174	8104	4.86	(7.84) [a]	Pass
176	95.0 - 101.0% of mass 174	98432	59.0	(95.3) [a]	Pass
177	5.0 - 9.0% of mass 176	6412	3.85	(6.51) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VC7691-CC7650	C209087.D	04/14/16	21:50	00:29	Continuing cal 50
VC7691-MB2	C209089.D	04/14/16	22:48	01:27	Method Blank
ZZZZZZ	C209090.D	04/14/16	23:17	01:56	(unrelated sample)
ZZZZZZ	C209091.D	04/14/16	23:46	02:25	(unrelated sample)
ZZZZZZ	C209092.D	04/15/16	00:15	02:54	(unrelated sample)
ZZZZZZ	C209093.D	04/15/16	00:44	03:23	(unrelated sample)
JC18196-1	C209097.D	04/15/16	02:39	05:18	MW-11
JC18196-2	C209098.D	04/15/16	03:08	05:47	MW-12
JC18196-3	C209099.D	04/15/16	03:37	06:16	MW-14
JC18196-4	C209101.D	04/15/16	04:34	07:13	MW-16R
JC18196-5	C209103.D	04/15/16	05:32	08:11	MW-17R

Instrument Performance Check (BFB)

Job Number: JC18196
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample: VC7692-BFB
Lab File ID: C209111.D
Instrument ID: GCMSC
Injection Date: 04/15/16
Injection Time: 11:07

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	33210	19.5		Pass
75	30.0 - 60.0% of mass 95	82053	48.1		Pass
95	Base peak, 100% relative abundance	170453	100.0		Pass
96	5.0 - 9.0% of mass 95	11588	6.80		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	105760	62.0		Pass
175	5.0 - 9.0% of mass 174	8160	4.79	(7.72) [a]	Pass
176	95.0 - 101.0% of mass 174	101477	59.5	(96.0) [a]	Pass
177	5.0 - 9.0% of mass 176	6704	3.93	(6.61) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VC7692-CC7650	C209113.D	04/15/16	12:15	01:08	Continuing cal 20
VC7692-MB	C209115.D	04/15/16	13:13	02:06	Method Blank
VC7692-BS	C209116.D	04/15/16	13:42	02:35	Blank Spike
JC18328-1	C209118.D	04/15/16	14:40	03:33	(used for QC only; not part of job JC18196)
JC18328-2	C209119.D	04/15/16	15:09	04:02	(used for QC only; not part of job JC18196)
ZZZZZZ	C209120.D	04/15/16	15:38	04:31	(unrelated sample)
JC18196-7	C209121.D	04/15/16	16:08	05:01	MW-19
JC18196-6	C209122.D	04/15/16	16:36	05:29	MW-18R
JC18328-2MS	C209123.D	04/15/16	17:05	05:58	Matrix Spike
JC18328-1DUP	C209125.D	04/15/16	18:03	06:56	Duplicate
ZZZZZZ	C209126.D	04/15/16	18:31	07:24	(unrelated sample)
ZZZZZZ	C209127.D	04/15/16	19:00	07:53	(unrelated sample)
ZZZZZZ	C209128.D	04/15/16	19:29	08:22	(unrelated sample)
ZZZZZZ	C209129.D	04/15/16	19:57	08:50	(unrelated sample)
ZZZZZZ	C209130.D	04/15/16	20:27	09:20	(unrelated sample)
ZZZZZZ	C209131.D	04/15/16	20:55	09:48	(unrelated sample)
ZZZZZZ	C209132.D	04/15/16	21:24	10:17	(unrelated sample)
ZZZZZZ	C209134.D	04/15/16	22:22	11:15	(unrelated sample)

Volatile Internal Standard Area Summary

Job Number: JC18196
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Check Std: VC7691-CC7650 **Injection Date:** 04/14/16
Lab File ID: C209063.D **Injection Time:** 10:04
Instrument ID: GCMSC **Method:** SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	283088	8.08	284299	10.78	530875	11.73	478669	14.78	237936	16.80
Upper Limit [a]	566176	8.58	568598	11.28	1061750	12.23	957338	15.28	475872	17.30
Lower Limit [b]	141544	7.58	142150	10.28	265438	11.23	239335	14.28	118968	16.30

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VC7691-MB	278877	8.07	303267	10.78	558589	11.74	501507	14.78	242074	16.80
VC7691-BS	267031	8.08	290555	10.78	540851	11.74	482187	14.78	239547	16.80
ZZZZZZ	268560	8.09	301577	10.78	554119	11.74	500348	14.78	242301	16.80
ZZZZZZ	268956	8.09	303759	10.78	556979	11.74	500844	14.78	243692	16.80
JC18164-7	261197	8.08	300814	10.79	559289	11.74	502486	14.78	242954	16.80
ZZZZZZ	262078	8.08	309775	10.78	566942	11.74	506178	14.78	241248	16.80
ZZZZZZ	270383	8.08	304377	10.79	558393	11.74	501856	14.78	239712	16.80
JC18164-7MS	244508	8.09	290547	10.79	530437	11.75	480752	14.78	243060	16.80
JC18164-7MSD	243772	8.08	290007	10.79	527916	11.74	476215	14.78	237693	16.80
ZZZZZZ	241573	8.09	295562	10.79	529233	11.74	475501	14.78	234115	16.80
ZZZZZZ	258506	8.09	303417	10.78	547532	11.74	493240	14.78	239940	16.80
ZZZZZZ	254173	8.09	294974	10.78	534578	11.74	485516	14.78	239453	16.80
ZZZZZZ	265633	8.08	296653	10.79	544594	11.74	495015	14.79	242583	16.80
ZZZZZZ	259560	8.09	309243	10.79	566003	11.75	505763	14.78	243473	16.80
ZZZZZZ	262794	8.08	299563	10.79	553295	11.74	498445	14.78	240763	16.80
ZZZZZZ	287823	8.08	297792	10.79	547730	11.74	498987	14.78	241963	16.80
ZZZZZZ	282851	8.08	302144	10.79	555421	11.74	503276	14.78	244145	16.80
ZZZZZZ	282512	8.09	300910	10.78	553224	11.74	500933	14.78	243046	16.80

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: JC18196
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Check Std:	VC7691-CC7650	**Injection Date:**	04/14/16
Lab File ID:	C209087.D	**Injection Time:**	21:50
Instrument ID:	GCMSC	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	284228	8.09	289583	10.78	537569	11.74	487713	14.78	242166	16.80
Upper Limit [a]	568456	8.59	579166	11.28	1075138	12.24	975426	15.28	484332	17.30
Lower Limit [b]	142114	7.59	144792	10.28	268785	11.24	243857	14.28	121083	16.30
Lab Sample ID	**IS 1 AREA**	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**	**IS 4 AREA**	**RT**	**IS 5 AREA**	**RT**
VC7691-MB2 [c]	288517	8.08	306857	10.79	565022	11.74	506723	14.78	245899	16.80
ZZZZZZ	287579	8.08	300483	10.78	559018	11.74	503043	14.78	243185	16.80
ZZZZZZ	283956	8.09	304154	10.78	564367	11.74	507538	14.78	242901	16.80
ZZZZZZ	281972	8.08	302313	10.79	558613	11.74	508752	14.78	244896	16.80
ZZZZZZ	288394	8.08	306031	10.78	569319	11.74	510912	14.78	242859	16.80
JC18196-1	309962	8.08	313010	10.78	582696	11.74	520803	14.78	241666	16.80
JC18196-2	301047	8.08	311087	10.78	579360	11.74	515091	14.78	239996	16.80
JC18196-3	281902	8.07	306593	10.78	560864	11.74	507570	14.78	239805	16.80
JC18196-4	287365	8.08	297990	10.78	548469	11.74	496703	14.78	237355	16.80
JC18196-5	280174	8.08	301773	10.78	548658	11.74	497238	14.78	241727	16.80

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) corr-raw data in PDF

Volatile Internal Standard Area Summary

Job Number: JC18196
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Check Std: VC7692-CC7650 **Injection Date:** 04/15/16
Lab File ID: C209113.D **Injection Time:** 12:15
Instrument ID: GCMSC **Method:** SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	291484	8.08	305723	10.78	563791	11.74	506300	14.78	245817	16.80
Upper Limit [a]	582968	8.58	611446	11.28	1127582	12.24	1012600	15.28	491634	17.30
Lower Limit [b]	145742	7.58	152862	10.28	281896	11.24	253150	14.28	122909	16.30

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VC7692-MB	291229	8.08	308328	10.78	571565	11.74	518811	14.78	250191	16.80
VC7692-BS	282123	8.08	296597	10.78	551757	11.74	496535	14.78	249330	16.80
JC18328-1	291511	8.09	306593	10.79	568503	11.74	513606	14.78	248298	16.80
JC18328-2	293765	8.08	311152	10.79	577847	11.74	516519	14.78	247486	16.80
ZZZZZZ	291891	8.08	311900	10.78	580356	11.74	523371	14.78	252507	16.80
JC18196-7	292417	8.08	309792	10.79	579877	11.74	519817	14.78	250141	16.80
JC18196-6	299575	8.08	306935	10.78	575318	11.74	518925	14.78	247351	16.80
JC18328-2MS	278427	8.08	291620	10.79	546830	11.74	496416	14.78	242243	16.80
JC18328-1DUP	282440	8.09	302909	10.79	563769	11.74	504763	14.78	242187	16.80
ZZZZZZ	283518	8.09	310219	10.79	576749	11.75	517877	14.78	249645	16.80
ZZZZZZ	282181	8.09	304366	10.79	567575	11.74	515602	14.78	250090	16.80
ZZZZZZ	289339	8.08	306724	10.79	576157	11.74	520616	14.78	251872	16.80
ZZZZZZ	283022	8.08	303691	10.79	570813	11.74	518429	14.79	252165	16.80
ZZZZZZ	286048	8.09	303700	10.79	572547	11.74	519273	14.78	252436	16.80
ZZZZZZ	285352	8.08	306522	10.79	578025	11.74	522526	14.78	251175	16.80
ZZZZZZ	288356	8.09	304712	10.79	573395	11.74	523804	14.78	253270	16.80
ZZZZZZ	333892	8.09	314269	10.78	594545	11.74	530318	14.78	251125	16.80

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: JC18196
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Method: SW846 8260C **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JC18196-1	C209097.D	99	100	101	106
JC18196-2	C209098.D	98	102	100	106
JC18196-3	C209099.D	97	101	100	108
JC18196-4	C209101.D	97	98	100	108
JC18196-5	C209103.D	96	98	100	106
JC18196-6	C209122.D	99	101	100	105
JC18196-7	C209121.D	98	101	100	104
JC18164-7MS	C209074.D	97	94	100	103
JC18164-7MSD	C209075.D	96	93	100	104
JC18328-1DUP	C209125.D	98	99	100	104
JC18328-2MS	C209123.D	100	99	101	103
VC7691-BS	C209066.D	99	97	100	102
VC7691-MB2	C209089.D	96	97	100	103
VC7692-BS	C209116.D	99	99	101	103
VC7692-MB	C209115.D	98	99	101	104
VC7691-MB	C209065.D	96	97	100	104

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	76-120%
S2 = 1,2-Dichloroethane-D4	73-122%
S3 = Toluene-D8	84-119%
S4 = 4-Bromofluorobenzene	78-117%

Initial Calibration Summary

Job Number: JC18196 **Sample:** VC7650-ICC7650
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** C207913.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Response Factor Report MSC

Method : C:\MSDCHEM\1\METHODS\MC7650.M (RTE Integrator)
Title : Method SW846 8260C, ZB-624 60 m x 0.25 mm x 1.4 uFri Feb 26 15:06:23 2016
Last Update : Fri Feb 26 15:06:23 2016
Response via : Initial Calibration

Calibration Files
5 =c207910.D 2 =c207909.D 20 =c207912.D 50 =c207913.D
100 =c207914.D 1 =c207908.D 200 =c207915.D 0.5 =c207907.D
10 =c207911.D 0.2 =c206906.D = =

Compound	5	2	20	50	100	1	200	0.5	10	0.2	Avg	%RSD
1) Tert Butyl Alcohol-d9	----------ISTD----------											
2) 1,4-dioxane	0.075	0.078	0.079	0.079	0.076		0.071		0.083		0.077	5.12
3) tertiary butyl alcohol	1.043	1.102	1.025	1.022	0.976	1.208	0.941		1.098		1.052	7.92
4) ethanol											0.000#	-1.00
5) I pentafluorobenzene	----------ISTD----------											
6) chlorotrifluoroethene											0.000#	-1.00
7) chlorodifluoromethane	0.730	0.709	0.755	0.763	0.747	0.749	0.738	0.739	0.790		0.747	3.04
8) dichlorodifluoromethane	0.480	0.426	0.506	0.466	0.518	0.436	0.493	0.384	0.516		0.469	9.78
9) chloromethane	0.921	0.945	1.020	1.032	1.048	1.035	1.031	1.015	1.059	0.991	1.010	4.42
10) vinyl chloride	0.765	0.754	0.854	0.865	0.888	0.816	0.889	0.777	0.873	0.726	0.821	7.42
11) 1,3-Butadiene											0.000#	-1.00
12) acetaldehyde											0.000#	-1.00
13) bromomethane	0.375	0.368	0.402	0.396	0.372	0.420		0.366	0.419		0.390	5.75
14) chloroethane	0.462	0.475	0.492	0.489	0.488	0.490	0.462	0.467	0.516		0.482	3.68
15) VINYL BROMIDE											0.000#	-1.00
16) trichlorofluoromethane	0.601	0.558	0.672	0.662	0.696	0.566	0.686	0.500	0.679		0.624	11.22
17) pentane											0.000#	-1.00
18) ethyl ether	0.366	0.343	0.391	0.384	0.379	0.379	0.375	0.360	0.399		0.375	4.47
19) 2-chloropropane	1.029	0.998	1.135	1.085	1.073	1.084	1.070	1.160	1.160	0.842	1.064	8.84
20) acrolein	0.137	0.126	0.155	0.158	0.161	0.121	0.165		0.155		0.147	11.38
21) 1,1-dichloroethene	0.786	0.771	0.874	0.849	0.861	0.837	0.859	0.863	0.893	0.596	0.819	10.62
22) isopropyl alcohol											0.000#	-1.00
23) acetone												

```
                0.069 0.072 0.074       0.074       0.067        0.071    4.41
24)  allyl chloride
      0.311 0.284 0.320 0.316 0.318 0.311 0.317       0.326        0.313    4.00
25)  acetonitrile
      0.068 0.070 0.069 0.070 0.071 0.074 0.071       0.072        0.071    2.68
26)  iodomethane
      0.632 0.613 0.698 0.681 0.681 0.633 0.678 0.690 0.712        0.669    5.14
27)  iso-butyl alcohol
                                                                   0.000#  -1.00
28)  carbon disulfide
      1.668 1.660 1.797 1.745 1.759 1.881 1.753 2.071 1.857 2.242  1.843    9.96
29)  methylene chloride
      0.552 0.549 0.594 0.572 0.565 0.594 0.565 0.602 0.612        0.578    3.91
30)  1-chloropropane
      0.413 0.490 0.389 0.363 0.348       0.346       0.413        0.395   12.77
31)  methyl acetate
      0.611 0.540 0.649 0.651 0.638 0.525 0.621       0.657        0.611    8.41
32)  methyl tert butyl ether
      1.746 1.705 1.888 1.847 1.848 1.900 1.848 2.036 1.974 1.560  1.835    7.43
33)  trans-1,2-dichloroethene
      0.816 0.808 0.910 0.878 0.874 0.860 0.864 0.953 0.933 0.739  0.864    7.34
34)  di-isopropyl ether
      2.211 2.155 2.251 2.282 2.209 2.226 2.181 2.227 2.343 1.922  2.201    5.04
35)  ethyl tert-butyl ether
      2.019 1.973 2.043 2.075 2.020 2.078 2.020 2.002 2.129 1.599  1.996    7.33
36)  2-butanone
      0.074       0.093 0.095 0.098       0.096       0.090        0.091    9.53
37)  1,1-dichloroethane
      1.040 1.037 1.143 1.084 1.073 1.086 1.078 1.201 1.169 0.862  1.077    8.62
38)  chloroprene
      0.813 0.757 0.873 0.902 0.882 0.793 0.878 0.770 0.884        0.839    6.63
39)  acrylonitrile
      0.279 0.265 0.309 0.304 0.305 0.289 0.302 0.247 0.320        0.291    8.05
40)  vinyl acetate
      0.109       0.127 0.136 0.134       0.133       0.127        0.128    7.67
41)  ethyl acetate
      0.111       0.121 0.123 0.121       0.121       0.127        0.121    4.53
42)  2,2-dichloropropane
      0.560 0.559 0.598 0.556 0.528 0.616 0.498 0.677 0.619        0.579    9.35
43)  cis-1,2-dichloroethene
      0.565 0.574 0.609 0.587 0.584 0.638 0.574 0.669 0.631        0.604    5.87
44)  methyl acrylate
      0.079       0.100 0.104 0.106       0.105       0.099        0.099   10.22
45)  propionitrile
      0.117 0.121 0.130 0.128 0.129 0.136 0.129 0.119 0.135        0.127    5.33
46)  bromochloromethane
      0.239 0.231 0.261 0.254 0.252 0.232 0.249 0.250 0.269        0.249    5.13
47)  tetrahydrofuran
      0.098 0.087 0.109 0.109 0.107       0.107       0.109        0.104    8.19
48)  chloroform
      0.883 0.877 0.974 0.939 0.934 0.994 0.919 1.107 1.005 0.930  0.956    7.08
49)  t-butyl formate
      0.584 0.577 0.613 0.628 0.621 0.597 0.620 0.568 0.628        0.604    3.81
50)  dibromofluoromethane (s)
      0.534 0.530 0.541 0.546 0.540 0.525 0.545 0.531 0.537 0.532  0.536    1.28
51)  1,2-dichloroethane-d4 (s)
      0.754 0.745 0.744 0.750 0.751 0.734 0.756 0.735 0.754 0.731  0.745    1.23
52)  freon 113
      0.204 0.181 0.231 0.217 0.229 0.161 0.221       0.229        0.209   12.23
53)  methacrylonitrile
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      0.281 0.258 0.325 0.324 0.326 0.304 0.325       0.326        0.308    8.40
54)  cyclohexane
      0.693 0.631 0.769 0.716 0.759 0.719 0.749 0.706 0.777        0.724    6.34
55)  1,1,1-trichloroethane
      0.663 0.648 0.732 0.716 0.718 0.709 0.724 0.741 0.748        0.711    4.79
56)  tert-amyl alcohol
                                                                   0.000#  -1.00
57)  2,2,4-trimethylpentane
      1.207 1.131 1.295 1.243 1.319 1.430 1.255 0.974 1.352        1.245   10.69
58)  tert-amyl methyl ether
      1.866 1.919 1.865 1.899 1.856 2.146 1.850 2.053 1.973 1.754  1.918    5.88

59) I   1,4-difluorobenzene   ----------------ISTD---------------------
60)  epichlorohydrin
      0.047 0.048 0.049 0.049 0.050 0.050 0.050 0.052 0.051        0.049    2.96
61)  n-butyl alcohol
      0.014 0.014 0.014 0.015 0.016 0.014 0.016       0.015        0.015    5.90
62)  carbon tetrachloride
      0.278 0.278 0.311 0.305 0.313 0.301 0.312 0.314 0.323        0.304    5.19
63)  1,1-dichloropropene
      0.383 0.364 0.423 0.407 0.413 0.403 0.407 0.431 0.436 0.336  0.400    7.77
64)  hexane
      0.263 0.252 0.284 0.259 0.269 0.301 0.249       0.293        0.271    7.15
65)  benzene
      1.187 1.218 1.316 1.265 1.253 1.363 1.219 1.445 1.363 1.155  1.278    7.14
66)  heptane
      0.142 0.136 0.156 0.146 0.152 0.162 0.145       0.162        0.150    6.44
67)  isopropyl acetate
      0.079       0.084 0.085 0.085       0.084       0.087        0.084    3.36
68)  1,2-dichloroethane
      0.421 0.414 0.456 0.437 0.437 0.465 0.427 0.504 0.472 0.312  0.435   11.69
69)  ethyl acrylate
      0.466 0.467 0.554 0.563 0.587       0.606       0.498        0.534   10.74
70)  trichloroethene
      0.266 0.264 0.299 0.287 0.291 0.302 0.289 0.321 0.309 0.249  0.288    7.76
71)  2-chloroethyl vinyl ether
      0.262 0.268 0.272 0.277 0.267 0.286 0.255 0.269 0.284 0.191  0.263   10.19
72)  2-Nitropropane
      0.159 0.170 0.171 0.169 0.168 0.189 0.164 0.175 0.178        0.171    5.04
73)  methylcyclohexane
      0.357 0.333 0.377 0.355 0.373 0.391 0.363 0.310 0.373        0.359    6.80
74)  tert-amyl ethyl ether
                                                                   0.000#  -1.00
75)  methyl methacrylate
      0.080 0.073 0.094 0.094 0.096 0.087 0.096       0.094        0.089    9.44
76)  1,2-dichloropropane
      0.343 0.354 0.372 0.360 0.361 0.388 0.356 0.415 0.388 0.255  0.359   11.76
77)  dibromomethane
      0.181 0.179 0.195 0.189 0.190 0.202 0.189 0.196 0.202 0.140  0.186    9.58
78)  bromodichloromethane
      0.367 0.377 0.417 0.408 0.412 0.440 0.410 0.431 0.421 0.294  0.398   10.69
79)  cis-1,3-dichloropropene
      0.511 0.510 0.568 0.554 0.557 0.598 0.554 0.605 0.582 0.406  0.544   10.67
80)  toluene-d8 (s)
      1.269 1.273 1.266 1.270 1.284 1.272 1.298 1.259 1.265 1.257  1.271    0.95
81)  4-methyl-2-pentanone
      0.165 0.174 0.183 0.182 0.187 0.186 0.190 0.146 0.186        0.178    7.94
82)  toluene
      1.250 1.254 1.329 1.277 1.284 1.437 1.260 1.485 1.383 1.210  1.317    6.84
83)  3-methyl-1-butanol
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      0.021 0.021 0.022 0.023 0.024 0.023 0.026       0.022        0.023    7.05
84)  trans-1,3-dichloropropene
      0.478 0.490 0.530 0.520 0.525 0.547 0.524 0.567 0.539 0.369  0.509   10.91
85)  ethyl methacrylate
      0.456 0.461 0.523 0.532 0.544 0.535 0.552 0.476 0.529        0.512    7.22
86)  1,1,2-trichloroethane
      0.241 0.262 0.261 0.254 0.256 0.319 0.258 0.284 0.274        0.267    8.45
87)  2-hexanone
      0.167 0.184 0.172 0.172 0.182 0.189 0.188 0.138 0.171        0.174    9.02

88) I   chlorobenzene-d5      ----------------ISTD---------------------
89)  cyclohexanone
      0.009 0.008 0.008 0.008 0.008       0.008       0.008        0.008#   4.08
90)  tetrachloroethene
      0.258 0.255 0.277 0.268 0.268 0.290 0.263 0.303 0.291 0.239  0.271    7.11
91)  1,3-dichloropropane
      0.593 0.624 0.627 0.605 0.591 0.741 0.574 0.729 0.649        0.637    9.41
92)  butyl acetate
      0.328 0.338 0.341 0.349 0.339 0.362 0.338 0.323 0.354        0.341    3.56
93)  3,3-dimethyl-1-butanol
      0.054 0.056 0.056 0.062 0.060 0.062 0.064 0.062 0.057        0.059    5.96
94)  dibromochloromethane
      0.285 0.307 0.320 0.318 0.316 0.367 0.314 0.340 0.323        0.321    6.99
95)  1,2-dibromoethane
      0.297 0.319 0.322 0.316 0.315 0.372 0.311 0.336 0.338        0.325    6.64
96)  n-butyl ether
      1.725 1.733 1.866 1.851 1.854 2.027 1.844 2.019 1.907 1.545  1.837    7.79
97)  chlorobenzene
      0.854 0.903 0.887 0.859 0.846 1.043 0.829 1.075 0.931 0.843  0.907    9.51
98)  1,1,1,2-tetrachloroethane
      0.281 0.295 0.295 0.289 0.289 0.351 0.286 0.337 0.310        0.304    8.07
99)  ethylbenzene
      1.556 1.595 1.662 1.608 1.599 1.909 1.569 1.938 1.731 1.623  1.679    8.24
100)  m,p-xylene
      0.575 0.594 0.615 0.592 0.587 0.681 0.561 0.693 0.638 0.551  0.609    7.92
101)  o-xylene
      1.248 1.284 1.331 1.302 1.308 1.515 1.304 1.528 1.392 1.217  1.343    7.82
102)  styrene
      0.905 0.929 1.021 1.017 1.021 1.109 1.009 1.067 1.038        1.013    6.21
103)  bromoform
      0.178 0.186 0.197 0.202 0.207 0.230 0.208 0.205 0.199        0.201    7.33

104) I   1,4-dichlorobenzene-d ----------------ISTD---------------------
105)  isopropylbenzene
      2.981 3.051 3.168 2.993 2.926 3.636 2.899 3.690 3.278 2.974  3.160    9.14
106)  4-bromofluorobenzene (s)
      0.710 0.708 0.705 0.691 0.675 0.711 0.691 0.713 0.702 0.710  0.702    1.72
107)  bromobenzene
      0.656 0.715 0.703 0.659 0.639 0.877 0.621 0.825 0.735        0.715   12.13
108)  1,1,2,2-tetrachloroethane
      1.021 1.166 1.066 1.011 0.997 1.482 1.011       1.117        1.109   14.61
109)  trans-1,4-dichloro-2-butene
      *This compound does not meet initial calibration criteria*
      0.075       0.135 0.173 0.208       0.229       0.109        0.155   38.29
110)  1,2,3-trichloropropane
      0.278 0.310 0.280 0.265 0.260       0.257       0.298        0.278    7.13
111)  n-propylbenzene
      3.648 3.794 3.912 3.728 3.668 4.368 3.585 4.632 4.031 3.913  3.928    8.58
112)  4-ethyltoluene
                                                                   0.000#  -1.00
```

Initial Calibration Summary

Job Number: JC18196 **Sample:** VC7650-ICC7650
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** C207913.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

```
113)  2-chlorotoluene
       0.698 0.743 0.725 0.681 0.665 0.841 0.653 0.890 0.755        0.739   10.86
114)  4-chlorotoluene
       2.391 2.585 2.491 2.371 2.349 3.032 2.348 3.111 2.619 2.576  2.587   10.65
115)  1,3,5-trimethylbenzene
       2.501 2.605 2.724 2.587 2.582 2.993 2.558 3.141 2.776 2.540  2.701    7.88
116)  tert-butylbenzene
       0.491 0.512 0.519 0.501 0.501 0.595 0.495 0.632 0.548        0.533    9.35
117)  pentachloroethane
       0.375 0.400 0.413 0.398 0.404 0.491 0.403 0.465 0.424        0.419    8.67
118)  1,2,4-trimethylbenzene
       2.623 2.736 2.796 2.689 2.695 3.210 2.665 3.277 2.905 2.682  2.828    8.25
119)  sec-butylbenzene
       3.162 3.259 3.385 3.242 3.251 3.844 3.198 4.063 3.507 3.388  3.430    8.71
120)  1,3-dichlorobenzene
       1.340 1.462 1.418 1.353 1.340 1.781 1.318 1.802 1.471 1.382  1.467   12.19
121)  p-isopropyltoluene
       2.607 2.705 2.781 2.671 2.676 3.242 2.611 3.302 2.865 2.827  2.829    8.81
122)  1,4-dichlorobenzene
       1.389 1.510 1.448 1.373 1.362 1.913 1.339 1.906 1.506 1.589  1.533   13.89
123)  benzyl chloride
       1.945 2.070 1.940 1.938 1.899 2.375 1.856 2.479 2.037 1.843  2.038   10.69
124)  p-diethylbenzene
                                                                    0.000#  -1.00
125)  1,2-dichlorobenzene
       1.359 1.476 1.402 1.344 1.333 1.793 1.302 1.802 1.470 1.301  1.458   12.98
126)  n-butylbenzene
       1.425 1.460 1.564 1.512 1.524 1.757 1.490 1.821 1.603 1.550  1.571    8.05
127)  1,2,4,5-tetramethylbenzene
                                                                    0.000#  -1.00
128)  1,2-dibromo-3-chloropropane
       0.195 0.221 0.206 0.204 0.205       0.201       0.214        0.206    4.08
129)  1,3,5-trichlorobenzene
       0.945 0.987 1.009 0.962 0.925 1.213 0.875 1.257 1.038 0.986  1.020   12.01
130)  1,2,4-trichlorobenzene
       0.889 0.958 0.945 0.897 0.865 1.141 0.810 1.205 0.980 1.014  0.970   12.66
131)  hexachlorobutadiene
       0.277 0.283 0.303 0.286 0.275 0.356 0.257 0.350 0.310        0.300   11.36
132)  naphthalene
       3.126 3.501 3.289 3.164 3.020       2.818       3.393        3.187    7.24
133)  1,2,3-trichlorobenzene
       0.835 0.909 0.894 0.852 0.808 1.137 0.753 1.148 0.928 0.889  0.915   14.26
134)  hexachloroethane
       0.434 0.473 0.484 0.473 0.476 0.634 0.468       0.491        0.492   12.19
 ----------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          MC7650.M          Fri Feb 26 15:08:11 2016   C
```

Initial Calibration Verification

Job Number: JC18196 **Sample:** VC7650-ICV7650
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** C207918.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\c207918.D Vial: 15
Acq On : 25 Feb 2016 11:09 pm Operator: VIANNAC
Sample : icv7650-50 Inst : MSC
Misc : MS98721,VC7650,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MC7650.M (RTE Integrator)
Title : Method SW846 8260C, ZB-624 60 m x 0.25 mm x 1.4 uFri Feb 26 15:06:23 2016
Last Update : Fri Feb 26 15:06:23 2016
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1		Tert Butyl Alcohol-d9	1.000	1.000	0.0	100	0.00	8.08
2	M	1,4-dioxane	0.077	0.077	0.0	98	0.00	12.48
3	M	tertiary butyl alcohol	1.052	1.026	2.5	101	0.00	8.23
4		ethanol		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	100	0.00	10.79
6	M	chlorotrifluoroethene		----------NA----------				
7	M	chlorodifluoromethane	0.747	0.841	-12.6	110	0.00	3.95
8	M	dichlorodifluoromethane	0.469	0.518	-10.4	111	0.00	3.91
9	M	chloromethane	1.010	0.951	5.8	92	0.00	4.36
10	M	vinyl chloride	0.821	0.788	4.0	91	0.00	4.63
11		1,3-Butadiene		----------NA----------				
12	M	acetaldehyde		----------NA----------				
13	M	bromomethane	0.390	0.419	-7.4	106	0.00	5.39
14	M	chloroethane	0.482	0.482	0.0	98	0.00	5.61
15		VINYL BROMIDE		----------NA----------				
16	M	trichlorofluoromethane	0.624	0.644	-3.2	97	0.00	6.11
17		pentane		----------NA----------				
18	M	ethyl ether	0.375	0.405	-8.0	106	0.00	6.66
19	m	2-chloropropane	1.064	1.120	-5.3	103	0.00	6.89
20	M	acrolein	0.147	0.151	-2.7	95	0.00	7.00
21	M	1,1-dichloroethene	0.819	0.865	-5.6	102	0.00	7.16
22	M	isopropyl alcohol		----------NA----------				
23	M	acetone	0.071	0.077	-8.5	107	0.00	7.29
24	M	allyl chloride	0.313	0.315	-0.6	100	0.00	7.85
25	M	acetonitrile	0.071	0.071	0.0	101	0.00	7.86
26	M	iodomethane	0.669	0.693	-3.6	102	0.00	7.51
27	M	iso-butyl alcohol		----------NA----------				
28	M	carbon disulfide	1.843	1.822	1.1	104	0.00	7.63
29	M	methylene chloride	0.578	0.592	-2.4	103	0.00	8.10
30	m	1-chloropropane	0.395	0.363	8.1	100	0.00	8.12
31	M	methyl acetate	0.611	0.657	-7.5	101	0.00	7.86
32	M	methyl tert butyl ether	1.835	1.943	-5.9	105	0.00	8.48
33	M	trans-1,2-dichloroethene	0.864	0.884	-2.3	101	0.00	8.56
34	M	di-isopropyl ether	2.201	2.322	-5.5	102	0.00	9.26
35	M	ethyl tert-butyl ether	1.996	2.152	-7.8	104	0.00	9.82
36	M	2-butanone	0.091	0.103	-13.2	108	0.00	10.18
37	M	1,1-dichloroethane	1.077	1.126	-4.5	104	0.00	9.30
38	M	chloroprene	0.839	0.913	-8.8	101	0.00	9.42
39	M	acrylonitrile	0.291	0.324	-11.3	107	0.00	8.57
40	M	vinyl acetate	0.128	0.143	-11.7	105	0.00	9.31
41	M	ethyl acetate	0.121	0.127	-5.0	102	0.00	10.19

Initial Calibration Verification

Job Number: JC18196 **Sample:** VC7650-ICV7650
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** C207918.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

42	M	2,2-dichloropropane	0.579	0.553	4.5	99	0.00	10.16
43	M	cis-1,2-dichloroethene	0.604	0.606	-0.3	103	0.00	10.19
44	m	methyl acrylate	0.099	0.114	-15.2	110	0.00	10.28
45	M	propionitrile	0.127	0.137	-7.9	107	0.00	10.32
46	M	bromochloromethane	0.249	0.267	-7.2	105	0.00	10.54
47	M	tetrahydrofuran	0.104	0.116	-11.5	107	0.00	10.57
48	M	chloroform	0.956	0.994	-4.0	106	0.00	10.62
49	m	t-butyl formate	0.604	0.549	9.1	87	0.00	10.63
50	S	dibromofluoromethane (s)	0.536	0.536	0.0	98	0.00	10.84
51	S	1,2-dichloroethane-d4 (s)	0.745	0.739	0.8	98	0.00	11.29
52	M	freon 113	0.209	0.260	-24.4	120	0.00	7.11
53	M	methacrylonitrile	0.308	0.338	-9.7	104	0.00	10.51
54		cyclohexane	0.724	0.753	-4.0	105	0.00	10.90
55	M	1,1,1-trichloroethane	0.711	0.759	-6.8	106	0.00	10.85
56		tert-amyl alcohol		----------NA----------				
57		2,2,4-trimethylpentane	1.245	1.483	-19.1	119	0.00	11.31
58	M	tert-amyl methyl ether	1.918	1.959	-2.1	103	0.00	11.36
59	I	1,4-difluorobenzene	1.000	1.000	0.0	99	0.00	11.75
60	M	epichlorohydrin	0.049	0.051	-4.1	102	0.00	13.03
61	M	n-butyl alcohol	0.015	0.015	0.0	100	0.00	11.92
62	M	carbon tetrachloride	0.304	0.314	-3.3	101	0.00	11.06
63	M	1,1-dichloropropene	0.400	0.443	-10.7	107	0.00	11.05
64	M	hexane	0.271	0.275	-1.5	105	0.00	8.93
65	M	benzene	1.278	1.324	-3.6	103	0.00	11.34
66	M	heptane	0.150	0.176	-17.3	119	0.00	11.49
67	M	isopropyl acetate	0.084	0.090	-7.1	104	0.00	11.29
68	M	1,2-dichloroethane	0.435	0.467	-7.4	105	0.00	11.38
69		ethyl acrylate		----------NA----------				
70	M	trichloroethene	0.288	0.301	-4.5	103	0.00	12.08
71	M	2-chloroethyl vinyl ether	0.263	0.255	3.0	91	0.00	12.90
72		2-Nitropropane	0.171	0.178	-4.1	104	0.00	12.90
73	M	methylcyclohexane	0.359	0.417	-16.2	116	0.00	12.26
74		tert-amyl ethyl ether		----------NA----------				
75	M	methyl methacrylate	0.089	0.104	-16.9	108	0.00	12.37
76	M	1,2-dichloropropane	0.359	0.378	-5.3	104	0.00	12.36
77	M	dibromomethane	0.186	0.199	-7.0	104	0.00	12.52
78	M	bromodichloromethane	0.398	0.430	-8.0	104	0.00	12.66
79	M	cis-1,3-dichloropropene	0.544	0.583	-7.2	104	0.00	13.10
80	S	toluene-d8 (s)	1.271	1.277	-0.5	99	0.00	13.36
81	M	4-methyl-2-pentanone	0.178	0.200	-12.4	108	0.00	13.19
82	M	toluene	1.317	1.347	-2.3	104	0.00	13.43
83	M	3-methyl-1-butanol	0.023	0.024	-4.3	103	0.00	13.24
84	M	trans-1,3-dichloropropene	0.509	0.537	-5.5	102	0.00	13.65
85	M	ethyl methacrylate	0.512	0.572	-11.7	106	0.00	13.63
86	M	1,1,2-trichloroethane	0.267	0.269	-0.7	105	0.00	13.85
87	M	2-hexanone	0.174	0.193	-10.9	110	0.00	14.01
88	I	chlorobenzene-d5	1.000	1.000	0.0	101	0.00	14.78
89	M	cyclohexanone	0.008	0.007#	12.5	90	0.00	15.80
90	M	tetrachloroethene	0.271	0.278	-2.6	104	0.00	13.98
91	M	1,3-dichloropropane	0.637	0.629	1.3	104	0.00	14.02
92	M	butyl acetate	0.341	0.366	-7.3	106	0.00	14.07
93	m	3,3-dimethyl-1-butanol	0.059	0.059	0.0	97	0.00	14.18
94	M	dibromochloromethane	0.321	0.333	-3.7	105	0.00	14.27
95	M	1,2-dibromoethane	0.325	0.333	-2.5	106	0.00	14.41
96	M	n-butyl ether	1.837	1.943	-5.8	106	0.00	14.70
97	M	chlorobenzene	0.907	0.905	0.2	106	0.00	14.81
98	M	1,1,1,2-tetrachloroethane	0.304	0.296	2.6	103	0.00	14.87
99	M	ethylbenzene	1.679	1.667	0.7	104	0.00	14.85

Initial Calibration Verification

Job Number: JC18196 **Sample:** VC7650-ICV7650
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** C207918.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

100	M	m,p-xylene	0.609	0.614	-0.8	104	0.00	14.95
101	M	o-xylene	1.343	1.390	-3.5	107	0.00	15.32
102	M	styrene	1.013	1.059	-4.5	105	0.00	15.34
103	M	bromoform	0.201	0.214	-6.5	107	0.00	15.60
104	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	101	0.00	16.81
105	M	isopropylbenzene	3.160	3.059	3.2	103	0.00	15.61
106	S	4-bromofluorobenzene (s)	0.702	0.694	1.1	101	0.00	15.81
107	M	bromobenzene	0.715	0.687	3.9	105	0.00	15.99
108	M	1,1,2,2-tetrachloroethane	1.109	1.070	3.5	107	0.00	15.92
109	M	trans-1,4-dichloro-2-bute	0.155	0.198	-27.7	116	0.00	15.94
110	M	1,2,3-trichloropropane	0.278	0.280	-0.7	107	0.00	15.98
111	M	n-propylbenzene	3.928	3.919	0.2	106	0.00	15.97
112	M	4-ethyltoluene	----------NA----------					
113	M	2-chlorotoluene	0.739	0.691	6.5	102	0.00	16.11
114	M	4-chlorotoluene	2.587	2.480	4.1	106	0.00	16.19
115	M	1,3,5-trimethylbenzene	2.701	2.665	1.3	104	0.00	16.09
116	M	tert-butylbenzene	0.533	0.515	3.4	104	0.00	16.39
117	M	pentachloroethane	0.419	0.418	0.2	106	0.00	16.49
118	M	1,2,4-trimethylbenzene	2.828	2.827	0.0	106	0.00	16.43
119	M	sec-butylbenzene	3.430	3.288	4.1	102	0.00	16.57
120	M	1,3-dichlorobenzene	1.467	1.397	4.8	104	0.00	16.75
121	M	p-isopropyltoluene	2.829	2.776	1.9	105	0.00	16.67
122	M	1,4-dichlorobenzene	1.533	1.441	6.0	106	0.00	16.83
123		benzyl chloride	2.038	1.922	5.7	100	0.00	16.93
124		p-diethylbenzene	----------NA----------					
125	M	1,2-dichlorobenzene	1.458	1.405	3.6	106	0.00	17.16
126	M	n-butylbenzene	1.571	1.525	2.9	102	0.00	17.01
127		1,2,4,5-tetramethylbenzen	----------NA----------					
128	M	1,2-dibromo-3-chloropropa	0.206	0.217	-5.3	108	0.00	17.79
129	m	1,3,5-trichlorobenzene	1.020	0.968	5.1	102	0.00	17.91
130	M	1,2,4-trichlorobenzene	0.970	0.935	3.6	105	0.00	18.45
131	M	hexachlorobutadiene	0.300	0.284	5.3	100	0.00	18.52
132	M	naphthalene	3.187	3.268	-2.5	104	0.00	18.70
133	M	1,2,3-trichlorobenzene	0.915	0.868	5.1	103	0.00	18.90
134	M	hexachloroethane	0.492	0.486	1.2	104	0.00	17.36

(#) = Out of Range SPCC's out = 0 CCC's out = 0
c207913.D MC7650.M Fri Feb 26 15:07:57 2016 C

Initial Calibration Verification

Job Number: JC18196 **Sample:** VC7651-ICV7650
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** C207929.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\c207929.D Vial: 10
Acq On : 26 Feb 2016 4:04 pm Operator: VIANNAC
Sample : ICV7650-50 Inst : MSC
Misc : MS98721,VC7651,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\MC7650.M (RTE Integrator)
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um
Last Update : Fri Feb 26 15:43:53 2016
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1		Tert Butyl Alcohol-d9	1.000	1.000	0.0	96	0.00	8.08
2	M	1,4-dioxane		----------NA----------				
3	M	tertiary butyl alcohol		----------NA----------				
4		ethanol		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	96	0.00	10.79
6	M	chlorotrifluoroethene		----------NA----------				
7	M	chlorodifluoromethane		----------NA----------				
8	M	dichlorodifluoromethane		----------NA----------				
9	M	chloromethane		----------NA----------				
10	M	vinyl chloride		----------NA----------				
11		1,3-Butadiene		----------NA----------				
12	M	acetaldehyde		----------NA----------				
13	M	bromomethane		----------NA----------				
14	M	chloroethane		----------NA----------				
15		VINYL BROMIDE		----------NA----------				
16	M	trichlorofluoromethane		----------NA----------				
17		pentane		----------NA----------				
18	M	ethyl ether		----------NA----------				
19	m	2-chloropropane		----------NA----------				
20	M	acrolein		----------NA----------				
21	M	1,1-dichloroethene		----------NA----------				
22	M	isopropyl alcohol		----------NA----------				
23	M	acetone		----------NA----------				
24	M	allyl chloride		----------NA----------				
25	M	acetonitrile		----------NA----------				
26	M	iodomethane		----------NA----------				
27	M	iso-butyl alcohol		----------NA----------				
28	M	carbon disulfide		----------NA----------				
29	M	methylene chloride		----------NA----------				
30	m	1-chloropropane		----------NA----------				
31	M	methyl acetate		----------NA----------				
32	M	methyl tert butyl ether		----------NA----------				
33	M	trans-1,2-dichloroethene		----------NA----------				
34	M	di-isopropyl ether		----------NA----------				
35	M	ethyl tert-butyl ether		----------NA----------				
36	M	2-butanone		----------NA----------				
37	M	1,1-dichloroethane		----------NA----------				
38	M	chloroprene		----------NA----------				
39	M	acrylonitrile		----------NA----------				
40	M	vinyl acetate		----------NA----------				
41	M	ethyl acetate		----------NA----------				

Initial Calibration Verification

Job Number: JC18196 **Sample:** VC7651-ICV7650
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** C207929.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

42	M	2,2-dichloropropane		----------NA----------				
43	M	cis-1,2-dichloroethene		----------NA----------				
44	m	methyl acrylate		----------NA----------				
45	M	propionitrile		----------NA----------				
46	M	bromochloromethane		----------NA----------				
47	M	tetrahydrofuran		----------NA----------				
48	M	chloroform		----------NA----------				
49	m	t-butyl formate		----------NA----------				
50	S	dibromofluoromethane (s)	0.536	0.531	0.9	93	0.00	10.84
51	S	1,2-dichloroethane-d4 (s)	0.745	0.753	-1.1	96	0.00	11.29
52	M	freon 113		----------NA----------				
53	M	methacrylonitrile		----------NA----------				
54		cyclohexane		----------NA----------				
55	M	1,1,1-trichloroethane		----------NA----------				
56		tert-amyl alcohol		----------NA----------				
57		2,2,4-trimethylpentane		----------NA----------				
58	M	tert-amyl methyl ether		----------NA----------				
59	I	1,4-difluorobenzene	1.000	1.000	0.0	95	0.00	11.75
60	M	epichlorohydrin		----------NA----------				
61	M	n-butyl alcohol		----------NA----------				
62	M	carbon tetrachloride		----------NA----------				
63	M	1,1-dichloropropene		----------NA----------				
64	M	hexane		----------NA----------				
65	M	benzene		----------NA----------				
66	M	heptane		----------NA----------				
67	M	isopropyl acetate		----------NA----------				
68	M	1,2-dichloroethane		----------NA----------				
69		ethyl acrylate	0.534	0.604	-13.1	102	-0.01	12.11
70	M	trichloroethene		----------NA----------				
71	M	2-chloroethyl vinyl ether		----------NA----------				
72		2-Nitropropane		----------NA----------				
73	M	methylcyclohexane		----------NA----------				
74		tert-amyl ethyl ether		----------NA----------				
75	M	methyl methacrylate		----------NA----------				
76	M	1,2-dichloropropane		----------NA----------				
77	M	dibromomethane		----------NA----------				
78	M	bromodichloromethane		----------NA----------				
79	M	cis-1,3-dichloropropene		----------NA----------				
80	S	toluene-d8 (s)	1.271	1.272	-0.1	95	0.00	13.36
81	M	4-methyl-2-pentanone		----------NA----------				
82	M	toluene		----------NA----------				
83	M	3-methyl-1-butanol		----------NA----------				
84	M	trans-1,3-dichloropropene		----------NA----------				
85	M	ethyl methacrylate		----------NA----------				
86	M	1,1,2-trichloroethane		----------NA----------				
87	M	2-hexanone		----------NA----------				
88	I	chlorobenzene-d5	1.000	1.000	0.0	97	0.00	14.78
89	M	cyclohexanone		----------NA----------				
90	M	tetrachloroethene		----------NA----------				
91	M	1,3-dichloropropane		----------NA----------				
92	M	butyl acetate		----------NA----------				
93	m	3,3-dimethyl-1-butanol		----------NA----------				
94	M	dibromochloromethane		----------NA----------				
95	M	1,2-dibromoethane		----------NA----------				
96	M	n-butyl ether		----------NA----------				
97	M	chlorobenzene		----------NA----------				
98	M	1,1,1,2-tetrachloroethane		----------NA----------				
99	M	ethylbenzene		----------NA----------				

Initial Calibration Verification

Job Number: JC18196 **Sample:** VC7651-ICV7650
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** C207929.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

100	M	m,p-xylene			----------NA----------			
101	M	o-xylene			----------NA----------			
102	M	styrene			----------NA----------			
103	M	bromoform			----------NA----------			
104	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	94	0.00	16.80
105	M	isopropylbenzene			----------NA----------			
106	S	4-bromofluorobenzene (s)	0.702	0.703	-0.1	95	0.00	15.81
107	M	bromobenzene			----------NA----------			
108	M	1,1,2,2-tetrachloroethane			----------NA----------			
109	M	trans-1,4-dichloro-2-bute			----------NA----------			
110	M	1,2,3-trichloropropane			----------NA----------			
111	M	n-propylbenzene			----------NA----------			
112	M	4-ethyltoluene			----------NA----------			
113	M	2-chlorotoluene			----------NA----------			
114	M	4-chlorotoluene			----------NA----------			
115	M	1,3,5-trimethylbenzene			----------NA----------			
116	M	tert-butylbenzene			----------NA----------			
117	M	pentachloroethane			----------NA----------			
118	M	1,2,4-trimethylbenzene			----------NA----------			
119	M	sec-butylbenzene			----------NA----------			
120	M	1,3-dichlorobenzene			----------NA----------			
121	M	p-isopropyltoluene			----------NA----------			
122	M	1,4-dichlorobenzene			----------NA----------			
123		benzyl chloride			----------NA----------			
124		p-diethylbenzene			----------NA----------			
125	M	1,2-dichlorobenzene			----------NA----------			
126	M	n-butylbenzene			----------NA----------			
127		1,2,4,5-tetramethylbenzen			----------NA----------			
128	M	1,2-dibromo-3-chloropropa			----------NA----------			
129	m	1,3,5-trichlorobenzene			----------NA----------			
130	M	1,2,4-trichlorobenzene			----------NA----------			
131	M	hexachlorobutadiene			----------NA----------			
132	M	naphthalene			----------NA----------			
133	M	1,2,3-trichlorobenzene			----------NA----------			
134	M	hexachloroethane			----------NA----------			

(#) = Out of Range SPCC's out = 0 CCC's out = 0
c207913.D MC7650.M Fri Feb 26 17:11:52 2016 C

6.9.3

6

Continuing Calibration Summary

Job Number: JC18196 **Sample:** VC7691-CC7650
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** C209063.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\c209063.D Vial: 2
Acq On : 14 Apr 2016 10:04 am Operator: VIANNAC
Sample : cc7650-50 Inst : MSC
Misc : MS897,VC7691,5.0,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MC7650.M (RTE Integrator)
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um
Last Update : Fri Feb 26 15:43:53 2016
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1		Tert Butyl Alcohol-d9	1.000	1.000	0.0	121	0.00	8.08
2	M	1,4-dioxane	0.077	0.074	3.9	114	0.00	12.47
3	M	tertiary butyl alcohol	1.052	0.949	9.8	112	0.00	8.23
4		ethanol		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	116	0.00	10.78
6	M	chlorotrifluoroethene		----------NA----------				
7	M	chlorodifluoromethane	0.747	0.512	31.5#	78	0.00	3.94
8	M	dichlorodifluoromethane	0.469	0.495	-5.5	124	0.00	3.91
9	M	chloromethane	1.010	0.982	2.8	111	-0.01	4.35
10	M	vinyl chloride	0.821	0.840	-2.3	113	0.00	4.62
11		1,3-Butadiene		----------NA----------				
12	M	acetaldehyde		----------NA----------				
13	M	bromomethane	0.390	0.306	21.5#	90	-0.01	5.39
14	M	chloroethane	0.482	0.443	8.1	105	0.00	5.61
15		VINYL BROMIDE		----------NA----------				
16	M	trichlorofluoromethane	0.624	0.674	-8.0	119	0.00	6.11
17		pentane		----------NA----------				
18	M	ethyl ether	0.375	0.391	-4.3	118	0.00	6.65
19	m	2-chloropropane	1.064	1.072	-0.8	115	-0.01	6.88
20	M	acrolein	0.147	0.154	-4.8	113	0.00	7.00
21	M	1,1-dichloroethene	0.819	0.864	-5.5	118	-0.01	7.15
22	M	isopropyl alcohol		----------NA----------				
23	M	acetone	0.071	0.072	-1.4	117	-0.01	7.28
24	M	allyl chloride	0.313	0.335	-7.0	123	-0.02	7.84
25	M	acetonitrile	0.071	0.067	5.6	110	0.00	7.85
26	M	iodomethane	0.669	0.694	-3.7	118	-0.01	7.50
27	M	iso-butyl alcohol		----------NA----------				
28	M	carbon disulfide	1.843	1.813	1.6	121	-0.01	7.62
29	M	methylene chloride	0.578	0.580	-0.3	118	-0.02	8.09
30	m	1-chloropropane	0.395	0.383	3.0	123	0.00	8.12
31	M	methyl acetate	0.611	0.605	1.0	108	0.00	7.85
32	M	methyl tert butyl ether	1.835	1.843	-0.4	116	-0.01	8.48
33	M	trans-1,2-dichloroethene	0.864	0.899	-4.1	119	-0.02	8.55
34	M	di-isopropyl ether	2.201	2.093	4.9	107	0.00	9.25
35	M	ethyl tert-butyl ether	1.996	1.889	5.4	106	-0.01	9.81
36	M	2-butanone	0.091	0.092	-1.1	113	0.00	10.17
37	M	1,1-dichloroethane	1.077	1.114	-3.4	120	-0.01	9.29
38	M	chloroprene	0.839	0.838	0.1	108	-0.01	9.41
39	M	acrylonitrile	0.291	0.305	-4.8	117	-0.01	8.56
40	M	vinyl acetate	0.128	0.121	5.5	104	-0.01	9.30
41	M	ethyl acetate	0.121	0.112	7.4	106	0.00	10.19

Continuing Calibration Summary

Job Number: JC18196 **Sample:** VC7691-CC7650
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** C209063.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

42	M	2,2-dichloropropane	0.579	0.586	-1.2	123	-0.01	10.16
43	M	cis-1,2-dichloroethene	0.604	0.599	0.8	119	-0.01	10.18
44	m	methyl acrylate	0.099	0.103	-4.0	115	-0.01	10.27
45	M	propionitrile	0.127	0.127	0.0	116	0.00	10.31
46	M	bromochloromethane	0.249	0.252	-1.2	115	-0.01	10.54
47	M	tetrahydrofuran	0.104	0.106	-1.9	114	0.00	10.57
48	M	chloroform	0.956	0.925	3.2	115	0.00	10.61
49	m	t-butyl formate	0.604	0.679	-12.4	126	-0.01	10.62
50	S	dibromofluoromethane (s)	0.536	0.533	0.6	114	-0.01	10.83
51	S	1,2-dichloroethane-d4 (s)	0.745	0.730	2.0	113	-0.01	11.28
52	M	freon 113	0.209	0.244	-16.7	131	0.00	7.11
53	M	methacrylonitrile	0.308	0.318	-3.2	114	-0.01	10.50
54		cyclohexane	0.724	0.865	-19.5	141	-0.01	10.89
55	M	1,1,1-trichloroethane	0.711	0.707	0.6	115	0.00	10.85
56		tert-amyl alcohol		----------NA----------				
57		2,2,4-trimethylpentane	1.245	1.571	-26.2#	147	-0.01	11.29
58	M	tert-amyl methyl ether	1.918	1.696	11.6	104	0.00	11.36
59	I	1,4-difluorobenzene	1.000	1.000	0.0	115	-0.01	11.73
60	M	epichlorohydrin	0.049	0.047	4.1	110	0.00	13.02
61	M	n-butyl alcohol	0.015	0.015	0.0	116	0.00	11.91
62	M	carbon tetrachloride	0.304	0.311	-2.3	117	-0.01	11.05
63	M	1,1-dichloropropene	0.400	0.412	-3.0	116	0.00	11.04
64	M	hexane	0.271	0.382	-41.0#	169	-0.01	8.92
65	M	benzene	1.278	1.278	0.0	116	-0.01	11.33
66	M	heptane	0.150	0.199	-32.7#	157	-0.01	11.49
67	M	isopropyl acetate	0.084	0.078	7.1	105	0.00	11.28
68	M	1,2-dichloroethane	0.435	0.428	1.6	113	-0.01	11.37
69		ethyl acrylate	0.534	0.530	0.7	108	-0.02	12.10
70	M	trichloroethene	0.288	0.291	-1.0	116	0.00	12.07
71	M	2-chloroethyl vinyl ether	0.263	0.231	12.2	96	0.00	12.89
72		2-Nitropropane	0.171	0.151	11.7	103	-0.01	12.88
73	M	methylcyclohexane	0.359	0.430	-19.8	139	0.00	12.25
74		tert-amyl ethyl ether		----------NA----------				
75	M	methyl methacrylate	0.089	0.091	-2.2	111	0.00	12.36
76	M	1,2-dichloropropane	0.359	0.364	-1.4	116	0.00	12.35
77	M	dibromomethane	0.186	0.187	-0.5	113	-0.01	12.51
78	M	bromodichloromethane	0.398	0.403	-1.3	114	0.00	12.65
79	M	cis-1,3-dichloropropene	0.544	0.574	-5.5	119	0.00	13.09
80	S	toluene-d8 (s)	1.271	1.275	-0.3	115	-0.01	13.35
81	M	4-methyl-2-pentanone	0.178	0.181	-1.7	114	-0.01	13.19
82	M	toluene	1.317	1.274	3.3	115	0.00	13.42
83	M	3-methyl-1-butanol	0.023	0.023	0.0	116	0.00	13.23
84	M	trans-1,3-dichloropropene	0.509	0.529	-3.9	117	0.00	13.64
85	M	ethyl methacrylate	0.512	0.511	0.2	110	0.00	13.62
86	M	1,1,2-trichloroethane	0.267	0.251	6.0	114	0.00	13.85
87	M	2-hexanone	0.174	0.173	0.6	115	0.00	14.00
88	I	chlorobenzene-d5	1.000	1.000	0.0	115	0.00	14.78
89	M	cyclohexanone	0.008	0.014	-75.0#	193	0.00	15.80
90	M	tetrachloroethene	0.271	0.271	0.0	116	0.00	13.97
91	M	1,3-dichloropropane	0.637	0.600	5.8	114	-0.01	14.01
92	M	butyl acetate	0.341	0.333	2.3	109	0.00	14.06
93	m	3,3-dimethyl-1-butanol	0.059	0.057	3.4	107	0.00	14.18
94	M	dibromochloromethane	0.321	0.313	2.5	113	0.00	14.26
95	M	1,2-dibromoethane	0.325	0.313	3.7	114	-0.01	14.40
96	M	n-butyl ether	1.837	1.850	-0.7	115	0.00	14.70
97	M	chlorobenzene	0.907	0.855	5.7	114	0.00	14.81
98	M	1,1,1,2-tetrachloroethane	0.304	0.288	5.3	114	0.00	14.87
99	M	ethylbenzene	1.679	1.594	5.1	114	0.00	14.84

Continuing Calibration Summary

Job Number: JC18196 **Sample:** VC7691-CC7650
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** C209063.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

100	M	m,p-xylene	0.609	0.590	3.1	114	0.00	14.94
101	M	o-xylene	1.343	1.301	3.1	115	0.00	15.32
102	M	styrene	1.013	0.995	1.8	112	0.00	15.33
103	M	bromoform	0.201	0.200	0.5	114	0.00	15.59
104	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	112	0.00	16.80
105	M	isopropylbenzene	3.160	3.043	3.7	114	0.00	15.61
106	S	4-bromofluorobenzene (s)	0.702	0.714	-1.7	116	0.00	15.81
107	M	bromobenzene	0.715	0.666	6.9	113	0.00	15.98
108	M	1,1,2,2-tetrachloroethane	1.109	1.015	8.5	113	0.00	15.91
109	M	trans-1,4-dichloro-2-bute	0.155	0.333	-114.8#	216#	0.00	15.94
110	M	1,2,3-trichloropropane	0.278	0.258	7.2	109	0.00	15.97
111	M	n-propylbenzene	3.928	3.772	4.0	114	0.00	15.96
112	M	4-ethyltoluene		----------NA----------				
113	M	2-chlorotoluene	0.739	0.694	6.1	114	0.00	16.10
114	M	4-chlorotoluene	2.587	2.410	6.8	114	0.00	16.19
115	M	1,3,5-trimethylbenzene	2.701	2.637	2.4	114	0.00	16.08
116	M	tert-butylbenzene	0.533	0.510	4.3	114	0.00	16.39
117	M	pentachloroethane	0.419	0.411	1.9	116	-0.01	16.48
118	M	1,2,4-trimethylbenzene	2.828	2.711	4.1	113	0.00	16.42
119	M	sec-butylbenzene	3.430	3.304	3.7	114	0.00	16.56
120	M	1,3-dichlorobenzene	1.467	1.355	7.6	112	0.00	16.75
121	M	p-isopropyltoluene	2.829	2.715	4.0	114	0.00	16.66
122	M	1,4-dichlorobenzene	1.533	1.381	9.9	113	0.00	16.82
123		benzyl chloride	2.038	2.168	-6.4	126	0.00	16.92
124		p-diethylbenzene		----------NA----------				
125	M	1,2-dichlorobenzene	1.458	1.349	7.5	113	0.00	17.15
126	M	n-butylbenzene	1.571	1.526	2.9	113	0.00	17.00
127		1,2,4,5-tetramethylbenzen		----------NA----------				
128	M	1,2-dibromo-3-chloropropa	0.206	0.202	1.9	111	0.00	17.79
129	m	1,3,5-trichlorobenzene	1.020	0.973	4.6	113	0.00	17.91
130	M	1,2,4-trichlorobenzene	0.970	0.937	3.4	117	0.00	18.44
131	M	hexachlorobutadiene	0.300	0.311	-3.7	122	0.00	18.51
132	M	naphthalene	3.187	3.154	1.0	112	-0.01	18.69
133	M	1,2,3-trichlorobenzene	0.915	0.897	2.0	118	0.00	18.89
134	M	hexachloroethane	0.492	0.482	2.0	114	0.00	17.35

(#) = Out of Range SPCC's out = 0 CCC's out = 0
c207913.D MC7650.M Fri Apr 15 15:02:47 2016 C

Continuing Calibration Summary

Job Number: JC18196 **Sample:** VC7691-CC7650
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** C209064.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\c209064.D Vial: 3
Acq On : 14 Apr 2016 10:39 am Operator: VIANNAC
Sample : cc7650-1 Inst : MSC
Misc : MS897,VC7691,5.0,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MC7650.M (RTE Integrator)
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um
Last Update : Fri Feb 26 15:43:53 2016
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1		Tert Butyl Alcohol-d9	1.000	1.000	0.0	126	0.00	8.08
2	M	1,4-dioxane		----------NA----------				
3	M	tertiary butyl alcohol		----------NA----------				
4		ethanol		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	123	-0.01	10.78
6	M	chlorotrifluoroethene		----------NA----------				
7	M	chlorodifluoromethane		----------NA----------				
8	M	dichlorodifluoromethane		----------NA----------				
9	M	chloromethane		----------NA----------				
10	M	vinyl chloride		----------NA----------				
11		1,3-Butadiene		----------NA----------				
12	M	acetaldehyde		----------NA----------				
13	M	bromomethane	0.390	0.355	9.0	104	0.00	5.39
14	M	chloroethane		----------NA----------				
15		VINYL BROMIDE		----------NA----------				
16	M	trichlorofluoromethane		----------NA----------				
17		pentane		----------NA----------				
18	M	ethyl ether		----------NA----------				
19	m	2-chloropropane		----------NA----------				
20	M	acrolein		----------NA----------				
21	M	1,1-dichloroethene		----------NA----------				
22	M	isopropyl alcohol		----------NA----------				
23	M	acetone		----------NA----------				
24	M	allyl chloride		----------NA----------				
25	M	acetonitrile		----------NA----------				
26	M	iodomethane		----------NA----------				
27	M	iso-butyl alcohol		----------NA----------				
28	M	carbon disulfide		----------NA----------				
29	M	methylene chloride		----------NA----------				
30	m	1-chloropropane		----------NA----------				
31	M	methyl acetate		----------NA----------				
32	M	methyl tert butyl ether		----------NA----------				
33	M	trans-1,2-dichloroethene		----------NA----------				
34	M	di-isopropyl ether		----------NA----------				
35	M	ethyl tert-butyl ether		----------NA----------				
36	M	2-butanone		----------NA----------				
37	M	1,1-dichloroethane		----------NA----------				
38	M	chloroprene		----------NA----------				
39	M	acrylonitrile		----------NA----------				
40	M	vinyl acetate		----------NA----------				
41	M	ethyl acetate		----------NA----------				

Continuing Calibration Summary

Job Number: JC18196 **Sample:** VC7691-CC7650
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** C209064.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

42	M	2,2-dichloropropane		----------NA----------					
43	M	cis-1,2-dichloroethene		----------NA----------					
44	m	methyl acrylate		----------NA----------					
45	M	propionitrile		----------NA----------					
46	M	bromochloromethane		----------NA----------					
47	M	tetrahydrofuran		----------NA----------					
48	M	chloroform		----------NA----------					
49	m	t-butyl formate		----------NA----------					
50	S	dibromofluoromethane (s)	0.536	0.521	2.8	123	-0.01	10.83	
51	S	1,2-dichloroethane-d4 (s)	0.745	0.727	2.4	122	-0.01	11.28	
52	M	freon 113		----------NA----------					
53	M	methacrylonitrile		----------NA----------					
54		cyclohexane		----------NA----------					
55	M	1,1,1-trichloroethane		----------NA----------					
56		tert-amyl alcohol		----------NA----------					
57		2,2,4-trimethylpentane		----------NA----------					
58	M	tert-amyl methyl ether		----------NA----------					
59	I	1,4-difluorobenzene	1.000	1.000	0.0	123	-0.01	11.74	
60	M	epichlorohydrin		----------NA----------					
61	M	n-butyl alcohol		----------NA----------					
62	M	carbon tetrachloride		----------NA----------					
63	M	1,1-dichloropropene		----------NA----------					
64	M	hexane		----------NA----------					
65	M	benzene		----------NA----------					
66	M	heptane		----------NA----------					
67	M	isopropyl acetate		----------NA----------					
68	M	1,2-dichloroethane		----------NA----------					
69		ethyl acrylate		----------NA----------					
70	M	trichloroethene		----------NA----------					
71	M	2-chloroethyl vinyl ether		----------NA----------					
72		2-Nitropropane		----------NA----------					
73	M	methylcyclohexane		----------NA----------					
74		tert-amyl ethyl ether		----------NA----------					
75	M	methyl methacrylate		----------NA----------					
76	M	1,2-dichloropropane		----------NA----------					
77	M	dibromomethane		----------NA----------					
78	M	bromodichloromethane		----------NA----------					
79	M	cis-1,3-dichloropropene		----------NA----------					
80	S	toluene-d8 (s)	1.271	1.264	0.6	123	-0.01	13.35	
81	M	4-methyl-2-pentanone		----------NA----------					
82	M	toluene		----------NA----------					
83	M	3-methyl-1-butanol		----------NA----------					
84	M	trans-1,3-dichloropropene		----------NA----------					
85	M	ethyl methacrylate		----------NA----------					
86	M	1,1,2-trichloroethane		----------NA----------					
87	M	2-hexanone		----------NA----------					
88	I	chlorobenzene-d5	1.000	1.000	0.0	122	0.00	14.78	
89	M	cyclohexanone		----------NA----------					
90	M	tetrachloroethene		----------NA----------					
91	M	1,3-dichloropropane		----------NA----------					
92	M	butyl acetate		----------NA----------					
93	m	3,3-dimethyl-1-butanol		----------NA----------					
94	M	dibromochloromethane		----------NA----------					
95	M	1,2-dibromoethane		----------NA----------					
96	M	n-butyl ether		----------NA----------					
97	M	chlorobenzene		----------NA----------					
98	M	1,1,1,2-tetrachloroethane		----------NA----------					
99	M	ethylbenzene		----------NA----------					

Continuing Calibration Summary

Job Number: JC18196 **Sample:** VC7691-CC7650
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** C209064.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

100	M	m,p-xylene		----------NA----------				
101	M	o-xylene		----------NA----------				
102	M	styrene		----------NA----------				
103	M	bromoform		----------NA----------				
104	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	122	-0.01	16.80
105	M	isopropylbenzene		----------NA----------				
106	S	4-bromofluorobenzene (s)	0.702	0.732	-4.3	125	0.00	15.81
107	M	bromobenzene		----------NA----------				
108	M	1,1,2,2-tetrachloroethane		----------NA----------				
109	M	trans-1,4-dichloro-2-bute		----------NA----------				
110	M	1,2,3-trichloropropane		----------NA----------				
111	M	n-propylbenzene		----------NA----------				
112	M	4-ethyltoluene		----------NA----------				
113	M	2-chlorotoluene		----------NA----------				
114	M	4-chlorotoluene		----------NA----------				
115	M	1,3,5-trimethylbenzene		----------NA----------				
116	M	tert-butylbenzene		----------NA----------				
117	M	pentachloroethane		----------NA----------				
118	M	1,2,4-trimethylbenzene		----------NA----------				
119	M	sec-butylbenzene		----------NA----------				
120	M	1,3-dichlorobenzene		----------NA----------				
121	M	p-isopropyltoluene		----------NA----------				
122	M	1,4-dichlorobenzene		----------NA----------				
123		benzyl chloride		----------NA----------				
124		p-diethylbenzene		----------NA----------				
125	M	1,2-dichlorobenzene		----------NA----------				
126	M	n-butylbenzene		----------NA----------				
127		1,2,4,5-tetramethylbenzen		----------NA----------				
128	M	1,2-dibromo-3-chloropropa		----------NA----------				
129	m	1,3,5-trichlorobenzene		----------NA----------				
130	M	1,2,4-trichlorobenzene		----------NA----------				
131	M	hexachlorobutadiene		----------NA----------				
132	M	naphthalene		----------NA----------				
133	M	1,2,3-trichlorobenzene		----------NA----------				
134	M	hexachloroethane		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
c207908.D MC7650.M Fri Apr 15 15:04:29 2016 C

Continuing Calibration Summary

Job Number: JC18196 **Sample:** VC7691-CC7650
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** C209087.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\c209087.D Vial: 26
Acq On : 14 Apr 2016 9:50 pm Operator: VIANNAC
Sample : cc7650-50 Inst : MSC
Misc : MS900,VC7691,5.0,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MC7650.M (RTE Integrator)
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um
Last Update : Fri Apr 15 15:18:17 2016
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1		Tert Butyl Alcohol-d9	1.000	1.000	0.0	121	0.00	8.09
2	M	1,4-dioxane	0.077	0.071	7.8	110	0.00	12.48
3	M	tertiary butyl alcohol	1.052	0.934	11.2	111	0.00	8.23
4		ethanol		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	119	0.00	10.78
6	M	chlorotrifluoroethene		----------NA----------				
7	M	chlorodifluoromethane	0.747	0.450	39.8#	70	0.00	3.95
8	M	dichlorodifluoromethane	0.469	0.572	-22.0#	146	0.00	3.92
9	M	chloromethane	1.010	1.160	-14.9	133	0.00	4.36
10	M	vinyl chloride	0.821	0.964	-17.4	132	0.00	4.63
11		1,3-Butadiene		----------NA----------				
12	M	acetaldehyde		----------NA----------				
13	M	bromomethane	0.390	0.358	8.2	107	0.00	5.39
14	M	chloroethane	0.482	0.490	-1.7	119	0.01	5.62
15		VINYL BROMIDE		----------NA----------				
16	M	trichlorofluoromethane	0.624	0.725	-16.2	130	0.00	6.12
17		pentane		----------NA----------				
18	M	ethyl ether	0.375	0.375	0.0	116	0.00	6.66
19	m	2-chloropropane	1.064	1.020	4.1	111	0.00	6.90
20	M	acrolein	0.147	0.155	-5.4	116	0.00	7.01
21	M	1,1-dichloroethene	0.819	0.846	-3.3	118	0.00	7.16
22	M	isopropyl alcohol		----------NA----------				
23	M	acetone	0.071	0.071	0.0	118	0.00	7.29
24	M	allyl chloride	0.313	0.314	-0.3	118	-0.01	7.85
25	M	acetonitrile	0.071	0.062	12.7	104	0.00	7.86
26	M	iodomethane	0.669	0.672	-0.4	117	0.00	7.51
27	M	iso-butyl alcohol		----------NA----------				
28	M	carbon disulfide	1.843	1.753	4.9	119	0.00	7.64
29	M	methylene chloride	0.578	0.563	2.6	117	0.00	8.10
30	m	1-chloropropane	0.395	0.371	6.1	121	0.00	8.13
31	M	methyl acetate	0.611	0.566	7.4	103	0.00	7.86
32	M	methyl tert butyl ether	1.835	1.769	3.6	113	0.00	8.48
33	M	trans-1,2-dichloroethene	0.864	0.852	1.4	115	0.00	8.56
34	M	di-isopropyl ether	2.201	1.973	10.4	102	0.00	9.26
35	M	ethyl tert-butyl ether	1.996	1.786	10.5	102	0.00	9.82
36	M	2-butanone	0.091	0.088	3.3	109	0.00	10.17
37	M	1,1-dichloroethane	1.077	1.066	1.0	116	0.00	9.31
38	M	chloroprene	0.839	0.769	8.3	101	0.00	9.42
39	M	acrylonitrile	0.291	0.291	0.0	113	0.00	8.57
40	M	vinyl acetate	0.128	0.111	13.3	97	0.00	9.31
41	M	ethyl acetate	0.121	0.104	14.0	100	0.00	10.19

Continuing Calibration Summary

Job Number: JC18196 **Sample:** VC7691-CC7650
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** C209087.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

42	M	2,2-dichloropropane	0.579	0.488	15.7	104	-0.01	10.16
43	M	cis-1,2-dichloroethene	0.604	0.569	5.8	115	0.00	10.19
44	m	methyl acrylate	0.099	0.097	2.0	111	0.00	10.28
45	M	propionitrile	0.127	0.122	3.9	114	0.00	10.32
46	M	bromochloromethane	0.249	0.240	3.6	112	0.00	10.54
47	M	tetrahydrofuran	0.104	0.101	2.9	110	0.00	10.58
48	M	chloroform	0.956	0.884	7.5	112	0.00	10.62
49	m	t-butyl formate	0.604	0.641	-6.1	121	0.00	10.63
50	S	dibromofluoromethane (s)	0.536	0.531	0.9	115	0.00	10.84
51	S	1,2-dichloroethane-d4 (s)	0.745	0.726	2.6	115	0.00	11.29
52	M	freon 113	0.209	0.214	-2.4	117	0.00	7.12
53	M	methacrylonitrile	0.308	0.305	1.0	112	0.00	10.50
54		cyclohexane	0.724	0.807	-11.5	134	0.00	10.90
55	M	1,1,1-trichloroethane	0.711	0.690	3.0	114	0.00	10.85
56		tert-amyl alcohol		----------NA----------				
57		2,2,4-trimethylpentane	1.245	1.284	-3.1	122	0.00	11.30
58	M	tert-amyl methyl ether	1.918	1.619	15.6	101	0.00	11.36
59	I	1,4-difluorobenzene	1.000	1.000	0.0	116	0.00	11.74
60	M	epichlorohydrin	0.049	0.044	10.2	105	0.00	13.03
61	M	n-butyl alcohol	0.015	0.015	0.0	118	0.00	11.92
62	M	carbon tetrachloride	0.304	0.298	2.0	114	0.00	11.06
63	M	1,1-dichloropropene	0.400	0.399	0.3	114	0.00	11.05
64	M	hexane	0.271	0.312	-15.1	140	0.00	8.93
65	M	benzene	1.278	1.233	3.5	113	0.00	11.33
66	M	heptane	0.150	0.160	-6.7	128	0.00	11.50
67	M	isopropyl acetate	0.084	0.075	10.7	102	0.00	11.29
68	M	1,2-dichloroethane	0.435	0.418	3.9	111	0.00	11.38
69		ethyl acrylate	0.534	0.532	0.4	110	-0.02	12.10
70	M	trichloroethene	0.288	0.280	2.8	113	0.00	12.07
71	M	2-chloroethyl vinyl ether	0.263	0.223	15.2	94	0.00	12.89
72		2-Nitropropane	0.171	0.147	14.0	101	0.00	12.89
73	M	methylcyclohexane	0.359	0.375	-4.5	123	0.00	12.26
74		tert-amyl ethyl ether		----------NA----------				
75	M	methyl methacrylate	0.089	0.091	-2.2	112	0.00	12.37
76	M	1,2-dichloropropane	0.359	0.355	1.1	115	0.00	12.35
77	M	dibromomethane	0.186	0.181	2.7	111	0.00	12.52
78	M	bromodichloromethane	0.398	0.392	1.5	112	0.00	12.65
79	M	cis-1,3-dichloropropene	0.544	0.546	-0.4	115	0.00	13.10
80	S	toluene-d8 (s)	1.271	1.286	-1.2	118	0.00	13.36
81	M	4-methyl-2-pentanone	0.178	0.175	1.7	111	0.00	13.19
82	M	toluene	1.317	1.240	5.8	113	0.00	13.43
83	M	3-methyl-1-butanol	0.023	0.024	-4.3	120	0.00	13.24
84	M	trans-1,3-dichloropropene	0.509	0.508	0.2	114	0.00	13.64
85	M	ethyl methacrylate	0.512	0.501	2.1	110	0.00	13.62
86	M	1,1,2-trichloroethane	0.267	0.245	8.2	112	0.00	13.85
87	M	2-hexanone	0.174	0.167	4.0	112	0.00	14.01
88	I	chlorobenzene-d5	1.000	1.000	0.0	117	0.00	14.78
89	M	cyclohexanone	0.008	0.007#	12.5	97	0.00	15.80
90	M	tetrachloroethene	0.271	0.257	5.2	112	0.00	13.97
91	M	1,3-dichloropropane	0.637	0.584	8.3	113	0.00	14.02
92	M	butyl acetate	0.341	0.322	5.6	108	0.00	14.06
93	m	3,3-dimethyl-1-butanol	0.059	0.059	0.0	112	0.00	14.18
94	M	dibromochloromethane	0.321	0.301	6.2	111	0.00	14.27
95	M	1,2-dibromoethane	0.325	0.305	6.2	113	0.00	14.40
96	M	n-butyl ether	1.837	1.785	2.8	113	0.00	14.70
97	M	chlorobenzene	0.907	0.829	8.6	113	0.00	14.81
98	M	1,1,1,2-tetrachloroethane	0.304	0.278	8.6	112	0.00	14.87
99	M	ethylbenzene	1.679	1.533	8.7	112	0.00	14.85

Continuing Calibration Summary

Job Number: JC18196 **Sample:** VC7691-CC7650
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** C209087.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

100	M	m,p-xylene	0.609	0.569	6.6	112	0.00	14.94
101	M	o-xylene	1.343	1.252	6.8	112	0.00	15.32
102	M	styrene	1.013	0.965	4.7	111	0.00	15.33
103	M	bromoform	0.201	0.193	4.0	112	0.00	15.59
104	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	114	0.00	16.80
105	M	isopropylbenzene	3.160	2.951	6.6	113	0.00	15.62
106	S	4-bromofluorobenzene (s)	0.702	0.715	-1.9	118	0.00	15.81
107	M	bromobenzene	0.715	0.651	9.0	113	0.00	15.98
108	M	1,1,2,2-tetrachloroethane	1.109	0.982	11.5	111	0.00	15.91
109	M	trans-1,4-dichloro-2-bute	0.155	0.299	-92.9#	198	0.00	15.94
110	M	1,2,3-trichloropropane	0.278	0.251	9.7	108	0.00	15.98
111	M	n-propylbenzene	3.928	3.633	7.5	111	0.00	15.97
112	M	4-ethyltoluene		----------NA----------				
113	M	2-chlorotoluene	0.739	0.664	10.1	111	0.00	16.11
114	M	4-chlorotoluene	2.587	2.326	10.1	112	0.00	16.19
115	M	1,3,5-trimethylbenzene	2.701	2.512	7.0	111	0.00	16.09
116	M	tert-butylbenzene	0.533	0.490	8.1	112	0.00	16.39
117	M	pentachloroethane	0.419	0.395	5.7	113	0.00	16.49
118	M	1,2,4-trimethylbenzene	2.828	2.610	7.7	111	0.00	16.43
119	M	sec-butylbenzene	3.430	3.158	7.9	111	0.00	16.57
120	M	1,3-dichlorobenzene	1.467	1.305	11.0	110	0.00	16.76
121	M	p-isopropyltoluene	2.829	2.592	8.4	111	0.00	16.66
122	M	1,4-dichlorobenzene	1.533	1.332	13.1	111	0.00	16.82
123		benzyl chloride	2.038	1.786	12.4	105	0.00	16.92
124		p-diethylbenzene		----------NA----------				
125	M	1,2-dichlorobenzene	1.458	1.294	11.2	110	0.00	17.15
126	M	n-butylbenzene	1.571	1.433	8.8	108	0.00	17.01
127		1,2,4,5-tetramethylbenzen		----------NA----------				
128	M	1,2-dibromo-3-chloropropa	0.206	0.192	6.8	108	0.00	17.79
129	m	1,3,5-trichlorobenzene	1.020	0.910	10.8	108	0.00	17.91
130	M	1,2,4-trichlorobenzene	0.970	0.884	8.9	113	0.00	18.44
131	M	hexachlorobutadiene	0.300	0.286	4.7	114	0.00	18.51
132	M	naphthalene	3.187	3.014	5.4	109	0.00	18.69
133	M	1,2,3-trichlorobenzene	0.915	0.846	7.5	113	0.00	18.89
134	M	hexachloroethane	0.492	0.458	6.9	111	0.00	17.36

(#) = Out of Range SPCC's out = 0 CCC's out = 0
c207913.D MC7650.M Fri Apr 15 15:56:48 2016 C

Continuing Calibration Summary

Job Number: JC18196 **Sample:** VC7692-CC7650
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** C209113.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\c209113.D Vial: 7
Acq On : 15 Apr 2016 12:15 pm Operator: VIANNAC
Sample : cc7650-20 Inst : MSC
Misc : MS951,VC7692,5.0,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MC7650.M (RTE Integrator)
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um
Last Update : Fri Apr 15 15:18:17 2016
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1		Tert Butyl Alcohol-d9	1.000	1.000	0.0	125	0.00	8.08
2	M	1,4-dioxane	0.077	0.084	-9.1	135	0.00	12.47
3	M	tertiary butyl alcohol	1.052	1.052	0.0	129	-0.01	8.22
4		ethanol		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	124	0.00	10.78
6	M	chlorotrifluoroethene		----------NA----------				
7	M	chlorodifluoromethane	0.747	0.515	31.1#	85	0.00	3.95
8	M	dichlorodifluoromethane	0.469	0.502	-7.0	123	0.00	3.91
9	M	chloromethane	1.010	1.057	-4.7	129	-0.01	4.35
10	M	vinyl chloride	0.821	0.858	-4.5	125	0.00	4.62
11		1,3-Butadiene		----------NA----------				
12	M	acetaldehyde		----------NA----------				
13	M	bromomethane	0.390	0.369	5.4	114	0.00	5.40
14	M	chloroethane	0.482	0.483	-0.2	122	0.00	5.62
15		VINYL BROMIDE		----------NA----------				
16	M	trichlorofluoromethane	0.624	0.667	-6.9	123	0.00	6.11
17		pentane		----------NA----------				
18	M	ethyl ether	0.375	0.375	0.0	119	0.00	6.65
19	m	2-chloropropane	1.064	1.023	3.9	112	0.00	6.89
20	M	acrolein	0.147	0.146	0.7	117	0.00	7.00
21	M	1,1-dichloroethene	0.819	0.826	-0.9	117	0.00	7.16
22	M	isopropyl alcohol		----------NA----------				
23	M	acetone	0.071	0.065	8.5	117	0.00	7.29
24	M	allyl chloride	0.313	0.322	-2.9	125	-0.01	7.84
25	M	acetonitrile	0.071	0.071	0.0	127	0.00	7.85
26	M	iodomethane	0.669	0.655	2.1	116	-0.01	7.50
27	M	iso-butyl alcohol		----------NA----------				
28	M	carbon disulfide	1.843	1.712	7.1	118	0.00	7.63
29	M	methylene chloride	0.578	0.565	2.2	118	-0.01	8.09
30	m	1-chloropropane	0.395	0.383	3.0	122	0.00	8.12
31	M	methyl acetate	0.611	0.677	-10.8	129	0.00	7.85
32	M	methyl tert butyl ether	1.835	1.797	2.1	118	0.00	8.48
33	M	trans-1,2-dichloroethene	0.864	0.877	-1.5	120	0.00	8.56
34	M	di-isopropyl ether	2.201	2.372	-7.8	131	0.00	9.25
35	M	ethyl tert-butyl ether	1.996	2.136	-7.0	130	0.00	9.82
36	M	2-butanone	0.091	0.089	2.2	119	0.00	10.17
37	M	1,1-dichloroethane	1.077	1.084	-0.6	118	0.00	9.30
38	M	chloroprene	0.839	0.921	-9.8	131	0.00	9.42
39	M	acrylonitrile	0.291	0.291	0.0	117	0.00	8.56
40	M	vinyl acetate	0.128	0.130	-1.6	127	0.00	9.31
41	M	ethyl acetate	0.121	0.124	-2.5	127	0.00	10.19

Continuing Calibration Summary

Job Number: JC18196 **Sample:** VC7692-CC7650
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** C209113.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

42	M	2,2-dichloropropane	0.579	0.585	-1.0	122	0.00	10.16
43	M	cis-1,2-dichloroethene	0.604	0.586	3.0	119	-0.01	10.18
44	m	methyl acrylate	0.099	0.097	2.0	121	0.00	10.27
45	M	propionitrile	0.127	0.126	0.8	120	0.00	10.32
46	M	bromochloromethane	0.249	0.247	0.8	117	0.00	10.54
47	M	tetrahydrofuran	0.104	0.106	-1.9	120	0.00	10.57
48	M	chloroform	0.956	0.926	3.1	118	0.00	10.61
49	m	t-butyl formate	0.604	0.755	-25.0#	153	0.00	10.62
50	S	dibromofluoromethane (s)	0.536	0.527	1.7	121	0.00	10.83
51	S	1,2-dichloroethane-d4 (s)	0.745	0.726	2.6	121	0.00	11.28
52	M	freon 113	0.209	0.250	-19.6	134	0.00	7.12
53	M	methacrylonitrile	0.308	0.310	-0.6	118	0.00	10.50
54		cyclohexane	0.724	0.771	-6.5	124	0.00	10.90
55	M	1,1,1-trichloroethane	0.711	0.703	1.1	119	0.00	10.85
56		tert-amyl alcohol		----------NA----------				
57		2,2,4-trimethylpentane	1.245	1.546	-24.2#	148	-0.01	11.29
58	M	tert-amyl methyl ether	1.918	1.923	-0.3	128	0.00	11.36
59	I	1,4-difluorobenzene	1.000	1.000	0.0	122	0.00	11.74
60	M	epichlorohydrin	0.049	0.052	-6.1	131	0.00	13.02
61	M	n-butyl alcohol	0.015	0.016	-6.7	132	0.00	11.92
62	M	carbon tetrachloride	0.304	0.299	1.6	117	0.00	11.05
63	M	1,1-dichloropropene	0.400	0.408	-2.0	118	0.00	11.04
64	M	hexane	0.271	0.365	-34.7#	157	0.00	8.92
65	M	benzene	1.278	1.298	-1.6	120	0.00	11.33
66	M	heptane	0.150	0.197	-31.3#	153	0.00	11.49
67	M	isopropyl acetate	0.084	0.089	-6.0	130	0.00	11.29
68	M	1,2-dichloroethane	0.435	0.438	-0.7	117	0.00	11.38
69		ethyl acrylate	0.534	0.513	3.9	113	-0.02	12.10
70	M	trichloroethene	0.288	0.293	-1.7	120	0.00	12.07
71	M	2-chloroethyl vinyl ether	0.263	0.265	-0.8	119	0.00	12.89
72		2-Nitropropane	0.171	0.164	4.1	117	0.00	12.89
73	M	methylcyclohexane	0.359	0.430	-19.8	139	0.00	12.26
74		tert-amyl ethyl ether		----------NA----------				
75	M	methyl methacrylate	0.089	0.092	-3.4	120	0.00	12.36
76	M	1,2-dichloropropane	0.359	0.373	-3.9	122	0.00	12.35
77	M	dibromomethane	0.186	0.186	0.0	116	0.00	12.52
78	M	bromodichloromethane	0.398	0.403	-1.3	118	0.00	12.65
79	M	cis-1,3-dichloropropene	0.544	0.583	-7.2	125	0.00	13.09
80	S	toluene-d8 (s)	1.271	1.272	-0.1	122	0.00	13.35
81	M	4-methyl-2-pentanone	0.178	0.186	-4.5	124	0.00	13.19
82	M	toluene	1.317	1.312	0.4	120	0.00	13.43
83	M	3-methyl-1-butanol	0.023	0.024	-4.3	134	0.00	13.24
84	M	trans-1,3-dichloropropene	0.509	0.544	-6.9	125	0.00	13.65
85	M	ethyl methacrylate	0.512	0.518	-1.2	121	0.00	13.62
86	M	1,1,2-trichloroethane	0.267	0.260	2.6	121	0.00	13.85
87	M	2-hexanone	0.174	0.175	-0.6	124	0.00	14.01
88	I	chlorobenzene-d5	1.000	1.000	0.0	121	0.00	14.78
89	M	cyclohexanone	0.008	0.012	-50.0#	187	0.00	15.80
90	M	tetrachloroethene	0.271	0.275	-1.5	121	0.00	13.98
91	M	1,3-dichloropropane	0.637	0.625	1.9	121	0.00	14.02
92	M	butyl acetate	0.341	0.367	-7.6	131	0.00	14.06
93	m	3,3-dimethyl-1-butanol	0.059	0.061	-3.4	133	0.00	14.17
94	M	dibromochloromethane	0.321	0.315	1.9	119	0.00	14.26
95	M	1,2-dibromoethane	0.325	0.321	1.2	121	0.00	14.40
96	M	n-butyl ether	1.837	1.895	-3.2	123	0.00	14.70
97	M	chlorobenzene	0.907	0.894	1.4	122	0.00	14.81
98	M	1,1,1,2-tetrachloroethane	0.304	0.299	1.6	123	0.00	14.87
99	M	ethylbenzene	1.679	1.659	1.2	121	0.00	14.85

Continuing Calibration Summary

Job Number: JC18196 **Sample:** VC7692-CC7650
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** C209113.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

100	M	m,p-xylene	0.609	0.620	-1.8	122	0.00	14.94
101	M	o-xylene	1.343	1.341	0.1	122	0.00	15.32
102	M	styrene	1.013	1.029	-1.6	122	0.00	15.33
103	M	bromoform	0.201	0.200	0.5	123	0.00	15.60
104	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	120	0.00	16.80
105	M	isopropylbenzene	3.160	3.231	-2.2	123	0.00	15.61
106	S	4-bromofluorobenzene (s)	0.702	0.723	-3.0	123	0.00	15.81
107	M	bromobenzene	0.715	0.717	-0.3	123	0.00	15.98
108	M	1,1,2,2-tetrachloroethane	1.109	1.098	1.0	124	0.00	15.91
109	M	trans-1,4-dichloro-2-bute	0.155	0.326	-110.3#	291#	0.00	15.94
110	M	1,2,3-trichloropropane	0.278	0.281	-1.1	121	0.00	15.98
111	M	n-propylbenzene	3.928	4.022	-2.4	124	0.00	15.97
112	M	4-ethyltoluene		----------NA----------				
113	M	2-chlorotoluene	0.739	0.740	-0.1	123	0.00	16.11
114	M	4-chlorotoluene	2.587	2.599	-0.5	125	0.00	16.19
115	M	1,3,5-trimethylbenzene	2.701	2.760	-2.2	122	0.00	16.09
116	M	tert-butylbenzene	0.533	0.536	-0.6	124	0.00	16.39
117	M	pentachloroethane	0.419	0.434	-3.6	126	0.00	16.48
118	M	1,2,4-trimethylbenzene	2.828	2.861	-1.2	123	0.00	16.43
119	M	sec-butylbenzene	3.430	3.452	-0.6	123	0.00	16.57
120	M	1,3-dichlorobenzene	1.467	1.445	1.5	123	0.00	16.75
121	M	p-isopropyltoluene	2.829	2.865	-1.3	124	0.00	16.66
122	M	1,4-dichlorobenzene	1.533	1.469	4.2	122	0.00	16.82
123		benzyl chloride	2.038	2.332	-14.4	145	0.00	16.92
124		p-diethylbenzene		----------NA----------				
125	M	1,2-dichlorobenzene	1.458	1.428	2.1	123	0.00	17.15
126	M	n-butylbenzene	1.571	1.585	-0.9	122	0.00	17.01
127		1,2,4,5-tetramethylbenzen		----------NA----------				
128	M	1,2-dibromo-3-chloropropa	0.206	0.208	-1.0	121	0.00	17.79
129	m	1,3,5-trichlorobenzene	1.020	1.002	1.8	119	0.00	17.91
130	M	1,2,4-trichlorobenzene	0.970	0.970	0.0	123	0.00	18.44
131	M	hexachlorobutadiene	0.300	0.326	-8.7	129	0.00	18.51
132	M	naphthalene	3.187	3.262	-2.4	119	0.00	18.69
133	M	1,2,3-trichlorobenzene	0.915	0.925	-1.1	124	0.00	18.89
134	M	hexachloroethane	0.492	0.489	0.6	121	0.00	17.35

(#) = Out of Range SPCC's out = 0 CCC's out = 0
c207912.D MC7650.M Mon Apr 18 11:34:44 2016 C

GC/MS Volatiles

Raw Data

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : c209097.D
Acq On : 15 Apr 2016 2:39 am
Operator : VIANNAC
Sample : jc18196-1
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Apr 15 16:17:34 2016
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Fri Apr 15 15:18:17 2016
Response via : Initial Calibration

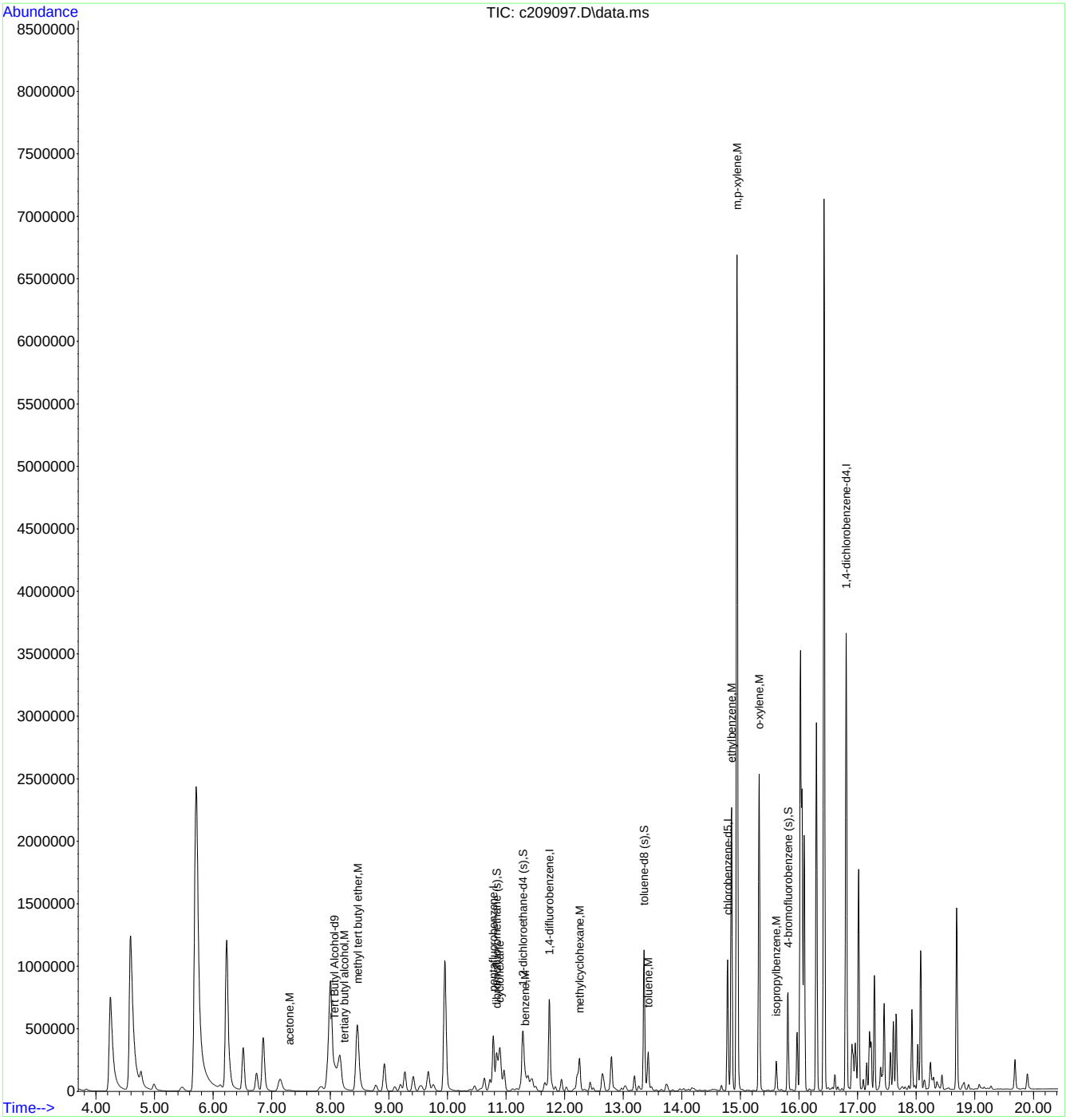
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.078	65	309962	500.00	ug/L	0.00
5) pentafluorobenzene	10.781	168	313010	50.00	ug/L	0.00
59) 1,4-difluorobenzene	11.738	114	582696	50.00	ug/L	0.00
88) chlorobenzene-d5	14.780	117	520803	50.00	ug/L	0.00
104) 1,4-dichlorobenzene-d4	16.798	152	241666	50.00	ug/L	0.00
System Monitoring Compounds						
50) dibromofluoromethane (s)	10.833	113	165450	49.30	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 98.60%			
51) 1,2-dichloroethane-d4 (s)	11.283	65	233258	49.99	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 99.98%			
80) toluene-d8 (s)	13.353	98	745767	50.34	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 100.68%			
106) 4-bromofluorobenzene (s)	15.810	174	180310	53.17	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 106.34%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.240	59	4871	7.47	ug/L #	1
23) acetone	7.299	58	5043	11.33	ug/L #	81
32) methyl tert butyl ether	8.475	73	5055	0.44	ug/L #	1
54) cyclohexane	10.896	84	158152	34.87	ug/L	76
65) benzene	11.330	78	53870	3.62	ug/L	96
73) methylcyclohexane	12.255	83	127167	30.38	ug/L	94
82) toluene	13.426	91	204417	13.32	ug/L	99
99) ethylbenzene	14.848	91	1609560	92.04	ug/L	99
100) m,p-xylene	14.942	106	1871266	295.15	ug/L	100
101) o-xylene	15.319	91	1454123	103.96	ug/L	98
105) isopropylbenzene	15.611	105	150658	9.87	ug/L	100

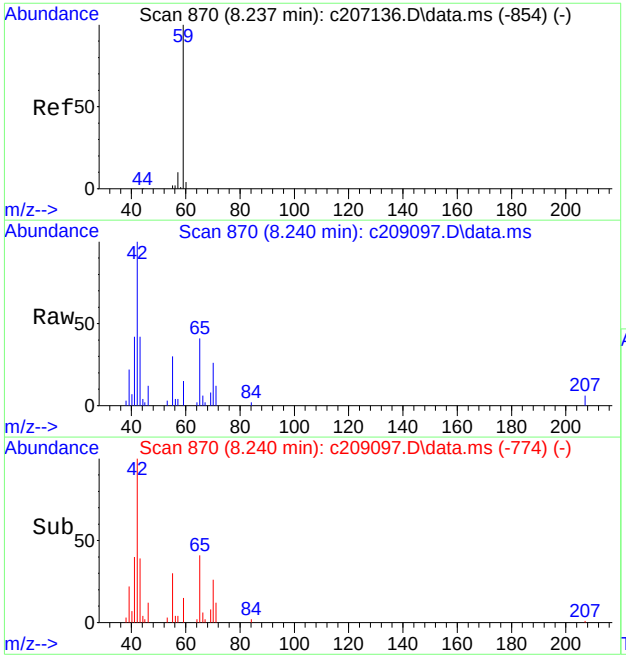
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : c209097.D
Acq On : 15 Apr 2016 2:39 am
Operator : VIANNAC
Sample : jc18196-1
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Apr 15 16:17:34 2016
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Fri Apr 15 15:18:17 2016
Response via : Initial Calibration

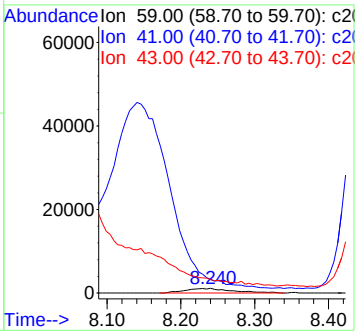


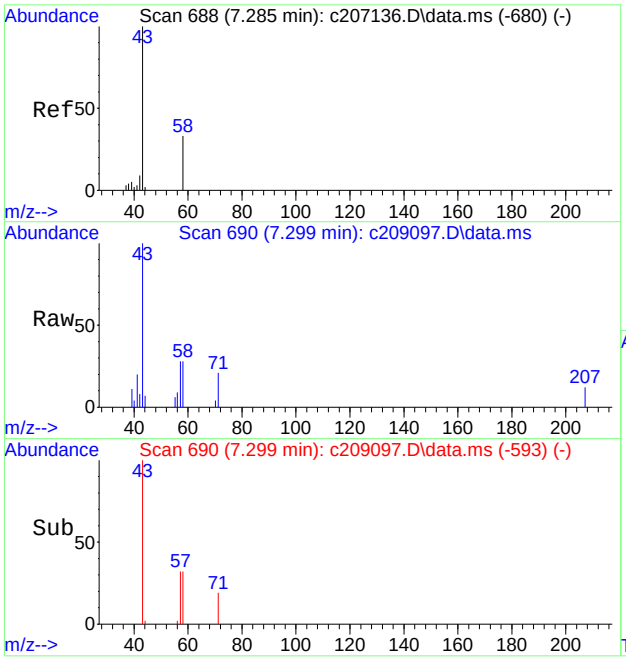


#3
tertiary butyl alcohol
Concen: 7.47 ug/L
RT: 8.240 min Scan# 870
Delta R.T. 0.002 min
Lab File: c209097.D
Acq: 15 Apr 2016 2:39 am

Tgt Ion: 59 Resp: 4871

Ion	Ratio	Lower	Upper
59	100		
41	194.8	0.0	32.5#
43	125.0	0.0	33.8#

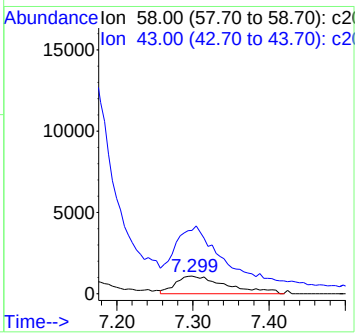


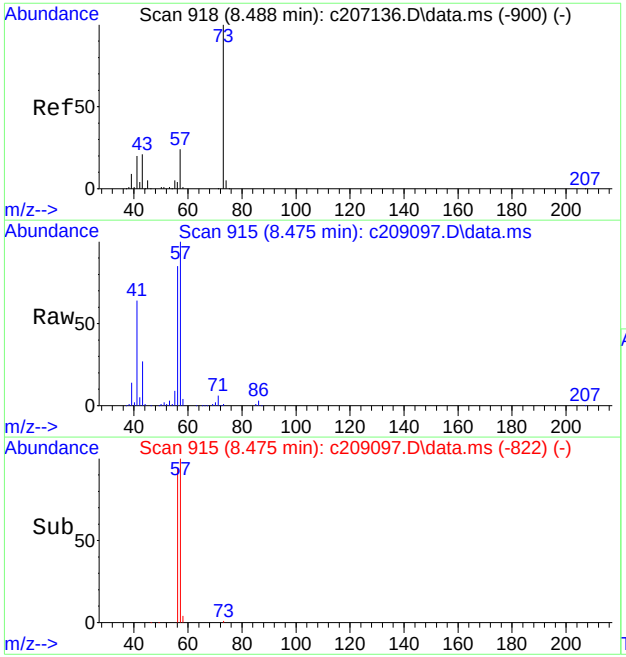


#23
acetone
Concen: 11.33 ug/L
RT: 7.299 min Scan# 690
Delta R.T. 0.007 min
Lab File: c209097.D
Acq: 15 Apr 2016 2:39 am

Tgt Ion: 58 Resp: 5043

Ion	Ratio	Lower	Upper
58	100		
43	287.7	297.8	357.8#

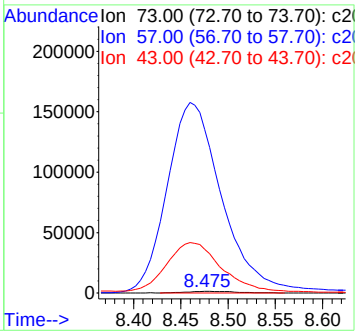


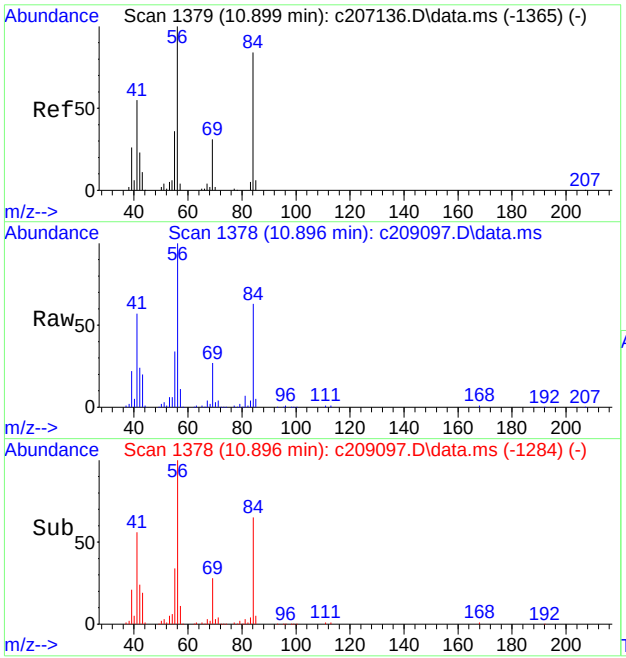


#32
methyl tert butyl ether
Concen: 0.44 ug/L
RT: 8.475 min Scan# 915
Delta R.T. -0.015 min
Lab File: c209097.D
Acq: 15 Apr 2016 2:39 am

Tgt Ion: 73 Resp: 5055

Ion	Ratio	Lower	Upper
73	100		
57	9214.0	0.0	54.9#
43	2445.9	0.0	51.7#

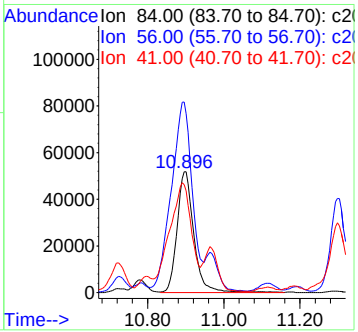


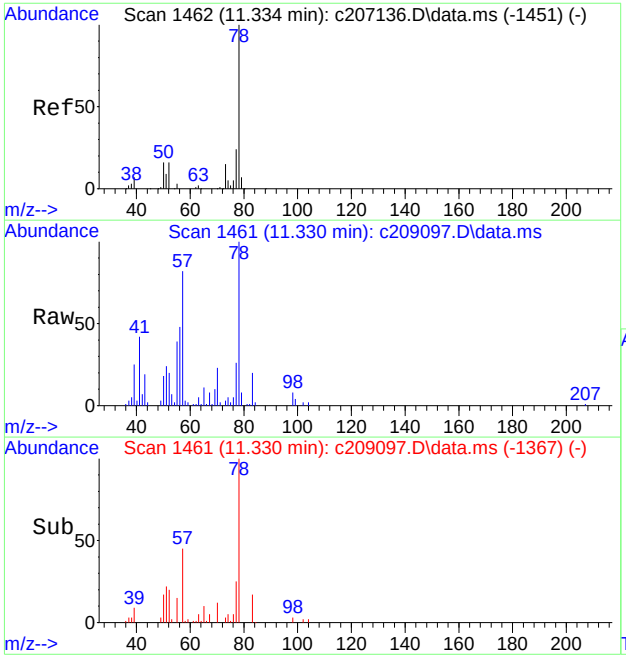


#54
cyclohexane
Concen: 34.87 ug/L
RT: 10.896 min Scan# 1378
Delta R.T. -0.009 min
Lab File: c209097.D
Acq: 15 Apr 2016 2:39 am

Tgt Ion: 84 Resp: 158152

Ion	Ratio	Lower	Upper
84	100		
56	155.6	88.4	164.2
41	86.4	49.0	91.0

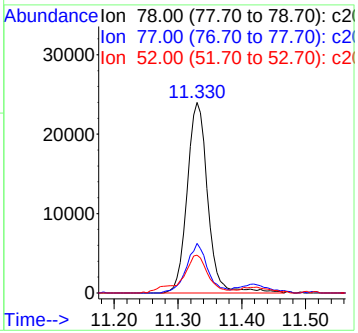


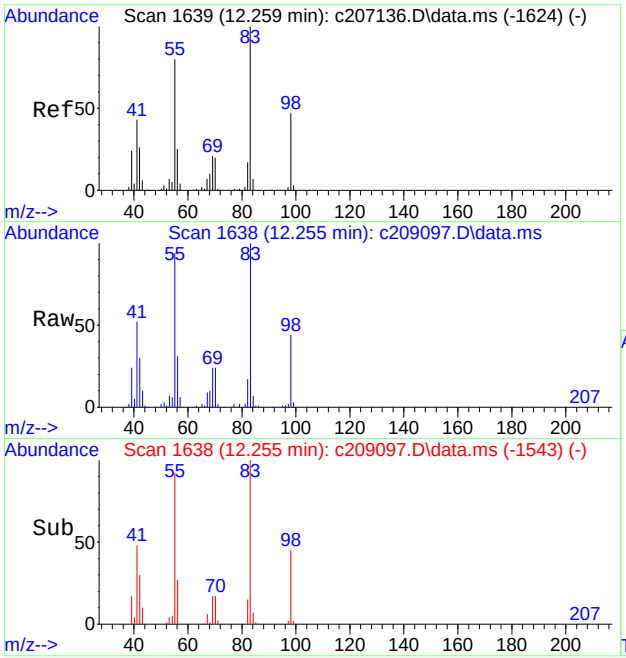


#65
benzene
Concen: 3.62 ug/L
RT: 11.330 min Scan# 1461
Delta R.T. -0.009 min
Lab File: c209097.D
Acq: 15 Apr 2016 2:39 am

Tgt Ion: 78 Resp: 53870

Ion	Ratio	Lower	Upper
78	100		
77	26.1	0.0	53.5
52	19.0	0.0	48.0

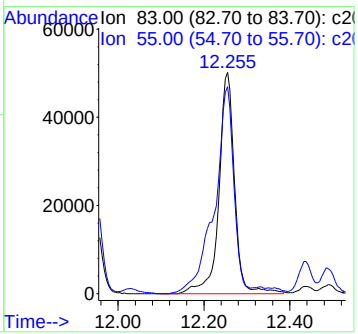


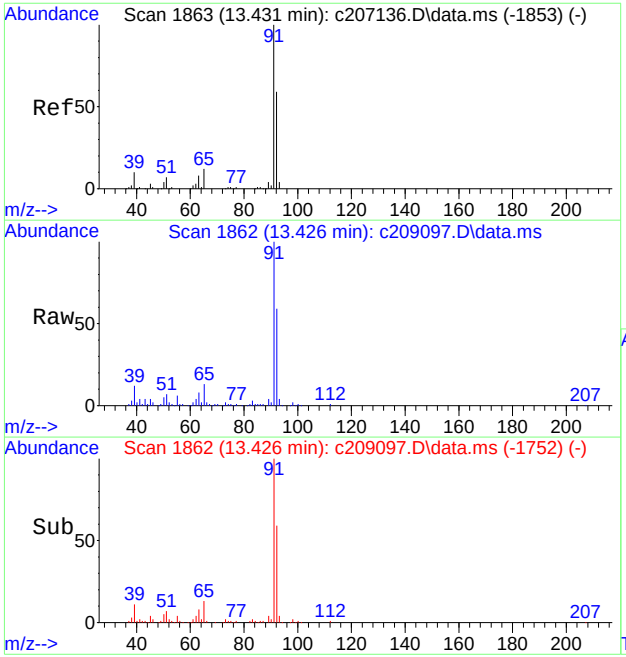


#73
methylcyclohexane
Concen: 30.38 ug/L
RT: 12.255 min Scan# 1638
Delta R.T. -0.004 min
Lab File: c209097.D
Acq: 15 Apr 2016 2:39 am

Tgt Ion: 83 Resp: 127167

Ion	Ratio	Lower	Upper
83	100		
55	93.5	61.2	113.8

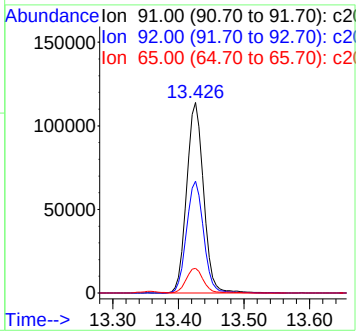


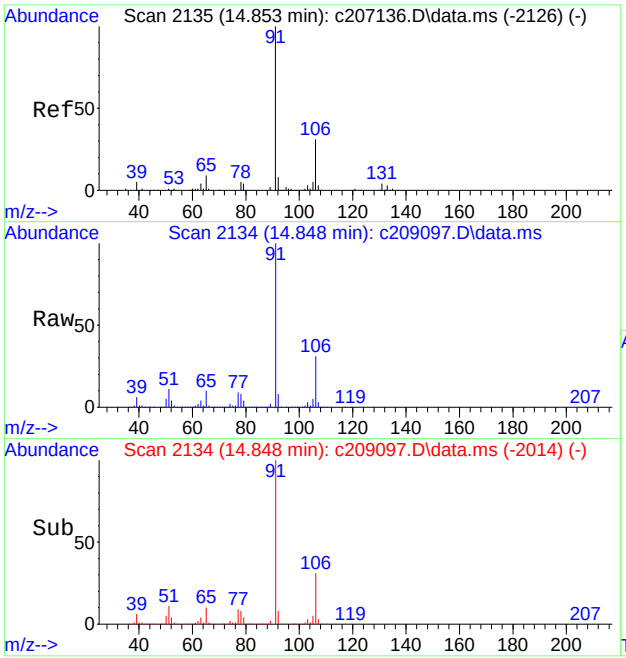


#82
toluene
Concen: 13.32 ug/L
RT: 13.426 min Scan# 1862
Delta R.T. -0.004 min
Lab File: c209097.D
Acq: 15 Apr 2016 2:39 am

Tgt Ion: 91 Resp: 204417

Ion	Ratio	Lower	Upper
91	100		
92	58.8	29.4	89.4
65	12.9	0.0	42.9

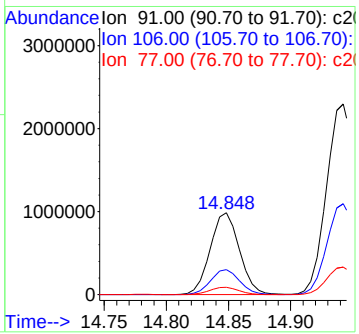


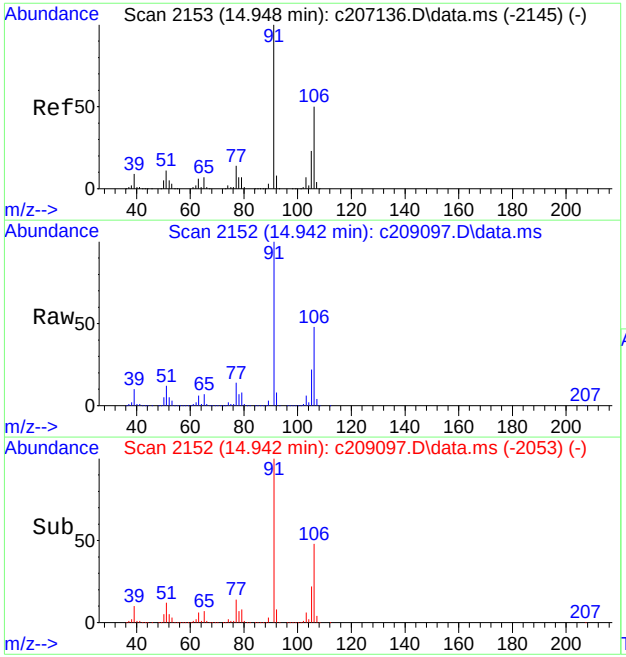


#99
ethylbenzene
Concen: 92.04 ug/L
RT: 14.848 min Scan# 2134
Delta R.T. -0.004 min
Lab File: c209097.D
Acq: 15 Apr 2016 2:39 am

Tgt Ion: 91 Resp: 1609560

Ion	Ratio	Lower	Upper
91	100		
106	30.5	0.0	59.9
77	8.9	0.0	39.2

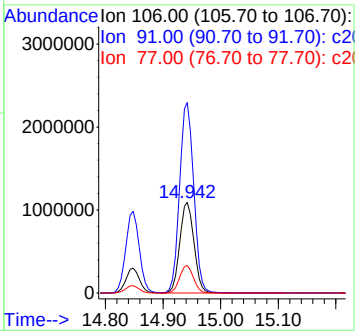


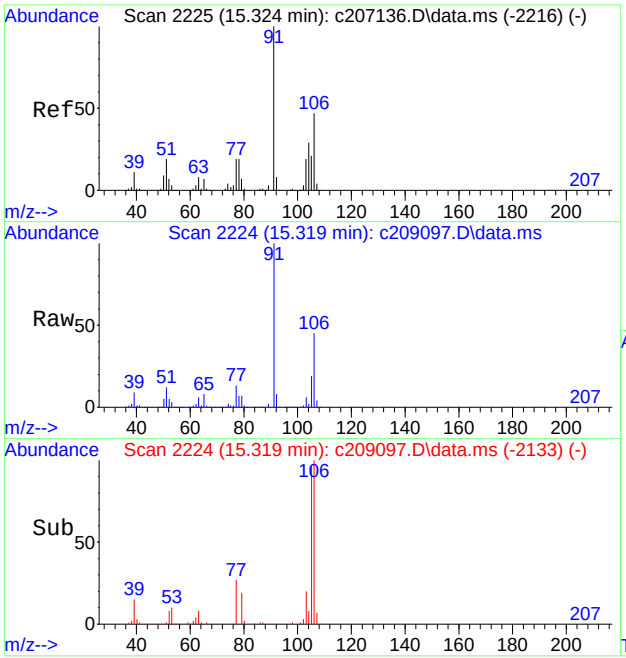


#100
m,p-xylene
Concen: 295.15 ug/L
RT: 14.942 min Scan# 2152
Delta R.T. -0.004 min
Lab File: c209097.D
Acq: 15 Apr 2016 2:39 am

Tgt Ion:106 Resp: 1871266

Ion	Ratio	Lower	Upper
106	100		
91	209.5	179.7	239.7
77	30.3	0.0	59.6

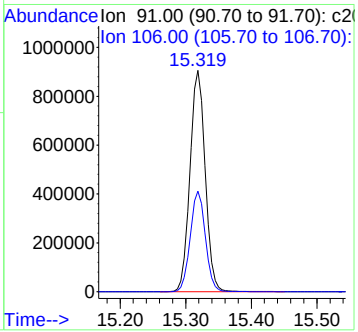


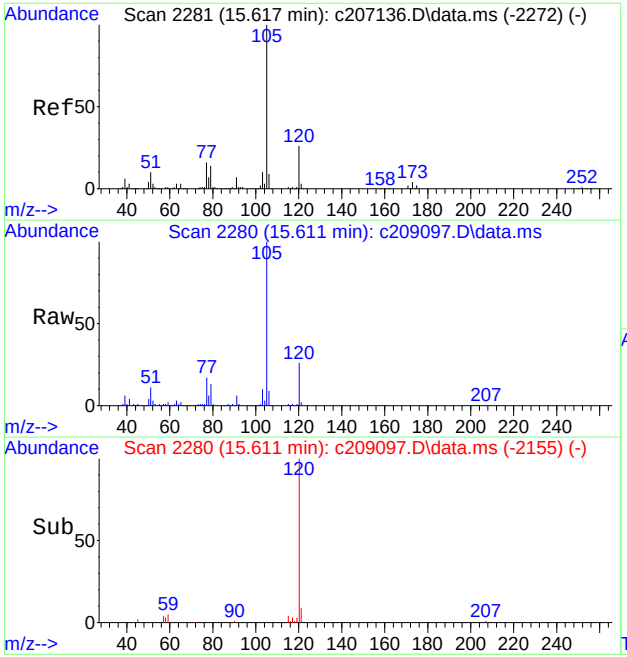


#101
o-xylene
Concen: 103.96 ug/L
RT: 15.319 min Scan# 2224
Delta R.T. -0.004 min
Lab File: c209097.D
Acq: 15 Apr 2016 2:39 am

Tgt Ion: 91 Resp: 1454123

Ion	Ratio	Lower	Upper
91	100		
106	45.4	14.3	74.3

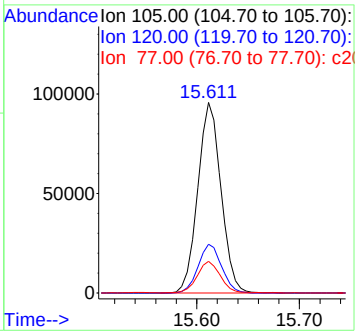




#105
isopropylbenzene
Concen: 9.87 ug/L
RT: 15.611 min Scan# 2280
Delta R.T. -0.004 min
Lab File: c209097.D
Acq: 15 Apr 2016 2:39 am

Tgt Ion:105 Resp: 150658

Ion	Ratio	Lower	Upper
105	100		
120	25.7	0.0	55.7
77	16.6	0.0	46.7



7.11

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : c209097.D
Acq On : 15 Apr 2016 2:39 am
Operator : VIANNAC
Sample : jc18196-1
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 36 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.3 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MC7650.M
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

Signal : TIC: c20909

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.833	21	27	90	rVB2	16219	69123	0.52%	0.052%
2	4.246	90	106	157	rBB	748383	3375736	25.47%	2.539%
3	4.591	157	172	241	rBB	1225829	6348558	47.89%	4.776%
4	4.993	241	249	326	rVB2	57193	251010	1.89%	0.189%
5	5.474	326	341	366	rBB2	32160	144067	1.09%	0.108%
6	5.710	366	386	473	rBB	2431603	13255311	100.00%	9.972%
7	6.232	473	486	526	rBB	1181228	4200495	31.69%	3.160%
8	6.515	529	540	558	rBB	335007	937036	7.07%	0.705%
9	6.745	571	584	594	rBB	134196	378071	2.85%	0.284%
10	6.855	594	605	631	rBB	417611	1303989	9.84%	0.981%
11	7.142	642	660	733	rBB3	95355	513541	3.87%	0.386%
12	7.848	775	795	804	rBV7	37109	191071	1.44%	0.144%
13	8.005	804	825	894	rBB2	866318	5717281	43.13%	4.301%
14	8.460	897	912	960	rBB	523946	2099881	15.84%	1.580%
15	8.773	961	972	988	rBB2	46469	146842	1.11%	0.110%
16	8.925	988	1001	1020	rBB	218964	644611	4.86%	0.485%
17	9.097	1024	1034	1044	rBB2	34190	91161	0.69%	0.069%
18	9.197	1044	1053	1059	rVV3	52091	140583	1.06%	0.106%
19	9.275	1059	1068	1083	rVB	153815	433606	3.27%	0.326%
20	9.416	1083	1095	1107	rBB	115316	327274	2.47%	0.246%
21	9.547	1107	1120	1131	rVV4	42188	177844	1.34%	0.134%
22	9.672	1131	1144	1154	rVV3	155834	487787	3.68%	0.367%
23	9.756	1154	1160	1183	rVB3	51933	178330	1.35%	0.134%
24	9.955	1183	1198	1238	rBB	1044002	3191665	24.08%	2.401%
25	10.389	1271	1281	1287	rBV2	13271	43167	0.33%	0.032%
26	10.462	1287	1295	1305	rVB4	38952	105548	0.80%	0.079%
27	10.629	1305	1327	1336	rBB2	98652	296563	2.24%	0.223%
28	10.723	1336	1345	1349	rVV2	89295	212475	1.60%	0.160%
29	10.781	1349	1356	1362	rVV	438318	1040391	7.85%	0.783%
30	10.891	1362	1377	1387	rVV4	344904	1880648	14.19%	1.415%
31	10.964	1387	1391	1410	rVB	166360	387937	2.93%	0.292%
32	11.115	1410	1420	1427	rBV2	16575	50498	0.38%	0.038%
33	11.183	1427	1433	1438	rVV4	15542	38013	0.29%	0.029%
34	11.288	1438	1453	1510	rBB3	473043	2324815	17.54%	1.749%
35	11.659	1513	1524	1531	rBV2	70519	212245	1.60%	0.160%
36	11.738	1531	1539	1553	rBB	697353	1448698	10.93%	1.090%
37	11.842	1554	1559	1568	rVB2	35316	72529	0.55%	0.055%
38	11.947	1568	1579	1588	rBB	94317	206390	1.56%	0.155%
39	12.030	1588	1595	1606	rBB	32187	67465	0.51%	0.051%
40	12.255	1609	1638	1648	rBB4	259136	903054	6.81%	0.679%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : c209097.D
Acq On : 15 Apr 2016 2:39 am
Operator : VIANNAC
Sample : jc18196-1
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 36 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.3 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MC7650.M
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

41	12.334	1648	1653	1665	rVB3	12135	30248	0.23%	0.023%
42	12.433	1665	1672	1679	rBV	70532	143936	1.09%	0.108%
43	12.490	1679	1683	1693	rVB2	25582	50444	0.38%	0.038%
44	12.647	1702	1713	1730	rBB3	138544	393856	2.97%	0.296%
45	12.799	1730	1742	1765	rBB2	271832	669248	5.05%	0.503%
46	12.971	1766	1775	1779	rBV3	21389	43060	0.32%	0.032%
47	13.034	1779	1787	1800	rVB5	41048	129124	0.97%	0.097%
48	13.191	1809	1817	1824	rBB3	117291	225388	1.70%	0.170%
49	13.264	1824	1831	1840	rBV2	36233	88345	0.67%	0.066%
50	13.353	1841	1848	1856	rBB	1091096	1849426	13.95%	1.391%
51	13.426	1856	1862	1883	rVB	311319	680475	5.13%	0.512%
52	13.646	1897	1904	1912	rBV5	13662	30327	0.23%	0.023%
53	13.735	1912	1921	1935	rBB3	55538	156308	1.18%	0.118%
54	13.965	1956	1965	1975	rBV2	18879	59016	0.45%	0.044%
55	14.174	1999	2005	2024	rVB10	25230	99543	0.75%	0.075%
56	14.676	2094	2101	2113	rBB4	42788	79490	0.60%	0.060%
57	14.780	2114	2121	2127	rBB	1020517	1601246	12.08%	1.205%
58	14.848	2127	2134	2143	rBB	2234767	3592716	27.10%	2.703%
59	14.942	2143	2152	2176	rBB	6681646	11377042	85.83%	8.559%
60	15.319	2214	2224	2247	rBB	2533354	4063893	30.66%	3.057%
61	15.611	2270	2280	2293	rBB	234181	387127	2.92%	0.291%
62	15.810	2308	2318	2340	rBB	789203	1288031	9.72%	0.969%
63	15.967	2342	2348	2353	rBB	442319	638683	4.82%	0.480%
64	16.024	2353	2359	2368	rVV	3512053	8917889	67.28%	6.709%
65	16.087	2368	2371	2383	rVB	2042921	2831392	21.36%	2.130%
66	16.296	2403	2411	2423	rBB	2942781	4517559	34.08%	3.398%
67	16.427	2427	2436	2446	rBB	7124815	10928661	82.45%	8.221%
68	16.610	2466	2471	2477	rBB	118793	169504	1.28%	0.128%
69	16.662	2477	2481	2486	rBB	26304	35202	0.27%	0.026%
70	16.803	2500	2508	2521	rBB2	3653119	5957077	44.94%	4.481%
71	16.903	2521	2527	2534	rVV2	361659	898121	6.78%	0.676%
72	16.960	2534	2538	2543	rVV2	371787	693627	5.23%	0.522%
73	17.018	2543	2549	2555	rBB	1712261	2479050	18.70%	1.865%
74	17.096	2558	2564	2569	rBB	80567	114760	0.87%	0.086%
75	17.154	2569	2575	2579	rBV	217706	315372	2.38%	0.237%
76	17.201	2579	2584	2595	rBB3	437845	1139693	8.60%	0.857%
77	17.284	2595	2600	2608	rBB	904213	1300799	9.81%	0.979%
78	17.394	2611	2621	2627	rBV2	180986	425746	3.21%	0.320%
79	17.452	2627	2632	2644	rVB	689270	1044426	7.88%	0.786%
80	17.556	2644	2652	2657	rBV	297588	474996	3.58%	0.357%
81	17.609	2657	2662	2667	rBB	491159	654709	4.94%	0.493%
82	17.656	2667	2671	2684	rVB	604089	950263	7.17%	0.715%
83	17.760	2684	2691	2697	rBV6	23184	53731	0.41%	0.040%
84	17.807	2697	2700	2707	rVB2	23074	35409	0.27%	0.027%
85	17.870	2707	2712	2716	rBV2	31308	49411	0.37%	0.037%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : c209097.D
Acq On : 15 Apr 2016 2:39 am
Operator : VIANNAC
Sample : jc18196-1
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 36 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.3 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MC7650.M
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

86	17.927	2717	2723	2730	rBB	626701	917347	6.92%	0.690%
87	17.975	2730	2732	2736	rVV2	30250	35951	0.27%	0.027%
88	18.027	2736	2742	2746	rVV	358563	559044	4.22%	0.421%
89	18.074	2746	2751	2758	rBB	1062262	1552527	11.71%	1.168%
90	18.137	2758	2763	2771	rVB2	72803	140539	1.06%	0.106%
91	18.241	2776	2783	2800	rBB5	211064	599478	4.52%	0.451%
92	18.356	2800	2805	2815	rBB4	53468	105861	0.80%	0.080%
93	18.440	2815	2821	2827	rBB	111630	173122	1.31%	0.130%
94	18.691	2860	2869	2882	rBB	1452422	2313534	17.45%	1.740%
95	18.816	2882	2893	2903	rBB2	54877	136927	1.03%	0.103%
96	18.895	2903	2908	2937	rBB	35602	53892	0.41%	0.041%
97	19.078	2937	2943	2956	rVV2	37264	80371	0.61%	0.060%
98	19.161	2956	2959	2975	rVB4	14852	32258	0.24%	0.024%
99	19.684	3051	3059	3073	rBB	235914	432226	3.26%	0.325%
100	19.893	3093	3099	3194	rBB2	122885	236547	1.78%	0.178%

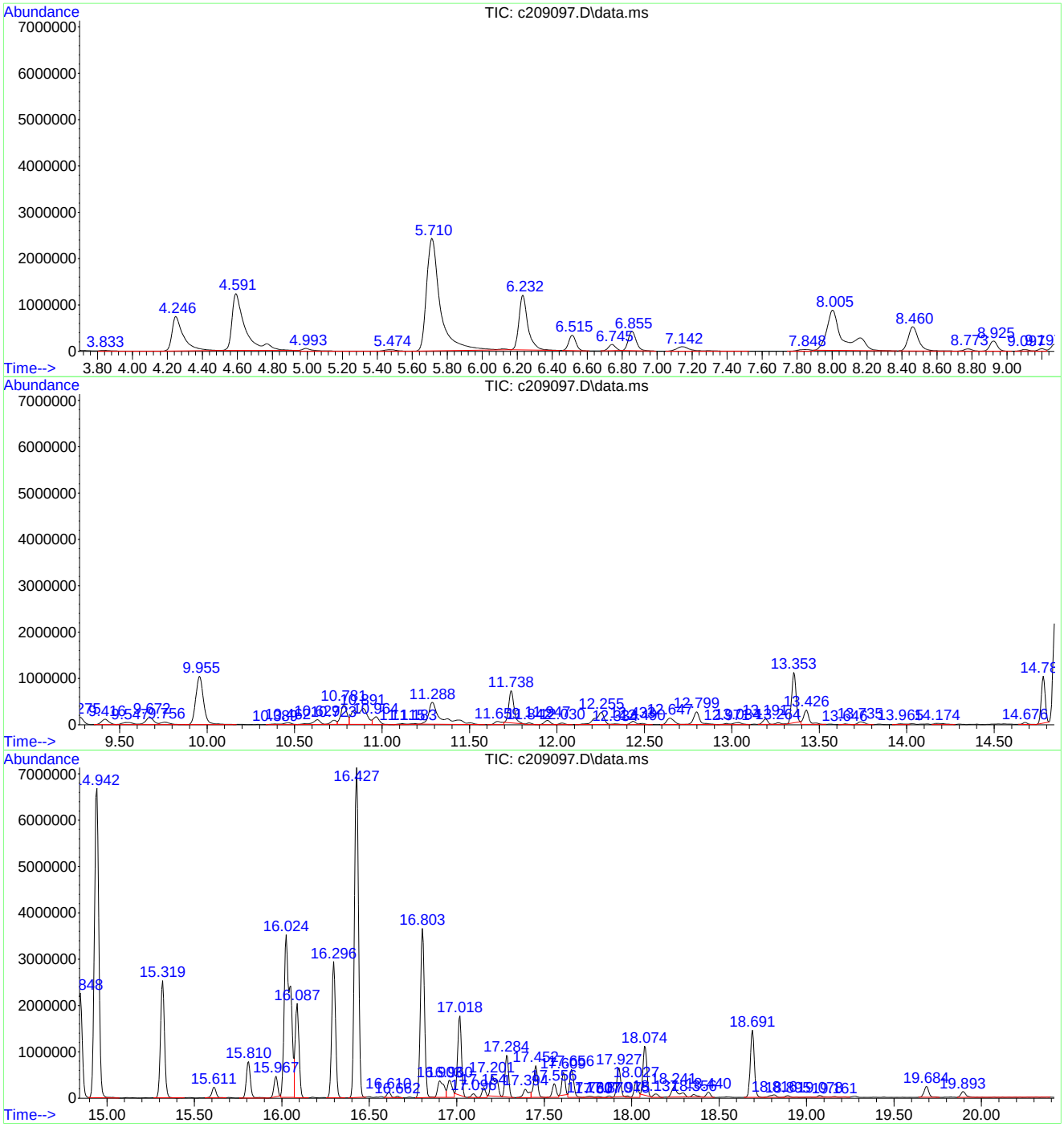
Sum of corrected areas: 132929302

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\
Data File : c209097.D
Acq On : 15 Apr 2016 2:39 am
Operator : VIANNAC
Sample : jc18196-1
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209097.D
Acq On : 15 Apr 2016 2:39 am
Operator : VIANNAC
Sample : jc18196-1
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

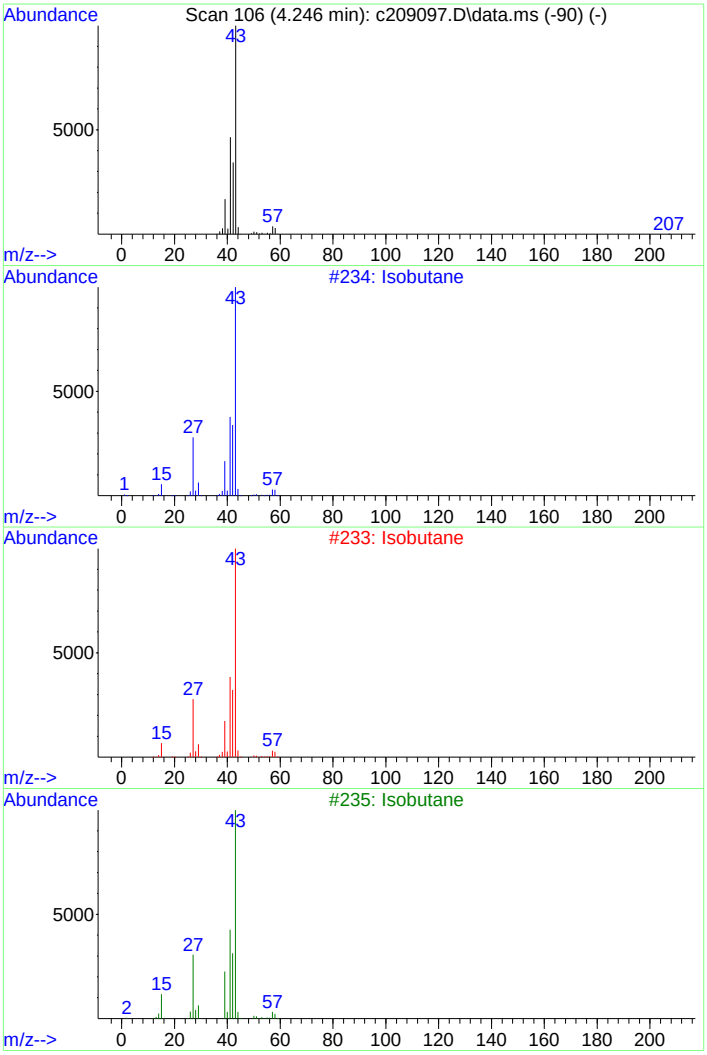
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

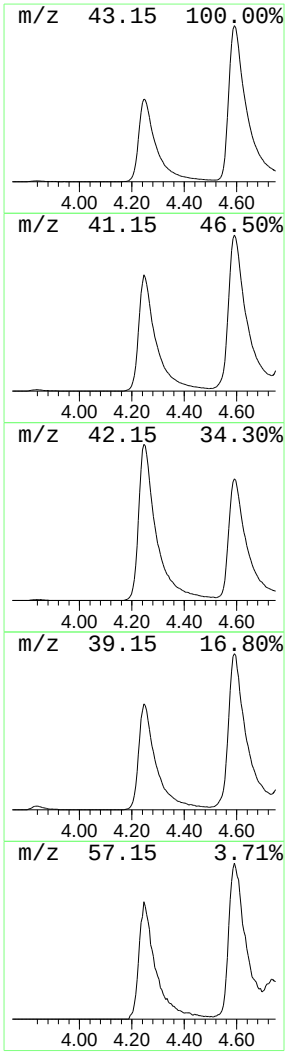
****

Peak Number 1 alkane Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.246	162.23 ug/L	3375740	pentafluorobenzene	10.781

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Isobutane	58	C4H10	000075-28-5	86
2	Isobutane	58	C4H10	000075-28-5	80
3	Isobutane	58	C4H10	000075-28-5	72
4	Isobutane	58	C4H10	000075-28-5	64
5	Cyclobutylamine	71	C4H9N	002516-34-9	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209097.D
Acq On : 15 Apr 2016 2:39 am
Operator : VIANNAC
Sample : jc18196-1
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

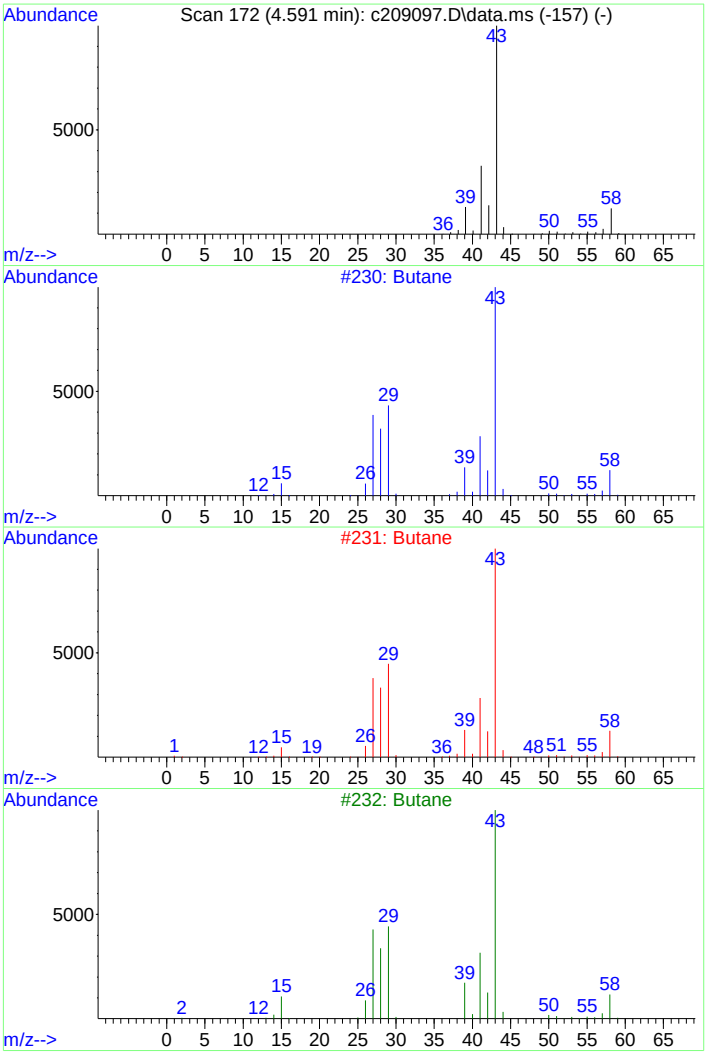
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

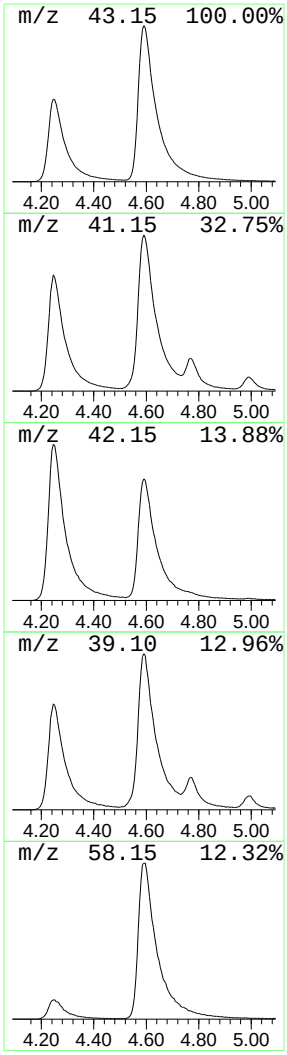
****

Peak Number 2 alkane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.591	305.10 ug/L	6348560	pentafluorobenzene	10.781

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	72
2	Butane	58	C4H10	000106-97-8	72
3	Butane	58	C4H10	000106-97-8	58
4	Isopropylsulfonyl chloride	142	C3H7ClO2S	010147-37-2	9
5	Isobutane	58	C4H10	000075-28-5	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209097.D
Acq On : 15 Apr 2016 2:39 am
Operator : VIANNAC
Sample : jc18196-1
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

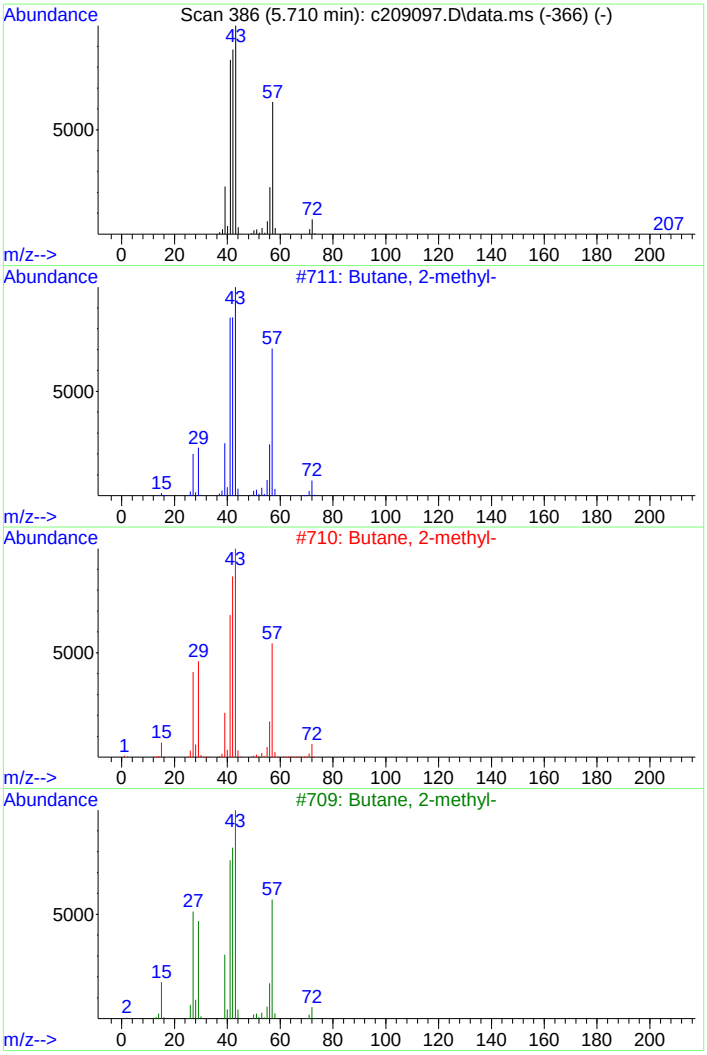
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

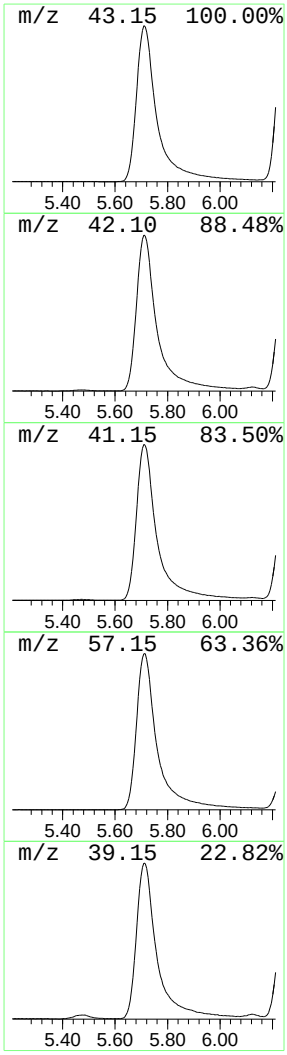
****

Peak Number 3 alkane Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.710	637.03 ug/L	13255300	pentafluorobenzene	10.781

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	94
2	Butane, 2-methyl-	72	C5H12	000078-78-4	91
3	Butane, 2-methyl-	72	C5H12	000078-78-4	90
4	Pentane	72	C5H12	000109-66-0	33
5	3-Buten-1-ol	72	C4H8O	000627-27-0	28





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209097.D
Acq On : 15 Apr 2016 2:39 am
Operator : VIANNAC
Sample : jc18196-1
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

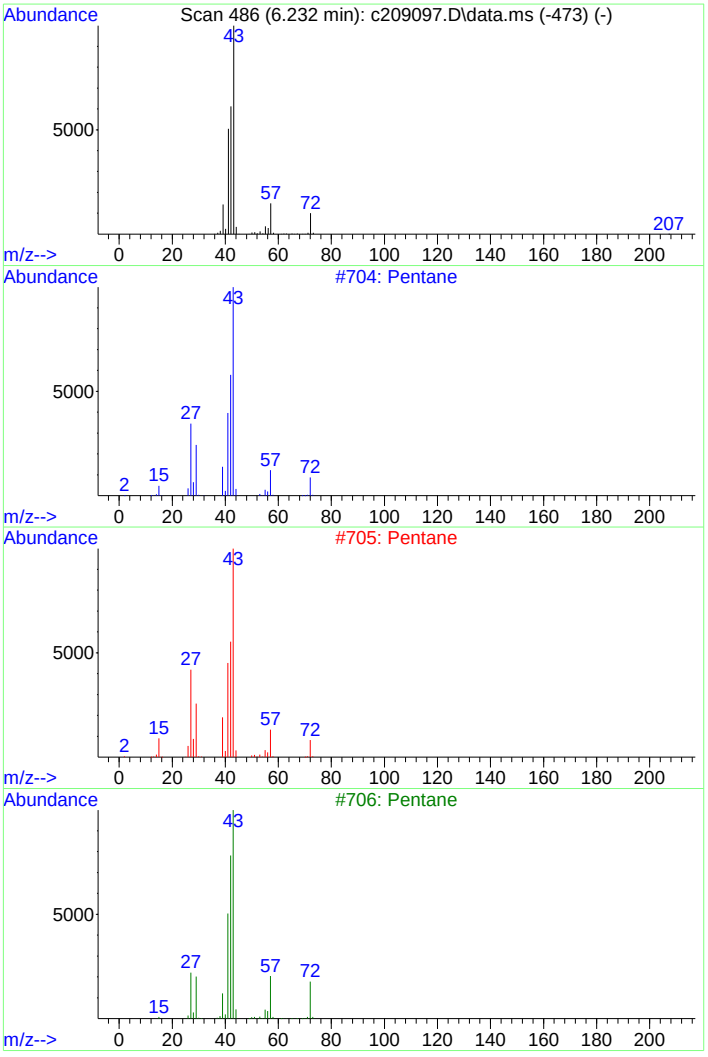
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

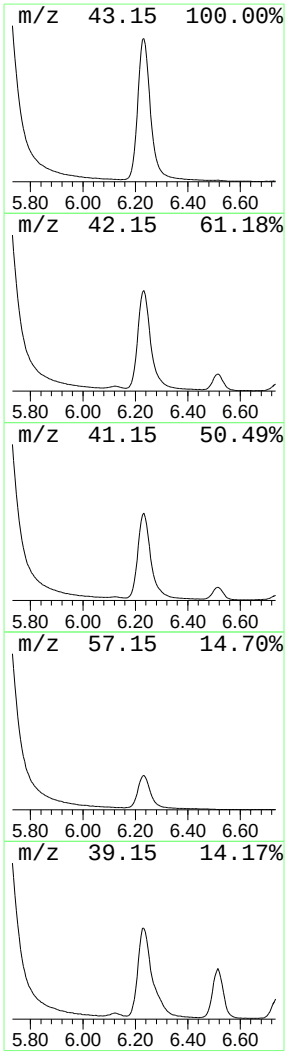
****

Peak Number 4 alkane Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.232	201.87 ug/L	4200500	pentafluorobenzene	10.781

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	90
2	Pentane	72	C5H12	000109-66-0	86
3	Pentane	72	C5H12	000109-66-0	72
4	Pentane	72	C5H12	000109-66-0	58
5	Diaziridine,3,3-dimethyl-	72	C3H8N2	004901-76-2	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209097.D
Acq On : 15 Apr 2016 2:39 am
Operator : VIANNAC
Sample : jc18196-1
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

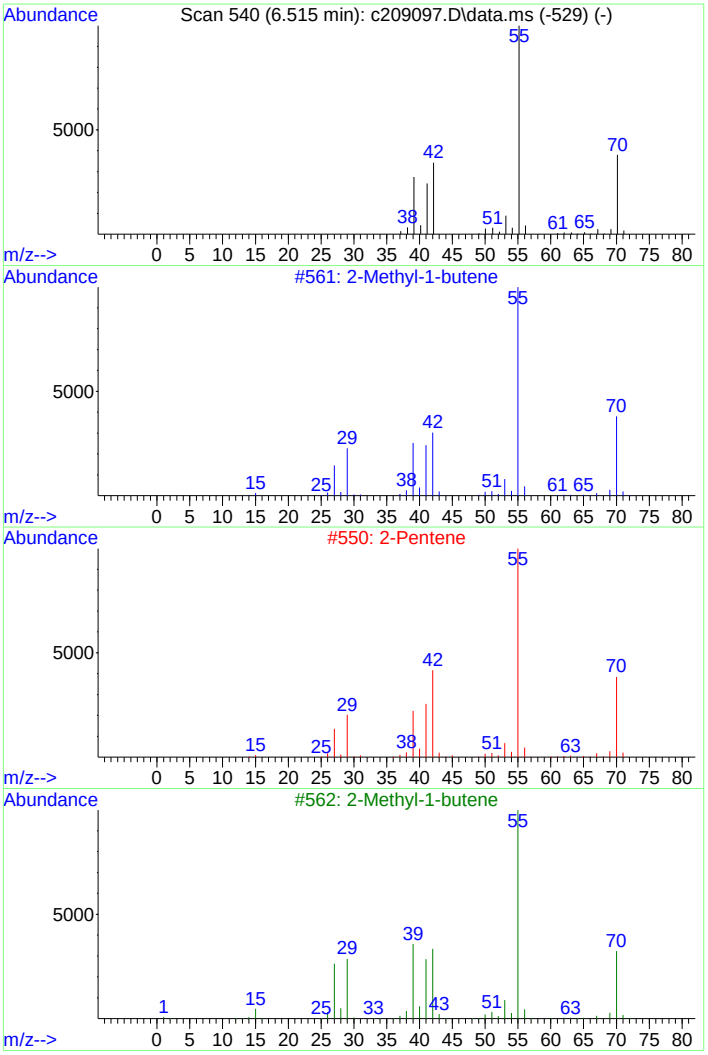
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

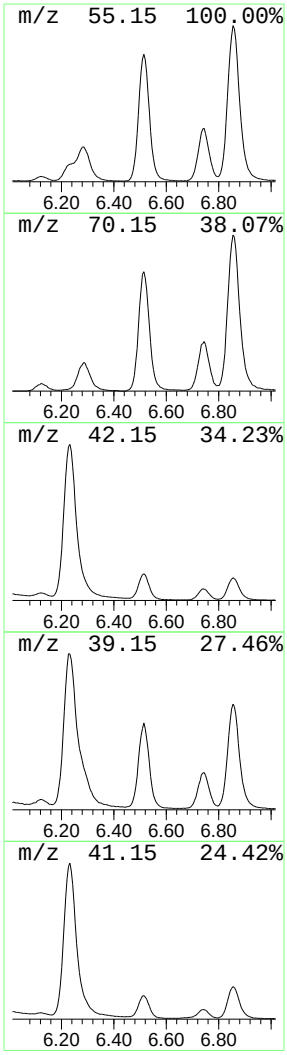
****

Peak Number 5 alkane Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.515	45.03 ug/L	937036	pentafluorobenzene	10.781

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Methyl-1-butene	70	C5H10	000563-46-2	91
2	2-Pentene	70	C5H10	000109-68-2	91
3	2-Methyl-1-butene	70	C5H10	000563-46-2	91
4	2-Pentene, (Z)-	70	C5H10	000627-20-3	91
5	2-Pentene, (E)-	70	C5H10	000646-04-8	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209097.D
Acq On : 15 Apr 2016 2:39 am
Operator : VIANNAC
Sample : jc18196-1
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

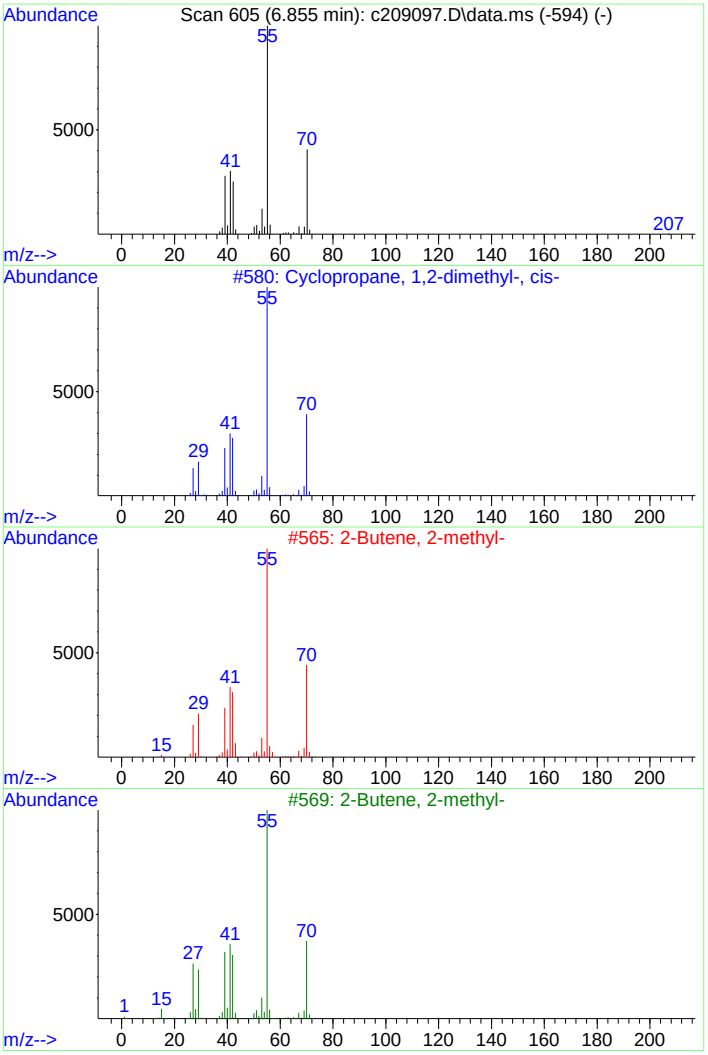
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

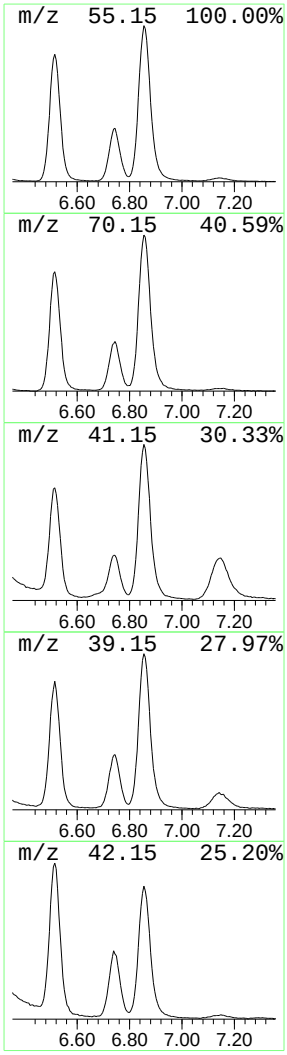
****

Peak Number 6 alkane Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.855	62.67 ug/L	1303990	pentafluorobenzene	10.781

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopropane, 1,2-dimethyl-, cis-	70	C5H10	000930-18-7	91
2	2-Butene, 2-methyl-	70	C5H10	000513-35-9	91
3	2-Butene, 2-methyl-	70	C5H10	000513-35-9	91
4	1-Butene, 3-methyl-	70	C5H10	000563-45-1	86
5	2-Pentene	70	C5H10	000109-68-2	81





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209097.D
Acq On : 15 Apr 2016 2:39 am
Operator : VIANNAC
Sample : jc18196-1
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

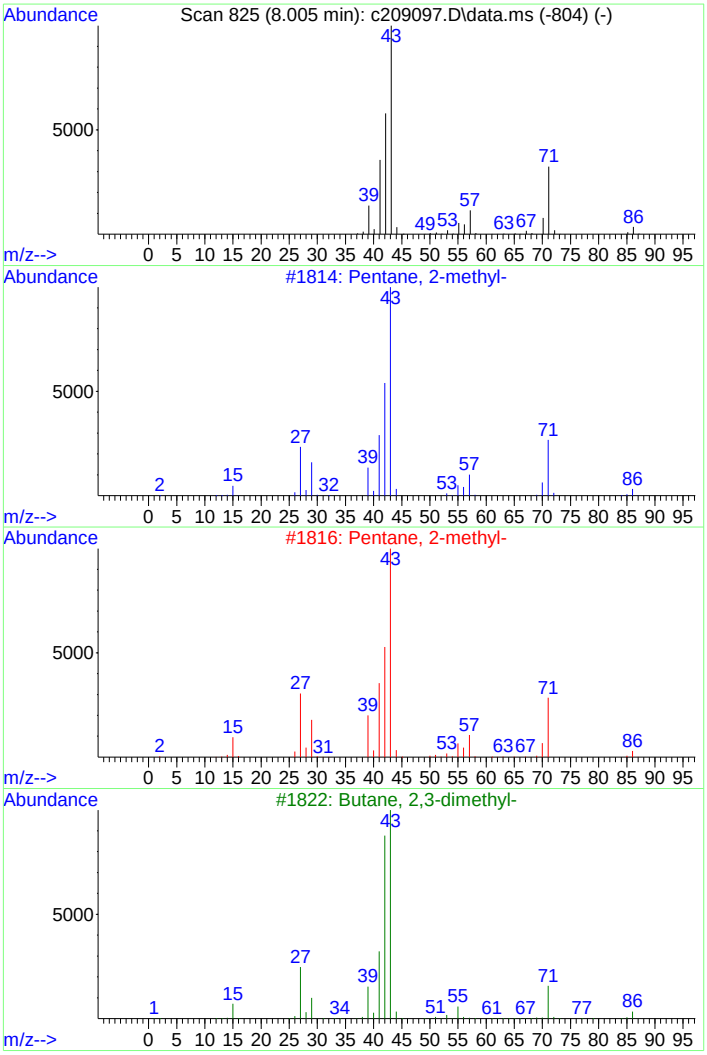
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

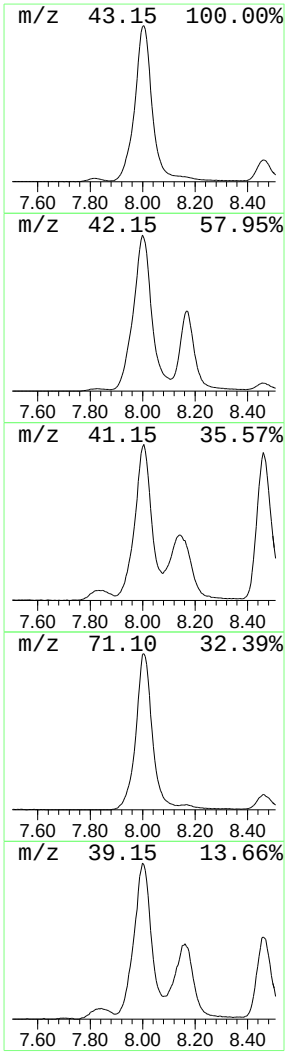
****

Peak Number 8 alkane Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.005	274.77 ug/L	5717280	pentafluorobenzene	10.781

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2-methyl-	86	C6H14	000107-83-5	91
2	Pentane, 2-methyl-	86	C6H14	000107-83-5	86
3	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	47
4	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	47
5	Pentane	72	C5H12	000109-66-0	40





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209097.D
Acq On : 15 Apr 2016 2:39 am
Operator : VIANNAC
Sample : jc18196-1
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

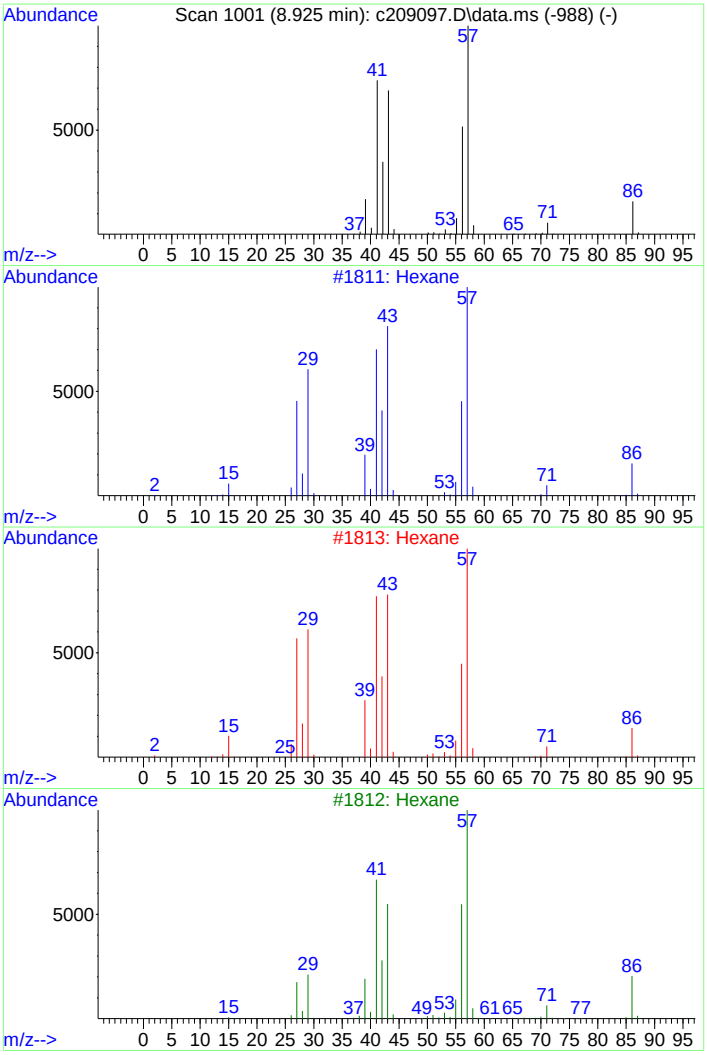
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

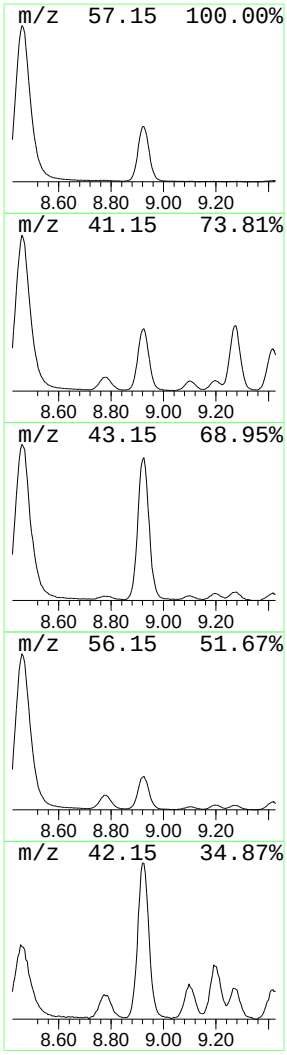
****

Peak Number 9 alkane Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.925	30.98 ug/L	644611	pentafluorobenzene	10.781

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexane	86	C6H14	000110-54-3	91
2	Hexane	86	C6H14	000110-54-3	91
3	Hexane	86	C6H14	000110-54-3	64
4	Furan, tetrahydro-3-methyl-	86	C5H10O	013423-15-9	58
5	Pentane, 2,2,3,4-tetramethyl-	128	C9H20	001186-53-4	40





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209097.D
Acq On : 15 Apr 2016 2:39 am
Operator : VIANNAC
Sample : jc18196-1
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

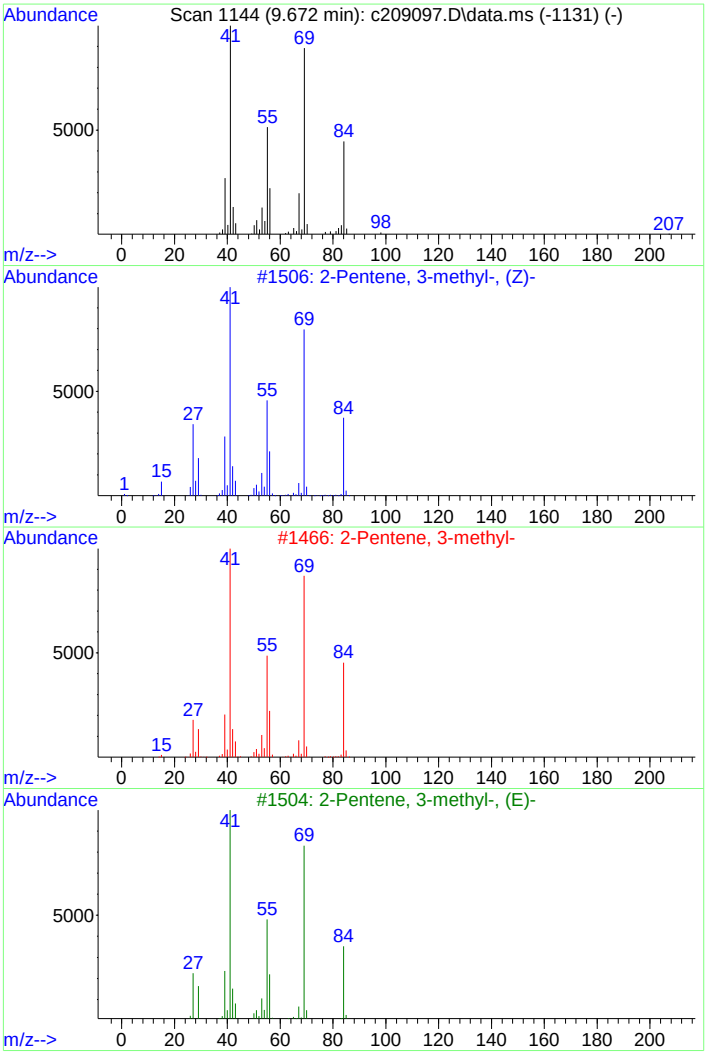
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

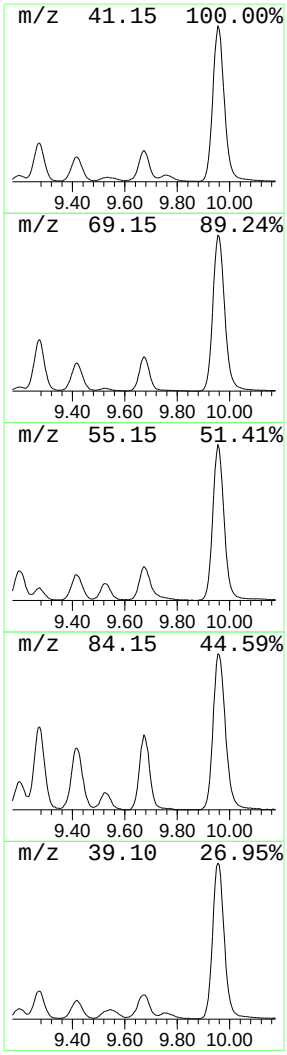
****

Peak Number 10 alkene Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.672	23.44 ug/L	487787	pentafluorobenzene	10.781

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentene, 3-methyl-, (Z)-	84	C6H12	000922-62-3	93
2	2-Pentene, 3-methyl-	84	C6H12	000922-61-2	93
3	2-Pentene, 3-methyl-, (E)-	84	C6H12	000616-12-6	93
4	2-Pentene, 3-methyl-, (E)-	84	C6H12	000616-12-6	90
5	2-Pentene, 3-methyl-, (E)-	84	C6H12	000616-12-6	87





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209097.D
Acq On : 15 Apr 2016 2:39 am
Operator : VIANNAC
Sample : jc18196-1
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

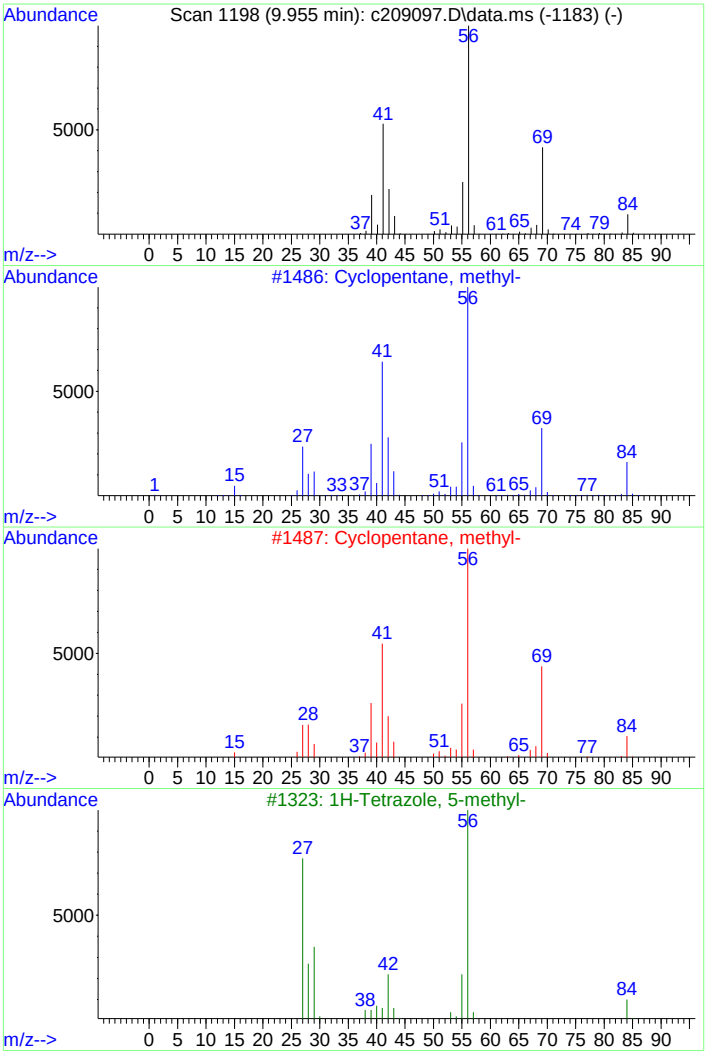
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

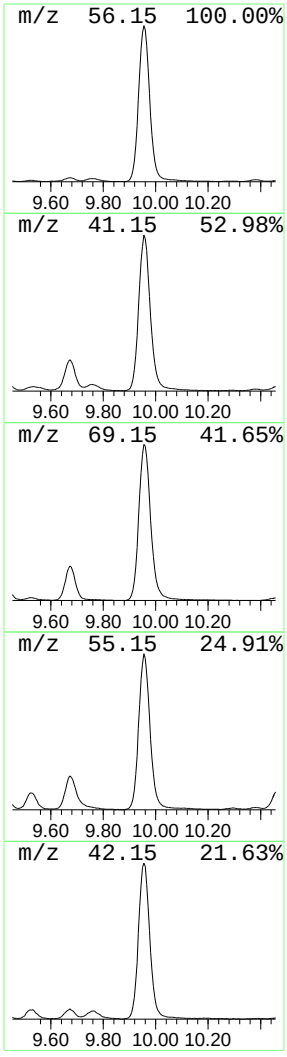
****

Peak Number 11 Cyclopentane, methyl- Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.955	153.39 ug/L	3191670	pentafluorobenzene	10.781

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	91
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	90
3	1H-Tetrazole, 5-methyl-	84	C2H4N4	004076-36-2	80
4	Cyclobutane, ethyl-	84	C6H12	004806-61-5	78
5	Cyclopentane, methyl-	84	C6H12	000096-37-7	78





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209097.D
Acq On : 15 Apr 2016 2:39 am
Operator : VIANNAC
Sample : jc18196-1
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

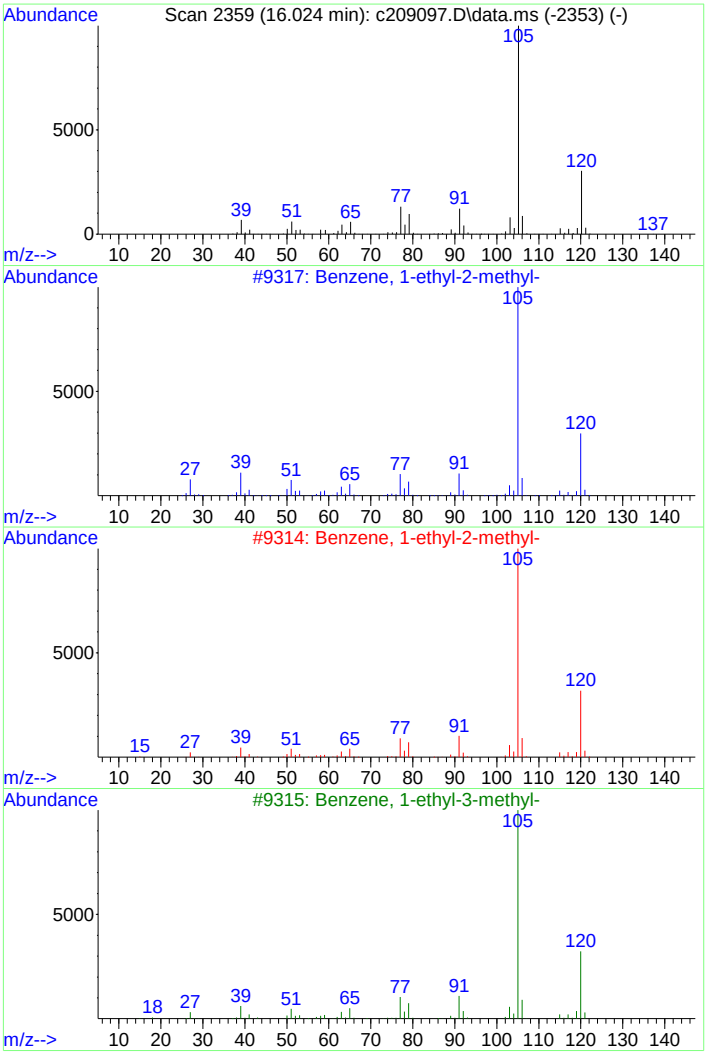
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

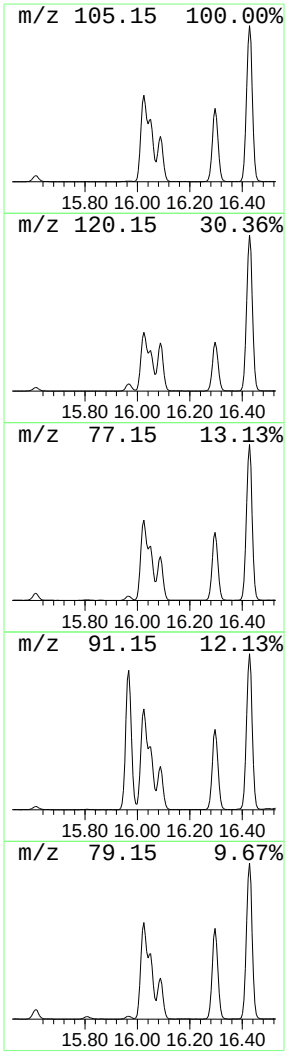
****

Peak Number 12 C3 alkyl benzene Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.025	74.85 ug/L	8917890	1,4-dichlorobenzene-d4	16.798

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
3	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	95
4	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	94
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209097.D
Acq On : 15 Apr 2016 2:39 am
Operator : VIANNAC
Sample : jc18196-1
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

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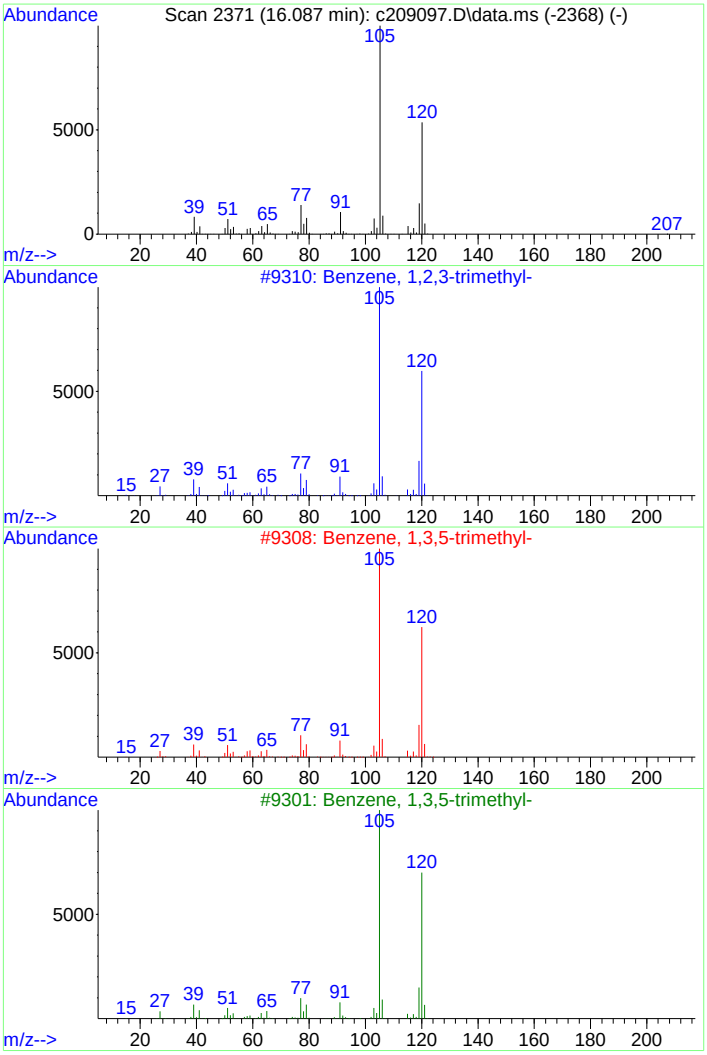
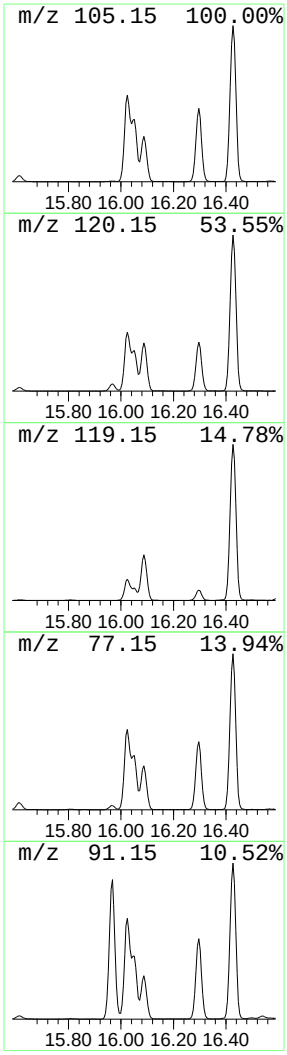
Peak Number 13 Benzene, 1,3,5-trimethyl- Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.087	23.76 ug/L	2831390	1,4-dichlorobenzene-d4	16.798

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
5	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94





SGS ACCUTEST JC18196

Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209097.D
Acq On : 15 Apr 2016 2:39 am
Operator : VIANNAC
Sample : jc18196-1
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

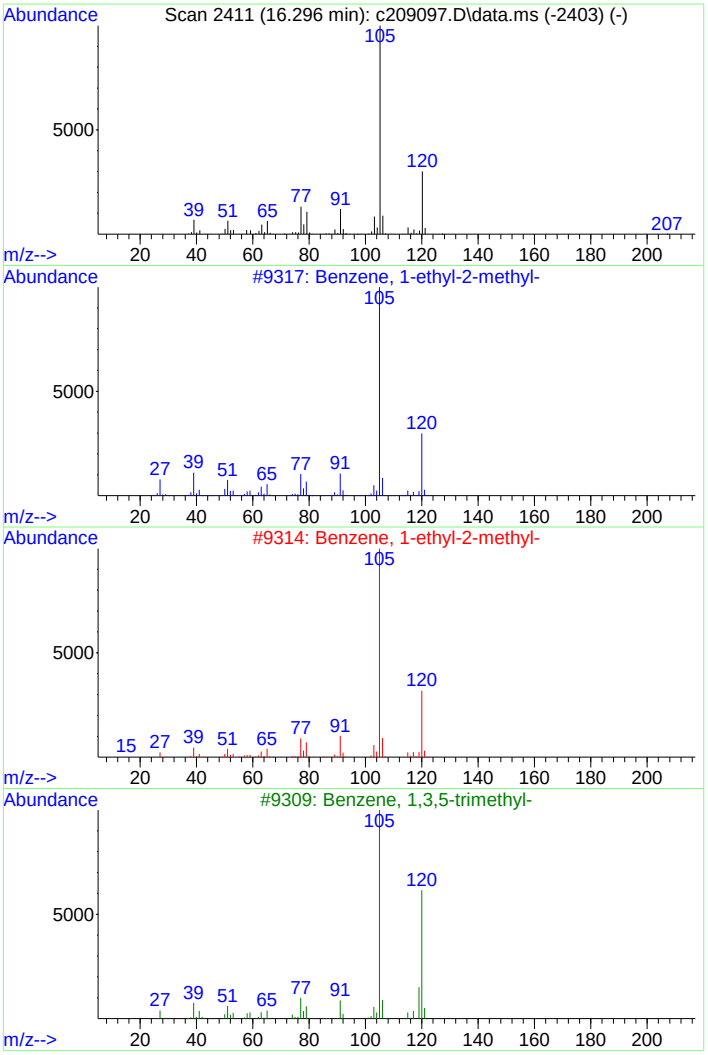
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

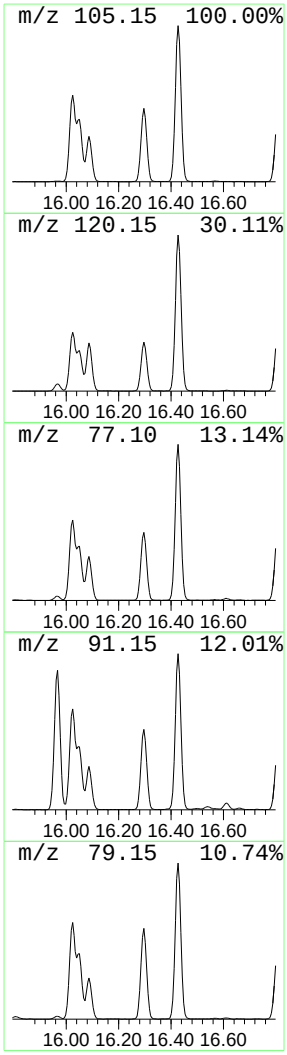
****

Peak Number 14 C3 alkyl benzene Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.296	37.92 ug/L	4517560	1,4-dichlorobenzene-d4	16.798

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
4	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	91
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209097.D
Acq On : 15 Apr 2016 2:39 am
Operator : VIANNAC
Sample : jc18196-1
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

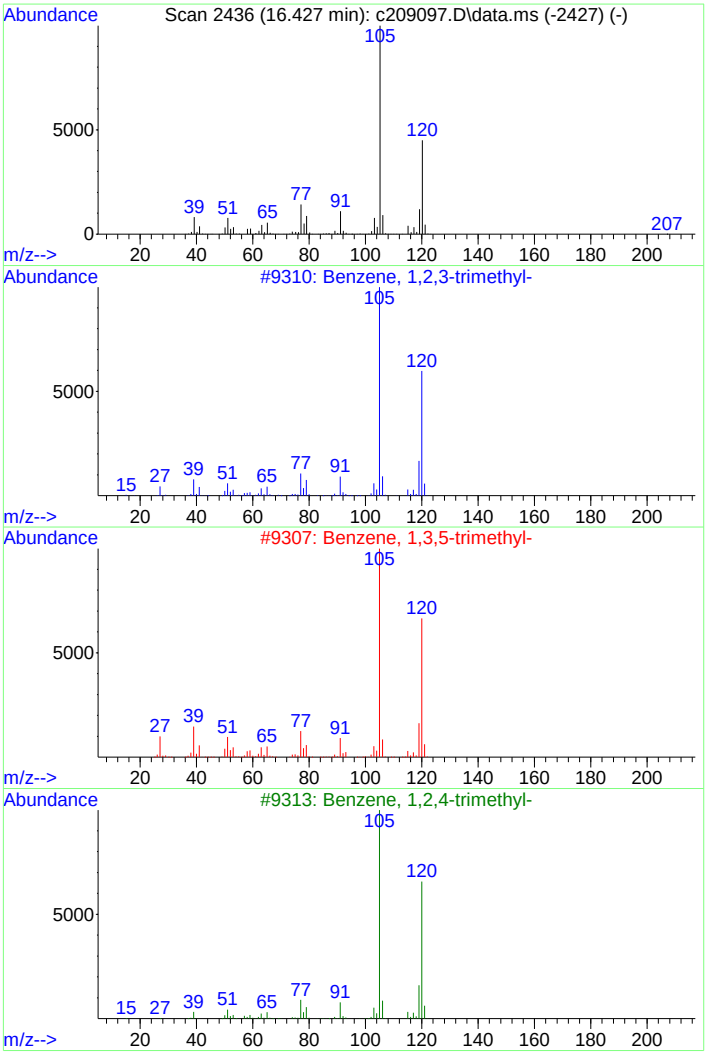
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

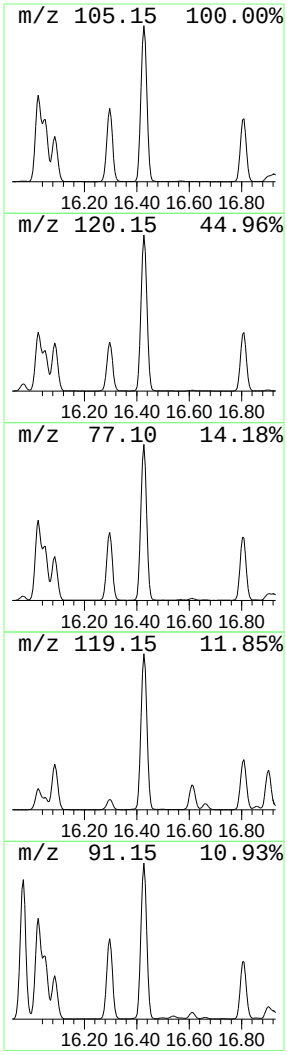
****

Peak Number 15 Benzene, 1,2,4-trimethyl- Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.427	91.73 ug/L	10928700	1,4-dichlorobenzene-d4	16.798

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209097.D
Acq On : 15 Apr 2016 2:39 am
Operator : VIANNAC
Sample : jc18196-1
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

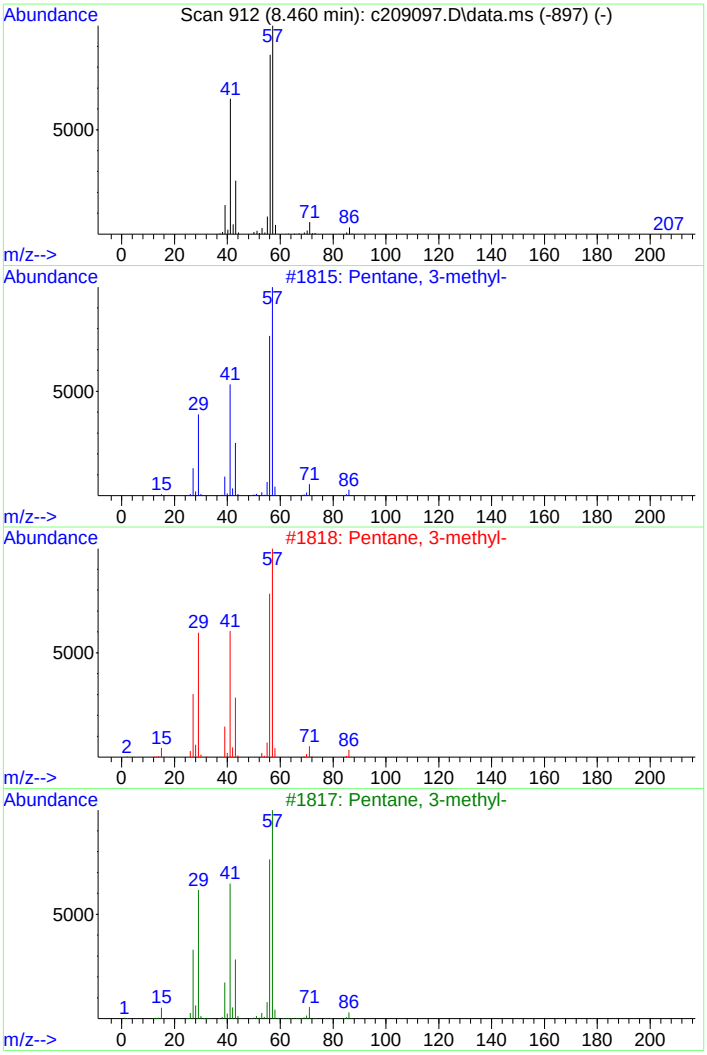
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

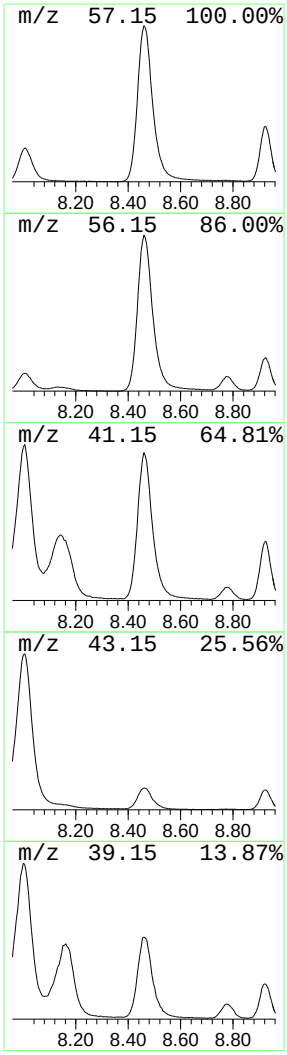
****

Peak Number 16 alkane Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.460	100.92 ug/L	2099880	pentafluorobenzene	10.781

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
2	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
3	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
4	Oxirane, (1-methylethyl)-	86	C5H10O	001438-14-8	59
5	Hexane, 2,2,3-trimethyl-	128	C9H20	016747-25-4	56





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\
Data File : c209097.D
Acq On : 15 Apr 2016 2:39 am
Operator : VIANNAC
Sample : jc18196-1
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
alkane	4.246	162.2	ug/L	3375740	2	10.781	1040390	50.0
alkane	4.591	305.1	ug/L	6348560	2	10.781	1040390	50.0
alkane	5.710	637.0	ug/L	13255300	2	10.781	1040390	50.0
alkane	6.232	201.9	ug/L	4200500	2	10.781	1040390	50.0
alkane	6.515	45.0	ug/L	937036	2	10.781	1040390	50.0
alkane	6.855	62.7	ug/L	1303990	2	10.781	1040390	50.0
alkane	8.005	274.8	ug/L	5717280	2	10.781	1040390	50.0
alkane	8.925	31.0	ug/L	644611	2	10.781	1040390	50.0
alkene	9.672	23.4	ug/L	487787	2	10.781	1040390	50.0
Cyclopentane, m...	9.955	153.4	ug/L	3191670	2	10.781	1040390	50.0
C3 alkyl benzene	16.025	74.8	ug/L	8917890	5	16.798	5957080	50.0
Benzene, 1,3,5-...	16.087	23.8	ug/L	2831390	5	16.798	5957080	50.0
C3 alkyl benzene	16.296	37.9	ug/L	4517560	5	16.798	5957080	50.0
Benzene, 1,2,4-...	16.427	91.7	ug/L	10928700	5	16.798	5957080	50.0
alkane	8.460	100.9	ug/L	2099880	2	10.781	1040390	50.0

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : c209098.D
Acq On : 15 Apr 2016 3:08 am
Operator : VIANNAC
Sample : jc18196-2
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Time: Apr 15 16:29:22 2016
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Fri Apr 15 15:18:17 2016
Response via : Initial Calibration

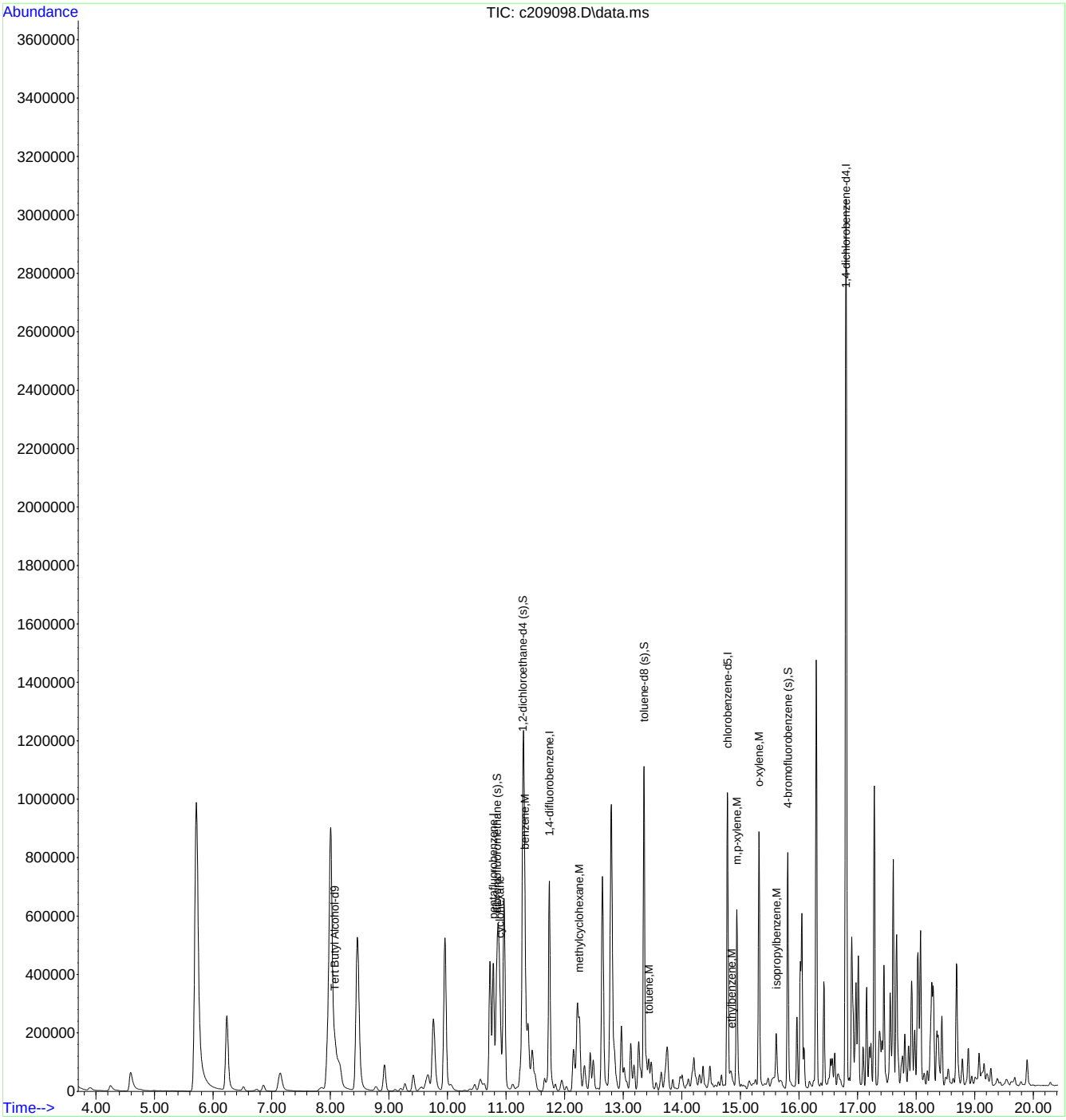
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.081	65	301047	500.00	ug/L	0.00
5) pentafluorobenzene	10.784	168	311087	50.00	ug/L	0.00
59) 1,4-difluorobenzene	11.740	114	579360	50.00	ug/L	0.00
88) chlorobenzene-d5	14.778	117	515091	50.00	ug/L	0.00
104) 1,4-dichlorobenzene-d4	16.796	152	239996	50.00	ug/L	-0.01
System Monitoring Compounds						
50) dibromofluoromethane (s)	10.836	113	164116	49.21	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 98.42%			
51) 1,2-dichloroethane-d4 (s)	11.280	65	237482	51.21	ug/L	-0.01
Spiked Amount 50.000	Range 73 - 122		Recovery = 102.42%			
80) toluene-d8 (s)	13.356	98	734730	49.88	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.76%			
106) 4-bromofluorobenzene (s)	15.808	174	178813	53.10	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 106.20%			
Target Compounds						Qvalue
54) cyclohexane	10.899	84	92389	20.50	ug/L	# 8
65) benzene	11.327	78	18872	1.27	ug/L	93
73) methylcyclohexane	12.253	83	128103	30.78	ug/L	89
82) toluene	13.429	91	3814	0.25	ug/L	85
99) ethylbenzene	14.851	91	11458	0.66	ug/L	94
100) m,p-xylene	14.940	106	165617	26.41	ug/L	99
101) o-xylene	15.316	91	500795	36.20	ug/L	98
105) isopropylbenzene	15.614	105	117548	7.75	ug/L	99

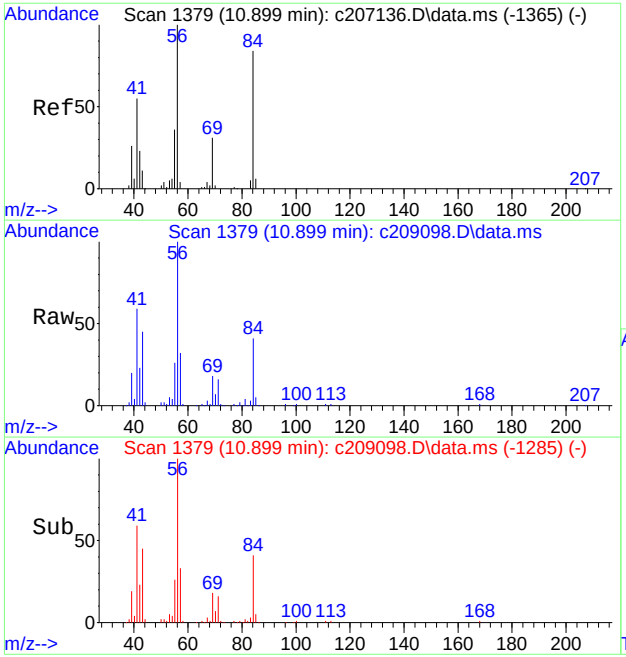
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : c209098.D
Acq On : 15 Apr 2016 3:08 am
Operator : VIANNAC
Sample : jc18196-2
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Time: Apr 15 16:29:22 2016
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Fri Apr 15 15:18:17 2016
Response via : Initial Calibration

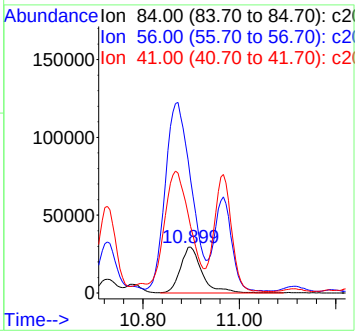


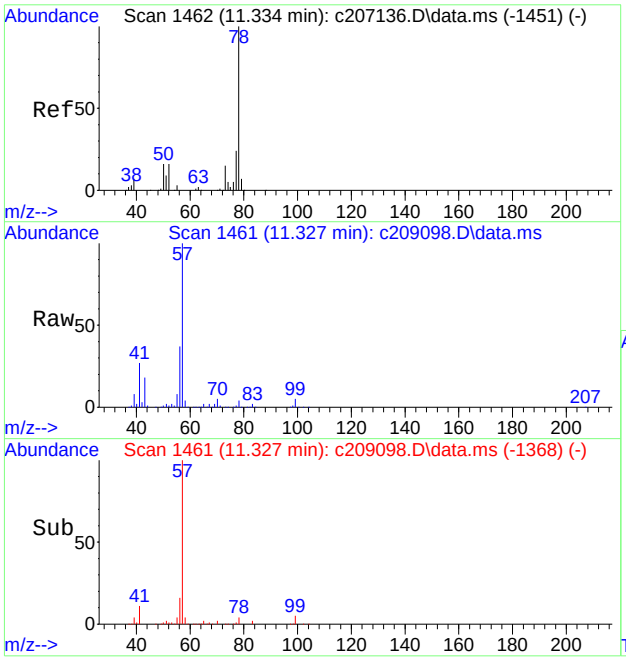


#54
cyclohexane
Concen: 20.50 ug/L
RT: 10.899 min Scan# 1379
Delta R.T. -0.006 min
Lab File: c209098.D
Acq: 15 Apr 2016 3:08 am

Tgt Ion: 84 Resp: 92389

Ion	Ratio	Lower	Upper
84	100		
56	237.2	88.4	164.2#
41	138.6	49.0	91.0#

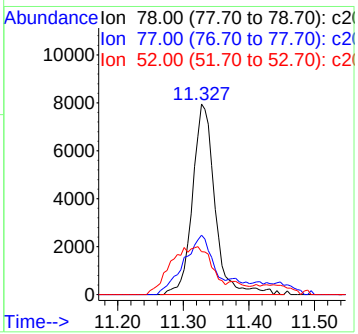


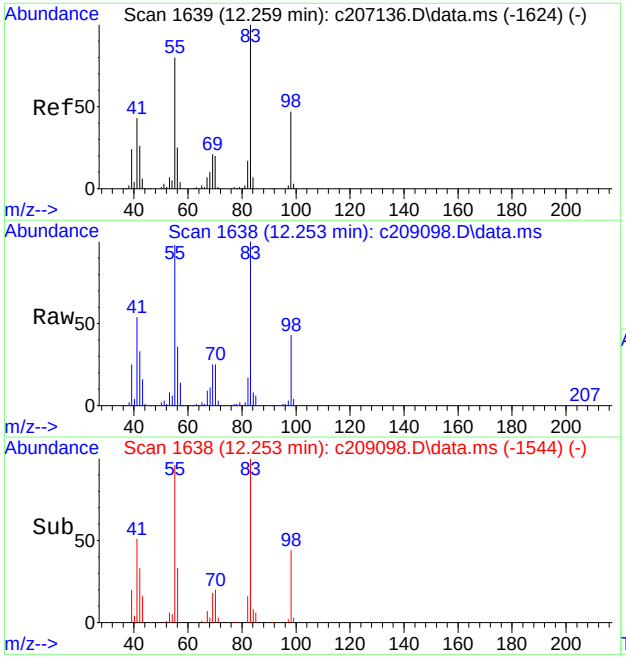


#65
benzene
Concen: 1.27 ug/L
RT: 11.327 min Scan# 1461
Delta R.T. -0.012 min
Lab File: c209098.D
Acq: 15 Apr 2016 3:08 am

Tgt Ion: 78 Resp: 18872

Ion	Ratio	Lower	Upper
78	100		
77	29.2	0.0	53.5
52	18.1	0.0	48.0

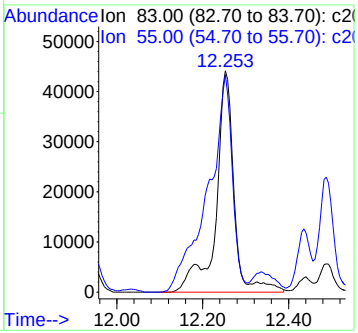


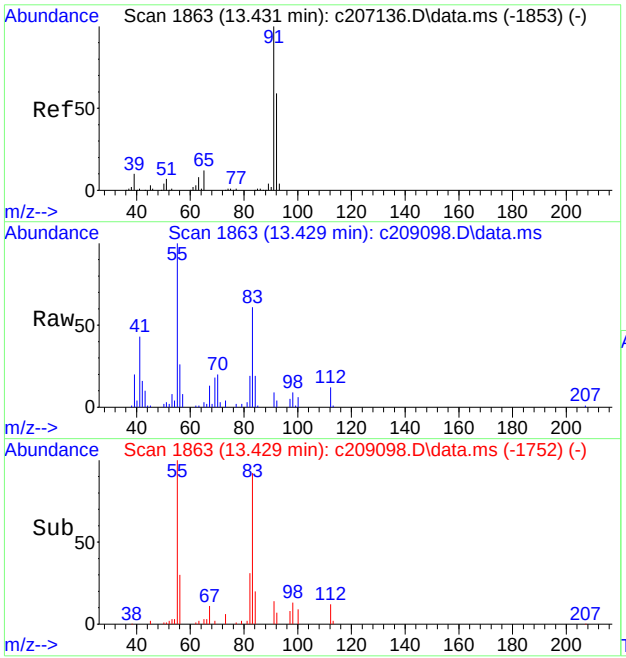


#73
methylcyclohexane
Concen: 30.78 ug/L
RT: 12.253 min Scan# 1638
Delta R.T. -0.006 min
Lab File: c209098.D
Acq: 15 Apr 2016 3:08 am

Tgt Ion: 83 Resp: 128103

Ion	Ratio	Lower	Upper
83	100		
55	98.1	61.2	113.8

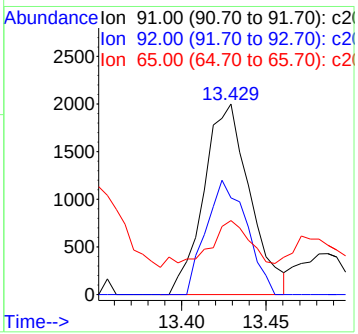


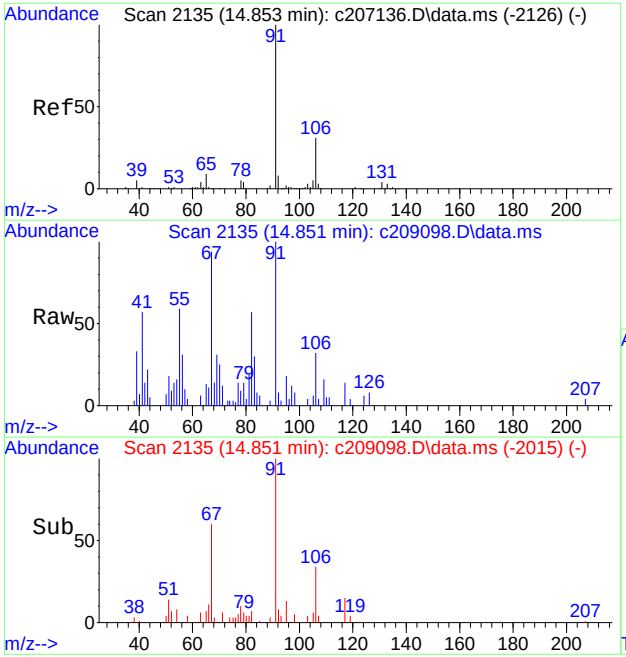


#82
toluene
Concen: 0.25 ug/L
RT: 13.429 min Scan# 1863
Delta R.T. -0.001 min
Lab File: c209098.D
Acq: 15 Apr 2016 3:08 am

Tgt Ion: 91 Resp: 3814

Ion	Ratio	Lower	Upper
91	100		
92	50.9	29.4	89.4
65	24.4	0.0	42.9

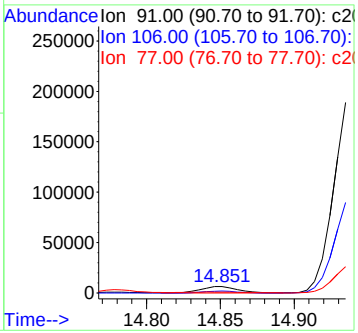


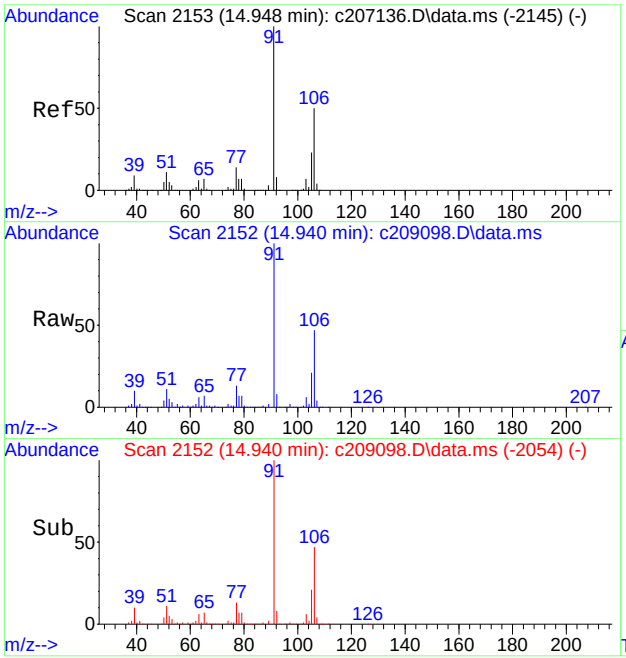


#99
ethylbenzene
Concen: 0.66 ug/L
RT: 14.851 min Scan# 2135
Delta R.T. -0.001 min
Lab File: c209098.D
Acq: 15 Apr 2016 3:08 am

Tgt Ion: 91 Resp: 11458

Ion	Ratio	Lower	Upper
91	100		
106	33.3	0.0	59.9
77	11.7	0.0	39.2

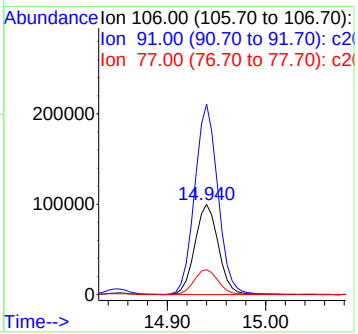


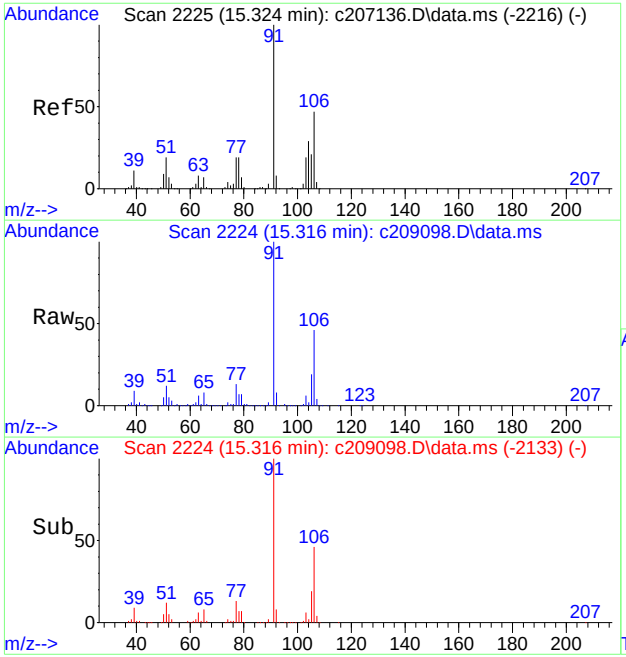


#100
m,p-xylene
Concen: 26.41 ug/L
RT: 14.940 min Scan# 2152
Delta R.T. -0.006 min
Lab File: c209098.D
Acq: 15 Apr 2016 3:08 am

Tgt Ion:106 Resp: 165617

Ion	Ratio	Lower	Upper
106	100		
91	211.1	179.7	239.7
77	27.5	0.0	59.6

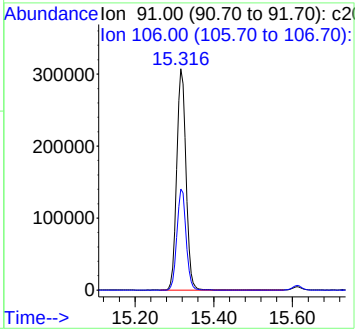


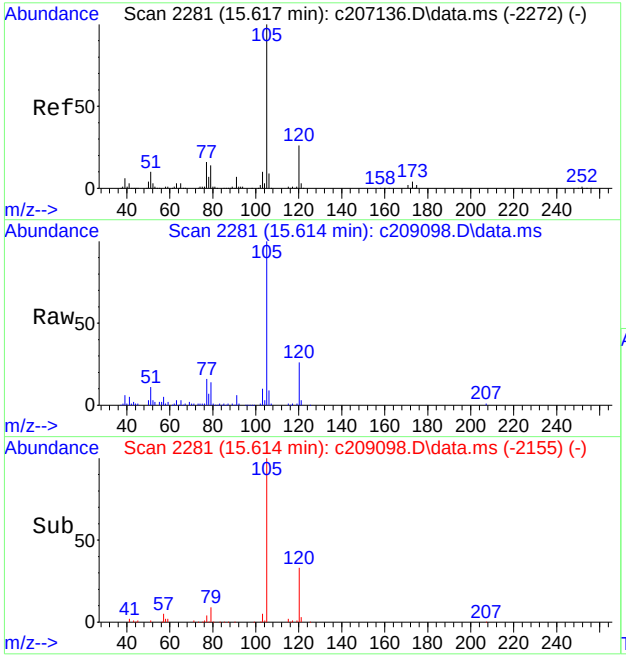


#101
o-xylene
Concen: 36.20 ug/L
RT: 15.316 min Scan# 2224
Delta R.T. -0.006 min
Lab File: c209098.D
Acq: 15 Apr 2016 3:08 am

Tgt Ion: 91 Resp: 500795

Ion	Ratio	Lower	Upper
91	100		
106	45.6	14.3	74.3

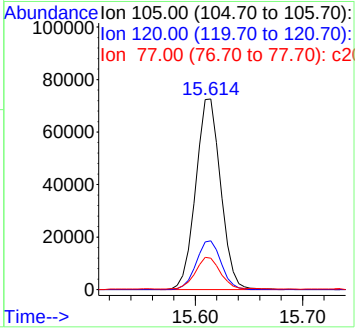




#105
isopropylbenzene
Concen: 7.75 ug/L
RT: 15.614 min Scan# 2281
Delta R.T. -0.001 min
Lab File: c209098.D
Acq: 15 Apr 2016 3:08 am

Tgt Ion:105 Resp: 117548

Ion	Ratio	Lower	Upper
105	100		
120	25.6	0.0	55.7
77	16.2	0.0	46.7



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : c209098.D
Acq On : 15 Apr 2016 3:08 am
Operator : VIANNAC
Sample : jc18196-2
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 37 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 10 prefer < Tangent else baseline drop >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MC7650.M
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

Signal : TIC: c20909

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.244	96	106	147	rBB3	17821	80277	1.61%	0.107%
2	4.589	159	172	244	rBB3	63587	311008	6.23%	0.416%
3	5.713	368	387	474	rBB	987177	4808728	96.29%	6.428%
4	6.235	474	487	529	rBB	252856	838466	16.79%	1.121%
5	6.857	595	606	637	rBB2	21098	66140	1.32%	0.088%
6	7.140	643	660	712	rBB4	62265	315326	6.31%	0.422%
7	8.008	803	826	896	rBB2	894650	4868979	97.49%	6.509%
8	8.463	897	913	957	rBB	521933	2096540	41.98%	2.803%
9	8.923	989	1001	1021	rBB	89490	268090	5.37%	0.358%
10	9.273	1060	1068	1082	rVB	25943	71441	1.43%	0.095%
11	9.419	1084	1096	1110	rBB2	54149	158495	3.17%	0.212%
12	9.665	1129	1143	1151	rVV6	52737	227032	4.55%	0.303%
13	9.759	1151	1161	1183	rBB	228350	774572	15.51%	1.035%
14	9.958	1185	1199	1245	rBB	520438	1627794	32.59%	2.176%
15	10.559	1304	1314	1335	rBB4	36776	177616	3.56%	0.237%
16	10.726	1335	1346	1352	rVV	442525	1140818	22.84%	1.525%
17	10.778	1352	1356	1362	rVV	435410	964522	19.31%	1.289%
18	10.867	1362	1373	1384	rBB5	432567	1591515	31.87%	2.127%
19	10.967	1385	1392	1412	rVV	657038	1656265	33.16%	2.214%
20	11.296	1438	1455	1479	rBB2	1191006	4268696	85.47%	5.706%
21	11.442	1479	1483	1514	rVB4	140222	504980	10.11%	0.675%
22	11.657	1514	1524	1530	rBV2	43394	112752	2.26%	0.151%
23	11.740	1530	1540	1554	rBB	696324	1420800	28.45%	1.899%
24	11.950	1569	1580	1590	rBB3	34628	91817	1.84%	0.123%
25	12.153	1606	1619	1625	rBV2	144007	396250	7.93%	0.530%
26	12.221	1625	1632	1647	rVV3	286530	1108727	22.20%	1.482%
27	12.336	1647	1654	1665	rVB	80134	206152	4.13%	0.276%
28	12.436	1665	1673	1678	rBV	124541	255088	5.11%	0.341%
29	12.488	1678	1683	1702	rVB	100996	224547	4.50%	0.300%
30	12.645	1703	1713	1729	rBB	724003	1718474	34.41%	2.297%
31	12.797	1729	1742	1766	rBB	966352	2928321	58.63%	3.914%
32	12.969	1767	1775	1798	rBB	214403	622126	12.46%	0.832%
33	13.126	1798	1805	1812	rBV	153966	326563	6.54%	0.437%
34	13.183	1812	1816	1823	rVB3	83224	161968	3.24%	0.217%
35	13.262	1823	1831	1841	rBV	163142	441946	8.85%	0.591%
36	13.356	1842	1849	1861	rBB	1053119	1852784	37.10%	2.477%
37	13.434	1861	1864	1869	rVV	93415	173752	3.48%	0.232%
38	13.476	1869	1872	1882	rVB3	92389	173966	3.48%	0.233%
39	13.649	1895	1905	1911	rBV2	61892	140515	2.81%	0.188%
40	13.748	1911	1924	1936	rBB4	143460	454521	9.10%	0.608%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : c209098.D
Acq On : 15 Apr 2016 3:08 am
Operator : VIANNAC
Sample : jc18196-2
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 37 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 10 prefer < Tangent else baseline drop >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MC7650.M
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

41	13.847	1936	1943	1959	rBB3	34379	67698	1.36%	0.090%
42	14.004	1959	1973	1983	rBB4	46857	171525	3.43%	0.229%
43	14.114	1983	1994	2000	rBV6	32090	82003	1.64%	0.110%
44	14.208	2000	2012	2024	rBB6	96603	296863	5.94%	0.397%
45	14.302	2024	2030	2036	rVV6	38613	75877	1.52%	0.101%
46	14.360	2036	2041	2054	rVB	74305	159550	3.19%	0.213%
47	14.480	2054	2064	2078	rBB4	73608	168193	3.37%	0.225%
48	14.778	2114	2121	2144	rBB	1002378	1806921	36.18%	2.415%
49	14.940	2144	2152	2163	rBB	604103	1034546	20.72%	1.383%
50	15.013	2163	2166	2184	rVB10	15822	65827	1.32%	0.088%
51	15.259	2184	2213	2217	rBV8	32279	196639	3.94%	0.263%
52	15.316	2217	2224	2249	rBB	865512	1373456	27.50%	1.836%
53	15.614	2275	2281	2309	rVB2	187685	487524	9.76%	0.652%
54	15.808	2309	2318	2341	rBB	805702	1312660	26.28%	1.755%
55	15.965	2342	2348	2353	rBB	233390	339170	6.79%	0.453%
56	16.048	2353	2364	2381	rBB	589707	1673743	33.51%	2.237%
57	16.294	2398	2411	2423	rBB	1459877	2299896	46.05%	3.074%
58	16.425	2430	2436	2448	rBB	353970	520748	10.43%	0.696%
59	16.566	2448	2463	2467	rVV2	100506	370007	7.41%	0.495%
60	16.613	2467	2472	2477	rVV	118481	197593	3.96%	0.264%
61	16.670	2477	2483	2500	rVV4	47425	171564	3.44%	0.229%
62	16.801	2500	2508	2521	rBB2	3032514	4994166	100.00%	6.676%
63	16.900	2521	2527	2535	rVV	515215	1104964	22.13%	1.477%
64	16.974	2535	2541	2544	rVV2	359046	644135	12.90%	0.861%
65	17.010	2544	2548	2558	rVV2	450885	766531	15.35%	1.025%
66	17.094	2558	2564	2570	rBB	131105	194056	3.89%	0.259%
67	17.157	2570	2576	2581	rBB	319950	465116	9.31%	0.622%
68	17.204	2581	2585	2588	rVV2	138678	240606	4.82%	0.322%
69	17.230	2588	2590	2595	rVV	151355	183939	3.68%	0.246%
70	17.287	2595	2601	2607	rBB	1017907	1473948	29.51%	1.970%
71	17.376	2610	2618	2628	rVV5	192026	728851	14.59%	0.974%
72	17.449	2628	2632	2644	rVV	417892	718358	14.38%	0.960%
73	17.559	2644	2653	2657	rVV	322628	605782	12.13%	0.810%
74	17.611	2657	2663	2668	rBB	703823	949762	19.02%	1.270%
75	17.669	2668	2674	2684	rBB2	485494	900783	18.04%	1.204%
76	17.768	2684	2693	2696	rVV4	106702	264621	5.30%	0.354%
77	17.805	2696	2700	2708	rVV2	180885	341044	6.83%	0.456%
78	17.873	2708	2713	2717	rVV3	140624	257546	5.16%	0.344%
79	17.925	2717	2723	2728	rBB3	307105	480522	9.62%	0.642%
80	17.977	2728	2733	2737	rBB2	146883	204692	4.10%	0.274%
81	18.030	2737	2743	2748	rVV4	460227	1017046	20.36%	1.360%
82	18.077	2748	2752	2760	rVV	535473	853357	17.09%	1.141%
83	18.134	2760	2763	2769	rVV3	46638	86692	1.74%	0.116%
84	18.192	2769	2774	2778	rVV	54863	94677	1.90%	0.127%
85	18.270	2778	2789	2800	rBB2	337015	1241518	24.86%	1.660%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : c209098.D
Acq On : 15 Apr 2016 3:08 am
Operator : VIANNAC
Sample : jc18196-2
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 37 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 10 prefer < Tangent else baseline drop >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MC7650.M
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

86	18.354	2800	2805	2816	rVV3	191743	605817	12.13%	0.810%
87	18.438	2816	2821	2829	rVV	240903	414054	8.29%	0.553%
88	18.511	2829	2835	2838	rVV4	32350	70074	1.40%	0.094%
89	18.547	2838	2842	2854	rVV4	60196	144414	2.89%	0.193%
90	18.688	2862	2869	2881	rBB2	408564	783339	15.69%	1.047%
91	18.788	2882	2888	2896	rBB3	85655	152003	3.04%	0.203%
92	18.892	2897	2908	2914	rBB2	121999	218651	4.38%	0.292%
93	19.007	2926	2930	2937	rVV3	32079	88599	1.77%	0.118%
94	19.075	2937	2943	2956	rVV	113270	340589	6.82%	0.455%
95	19.159	2956	2959	2965	rVV	77075	140894	2.82%	0.188%
96	19.211	2965	2969	2976	rVV2	42959	108007	2.16%	0.144%
97	19.274	2976	2981	2988	rBB2	50901	84135	1.68%	0.112%
98	19.384	2998	3002	3044	rVB5	20142	92605	1.85%	0.124%
99	19.687	3044	3060	3072	rBB4	26872	82085	1.64%	0.110%
100	19.896	3092	3100	3112	rBB	86929	169878	3.40%	0.227%

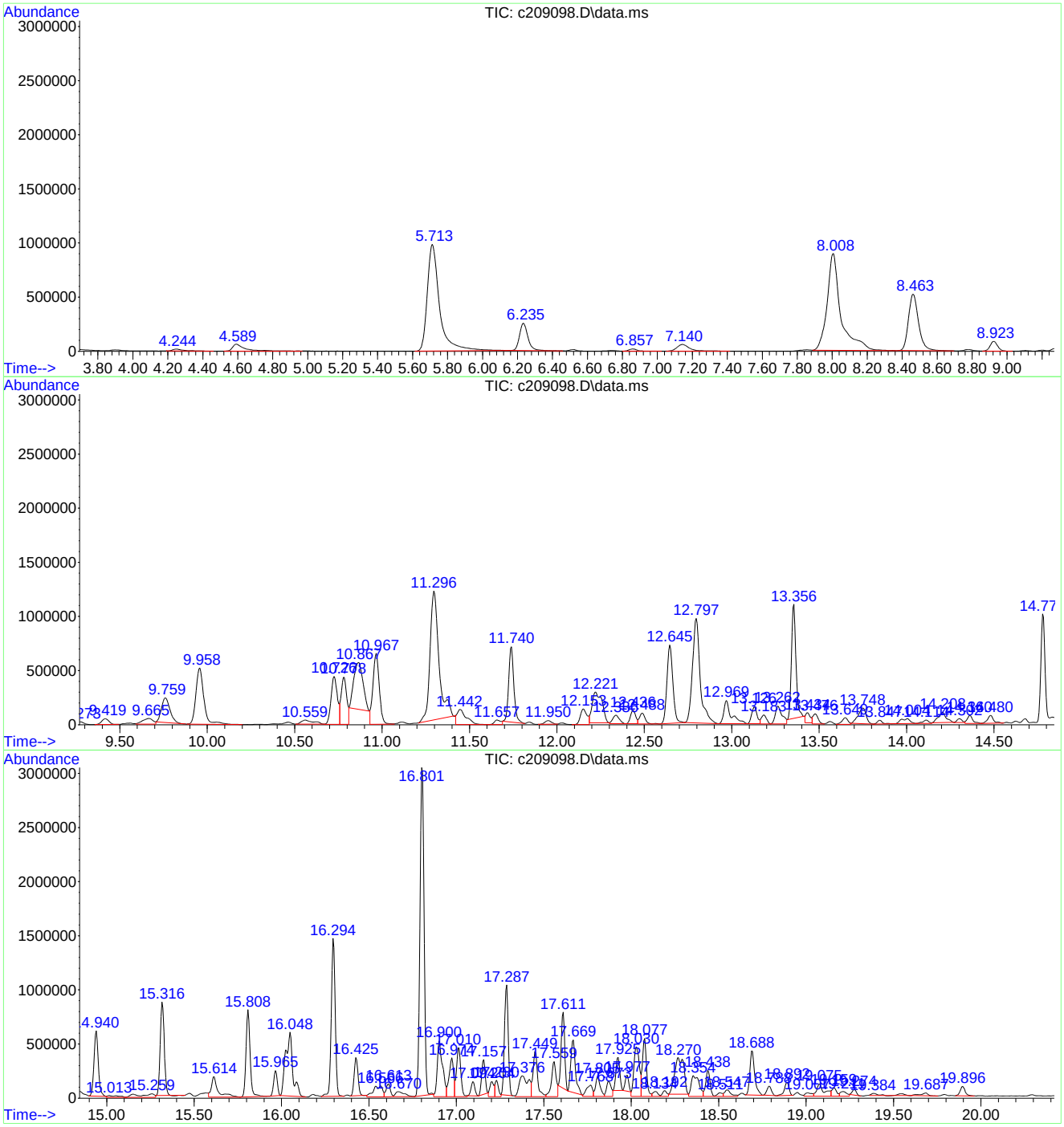
Sum of corrected areas: 74808228

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\
Data File : c209098.D
Acq On : 15 Apr 2016 3:08 am
Operator : VIANNAC
Sample : jc18196-2
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P



SGS ACCUTEST JC18196

Library Search Compound Report

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Acq On : 15 Apr 2016 3:08 am
Operator : VIANNAC
Sample : jc18196-2
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

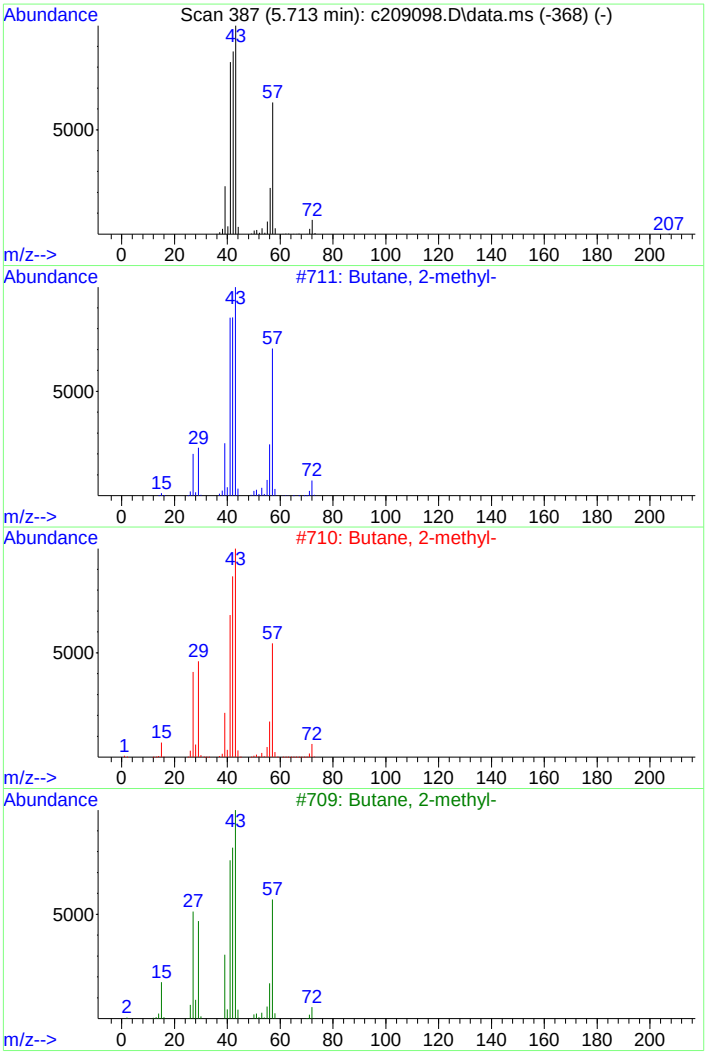
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

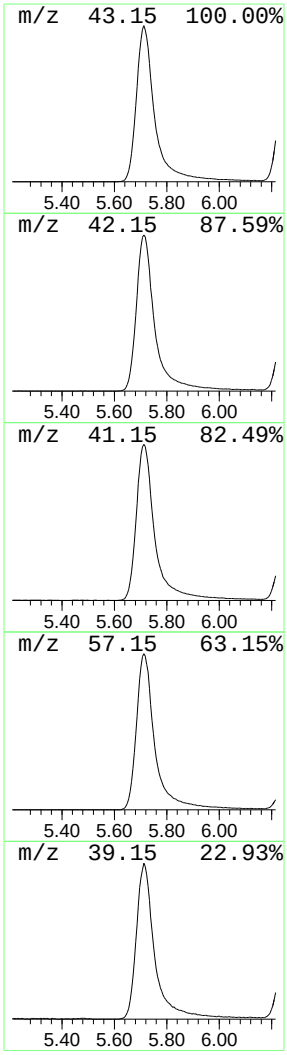
****

Peak Number 1 Butane, 2-methyl- Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.713	249.28 ug/L	4808730	pentafluorobenzene	10.784

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	94
2	Butane, 2-methyl-	72	C5H12	000078-78-4	91
3	Butane, 2-methyl-	72	C5H12	000078-78-4	90
4	Pentane	72	C5H12	000109-66-0	33
5	3-Buten-1-ol	72	C4H8O	000627-27-0	25





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Sample : jc18196-2
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

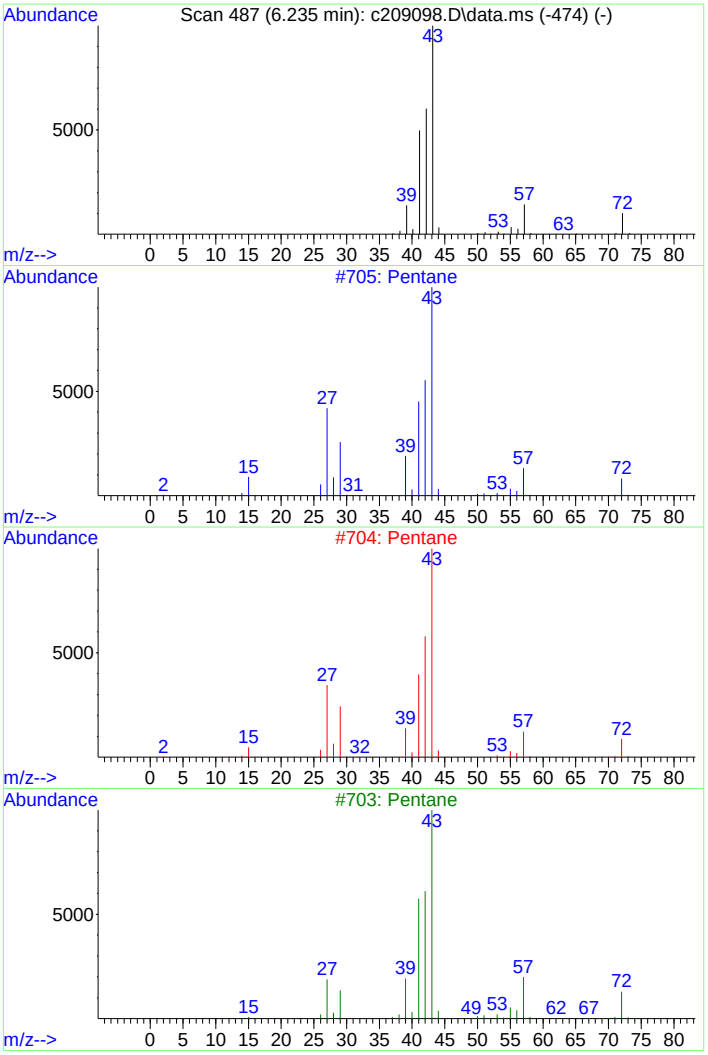
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

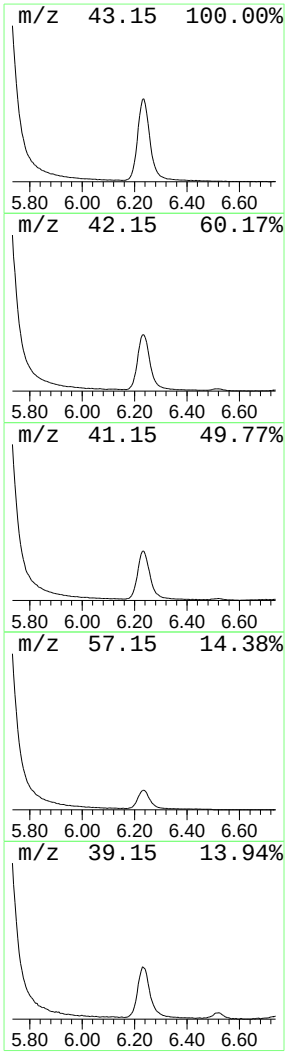
****

Peak Number 2 Pentane Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.235	43.47 ug/L	838466	pentafluorobenzene	10.784

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	86
2	Pentane	72	C5H12	000109-66-0	86
3	Pentane	72	C5H12	000109-66-0	80
4	Pentane	72	C5H12	000109-66-0	72
5	Oxirane, ethyl-	72	C4H8O	000106-88-7	9





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Operator : VIANNAC
Sample : jc18196-2
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 37 Sample Multiplier: 1

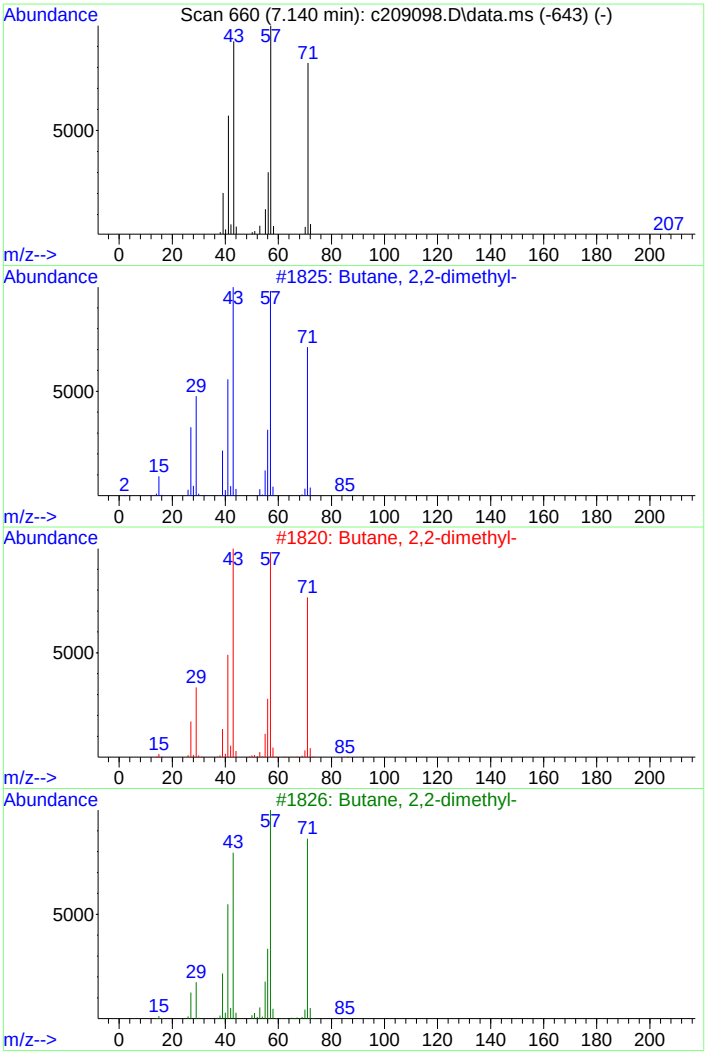
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

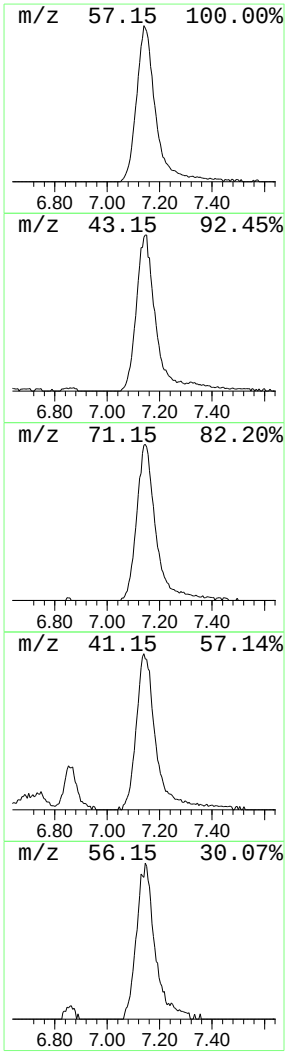
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

****
Peak Number 3 Butane, 2,2-dimethyl- Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.140	16.35 ug/L	315326	pentafluorobenzene	10.784

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2,2-dimethyl-	86	C6H14	000075-83-2	83
2	Butane, 2,2-dimethyl-	86	C6H14	000075-83-2	83
3	Butane, 2,2-dimethyl-	86	C6H14	000075-83-2	83
4	Butane, 2,2-dimethyl-	86	C6H14	000075-83-2	83
5	Heptane, 3-ethyl-5-methyl-	142	C10H22	052896-90-9	72





Library Search Compound Report

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Sample : jc18196-2
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

****

Peak Number 4 Pentane, 2-methyl- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.008	252.40 ug/L	4868980	pentafluorobenzene	10.784

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2-methyl-	86	C6H14	000107-83-5	91
2	Pentane, 2-methyl-	86	C6H14	000107-83-5	91
3	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	53
4	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	47
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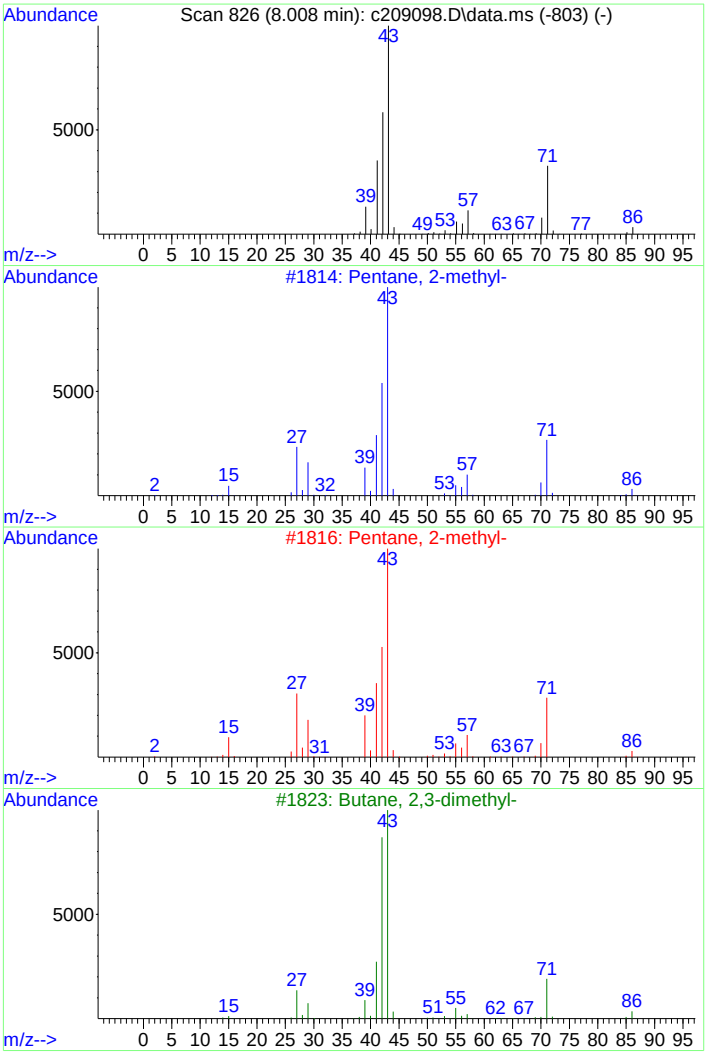

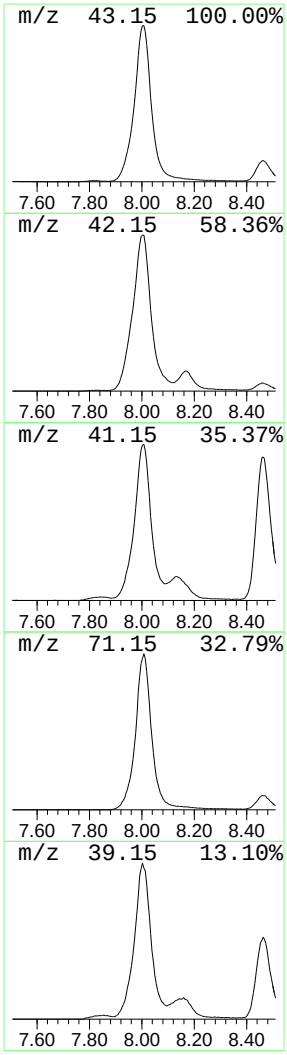

Library Search Compound Report

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Sample : jc18196-2
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

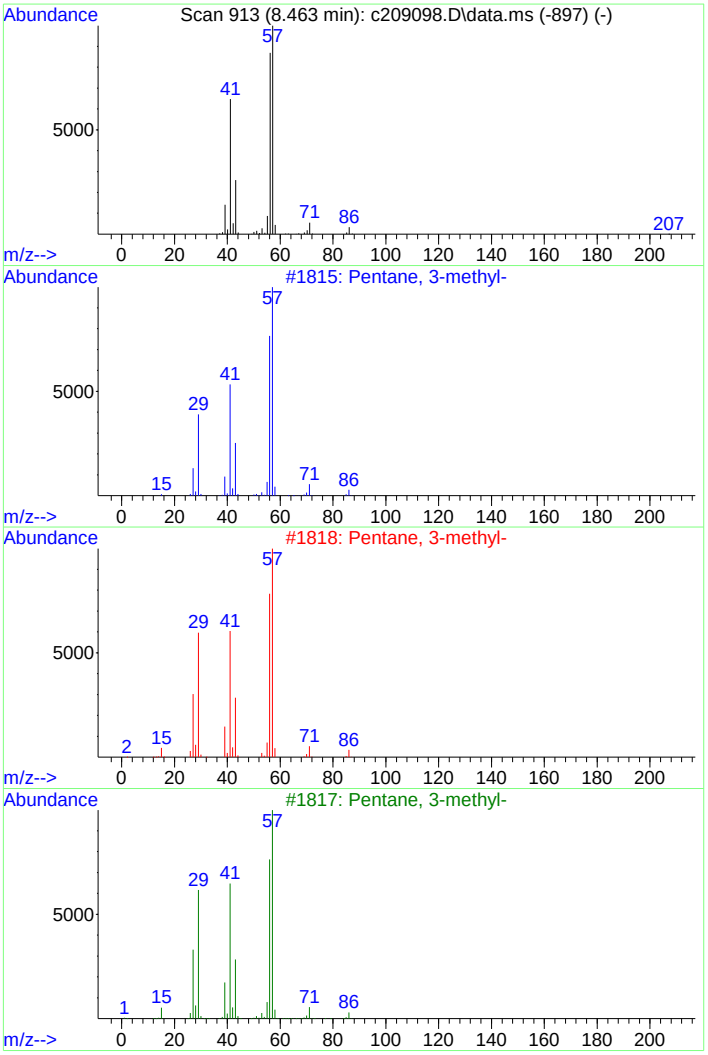
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

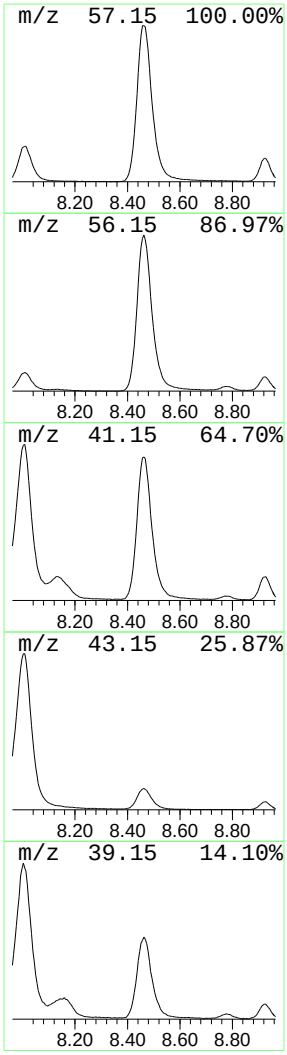
****

Peak Number 5 Pentane, 3-methyl- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.463	108.68 ug/L	2096540	pentafluorobenzene	10.784

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
2	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
3	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
4	Hexane, 2,2,3-trimethyl-	128	C9H20	016747-25-4	56
5	Oxirane, (1-methylethyl)-	86	C5H10O	001438-14-8	50





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Sample : jc18196-2
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

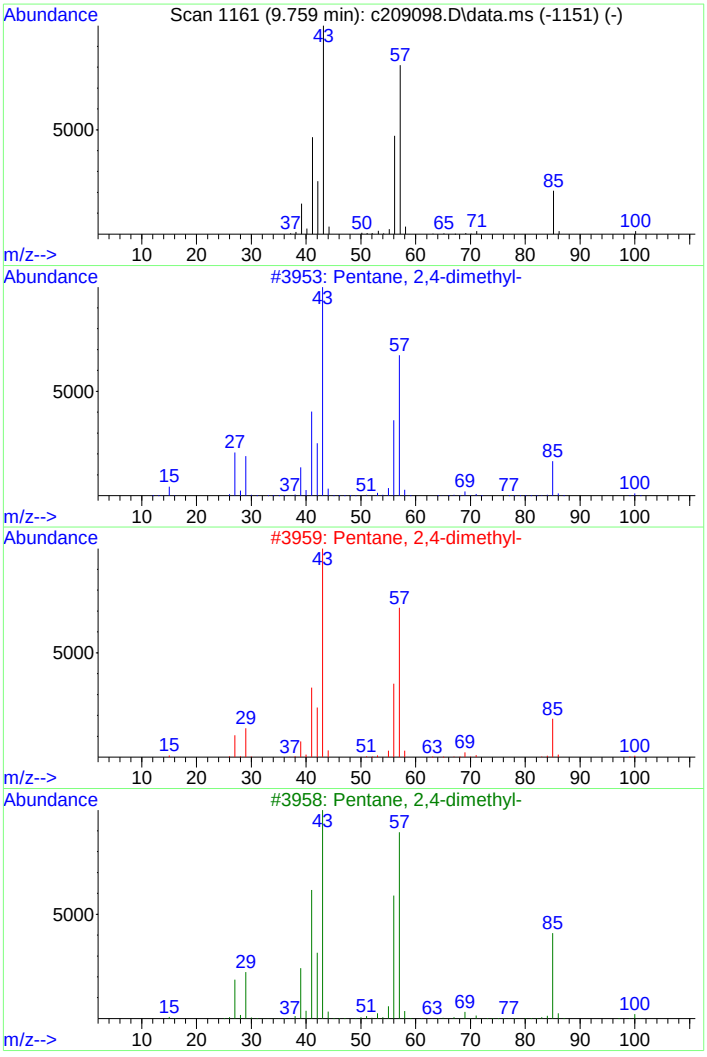
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

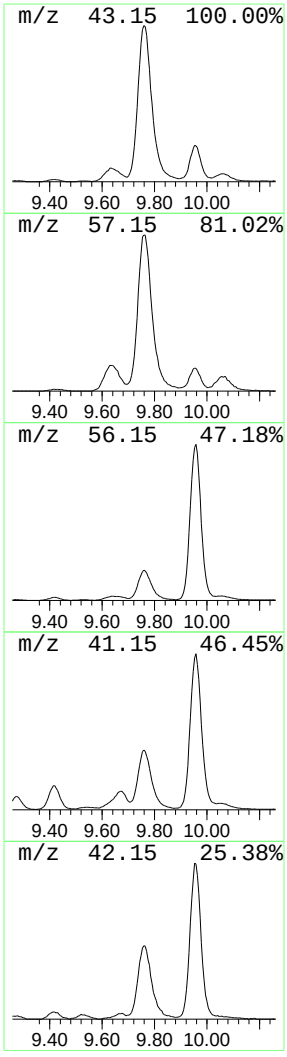
****

Peak Number 6 Pentane, 2,4-dimethyl- Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.759	40.15 ug/L	774572	pentafluorobenzene	10.784

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,4-dimethyl-	100	C7H16	000108-08-7	91
2	Pentane, 2,4-dimethyl-	100	C7H16	000108-08-7	91
3	Pentane, 2,4-dimethyl-	100	C7H16	000108-08-7	74
4	Butane, 2,2,3-trimethyl-	100	C7H16	000464-06-2	64
5	Butane, 2,2,3-trimethyl-	100	C7H16	000464-06-2	39





Library Search Compound Report

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Sample : jc18196-2
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

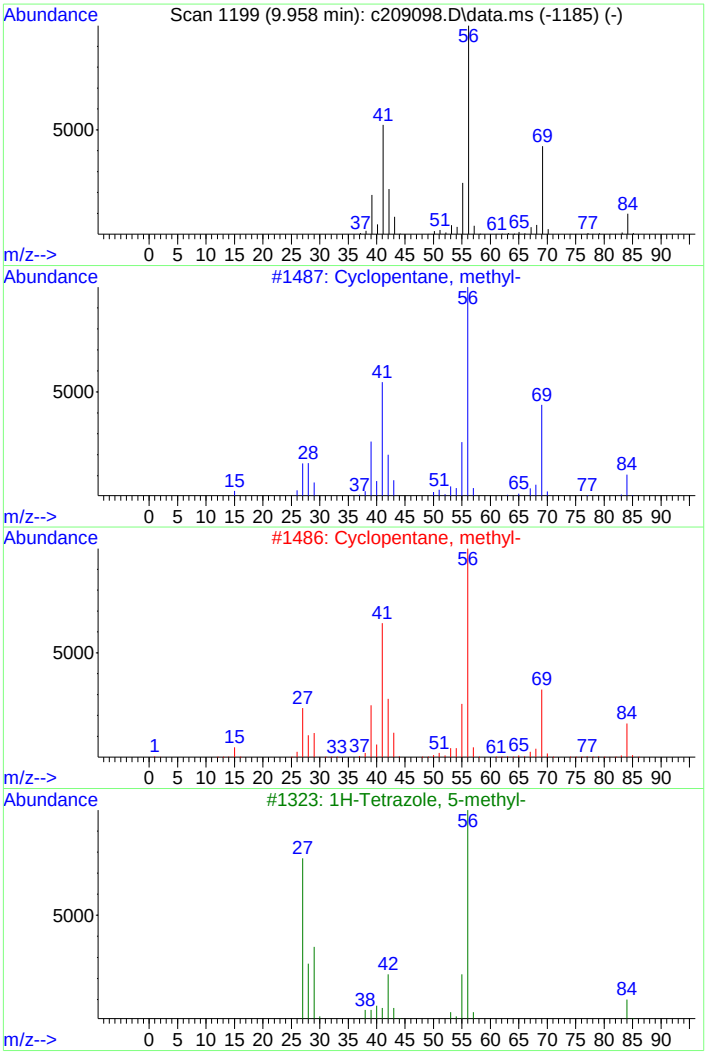
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

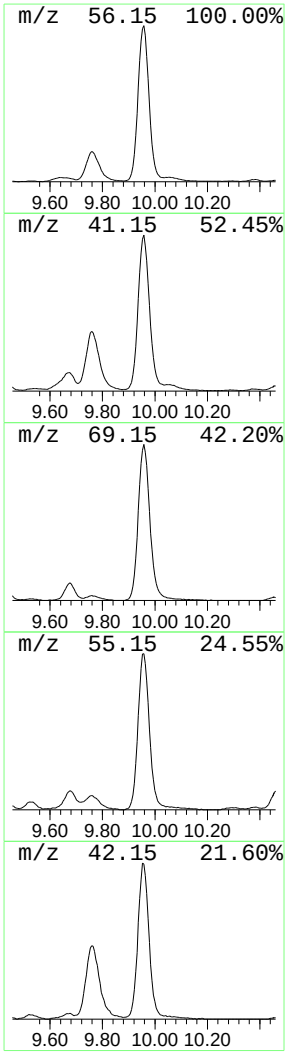
****

Peak Number 7 Cyclopentane, methyl- Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.958	84.38 ug/L	1627790	pentafluorobenzene	10.784

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	94
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	91
3	1H-Tetrazole, 5-methyl-	84	C2H4N4	004076-36-2	80
4	Cyclopentane, methyl-	84	C6H12	000096-37-7	78
5	Cyclobutane, ethyl-	84	C6H12	004806-61-5	64





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Sample : jc18196-2
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

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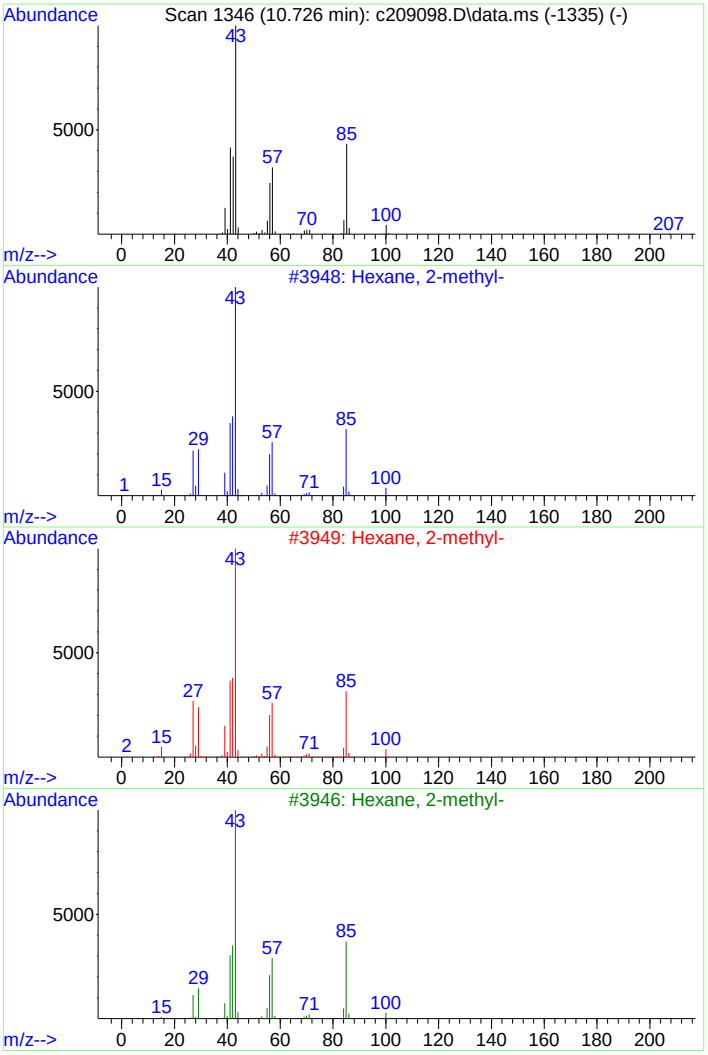
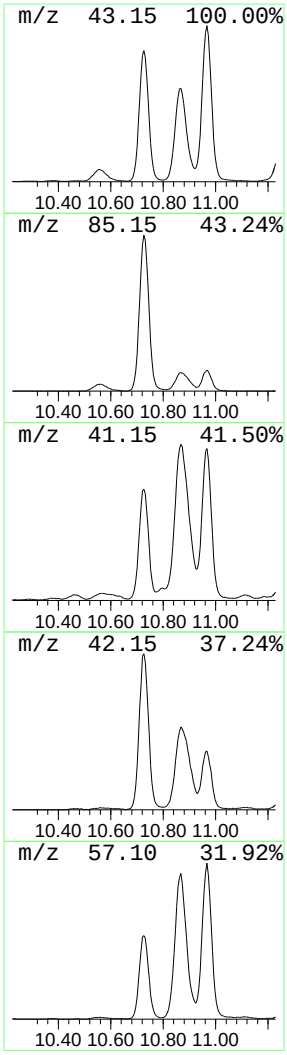
Peak Number 8 Hexane, 2-methyl- Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.726	59.14 ug/L	1140820	pentafluorobenzene	10.784

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexane, 2-methyl-	100	C7H16	000591-76-4	90
2	Hexane, 2-methyl-	100	C7H16	000591-76-4	90
3	Hexane, 2-methyl-	100	C7H16	000591-76-4	90
4	Octane	114	C8H18	000111-65-9	59
5	Pentane, 2,4-dimethyl-	100	C7H16	000108-08-7	50





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Sample : jc18196-2
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

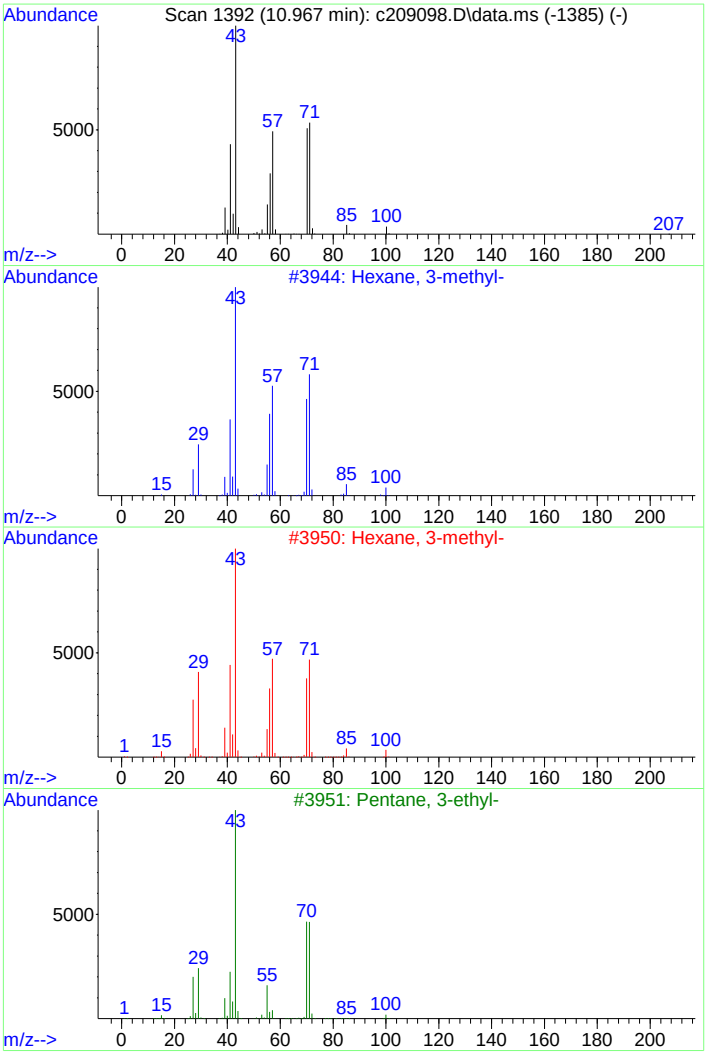
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

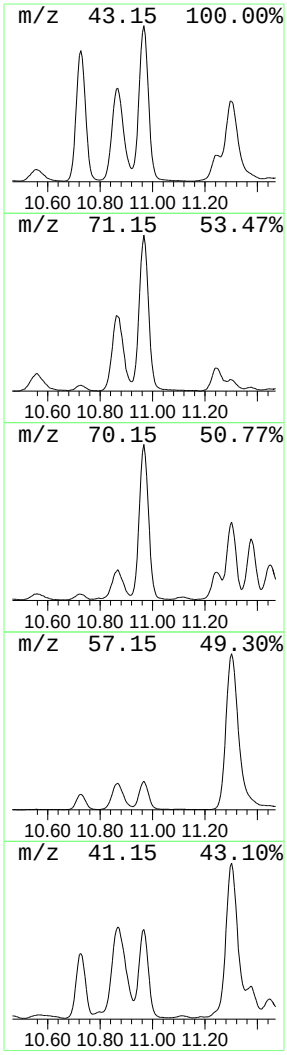
****

Peak Number 9 Hexane, 3-methyl- Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.967	85.86 ug/L	1656270	pentafluorobenzene	10.784

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexane, 3-methyl-	100	C7H16	000589-34-4	93
2	Hexane, 3-methyl-	100	C7H16	000589-34-4	87
3	Pentane, 3-ethyl-	100	C7H16	000617-78-7	72
4	Pentane, 3-ethyl-	100	C7H16	000617-78-7	64
5	Heptane, 4-methyl-	114	C8H18	000589-53-7	59





Library Search Compound Report

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Sample : jc18196-2
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 37 Sample Multiplier: 1

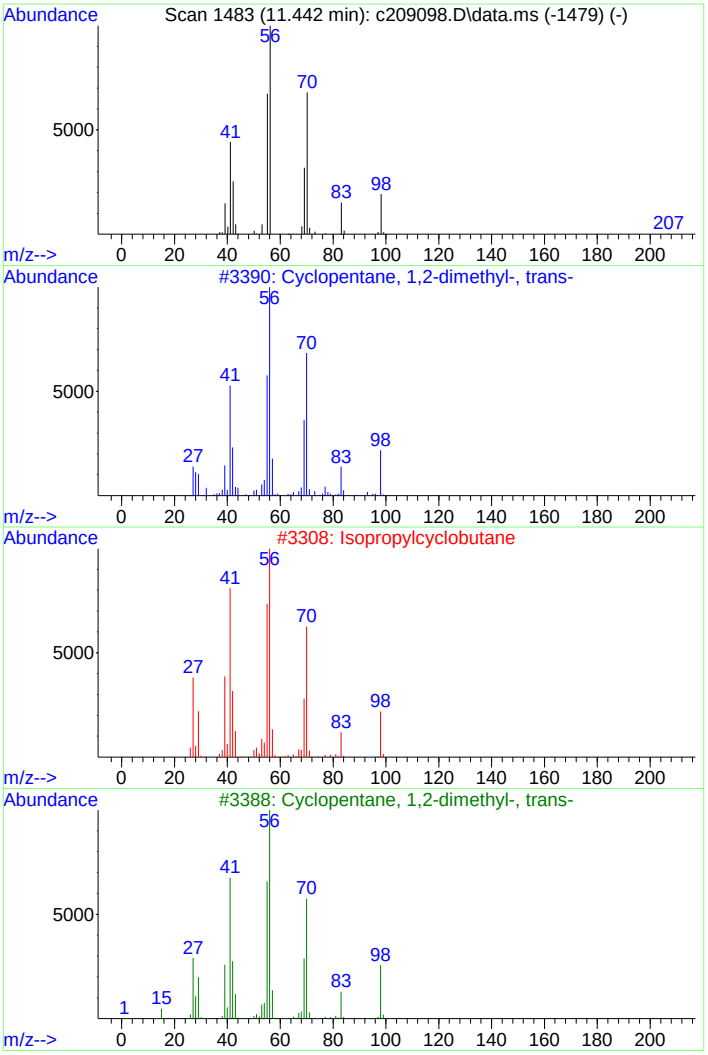
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

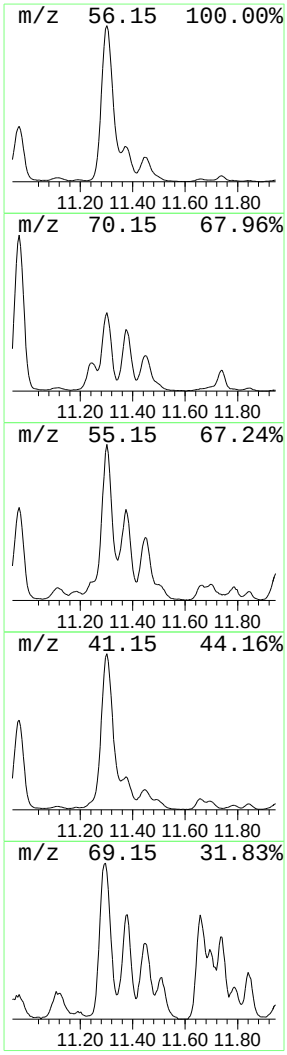
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

****
Peak Number 10 Cyclopentane, 1,2-dimethyl-... Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.443	17.77 ug/L	504980	1,4-difluorobenzene	11.740

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, 1,2-dimethyl-, trans-	98	C7H14	000822-50-4	91
2	Isopropylcyclobutane	98	C7H14	000872-56-0	90
3	Cyclopentane, 1,2-dimethyl-, trans-	98	C7H14	000822-50-4	90
4	1-Heptene	98	C7H14	000592-76-7	86
5	Cyclopentane, 1,2-dimethyl-	98	C7H14	002452-99-5	86





Library Search Compound Report

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Acq On : 15 Apr 2016 3:08 am
Operator : VIANNAC
Sample : jc18196-2
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

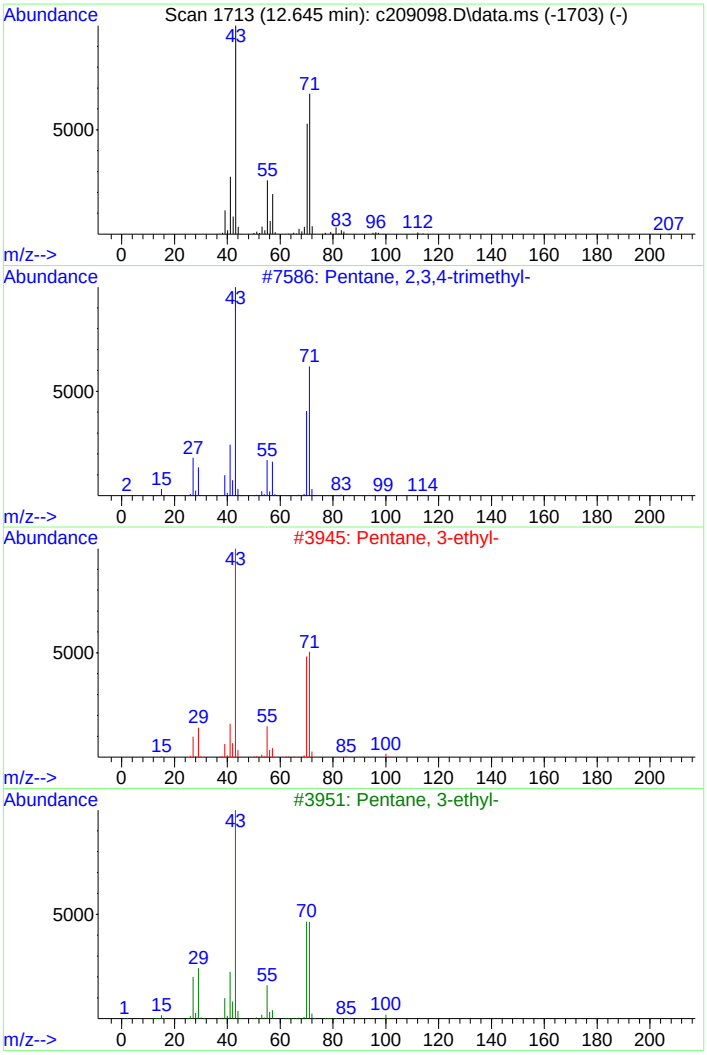
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

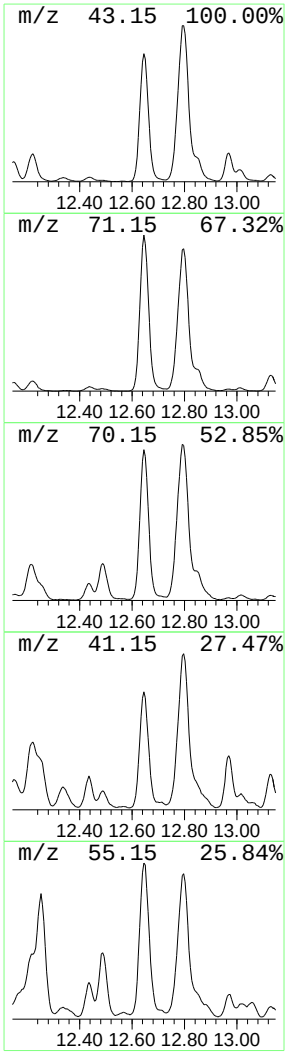
****

Peak Number 11 Pentane, 2,3,4-trimethyl- Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.645	60.48 ug/L	1718470	1,4-difluorobenzene	11.740

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	87
2	Pentane, 3-ethyl-	100	C7H16	000617-78-7	78
3	Pentane, 3-ethyl-	100	C7H16	000617-78-7	78
4	Heptane, 4-methyl-	114	C8H18	000589-53-7	74
5	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	72





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Sample : jc18196-2
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

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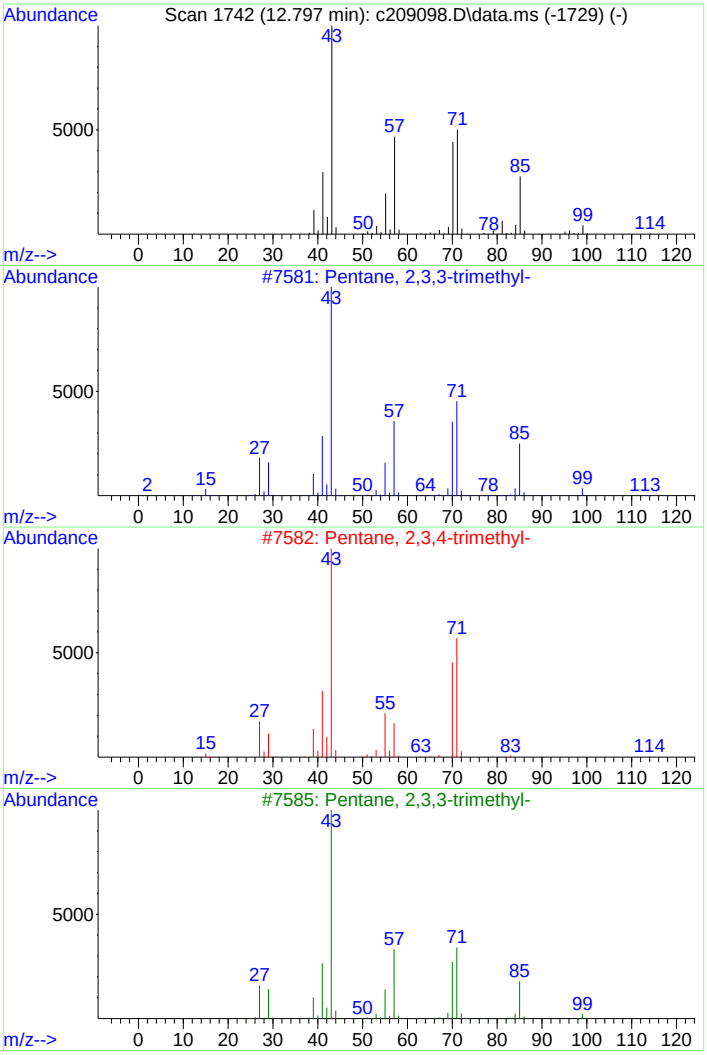
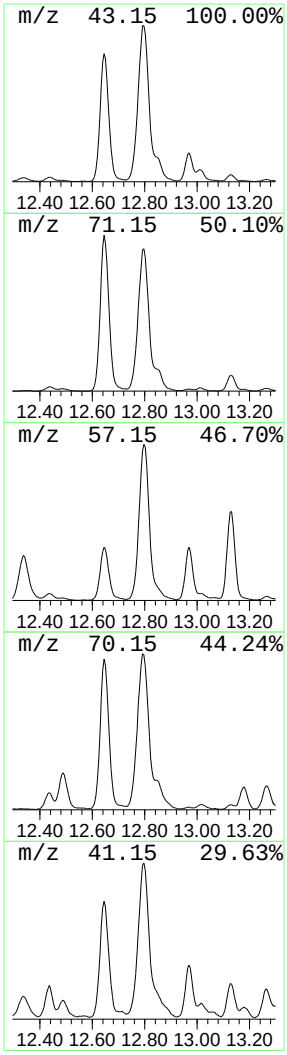
Peak Number 12 Pentane, 2,3,3-trimethyl- Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.797	103.05 ug/L	2928320	1,4-difluorobenzene	11.740

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	90
2	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	76
3	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	64
4	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	64
5	Hexane, 2,3-dimethyl-	114	C8H18	000584-94-1	59





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209098.D
Acq On : 15 Apr 2016 3:08 am
Operator : VIANNAC
Sample : jc18196-2
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

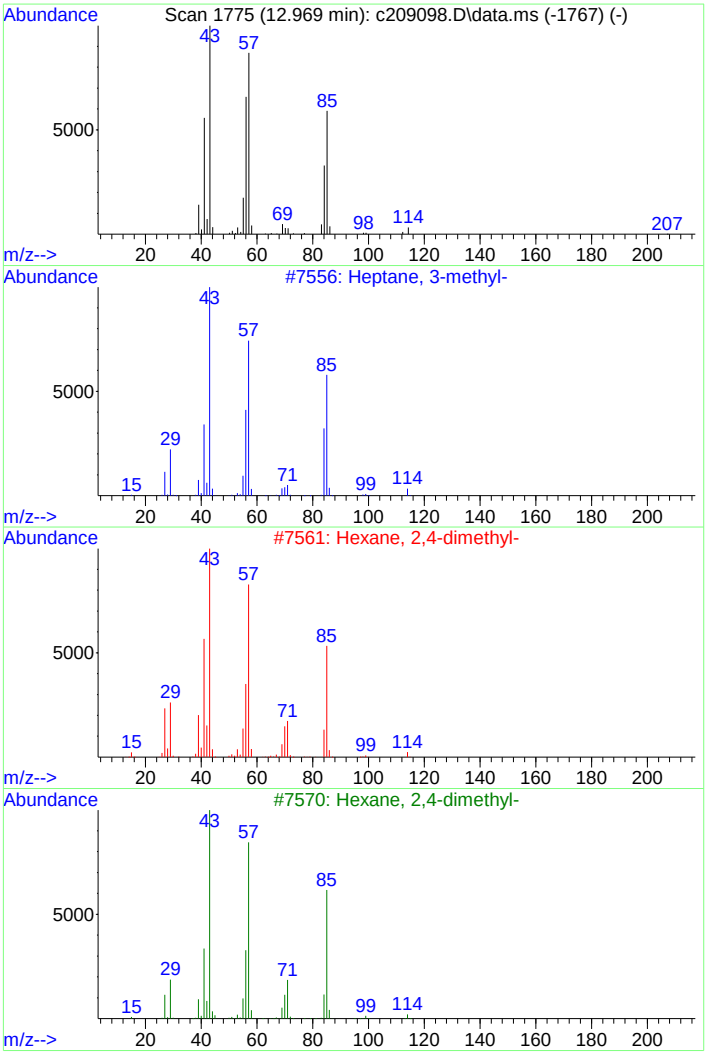
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

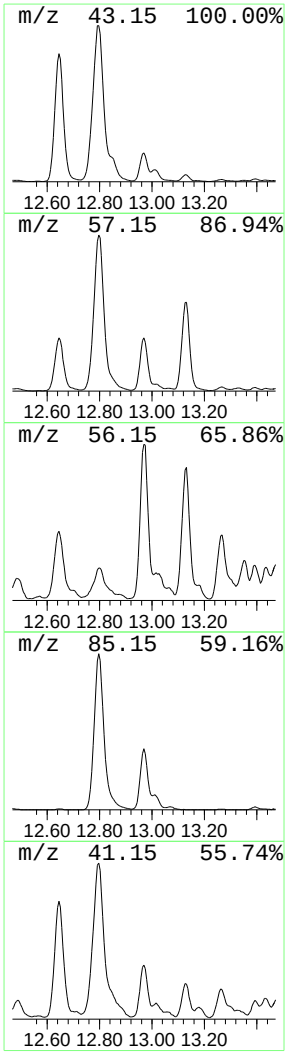
****

Peak Number 13 Heptane, 3-methyl- Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.969	21.89 ug/L	622126	1,4-difluorobenzene	11.740

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptane, 3-methyl-	114	C8H18	000589-81-1	90
2	Hexane, 2,4-dimethyl-	114	C8H18	000589-43-5	64
3	Hexane, 2,4-dimethyl-	114	C8H18	000589-43-5	64
4	Heptane, 3-methyl-	114	C8H18	000589-81-1	59
5	Heptane, 3,4,5-trimethyl-	142	C10H22	020278-89-1	53





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209098.D
Acq On : 15 Apr 2016 3:08 am
Operator : VIANNAC
Sample : jc18196-2
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

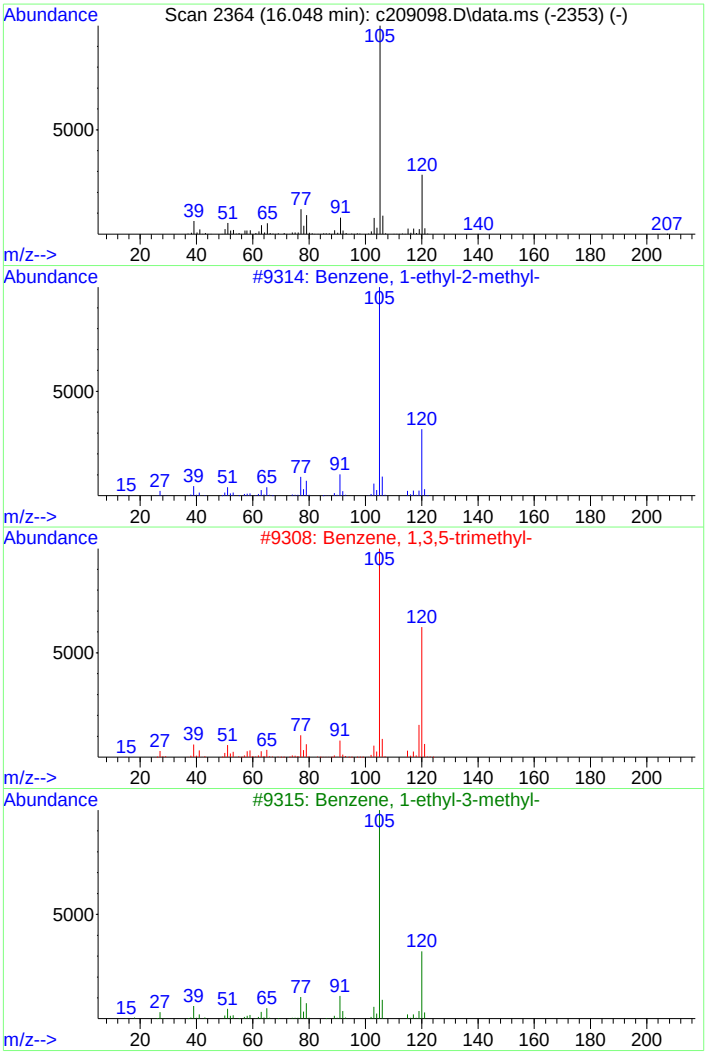
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

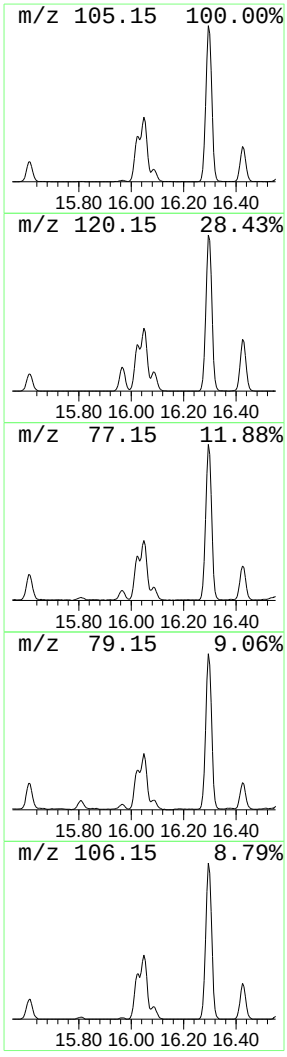
****

Peak Number 14 Benzene, 1-ethyl-2-methyl- Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.048	16.76 ug/L	1673740	1,4-dichlorobenzene-d4	16.796

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
3	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91
4	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91
5	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209098.D
Acq On : 15 Apr 2016 3:08 am
Operator : VIANNAC
Sample : jc18196-2
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

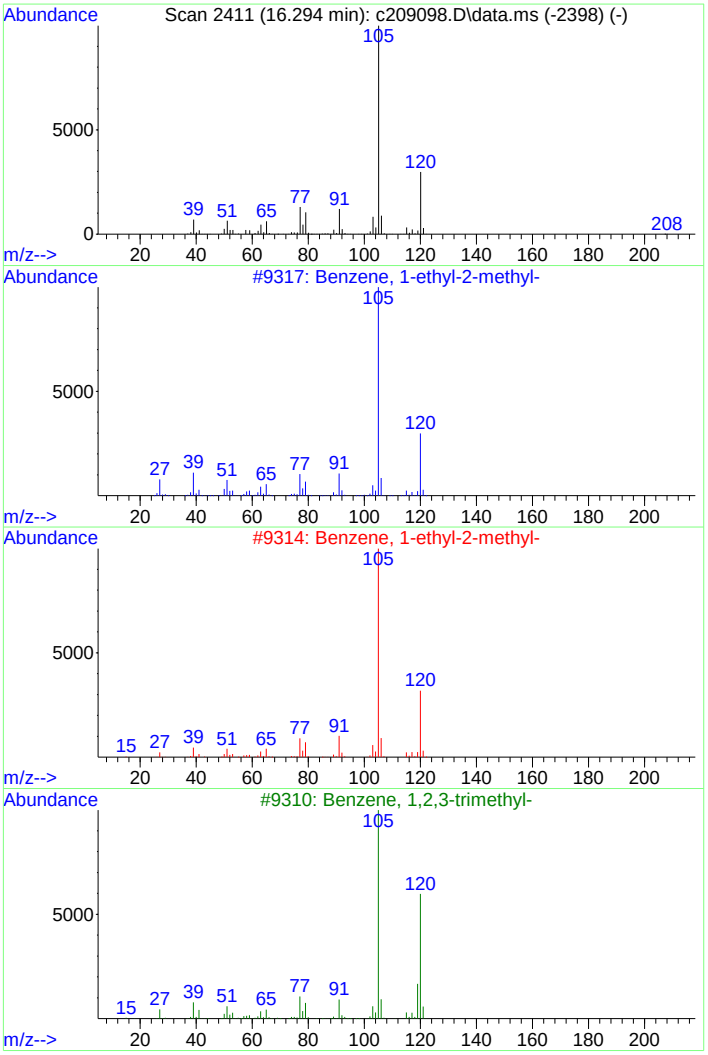
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

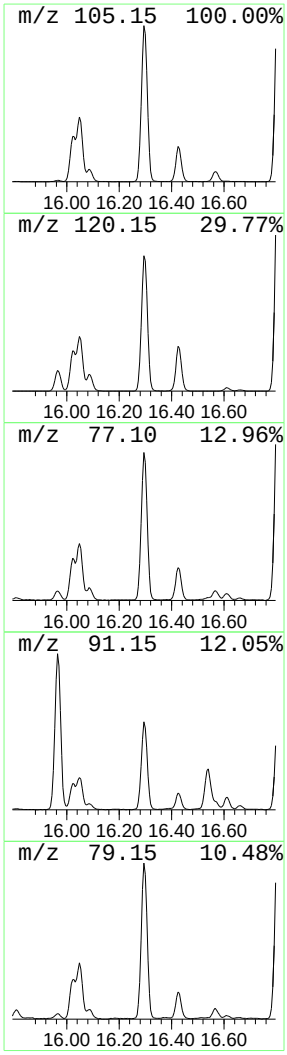
****

Peak Number 15 Benzene, 1-ethyl-2-methyl- Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.294	23.03 ug/L	2299900	1,4-dichlorobenzene-d4	16.796

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	91
4	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\
Data File : c209098.D
Acq On : 15 Apr 2016 3:08 am
Operator : VIANNAC
Sample : jc18196-2
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Butane, 2-methyl-	5.713	249.3	ug/L	4808730	2	10.784	964522	50.0
Pentane	6.235	43.5	ug/L	838466	2	10.784	964522	50.0
Butane, 2,2-dim...	7.140	16.3	ug/L	315326	2	10.784	964522	50.0
Pentane, 2-methyl-	8.008	252.4	ug/L	4868980	2	10.784	964522	50.0
Pentane, 3-methyl-	8.463	108.7	ug/L	2096540	2	10.784	964522	50.0
Pentane, 2,4-di...	9.759	40.2	ug/L	774572	2	10.784	964522	50.0
Cyclopentane, m...	9.958	84.4	ug/L	1627790	2	10.784	964522	50.0
Hexane, 2-methyl-	10.726	59.1	ug/L	1140820	2	10.784	964522	50.0
Hexane, 3-methyl-	10.967	85.9	ug/L	1656270	2	10.784	964522	50.0
Cyclopentane, 1...	11.443	17.8	ug/L	504980	3	11.740	1420800	50.0
Pentane, 2,3,4-...	12.645	60.5	ug/L	1718470	3	11.740	1420800	50.0
Pentane, 2,3,3-...	12.797	103.1	ug/L	2928320	3	11.740	1420800	50.0
Heptane, 3-methyl-	12.969	21.9	ug/L	622126	3	11.740	1420800	50.0
Benzene, 1-ethy...	16.048	16.8	ug/L	1673740	5	16.796	4994170	50.0
Benzene, 1-ethy...	16.294	23.0	ug/L	2299900	5	16.796	4994170	50.0

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : c209099.D
Acq On : 15 Apr 2016 3:37 am
Operator : VIANNAC
Sample : jc18196-3
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Time: Apr 15 16:30:56 2016
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Fri Apr 15 15:18:17 2016
Response via : Initial Calibration

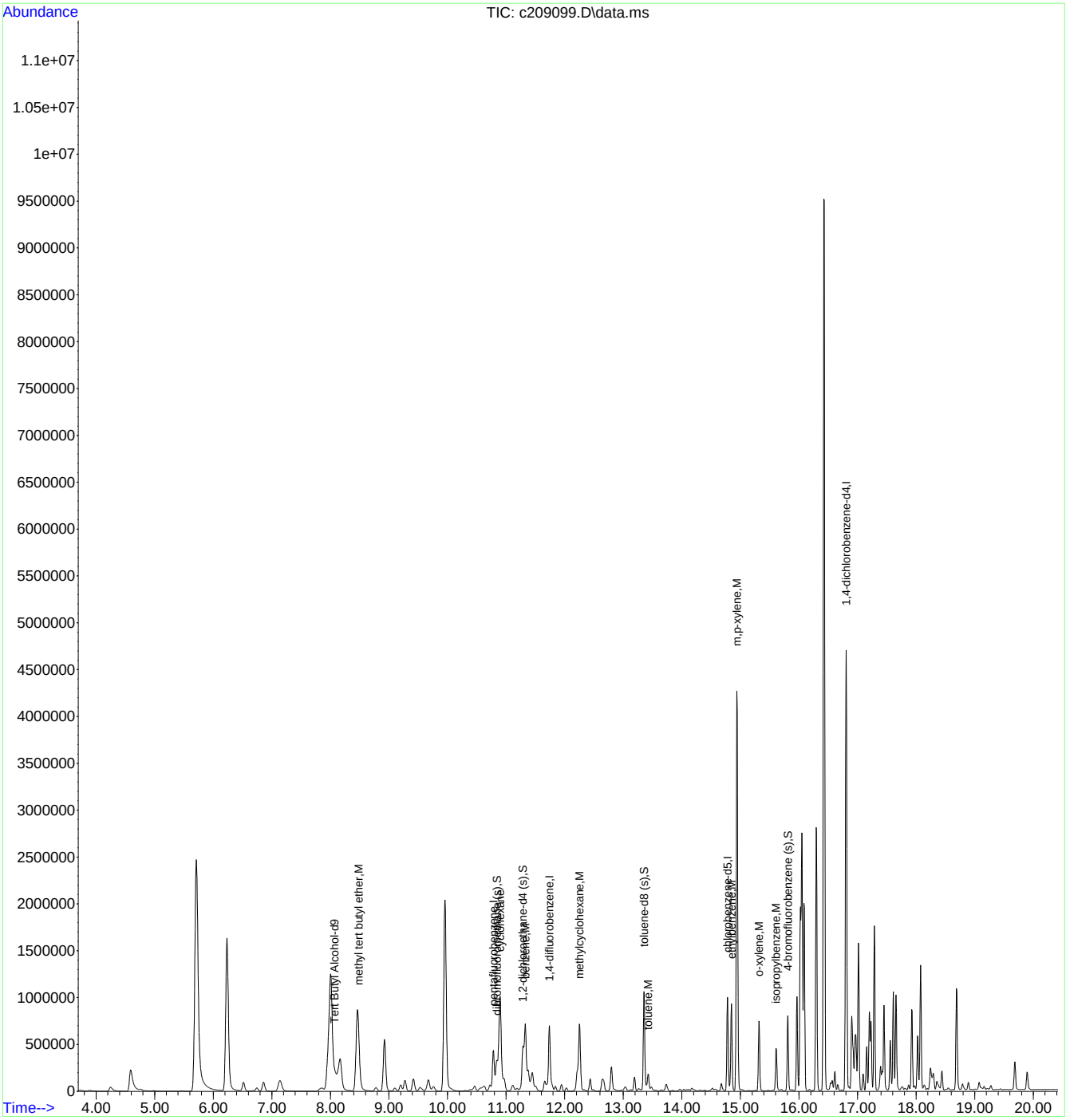
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.075	65	281902	500.00	ug/L	0.00
5) pentafluorobenzene	10.783	168	306593	50.00	ug/L	0.00
59) 1,4-difluorobenzene	11.740	114	560864	50.00	ug/L	0.00
88) chlorobenzene-d5	14.782	117	507570	50.00	ug/L	0.00
104) 1,4-dichlorobenzene-d4	16.800	152	239805	50.00	ug/L	0.00
System Monitoring Compounds						
50) dibromofluoromethane (s)	10.835	113	159301	48.46	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 96.92%			
51) 1,2-dichloroethane-d4 (s)	11.280	65	229890	50.30	ug/L	-0.01
Spiked Amount 50.000	Range 73 - 122		Recovery = 100.60%			
80) toluene-d8 (s)	13.355	98	715881	50.21	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 100.42%			
106) 4-bromofluorobenzene (s)	15.807	174	182434	54.21	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 108.42%			
Target Compounds						Qvalue
32) methyl tert butyl ether	8.488	73	27999	2.49	ug/L	# 1
54) cyclohexane	10.898	84	493070	110.99	ug/L	91
65) benzene	11.327	78	603407	42.08	ug/L	99
73) methylcyclohexane	12.252	83	334940	83.14	ug/L	95
82) toluene	13.423	91	103221	6.99	ug/L	100
99) ethylbenzene	14.845	91	642381	37.69	ug/L	100
100) m,p-xylene	14.939	106	1201908	194.52	ug/L	100
101) o-xylene	15.316	91	429026	31.47	ug/L	99
105) isopropylbenzene	15.608	105	297574	19.64	ug/L	100

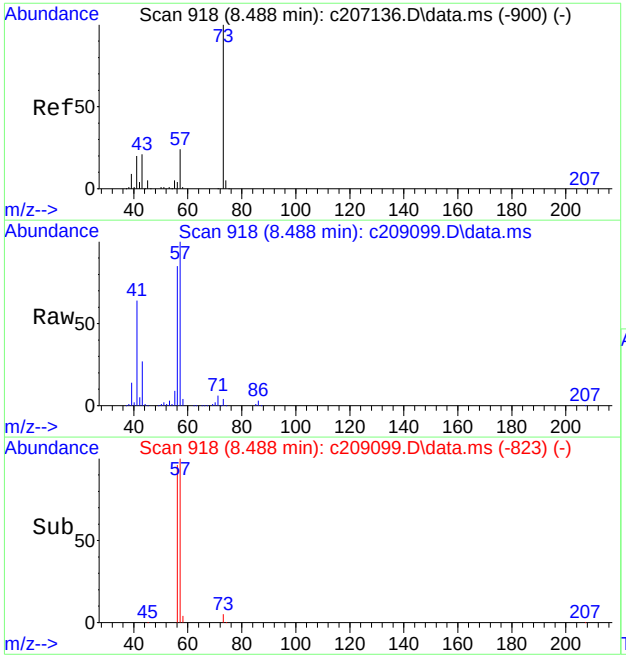
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : c209099.D
Acq On : 15 Apr 2016 3:37 am
Operator : VIANNAC
Sample : jc18196-3
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Time: Apr 15 16:30:56 2016
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Fri Apr 15 15:18:17 2016
Response via : Initial Calibration

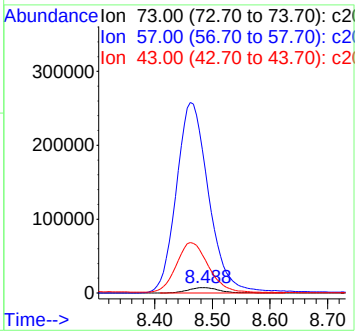


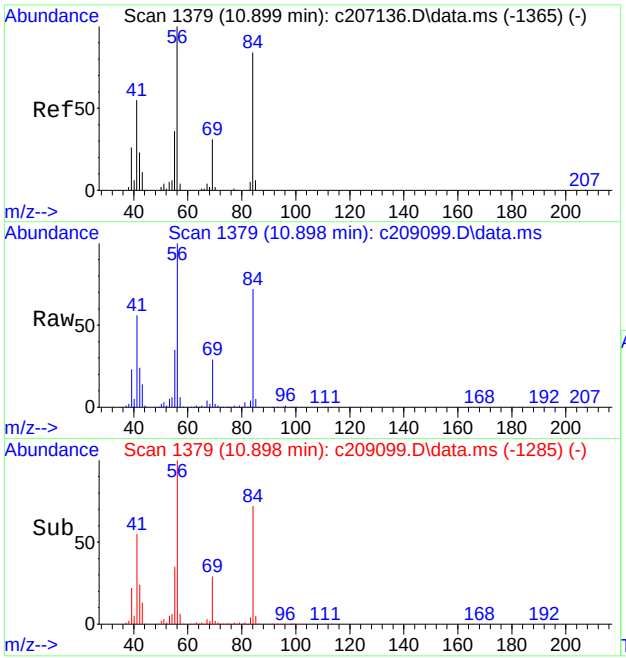


#32
methyl tert butyl ether
Concen: 2.49 ug/L
RT: 8.488 min Scan# 918
Delta R.T. -0.002 min
Lab File: c209099.D
Acq: 15 Apr 2016 3:37 am

Tgt Ion: 73 Resp: 27999

Ion	Ratio	Lower	Upper
73	100		
57	2215.9	0.0	54.9#
43	596.4	0.0	51.7#

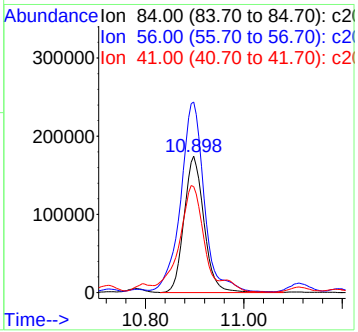


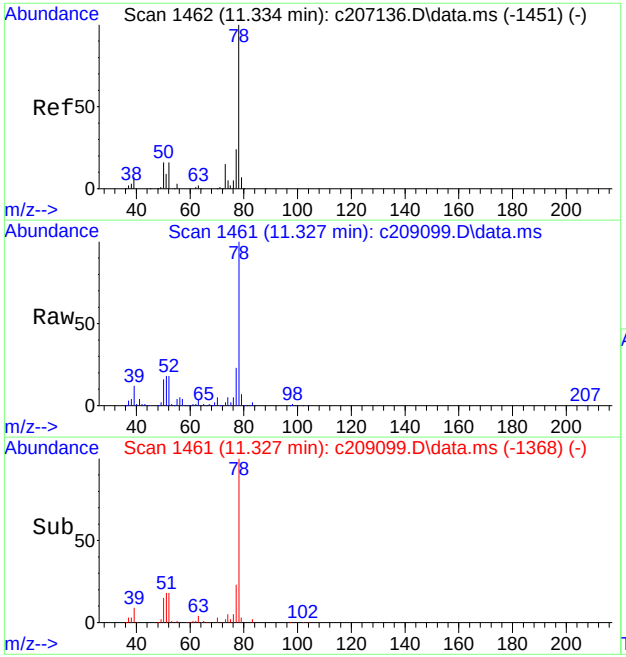


#54
cyclohexane
Concen: 110.99 ug/L
RT: 10.898 min Scan# 1379
Delta R.T. -0.007 min
Lab File: c209099.D
Acq: 15 Apr 2016 3:37 am

Tgt Ion: 84 Resp: 493070

Ion	Ratio	Lower	Upper
84	100		
56	137.6	88.4	164.2
41	76.4	49.0	91.0

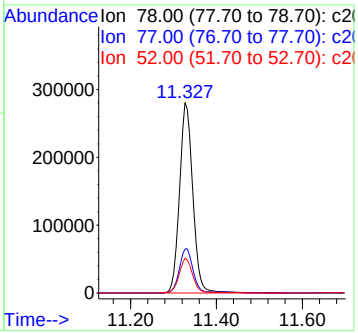


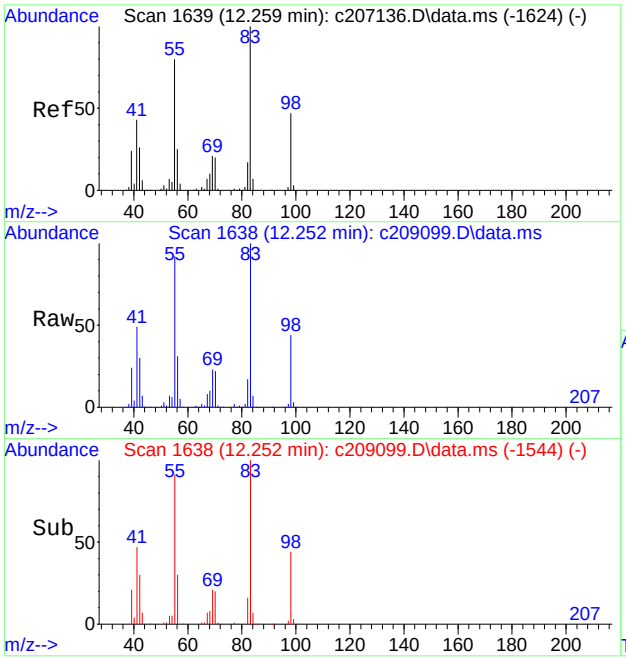


#65
benzene
Concen: 42.08 ug/L
RT: 11.327 min Scan# 1461
Delta R.T. -0.012 min
Lab File: c209099.D
Acq: 15 Apr 2016 3:37 am

Tgt Ion: 78 Resp: 603407

Ion	Ratio	Lower	Upper
78	100		
77	23.1	0.0	53.5
52	18.4	0.0	48.0

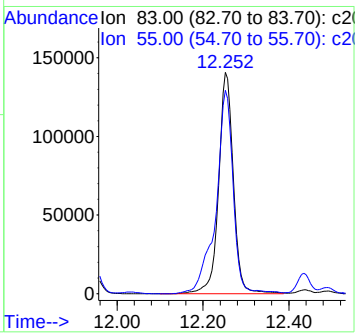


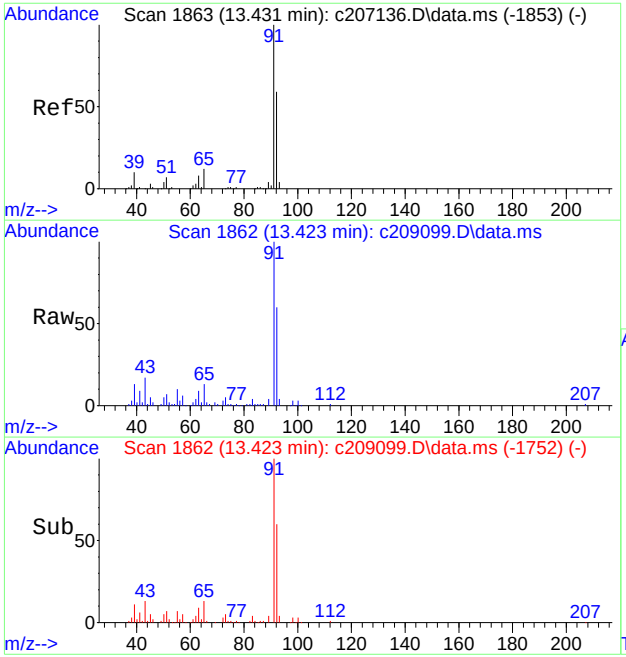


#73
methylcyclohexane
Concen: 83.14 ug/L
RT: 12.252 min Scan# 1638
Delta R.T. -0.007 min
Lab File: c209099.D
Acq: 15 Apr 2016 3:37 am

Tgt Ion: 83 Resp: 334940

Ion	Ratio	Lower	Upper
83	100		
55	91.9	61.2	113.8

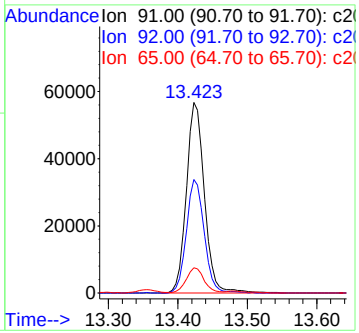


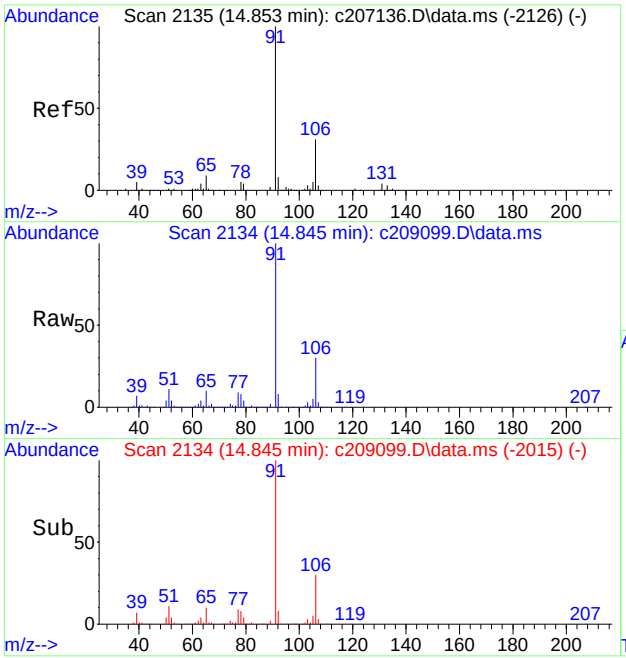


#82
toluene
Concen: 6.99 ug/L
RT: 13.423 min Scan# 1862
Delta R.T. -0.007 min
Lab File: c209099.D
Acq: 15 Apr 2016 3:37 am

Tgt Ion: 91 Resp: 103221

Ion	Ratio	Lower	Upper
91	100		
92	59.6	29.4	89.4
65	13.3	0.0	42.9

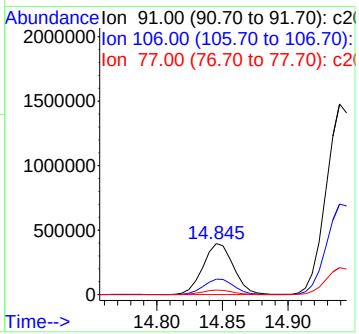


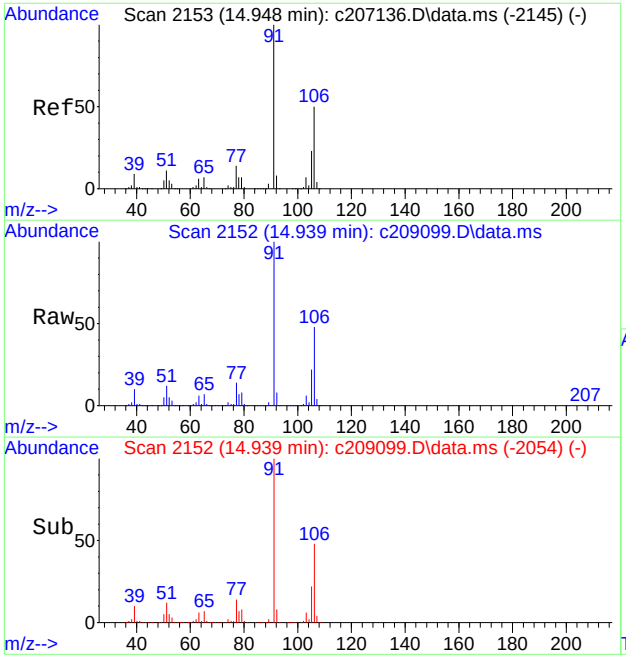


#99
ethylbenzene
Concen: 37.69 ug/L
RT: 14.845 min Scan# 2134
Delta R.T. -0.007 min
Lab File: c209099.D
Acq: 15 Apr 2016 3:37 am

Tgt Ion: 91 Resp: 642381

Ion	Ratio	Lower	Upper
91	100		
106	30.1	0.0	59.9
77	8.9	0.0	39.2

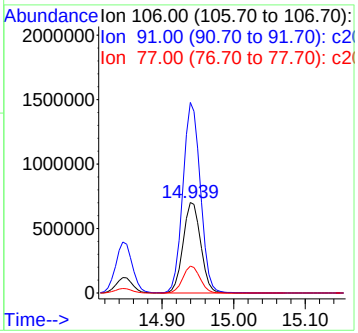


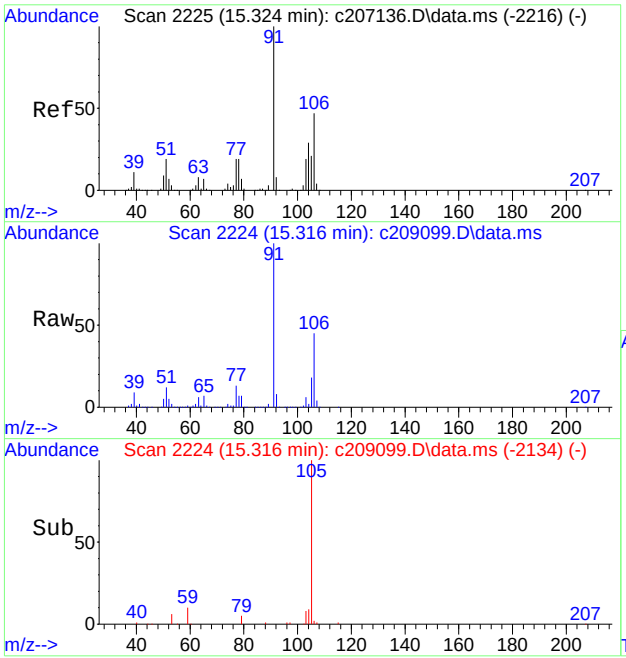


#100
m,p-xylene
Concen: 194.52 ug/L
RT: 14.939 min Scan# 2152
Delta R.T. -0.007 min
Lab File: c209099.D
Acq: 15 Apr 2016 3:37 am

Tgt Ion:106 Resp: 1201908

Ion	Ratio	Lower	Upper
106	100		
91	210.4	179.7	239.7
77	29.7	0.0	59.6

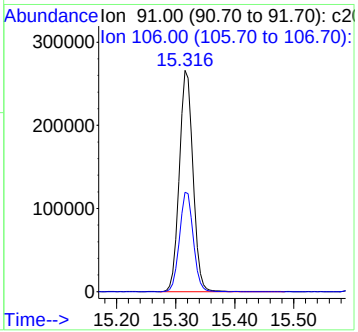


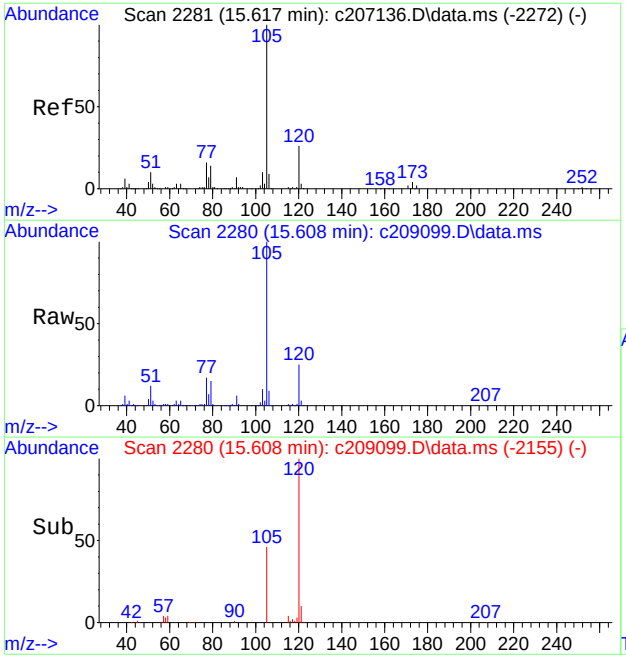


#101
o-xylene
Concen: 31.47 ug/L
RT: 15.316 min Scan# 2224
Delta R.T. -0.007 min
Lab File: c209099.D
Acq: 15 Apr 2016 3:37 am

Tgt Ion: 91 Resp: 429026

Ion	Ratio	Lower	Upper
91	100		
106	45.0	14.3	74.3

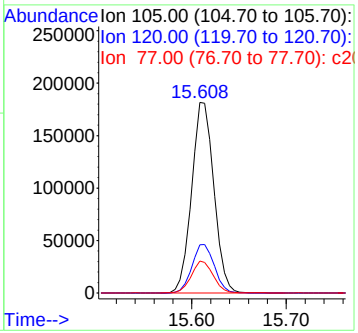




#105
isopropylbenzene
Concen: 19.64 ug/L
RT: 15.608 min Scan# 2280
Delta R.T. -0.007 min
Lab File: c209099.D
Acq: 15 Apr 2016 3:37 am

Tgt Ion:105 Resp: 297574

Ion	Ratio	Lower	Upper
105	100		
120	25.4	0.0	55.7
77	16.7	0.0	46.7



7.1.5

7

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : c209099.D
Acq On : 15 Apr 2016 3:37 am
Operator : VIANNAC
Sample : jc18196-3
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 38 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.3 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MC7650.M
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

Signal : TIC: c20909

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.898	31	40	95	rVB2	8012	39053	0.25%	0.029%
2	4.248	95	107	158	rBB2	42649	179851	1.16%	0.134%
3	4.593	158	173	242	rBB	227391	1072545	6.90%	0.799%
4	4.980	242	247	330	rVB4	7075	50150	0.32%	0.037%
5	5.712	366	387	473	rBB	2471807	10594157	68.14%	7.888%
6	6.235	473	487	529	rBB	1627445	5270093	33.90%	3.924%
7	6.517	531	541	556	rBB	91745	249641	1.61%	0.186%
8	6.742	566	584	595	rBB	33060	100740	0.65%	0.075%
9	6.857	595	606	633	rBB2	96082	292900	1.88%	0.218%
10	7.139	638	660	731	rBB2	115357	545139	3.51%	0.406%
11	7.850	777	796	804	rBV6	35918	175798	1.13%	0.131%
12	8.007	804	826	894	rBB3	1235764	7631997	49.09%	5.683%
13	8.462	897	913	960	rBB	866369	3369972	21.68%	2.509%
14	8.781	962	974	986	rBB	36528	109633	0.71%	0.082%
15	8.922	988	1001	1025	rBB	551166	1609886	10.35%	1.199%
16	9.100	1025	1035	1045	rBB3	31133	81866	0.53%	0.061%
17	9.199	1045	1054	1061	rVV2	65153	180878	1.16%	0.135%
18	9.272	1061	1068	1083	rVB	115790	323846	2.08%	0.241%
19	9.418	1083	1096	1108	rBB	130265	374831	2.41%	0.279%
20	9.528	1108	1117	1131	rVV5	38746	144471	0.93%	0.108%
21	9.675	1131	1145	1155	rVV2	120624	399698	2.57%	0.298%
22	9.758	1155	1161	1183	rVB	50124	163246	1.05%	0.122%
23	9.957	1183	1199	1255	rBB	2041454	6184666	39.78%	4.605%
24	10.464	1288	1296	1305	rVB	48435	132421	0.85%	0.099%
25	10.626	1305	1327	1336	rBB4	49551	245813	1.58%	0.183%
26	10.725	1336	1346	1349	rBV3	59719	136605	0.88%	0.102%
27	10.783	1349	1357	1363	rVV	426602	1046199	6.73%	0.779%
28	10.841	1363	1368	1371	rVV	321166	711199	4.57%	0.530%
29	10.898	1371	1379	1409	rVB	1007504	3371454	21.68%	2.510%
30	11.112	1409	1420	1429	rBV2	60796	177713	1.14%	0.132%
31	11.327	1458	1461	1478	rVB	612047	1323372	8.51%	0.985%
32	11.447	1478	1484	1512	rVB2	200592	689479	4.43%	0.513%
33	11.661	1512	1525	1532	rBV2	108685	324028	2.08%	0.241%
34	11.740	1532	1540	1554	rBB	643992	1340498	8.62%	0.998%
35	11.844	1555	1560	1569	rVB	52529	105391	0.68%	0.078%
36	11.944	1569	1579	1588	rBB	69117	150141	0.97%	0.112%
37	12.027	1588	1595	1607	rBB	35511	72398	0.47%	0.054%
38	12.252	1610	1638	1664	rBB2	717136	2128609	13.69%	1.585%
39	12.435	1664	1673	1693	rBB	131185	295961	1.90%	0.220%
40	12.644	1703	1713	1731	rBB5	130565	431936	2.78%	0.322%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : c209099.D
Acq On : 15 Apr 2016 3:37 am
Operator : VIANNAC
Sample : jc18196-3
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 38 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.3 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MC7650.M
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

41	12.796	1731	1742	1771	rBB2	255364	584278	3.76%	0.435%
42	13.036	1779	1788	1800	rVB3	44238	121751	0.78%	0.091%
43	13.193	1810	1818	1825	rBB	142886	266282	1.71%	0.198%
44	13.266	1825	1832	1841	rBV2	23070	64638	0.42%	0.048%
45	13.355	1841	1849	1857	rBB	1025761	1775845	11.42%	1.322%
46	13.423	1857	1862	1869	rVB2	155301	286578	1.84%	0.213%
47	13.481	1869	1873	1897	rVB6	46335	139934	0.90%	0.104%
48	13.732	1912	1921	1934	rBB3	71122	173431	1.12%	0.129%
49	13.967	1956	1966	1974	rBV3	21101	53158	0.34%	0.040%
50	14.171	1999	2005	2025	rVB8	30789	100246	0.64%	0.075%
51	14.521	2056	2072	2095	rBV5	33675	166940	1.07%	0.124%
52	14.678	2095	2102	2113	rBB3	77127	154803	1.00%	0.115%
53	14.777	2114	2121	2128	rBB	973256	1573202	10.12%	1.171%
54	14.845	2128	2134	2143	rBB	898983	1418745	9.13%	1.056%
55	14.939	2144	2152	2181	rBB	4266115	7253216	46.65%	5.400%
56	15.316	2216	2224	2238	rBB	745309	1212500	7.80%	0.903%
57	15.608	2263	2280	2294	rBB	448987	755131	4.86%	0.562%
58	15.807	2308	2318	2329	rBB	799132	1244490	8.00%	0.927%
59	15.964	2341	2348	2354	rBB	977380	1428384	9.19%	1.064%
60	16.048	2354	2364	2368	rVV	2753501	7036753	45.26%	5.239%
61	16.084	2368	2371	2383	rVB	2002655	3023948	19.45%	2.252%
62	16.293	2399	2411	2424	rBB	2809844	4500415	28.95%	3.351%
63	16.424	2424	2436	2453	rBB	9511016	15547555	100.00%	11.576%
64	16.539	2453	2458	2461	rVV	83512	151109	0.97%	0.113%
65	16.565	2461	2463	2467	rVV	107630	144050	0.93%	0.107%
66	16.612	2467	2472	2477	rVV	205867	309629	1.99%	0.231%
67	16.659	2477	2481	2492	rVV	63461	99783	0.64%	0.074%
68	16.806	2500	2509	2521	rBB2	4691822	7532585	48.45%	5.609%
69	16.900	2521	2527	2535	rVV2	794026	1780342	11.45%	1.326%
70	16.968	2535	2540	2544	rBB3	381444	676988	4.35%	0.504%
71	17.015	2544	2549	2558	rVV2	1572101	2427604	15.61%	1.808%
72	17.093	2558	2564	2570	rBB	173233	255786	1.65%	0.190%
73	17.156	2570	2576	2580	rVV	467466	698134	4.49%	0.520%
74	17.203	2580	2585	2588	rVV	839131	1384402	8.90%	1.031%
75	17.229	2588	2590	2595	rVV	738689	868190	5.58%	0.646%
76	17.287	2595	2601	2608	rBB	1736976	2457550	15.81%	1.830%
77	17.391	2611	2621	2628	rVV2	256698	685306	4.41%	0.510%
78	17.449	2628	2632	2645	rVV	909143	1384036	8.90%	1.031%
79	17.558	2645	2653	2658	rVV	533422	829275	5.33%	0.617%
80	17.611	2658	2663	2667	rBB	951776	1270003	8.17%	0.946%
81	17.658	2667	2672	2684	rVV	1016812	1594851	10.26%	1.187%
82	17.762	2684	2692	2697	rVV4	37508	92371	0.59%	0.069%
83	17.809	2697	2701	2707	rVV3	20727	43754	0.28%	0.033%
84	17.872	2707	2713	2717	rVV2	54211	90127	0.58%	0.067%
85	17.924	2717	2723	2730	rBB	841036	1271264	8.18%	0.947%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : c209099.D
Acq On : 15 Apr 2016 3:37 am
Operator : VIANNAC
Sample : jc18196-3
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 38 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.3 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MC7650.M
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

86	17.977	2730	2733	2736	rVV3	46973	66862	0.43%	0.050%
87	18.024	2736	2742	2747	rVV	579650	947663	6.10%	0.706%
88	18.076	2747	2752	2758	rBB	1265164	1806919	11.62%	1.345%
89	18.139	2759	2764	2770	rVV3	53651	113131	0.73%	0.084%
90	18.249	2777	2785	2800	rBB5	226799	805738	5.18%	0.600%
91	18.353	2800	2805	2815	rVV3	94669	237867	1.53%	0.177%
92	18.437	2815	2821	2829	rBB	192652	302590	1.95%	0.225%
93	18.688	2862	2869	2882	rBB	1081682	1810805	11.65%	1.348%
94	18.792	2882	2889	2902	rBB2	61754	127877	0.82%	0.095%
95	18.892	2902	2908	2937	rBB	77873	123390	0.79%	0.092%
96	19.075	2937	2943	2955	rBB2	72546	137608	0.89%	0.102%
97	19.158	2955	2959	2976	rVV3	35260	91018	0.59%	0.068%
98	19.279	2976	2982	3051	rVV	44381	100315	0.65%	0.075%
99	19.686	3051	3060	3073	rBB	297636	536011	3.45%	0.399%
100	19.895	3092	3100	3196	rBB2	188286	341010	2.19%	0.254%

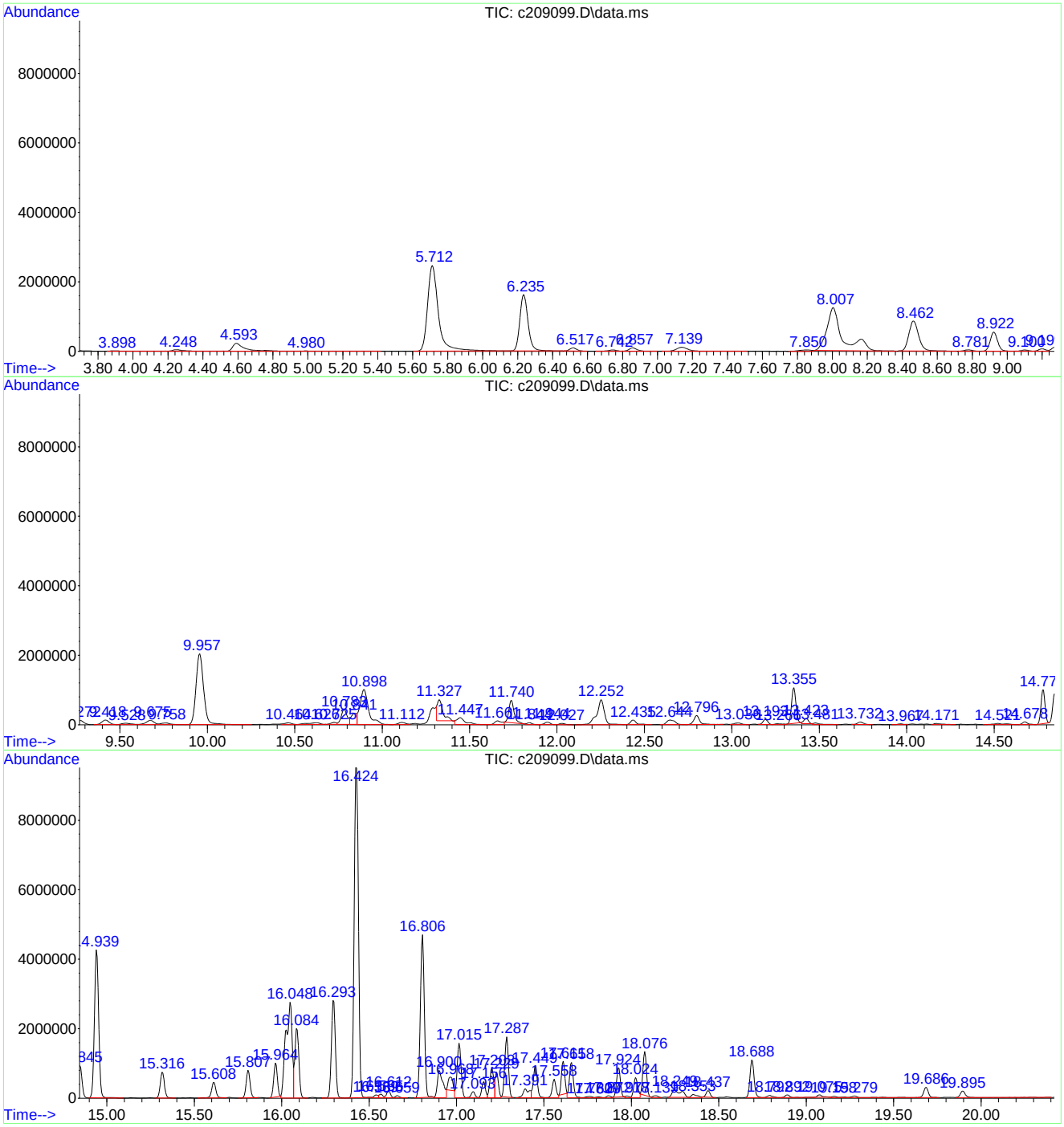
Sum of corrected areas: 134306440

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\
Data File : c209099.D
Acq On : 15 Apr 2016 3:37 am
Operator : VIANNAC
Sample : jc18196-3
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209099.D
Acq On : 15 Apr 2016 3:37 am
Operator : VIANNAC
Sample : jc18196-3
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

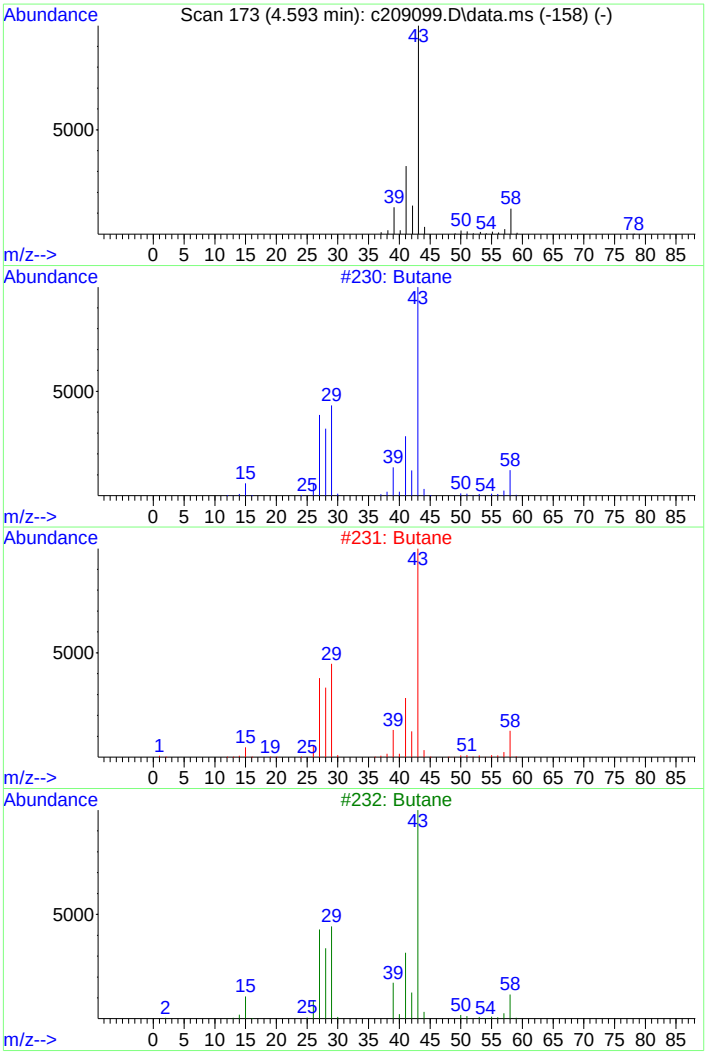
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

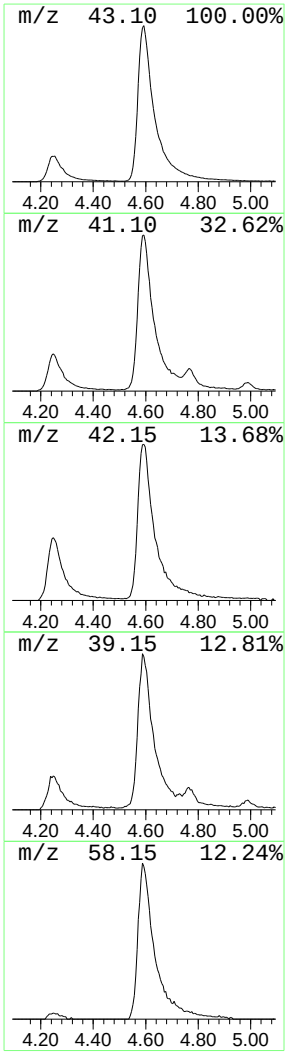
****

Peak Number 1 alkane Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.593	51.26 ug/L	1072550	pentafluorobenzene	10.783

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	72
2	Butane	58	C4H10	000106-97-8	72
3	Butane	58	C4H10	000106-97-8	58
4	Isopropylsulfonyl chloride	142	C3H7ClO2S	010147-37-2	9
5	Isobutane	58	C4H10	000075-28-5	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209099.D
Acq On : 15 Apr 2016 3:37 am
Operator : VIANNAC
Sample : jc18196-3
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

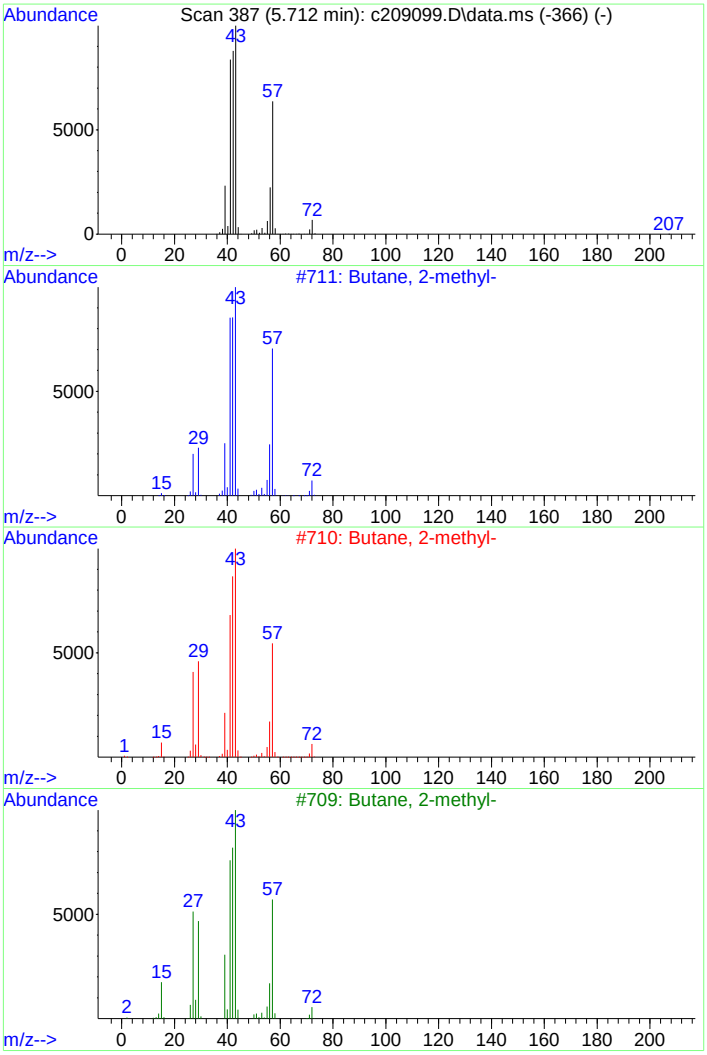
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

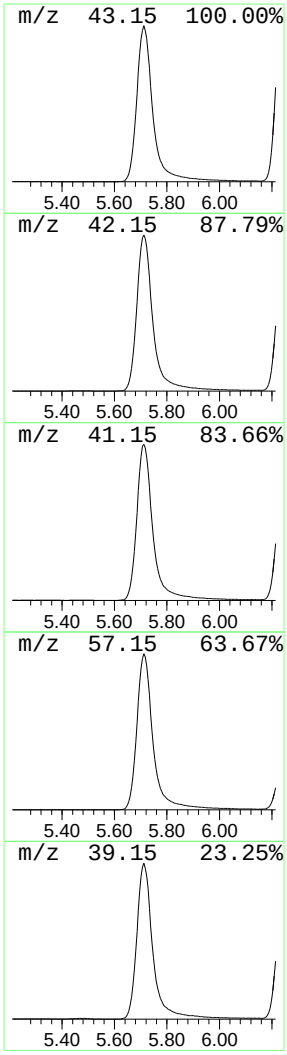
****

Peak Number 2 alkane Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.712	506.32 ug/L	10594200	pentafluorobenzene	10.783

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	94
2	Butane, 2-methyl-	72	C5H12	000078-78-4	91
3	Butane, 2-methyl-	72	C5H12	000078-78-4	90
4	Pentane	72	C5H12	000109-66-0	33
5	3-Buten-1-ol	72	C4H8O	000627-27-0	28





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209099.D
Acq On : 15 Apr 2016 3:37 am
Operator : VIANNAC
Sample : jc18196-3
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

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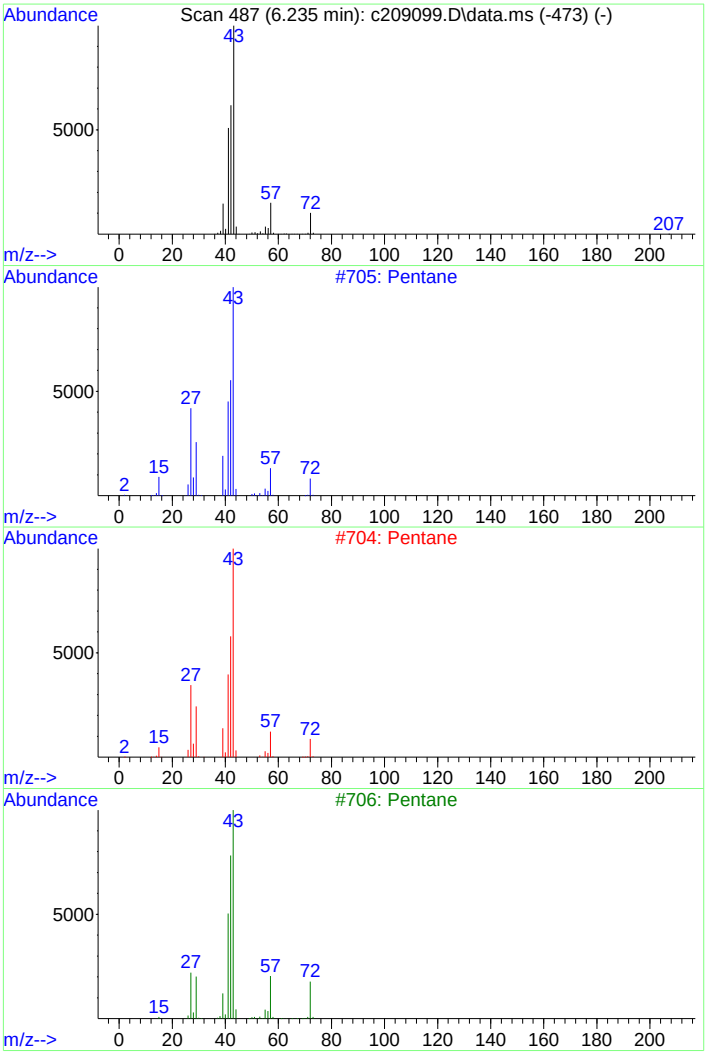
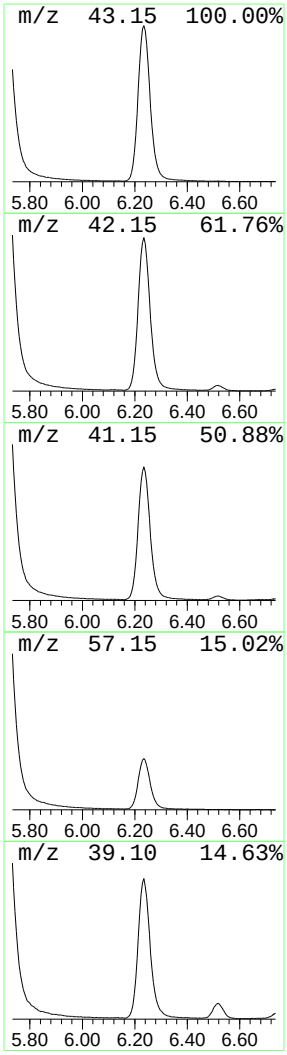
Peak Number 3 alkane Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.235	251.87 ug/L	5270090	pentafluorobenzene	10.783

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	90
2	Pentane	72	C5H12	000109-66-0	90
3	Pentane	72	C5H12	000109-66-0	72
4	Pentane	72	C5H12	000109-66-0	58
5	Diaziridine,3,3-dimethyl-	72	C3H8N2	004901-76-2	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209099.D
Acq On : 15 Apr 2016 3:37 am
Operator : VIANNAC
Sample : jc18196-3
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

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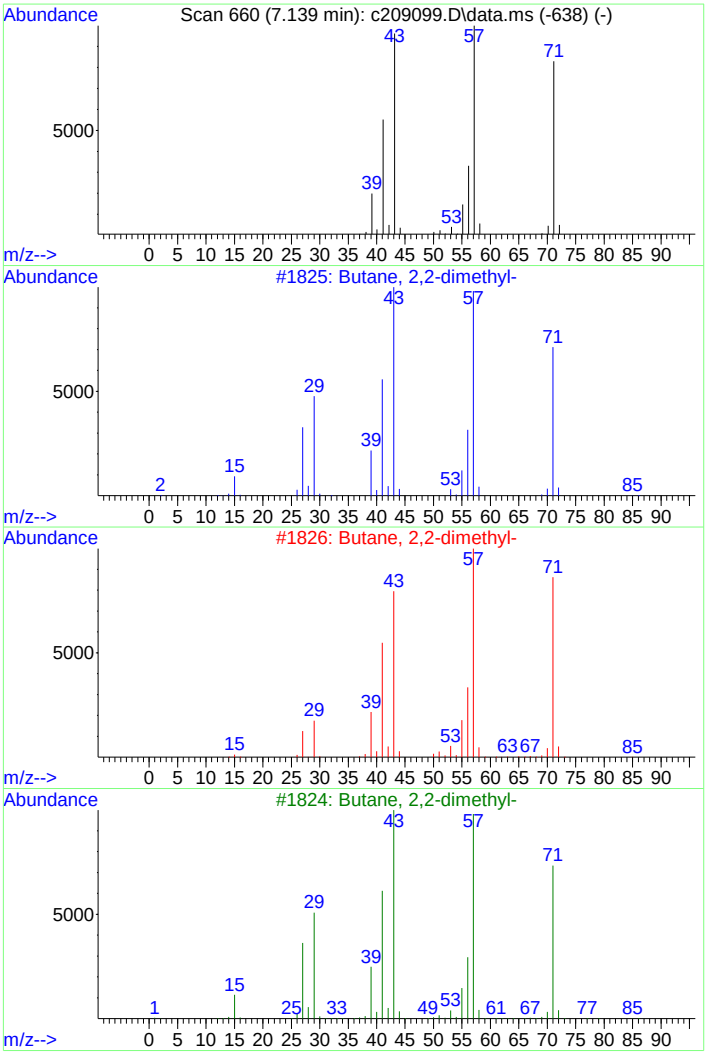
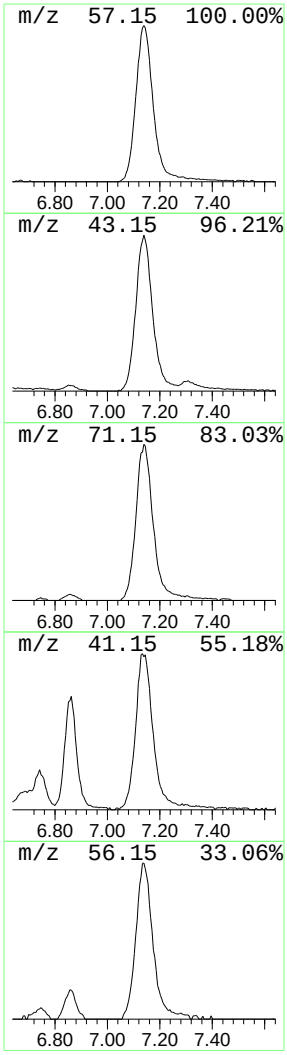
Peak Number 4 alkane Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.139	26.05 ug/L	545139	pentafluorobenzene	10.783

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2,2-dimethyl-	86	C6H14	000075-83-2	90
2	Butane, 2,2-dimethyl-	86	C6H14	000075-83-2	83
3	Butane, 2,2-dimethyl-	86	C6H14	000075-83-2	83
4	Butane, 2,2-dimethyl-	86	C6H14	000075-83-2	83
5	Sulfurous acid, isobutyl pentyl ...	208	C9H20O3S	1000309-13-8	72





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209099.D
Acq On : 15 Apr 2016 3:37 am
Operator : VIANNAC
Sample : jc18196-3
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

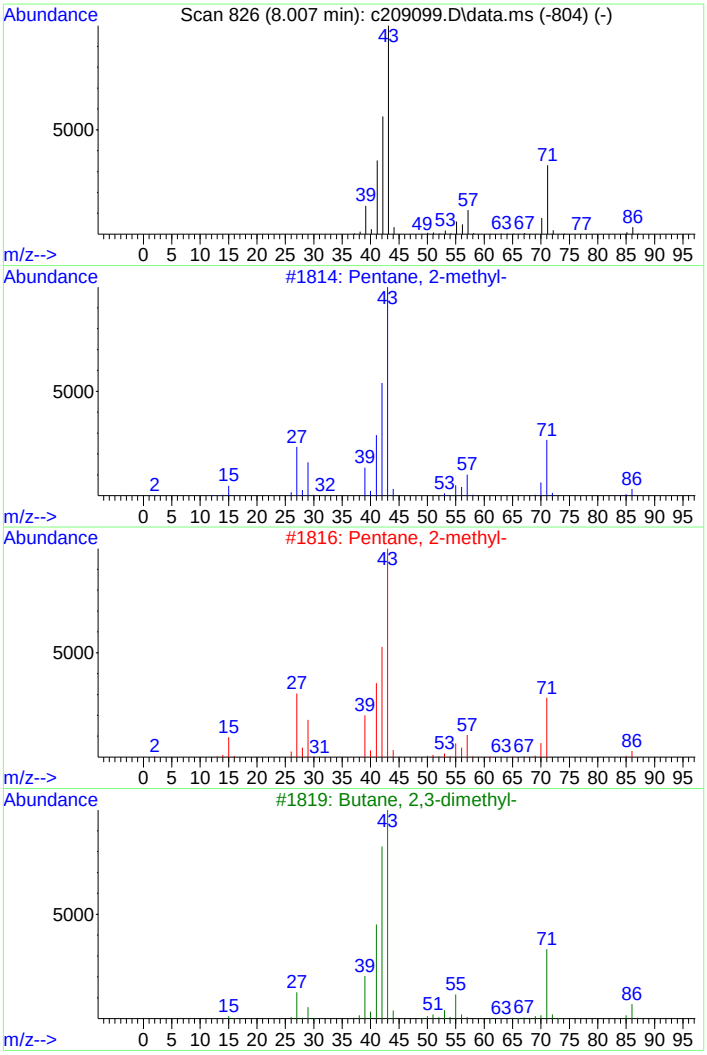
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

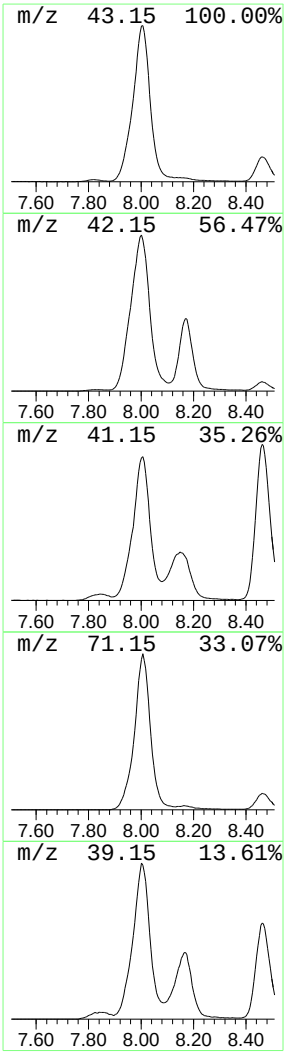
****

Peak Number 5 alkane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.007	364.75 ug/L	7632000	pentafluorobenzene	10.783

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2-methyl-	86	C6H14	000107-83-5	91
2	Pentane, 2-methyl-	86	C6H14	000107-83-5	91
3	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	64
4	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	47
5	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	47





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209099.D
Acq On : 15 Apr 2016 3:37 am
Operator : VIANNAC
Sample : jc18196-3
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

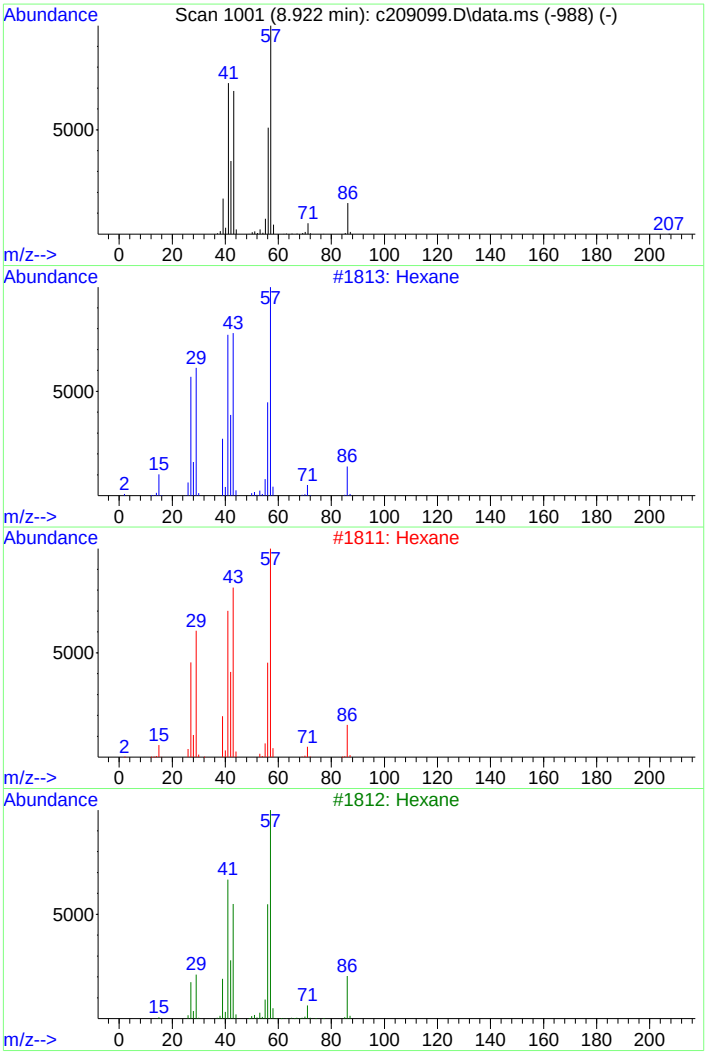
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

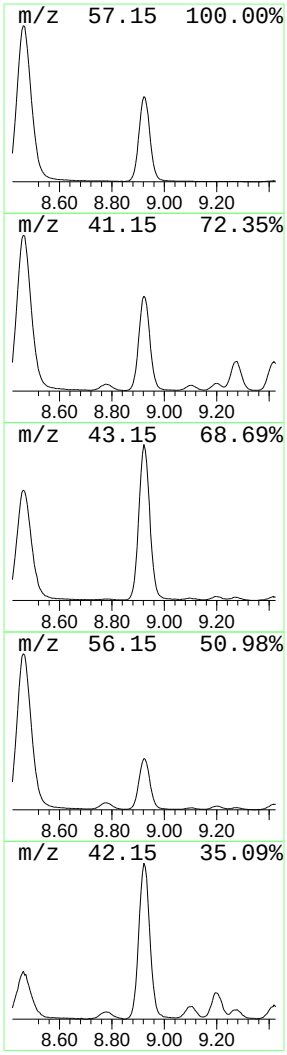
****

Peak Number 6 alkane Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.922	76.94 ug/L	1609890	pentafluorobenzene	10.783

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexane	86	C6H14	000110-54-3	91
2	Hexane	86	C6H14	000110-54-3	91
3	Hexane	86	C6H14	000110-54-3	91
4	Pentane, 2,2,3,4-tetramethyl-	128	C9H20	001186-53-4	42
5	1-Pentene, 4-methyl-	84	C6H12	000691-37-2	40





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209099.D
Acq On : 15 Apr 2016 3:37 am
Operator : VIANNAC
Sample : jc18196-3
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

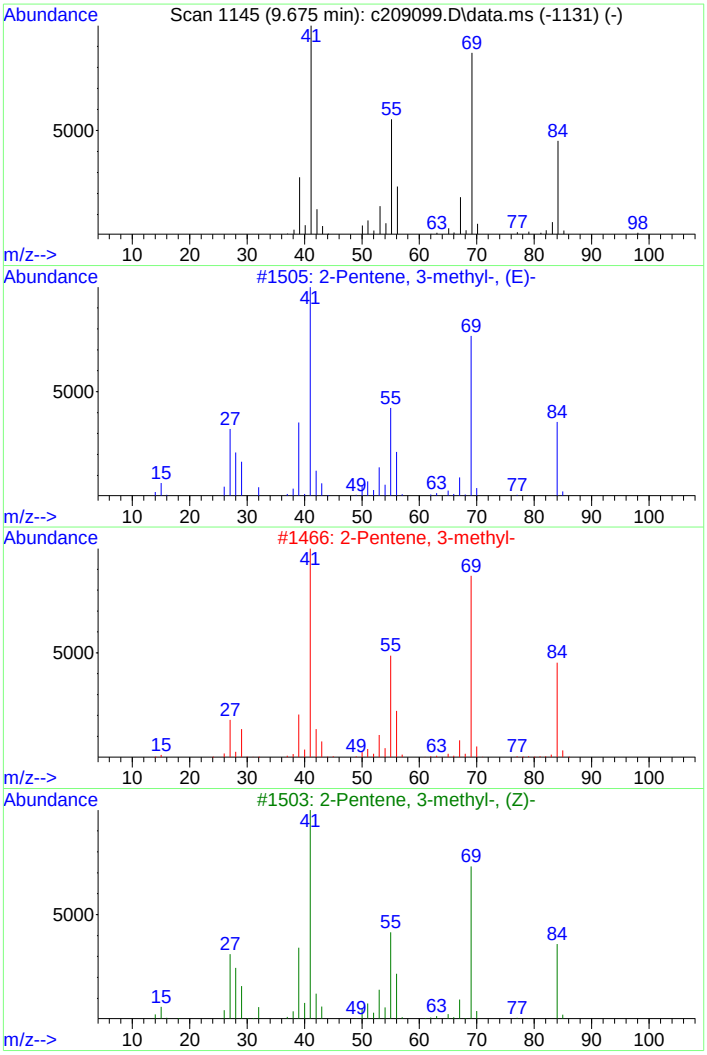
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

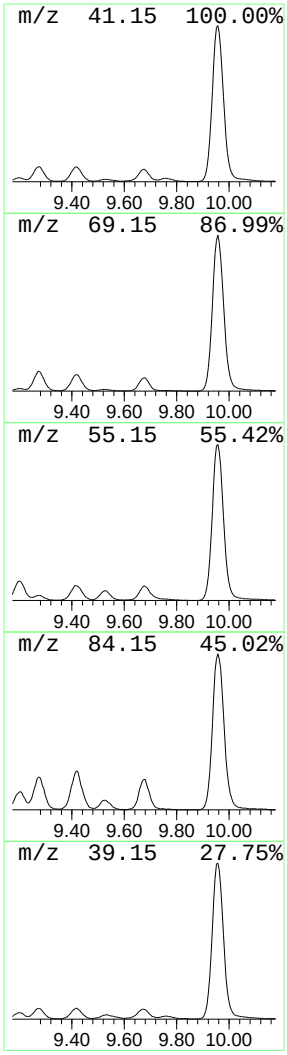
****

Peak Number 8 alkene Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.675	19.10 ug/L	399698	pentafluorobenzene	10.783

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentene, 3-methyl-, (E)-	84	C6H12	000616-12-6	94
2	2-Pentene, 3-methyl-	84	C6H12	000922-61-2	91
3	2-Pentene, 3-methyl-, (Z)-	84	C6H12	000922-62-3	91
4	2-Pentene, 3-methyl-, (E)-	84	C6H12	000616-12-6	91
5	2-Pentene, 3-methyl-, (Z)-	84	C6H12	000922-62-3	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209099.D
Acq On : 15 Apr 2016 3:37 am
Operator : VIANNAC
Sample : jc18196-3
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

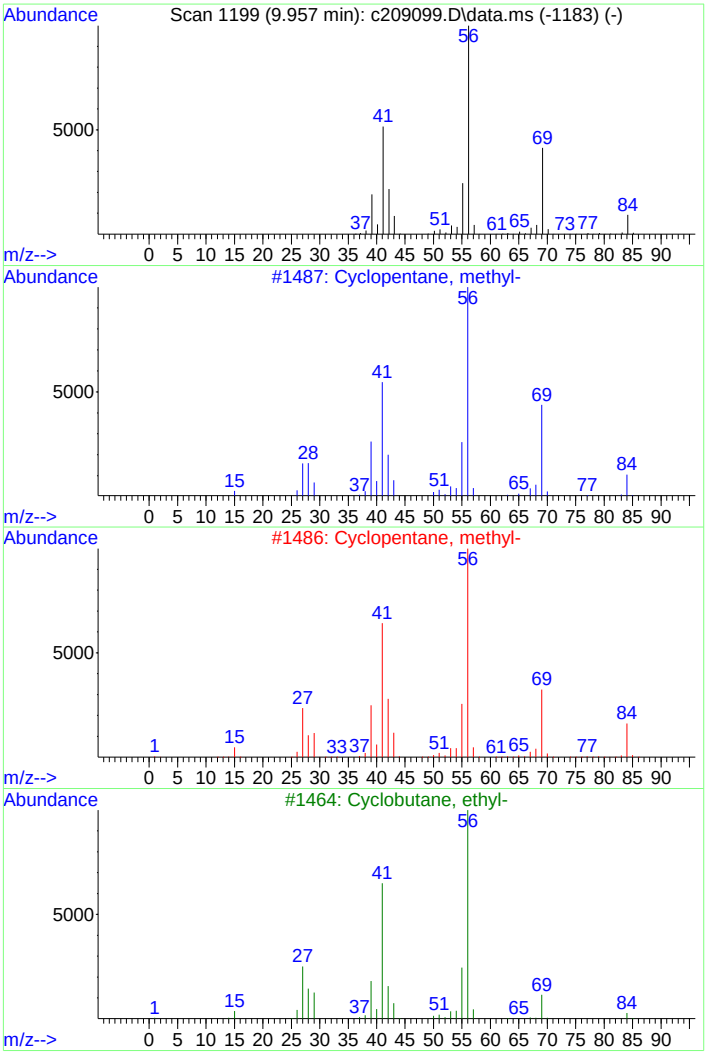
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

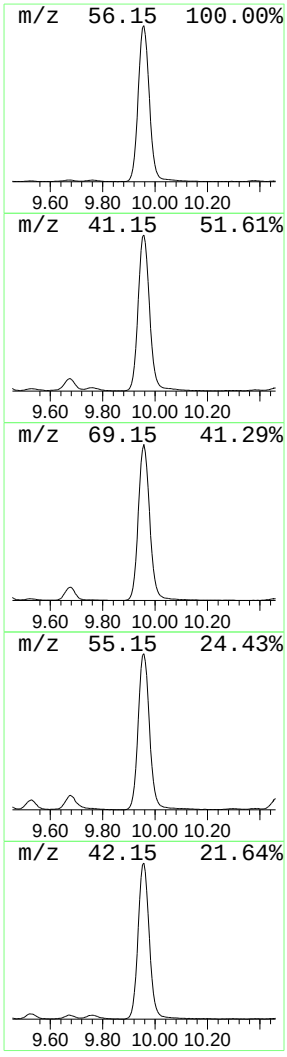
****

Peak Number 9 Cyclopentane, methyl- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.957	295.58 ug/L	6184670	pentafluorobenzene	10.783

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	91
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	91
3	Cyclobutane, ethyl-	84	C6H12	004806-61-5	86
4	Cyclopentane, methyl-	84	C6H12	000096-37-7	78
5	Cyclohexane	84	C6H12	000110-82-7	78





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209099.D
Acq On : 15 Apr 2016 3:37 am
Operator : VIANNAC
Sample : jc18196-3
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 38 Sample Multiplier: 1

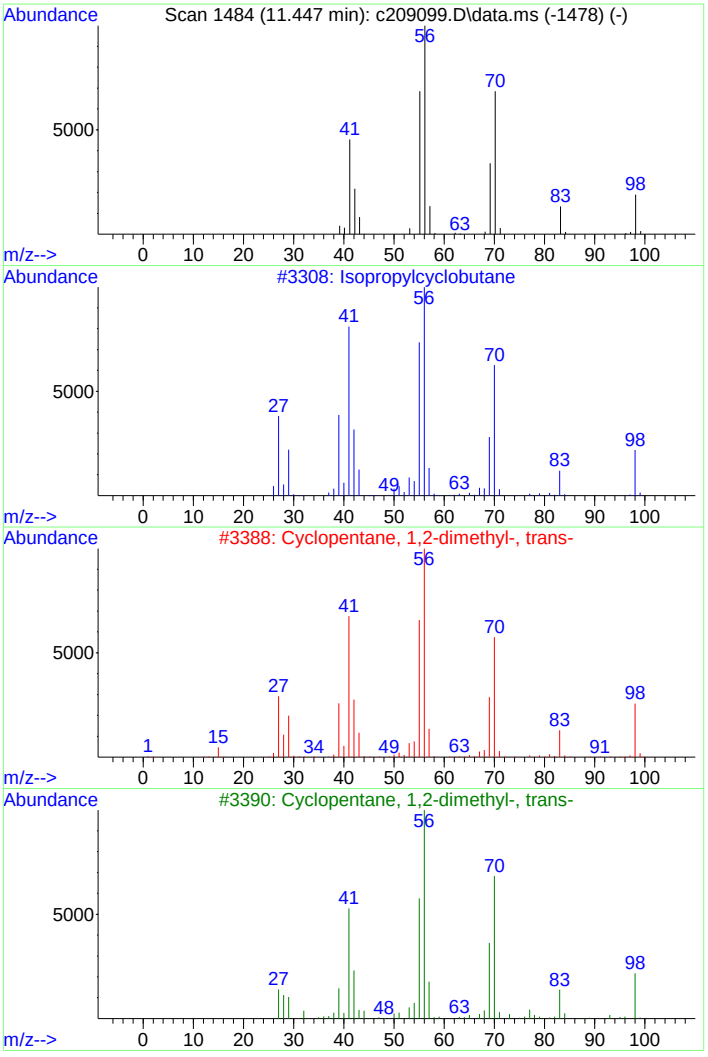
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

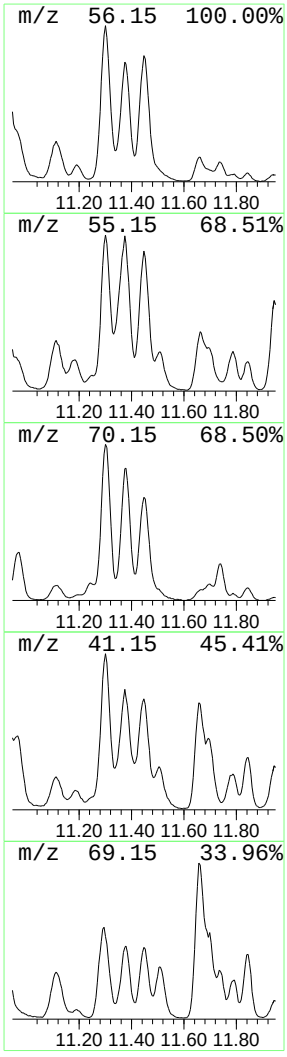
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

****
Peak Number 10 cyclopentane, dimethyl- isomer Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.447	25.72 ug/L	689479	1,4-difluorobenzene	11.740

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Isopropylcyclobutane	98	C7H14	000872-56-0	91
2	Cyclopentane, 1,2-dimethyl-, trans-	98	C7H14	000822-50-4	91
3	Cyclopentane, 1,2-dimethyl-, trans-	98	C7H14	000822-50-4	86
4	1-Heptene	98	C7H14	000592-76-7	72
5	5-Methyl-2-hexene,c&t	98	C7H14	003404-62-4	64





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209099.D
Acq On : 15 Apr 2016 3:37 am
Operator : VIANNAC
Sample : jc18196-3
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

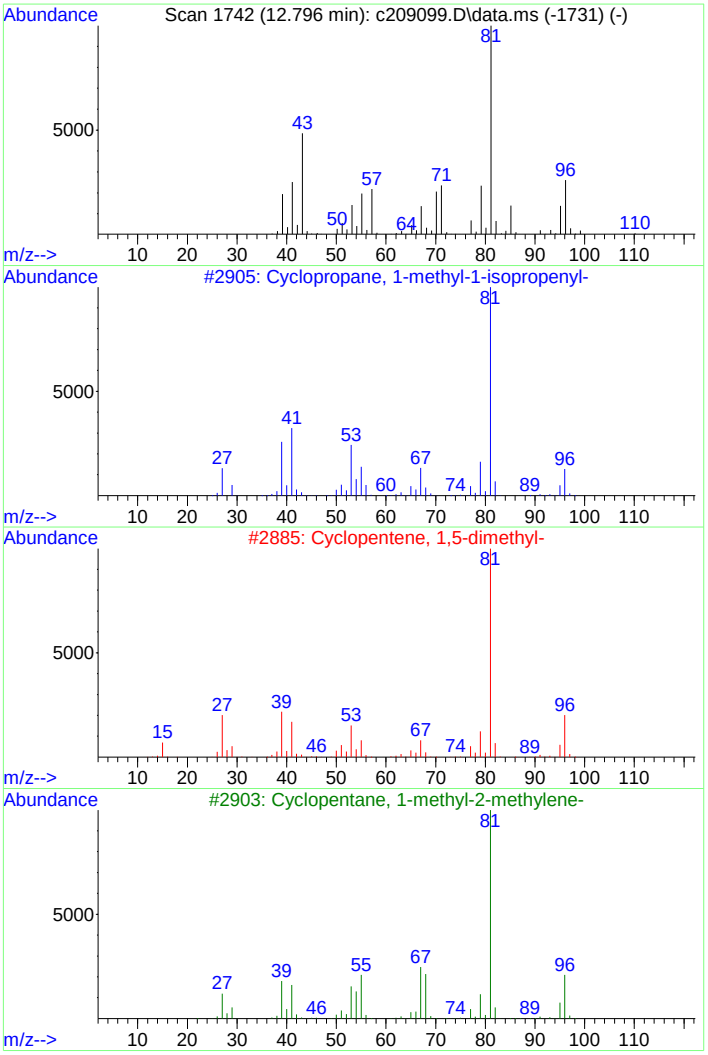
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

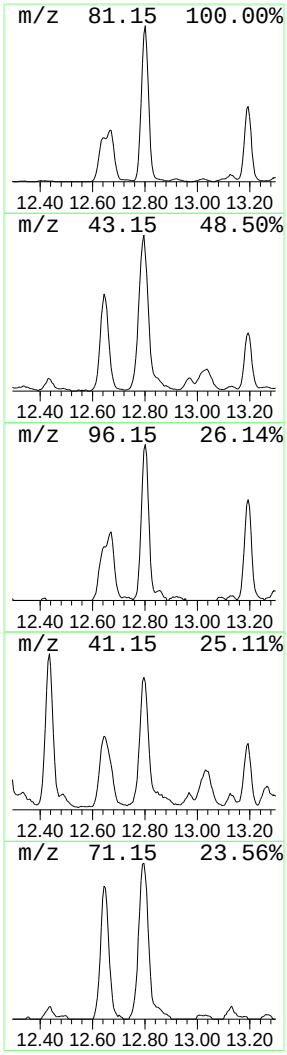
****

Peak Number 11 unknown Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.796	21.79 ug/L	584278	1,4-difluorobenzene	11.740

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopropane, 1-methyl-1-isoprop...	96	C7H12	003422-07-9	58
2	Cyclopentene, 1,5-dimethyl-	96	C7H12	016491-15-9	58
3	Cyclopentane, 1-methyl-2-methylene-	96	C7H12	041158-41-2	52
4	Cyclobutane, (1-methylethylidene)-	96	C7H12	001528-22-9	52
5	3,5-Dimethylcyclopentene	96	C7H12	007459-71-4	50





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209099.D
Acq On : 15 Apr 2016 3:37 am
Operator : VIANNAC
Sample : jc18196-3
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

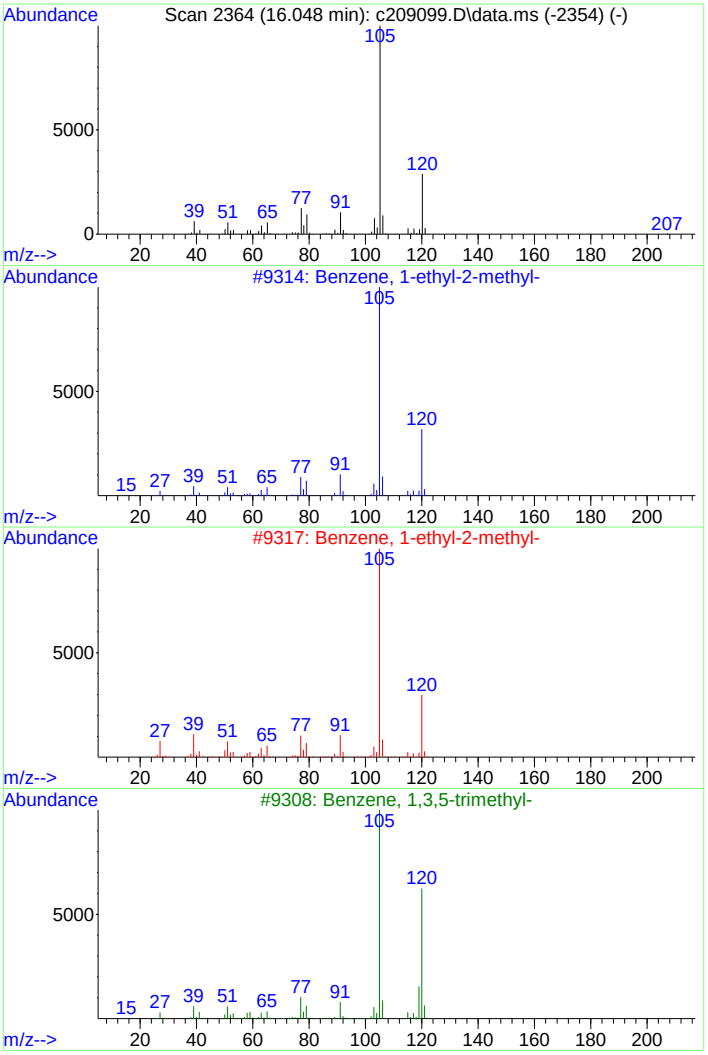
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

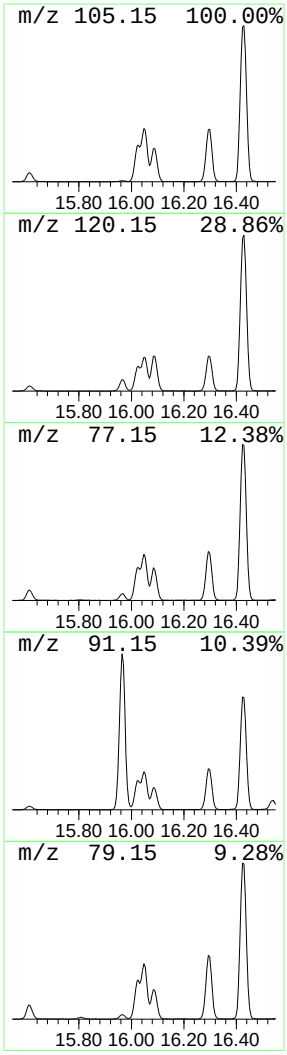
****

Peak Number 12 C3 alkyl benzene Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.048	46.71 ug/L	7036750	1,4-dichlorobenzene-d4	16.800

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
4	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209099.D
Acq On : 15 Apr 2016 3:37 am
Operator : VIANNAC
Sample : jc18196-3
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

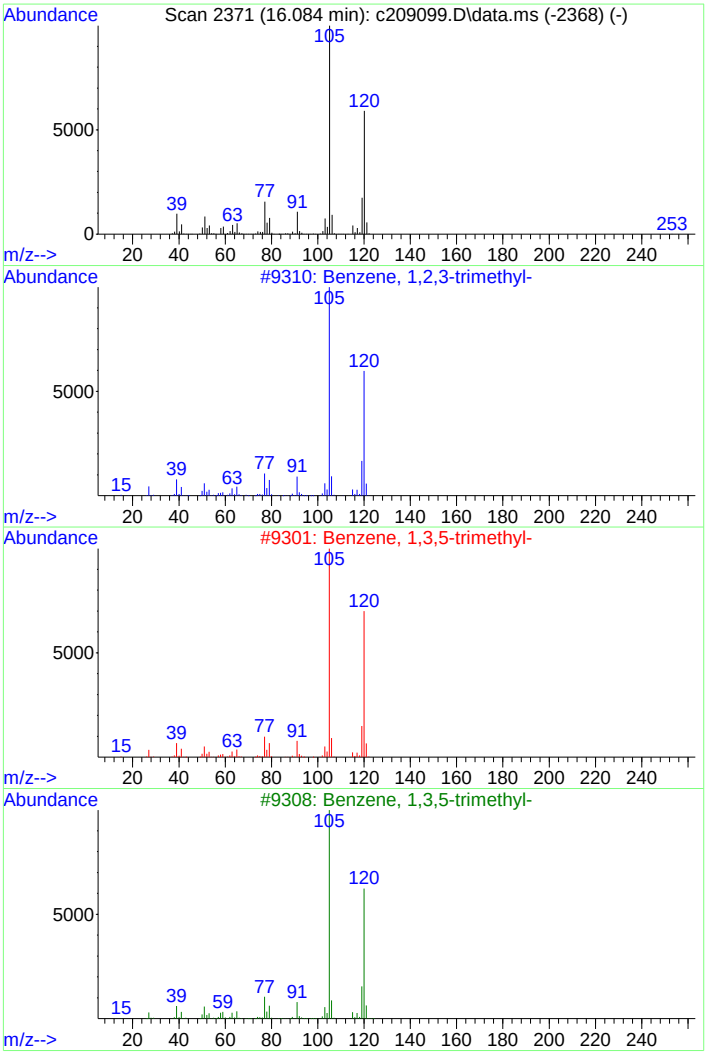
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

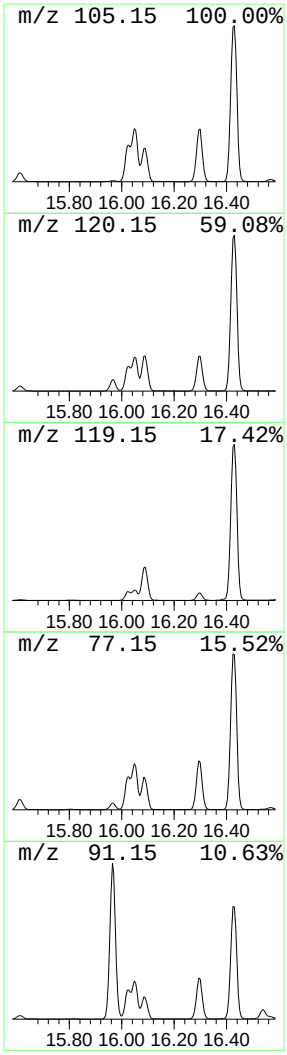
****

Peak Number 13 Benzene, 1,3,5-trimethyl- Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.084	20.07 ug/L	3023950	1,4-dichlorobenzene-d4	16.800

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
5	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209099.D
Acq On : 15 Apr 2016 3:37 am
Operator : VIANNAC
Sample : jc18196-3
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

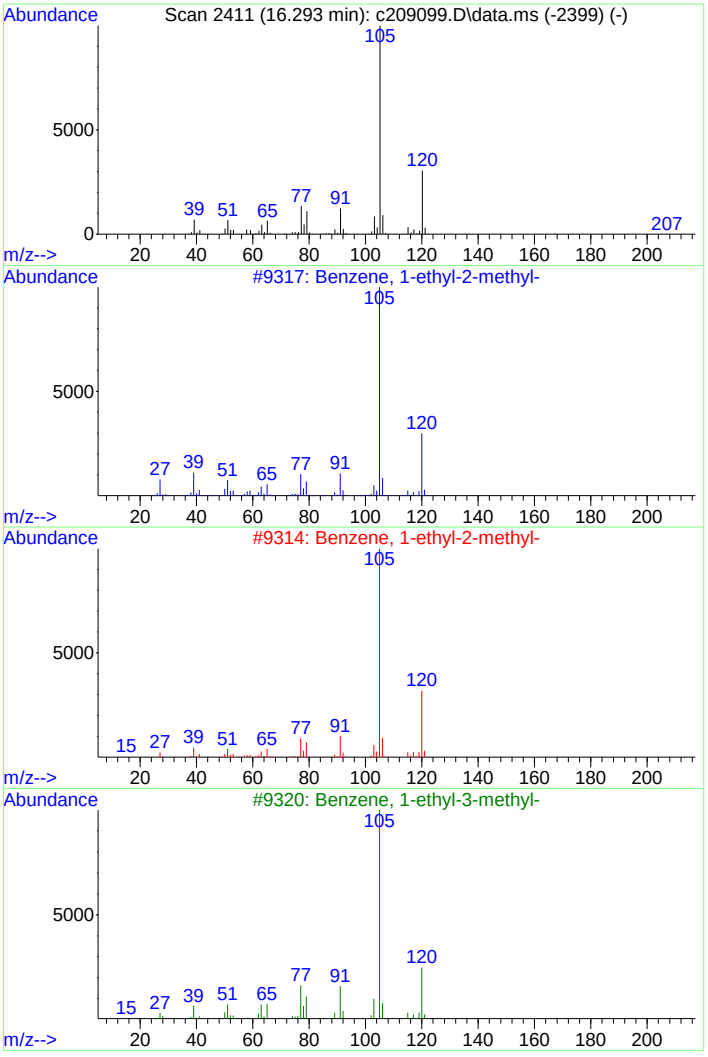
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

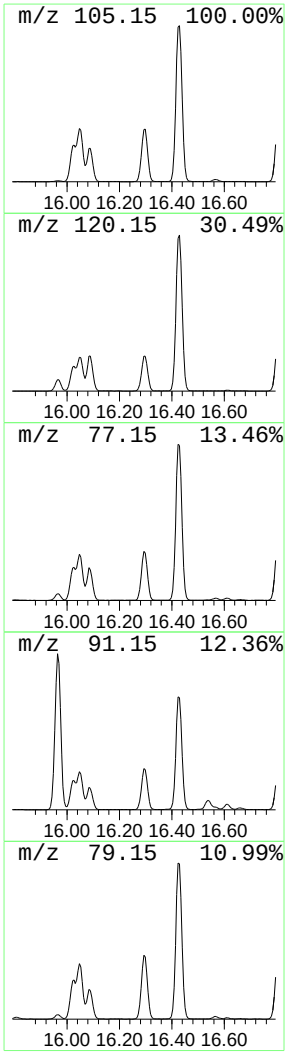
****

Peak Number 14 C3 alkyl benzene Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.293	29.87 ug/L	4500420	1,4-dichlorobenzene-d4	16.800

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91
4	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	91
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209099.D
Acq On : 15 Apr 2016 3:37 am
Operator : VIANNAC
Sample : jc18196-3
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

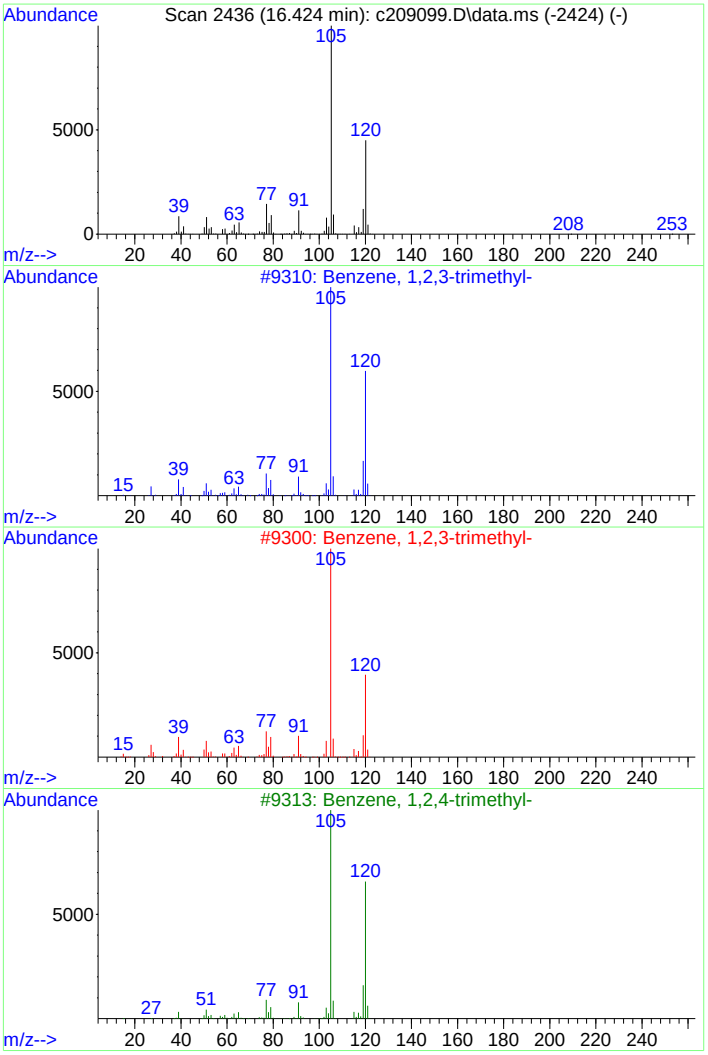
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

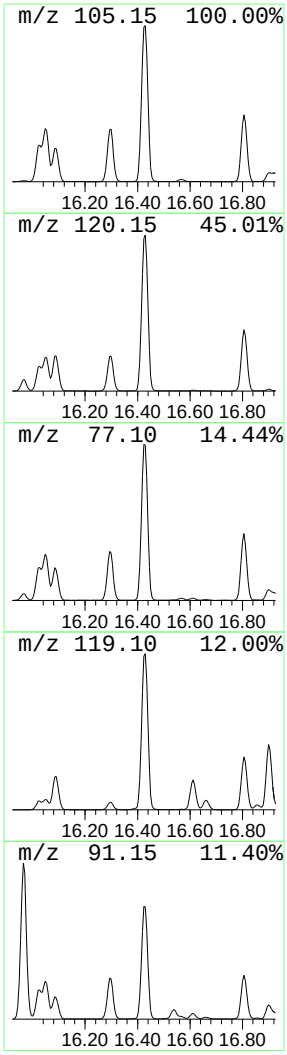
****

Peak Number 15 Benzene, 1,2,4-trimethyl- Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.424	103.20 ug/L	15547600	1,4-dichlorobenzene-d4	16.800

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209099.D
Acq On : 15 Apr 2016 3:37 am
Operator : VIANNAC
Sample : jc18196-3
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

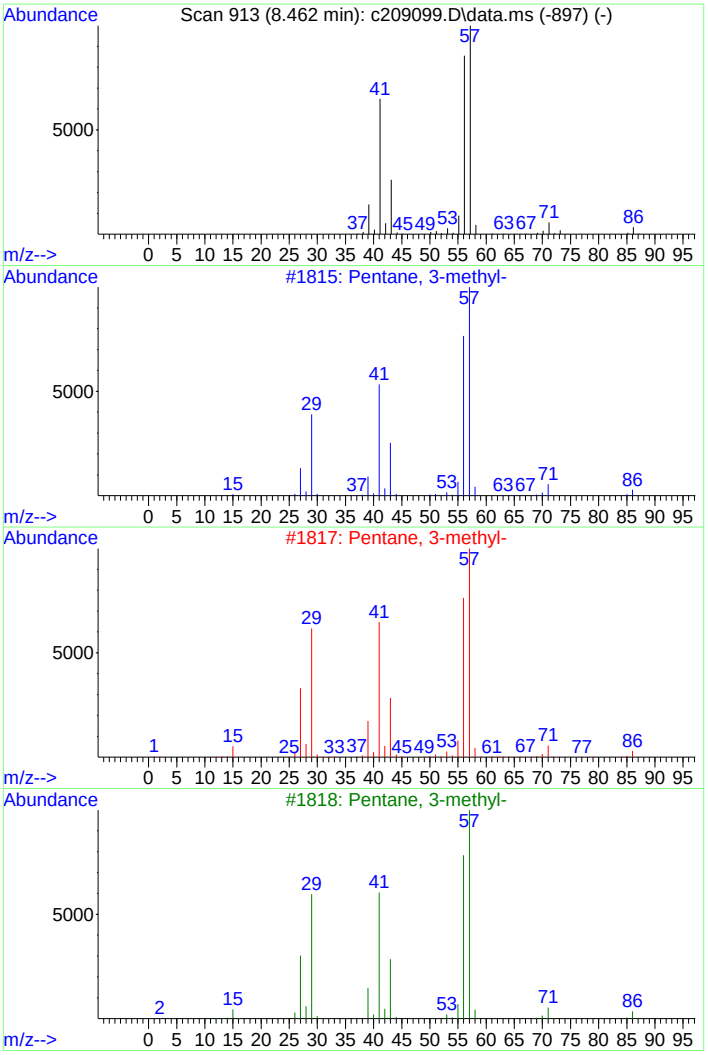
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

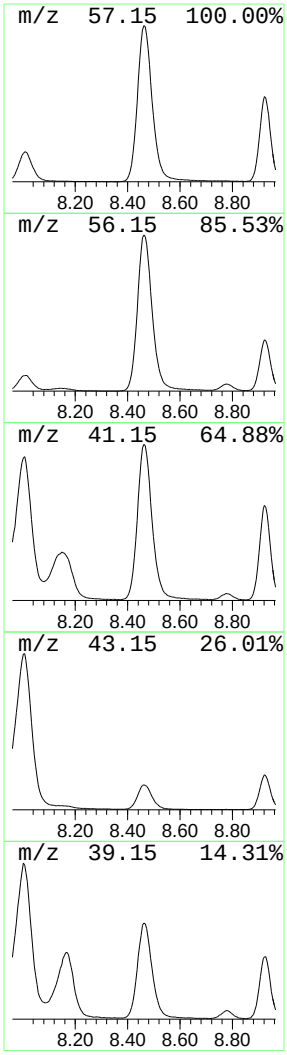
****

Peak Number 16 alkane Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.462	161.06 ug/L	3369970	pentafluorobenzene	10.783

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
2	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
3	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
4	Hexane, 2,2,3-trimethyl-	128	C9H20	016747-25-4	74
5	Oxirane, (1-methylethyl)-	86	C5H10O	001438-14-8	50





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\
Data File : c209099.D
Acq On : 15 Apr 2016 3:37 am
Operator : VIANNAC
Sample : jc18196-3
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
alkane	4.593	51.3	ug/L	1072550	2	10.783	1046200	50.0
alkane	5.712	506.3	ug/L	10594200	2	10.783	1046200	50.0
alkane	6.235	251.9	ug/L	5270090	2	10.783	1046200	50.0
alkane	7.139	26.1	ug/L	545139	2	10.783	1046200	50.0
alkane	8.007	364.8	ug/L	7632000	2	10.783	1046200	50.0
alkane	8.922	76.9	ug/L	1609890	2	10.783	1046200	50.0
alkene	9.675	19.1	ug/L	399698	2	10.783	1046200	50.0
Cyclopentane, m...	9.957	295.6	ug/L	6184670	2	10.783	1046200	50.0
cyclopentane, d...	11.447	25.7	ug/L	689479	3	11.740	1340500	50.0
unknown	12.796	21.8	ug/L	584278	3	11.740	1340500	50.0
C3 alkyl benzene	16.048	46.7	ug/L	7036750	5	16.800	7532590	50.0
Benzene, 1,3,5-...	16.084	20.1	ug/L	3023950	5	16.800	7532590	50.0
C3 alkyl benzene	16.293	29.9	ug/L	4500420	5	16.800	7532590	50.0
Benzene, 1,2,4-...	16.424	103.2	ug/L	15547600	5	16.800	7532590	50.0
alkane	8.462	161.1	ug/L	3369970	2	10.783	1046200	50.0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : c209101.D
Acq On : 15 Apr 2016 4:34 am
Operator : VIANNAC
Sample : jc18196-4
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Time: Apr 18 11:15:34 2016
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Fri Apr 15 15:18:17 2016
Response via : Initial Calibration

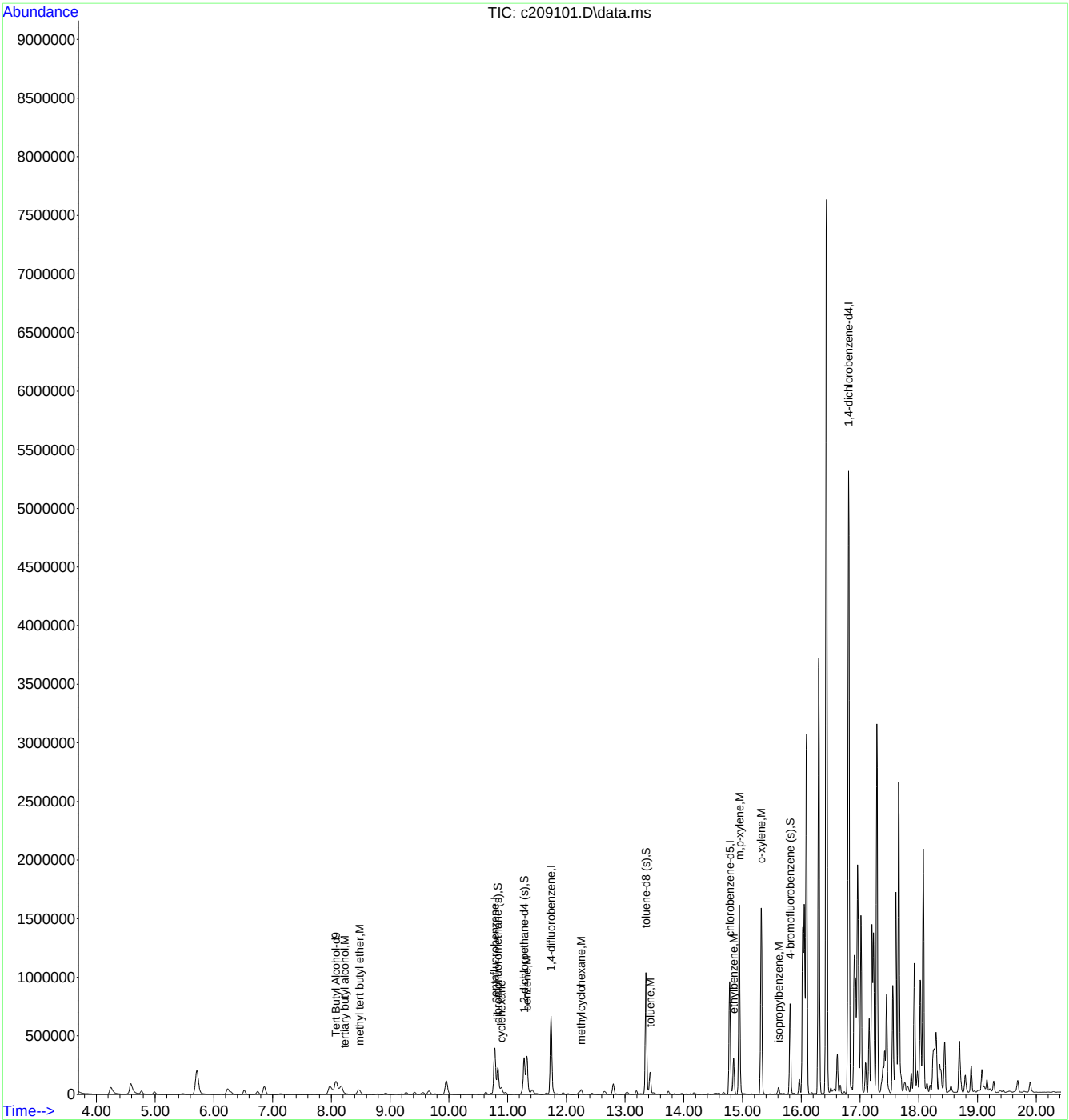
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.079	65	287365	500.00	ug/L	0.00
5) pentafluorobenzene	10.782	168	297990	50.00	ug/L	0.00
59) 1,4-difluorobenzene	11.739	114	548469	50.00	ug/L	0.00
88) chlorobenzene-d5	14.781	117	496703	50.00	ug/L	0.00
104) 1,4-dichlorobenzene-d4	16.799	152	237355	50.00	ug/L	0.00
System Monitoring Compounds						
50) dibromofluoromethane (s)	10.834	113	155161	48.57	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 97.14%			
51) 1,2-dichloroethane-d4 (s)	11.284	65	217712	49.01	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 98.02%			
80) toluene-d8 (s)	13.354	98	697013	49.99	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.98%			
106) 4-bromofluorobenzene (s)	15.811	174	180270	54.12	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 108.24%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.231	59	6590	10.90	ug/L #	1
32) methyl tert butyl ether	8.487	73	23207	2.12	ug/L #	1
54) cyclohexane	10.897	84	25274	5.85	ug/L	88
65) benzene	11.331	78	310537	22.15	ug/L	100
73) methylcyclohexane	12.256	83	19184	4.87	ug/L	94
82) toluene	13.427	91	129538	8.97	ug/L	99
99) ethylbenzene	14.844	91	214372	12.85	ug/L	99
100) m,p-xylene	14.944	106	417614	69.07	ug/L	100
101) o-xylene	15.320	91	943740	70.74	ug/L	99
105) isopropylbenzene	15.613	105	36195	2.41	ug/L	99

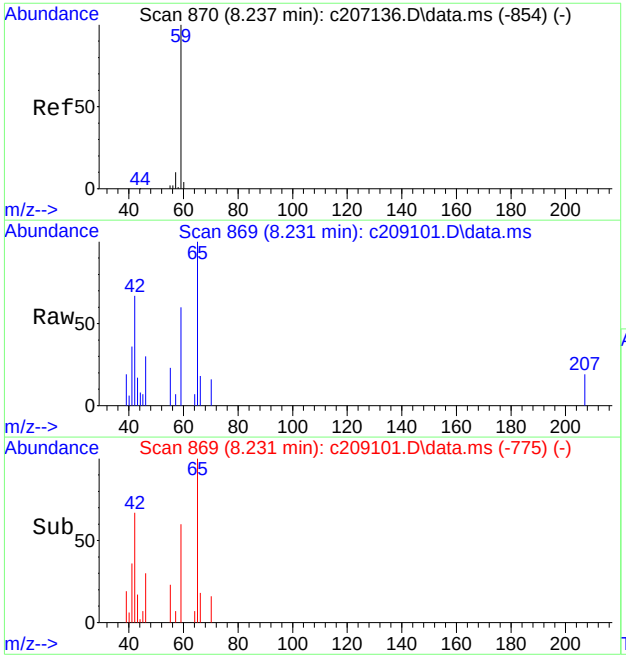
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : c209101.D
Acq On : 15 Apr 2016 4:34 am
Operator : VIANNAC
Sample : jc18196-4
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Time: Apr 18 11:15:34 2016
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Fri Apr 15 15:18:17 2016
Response via : Initial Calibration

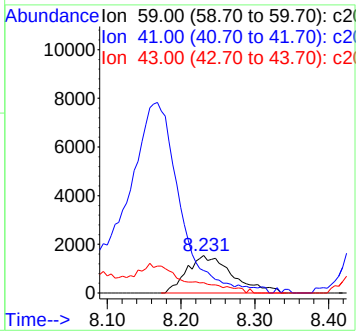


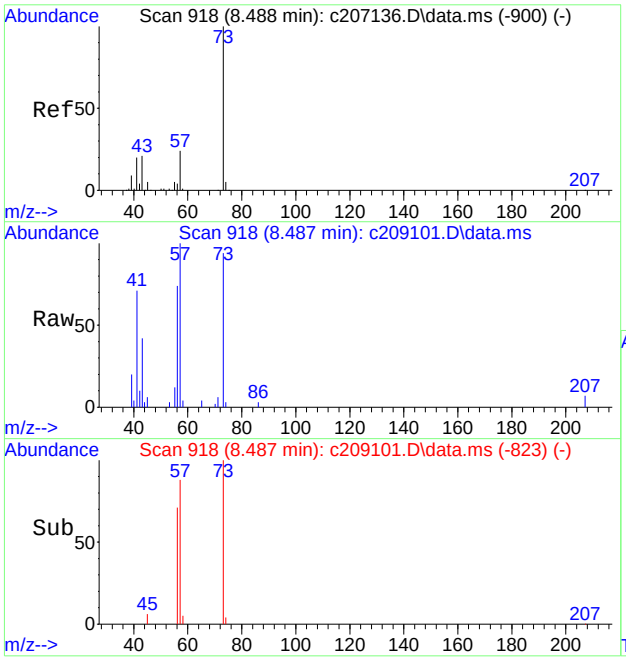


#3
tertiary butyl alcohol
Concen: 10.90 ug/L
RT: 8.231 min Scan# 869
Delta R.T. -0.007 min
Lab File: c209101.D
Acq: 15 Apr 2016 4:34 am

Tgt Ion: 59 Resp: 6590

Ion	Ratio	Lower	Upper
59	100		
41	49.6	0.0	32.5#
43	27.7	0.0	33.8

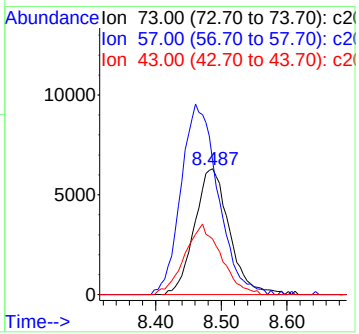


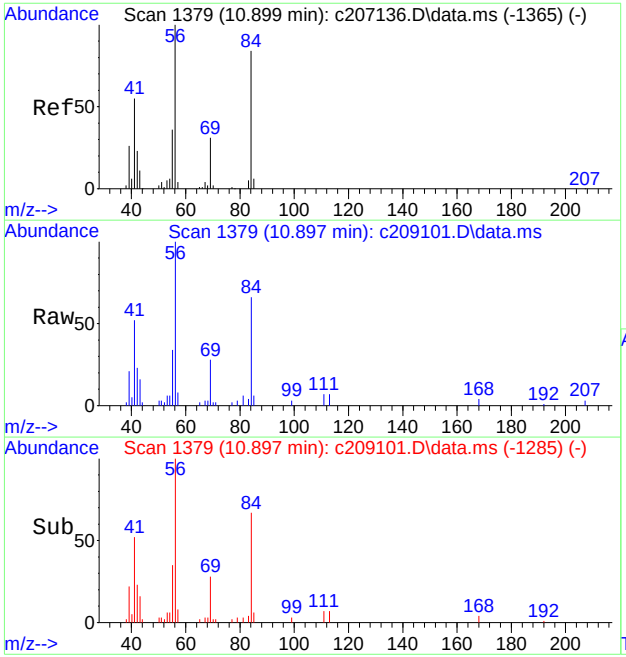


#32
methyl tert butyl ether
Concen: 2.12 ug/L
RT: 8.487 min Scan# 918
Delta R.T. -0.003 min
Lab File: c209101.D
Acq: 15 Apr 2016 4:34 am

Tgt Ion: 73 Resp: 23207

Ion	Ratio	Lower	Upper
73	100		
57	106.2	0.0	54.9#
43	44.2	0.0	51.7

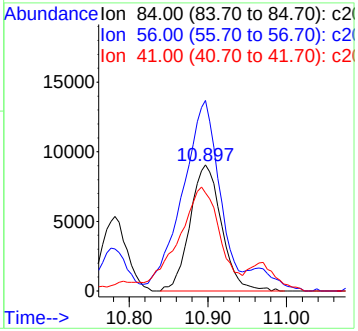


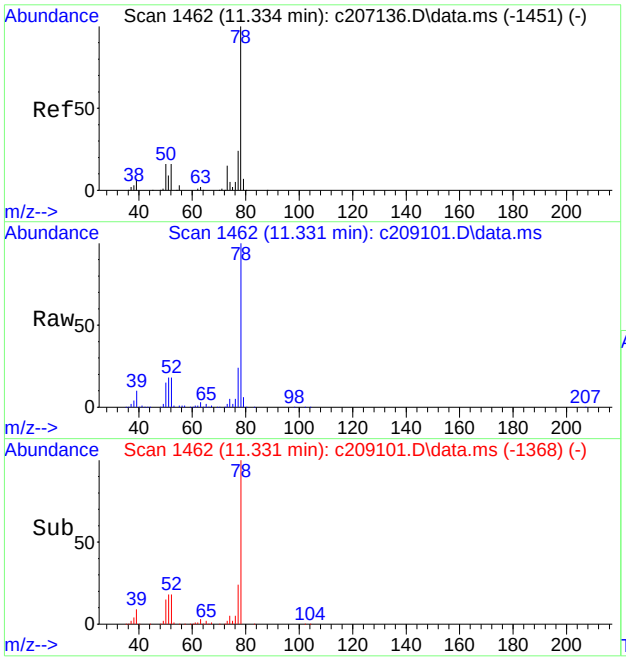


#54
cyclohexane
Concen: 5.85 ug/L
RT: 10.897 min Scan# 1379
Delta R.T. -0.008 min
Lab File: c209101.D
Acq: 15 Apr 2016 4:34 am

Tgt Ion: 84 Resp: 25274

Ion	Ratio	Lower	Upper
84	100		
56	145.8	88.4	164.2
41	72.3	49.0	91.0

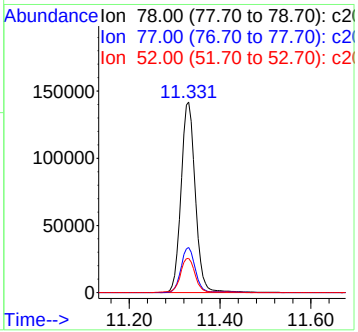


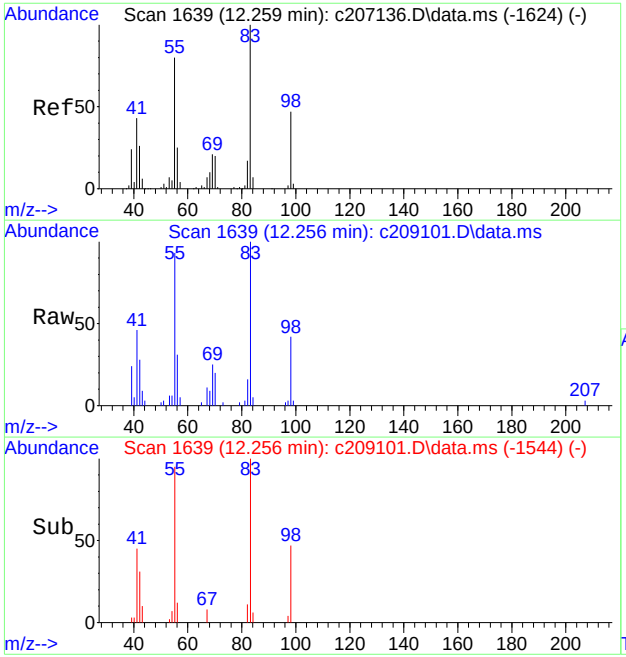


#65
benzene
Concen: 22.15 ug/L
RT: 11.331 min Scan# 1462
Delta R.T. -0.008 min
Lab File: c209101.D
Acq: 15 Apr 2016 4:34 am

Tgt Ion: 78 Resp: 310537

Ion	Ratio	Lower	Upper
78	100		
77	23.7	0.0	53.5
52	17.9	0.0	48.0

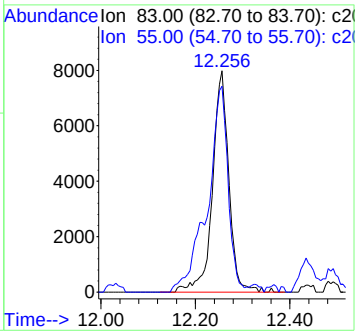


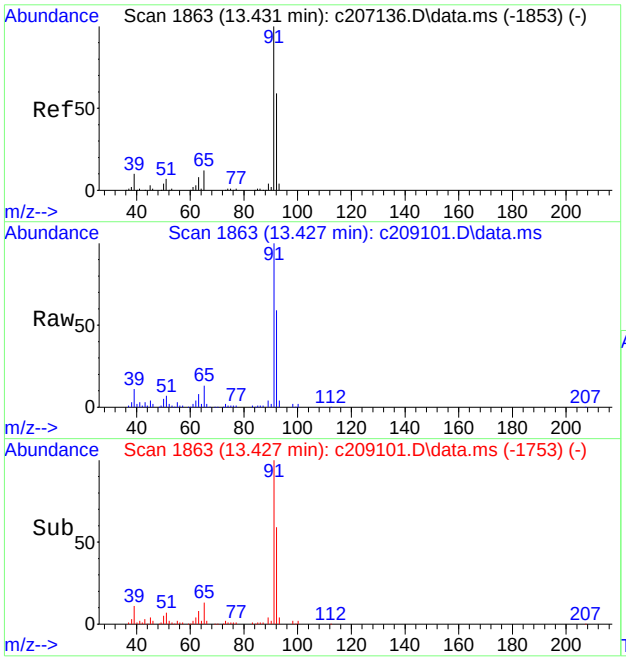


#73
methylcyclohexane
Concen: 4.87 ug/L
RT: 12.256 min Scan# 1639
Delta R.T. -0.003 min
Lab File: c209101.D
Acq: 15 Apr 2016 4:34 am

Tgt Ion: 83 Resp: 19184

Ion	Ratio	Lower	Upper
83	100		
55	93.0	61.2	113.8

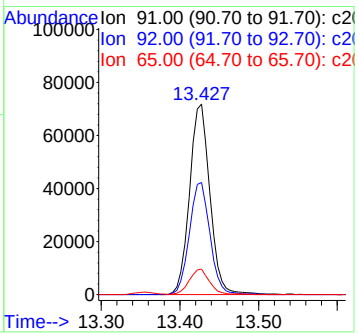


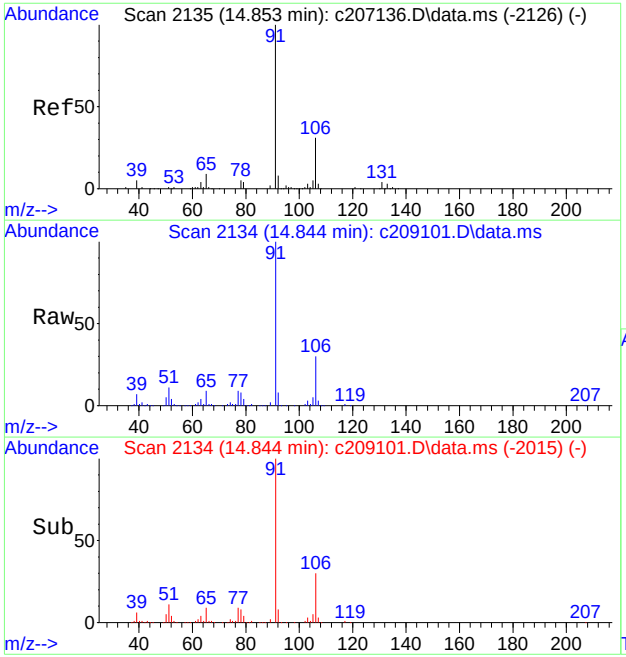


#82
toluene
Concen: 8.97 ug/L
RT: 13.427 min Scan# 1863
Delta R.T. -0.003 min
Lab File: c209101.D
Acq: 15 Apr 2016 4:34 am

Tgt Ion: 91 Resp: 129538

Ion	Ratio	Lower	Upper
91	100		
92	58.9	29.4	89.4
65	13.4	0.0	42.9

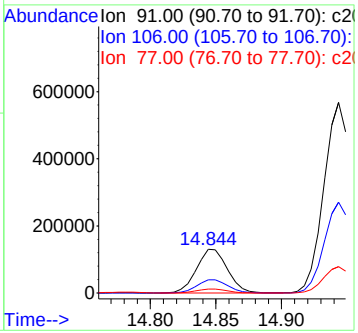


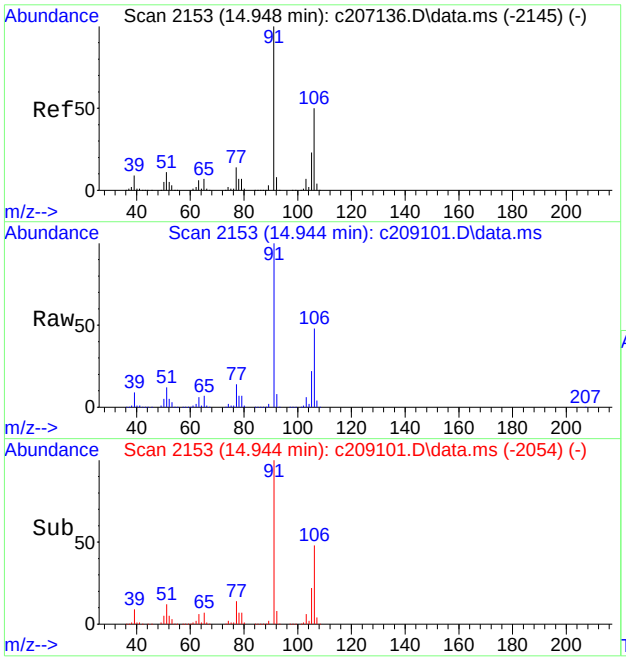


#99
ethylbenzene
Concen: 12.85 ug/L
RT: 14.844 min Scan# 2134
Delta R.T. -0.008 min
Lab File: c209101.D
Acq: 15 Apr 2016 4:34 am

Tgt Ion: 91 Resp: 214372

Ion	Ratio	Lower	Upper
91	100		
106	30.2	0.0	59.9
77	8.9	0.0	39.2

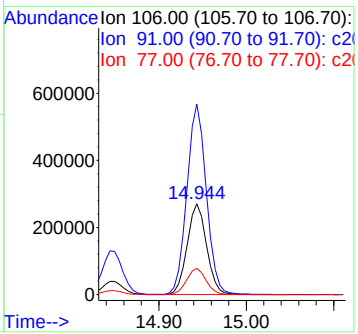


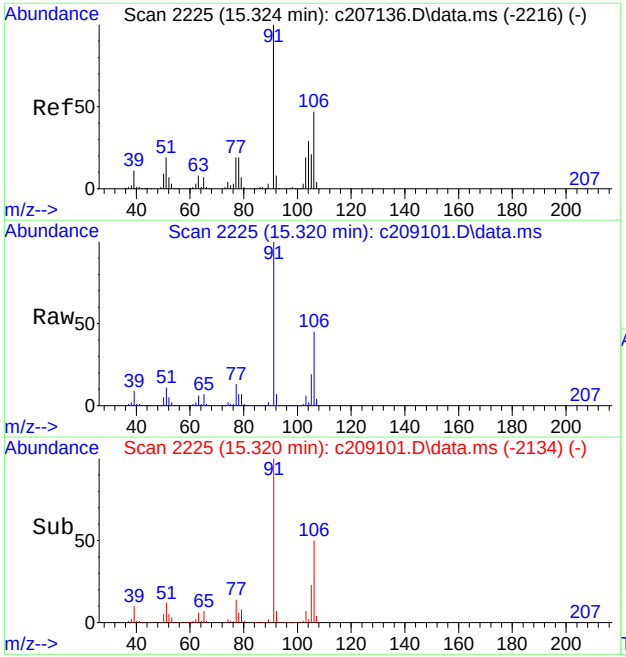


#100
m,p-xylene
Concen: 69.07 ug/L
RT: 14.944 min Scan# 2153
Delta R.T. -0.003 min
Lab File: c209101.D
Acq: 15 Apr 2016 4:34 am

Tgt Ion:106 Resp: 417614

Ion	Ratio	Lower	Upper
106	100		
91	209.3	179.7	239.7
77	28.9	0.0	59.6

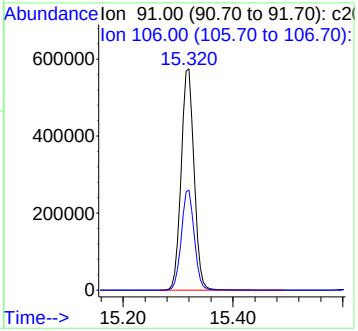


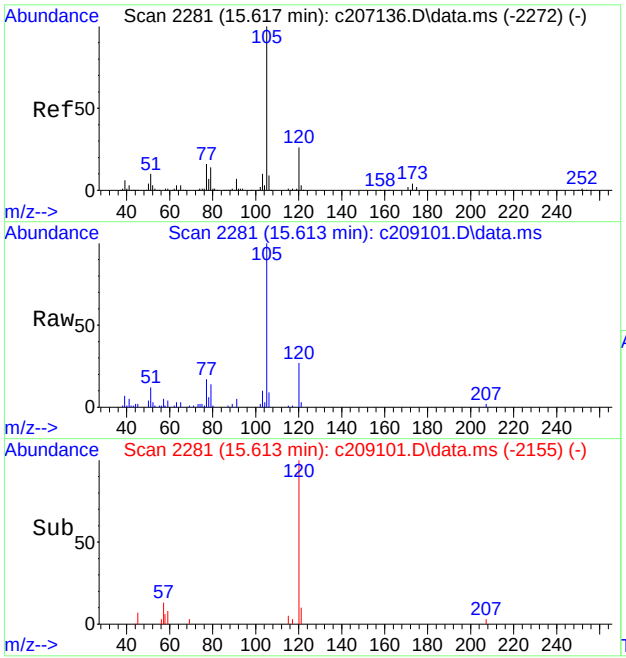


#101
o-xylene
Concen: 70.74 ug/L
RT: 15.320 min Scan# 2225
Delta R.T. -0.003 min
Lab File: c209101.D
Acq: 15 Apr 2016 4:34 am

Tgt Ion: 91 Resp: 943740

Ion	Ratio	Lower	Upper
91	100		
106	45.1	14.3	74.3

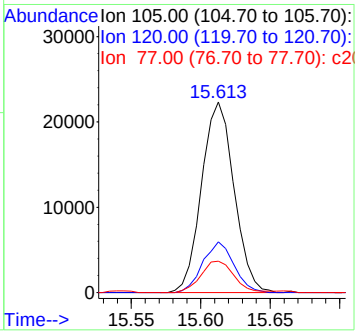




#105
isopropylbenzene
Concen: 2.41 ug/L
RT: 15.613 min Scan# 2281
Delta R.T. -0.003 min
Lab File: c209101.D
Acq: 15 Apr 2016 4:34 am

Tgt Ion:105 Resp: 36195

Ion	Ratio	Lower	Upper
105	100		
120	26.6	0.0	55.7
77	16.5	0.0	46.7



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : c209101.D
Acq On : 15 Apr 2016 4:34 am
Operator : VIANNAC
Sample : jc18196-4
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 10 prefer < Tangent else baseline drop >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MC7650.M
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

Signal : TIC: c20910

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.247	94	107	155	rBB	58646	249768	2.06%	0.256%
2	4.587	155	172	200	rBB2	88198	335060	2.76%	0.344%
3	4.770	200	207	239	rVB2	27241	73417	0.61%	0.075%
4	4.989	239	249	267	rBB2	20721	54134	0.45%	0.056%
5	5.470	328	341	359	rBB3	6415	24642	0.20%	0.025%
6	5.711	370	387	452	rBB2	205237	813944	6.71%	0.835%
7	6.234	476	487	520	rBB3	47443	208046	1.72%	0.213%
8	6.516	529	541	561	rBB2	33461	98440	0.81%	0.101%
9	6.741	572	584	596	rBB2	23733	66277	0.55%	0.068%
10	6.861	596	607	630	rBB	65612	198954	1.64%	0.204%
11	7.133	647	659	680	rBB4	6079	26724	0.22%	0.027%
12	7.975	805	820	832	rVV4	67728	317346	2.62%	0.326%
13	8.079	832	840	899	rVB3	110135	726058	5.99%	0.745%
14	8.471	899	915	952	rBB4	37924	154114	1.27%	0.158%
15	8.926	988	1002	1022	rBB3	11441	33747	0.28%	0.035%
16	9.271	1060	1068	1084	rVB2	16863	47021	0.39%	0.048%
17	9.423	1084	1097	1108	rBB	17639	51093	0.42%	0.052%
18	9.559	1108	1123	1132	rBV4	16677	53761	0.44%	0.055%
19	9.663	1132	1143	1155	rBB3	26857	82115	0.68%	0.084%
20	9.757	1155	1161	1181	rVB4	5946	18130	0.15%	0.019%
21	9.956	1185	1199	1235	rBB2	116480	360275	2.97%	0.370%
22	10.630	1321	1328	1336	rBB2	17234	35995	0.30%	0.037%
23	10.782	1338	1357	1363	rBV	396558	952927	7.86%	0.978%
24	10.834	1363	1367	1388	rVV3	221896	621444	5.12%	0.637%
25	10.965	1388	1392	1405	rVB2	17609	41135	0.34%	0.042%
26	11.284	1438	1453	1457	rBV	312647	723353	5.96%	0.742%
27	11.326	1457	1461	1474	rVV	321013	706038	5.82%	0.724%
28	11.420	1474	1479	1509	rVB4	38573	136138	1.12%	0.140%
29	11.660	1509	1525	1530	rBV7	11762	34928	0.29%	0.036%
30	11.739	1530	1540	1567	rBB	663243	1347258	11.11%	1.382%
31	11.948	1570	1580	1589	rBB	15138	32738	0.27%	0.034%
32	12.251	1611	1638	1648	rBB4	40968	136803	1.13%	0.140%
33	12.439	1665	1674	1680	rBV3	11137	23237	0.19%	0.024%
34	12.643	1704	1713	1727	rBB5	25172	76649	0.63%	0.079%
35	12.800	1727	1743	1768	rBB2	89976	199883	1.65%	0.205%
36	13.035	1779	1788	1802	rVB3	18735	56922	0.47%	0.058%
37	13.192	1810	1818	1825	rBB3	30123	57652	0.48%	0.059%
38	13.354	1841	1849	1857	rBB	1018247	1762535	14.53%	1.808%
39	13.427	1857	1863	1885	rVB	188368	388885	3.21%	0.399%
40	13.736	1912	1922	1934	rBB3	26901	60636	0.50%	0.062%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : c209101.D
Acq On : 15 Apr 2016 4:34 am
Operator : VIANNAC
Sample : jc18196-4
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 10 prefer < Tangent else baseline drop >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MC7650.M
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

41	13.966	1956	1966	1974	rBV2	8347	18836	0.16%	0.019%
42	14.170	1999	2005	2023	rVB7	13782	39029	0.32%	0.040%
43	14.551	2066	2078	2083	rBV3	9183	31423	0.26%	0.032%
44	14.593	2083	2086	2095	rVB2	10956	18353	0.15%	0.019%
45	14.677	2095	2102	2114	rBB5	17153	36120	0.30%	0.037%
46	14.781	2114	2122	2129	rBB	949043	1559693	12.86%	1.600%
47	14.844	2129	2134	2143	rBB	288991	454623	3.75%	0.466%
48	14.944	2145	2153	2175	rBB	1615245	2503094	20.64%	2.568%
49	15.315	2214	2224	2241	rBB	1590079	2627559	21.67%	2.695%
50	15.613	2271	2281	2294	rBB	55971	106538	0.88%	0.109%
51	15.806	2309	2318	2341	rBB	771620	1249835	10.31%	1.282%
52	15.968	2341	2349	2353	rBV	127332	205768	1.70%	0.211%
53	16.047	2353	2364	2368	rVV	1609566	4588761	37.84%	4.707%
54	16.088	2368	2372	2385	rVB	3072824	4593879	37.88%	4.713%
55	16.298	2404	2412	2424	rBB	3714584	5886621	48.54%	6.039%
56	16.428	2425	2437	2446	rBB	7622650	12126947	100.00%	12.440%
57	16.501	2446	2451	2456	rVV2	42409	68732	0.57%	0.071%
58	16.538	2456	2458	2461	rVV	26534	34635	0.29%	0.036%
59	16.564	2461	2463	2467	rVV	34236	45498	0.38%	0.047%
60	16.611	2467	2472	2478	rBB	321988	449305	3.71%	0.461%
61	16.658	2478	2481	2490	rVB	70397	102237	0.84%	0.105%
62	16.731	2490	2495	2500	rBB	15741	21277	0.18%	0.022%
63	16.805	2500	2509	2521	rBB2	5298695	8539489	70.42%	8.760%
64	16.904	2521	2528	2534	rVV2	1174266	2949540	24.32%	3.026%
65	16.956	2534	2538	2545	rVV2	1943580	3634719	29.97%	3.729%
66	17.014	2545	2549	2557	rVV	1511823	2240534	18.48%	2.298%
67	17.092	2557	2564	2570	rBB	253990	384280	3.17%	0.394%
68	17.155	2570	2576	2580	rVV	632186	920769	7.59%	0.945%
69	17.202	2580	2585	2588	rVV	1434091	2341918	19.31%	2.402%
70	17.228	2588	2590	2595	rVV	1364364	1667348	13.75%	1.710%
71	17.286	2595	2601	2608	rBB	3110487	4375386	36.08%	4.488%
72	17.422	2610	2627	2629	rVV4	356880	1029062	8.49%	1.056%
73	17.453	2629	2633	2645	rVB	841487	1282516	10.58%	1.316%
74	17.558	2645	2653	2658	rBV	916747	1416642	11.68%	1.453%
75	17.610	2658	2663	2667	rBB	1528100	2014750	16.61%	2.067%
76	17.657	2667	2672	2684	rBB	2472328	3714340	30.63%	3.810%
77	17.761	2685	2692	2697	rBB4	74409	150816	1.24%	0.155%
78	17.808	2697	2701	2708	rVV2	55510	108473	0.89%	0.111%
79	17.871	2708	2713	2717	rVV2	163516	250981	2.07%	0.257%
80	17.923	2717	2723	2729	rBB2	1055295	1634362	13.48%	1.677%
81	17.976	2729	2733	2737	rVV2	182721	287593	2.37%	0.295%
82	18.023	2737	2742	2747	rVV	959944	1628756	13.43%	1.671%
83	18.075	2747	2752	2758	rBB	1933637	2728324	22.50%	2.799%
84	18.138	2760	2764	2770	rVV3	76894	150206	1.24%	0.154%
85	18.190	2770	2774	2778	rVV	62365	93666	0.77%	0.096%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : c209101.D
Acq On : 15 Apr 2016 4:34 am
Operator : VIANNAC
Sample : jc18196-4
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 10 prefer < Tangent else baseline drop >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MC7650.M
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

86	18.295	2778	2794	2800	rBB5	489220	1782329	14.70%	1.828%
87	18.352	2800	2805	2816	rBB2	211745	519502	4.28%	0.533%
88	18.441	2816	2822	2829	rBB	412753	661890	5.46%	0.679%
89	18.546	2832	2842	2862	rBB2	56604	111143	0.92%	0.114%
90	18.692	2862	2870	2881	rBB2	436181	850467	7.01%	0.872%
91	18.791	2881	2889	2900	rBB2	145988	279550	2.31%	0.287%
92	18.891	2900	2908	2926	rBB	226605	378573	3.12%	0.388%
93	19.006	2926	2930	2937	rVV6	16756	50351	0.42%	0.052%
94	19.074	2937	2943	2955	rBB	174115	311420	2.57%	0.319%
95	19.163	2955	2960	2975	rVV2	106712	256445	2.11%	0.263%
96	19.278	2975	2982	2990	rBB	92127	156848	1.29%	0.161%
97	19.387	2998	3003	3009	rBV	14139	24619	0.20%	0.025%
98	19.434	3009	3012	3051	rVV	14274	38724	0.32%	0.040%
99	19.685	3051	3060	3072	rBB2	98658	191351	1.58%	0.196%
100	19.894	3092	3100	3195	rBB3	83317	167405	1.38%	0.172%

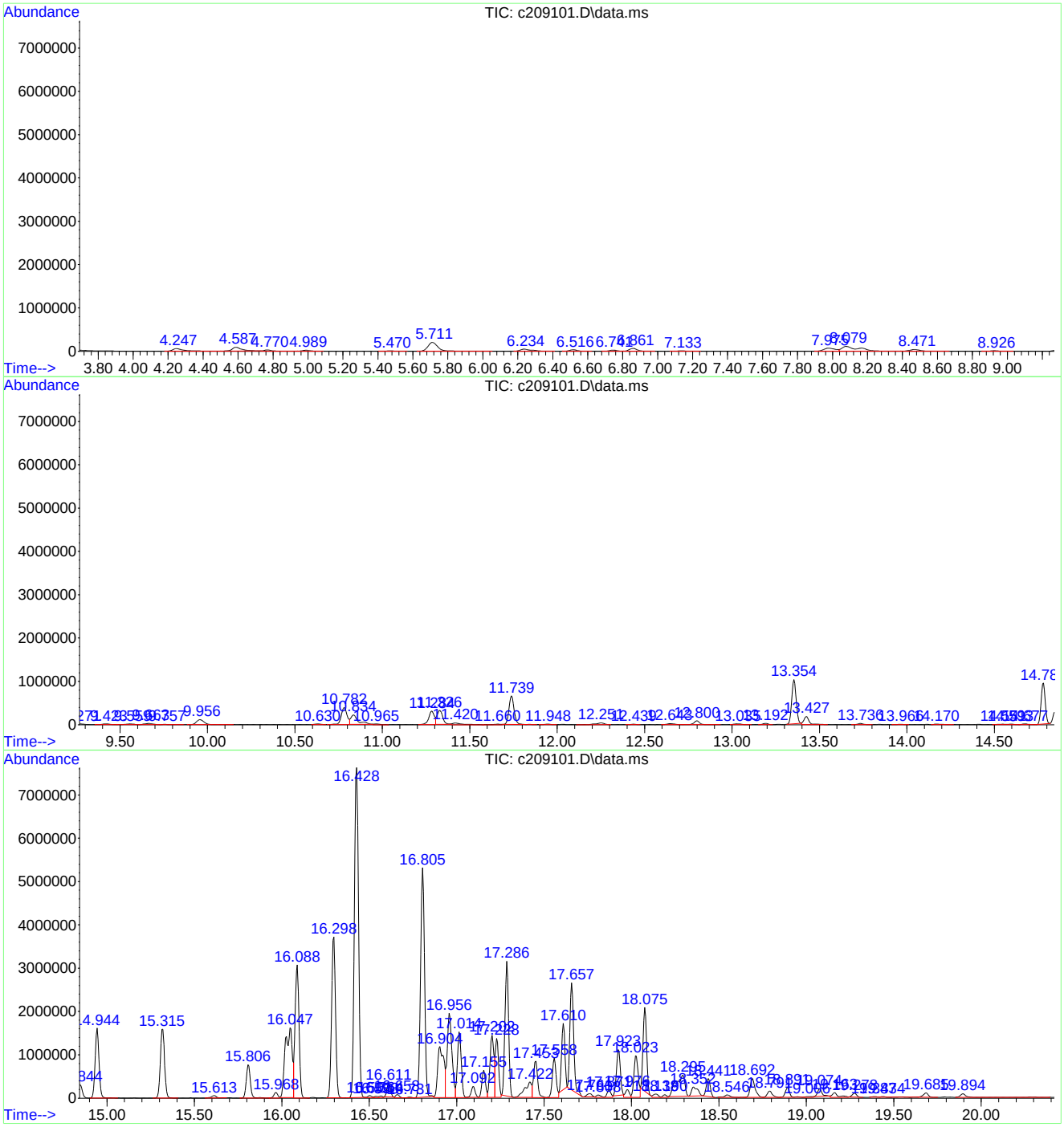
Sum of corrected areas: 97482072

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\
Data File : c209101.D
Acq On : 15 Apr 2016 4:34 am
Operator : VIANNAC
Sample : jc18196-4
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209101.D
Acq On : 15 Apr 2016 4:34 am
Operator : VIANNAC
Sample : jc18196-4
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

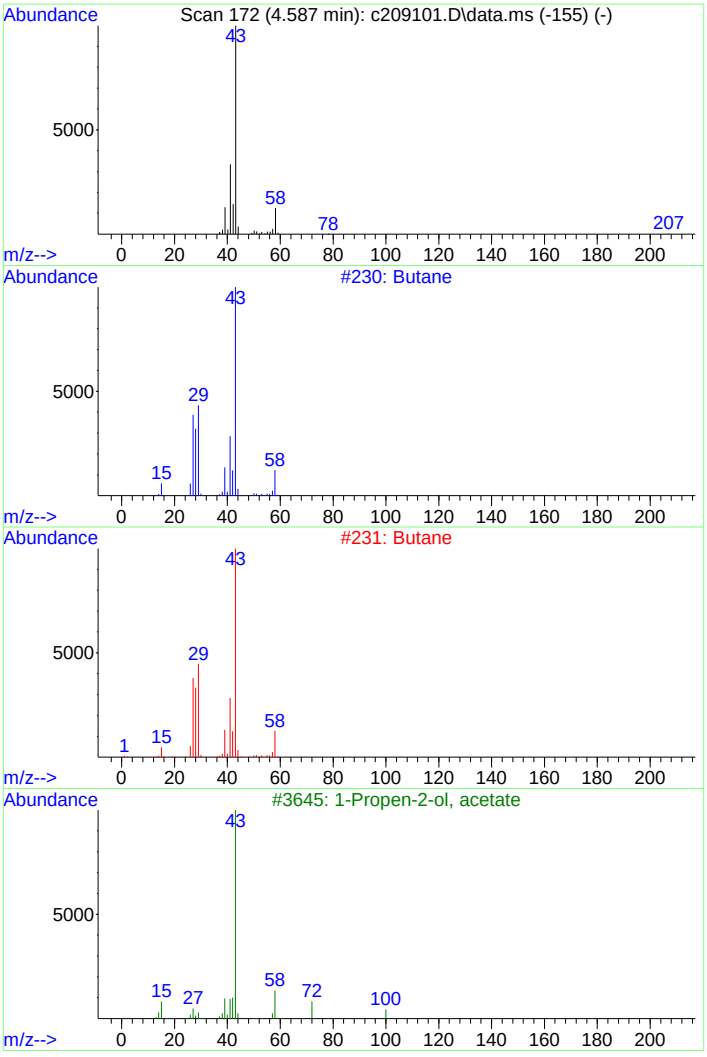
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

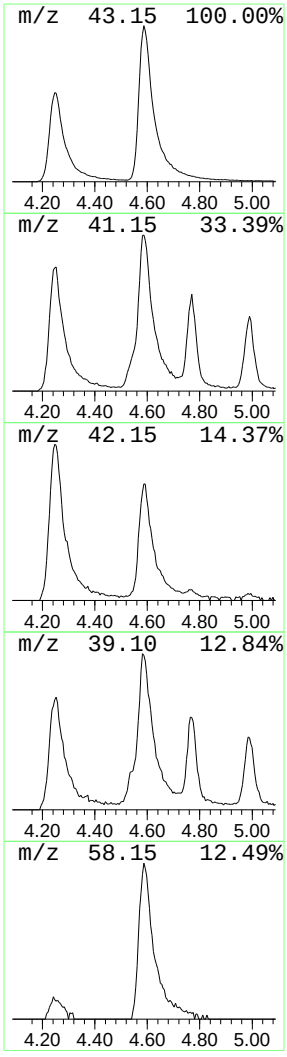
****

Peak Number 1 Butane Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.587	17.58 ug/L	335060	pentafluorobenzene	10.782

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	80
2	Butane	58	C4H10	000106-97-8	80
3	1-Propen-2-ol, acetate	100	C5H8O2	000108-22-5	56
4	Butane	58	C4H10	000106-97-8	52
5	Acetic acid, 2-propenyl ester	100	C5H8O2	000591-87-7	9





Library Search Compound Report

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Data File : c209101.D
Acq On : 15 Apr 2016 4:34 am
Operator : VIANNAC
Sample : jc18196-4
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

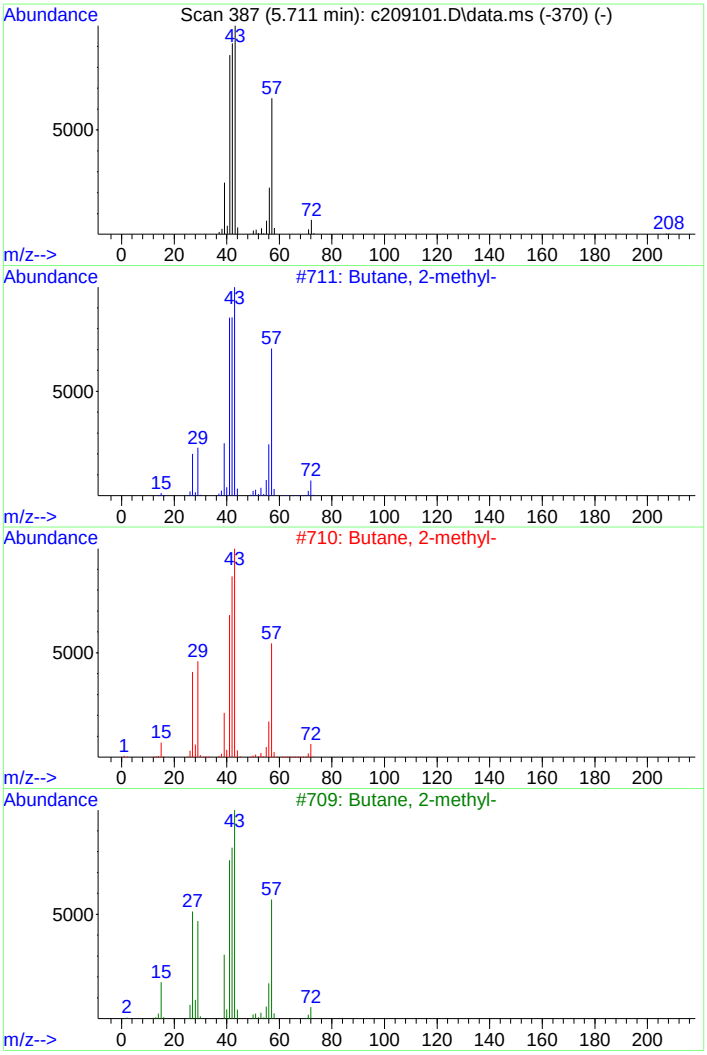
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

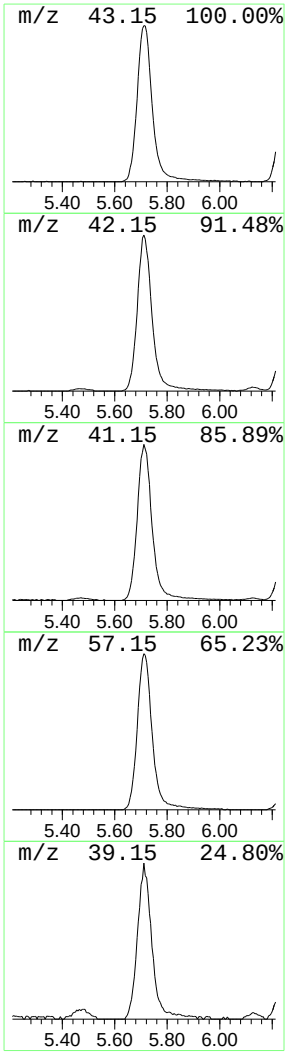
****

Peak Number 2 Butane, 2-methyl- Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.711	42.71 ug/L	813944	pentafluorobenzene	10.782

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	94
2	Butane, 2-methyl-	72	C5H12	000078-78-4	91
3	Butane, 2-methyl-	72	C5H12	000078-78-4	90
4	Pentane	72	C5H12	000109-66-0	33
5	3-Buten-1-ol	72	C4H8O	000627-27-0	25





Library Search Compound Report

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Data File : c209101.D
Acq On : 15 Apr 2016 4:34 am
Operator : VIANNAC
Sample : jc18196-4
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

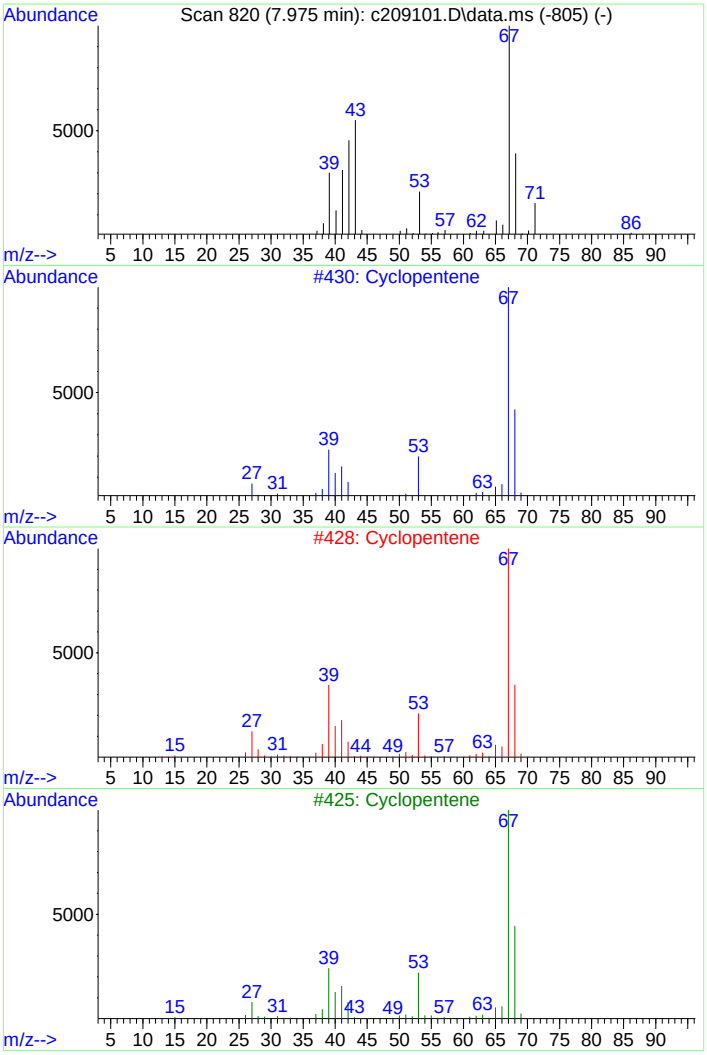
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

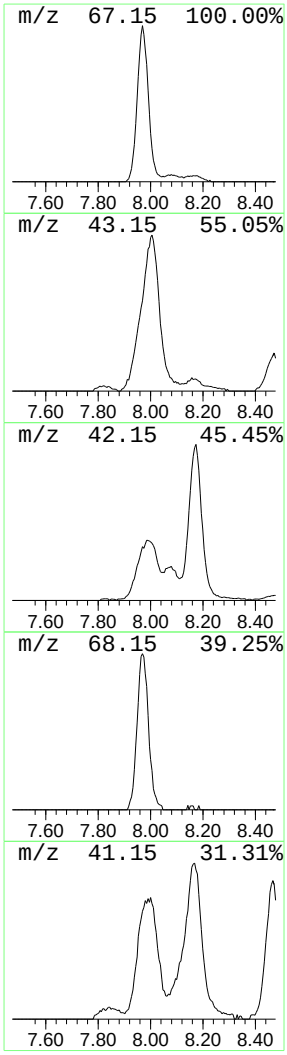
****

Peak Number 3 Cyclopentene Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.975	16.65 ug/L	317346	pentafluorobenzene	10.782

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentene	68	C5H8	000142-29-0	76
2	Cyclopentene	68	C5H8	000142-29-0	68
3	Cyclopentene	68	C5H8	000142-29-0	68
4	Cyclopentene	68	C5H8	000142-29-0	62
5	Cyclopropane, methylmethylene-	68	C5H8	018631-84-0	59





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209101.D
Acq On : 15 Apr 2016 4:34 am
Operator : VIANNAC
Sample : jc18196-4
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

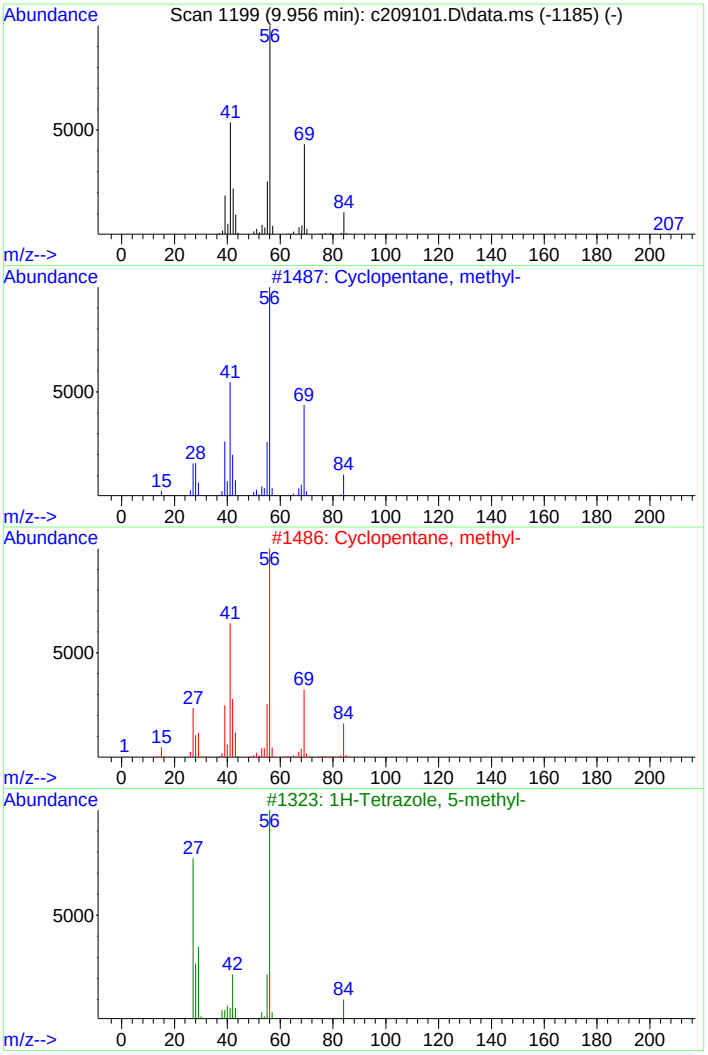
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

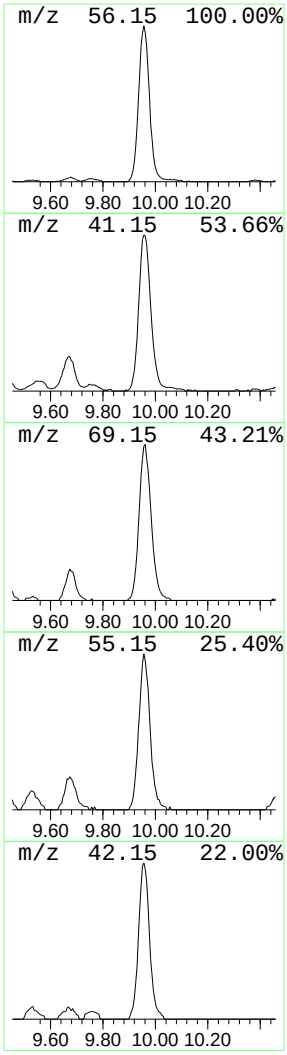
****

Peak Number 4 Cyclopentane, methyl- Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.956	18.90 ug/L	360275	pentafluorobenzene	10.782

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	94
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	91
3	1H-Tetrazole, 5-methyl-	84	C2H4N4	004076-36-2	72
4	Cyclopentane, methyl-	84	C6H12	000096-37-7	72
5	Cyclobutane, ethyl-	84	C6H12	004806-61-5	72





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209101.D
Acq On : 15 Apr 2016 4:34 am
Operator : VIANNAC
Sample : jc18196-4
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

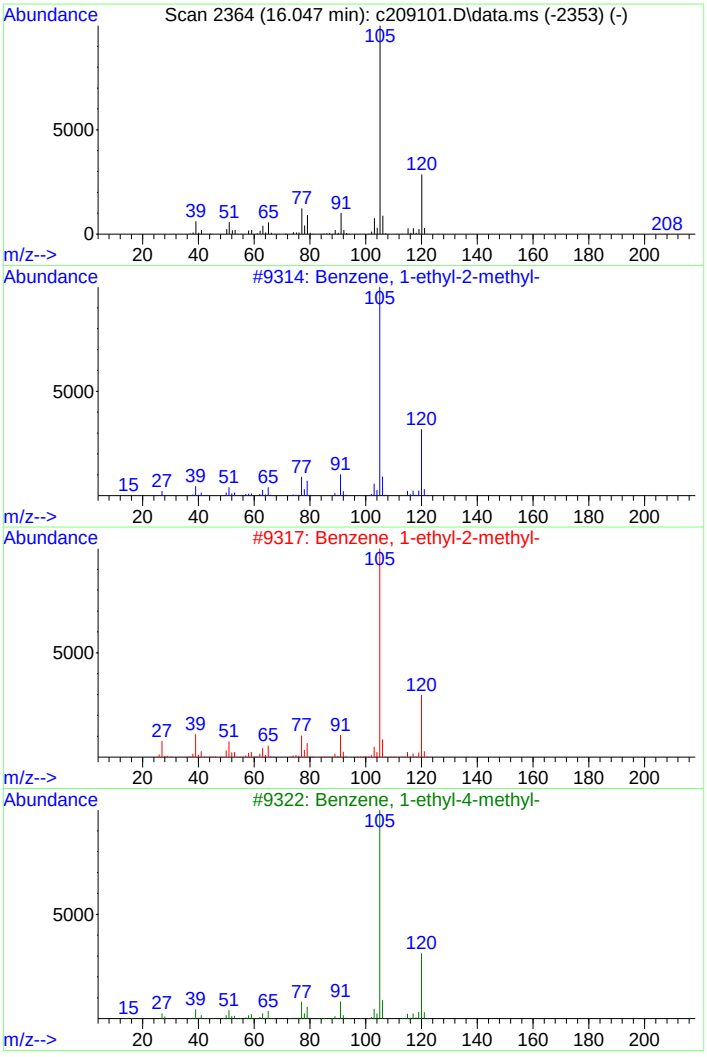
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

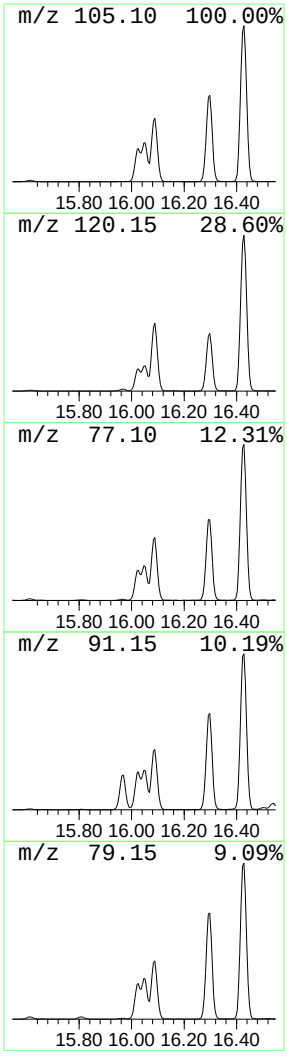
****

Peak Number 5 Benzene, 1-ethyl-2-methyl- Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.047	26.87 ug/L	4588760	1,4-dichlorobenzene-d4	16.799

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
3	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91
4	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91
5	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209101.D
Acq On : 15 Apr 2016 4:34 am
Operator : VIANNAC
Sample : jc18196-4
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

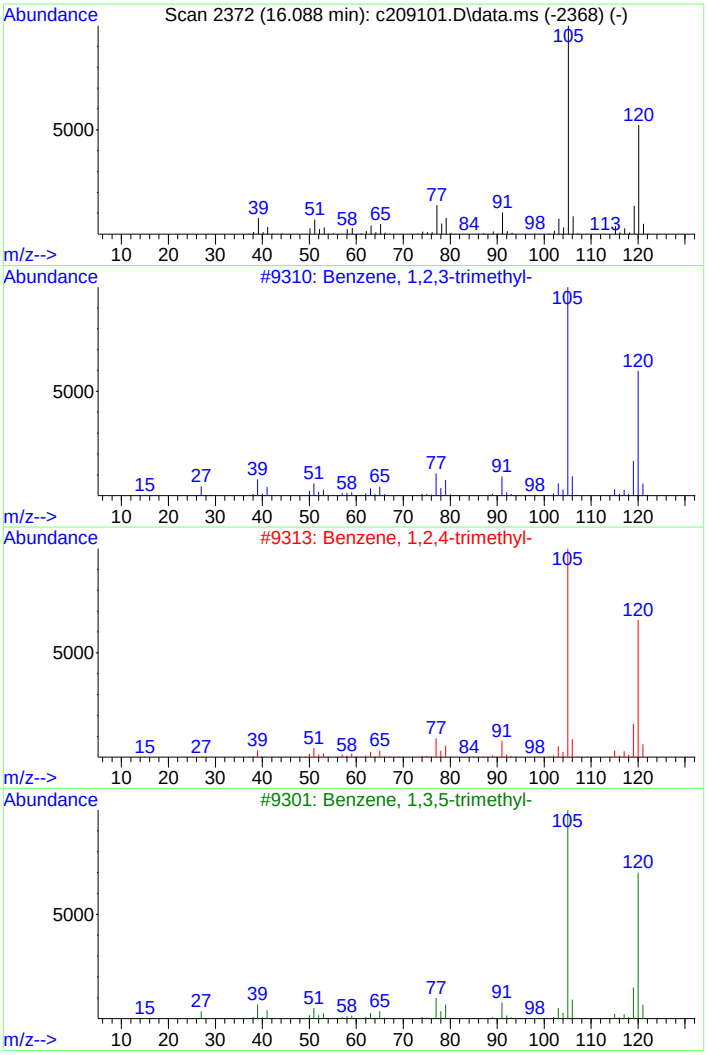
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

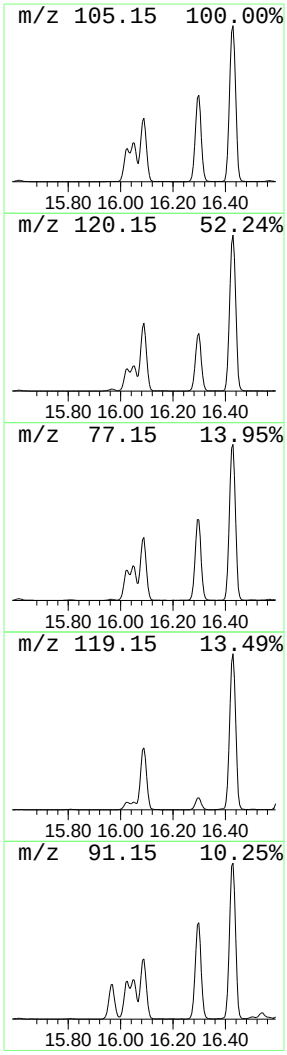
****

Peak Number 6 Benzene, 1,2,3-trimethyl- Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.088	26.90 ug/L	4593880	1,4-dichlorobenzene-d4	16.799

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209101.D
Acq On : 15 Apr 2016 4:34 am
Operator : VIANNAC
Sample : jc18196-4
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

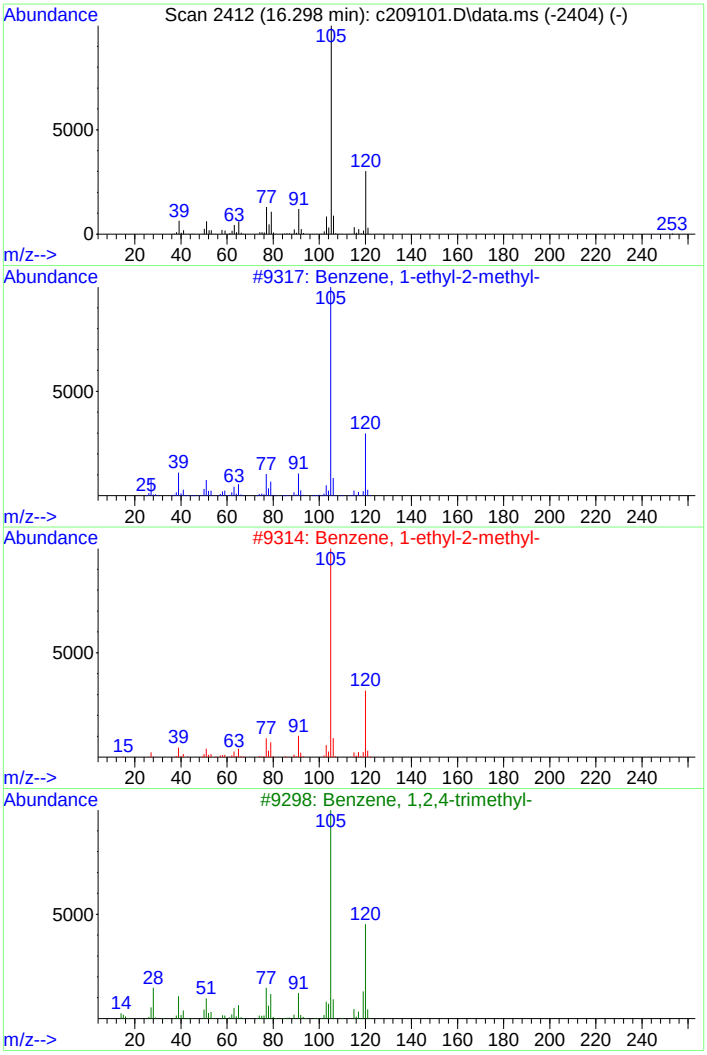
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

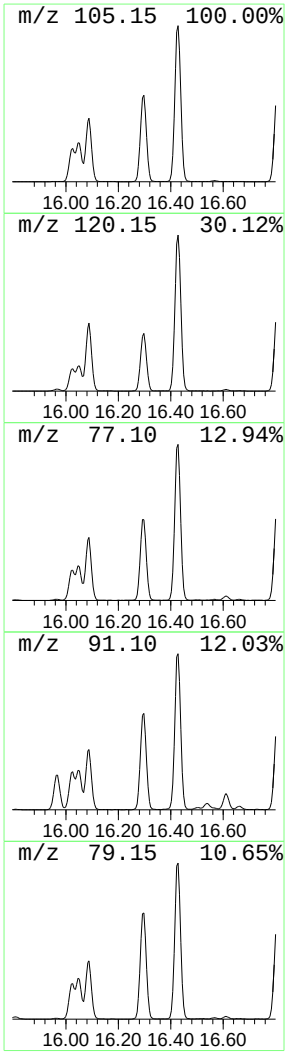
****

Peak Number 7 Benzene, 1-ethyl-2-methyl- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.298	34.47 ug/L	5886620	1,4-dichlorobenzene-d4	16.799

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	91
4	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91





Library Search Compound Report

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Data File : c209101.D
Acq On : 15 Apr 2016 4:34 am
Operator : VIANNAC
Sample : jc18196-4
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

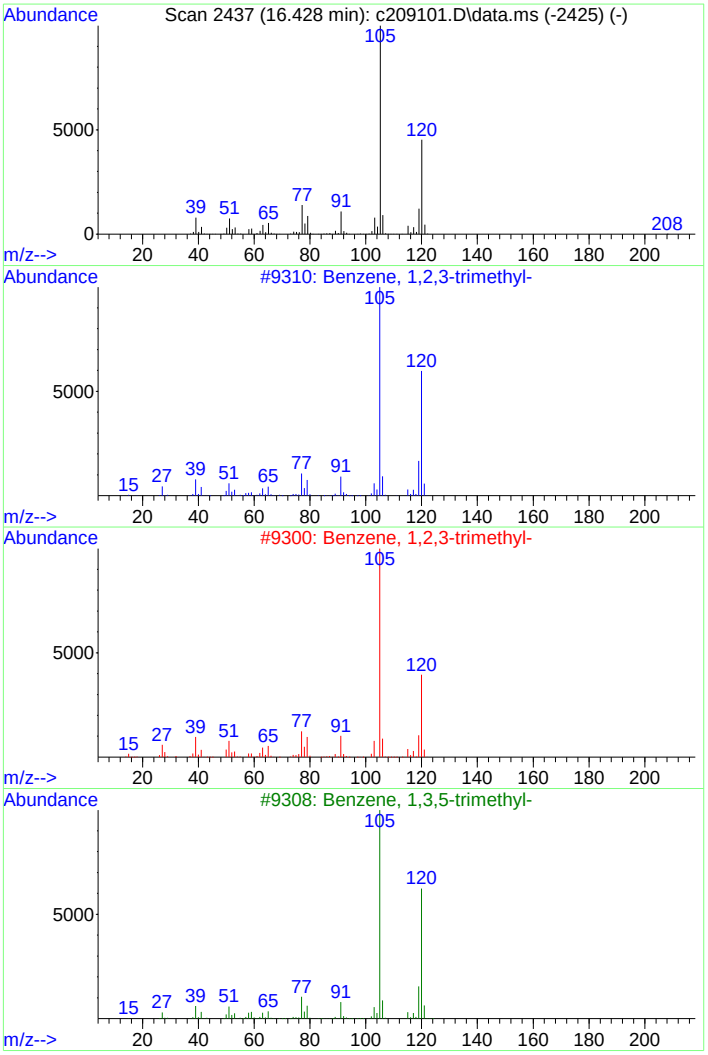
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

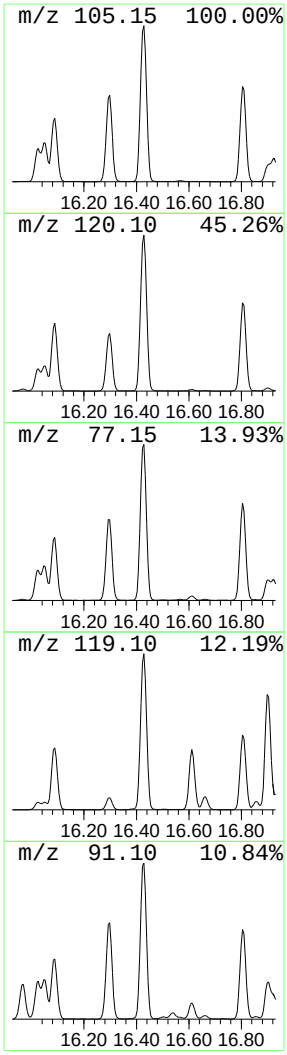
****

Peak Number 8 Benzene, 1,2,3-trimethyl- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.428	71.01 ug/L	12126900	1,4-dichlorobenzene-d4	16.799

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209101.D
Acq On : 15 Apr 2016 4:34 am
Operator : VIANNAC
Sample : jc18196-4
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

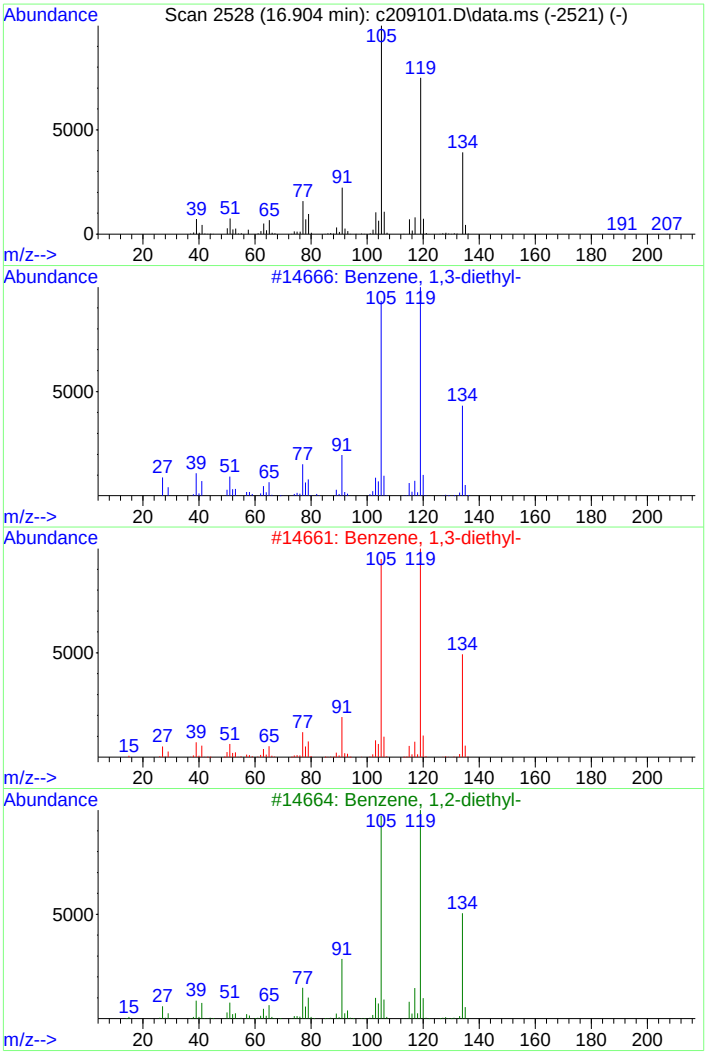
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

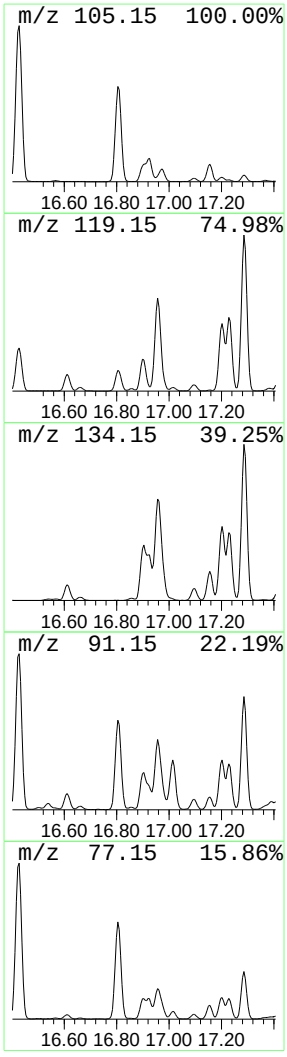
****

Peak Number 9 Benzene, 1,3-diethyl- Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.904	17.27 ug/L	2949540	1,4-dichlorobenzene-d4	16.799

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	95
2	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	95
3	Benzene, 1,2-diethyl-	134	C10H14	000135-01-3	94
4	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	90
5	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	90





Library Search Compound Report

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Data File : c209101.D
Acq On : 15 Apr 2016 4:34 am
Operator : VIANNAC
Sample : jc18196-4
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

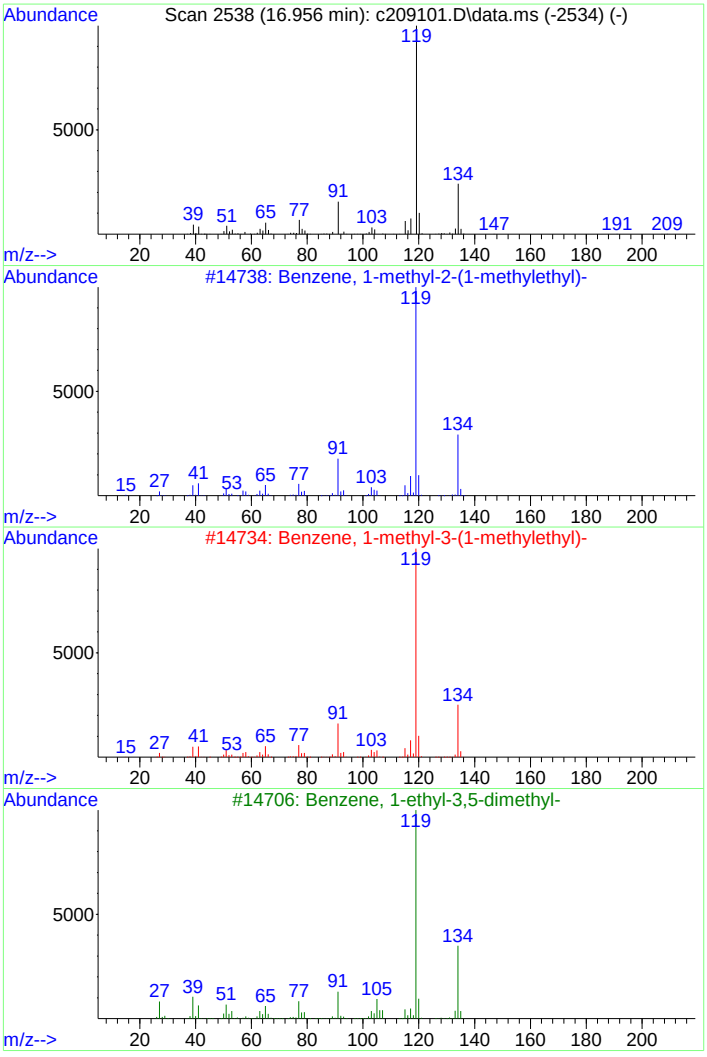
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

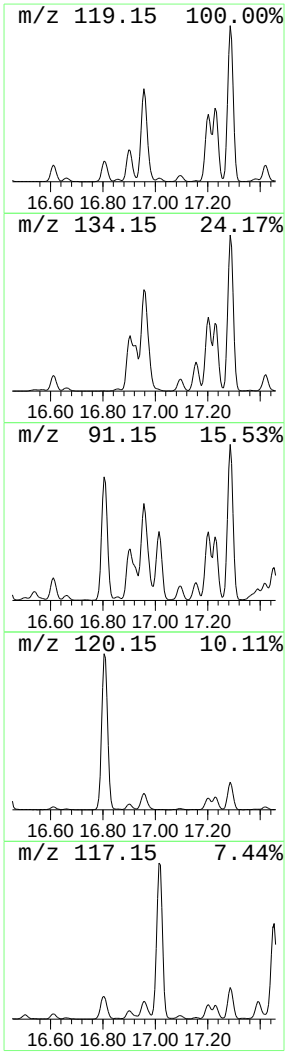
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

****
Peak Number 10 Benzene, 1-methyl-2-(1-meth... Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.956	21.28 ug/L	3634720	1,4-dichlorobenzene-d4	16.799

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	94
2	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	91
3	Benzene, 1-ethyl-3,5-dimethyl-	134	C10H14	000934-74-7	91
4	Benzene, 1-ethyl-3,5-dimethyl-	134	C10H14	000934-74-7	91
5	Benzene, 1-methyl-4-(1-methyleth...	134	C10H14	000099-87-6	91





Library Search Compound Report

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Data File : c209101.D
Acq On : 15 Apr 2016 4:34 am
Operator : VIANNAC
Sample : jc18196-4
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

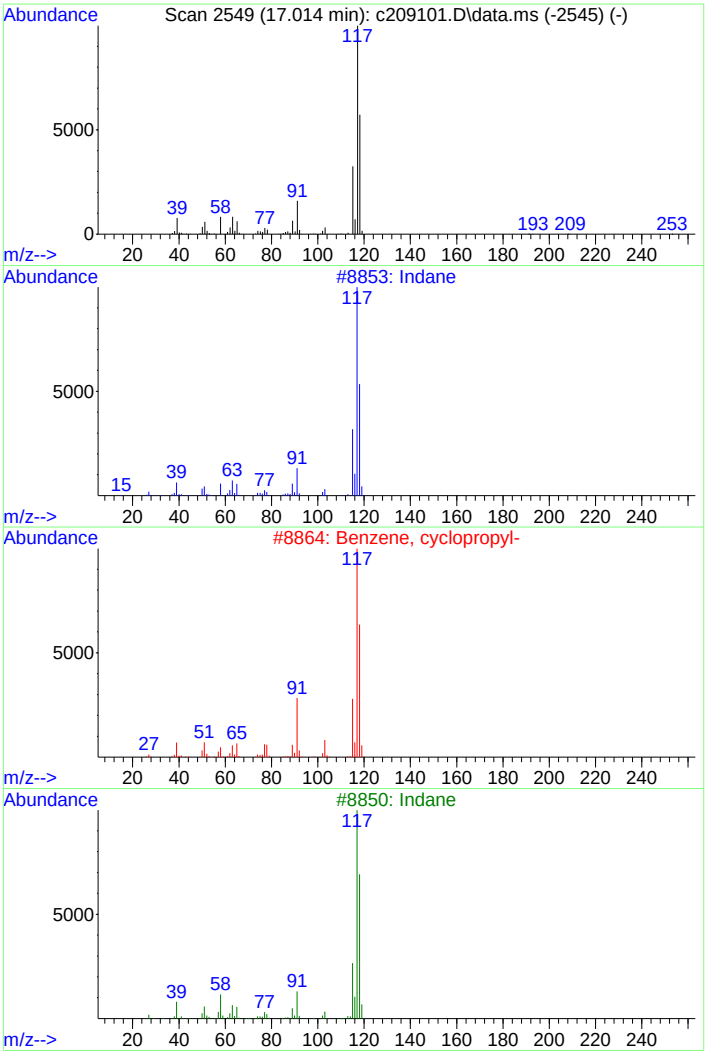
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

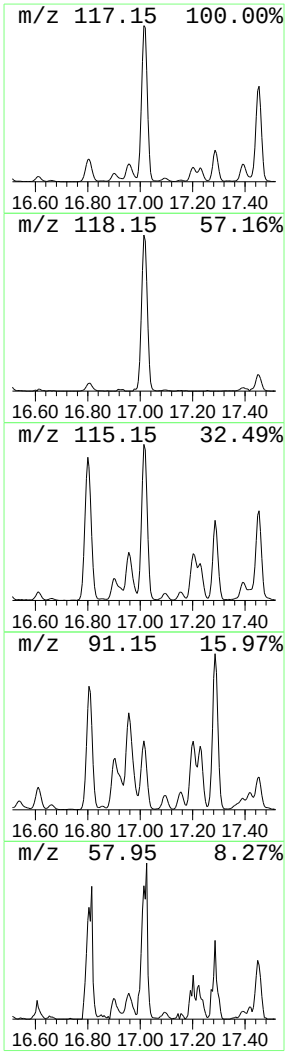
****

Peak Number 11 Indane Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.014	13.12 ug/L	2240530	1,4-dichlorobenzene-d4	16.799

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indane	118	C9H10	000496-11-7	81
2	Benzene, cyclopropyl-	118	C9H10	000873-49-4	80
3	Indane	118	C9H10	000496-11-7	72
4	Indane	118	C9H10	000496-11-7	60
5	Benzene, (2-bromocyclopropyl)-	196	C9H9Br	036617-02-4	59





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209101.D
Acq On : 15 Apr 2016 4:34 am
Operator : VIANNAC
Sample : jc18196-4
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

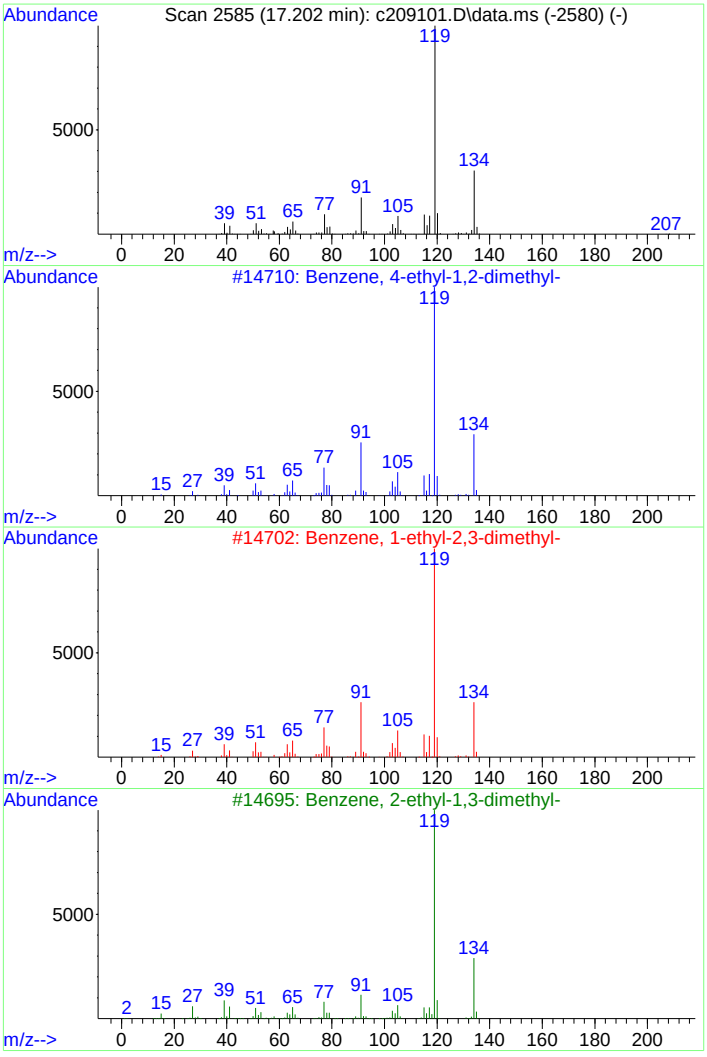
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

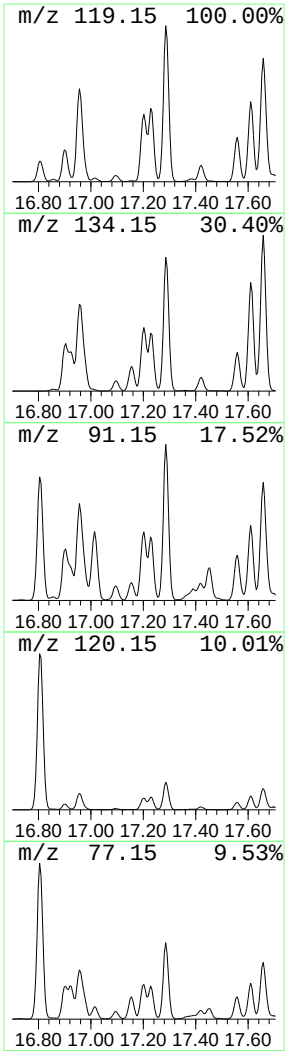
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

****
Peak Number 12 Benzene, 4-ethyl-1,2-dimethyl- Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.202	13.71 ug/L	2341920	1,4-dichlorobenzene-d4	16.799

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	94
2	Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	94
3	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14	002870-04-4	93
4	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	91
5	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14	002870-04-4	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209101.D
Acq On : 15 Apr 2016 4:34 am
Operator : VIANNAC
Sample : jc18196-4
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

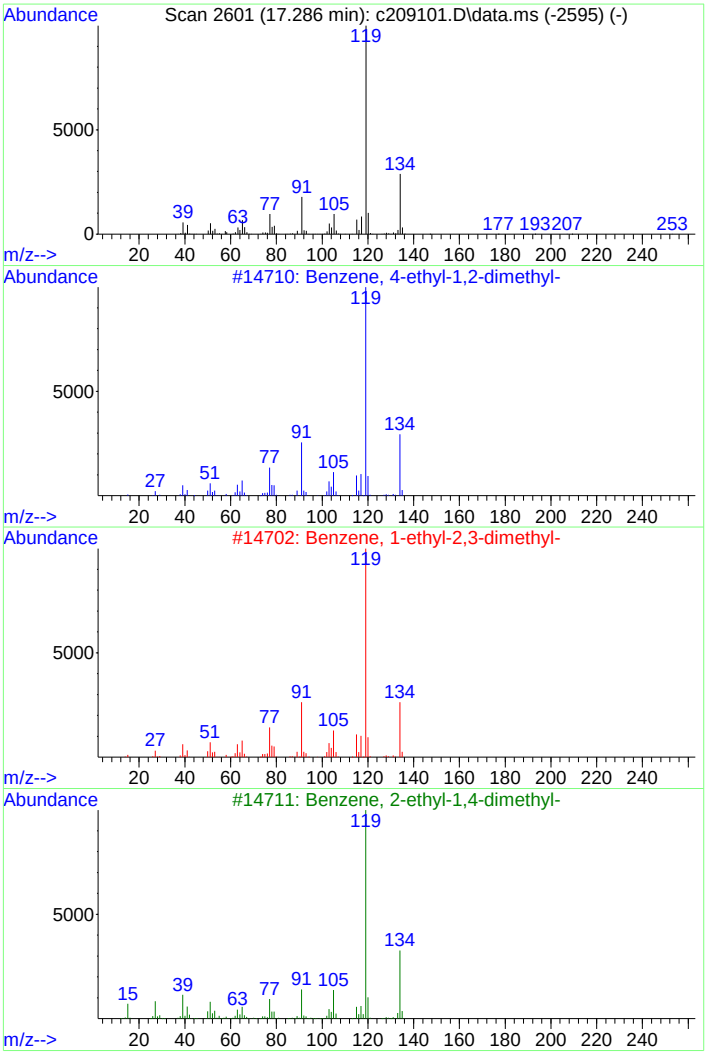
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

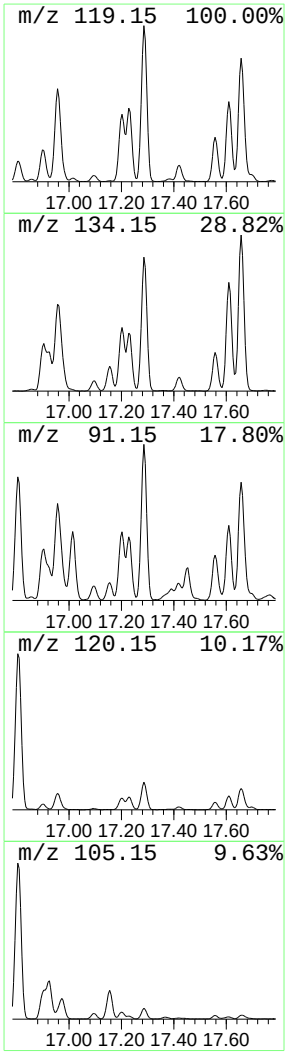
****

Peak Number 13 Benzene, 4-ethyl-1,2-dimethyl- Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.286	25.62 ug/L	4375390	1,4-dichlorobenzene-d4	16.799

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	95
2	Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	95
3	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	94
4	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	94
5	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209101.D
Acq On : 15 Apr 2016 4:34 am
Operator : VIANNAC
Sample : jc18196-4
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

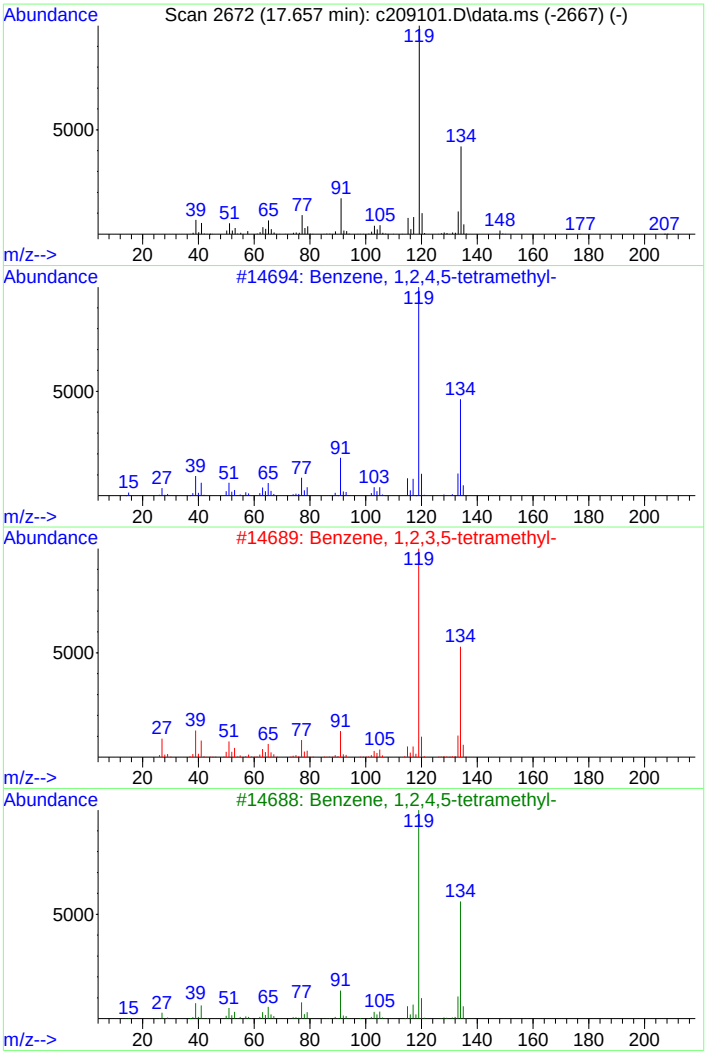
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

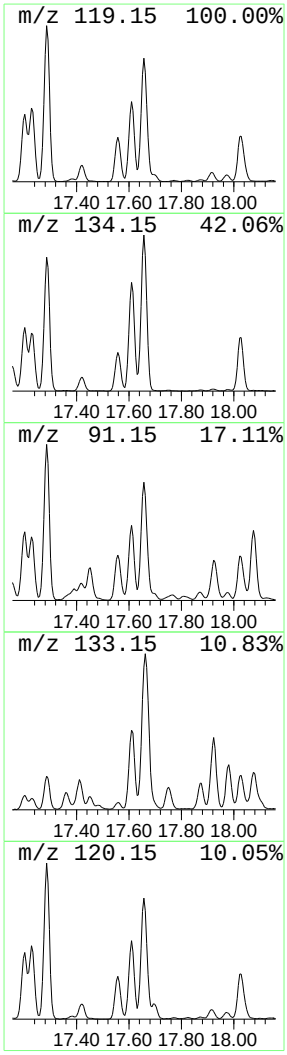
****

Peak Number 14 Benzene, 1,2,4,5-tetramethyl- Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.657	21.75 ug/L	3714340	1,4-dichlorobenzene-d4	16.799

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	95
2	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	94
3	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	94
4	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	94
5	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209101.D
Acq On : 15 Apr 2016 4:34 am
Operator : VIANNAC
Sample : jc18196-4
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

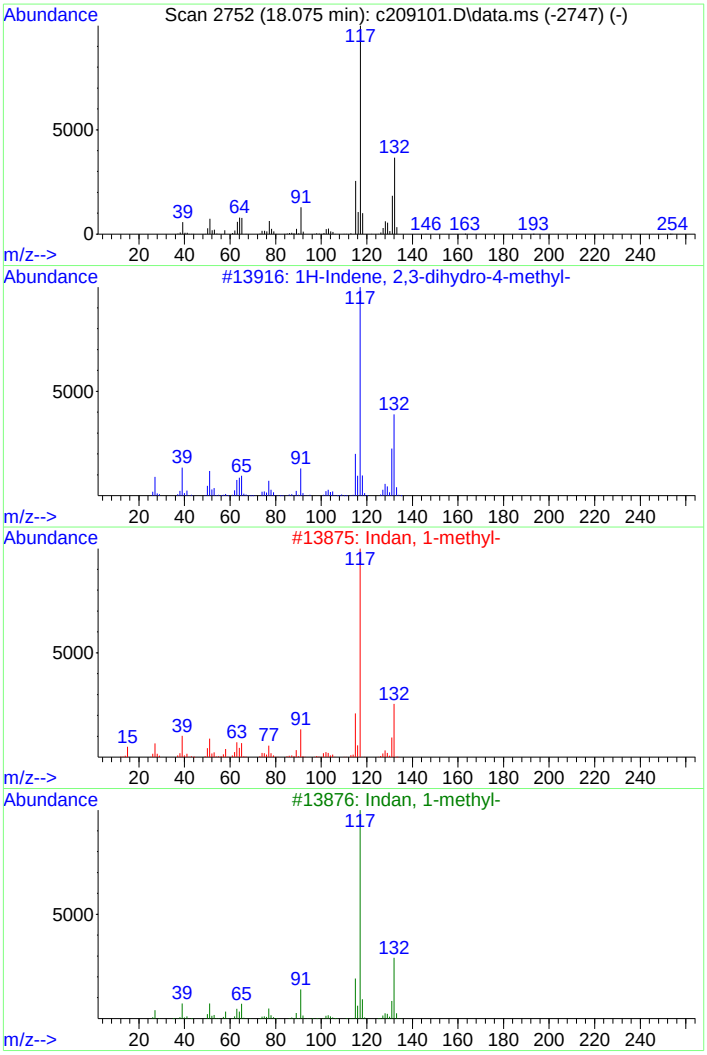
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

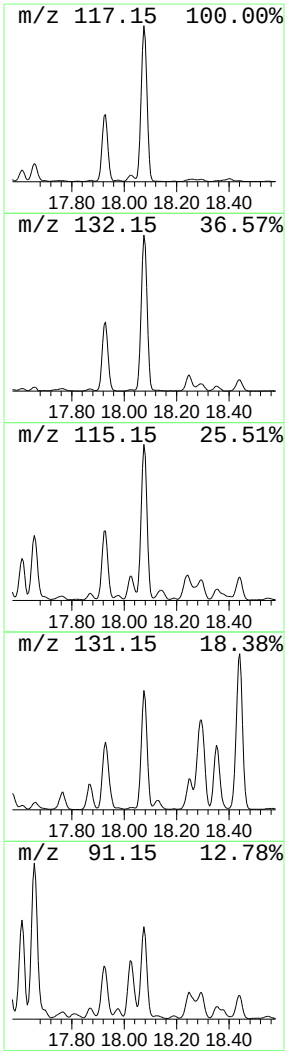
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

****
Peak Number 15 1H-Indene, 2,3-dihydro-4-me... Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.075	15.97 ug/L	2728320	1,4-dichlorobenzene-d4	16.799

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	94
2	Indan, 1-methyl-	132	C10H12	000767-58-8	90
3	Indan, 1-methyl-	132	C10H12	000767-58-8	83
4	Benzene, 1-ethenyl-4-ethyl-	132	C10H12	003454-07-7	81
5	Benzene, (2-methyl-1-propenyl)-	132	C10H12	000768-49-0	80





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\
Data File : c209101.D
Acq On : 15 Apr 2016 4:34 am
Operator : VIANNAC
Sample : jc18196-4
Misc : MS951,VC7691,5.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Butane	4.587	17.6	ug/L	335060	2	10.782	952927	50.0
Butane, 2-methyl-	5.711	42.7	ug/L	813944	2	10.782	952927	50.0
Cyclopentene	7.975	16.7	ug/L	317346	2	10.782	952927	50.0
Cyclopentane, m...	9.956	18.9	ug/L	360275	2	10.782	952927	50.0
Benzene, 1-ethy...	16.047	26.9	ug/L	4588760	5	16.799	8539490	50.0
Benzene, 1,2,3-...	16.088	26.9	ug/L	4593880	5	16.799	8539490	50.0
Benzene, 1-ethy...	16.298	34.5	ug/L	5886620	5	16.799	8539490	50.0
Benzene, 1,2,3-...	16.428	71.0	ug/L	12126900	5	16.799	8539490	50.0
Benzene, 1,3-di...	16.904	17.3	ug/L	2949540	5	16.799	8539490	50.0
Benzene, 1-meth...	16.956	21.3	ug/L	3634720	5	16.799	8539490	50.0
Indane	17.014	13.1	ug/L	2240530	5	16.799	8539490	50.0
Benzene, 4-ethy...	17.202	13.7	ug/L	2341920	5	16.799	8539490	50.0
Benzene, 4-ethy...	17.286	25.6	ug/L	4375390	5	16.799	8539490	50.0
Benzene, 1,2,4,...	17.657	21.7	ug/L	3714340	5	16.799	8539490	50.0
1H-Indene, 2,3-...	18.075	16.0	ug/L	2728320	5	16.799	8539490	50.0

Quantitation Report (LSC Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : c209103.D
Acq On : 15 Apr 2016 5:32 am
Operator : VIANNAC
Sample : jc18196-5
Misc : MS951,VC7691,5.0,,,,10
ALS Vial : 42 Sample Multiplier: 1

Quant Time: Apr 18 11:20:05 2016
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Fri Apr 15 15:18:17 2016
Response via : Initial Calibration

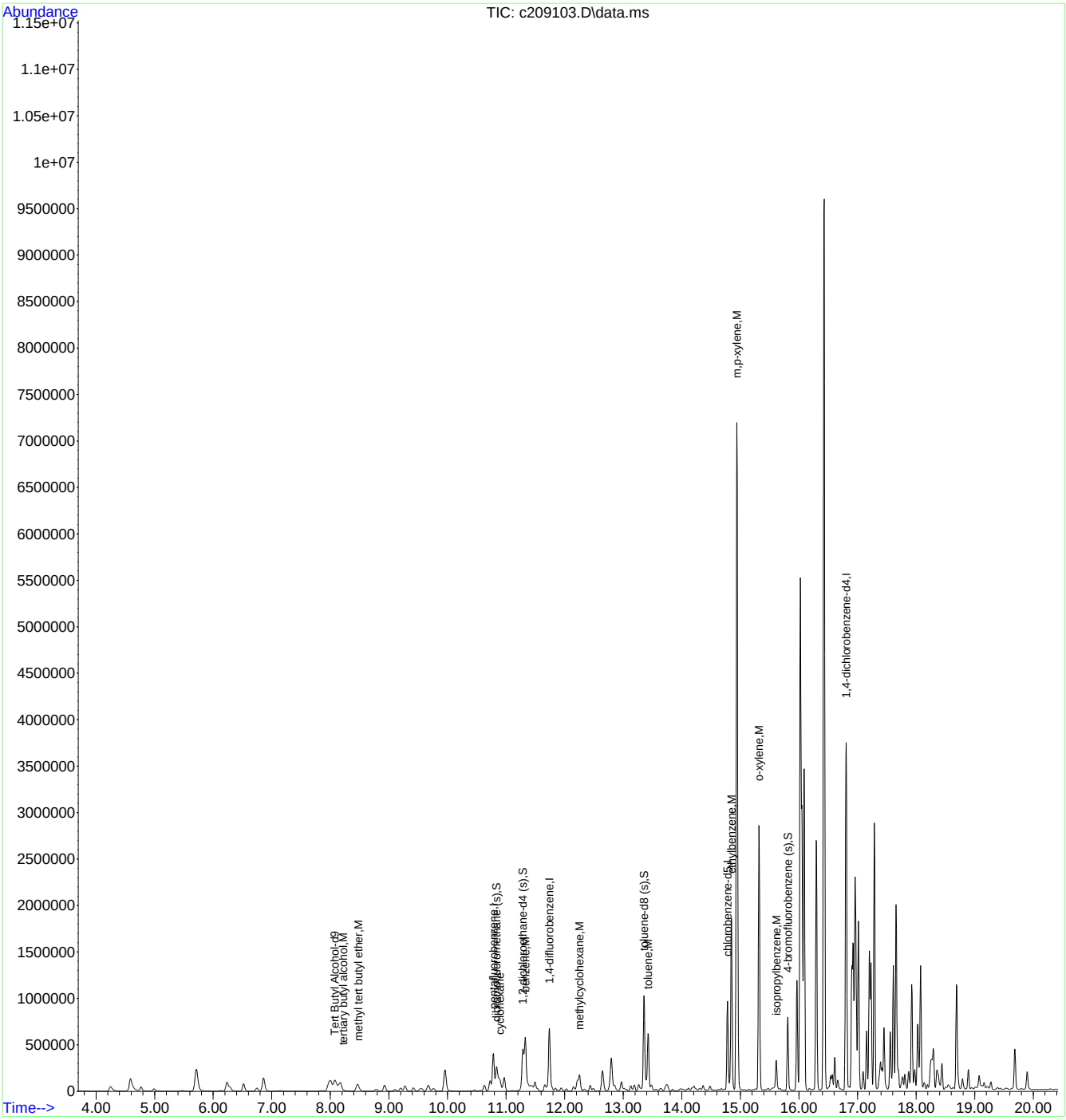
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.075	65	280174	500.00	ug/L	0.00
5) pentafluorobenzene	10.783	168	301773	50.00	ug/L	0.00
59) 1,4-difluorobenzene	11.740	114	548658	50.00	ug/L	0.00
88) chlorobenzene-d5	14.783	117	497238	50.00	ug/L	0.00
104) 1,4-dichlorobenzene-d4	16.801	152	241727	50.00	ug/L	0.00
System Monitoring Compounds						
50) dibromofluoromethane (s)	10.835	113	155311	48.00	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 96.00%			
51) 1,2-dichloroethane-d4 (s)	11.280	65	220674	49.06	ug/L	-0.01
Spiked Amount 50.000	Range 73 - 122		Recovery = 98.12%			
80) toluene-d8 (s)	13.355	98	697384	50.00	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 100.00%			
106) 4-bromofluorobenzene (s)	15.812	174	180392	53.18	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 106.36%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.227	59	3872	6.57	ug/L #	1
32) methyl tert butyl ether	8.483	73	7280	0.66	ug/L #	1
54) cyclohexane	10.898	84	44526	10.18	ug/L	71
65) benzene	11.327	78	488355	34.82	ug/L	100
73) methylcyclohexane	12.252	83	84751	21.51	ug/L	96
82) toluene	13.423	91	416785	28.84	ug/L	99
99) ethylbenzene	14.845	91	1289079	77.21	ug/L	100
100) m,p-xylene	14.939	106	2030777	335.49	ug/L	99
101) o-xylene	15.316	91	1644113	123.11	ug/L	99
105) isopropylbenzene	15.614	105	209884	13.74	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (LSC Reviewed)

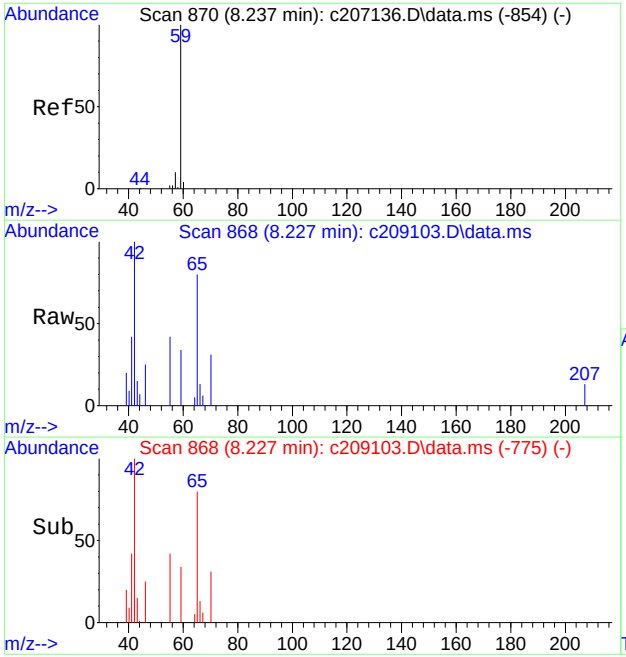
Data Path : C:\msdchem\1\DATA\
Data File : c209103.D
Acq On : 15 Apr 2016 5:32 am
Operator : VIANNAC
Sample : jc18196-5
Misc : MS951,VC7691,5.0,,,,10
ALS Vial : 42 Sample Multiplier: 1

Quant Time: Apr 18 11:20:05 2016
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Fri Apr 15 15:18:17 2016
Response via : Initial Calibration



MC7650.M Thu Apr 21 13:30:35 2016 C

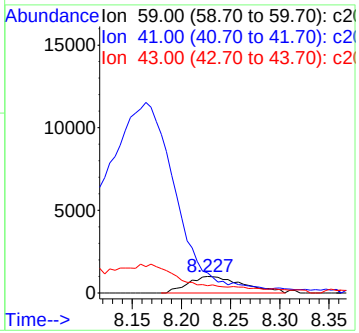
SGS ACCUTEST JC18196

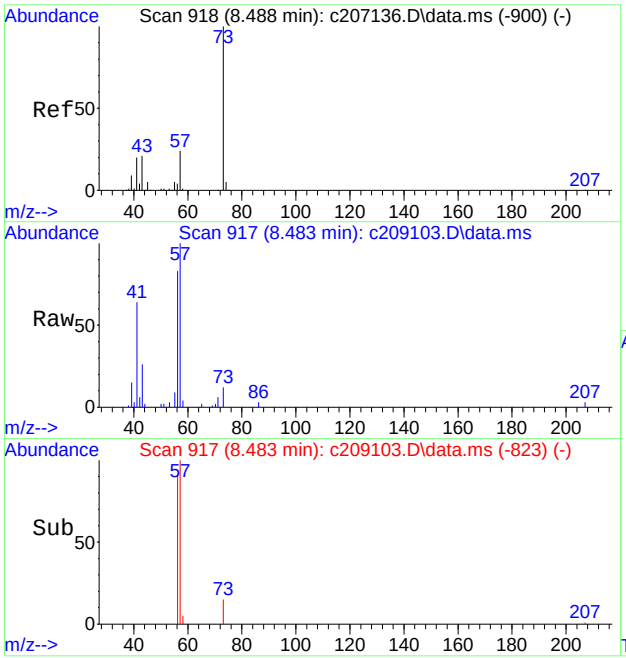


#3
tertiary butyl alcohol
Concen: 6.57 ug/L
RT: 8.227 min Scan# 868
Delta R.T. -0.011 min
Lab File: c209103.D
Acq: 15 Apr 2016 5:32 am

Tgt Ion: 59 Resp: 3872

Ion	Ratio	Lower	Upper
59	100		
41	97.3	0.0	32.5#
43	24.3	0.0	33.8

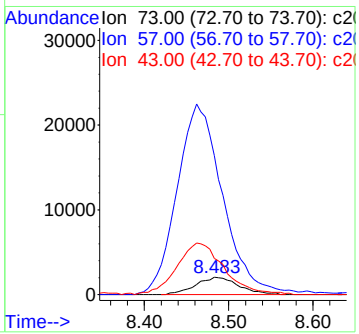


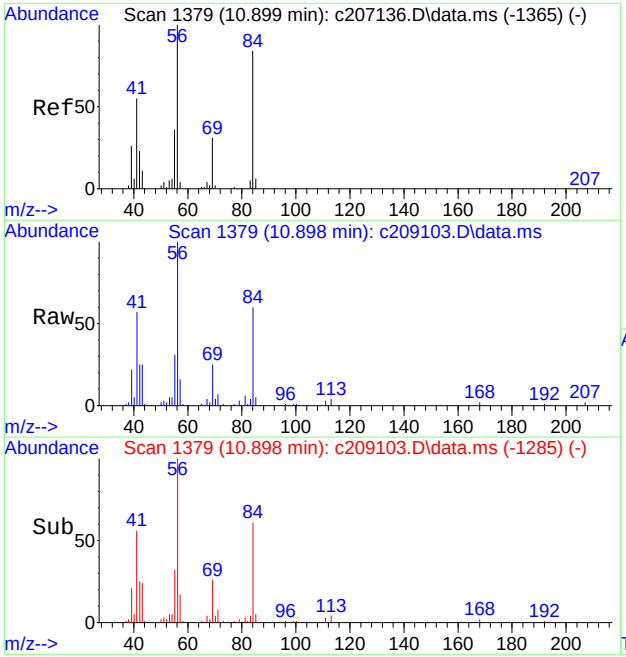


#32
methyl tert butyl ether
Concen: 0.66 ug/L
RT: 8.483 min Scan# 917
Delta R.T. -0.007 min
Lab File: c209103.D
Acq: 15 Apr 2016 5:32 am

Tgt Ion: 73 Resp: 7280

Ion	Ratio	Lower	Upper
73	100		
57	780.3	0.0	54.9#
43	202.3	0.0	51.7#

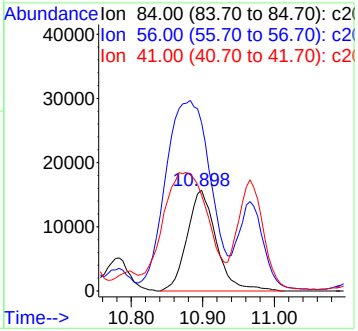


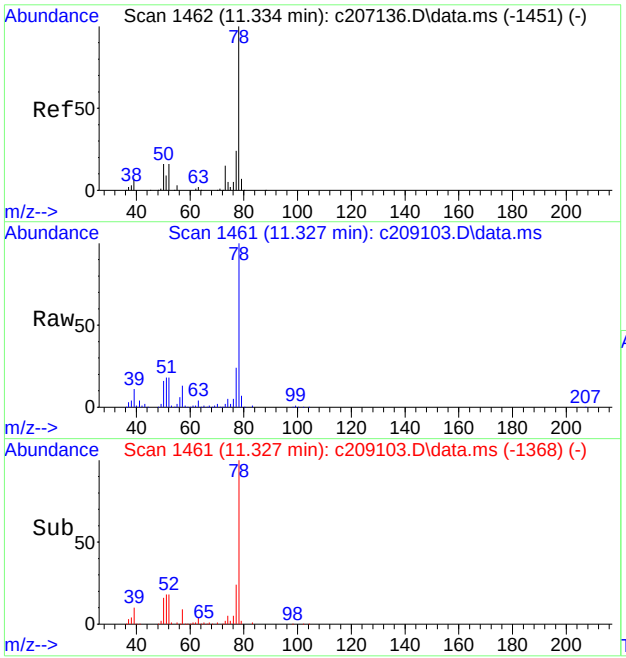


#54
cyclohexane
Concen: 10.18 ug/L
RT: 10.898 min Scan# 1379
Delta R.T. -0.007 min
Lab File: c209103.D
Acq: 15 Apr 2016 5:32 am

Tgt Ion: 84 Resp: 44526

Ion	Ratio	Lower	Upper
84	100		
56	162.1	88.4	164.2
41	89.8	49.0	91.0

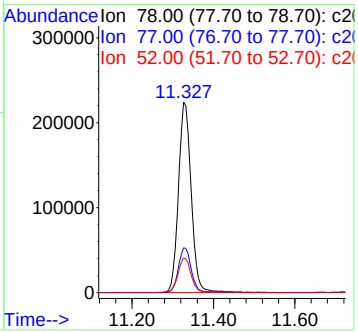


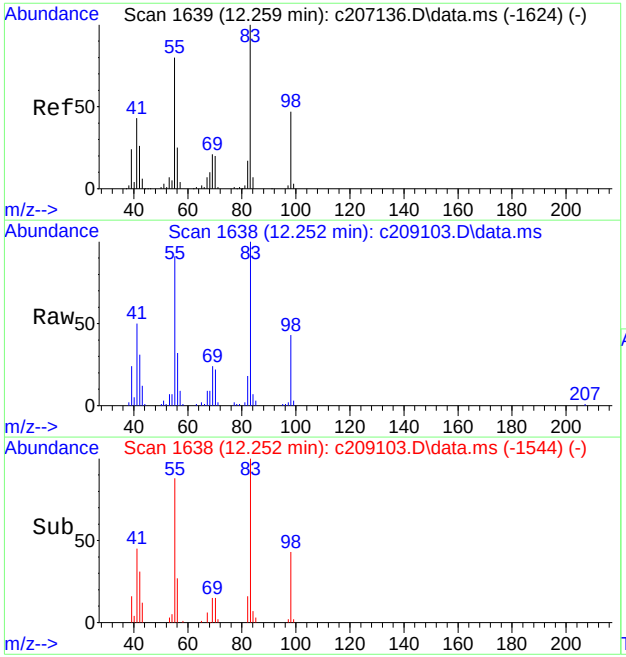


#65
benzene
Concen: 34.82 ug/L
RT: 11.327 min Scan# 1461
Delta R.T. -0.012 min
Lab File: c209103.D
Acq: 15 Apr 2016 5:32 am

Tgt Ion: 78 Resp: 488355

Ion	Ratio	Lower	Upper
78	100		
77	23.5	0.0	53.5
52	18.3	0.0	48.0

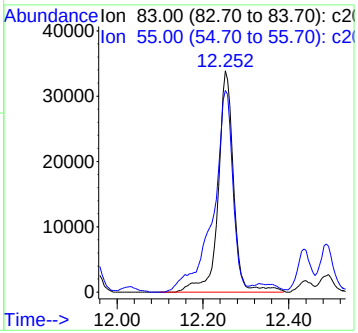


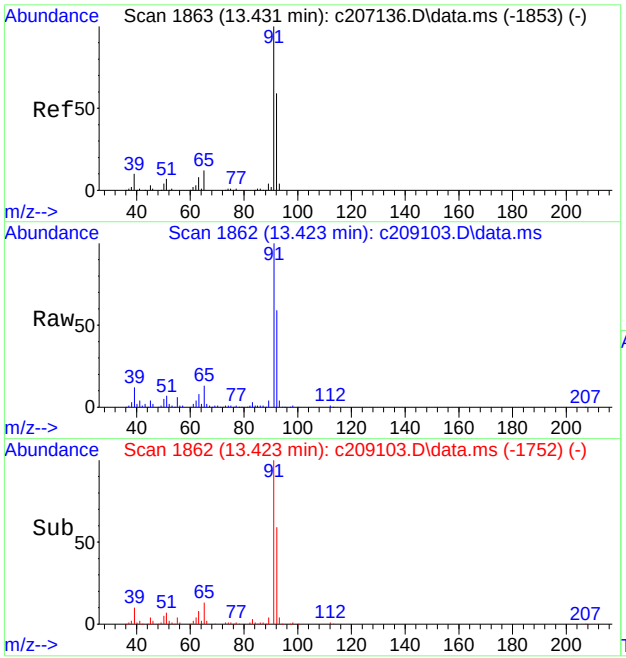


#73
methylcyclohexane
Concen: 21.51 ug/L
RT: 12.252 min Scan# 1638
Delta R.T. -0.007 min
Lab File: c209103.D
Acq: 15 Apr 2016 5:32 am

Tgt Ion: 83 Resp: 84751

Ion	Ratio	Lower	Upper
83	100		
55	91.1	61.2	113.8

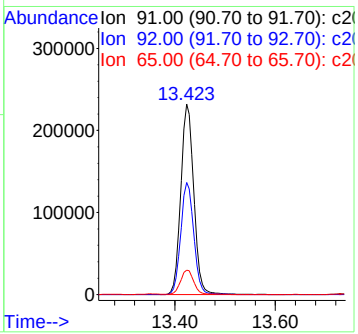


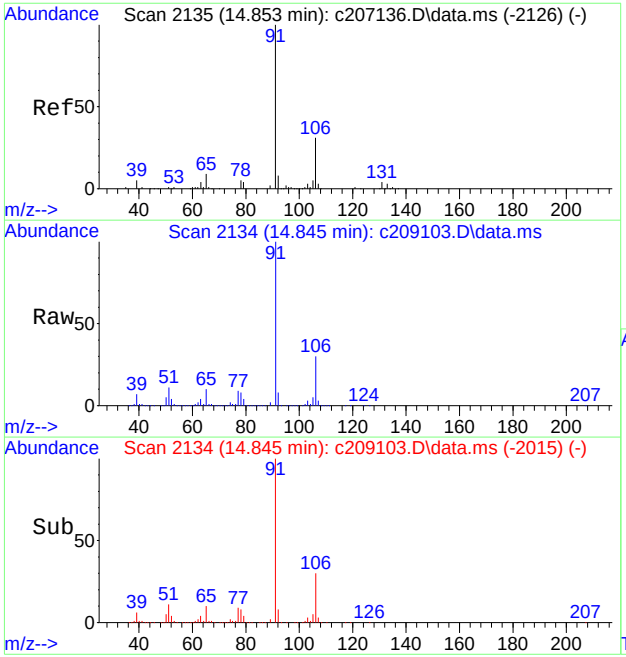


#82
toluene
Concen: 28.84 ug/L
RT: 13.423 min Scan# 1862
Delta R.T. -0.007 min
Lab File: c209103.D
Acq: 15 Apr 2016 5:32 am

Tgt Ion: 91 Resp: 416785

Ion	Ratio	Lower	Upper
91	100		
92	58.8	29.4	89.4
65	12.8	0.0	42.9

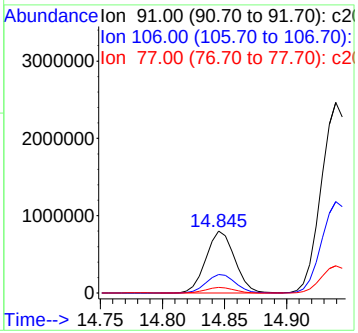


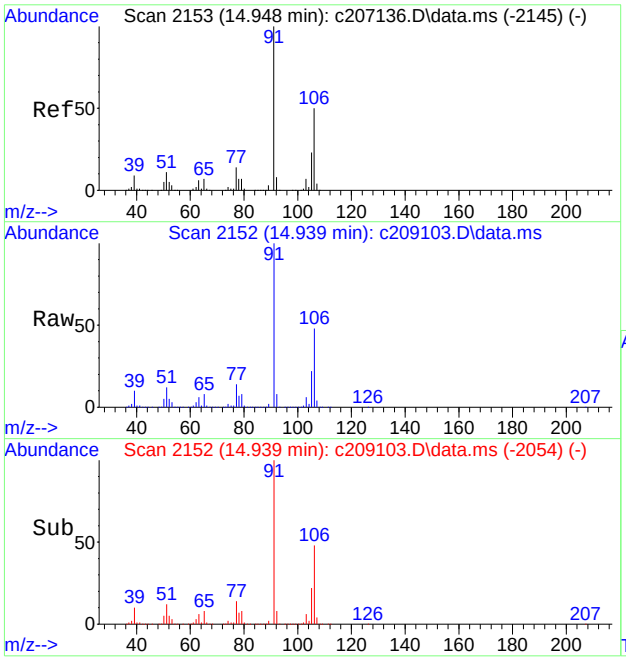


#99
ethylbenzene
Concen: 77.21 ug/L
RT: 14.845 min Scan# 2134
Delta R.T. -0.007 min
Lab File: c209103.D
Acq: 15 Apr 2016 5:32 am

Tgt Ion: 91 Resp: 1289079

Ion	Ratio	Lower	Upper
91	100		
106	30.0	0.0	59.9
77	9.0	0.0	39.2

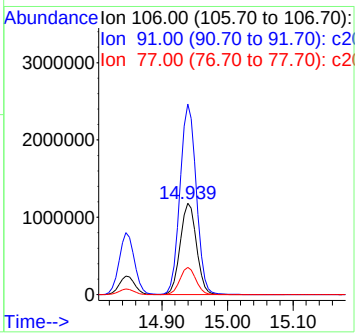


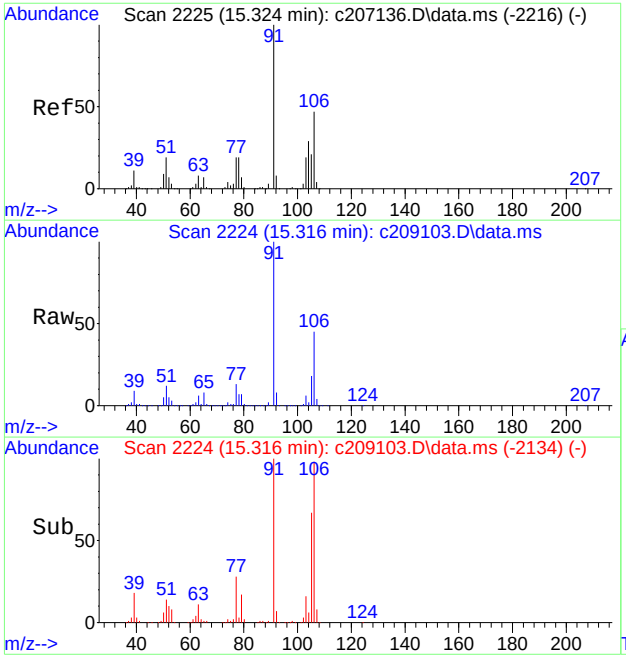


#100
m,p-xylene
Concen: 335.49 ug/L
RT: 14.939 min Scan# 2152
Delta R.T. -0.007 min
Lab File: c209103.D
Acq: 15 Apr 2016 5:32 am

Tgt Ion:106 Resp: 2030777

Ion	Ratio	Lower	Upper
106	100		
91	208.1	179.7	239.7
77	29.7	0.0	59.6

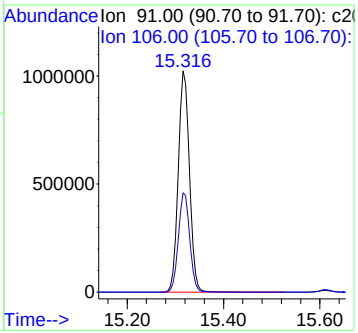


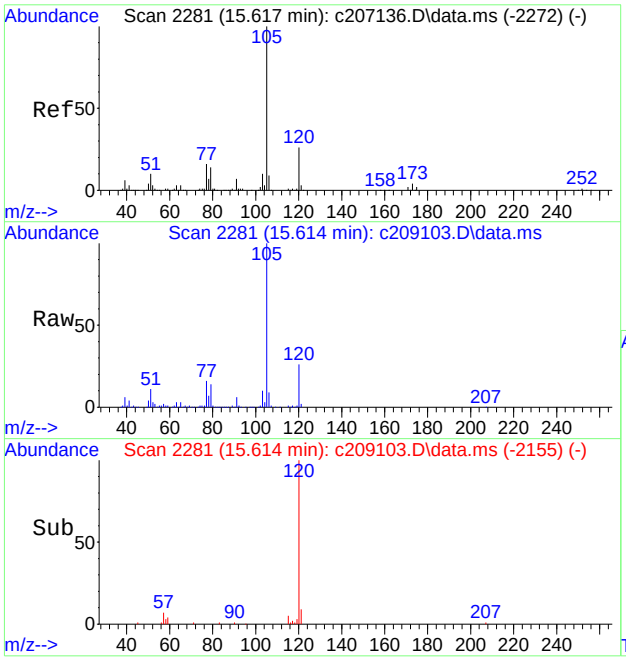


#101
o-xylene
Concen: 123.11 ug/L
RT: 15.316 min Scan# 2224
Delta R.T. -0.007 min
Lab File: c209103.D
Acq: 15 Apr 2016 5:32 am

Tgt Ion: 91 Resp: 1644113

Ion	Ratio	Lower	Upper
91	100		
106	44.9	14.3	74.3

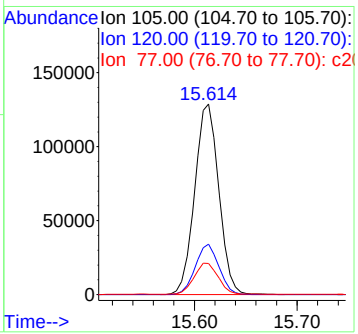




#105
isopropylbenzene
Concen: 13.74 ug/L
RT: 15.614 min Scan# 2281
Delta R.T. -0.002 min
Lab File: c209103.D
Acq: 15 Apr 2016 5:32 am

Tgt Ion:105 Resp: 209884

Ion	Ratio	Lower	Upper
105	100		
120	26.4	0.0	55.7
77	16.2	0.0	46.7



SGS ACCUTEST JC18196

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : c209103.D
Acq On : 15 Apr 2016 5:32 am
Operator : VIANNAC
Sample : jc18196-5
Misc : MS951,VC7691,5.0,,,,10
ALS Vial : 42 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 10 prefer < Tangent else baseline drop >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MC7650.M
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

Signal : TIC: c20910

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.248	94	107	155	rBB	50765	204498	1.34%	0.157%
2	4.588	156	172	199	rBB	132544	503664	3.29%	0.387%
3	4.766	199	206	239	rVB	45766	124984	0.82%	0.096%
4	4.985	239	248	268	rBB	25780	68321	0.45%	0.052%
5	5.712	369	387	457	rBB	238752	941639	6.16%	0.723%
6	6.235	476	487	525	rBB2	98148	422218	2.76%	0.324%
7	6.517	530	541	566	rBB2	80778	231362	1.51%	0.178%
8	6.747	570	585	595	rBB	33729	94857	0.62%	0.073%
9	6.857	595	606	639	rBB	142527	438982	2.87%	0.337%
10	7.997	806	824	834	rBV3	115273	588853	3.85%	0.452%
11	8.075	834	839	899	rVB6	119943	821089	5.37%	0.631%
12	8.462	899	913	953	rBB2	75595	289191	1.89%	0.222%
13	8.786	960	975	989	rBB4	21282	68726	0.45%	0.053%
14	8.922	989	1001	1024	rBB	64780	193873	1.27%	0.149%
15	9.199	1045	1054	1061	rVV2	33580	91034	0.60%	0.070%
16	9.272	1061	1068	1084	rVB2	58898	166884	1.09%	0.128%
17	9.419	1084	1096	1108	rBB2	35783	102217	0.67%	0.079%
18	9.549	1108	1121	1133	rBV6	29439	118804	0.78%	0.091%
19	9.675	1133	1145	1154	rBB3	58860	164206	1.07%	0.126%
20	9.758	1154	1161	1185	rVB3	29779	101920	0.67%	0.078%
21	9.957	1185	1199	1240	rBB2	232386	707467	4.63%	0.543%
22	10.632	1318	1328	1336	rBB	59160	137650	0.90%	0.106%
23	10.726	1336	1346	1350	rBV	109585	253028	1.65%	0.194%
24	10.783	1350	1357	1363	rVV	398659	950765	6.22%	0.730%
25	10.835	1363	1367	1385	rVV6	255769	971990	6.35%	0.747%
26	10.966	1385	1392	1411	rVB	147106	380379	2.49%	0.292%
27	11.285	1439	1453	1458	rBV2	448411	1249619	8.17%	0.960%
28	11.327	1458	1461	1488	rVV	571277	1437980	9.40%	1.105%
29	11.494	1488	1493	1512	rVB3	101596	285120	1.86%	0.219%
30	11.661	1512	1525	1531	rBV	70323	191132	1.25%	0.147%
31	11.740	1531	1540	1554	rBB	645269	1350888	8.83%	1.038%
32	11.938	1572	1578	1588	rVB4	33153	79509	0.52%	0.061%
33	12.148	1609	1618	1624	rBV2	49215	121276	0.79%	0.093%
34	12.252	1624	1638	1647	rBB3	165426	541092	3.54%	0.416%
35	12.435	1665	1673	1679	rBV2	63587	130913	0.86%	0.101%
36	12.644	1703	1713	1730	rBB	217456	528479	3.45%	0.406%
37	12.796	1730	1742	1765	rBB2	350000	1038614	6.79%	0.798%
38	12.968	1766	1775	1799	rBB2	97743	283205	1.85%	0.218%
39	13.130	1799	1806	1811	rBV	57085	119527	0.78%	0.092%
40	13.188	1811	1817	1824	rVB4	64433	129901	0.85%	0.100%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : c209103.D
Acq On : 15 Apr 2016 5:32 am
Operator : VIANNAC
Sample : jc18196-5
Misc : MS951,VC7691,5.0,,,,10
ALS Vial : 42 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 10 prefer < Tangent else baseline drop >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MC7650.M
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

41	13.266	1824	1832	1841	rBV2	68987	185839	1.21%	0.143%
42	13.355	1842	1849	1856	rBB	954596	1651094	10.79%	1.268%
43	13.423	1856	1862	1870	rVV	601254	1153282	7.54%	0.886%
44	13.481	1870	1873	1895	rVB5	64569	174383	1.14%	0.134%
45	13.643	1895	1904	1911	rBB6	25712	67205	0.44%	0.052%
46	13.747	1911	1924	1935	rBB5	68636	239485	1.57%	0.184%
47	13.972	1960	1967	1983	rBB8	18001	73930	0.48%	0.057%
48	14.202	2000	2011	2024	rBB9	43243	146314	0.96%	0.112%
49	14.364	2036	2042	2056	rVB	53088	104361	0.68%	0.080%
50	14.479	2056	2064	2078	rBB2	45182	97183	0.64%	0.075%
51	14.777	2115	2121	2127	rBB	916480	1464049	9.57%	1.125%
52	14.845	2127	2134	2143	rBB	1800619	2863432	18.72%	2.200%
53	14.939	2144	2152	2182	rBB	7178597	12219637	79.89%	9.387%
54	15.316	2216	2224	2236	rBB	2845450	4547793	29.73%	3.493%
55	15.614	2260	2281	2308	rBB	321451	709401	4.64%	0.545%
56	15.807	2310	2318	2340	rBB	789395	1234986	8.07%	0.949%
57	15.964	2342	2348	2353	rBB	1133286	1649377	10.78%	1.267%
58	16.022	2353	2359	2368	rVV	5506455	12865836	84.11%	9.883%
59	16.084	2368	2371	2384	rVB	3461282	5235865	34.23%	4.022%
60	16.293	2399	2411	2423	rBB	2685266	4250518	27.79%	3.265%
61	16.429	2423	2437	2448	rBB	9583802	15296068	100.00%	11.750%
62	16.539	2448	2458	2461	rVV	140905	261116	1.71%	0.201%
63	16.565	2461	2463	2467	rVV	154423	204791	1.34%	0.157%
64	16.612	2467	2472	2477	rVV	340993	504112	3.30%	0.387%
65	16.659	2477	2481	2500	rVB2	111517	243102	1.59%	0.187%
66	16.806	2500	2509	2521	rBB2	3732921	6136491	40.12%	4.714%
67	16.921	2521	2531	2534	rVV2	1568481	3970692	25.96%	3.050%
68	16.957	2534	2538	2545	rVV2	2278388	4677050	30.58%	3.593%
69	17.015	2545	2549	2558	rVB2	1807916	2673378	17.48%	2.054%
70	17.093	2558	2564	2570	rBB	191823	283062	1.85%	0.217%
71	17.156	2570	2576	2580	rBV	627251	929463	6.08%	0.714%
72	17.203	2580	2585	2588	rVV	1480784	2446360	15.99%	1.879%
73	17.229	2588	2590	2595	rVV	1352834	1593005	10.41%	1.224%
74	17.287	2595	2601	2608	rBB	2834578	4018552	26.27%	3.087%
75	17.391	2610	2621	2628	rBV4	293269	908804	5.94%	0.698%
76	17.449	2628	2632	2645	rVB	662142	1068468	6.99%	0.821%
77	17.559	2645	2653	2658	rBV	616498	990706	6.48%	0.761%
78	17.611	2658	2663	2667	rBB	1182857	1547416	10.12%	1.189%
79	17.658	2667	2672	2684	rBB2	1858170	2996904	19.59%	2.302%
80	17.768	2685	2693	2697	rBV4	124792	251116	1.64%	0.193%
81	17.810	2697	2701	2707	rVB2	153990	238870	1.56%	0.183%
82	17.872	2707	2713	2717	rBV4	182921	299551	1.96%	0.230%
83	17.925	2717	2723	2729	rBB2	1061521	1608013	10.51%	1.235%
84	17.977	2729	2733	2737	rVV2	195825	297457	1.94%	0.228%
85	18.024	2737	2742	2747	rVV2	683976	1228791	8.03%	0.944%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : c209103.D
Acq On : 15 Apr 2016 5:32 am
Operator : VIANNAC
Sample : jc18196-5
Misc : MS951,VC7691,5.0,,,,10
ALS Vial : 42 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 10 prefer < Tangent else baseline drop >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MC7650.M
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

86	18.076	2747	2752	2759	rVV	1312751	2011381	13.15%	1.545%
87	18.139	2759	2764	2770	rVB2	68562	125787	0.82%	0.097%
88	18.191	2770	2774	2778	rBV	45016	65734	0.43%	0.050%
89	18.296	2791	2794	2800	rVB	420616	619424	4.05%	0.476%
90	18.353	2800	2805	2816	rVV3	193280	524335	3.43%	0.403%
91	18.442	2816	2822	2829	rVB	280231	474573	3.10%	0.365%
92	18.547	2839	2842	2854	rVB3	44865	104480	0.68%	0.080%
93	18.688	2862	2869	2882	rBB	1121460	1968891	12.87%	1.512%
94	18.792	2882	2889	2901	rBB3	107240	190184	1.24%	0.146%
95	18.892	2901	2908	2915	rBB	207229	325013	2.12%	0.250%
96	19.075	2937	2943	2955	rBB	122158	218497	1.43%	0.168%
97	19.158	2955	2959	2976	rVV2	62358	148313	0.97%	0.114%
98	19.273	2976	2981	2988	rBB	74950	126071	0.82%	0.097%
99	19.686	3052	3060	3071	rBB	428872	749366	4.90%	0.576%
100	19.896	3092	3100	3196	rBB2	188269	294586	1.93%	0.226%

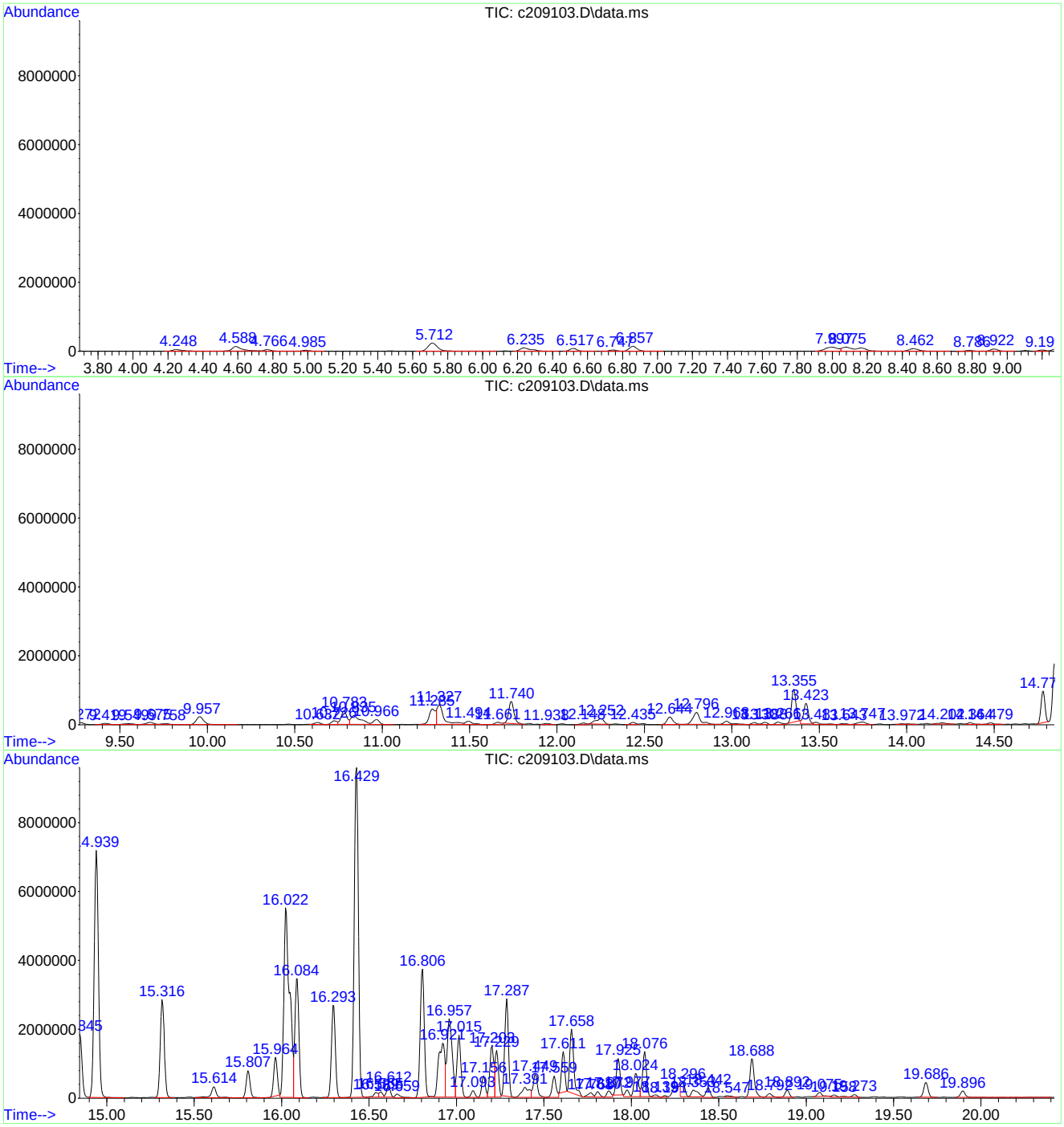
Sum of corrected areas: 130179799

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\
Data File : c209103.D
Acq On : 15 Apr 2016 5:32 am
Operator : VIANNAC
Sample : jc18196-5
Misc : MS951,VC7691,5.0,,,,10
ALS Vial : 42 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209103.D
Acq On : 15 Apr 2016 5:32 am
Operator : VIANNAC
Sample : jc18196-5
Misc : MS951,VC7691,5.0,,,,10
ALS Vial : 42 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

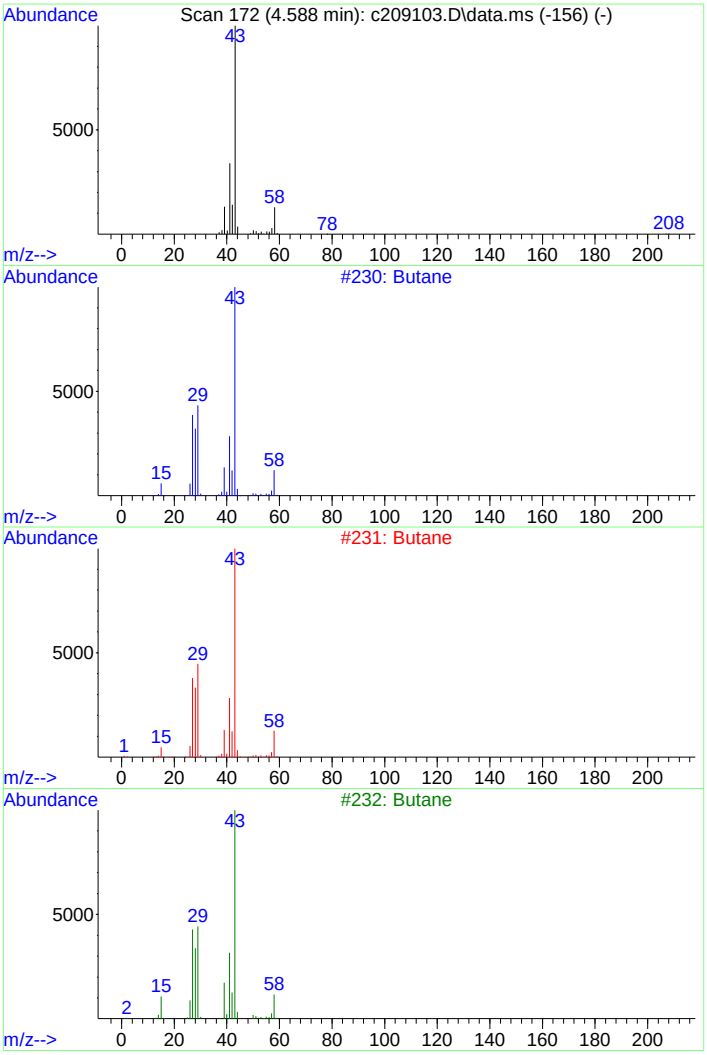
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

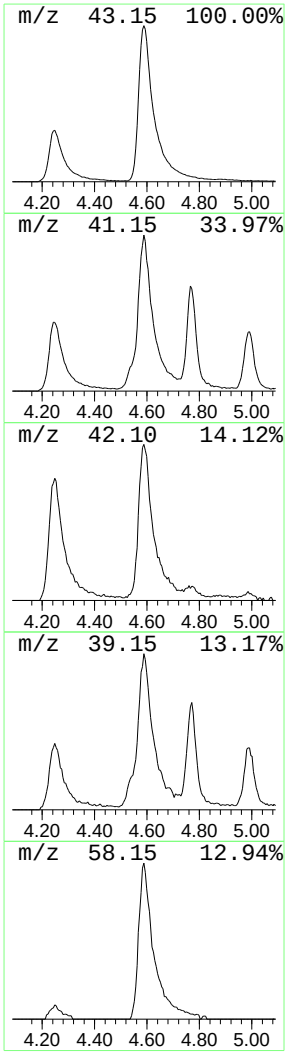
****

Peak Number 1 Butane Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.588	26.49 ug/L	503664	pentafluorobenzene	10.783

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	72
2	Butane	58	C4H10	000106-97-8	72
3	Butane	58	C4H10	000106-97-8	58
4	Isobutane	58	C4H10	000075-28-5	9
5	Isopropylsulfonyl chloride	142	C3H7ClO2S	010147-37-2	9





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209103.D
Acq On : 15 Apr 2016 5:32 am
Operator : VIANNAC
Sample : jc18196-5
Misc : MS951,VC7691,5.0,,,,10
ALS Vial : 42 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

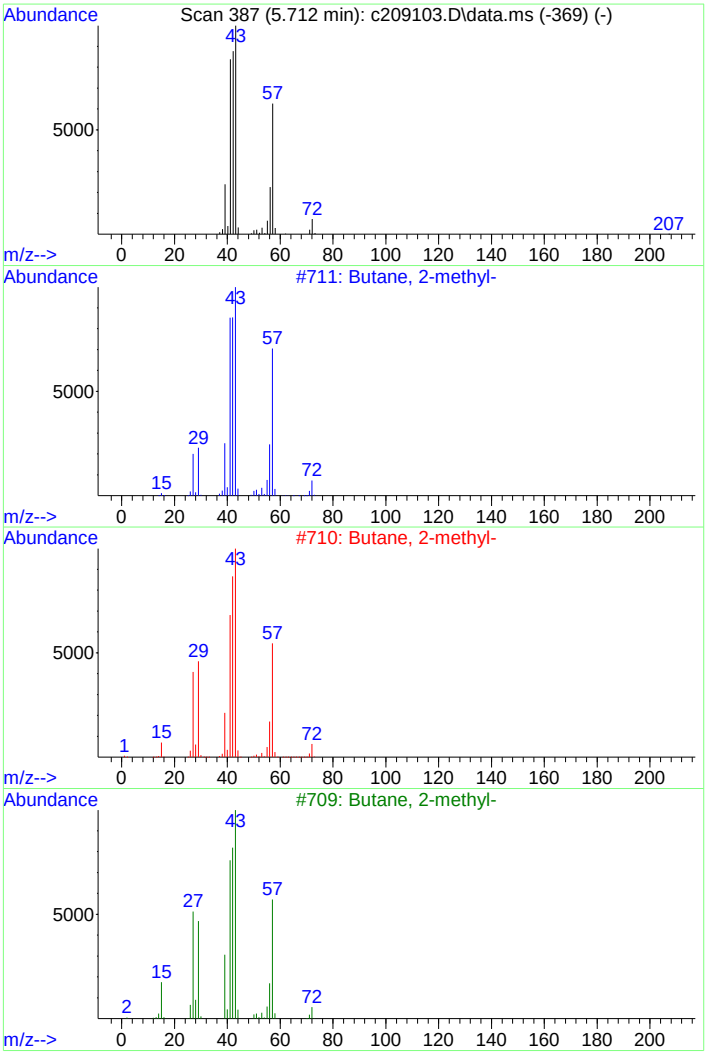
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

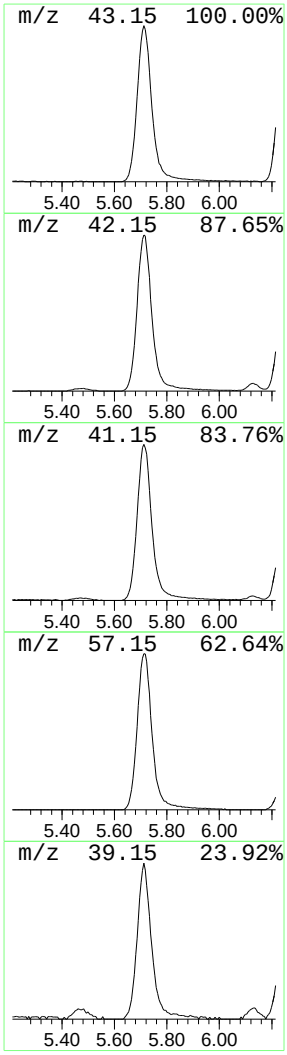
****

Peak Number 2 Butane, 2-methyl- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.712	49.52 ug/L	941639	pentafluorobenzene	10.783

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	94
2	Butane, 2-methyl-	72	C5H12	000078-78-4	91
3	Butane, 2-methyl-	72	C5H12	000078-78-4	90
4	Pentane	72	C5H12	000109-66-0	33
5	3-Buten-1-ol	72	C4H8O	000627-27-0	28





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209103.D
Acq On : 15 Apr 2016 5:32 am
Operator : VIANNAC
Sample : jc18196-5
Misc : MS951,VC7691,5.0,,,,10
ALS Vial : 42 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

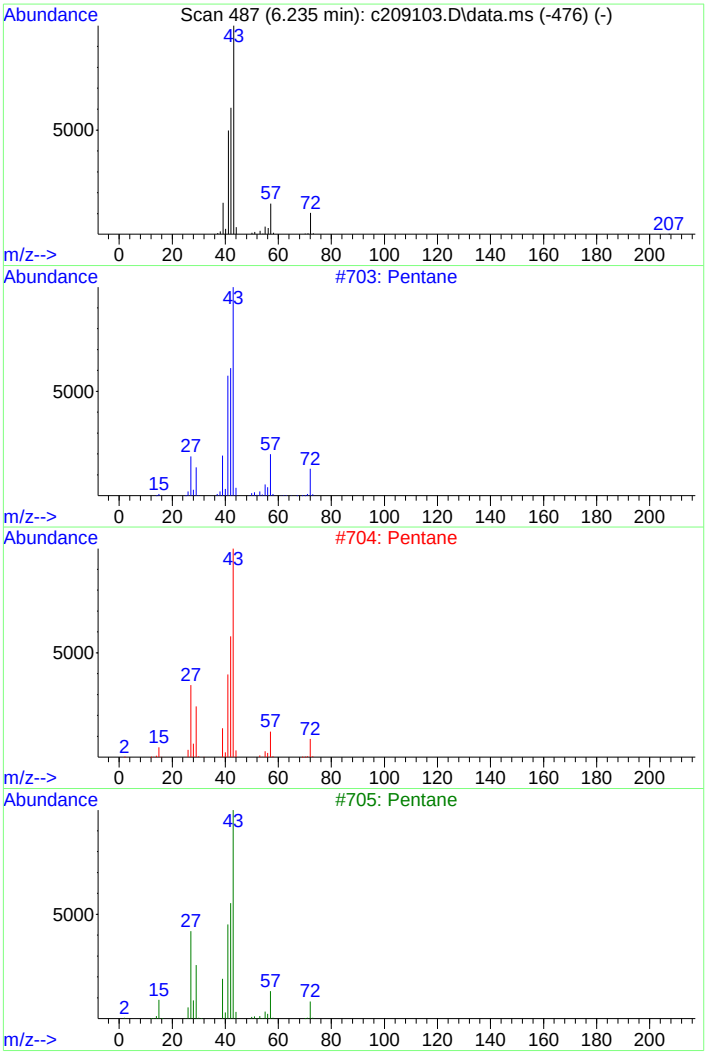
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

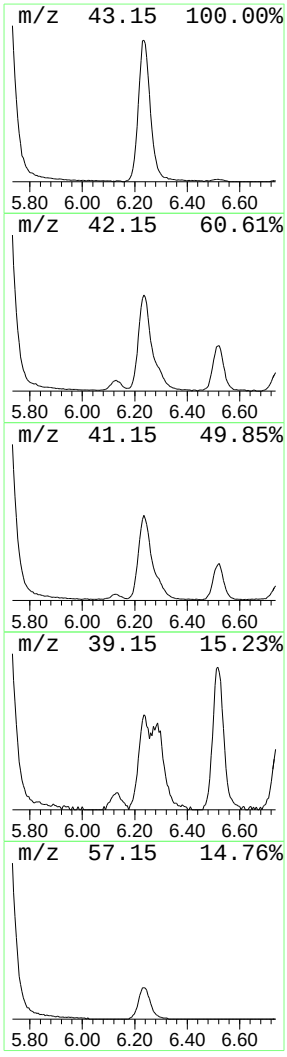
****

Peak Number 3 Pentane Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.235	22.20 ug/L	422218	pentafluorobenzene	10.783

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	91
2	Pentane	72	C5H12	000109-66-0	90
3	Pentane	72	C5H12	000109-66-0	90
4	Pentane	72	C5H12	000109-66-0	72
5	1-Propanol, 2-methyl-	74	C4H10O	000078-83-1	39





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209103.D
Acq On : 15 Apr 2016 5:32 am
Operator : VIANNAC
Sample : jc18196-5
Misc : MS951,VC7691,5.0,,,,10
ALS Vial : 42 Sample Multiplier: 1

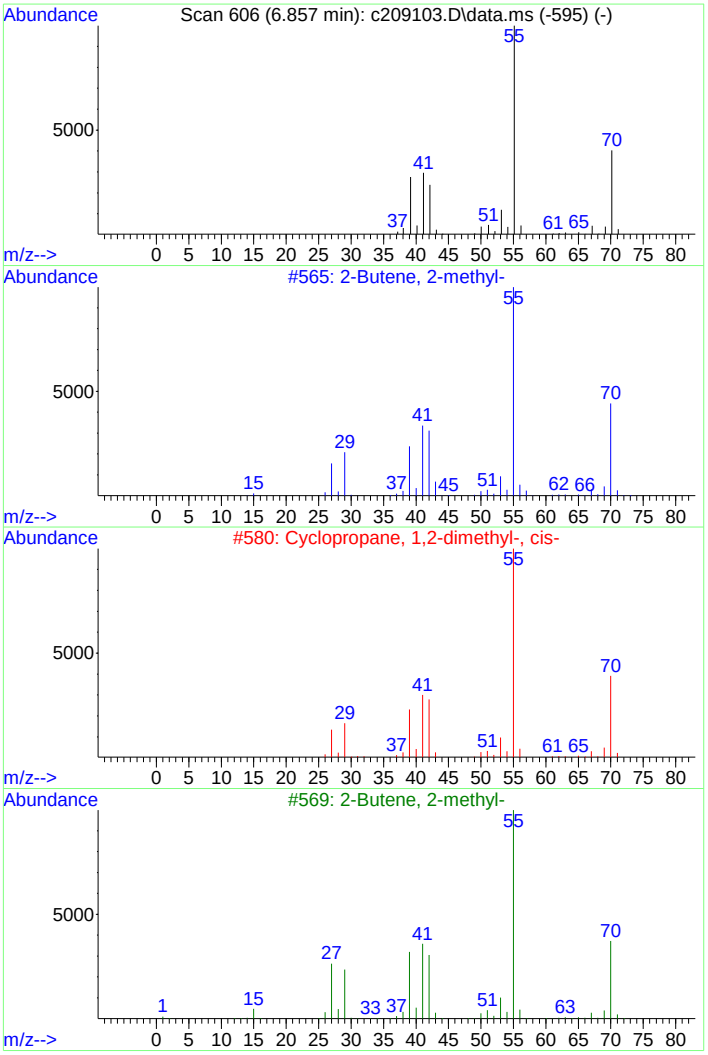
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

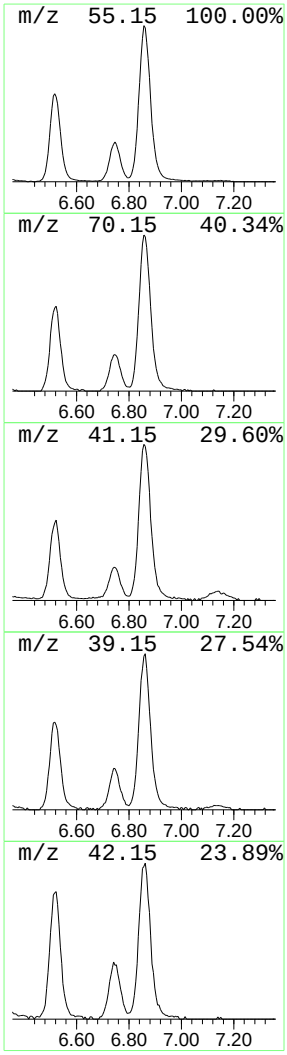
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

****
Peak Number 4 2-Butene, 2-methyl- Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.857	23.09 ug/L	438982	pentafluorobenzene	10.783

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Butene, 2-methyl-	70	C5H10	000513-35-9	91
2	Cyclopropane, 1,2-dimethyl-, cis-	70	C5H10	000930-18-7	91
3	2-Butene, 2-methyl-	70	C5H10	000513-35-9	91
4	1-Butene, 3-methyl-	70	C5H10	000563-45-1	86
5	2-Methyl-1-butene	70	C5H10	000563-46-2	86





SGS ACCUTEST JC18196

Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209103.D
Acq On : 15 Apr 2016 5:32 am
Operator : VIANNAC
Sample : jc18196-5
Misc : MS951,VC7691,5.0,,,,10
ALS Vial : 42 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

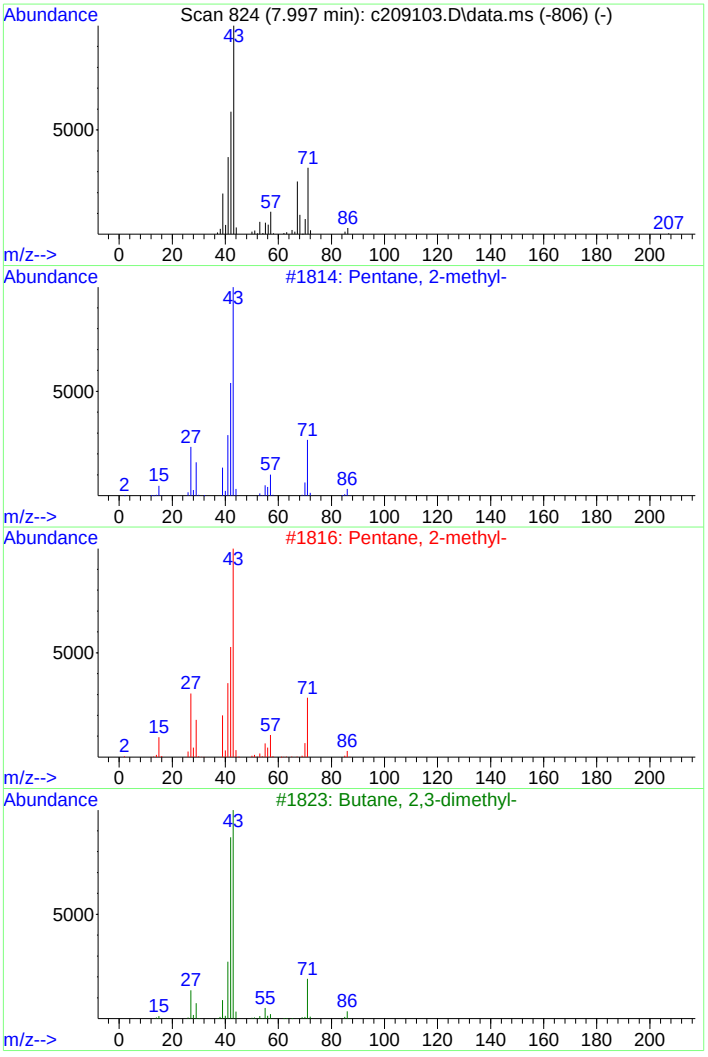
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

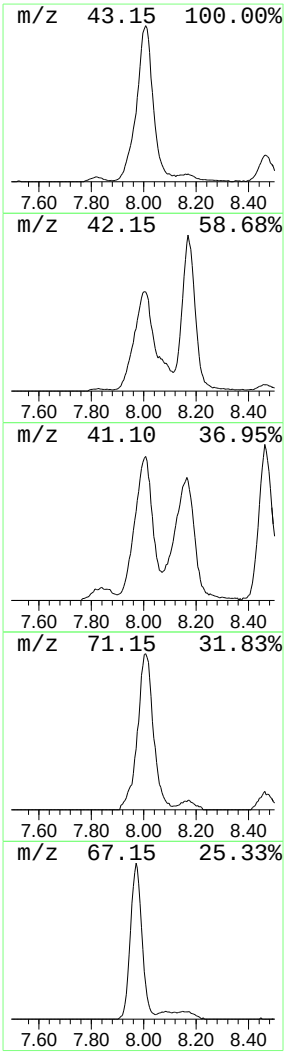
****

Peak Number 5 Pentane, 2-methyl- Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.997	30.97 ug/L	588853	pentafluorobenzene	10.783

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2-methyl-	86	C6H14	000107-83-5	68
2	Pentane, 2-methyl-	86	C6H14	000107-83-5	62
3	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	43
4	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	40
5	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	25





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209103.D
Acq On : 15 Apr 2016 5:32 am
Operator : VIANNAC
Sample : jc18196-5
Misc : MS951,VC7691,5.0,,,,10
ALS Vial : 42 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

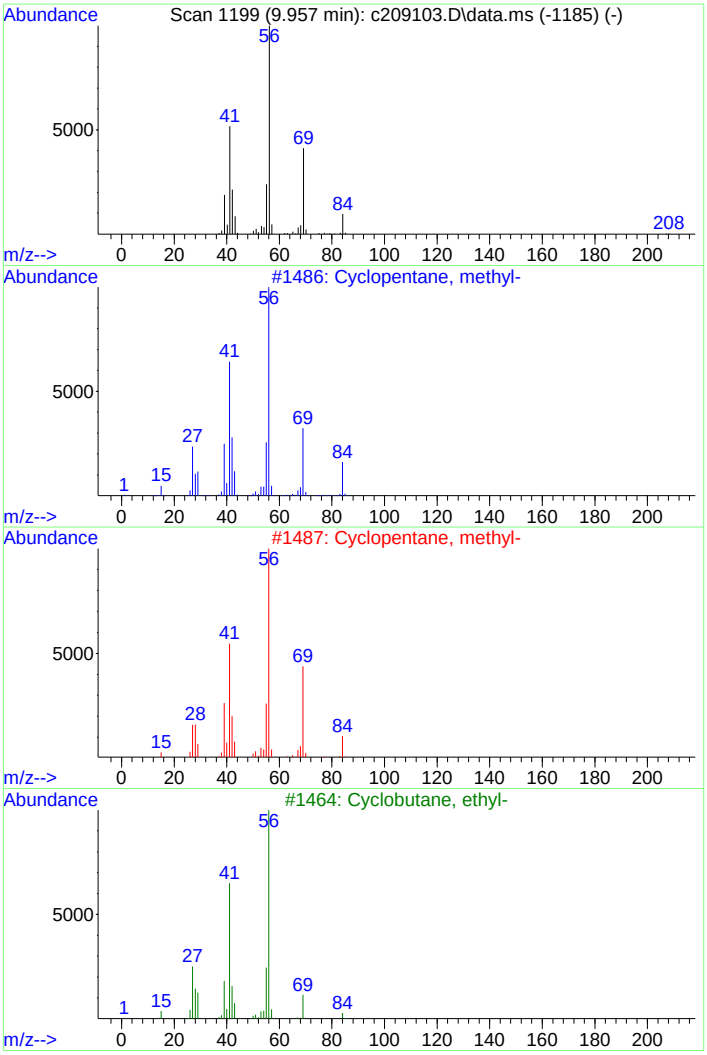
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

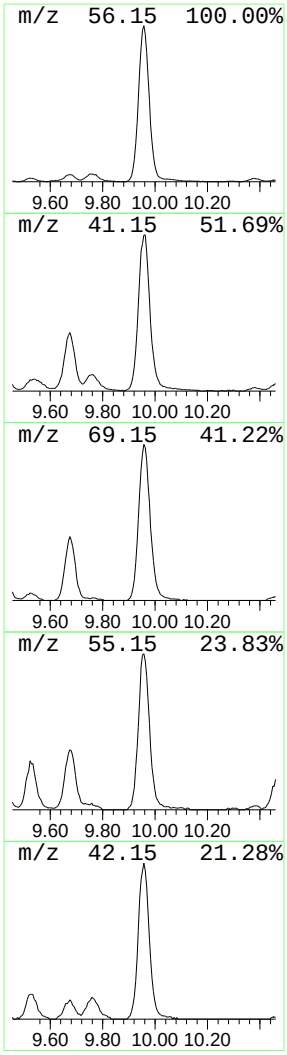
****

Peak Number 6 Cyclopentane, methyl- Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.957	37.21 ug/L	707467	pentafluorobenzene	10.783

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	91
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	87
3	Cyclobutane, ethyl-	84	C6H12	004806-61-5	80
4	1H-Tetrazole, 5-methyl-	84	C2H4N4	004076-36-2	80
5	Cyclopentane, methyl-	84	C6H12	000096-37-7	78





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209103.D
Acq On : 15 Apr 2016 5:32 am
Operator : VIANNAC
Sample : jc18196-5
Misc : MS951,VC7691,5.0,,,,10
ALS Vial : 42 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

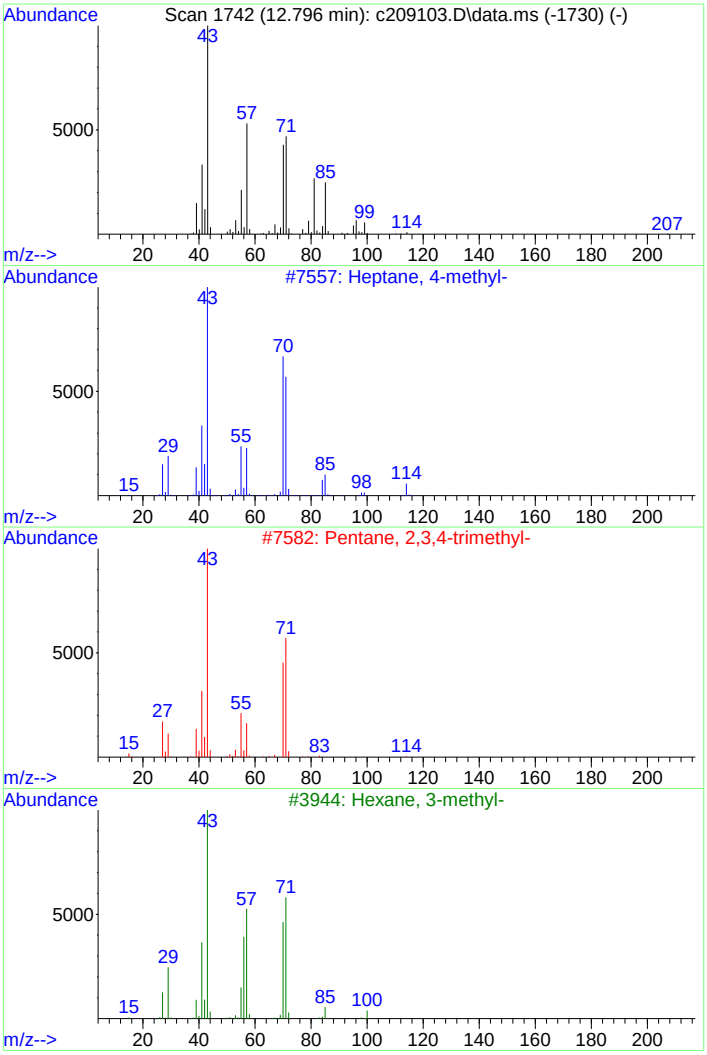
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

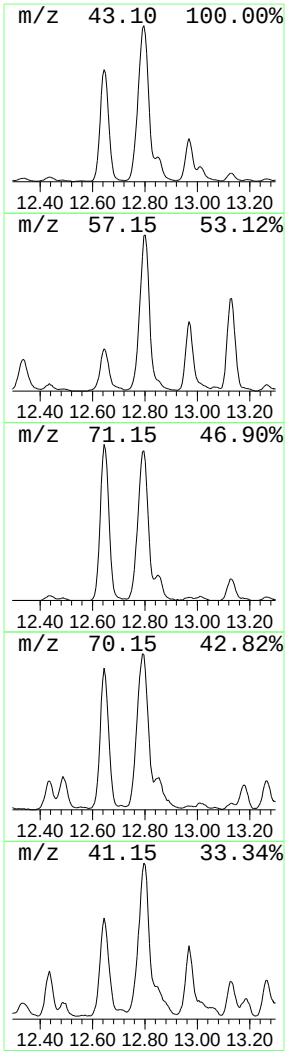
****

Peak Number 7 Heptane, 4-methyl- Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.796	38.44 ug/L	1038610	1,4-difluorobenzene	11.740

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptane, 4-methyl-	114	C8H18	000589-53-7	64
2	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	59
3	Hexane, 3-methyl-	100	C7H16	000589-34-4	59
4	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	59
5	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	59





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209103.D
Acq On : 15 Apr 2016 5:32 am
Operator : VIANNAC
Sample : jc18196-5
Misc : MS951,VC7691,5.0,,,,10
ALS Vial : 42 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

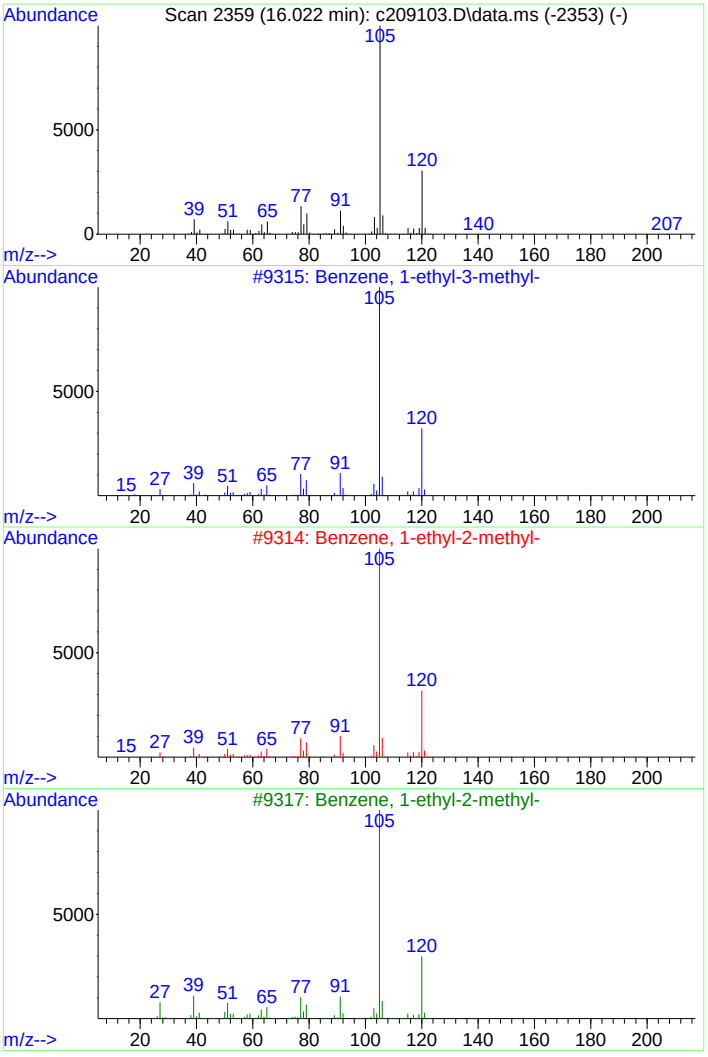
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

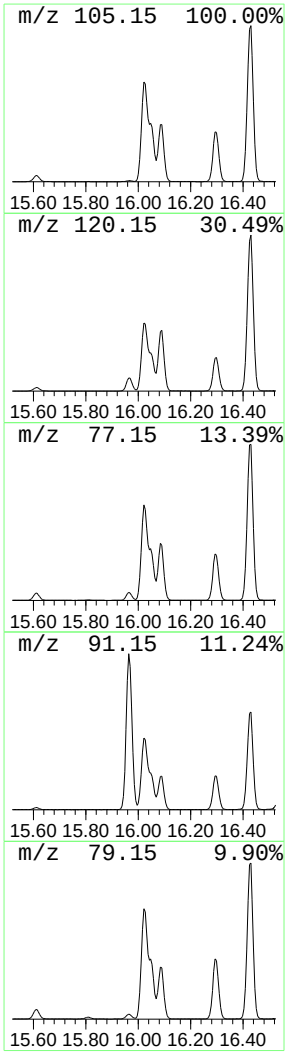
****

Peak Number 8 Benzene, 1-ethyl-3-methyl- Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.022	104.83 ug/L	12865800	1,4-dichlorobenzene-d4	16.801

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
3	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
4	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	94
5	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209103.D
Acq On : 15 Apr 2016 5:32 am
Operator : VIANNAC
Sample : jc18196-5
Misc : MS951,VC7691,5.0,,,,10
ALS Vial : 42 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

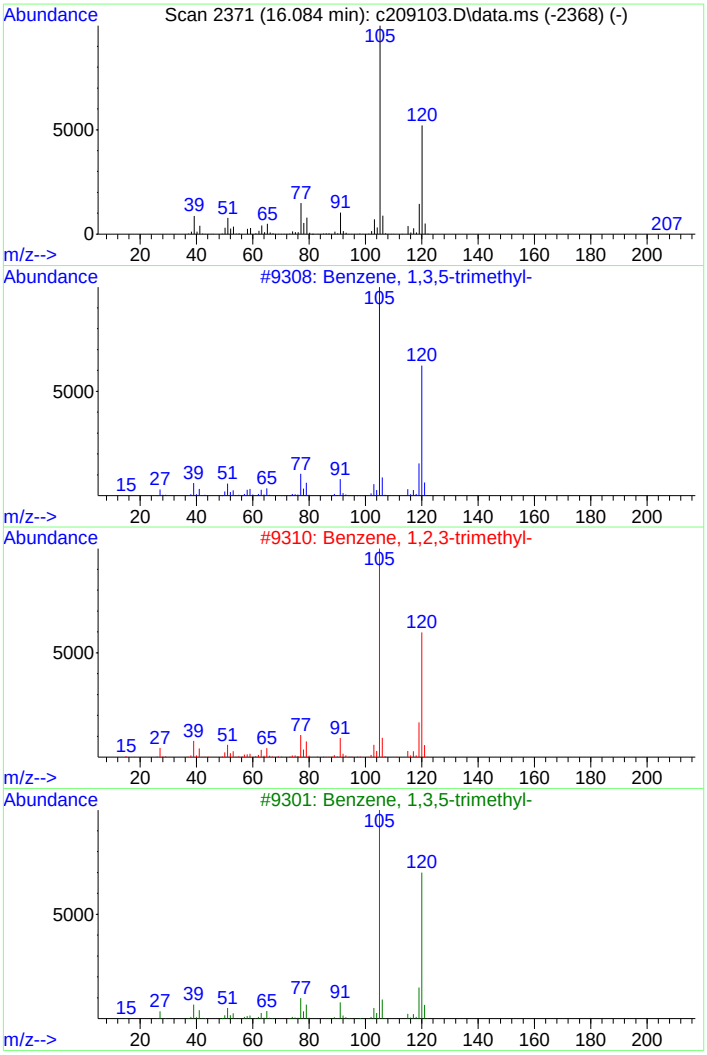
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

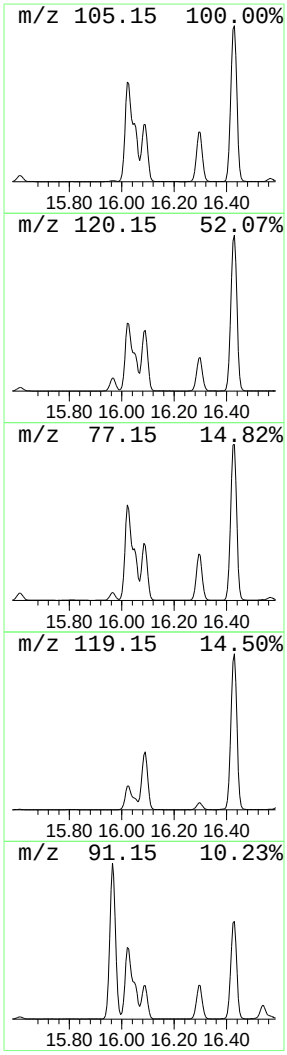
****

Peak Number 9 Benzene, 1,3,5-trimethyl- Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.084	42.66 ug/L	5235870	1,4-dichlorobenzene-d4	16.801

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
2	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209103.D
Acq On : 15 Apr 2016 5:32 am
Operator : VIANNAC
Sample : jc18196-5
Misc : MS951,VC7691,5.0,,,,10
ALS Vial : 42 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

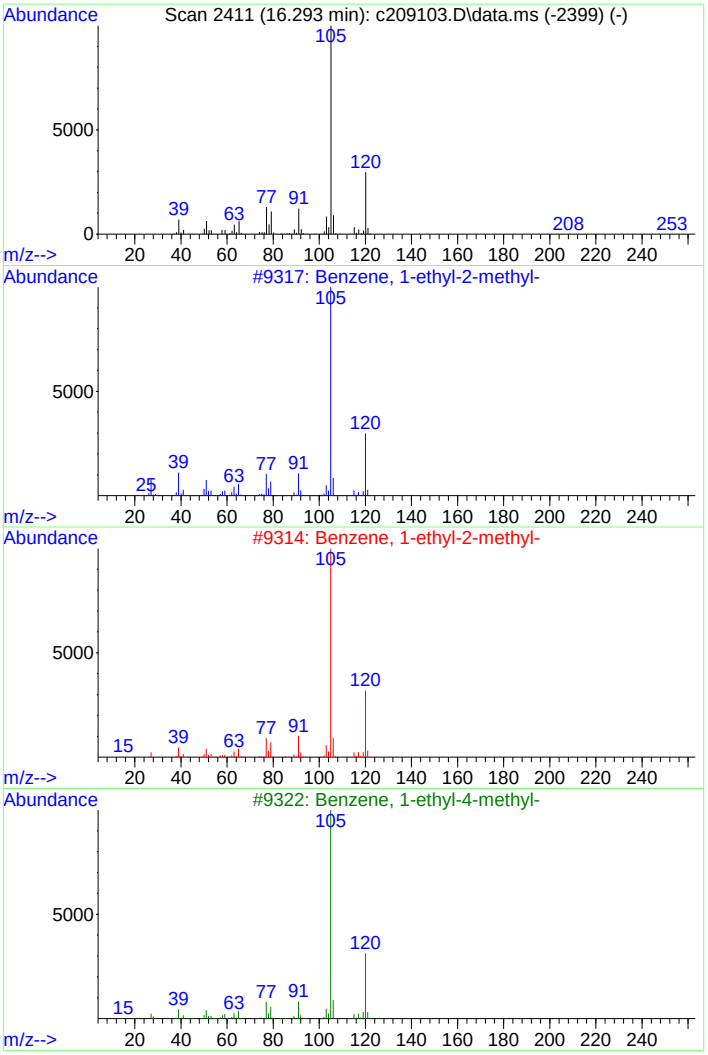
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

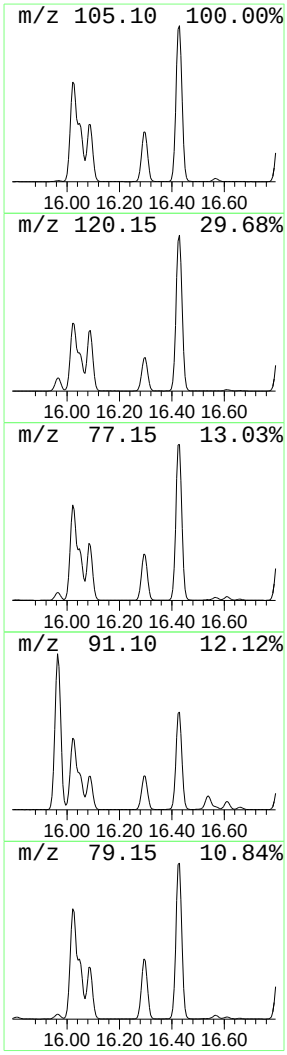
****

Peak Number 10 Benzene, 1-ethyl-2-methyl- Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.293	34.63 ug/L	4250520	1,4-dichlorobenzene-d4	16.801

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209103.D
Acq On : 15 Apr 2016 5:32 am
Operator : VIANNAC
Sample : jc18196-5
Misc : MS951,VC7691,5.0,,,,10
ALS Vial : 42 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

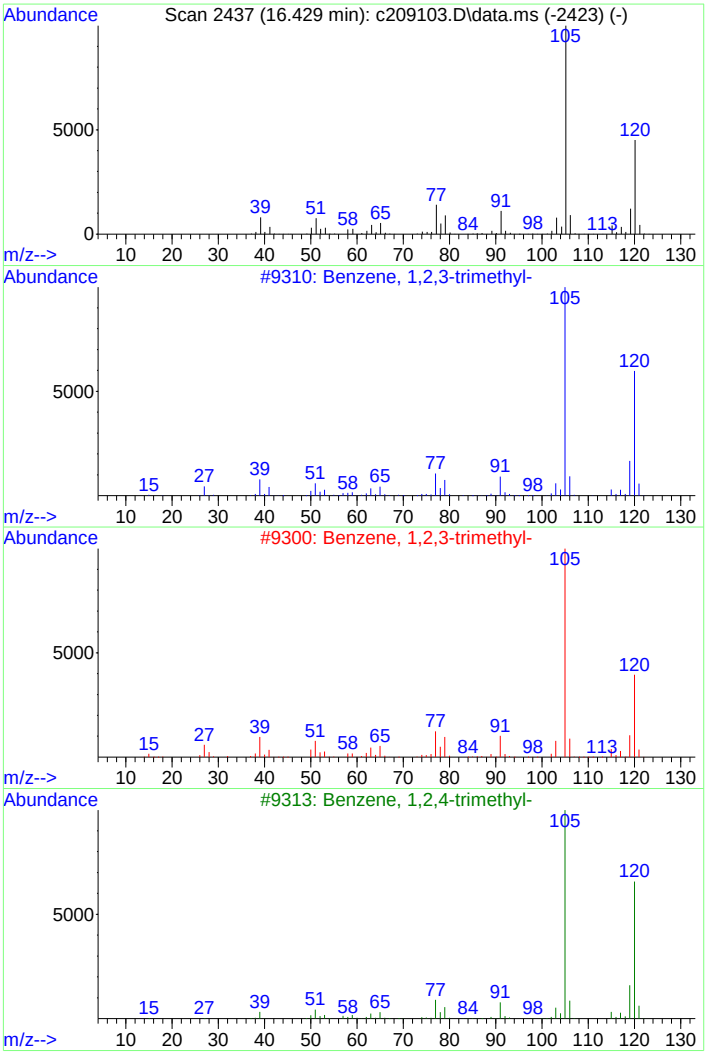
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

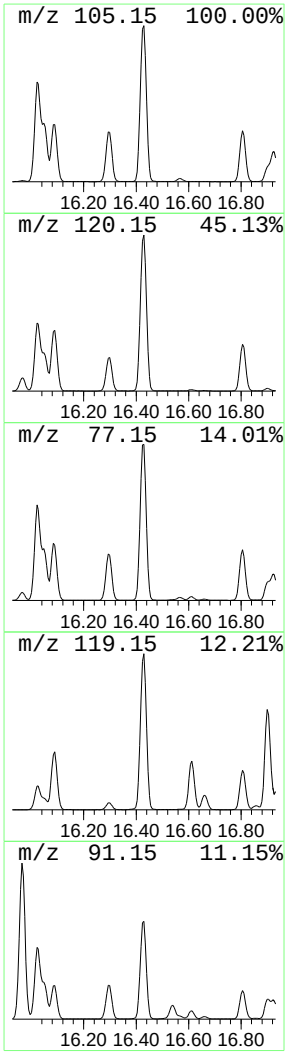
****

Peak Number 11 Benzene, 1,2,3-trimethyl- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.429	124.63 ug/L	15296100	1,4-dichlorobenzene-d4	16.801

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209103.D
Acq On : 15 Apr 2016 5:32 am
Operator : VIANNAC
Sample : jc18196-5
Misc : MS951,VC7691,5.0,,,,10
ALS Vial : 42 Sample Multiplier: 1

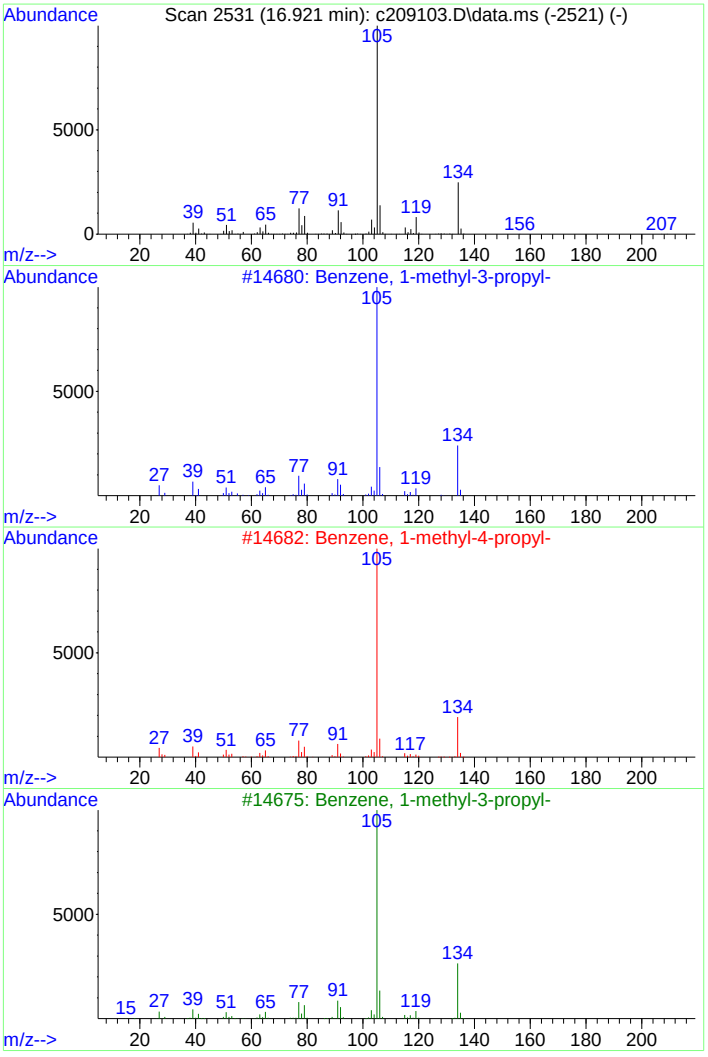
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

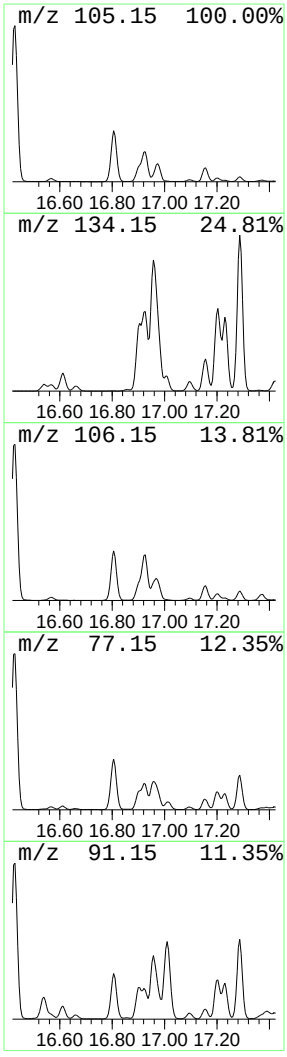
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

****
Peak Number 12 Benzene, 1-methyl-3-propyl- Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.921	32.35 ug/L	3970690	1,4-dichlorobenzene-d4	16.801

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-3-propyl-	134	C10H14	001074-43-7	94
2	Benzene, 1-methyl-4-propyl-	134	C10H14	001074-55-1	91
3	Benzene, 1-methyl-3-propyl-	134	C10H14	001074-43-7	91
4	Benzene, 1-methyl-2-propyl-	134	C10H14	001074-17-5	91
5	Benzene, 1-methyl-4-propyl-	134	C10H14	001074-55-1	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209103.D
Acq On : 15 Apr 2016 5:32 am
Operator : VIANNAC
Sample : jc18196-5
Misc : MS951,VC7691,5.0,,,,10
ALS Vial : 42 Sample Multiplier: 1

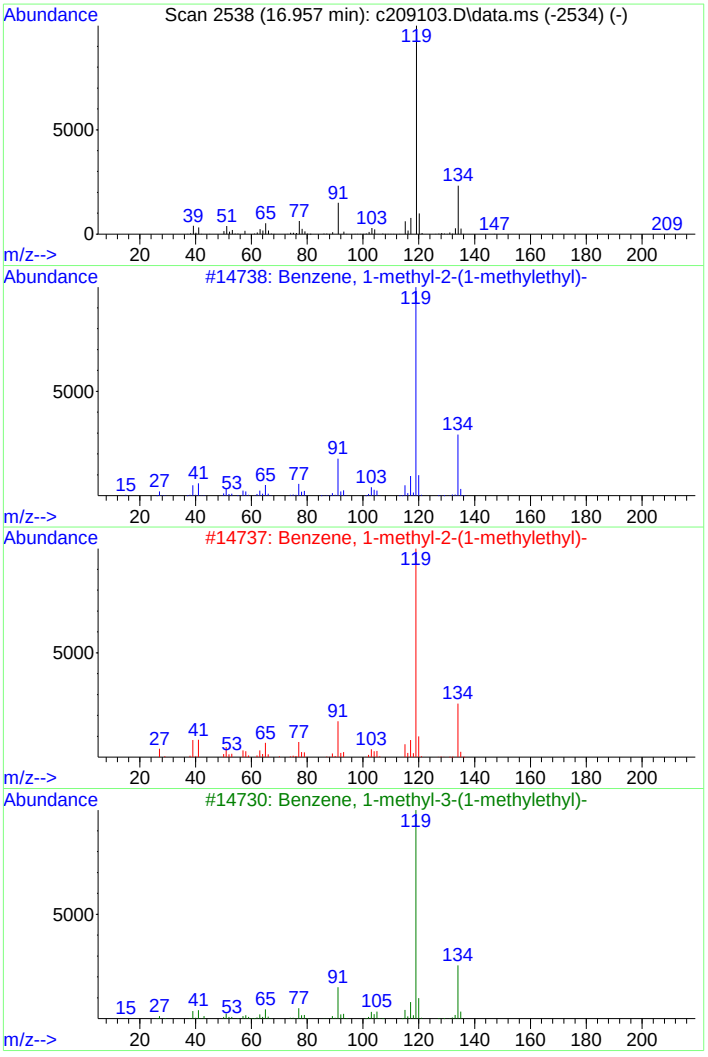
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

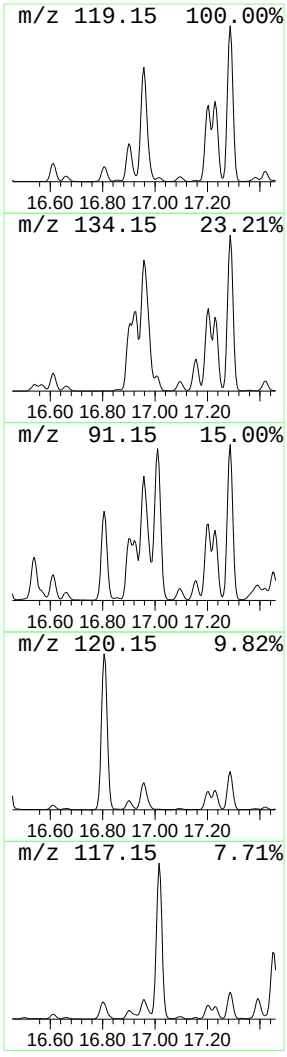
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

****
Peak Number 13 Benzene, 1-methyl-2-(1-meth... Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.957	38.11 ug/L	4677050	1,4-dichlorobenzene-d4	16.801

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	94
2	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	91
3	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	91
4	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	91
5	Benzene, 1-methyl-4-(1-methyleth...	134	C10H14	000099-87-6	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209103.D
Acq On : 15 Apr 2016 5:32 am
Operator : VIANNAC
Sample : jc18196-5
Misc : MS951,VC7691,5.0,,,,10
ALS Vial : 42 Sample Multiplier: 1

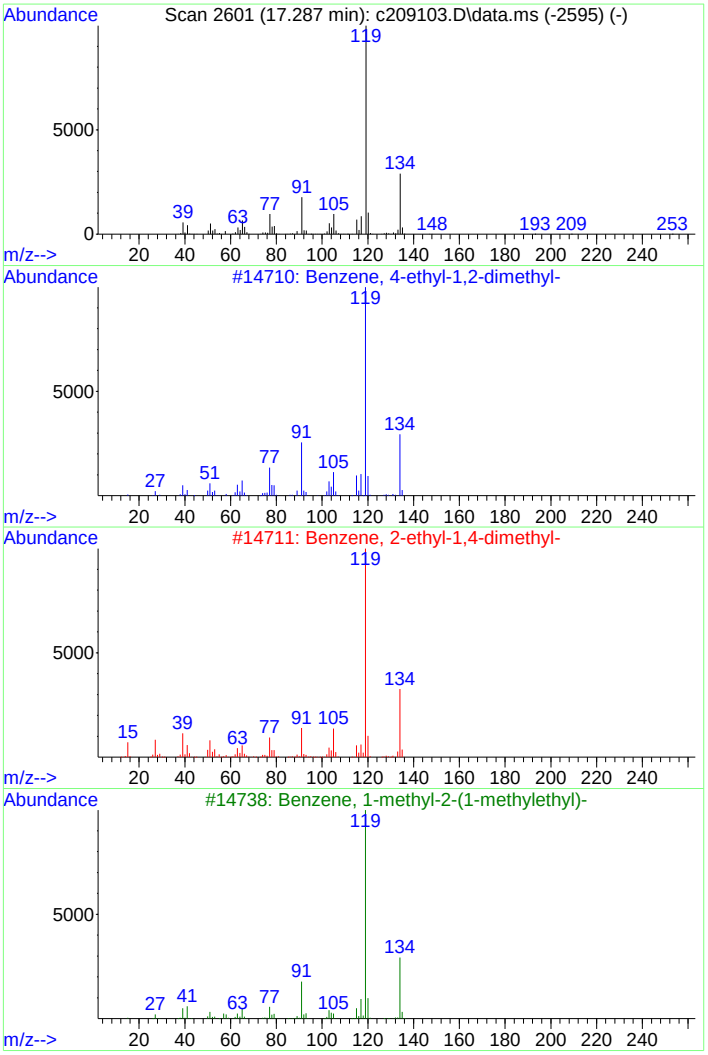
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

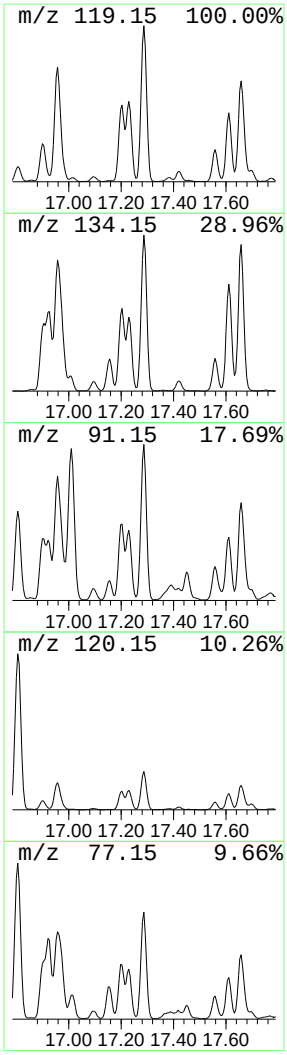
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

****
Peak Number 14 Benzene, 4-ethyl-1,2-dimethyl- Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.287	32.74 ug/L	4018550	1,4-dichlorobenzene-d4	16.801

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	95
2	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	94
3	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	94
4	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	94
5	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209103.D
Acq On : 15 Apr 2016 5:32 am
Operator : VIANNAC
Sample : jc18196-5
Misc : MS951,VC7691,5.0,,,,10
ALS Vial : 42 Sample Multiplier: 1

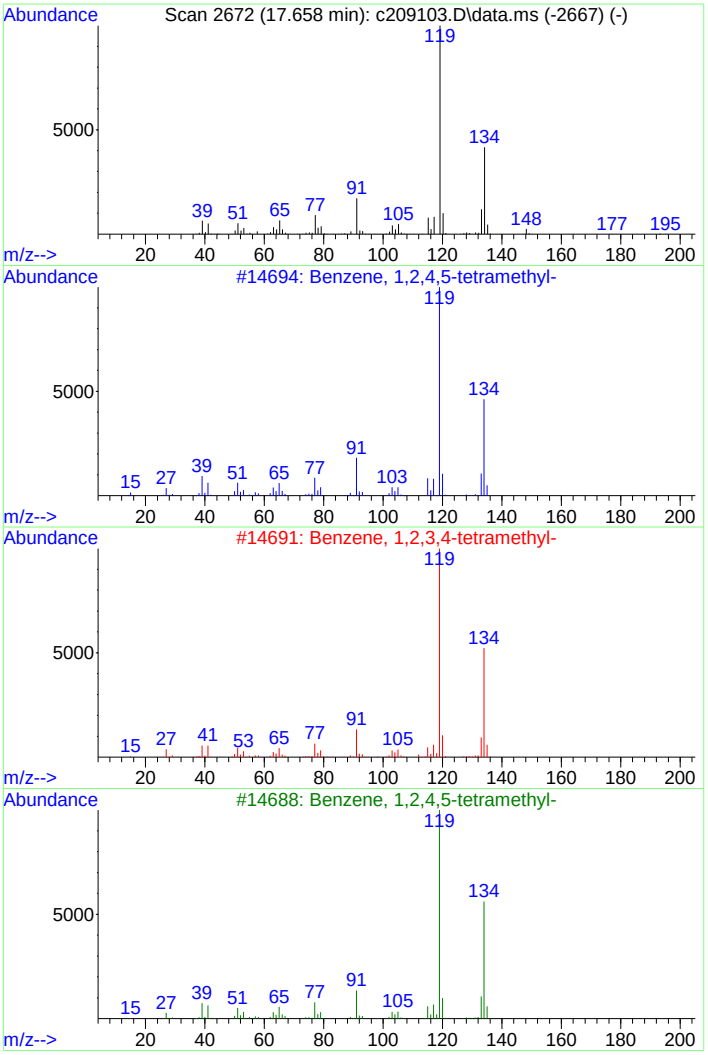
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

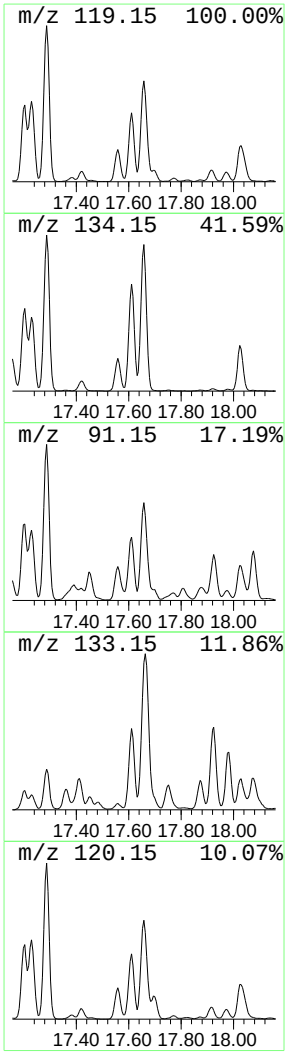
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

****
Peak Number 15 Benzene, 1,2,4,5-tetramethyl- Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.658	24.42 ug/L	2996900	1,4-dichlorobenzene-d4	16.801

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	96
2	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	94
3	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	94
4	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	94
5	1,3-Cyclopentadiene, 1,2,3,4-tet...	134	C10H14	076089-59-3	94





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\
Data File : c209103.D
Acq On : 15 Apr 2016 5:32 am
Operator : VIANNAC
Sample : jc18196-5
Misc : MS951,VC7691,5.0,,,,10
ALS Vial : 42 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Butane	4.588	26.5	ug/L	503664	2	10.783	950765	50.0
Butane, 2-methyl-	5.712	49.5	ug/L	941639	2	10.783	950765	50.0
Pentane	6.235	22.2	ug/L	422218	2	10.783	950765	50.0
2-Butene, 2-met...	6.857	23.1	ug/L	438982	2	10.783	950765	50.0
Pentane, 2-methyl-	7.997	31.0	ug/L	588853	2	10.783	950765	50.0
Cyclopentane, m...	9.957	37.2	ug/L	707467	2	10.783	950765	50.0
Heptane, 4-methyl-	12.796	38.4	ug/L	1038610	3	11.740	1350890	50.0
Benzene, 1-ethy...	16.022	104.8	ug/L	12865800	5	16.801	6136490	50.0
Benzene, 1,3,5-...	16.084	42.7	ug/L	5235870	5	16.801	6136490	50.0
Benzene, 1-ethy...	16.293	34.6	ug/L	4250520	5	16.801	6136490	50.0
Benzene, 1,2,3-...	16.429	124.6	ug/L	15296100	5	16.801	6136490	50.0
Benzene, 1-meth...	16.921	32.4	ug/L	3970690	5	16.801	6136490	50.0
Benzene, 1-meth...	16.957	38.1	ug/L	4677050	5	16.801	6136490	50.0
Benzene, 4-ethy...	17.287	32.7	ug/L	4018550	5	16.801	6136490	50.0
Benzene, 1,2,4,...	17.658	24.4	ug/L	2996900	5	16.801	6136490	50.0

Manual Integrations APPROVED (compounds with "m" flag)
MoHui Huang 04/21/16 10:10

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : c209122.D
Acq On : 15 Apr 2016 4:36 pm
Operator : VIANNAC
Sample : jc18196-6
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 18 11:49:44 2016
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Fri Apr 15 15:18:17 2016
Response via : Initial Calibration

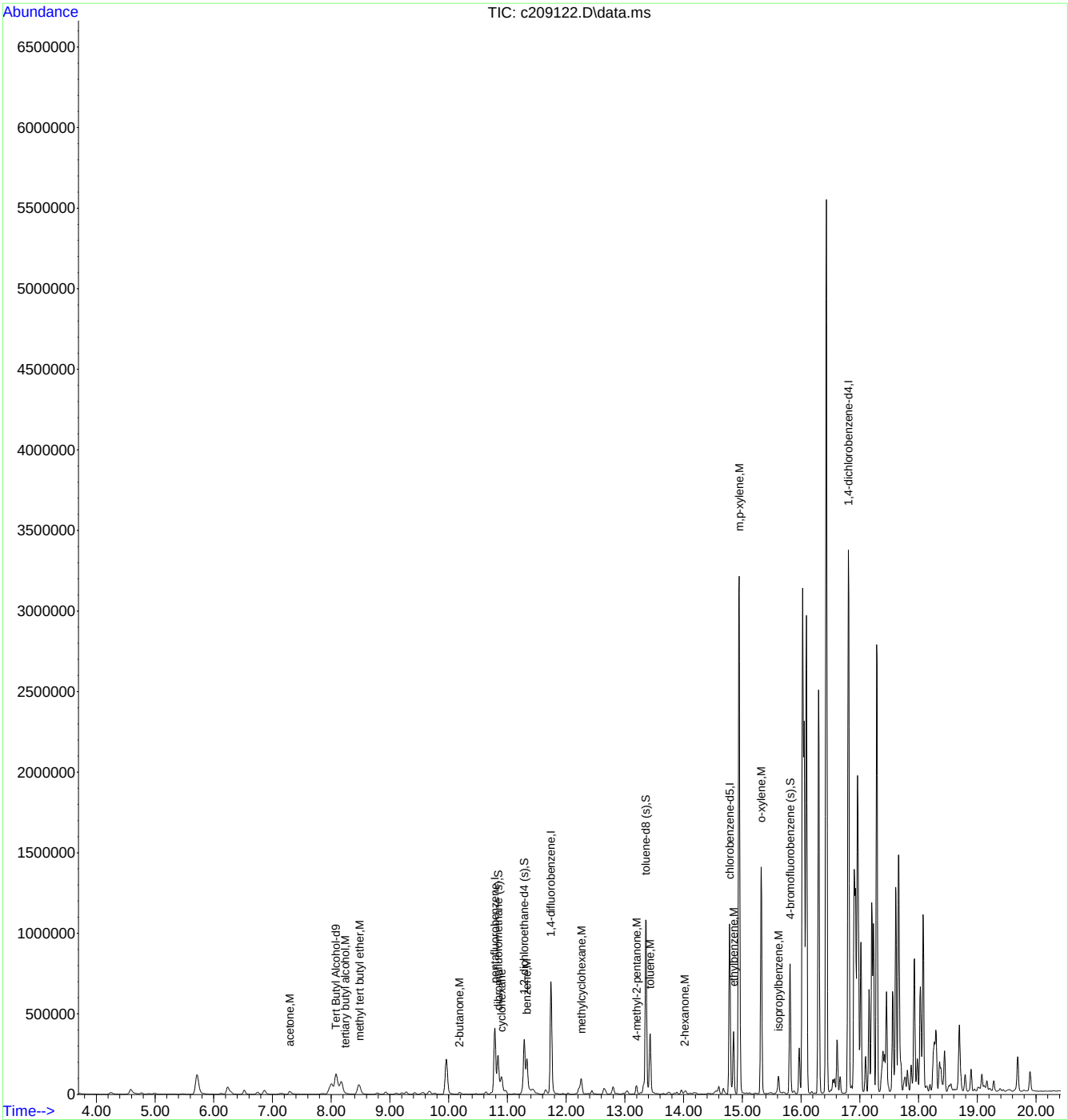
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.080	65	299575	500.00	ug/L	0.00
5) pentafluorobenzene	10.783	168	306935	50.00	ug/L	0.00
59) 1,4-difluorobenzene	11.740	114	575318	50.00	ug/L	0.00
88) chlorobenzene-d5	14.782	117	518925	50.00	ug/L	0.00
104) 1,4-dichlorobenzene-d4	16.800	152	247351	50.00	ug/L	0.00
System Monitoring Compounds						
50) dibromofluoromethane (s)	10.841	113	163639	49.73	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 99.46%			
51) 1,2-dichloroethane-d4 (s)	11.285	65	231715	50.64	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 101.28%			
80) toluene-d8 (s)	13.355	98	733191	50.13	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 100.26%			
106) 4-bromofluorobenzene (s)	15.812	174	182358	52.54	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 105.08%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.242	59	6386	10.13	ug/L #	15
23) acetone	7.291	58	14909	34.15	ug/L	87
32) methyl tert butyl ether	8.488	73	33370m	2.96	ug/L	
36) 2-butanone	10.182	72	5242	9.37	ug/L #	1
54) cyclohexane	10.898	84	51950	11.68	ug/L	84
65) benzene	11.332	78	194945	13.25	ug/L	98
73) methylcyclohexane	12.257	83	41547	10.05	ug/L	95
81) 4-methyl-2-pentanone	13.198	58	9162	4.48	ug/L	96
82) toluene	13.428	91	236449	15.60	ug/L	100
87) 2-hexanone	14.014	58	5060	2.53	ug/L	100
99) ethylbenzene	14.850	91	259332	14.88	ug/L	99
100) m,p-xylene	14.945	106	897394	142.06	ug/L	99
101) o-xylene	15.321	91	809777	58.10	ug/L	99
105) isopropylbenzene	15.614	105	66730	4.27	ug/L	99

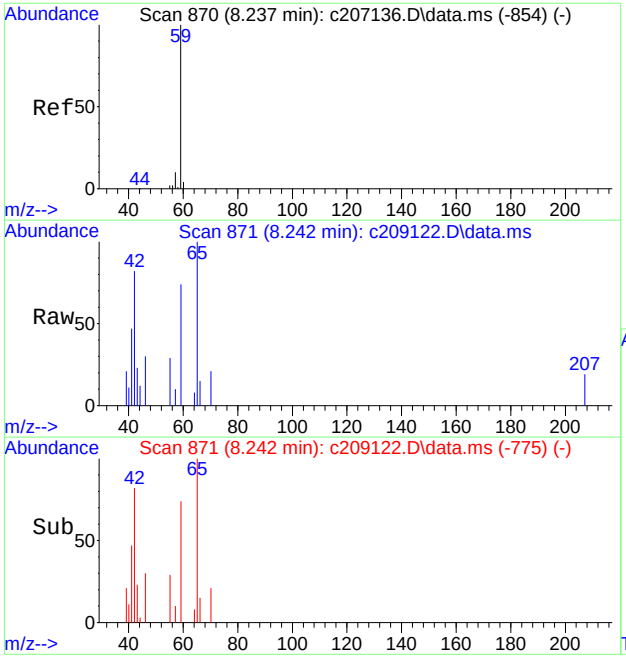
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : c209122.D
Acq On : 15 Apr 2016 4:36 pm
Operator : VIANNAC
Sample : jc18196-6
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 18 11:49:44 2016
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Fri Apr 15 15:18:17 2016
Response via : Initial Calibration

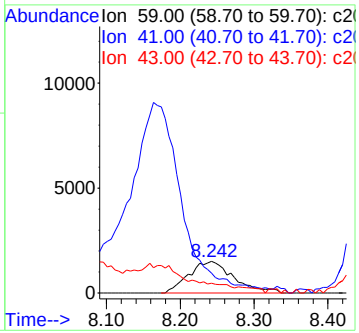


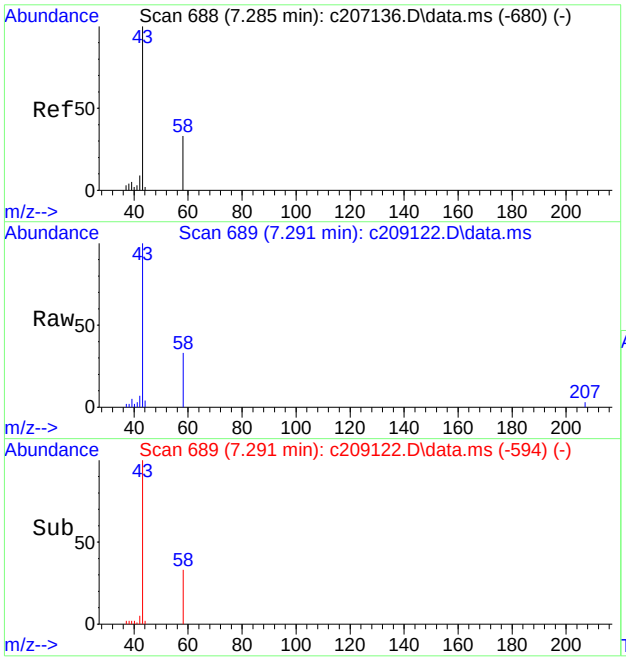


#3
tertiary butyl alcohol
Concen: 10.13 ug/L
RT: 8.242 min Scan# 871
Delta R.T. 0.004 min
Lab File: c209122.D
Acq: 15 Apr 2016 4:36 pm

Tgt Ion: 59 Resp: 6386

Ion	Ratio	Lower	Upper
59	100		
41	48.6	0.0	32.5#
43	20.9	0.0	33.8

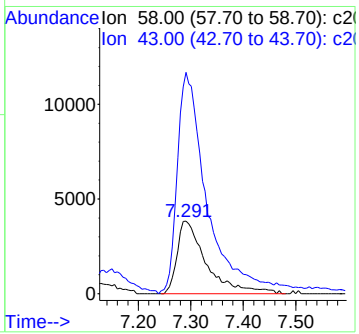




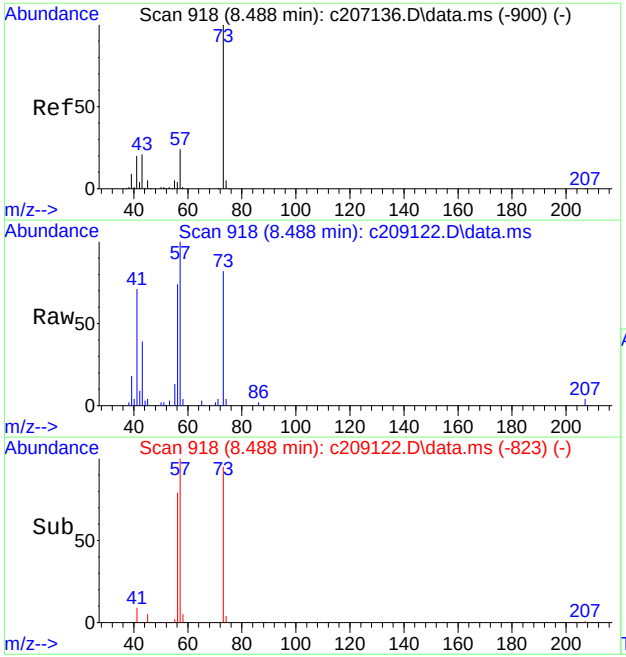
#23
acetone
Concen: 34.15 ug/L
RT: 7.291 min Scan# 689
Delta R.T. -0.001 min
Lab File: c209122.D
Acq: 15 Apr 2016 4:36 pm

Tgt Ion: 58 Resp: 14909

Ion	Ratio	Lower	Upper
58	100		
43	301.0	297.8	357.8



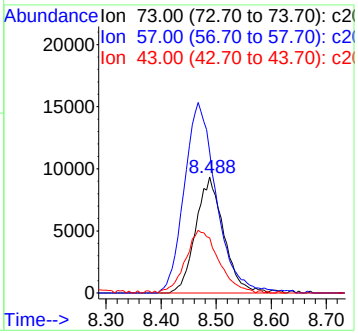
SGS ACCUTEST JC18196

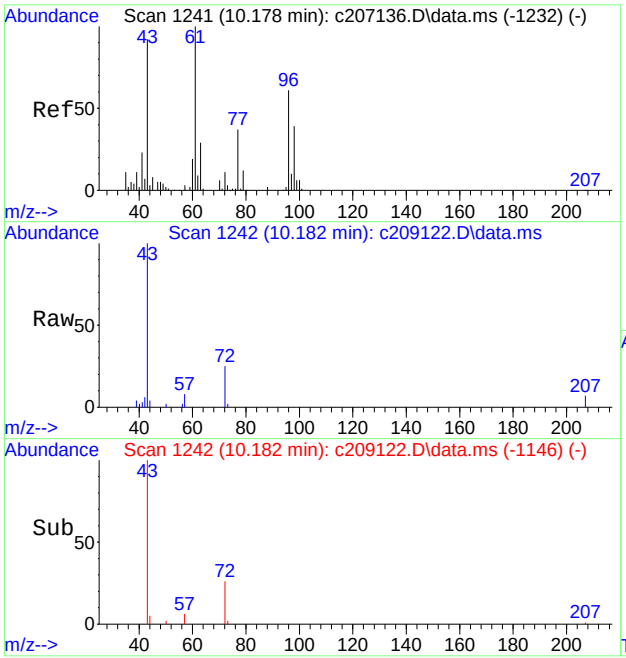


#32
methyl tert butyl ether
Concen: 2.96 ug/L m
RT: 8.488 min Scan# 918
Delta R.T. -0.002 min
Lab File: c209122.D
Acq: 15 Apr 2016 4:36 pm

Tgt Ion: 73 Resp: 33370

Ion	Ratio	Lower	Upper
73	100		
57	121.4	0.0	54.9#
43	47.7	0.0	51.7

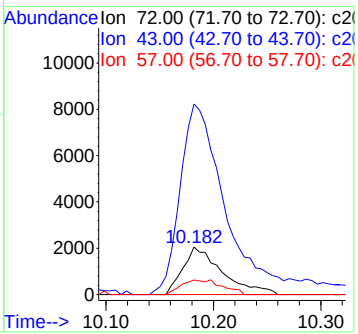


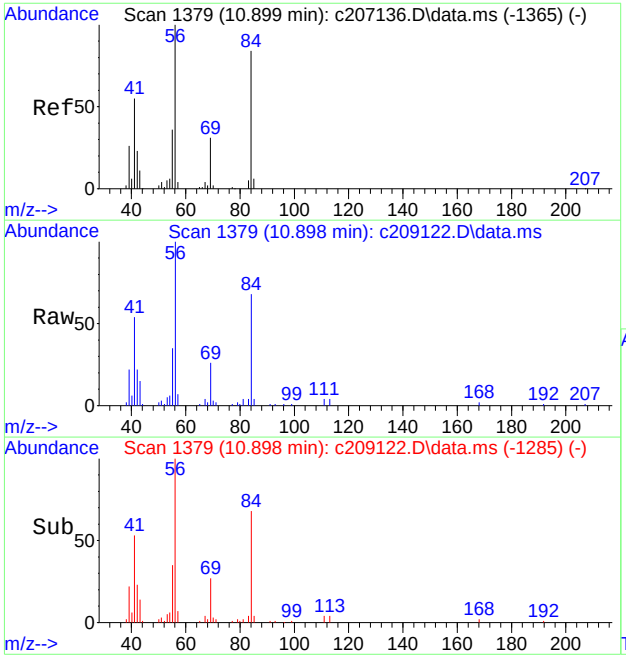


#36
2-butanone
Concen: 9.37 ug/L
RT: 10.182 min Scan# 1242
Delta R.T. 0.004 min
Lab File: c209122.D
Acq: 15 Apr 2016 4:36 pm

Tgt Ion: 72 Resp: 5242

Ion	Ratio	Lower	Upper
72	100		
43	382.3	926.6	1720.8#
57	30.9	20.9	38.7

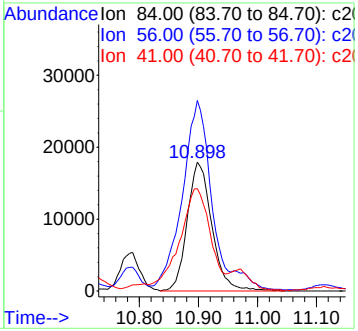


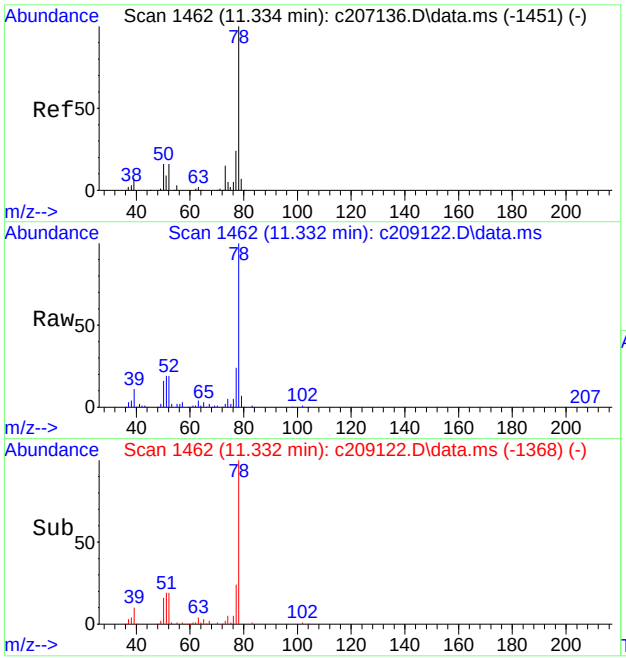


#54
cyclohexane
Concen: 11.68 ug/L
RT: 10.898 min Scan# 1379
Delta R.T. -0.007 min
Lab File: c209122.D
Acq: 15 Apr 2016 4:36 pm

Tgt Ion: 84 Resp: 51950

Ion	Ratio	Lower	Upper
84	100		
56	146.8	88.4	164.2
41	79.3	49.0	91.0

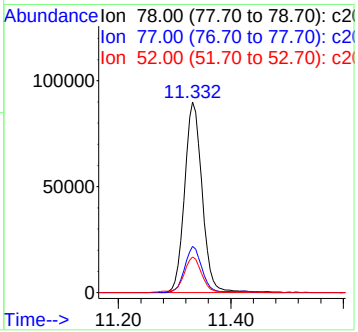


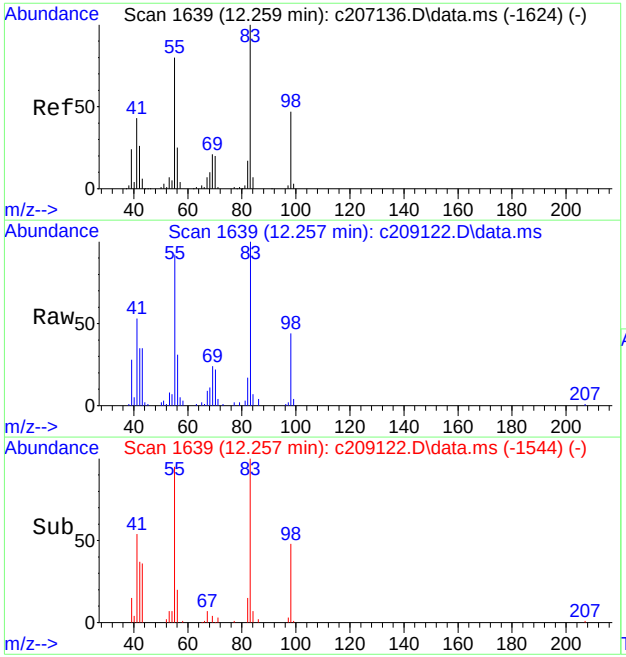


#65
benzene
Concen: 13.25 ug/L
RT: 11.332 min Scan# 1462
Delta R.T. -0.007 min
Lab File: c209122.D
Acq: 15 Apr 2016 4:36 pm

Tgt Ion: 78 Resp: 194945

Ion	Ratio	Lower	Upper
78	100		
77	24.3	0.0	53.5
52	18.7	0.0	48.0

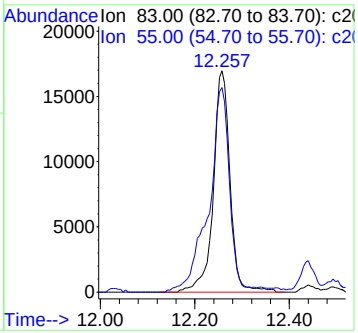


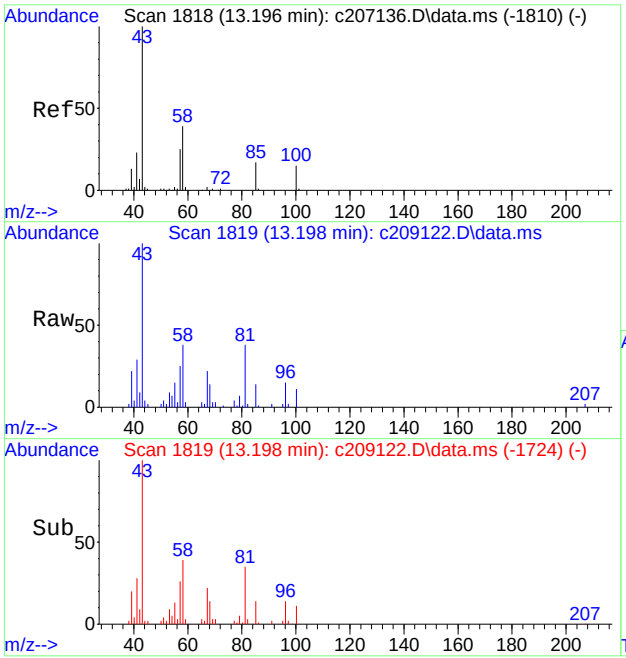


#73
methylcyclohexane
Concen: 10.05 ug/L
RT: 12.257 min Scan# 1639
Delta R.T. -0.002 min
Lab File: c209122.D
Acq: 15 Apr 2016 4:36 pm

Tgt Ion: 83 Resp: 41547

Ion	Ratio	Lower	Upper
83	100		
55	92.4	61.2	113.8

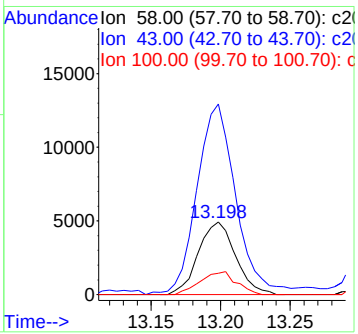


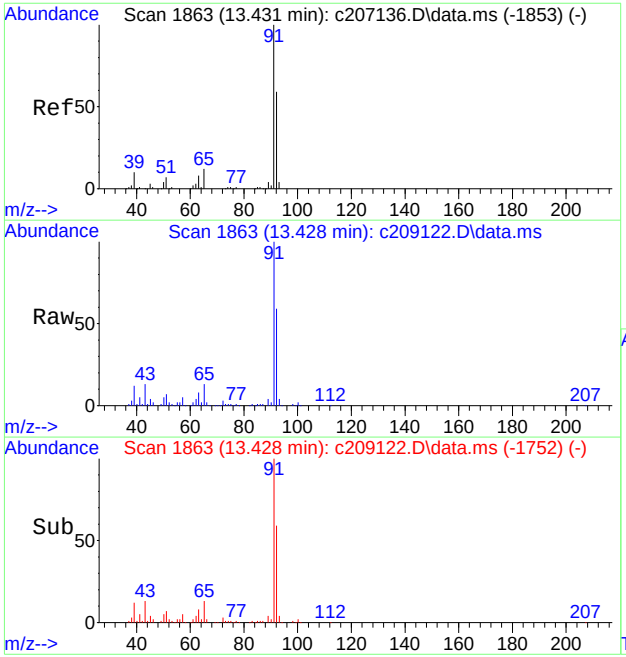


#81
4-methyl-2-pentanone
Concen: 4.48 ug/L
RT: 13.198 min Scan# 1819
Delta R.T. -0.002 min
Lab File: c209122.D
Acq: 15 Apr 2016 4:36 pm

Tgt Ion: 58 Resp: 9162

Ion	Ratio	Lower	Upper
58	100		
43	259.3	221.8	281.8
100	29.5	0.5	60.5

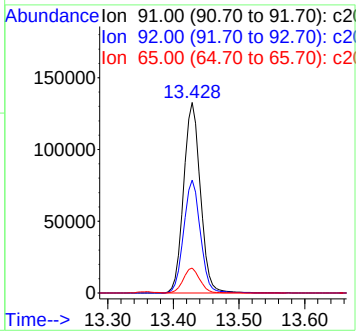


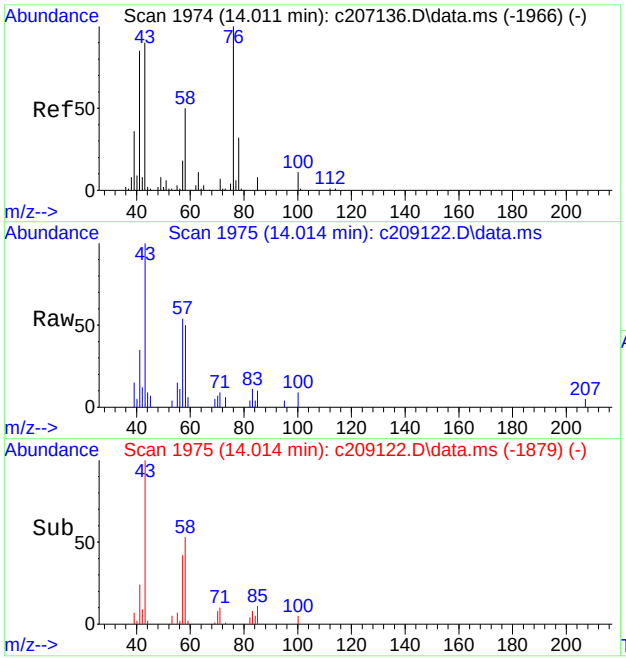


#82
toluene
Concen: 15.60 ug/L
RT: 13.428 min Scan# 1863
Delta R.T. -0.002 min
Lab File: c209122.D
Acq: 15 Apr 2016 4:36 pm

Tgt Ion: 91 Resp: 236449

Ion	Ratio	Lower	Upper
91	100		
92	59.3	29.4	89.4
65	13.1	0.0	42.9

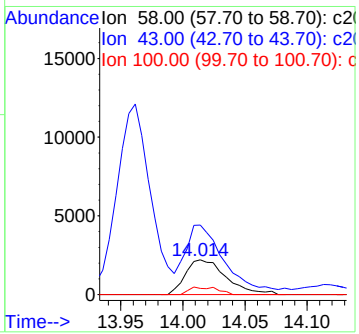


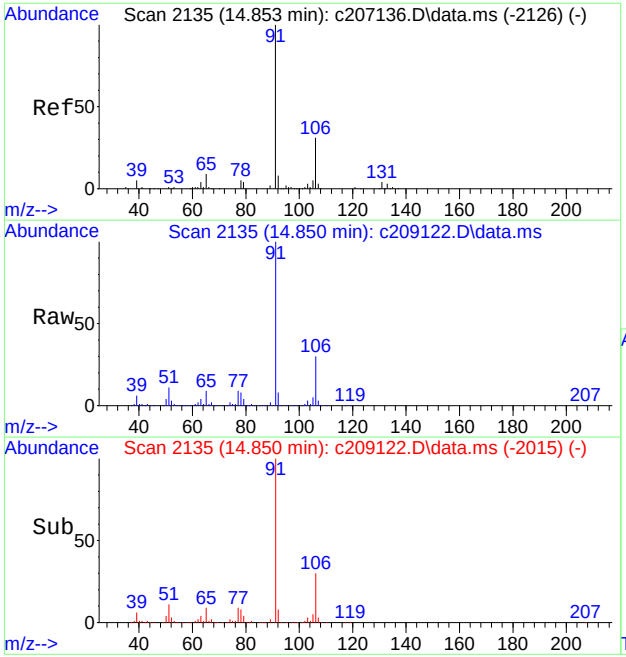


#87
2-hexanone
Concen: 2.53 ug/L
RT: 14.014 min Scan# 1975
Delta R.T. 0.003 min
Lab File: c209122.D
Acq: 15 Apr 2016 4:36 pm

Tgt Ion: 58 Resp: 5060

Ion	Ratio	Lower	Upper
58	100		
43	180.8	150.9	210.9
100	17.8	0.0	48.4

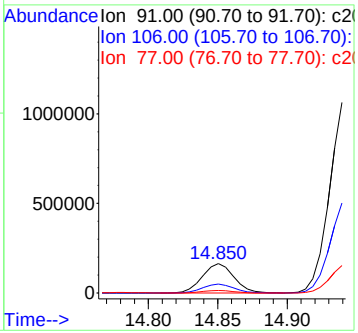


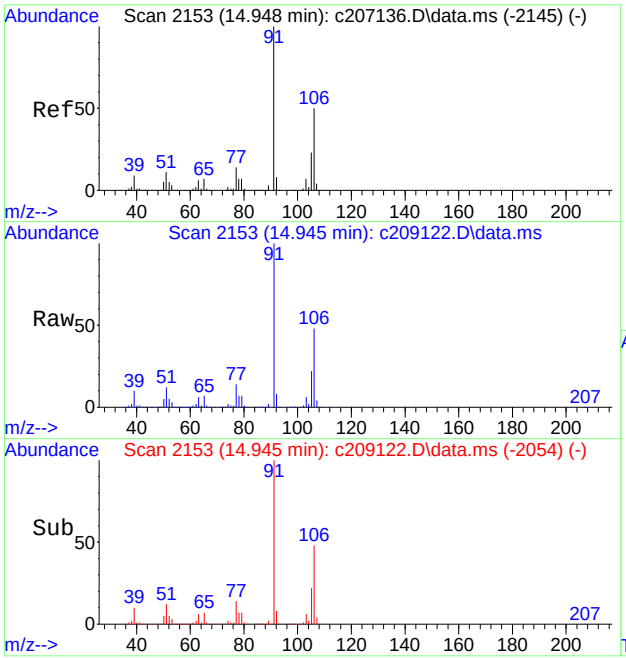


#99
ethylbenzene
Concen: 14.88 ug/L
RT: 14.850 min Scan# 2135
Delta R.T. -0.002 min
Lab File: c209122.D
Acq: 15 Apr 2016 4:36 pm

Tgt Ion: 91 Resp: 259332

Ion	Ratio	Lower	Upper
91	100		
106	30.4	0.0	59.9
77	8.7	0.0	39.2

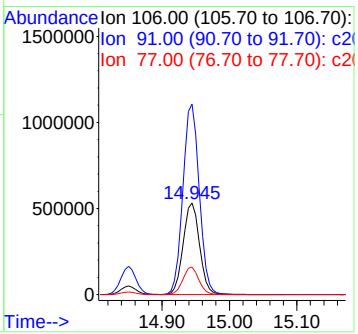


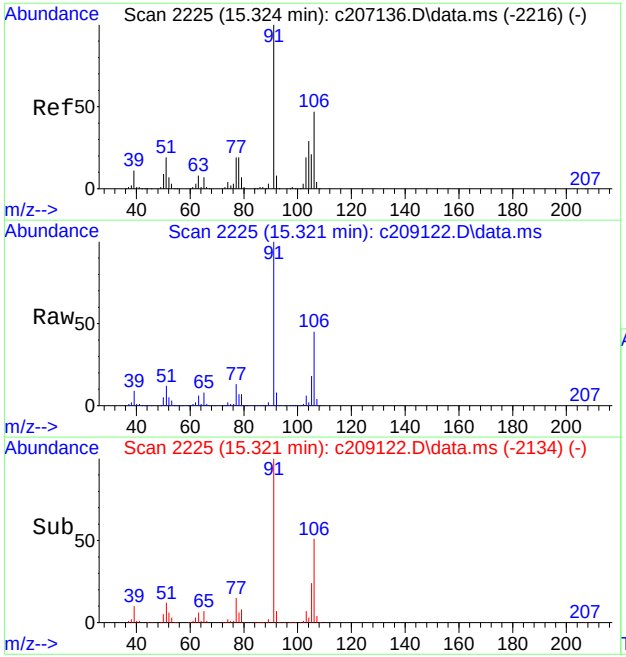


#100
m,p-xylene
Concen: 142.06 ug/L
RT: 14.945 min Scan# 2153
Delta R.T. -0.002 min
Lab File: c209122.D
Acq: 15 Apr 2016 4:36 pm

Tgt Ion:106 Resp: 897394

Ion	Ratio	Lower	Upper
106	100		
91	207.9	179.7	239.7
77	30.1	0.0	59.6

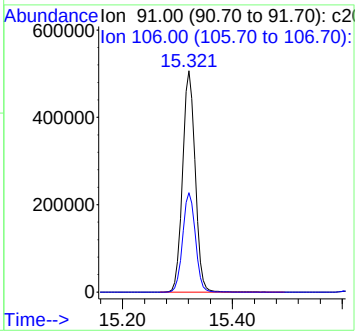


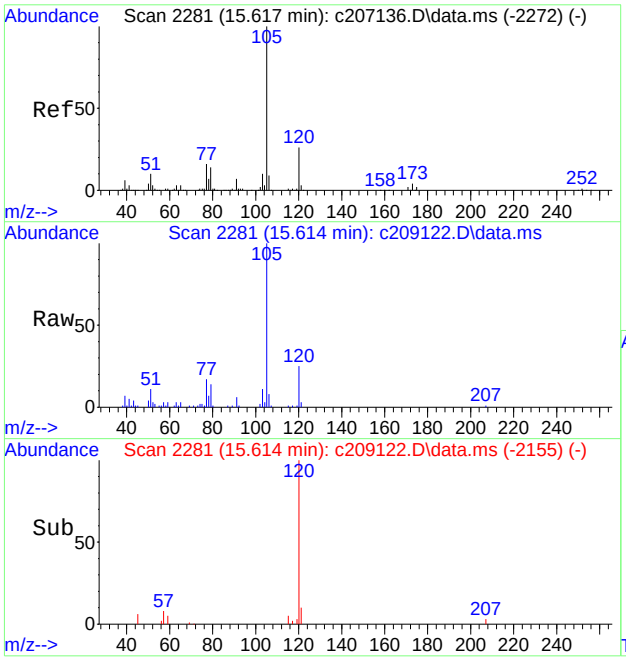


#101
o-xylene
Concen: 58.10 ug/L
RT: 15.321 min Scan# 2225
Delta R.T. -0.002 min
Lab File: c209122.D
Acq: 15 Apr 2016 4:36 pm

Tgt Ion: 91 Resp: 809777

Ion	Ratio	Lower	Upper
91	100		
106	44.9	14.3	74.3

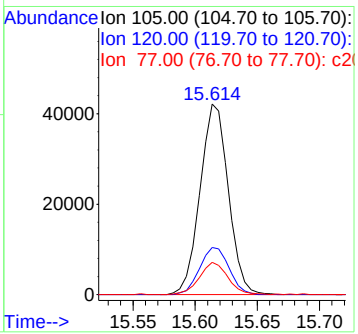




#105
isopropylbenzene
Concen: 4.27 ug/L
RT: 15.614 min Scan# 2281
Delta R.T. -0.002 min
Lab File: c209122.D
Acq: 15 Apr 2016 4:36 pm

Tgt Ion:105 Resp: 66730

Ion	Ratio	Lower	Upper
105	100		
120	24.7	0.0	55.7
77	17.0	0.0	46.7



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : c209122.D
Acq On : 15 Apr 2016 4:36 pm
Operator : VIANNAC
Sample : jc18196-6
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 16 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 10 prefer < Tangent else baseline drop >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MC7650.M
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

Signal : TIC: c20912

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.243	96	106	140	rBB2	11132	46922	0.56%	0.052%
2	4.588	156	172	200	rBB	29178	112191	1.33%	0.125%
3	4.771	200	207	222	rVV2	7963	22759	0.27%	0.025%
4	4.985	242	248	325	rVB3	7286	46549	0.55%	0.052%
5	5.712	370	387	454	rBB	121984	528926	6.28%	0.589%
6	6.240	476	488	520	rBB3	44250	184520	2.19%	0.205%
7	6.517	530	541	560	rBB	26818	76813	0.91%	0.086%
8	6.747	567	585	596	rBB2	13379	38489	0.46%	0.043%
9	6.862	596	607	629	rBB2	25086	81925	0.97%	0.091%
10	7.134	646	659	679	rBB5	6260	30064	0.36%	0.033%
11	7.291	679	689	750	rBB	18317	73113	0.87%	0.081%
12	7.855	778	797	806	rBV7	5197	24995	0.30%	0.028%
13	8.007	806	826	832	rVV4	63622	288115	3.42%	0.321%
14	8.080	832	840	900	rVB2	125361	815546	9.68%	0.908%
15	8.467	900	914	952	rBB3	58848	246180	2.92%	0.274%
16	8.786	963	975	988	rBB4	8547	29623	0.35%	0.033%
17	8.927	991	1002	1026	rBB2	14577	45839	0.54%	0.051%
18	9.105	1026	1036	1046	rBV3	7829	23454	0.28%	0.026%
19	9.204	1046	1055	1062	rBV3	9241	25795	0.31%	0.029%
20	9.277	1062	1069	1085	rVB	15799	41859	0.50%	0.047%
21	9.424	1085	1097	1109	rBB3	11227	31577	0.37%	0.035%
22	9.554	1109	1122	1133	rBB4	11714	38502	0.46%	0.043%
23	9.669	1133	1144	1156	rBV5	18466	61049	0.72%	0.068%
24	9.957	1184	1199	1234	rBB	218734	650245	7.72%	0.724%
25	10.182	1234	1242	1258	rBB	12505	32622	0.39%	0.036%
26	10.631	1320	1328	1338	rBB	13688	31107	0.37%	0.035%
27	10.783	1338	1357	1363	rBV	410881	979401	11.63%	1.090%
28	10.841	1363	1368	1411	rVB2	242712	947849	11.25%	1.055%
29	11.285	1438	1453	1459	rBV	339601	847099	10.06%	0.943%
30	11.332	1459	1462	1511	rVB	221483	630907	7.49%	0.702%
31	11.651	1511	1523	1531	rBV3	28433	82972	0.98%	0.092%
32	11.740	1531	1540	1566	rBB	694798	1427285	16.94%	1.589%
33	12.257	1613	1639	1651	rBB3	95135	303115	3.60%	0.337%
34	12.435	1667	1673	1702	rVB2	22739	55205	0.66%	0.061%
35	12.644	1704	1713	1728	rBB4	36814	105729	1.26%	0.118%
36	12.801	1728	1743	1769	rBB2	45455	118797	1.41%	0.132%
37	13.036	1780	1788	1802	rVB4	21737	59626	0.71%	0.066%
38	13.198	1811	1819	1826	rBB	53175	99896	1.19%	0.111%
39	13.355	1836	1849	1857	rBB	1053448	1922555	22.82%	2.140%
40	13.428	1857	1863	1896	rVB2	376217	756134	8.98%	0.842%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : c209122.D
Acq On : 15 Apr 2016 4:36 pm
Operator : VIANNAC
Sample : jc18196-6
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 16 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 10 prefer < Tangent else baseline drop >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MC7650.M
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

41	13.753	1912	1925	1936	rBB4	13903	39673	0.47%	0.044%
42	13.962	1958	1965	1971	rBV2	26235	51514	0.61%	0.057%
43	14.035	1971	1979	1991	rVB2	19386	47887	0.57%	0.053%
44	14.176	2000	2006	2024	rVB9	10079	38113	0.45%	0.042%
45	14.552	2065	2078	2081	rBV2	18628	48064	0.57%	0.054%
46	14.599	2081	2087	2095	rVB3	46829	91223	1.08%	0.102%
47	14.678	2095	2102	2114	rBB3	34965	74841	0.89%	0.083%
48	14.782	2115	2122	2129	rBB	1033921	1650240	19.59%	1.837%
49	14.850	2129	2135	2144	rVB	387402	637883	7.57%	0.710%
50	14.945	2144	2153	2173	rBB	3212263	5404736	64.16%	6.017%
51	15.321	2217	2225	2247	rBB	1407127	2251123	26.72%	2.506%
52	15.614	2269	2281	2295	rBB	105473	194060	2.30%	0.216%
53	15.697	2295	2297	2309	rVB5	12883	27691	0.33%	0.031%
54	15.812	2309	2319	2328	rBB	802164	1254925	14.90%	1.397%
55	15.880	2328	2332	2340	rVB4	17523	31607	0.38%	0.035%
56	15.969	2340	2349	2353	rBV	284549	441293	5.24%	0.491%
57	16.027	2353	2360	2368	rVV	3126350	7942420	94.28%	8.841%
58	16.089	2368	2372	2385	rVB	2966107	4486368	53.26%	4.994%
59	16.299	2404	2412	2425	rBB	2503302	3851455	45.72%	4.287%
60	16.429	2425	2437	2448	rBB	5541652	8423906	100.00%	9.377%
61	16.570	2453	2464	2467	rVV2	81446	235054	2.79%	0.262%
62	16.612	2467	2472	2478	rBB	303448	419687	4.98%	0.467%
63	16.665	2478	2482	2500	rVB	100630	141129	1.68%	0.157%
64	16.806	2501	2509	2522	rBB2	3358131	5442795	64.61%	6.059%
65	16.905	2522	2528	2535	rVV2	1381179	3707850	44.02%	4.128%
66	16.963	2535	2539	2545	rVV2	1962484	3723742	44.20%	4.145%
67	17.020	2545	2550	2558	rVV2	928971	1476250	17.52%	1.643%
68	17.098	2558	2565	2570	rBB	217822	311429	3.70%	0.347%
69	17.156	2570	2576	2580	rVV	634151	930415	11.04%	1.036%
70	17.203	2580	2585	2588	rVV	1173928	1827285	21.69%	2.034%
71	17.234	2588	2591	2596	rVV	1043155	1405552	16.69%	1.565%
72	17.287	2596	2601	2609	rBB	2748171	3955886	46.96%	4.404%
73	17.396	2610	2622	2629	rBV4	252124	892267	10.59%	0.993%
74	17.454	2629	2633	2645	rVV	620748	960111	11.40%	1.069%
75	17.559	2645	2653	2658	rVV	621630	1000280	11.87%	1.114%
76	17.611	2658	2663	2668	rBB	1134770	1533588	18.21%	1.707%
77	17.658	2668	2672	2685	rVV2	1468925	2788596	33.10%	3.104%
78	17.768	2685	2693	2697	rVV5	91046	211891	2.52%	0.236%
79	17.809	2697	2701	2708	rVV2	132343	221251	2.63%	0.246%
80	17.872	2708	2713	2717	rVV3	164269	264463	3.14%	0.294%
81	17.930	2718	2724	2729	rBB2	768218	1204563	14.30%	1.341%
82	17.977	2729	2733	2738	rVV2	204002	342285	4.06%	0.381%
83	18.029	2738	2743	2748	rVV2	650493	1221977	14.51%	1.360%
84	18.076	2748	2752	2770	rVV	1098460	1808047	21.46%	2.013%
85	18.196	2770	2775	2779	rVV	42763	64055	0.76%	0.071%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : c209122.D
Acq On : 15 Apr 2016 4:36 pm
Operator : VIANNAC
Sample : jc18196-6
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 16 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 10 prefer < Tangent else baseline drop >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MC7650.M
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

86	18.296	2779	2794	2800	rBB3	366783	1279660	15.19%	1.425%
87	18.358	2800	2806	2816	rVV3	184678	524415	6.23%	0.584%
88	18.442	2816	2822	2830	rVB	253019	433784	5.15%	0.483%
89	18.552	2830	2843	2862	rBV4	47575	213420	2.53%	0.238%
90	18.693	2862	2870	2882	rBB	404717	828604	9.84%	0.922%
91	18.792	2882	2889	2902	rBB2	101818	167912	1.99%	0.187%
92	18.892	2902	2908	2915	rBB	133670	218224	2.59%	0.243%
93	18.954	2916	2920	2926	rVV	13965	23051	0.27%	0.026%
94	19.017	2926	2932	2938	rVV6	25071	70531	0.84%	0.079%
95	19.080	2938	2944	2956	rBB	87004	148643	1.76%	0.165%
96	19.164	2956	2960	2976	rVV2	65370	146747	1.74%	0.163%
97	19.279	2976	2982	2999	rBB	62330	91537	1.09%	0.102%
98	19.388	2999	3003	3052	rVV5	15772	81011	0.96%	0.090%
99	19.686	3052	3060	3072	rBB	209309	372272	4.42%	0.414%
100	19.901	3093	3101	3195	rBB	118616	187263	2.22%	0.208%

Sum of corrected areas: 89831893

LSC Report - Integrated Chromatogram

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Data Path : C:\msdchem\1\DATA\
Data File : c209122.D
Acq On    : 15 Apr 2016   4:36 pm
Operator  : VIANNAC
Sample    : jc18196-6
Misc      : MS951,VC7692,5.0,,,,1
ALS Vial  : 16   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title  : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

TIC Library   : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P
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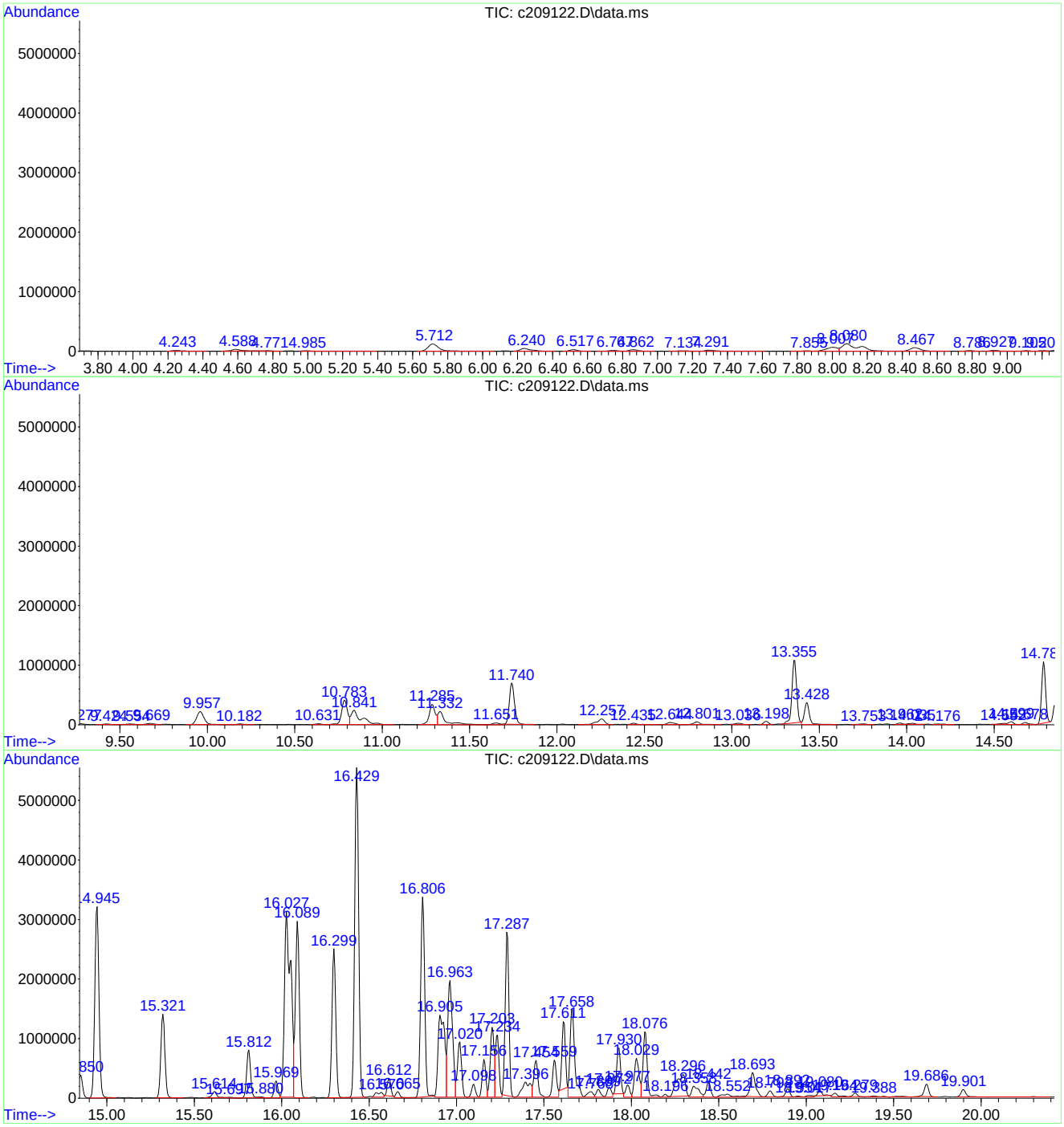


SGS ACCUTEST JC18196

Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209122.D
Acq On : 15 Apr 2016 4:36 pm
Operator : VIANNAC
Sample : jc18196-6
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

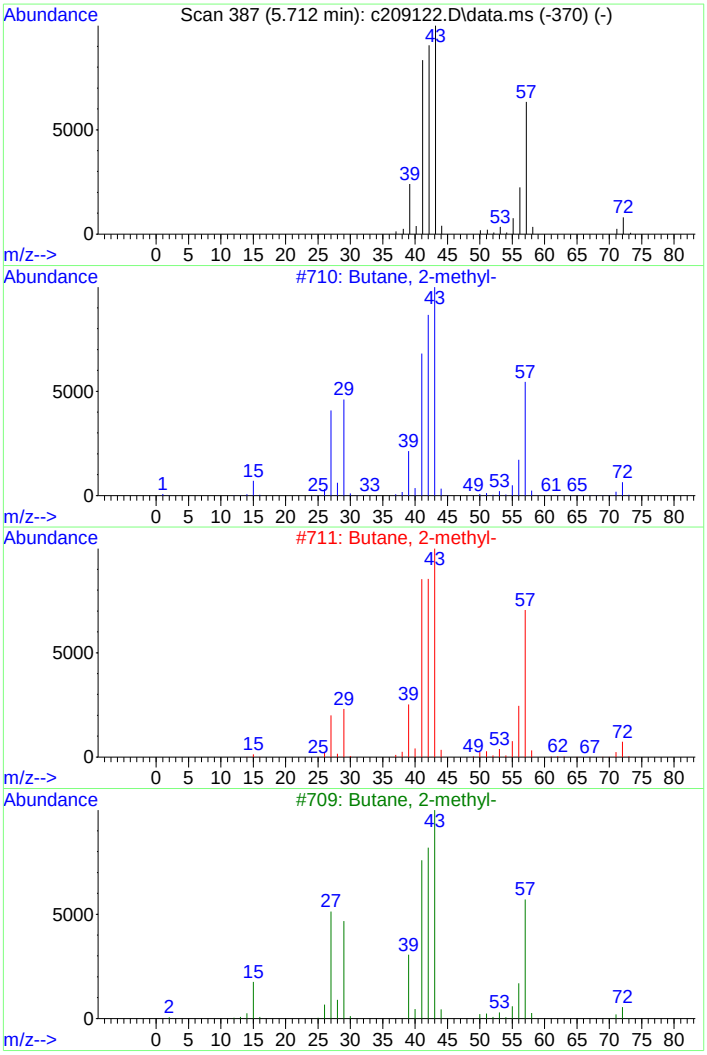
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

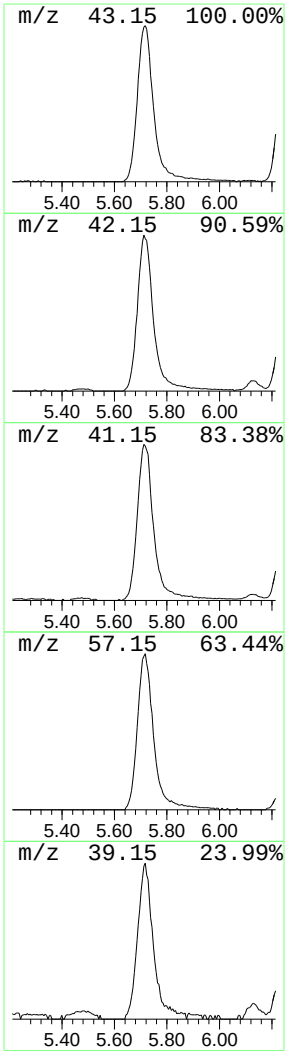
****

Peak Number 1 Butane, 2-methyl- Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.712	27.00 ug/L	528926	pentafluorobenzene	10.783

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	91
2	Butane, 2-methyl-	72	C5H12	000078-78-4	91
3	Butane, 2-methyl-	72	C5H12	000078-78-4	91
4	Pentane	72	C5H12	000109-66-0	50
5	Propane, 2-methyl-2-nitro-	103	C4H9NO2	000594-70-7	14





SGS ACCUTEST JC18196

Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209122.D
Acq On : 15 Apr 2016 4:36 pm
Operator : VIANNAC
Sample : jc18196-6
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

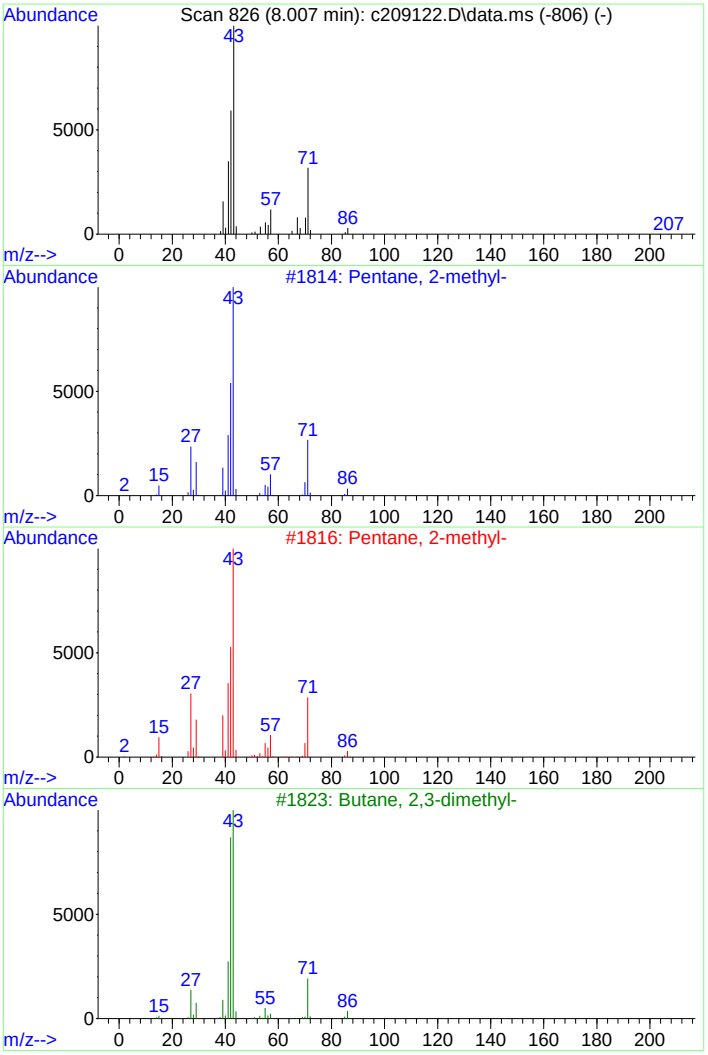
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

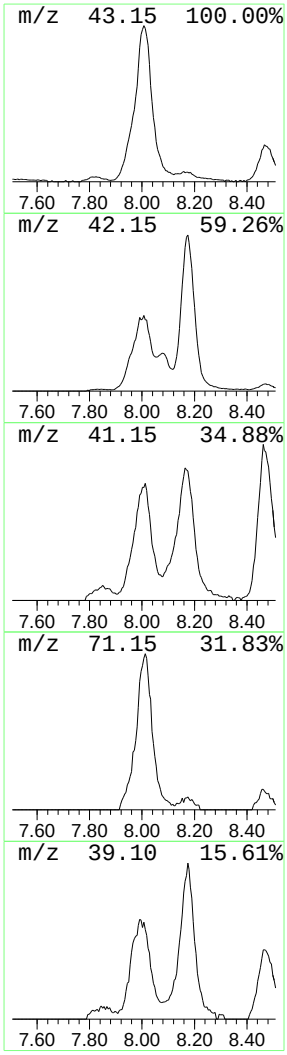
****

Peak Number 2 Pentane, 2-methyl- Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.007	14.71 ug/L	288115	pentafluorobenzene	10.783

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2-methyl-	86	C6H14	000107-83-5	91
2	Pentane, 2-methyl-	86	C6H14	000107-83-5	87
3	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	53
4	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	50
5	Pentane	72	C5H12	000109-66-0	50





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209122.D
Acq On : 15 Apr 2016 4:36 pm
Operator : VIANNAC
Sample : jc18196-6
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

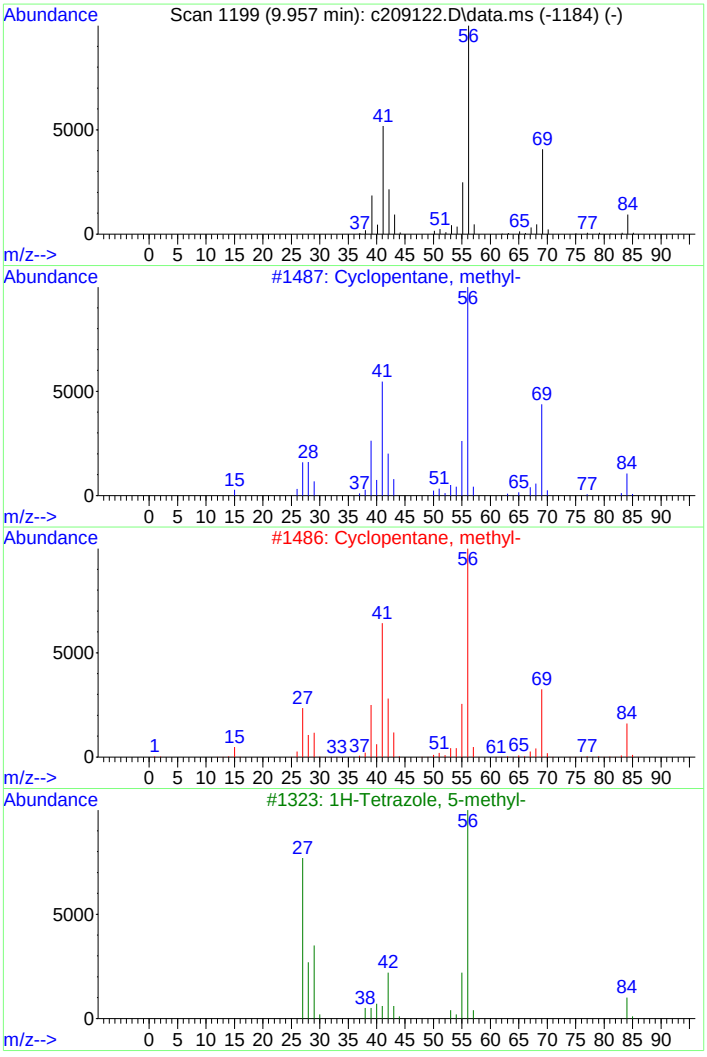
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

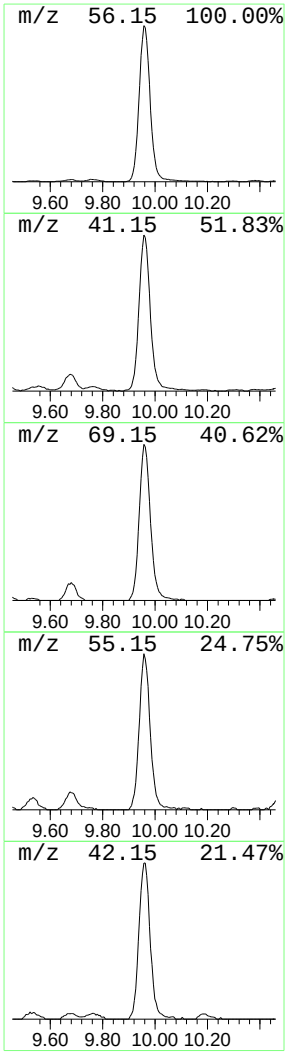
****

Peak Number 3 Cyclopentane, methyl- Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.957	33.20 ug/L	650245	pentafluorobenzene	10.783

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	91
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	91
3	1H-Tetrazole, 5-methyl-	84	C2H4N4	004076-36-2	80
4	Cyclopentane, methyl-	84	C6H12	000096-37-7	78
5	Cyclohexane	84	C6H12	000110-82-7	78





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209122.D
Acq On : 15 Apr 2016 4:36 pm
Operator : VIANNAC
Sample : jc18196-6
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

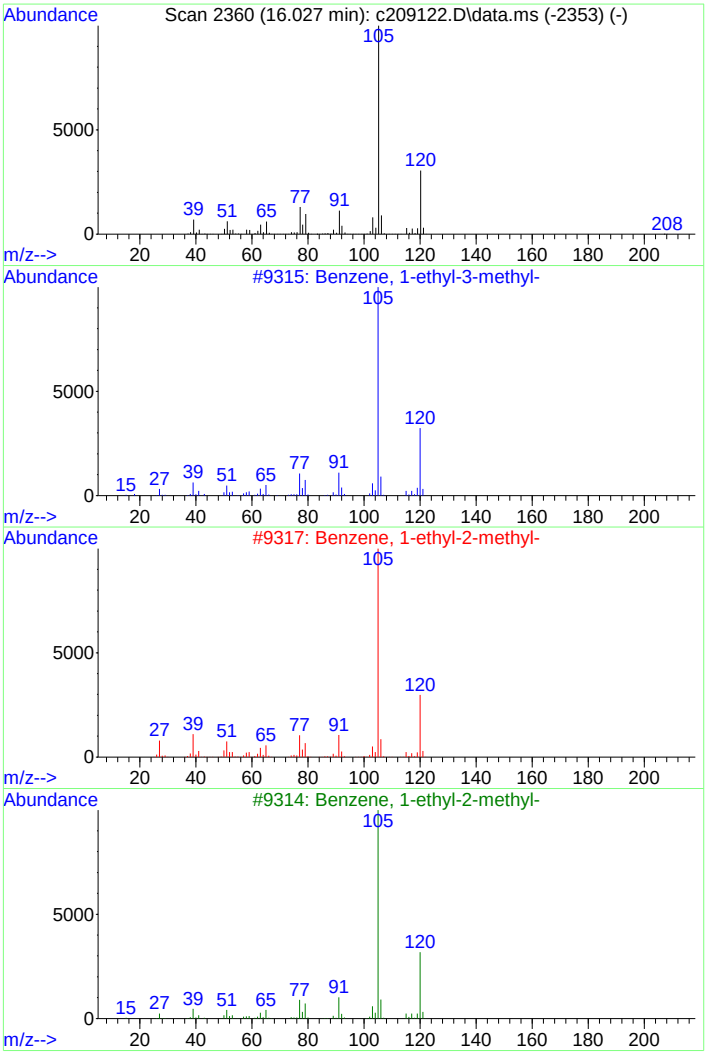
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

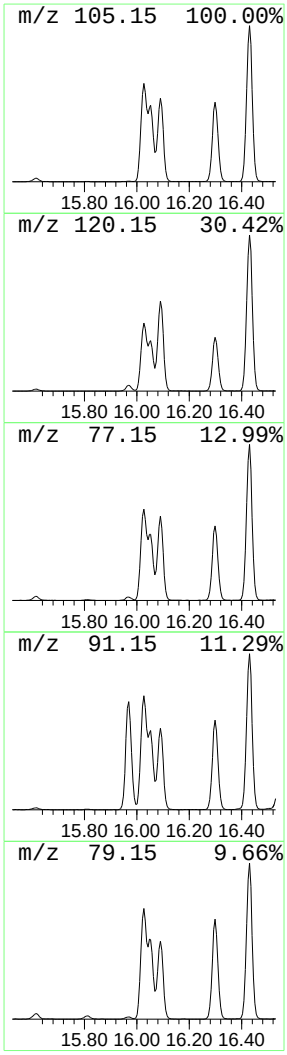
****

Peak Number 4 Benzene, 1-ethyl-3-methyl- Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.027	72.96 ug/L	7942420	1,4-dichlorobenzene-d4	16.801

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
3	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
4	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	94
5	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209122.D
Acq On : 15 Apr 2016 4:36 pm
Operator : VIANNAC
Sample : jc18196-6
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

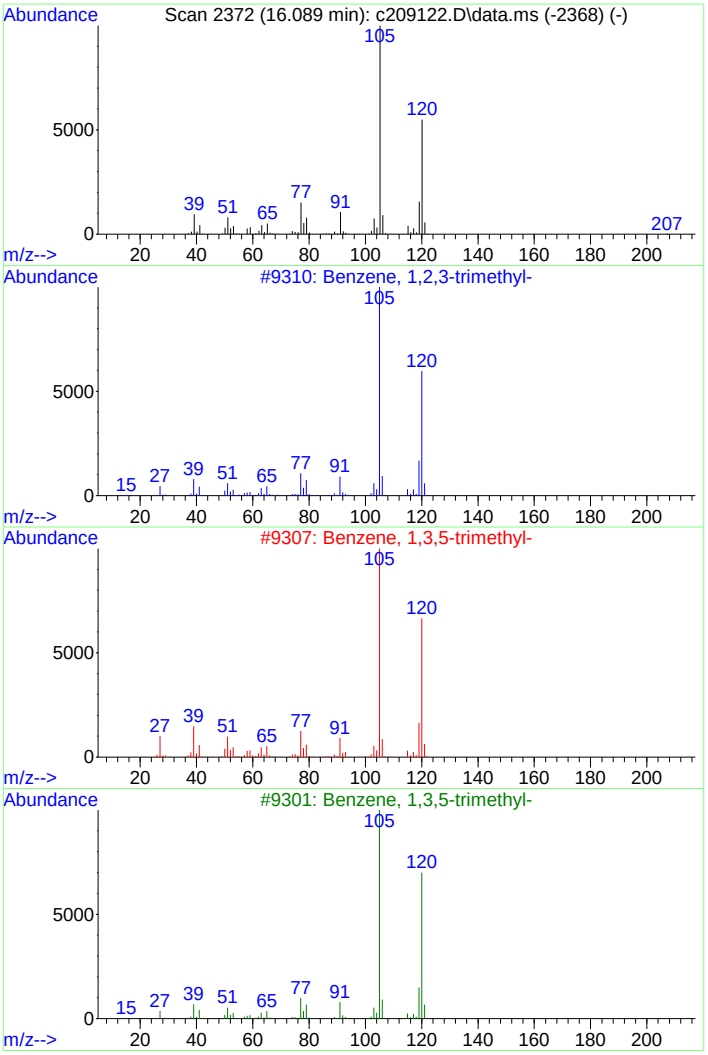
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

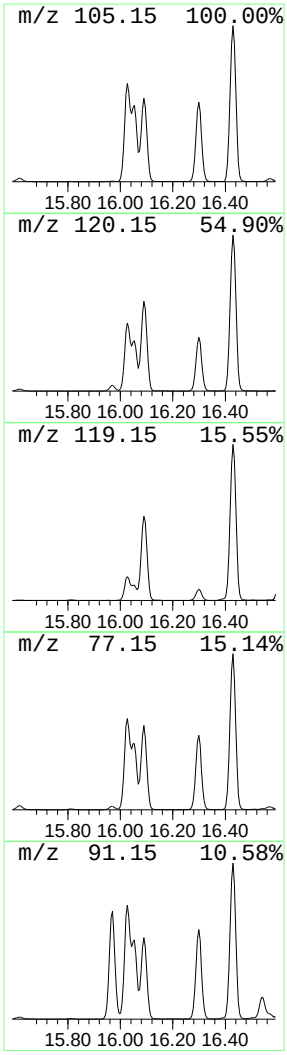
****

Peak Number 5 Benzene, 1,2,3-trimethyl- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.090	41.21 ug/L	4486370	1,4-dichlorobenzene-d4	16.801

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
5	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209122.D
Acq On : 15 Apr 2016 4:36 pm
Operator : VIANNAC
Sample : jc18196-6
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

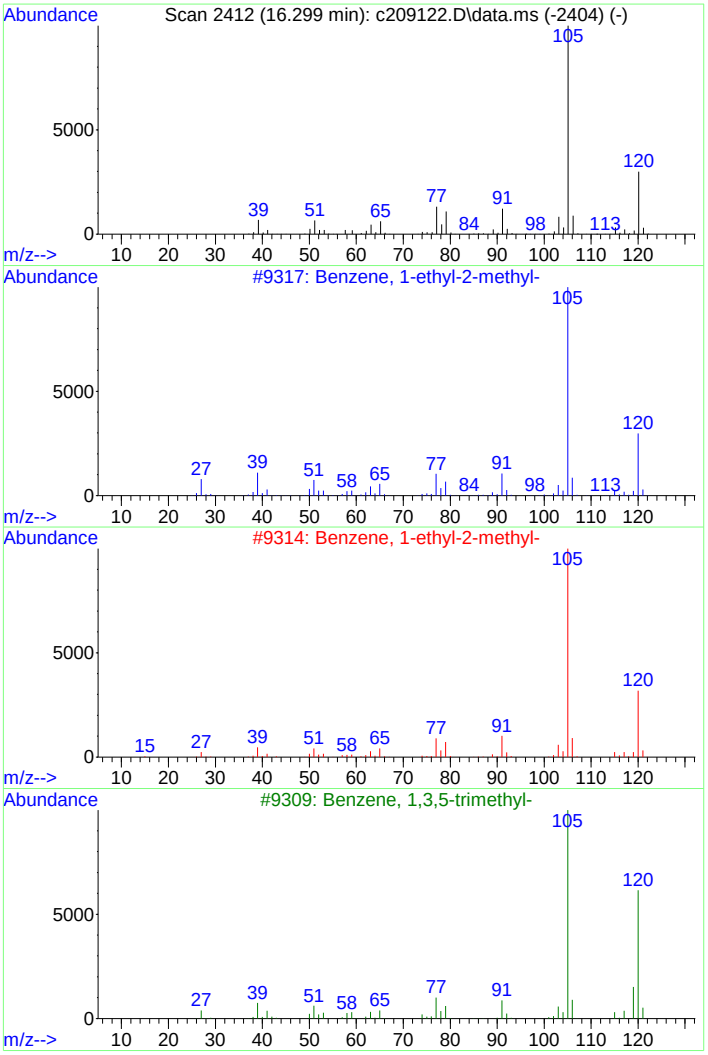
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

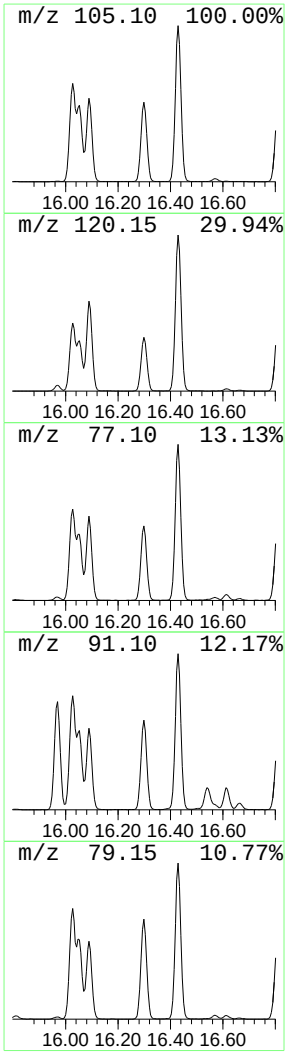
****

Peak Number 6 Benzene, 1-ethyl-2-methyl- Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.299	35.38 ug/L	3851460	1,4-dichlorobenzene-d4	16.801

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
4	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91
5	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91





SGS ACCUTEST JC18196

Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209122.D
Acq On : 15 Apr 2016 4:36 pm
Operator : VIANNAC
Sample : jc18196-6
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

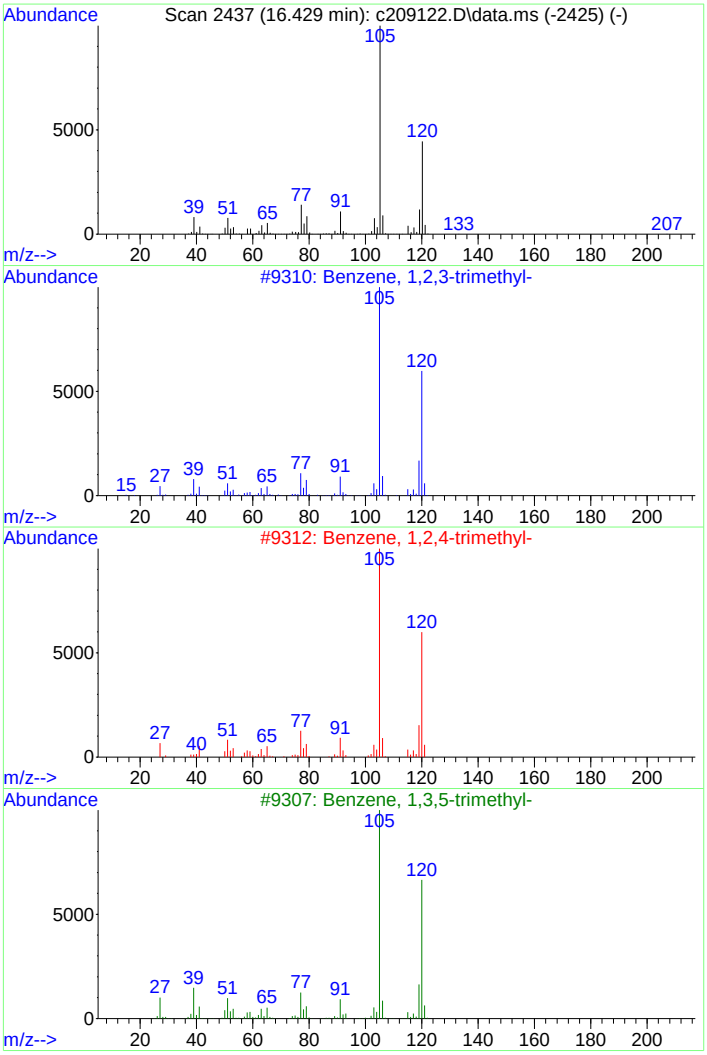
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

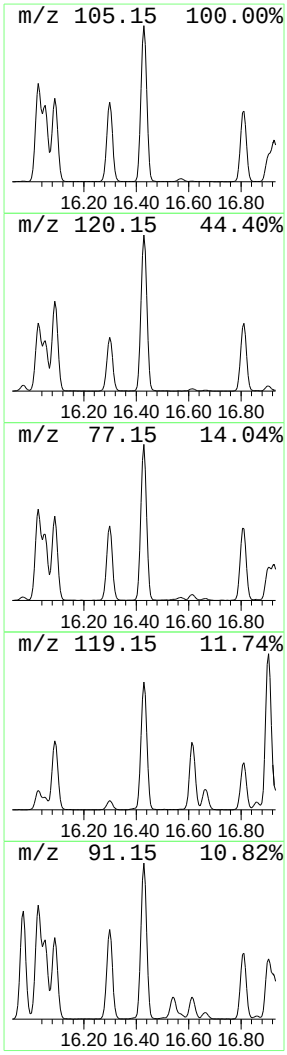
****

Peak Number 7 Benzene, 1,2,3-trimethyl- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.429	77.39 ug/L	8423910	1,4-dichlorobenzene-d4	16.801

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209122.D
Acq On : 15 Apr 2016 4:36 pm
Operator : VIANNAC
Sample : jc18196-6
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

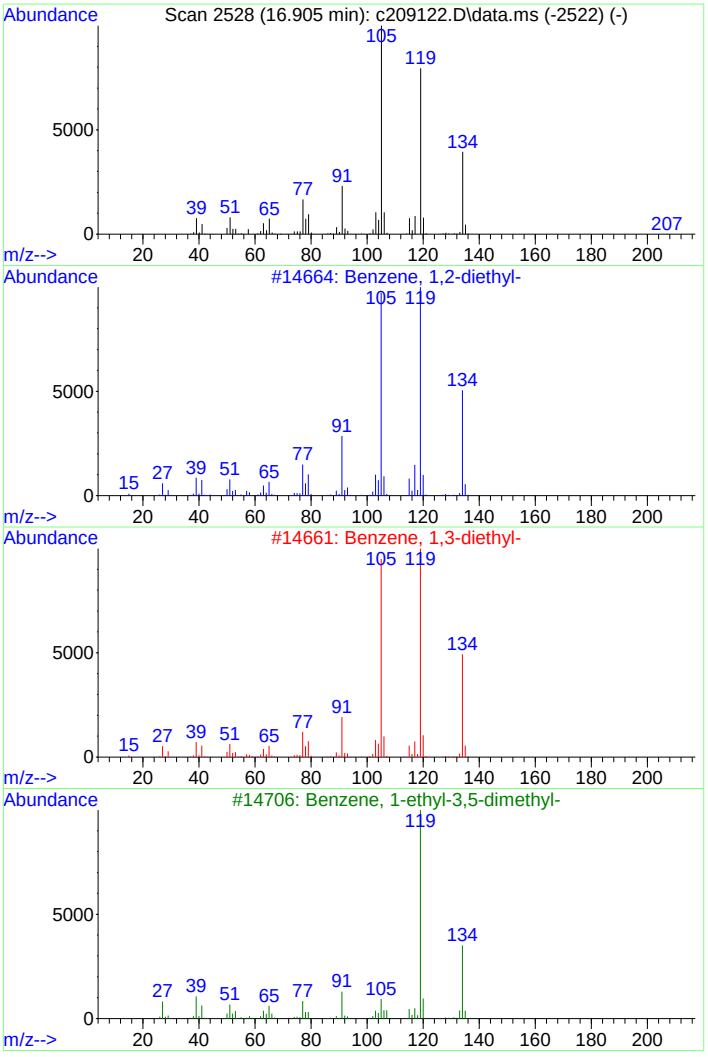
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

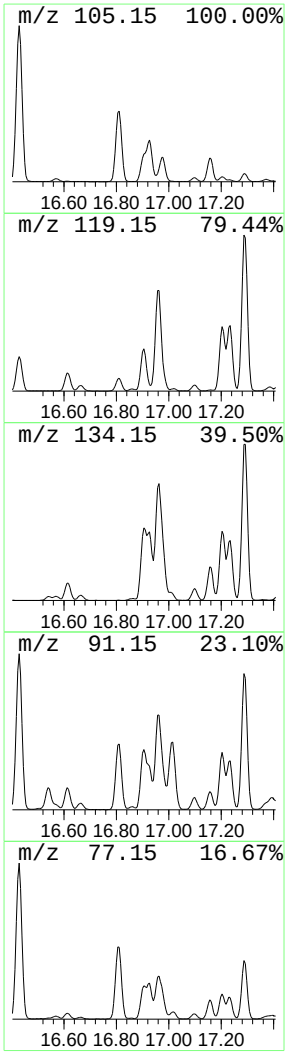
****

Peak Number 8 Benzene, 1,2-diethyl- Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.905	34.06 ug/L	3707850	1,4-dichlorobenzene-d4	16.801

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2-diethyl-	134	C10H14	000135-01-3	95
2	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	94
3	Benzene, 1-ethyl-3,5-dimethyl-	134	C10H14	000934-74-7	90
4	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	90
5	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	90





SGS ACCUTEST JC18196

Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209122.D
Acq On : 15 Apr 2016 4:36 pm
Operator : VIANNAC
Sample : jc18196-6
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 16 Sample Multiplier: 1

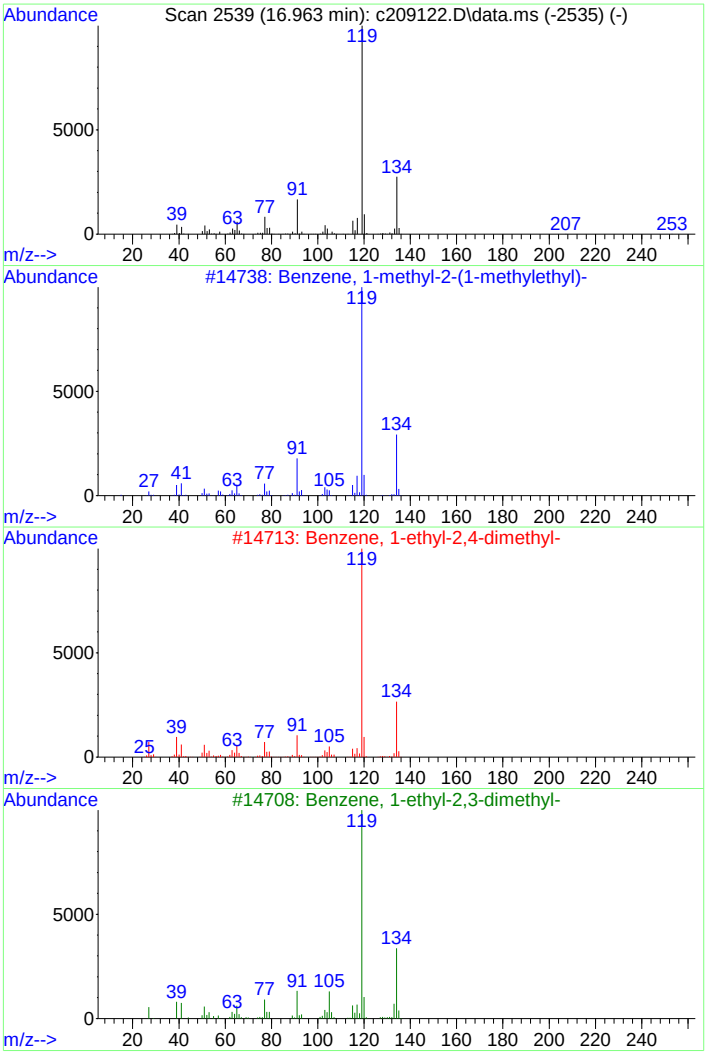
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

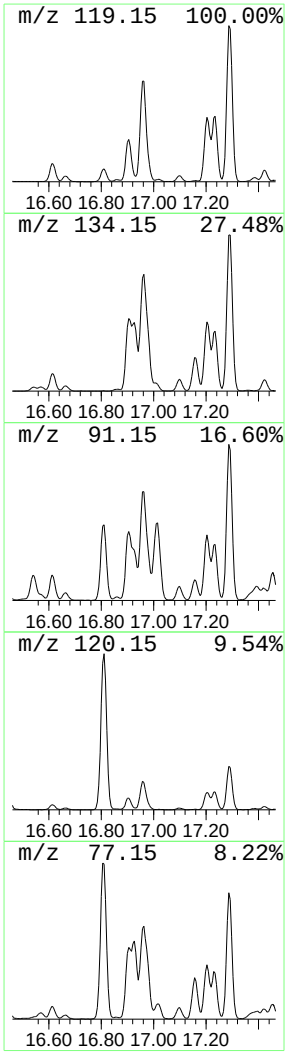
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

****
Peak Number 9 Benzene, 1-methyl-2-(1-meth... Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.963	34.21 ug/L	3723740	1,4-dichlorobenzene-d4	16.801

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	94
2	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	91
3	Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	91
4	Benzene, 1-methyl-4-(1-methyleth...	134	C10H14	000099-87-6	91
5	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209122.D
Acq On : 15 Apr 2016 4:36 pm
Operator : VIANNAC
Sample : jc18196-6
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 16 Sample Multiplier: 1

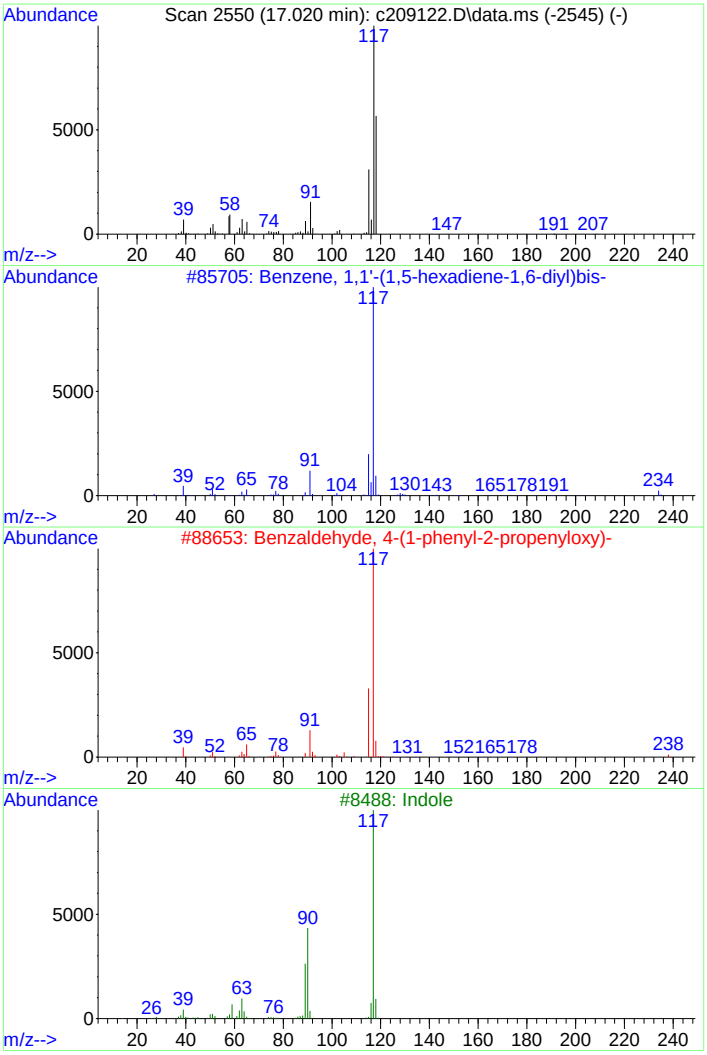
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

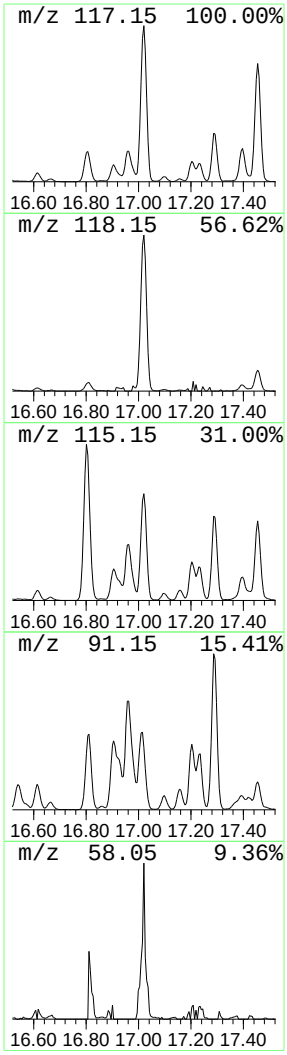
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

****
Peak Number 10 Benzene, 1,1'-(1,5-hexadien... Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.020	13.56 ug/L	1476250	1,4-dichlorobenzene-d4	16.801

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,1'-(1,5-hexadiene-1,6...	234	C18H18	004439-45-6	59
2	Benzaldehyde, 4-(1-phenyl-2-prop...	238	C16H14O2	1000277-56-1	50
3	Indole	117	C8H7N	000120-72-9	46
4	trans-Cinnamyl bromide	196	C9H9Br	026146-77-0	42
5	Benzene, (2-bromocyclopropyl)-	196	C9H9Br	036617-02-4	40





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209122.D
Acq On : 15 Apr 2016 4:36 pm
Operator : VIANNAC
Sample : jc18196-6
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 16 Sample Multiplier: 1

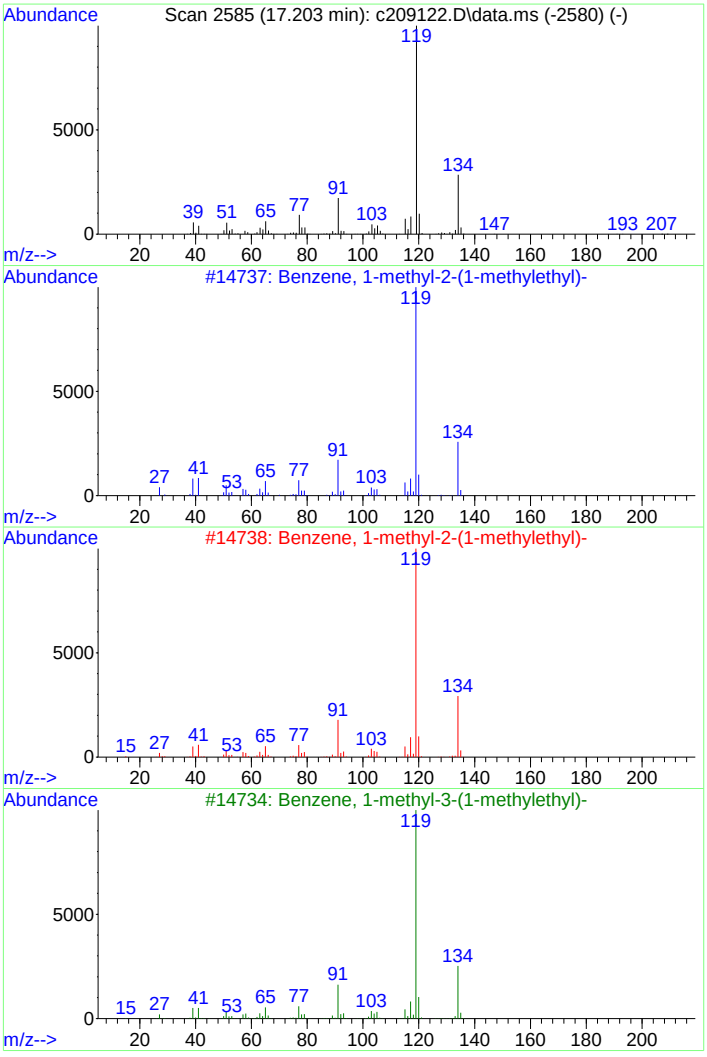
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

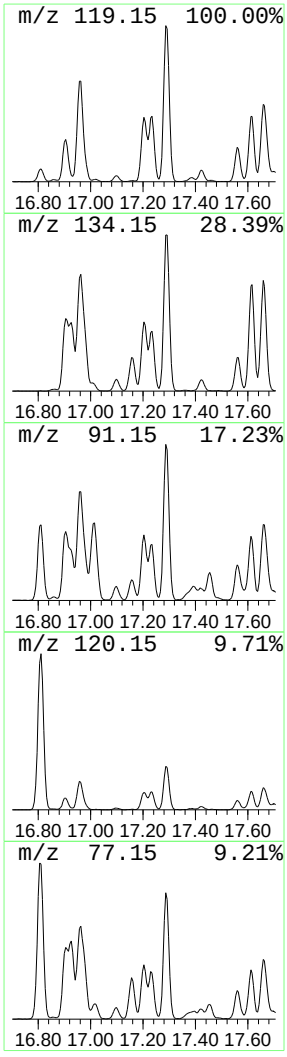
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

****
Peak Number 11 Benzene, 1-methyl-2-(1-meth... Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.203	16.79 ug/L	1827290	1,4-dichlorobenzene-d4	16.801

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	95
2	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	94
3	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	94
4	Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	94
5	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	91





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209122.D
Acq On : 15 Apr 2016 4:36 pm
Operator : VIANNAC
Sample : jc18196-6
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 16 Sample Multiplier: 1

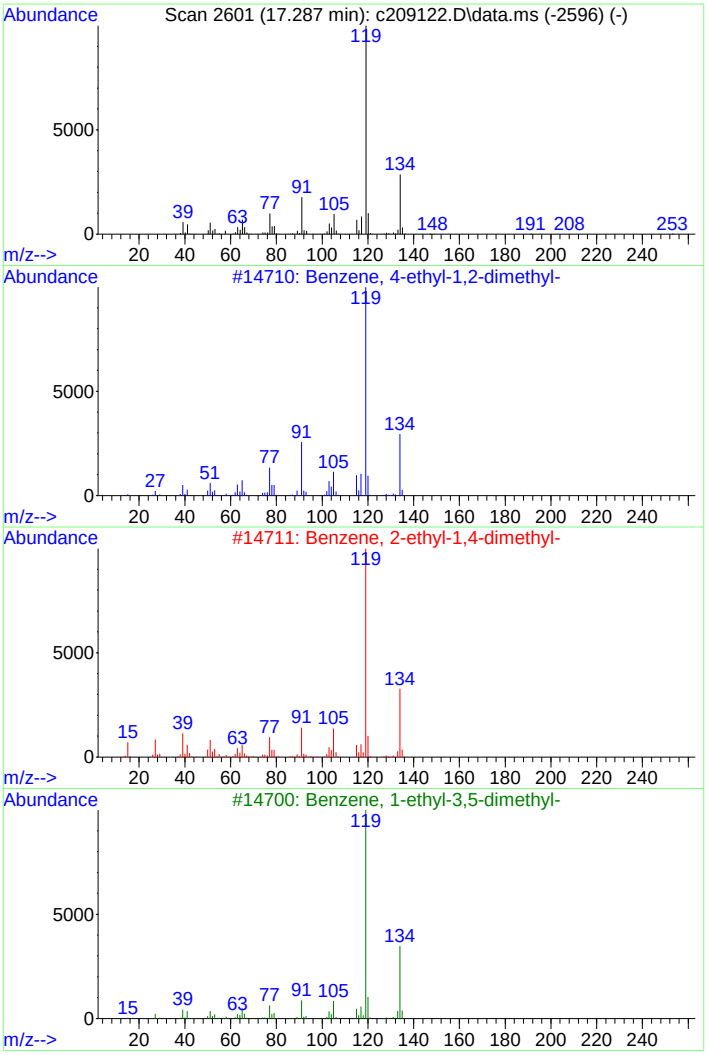
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

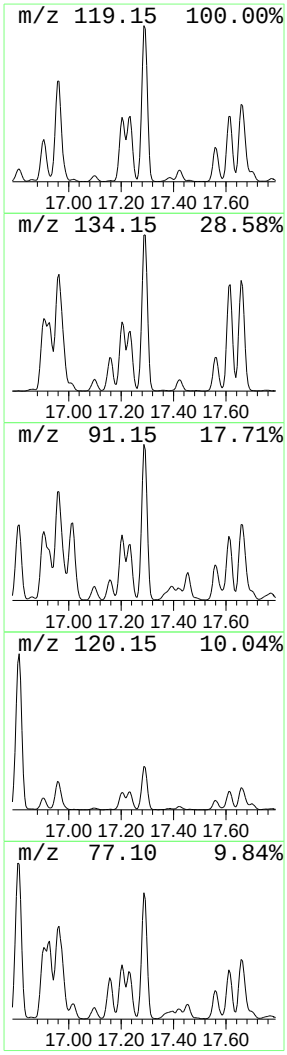
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

****
Peak Number 12 Benzene, 4-ethyl-1,2-dimethyl- Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.287	36.34 ug/L	3955890	1,4-dichlorobenzene-d4	16.801

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	95
2	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	94
3	Benzene, 1-ethyl-3,5-dimethyl-	134	C10H14	000934-74-7	94
4	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	94
5	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209122.D
Acq On : 15 Apr 2016 4:36 pm
Operator : VIANNAC
Sample : jc18196-6
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 16 Sample Multiplier: 1

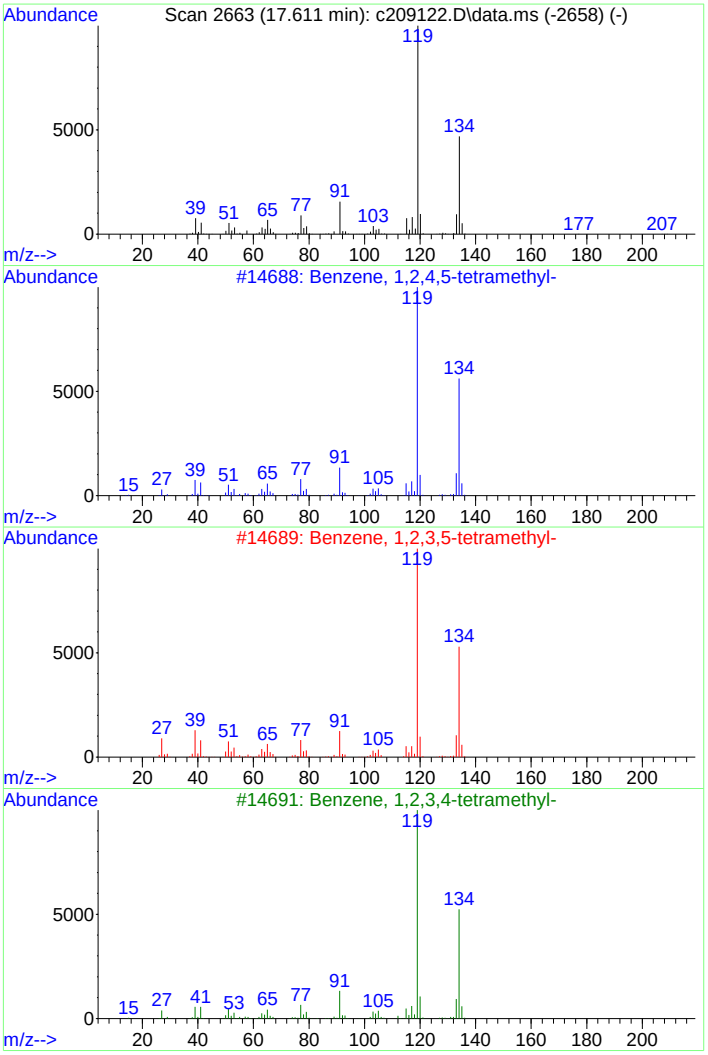
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

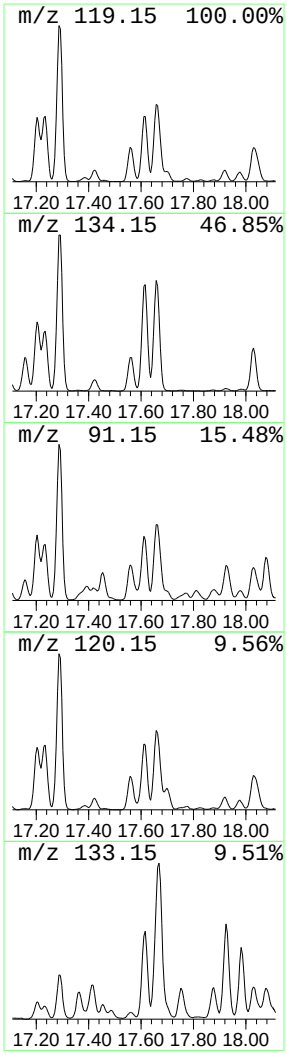
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

****
Peak Number 13 Benzene, 1,2,4,5-tetramethyl- Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.611	14.09 ug/L	1533590	1,4-dichlorobenzene-d4	16.801

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	97
2	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	95
3	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	95
4	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	95
5	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	95





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209122.D
Acq On : 15 Apr 2016 4:36 pm
Operator : VIANNAC
Sample : jc18196-6
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 16 Sample Multiplier: 1

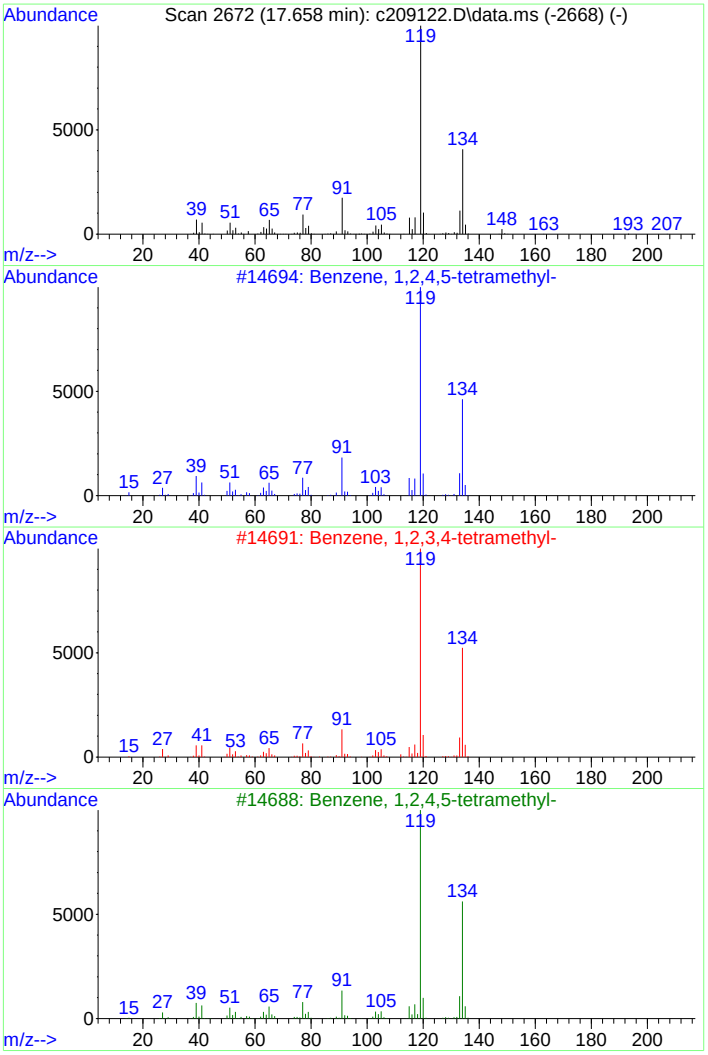
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

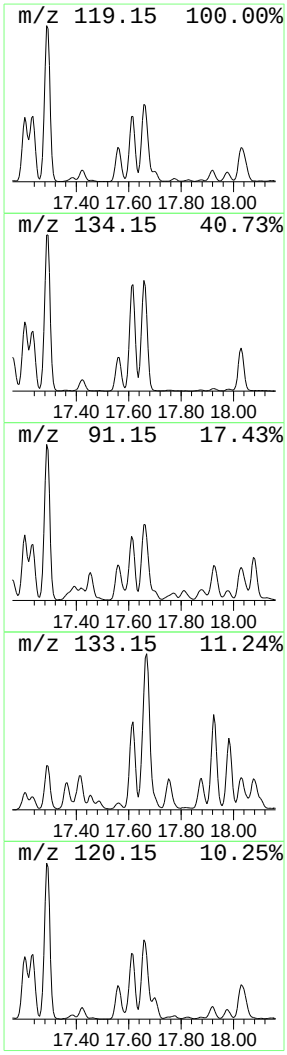
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

****
Peak Number 14 Benzene, 1,2,4,5-tetramethyl- Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.658	25.62 ug/L	2788600	1,4-dichlorobenzene-d4	16.801

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	96
2	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	95
3	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	94
4	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	94
5	1,3-Cyclopentadiene, 1,2,3,4-tet...	134	C10H14	076089-59-3	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : c209122.D
Acq On : 15 Apr 2016 4:36 pm
Operator : VIANNAC
Sample : jc18196-6
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 16 Sample Multiplier: 1

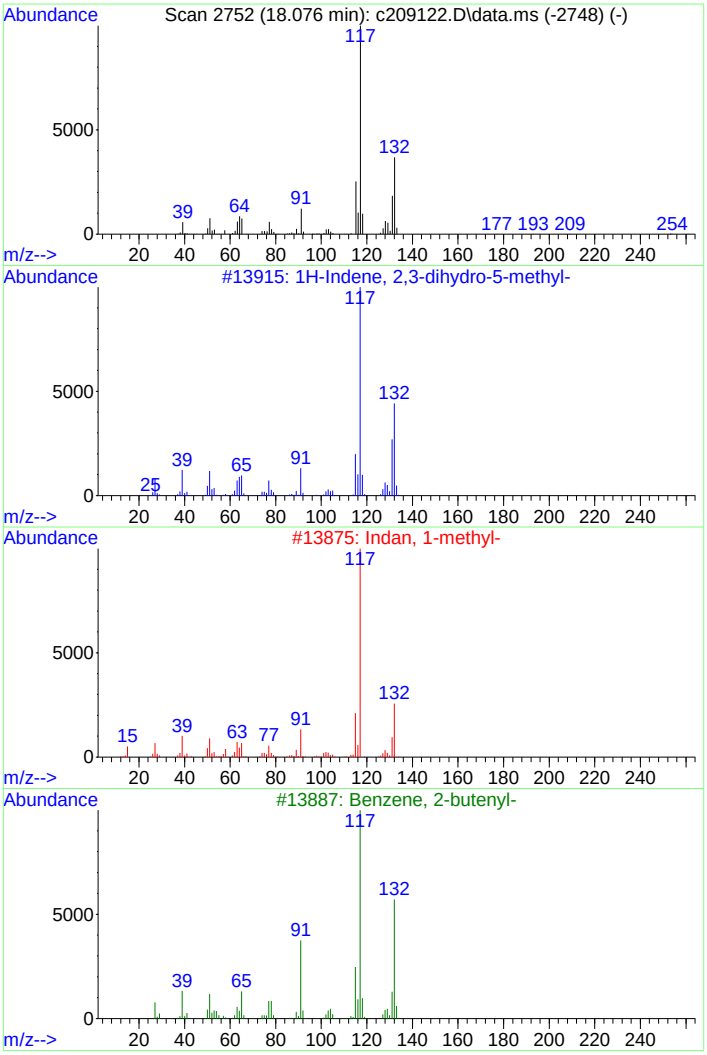
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

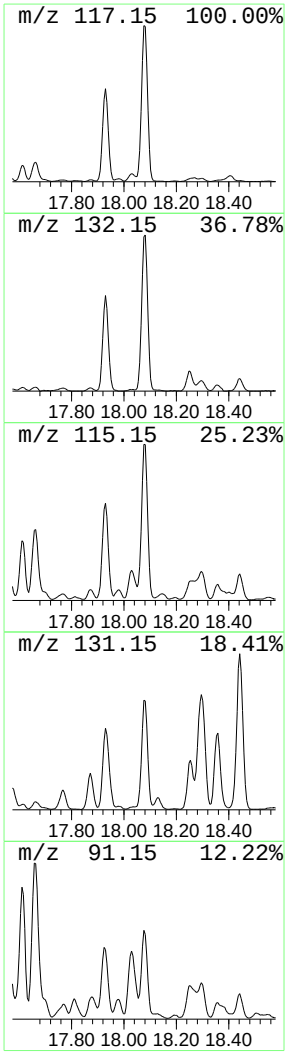
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

****
Peak Number 15 1H-Indene, 2,3-dihydro-5-me... Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.076	16.61 ug/L	1808050	1,4-dichlorobenzene-d4	16.801

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Indene, 2,3-dihydro-5-methyl-	132	C10H12	000874-35-1	90
2	Indan, 1-methyl-	132	C10H12	000767-58-8	87
3	Benzene, 2-butenyl-	132	C10H12	001560-06-1	86
4	Indan, 1-methyl-	132	C10H12	000767-58-8	83
5	Benzene, 1-ethenyl-4-ethyl-	132	C10H12	003454-07-7	81





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\
Data File : c209122.D
Acq On : 15 Apr 2016 4:36 pm
Operator : VIANNAC
Sample : jc18196-6
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Butane, 2-methyl-	5.712	27.0	ug/L	528926	2	10.783	979401	50.0
Pentane, 2-methyl-	8.007	14.7	ug/L	288115	2	10.783	979401	50.0
Cyclopentane, m...	9.957	33.2	ug/L	650245	2	10.783	979401	50.0
Benzene, 1-ethy...	16.027	73.0	ug/L	7942420	5	16.801	5442800	50.0
Benzene, 1,2,3-...	16.090	41.2	ug/L	4486370	5	16.801	5442800	50.0
Benzene, 1-ethy...	16.299	35.4	ug/L	3851460	5	16.801	5442800	50.0
Benzene, 1,2,3-...	16.429	77.4	ug/L	8423910	5	16.801	5442800	50.0
Benzene, 1,2-di...	16.905	34.1	ug/L	3707850	5	16.801	5442800	50.0
Benzene, 1-meth...	16.963	34.2	ug/L	3723740	5	16.801	5442800	50.0
Benzene, 1,1'-(...	17.020	13.6	ug/L	1476250	5	16.801	5442800	50.0
Benzene, 1-meth...	17.203	16.8	ug/L	1827290	5	16.801	5442800	50.0
Benzene, 4-ethy...	17.287	36.3	ug/L	3955890	5	16.801	5442800	50.0
Benzene, 1,2,4,...	17.611	14.1	ug/L	1533590	5	16.801	5442800	50.0
Benzene, 1,2,4,...	17.658	25.6	ug/L	2788600	5	16.801	5442800	50.0
1H-Indene, 2,3-...	18.076	16.6	ug/L	1808050	5	16.801	5442800	50.0

Manual Integrations APPROVED (compounds with "m" flag)
MoHui Huang
04/21/16 14:30

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : c209121.D
Acq On : 15 Apr 2016 4:08 pm
Operator : VIANNAC
Sample : jc18196-7
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 21 13:19:07 2016
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Fri Apr 15 15:18:17 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.084	65	292417	500.00	ug/L	0.00
5) pentafluorobenzene	10.787	168	309792	50.00	ug/L	0.00
59) 1,4-difluorobenzene	11.744	114	579877	50.00	ug/L	0.00
88) chlorobenzene-d5	14.781	117	519817	50.00	ug/L	0.00
104) 1,4-dichlorobenzene-d4	16.799	152	250141	50.00	ug/L	0.00
System Monitoring Compounds						
50) dibromofluoromethane (s)	10.840	113	163182	49.13	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 98.26%			
51) 1,2-dichloroethane-d4 (s)	11.284	65	232196	50.28	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 100.56%			
80) toluene-d8 (s)	13.359	98	736826	49.98	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.96%			
106) 4-bromofluorobenzene (s)	15.811	174	183198	52.19	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 104.38%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	8.236	59	5760	9.36	ug/L #	1
32) methyl tert butyl ether	8.487	73	42716m	3.76	ug/L	
54) cyclohexane	10.902	84	18007	4.01	ug/L	92
65) benzene	11.331	78	276707	18.66	ug/L	99
73) methylcyclohexane	12.262	83	3853	0.93	ug/L	100
82) toluene	13.433	91	3335	0.22	ug/L	95
105) isopropylbenzene	15.618	105	11602	0.73	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

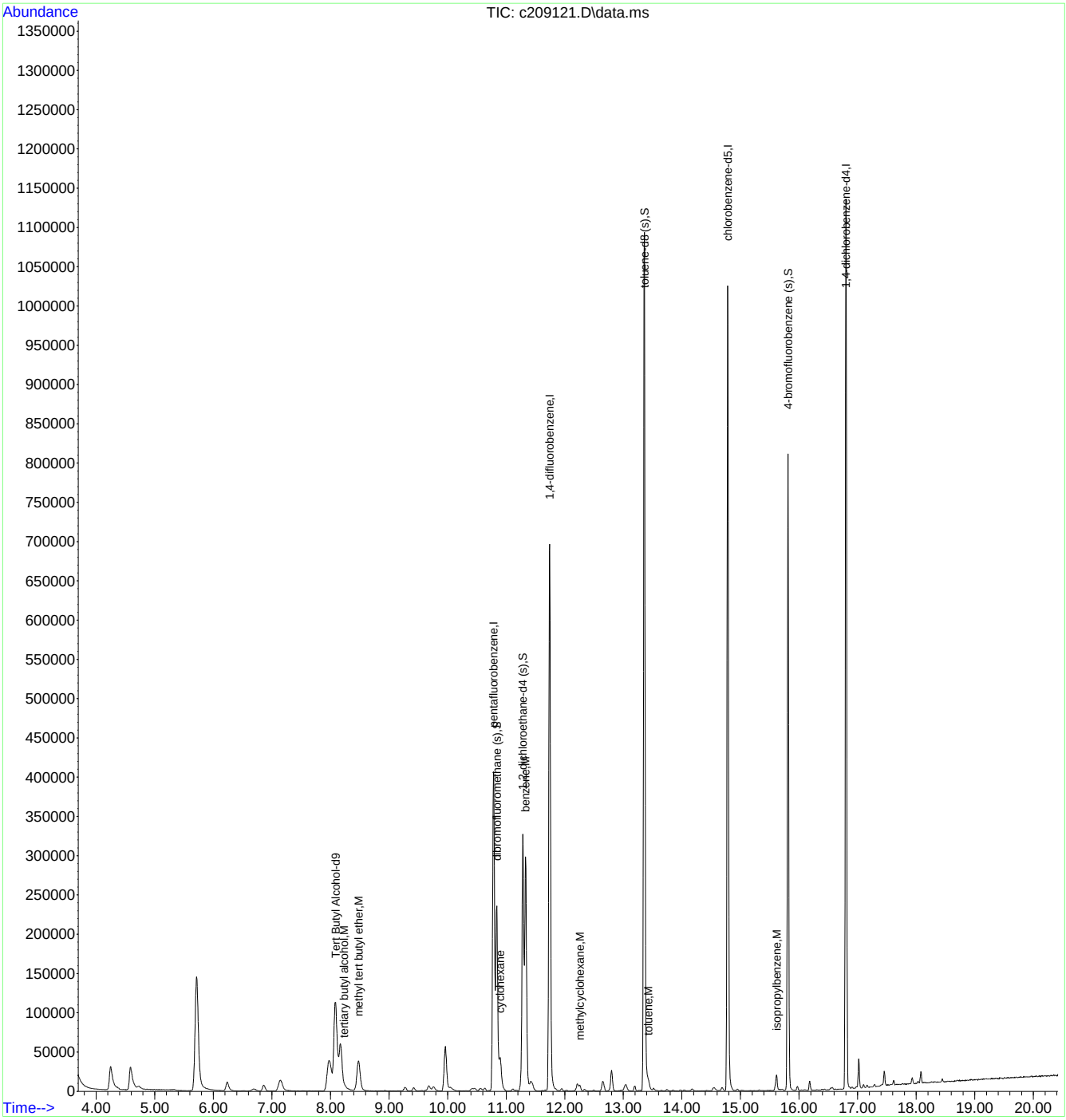
7.1.13

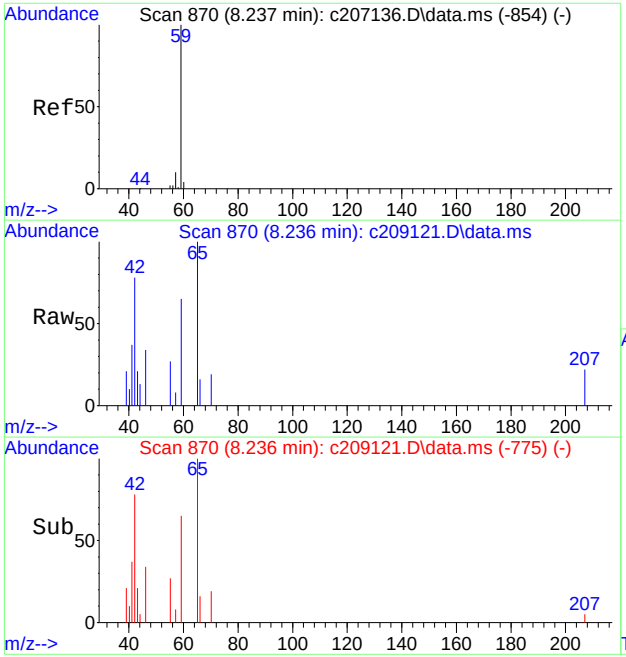
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : c209121.D
Acq On : 15 Apr 2016 4:08 pm
Operator : VIANNAC
Sample : jc18196-7
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 21 13:19:07 2016
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Fri Apr 15 15:18:17 2016
Response via : Initial Calibration

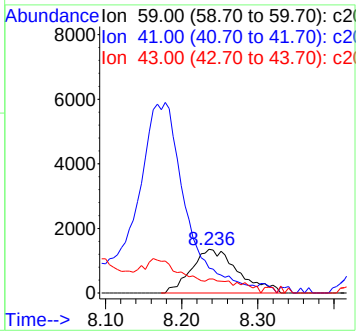


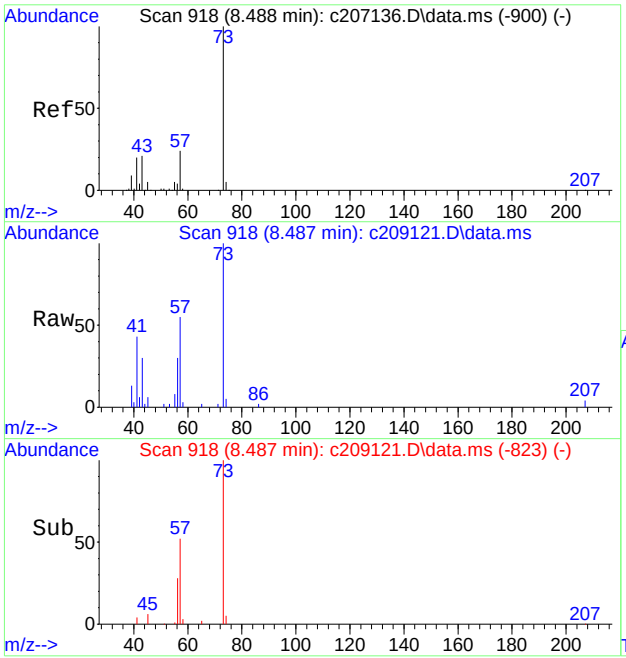


#3
tertiary butyl alcohol
Concen: 9.36 ug/L
RT: 8.236 min Scan# 870
Delta R.T. -0.002 min
Lab File: c209121.D
Acq: 15 Apr 2016 4:08 pm

Tgt Ion: 59 Resp: 5760

Ion	Ratio	Lower	Upper
59	100		
41	44.9	0.0	32.5#
43	32.0	0.0	33.8

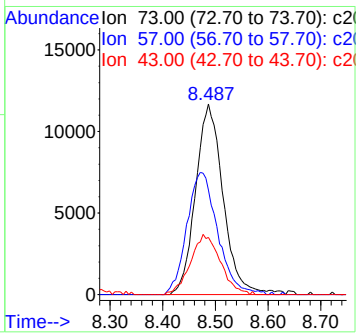


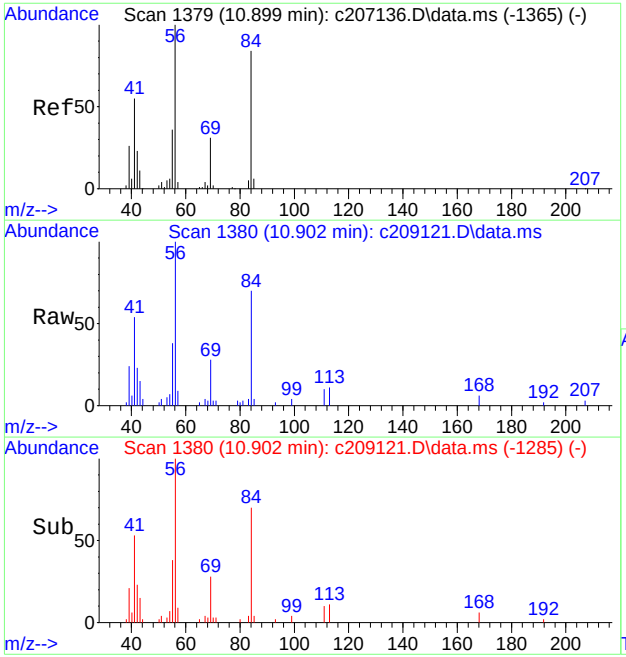


#32
methyl tert butyl ether
Concen: 3.76 ug/L m
RT: 8.487 min Scan# 918
Delta R.T. -0.003 min
Lab File: c209121.D
Acq: 15 Apr 2016 4:08 pm

Tgt Ion: 73 Resp: 42716

Ion	Ratio	Lower	Upper
73	100		
57	54.9	0.0	54.9#
43	30.1	0.0	51.7

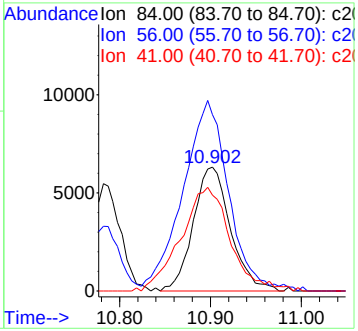


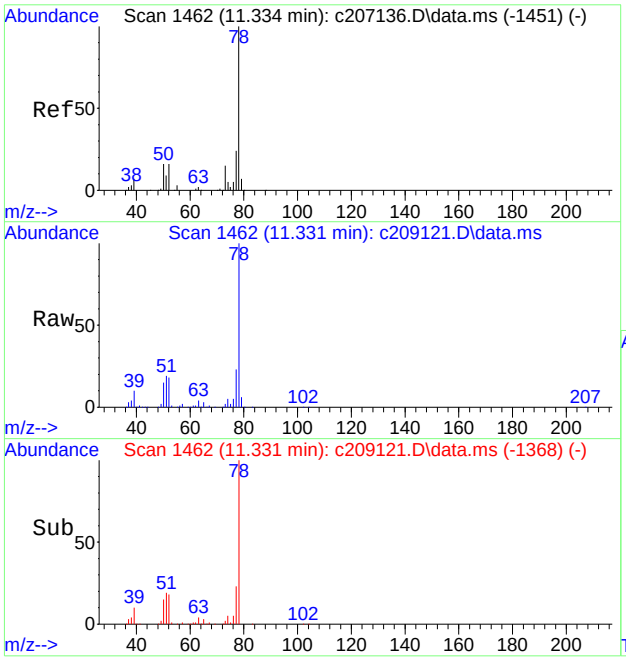


#54
cyclohexane
Concen: 4.01 ug/L
RT: 10.902 min Scan# 1380
Delta R.T. -0.003 min
Lab File: c209121.D
Acq: 15 Apr 2016 4:08 pm

Tgt Ion: 84 Resp: 18007

Ion	Ratio	Lower	Upper
84	100		
56	136.9	88.4	164.2
41	74.1	49.0	91.0

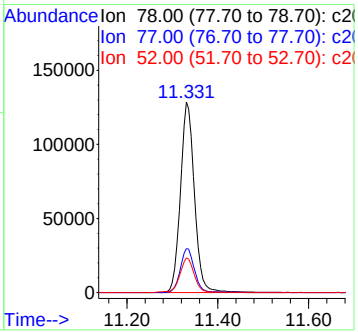




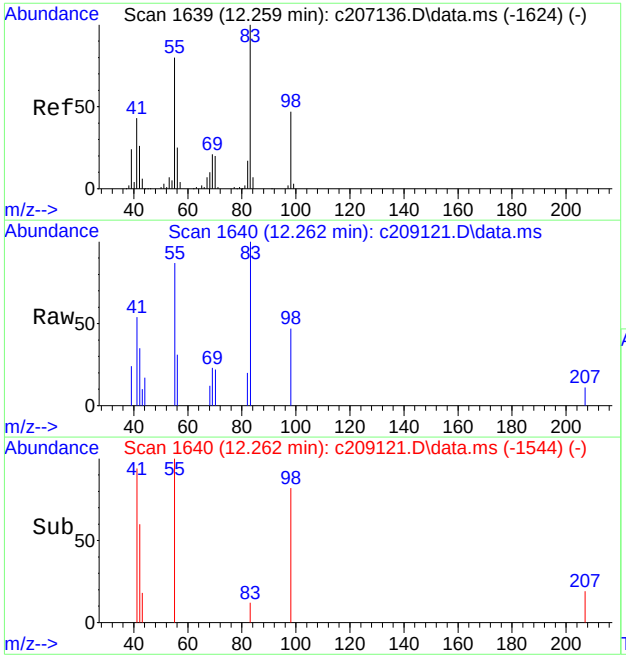
#65
benzene
Concen: 18.66 ug/L
RT: 11.331 min Scan# 1462
Delta R.T. -0.008 min
Lab File: c209121.D
Acq: 15 Apr 2016 4:08 pm

Tgt Ion: 78 Resp: 276707

Ion	Ratio	Lower	Upper
78	100		
77	23.1	0.0	53.5
52	18.2	0.0	48.0



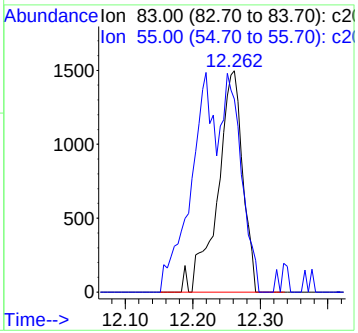
SGS ACCUTEST JC18196

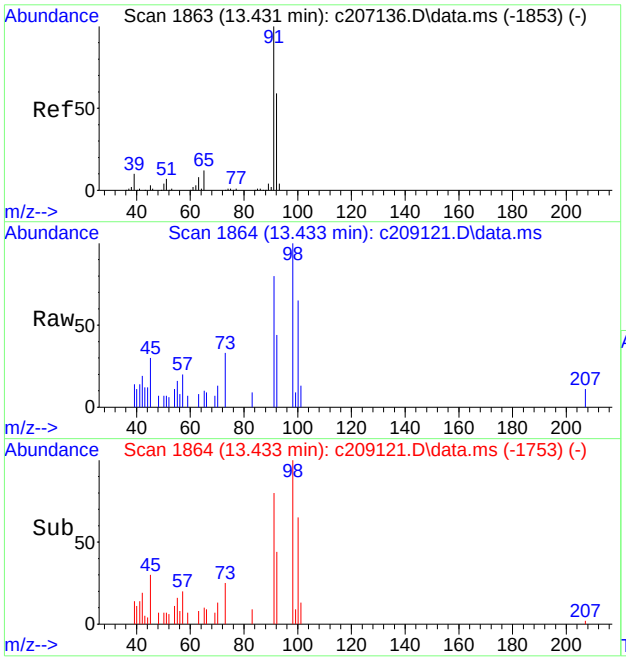


#73
methylcyclohexane
Concen: 0.93 ug/L
RT: 12.262 min Scan# 1640
Delta R.T. 0.002 min
Lab File: c209121.D
Acq: 15 Apr 2016 4:08 pm

Tgt Ion: 83 Resp: 3853

Ion	Ratio	Lower	Upper
83	100		
55	87.2	61.2	113.8

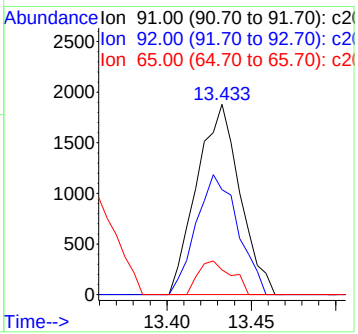


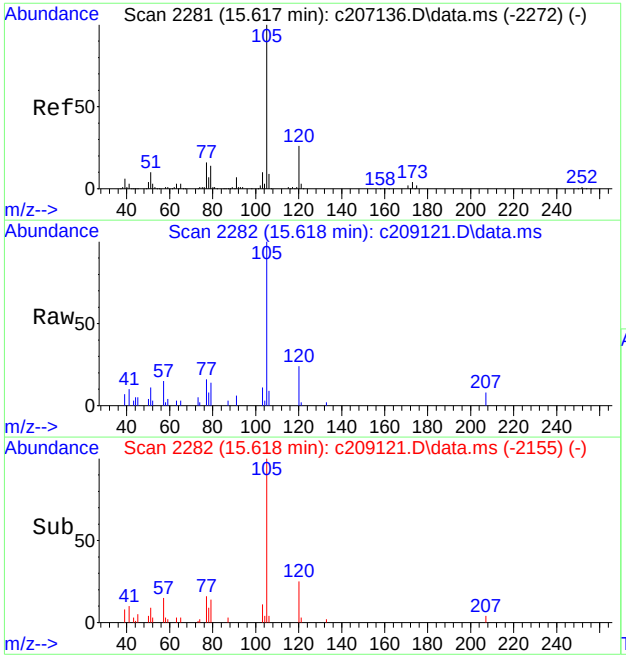


#82
toluene
Concen: 0.22 ug/L
RT: 13.433 min Scan# 1864
Delta R.T. 0.002 min
Lab File: c209121.D
Acq: 15 Apr 2016 4:08 pm

Tgt Ion: 91 Resp: 3335

Ion	Ratio	Lower	Upper
91	100		
92	55.0	29.4	89.4
65	13.0	0.0	42.9

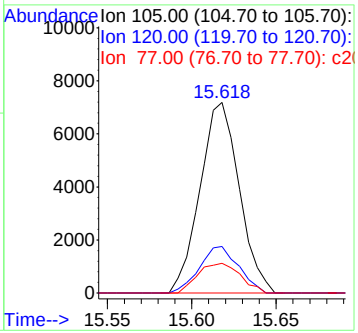




#105
isopropylbenzene
Concen: 0.73 ug/L
RT: 15.618 min Scan# 2282
Delta R.T. 0.002 min
Lab File: c209121.D
Acq: 15 Apr 2016 4:08 pm

Tgt Ion:105 Resp: 11602

Ion	Ratio	Lower	Upper
105	100		
120	24.4	0.0	55.7
77	15.6	0.0	46.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : c209089.D
Acq On : 14 Apr 2016 10:48 pm
Operator : VIANNAC
Sample : mb2
Misc : MS900,VC7691,5.0,,,,1
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Apr 18 12:45:53 2016
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Fri Apr 15 15:18:17 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.085	65	288517	500.00	ug/L	0.00
5) pentafluorobenzene	10.788	168	306857	50.00	ug/L	0.00
59) 1,4-difluorobenzene	11.739	114	565022	50.00	ug/L	0.00
88) chlorobenzene-d5	14.782	117	506723	50.00	ug/L	0.00
104) 1,4-dichlorobenzene-d4	16.800	152	245899	50.00	ug/L	0.00
System Monitoring Compounds						
50) dibromofluoromethane (s)	10.835	113	158561	48.20	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 96.40%			
51) 1,2-dichloroethane-d4 (s)	11.284	65	222006	48.53	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 97.06%			
80) toluene-d8 (s)	13.355	98	719726	50.11	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 100.22%			
106) 4-bromofluorobenzene (s)	15.812	174	177646	51.48	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 102.96%			

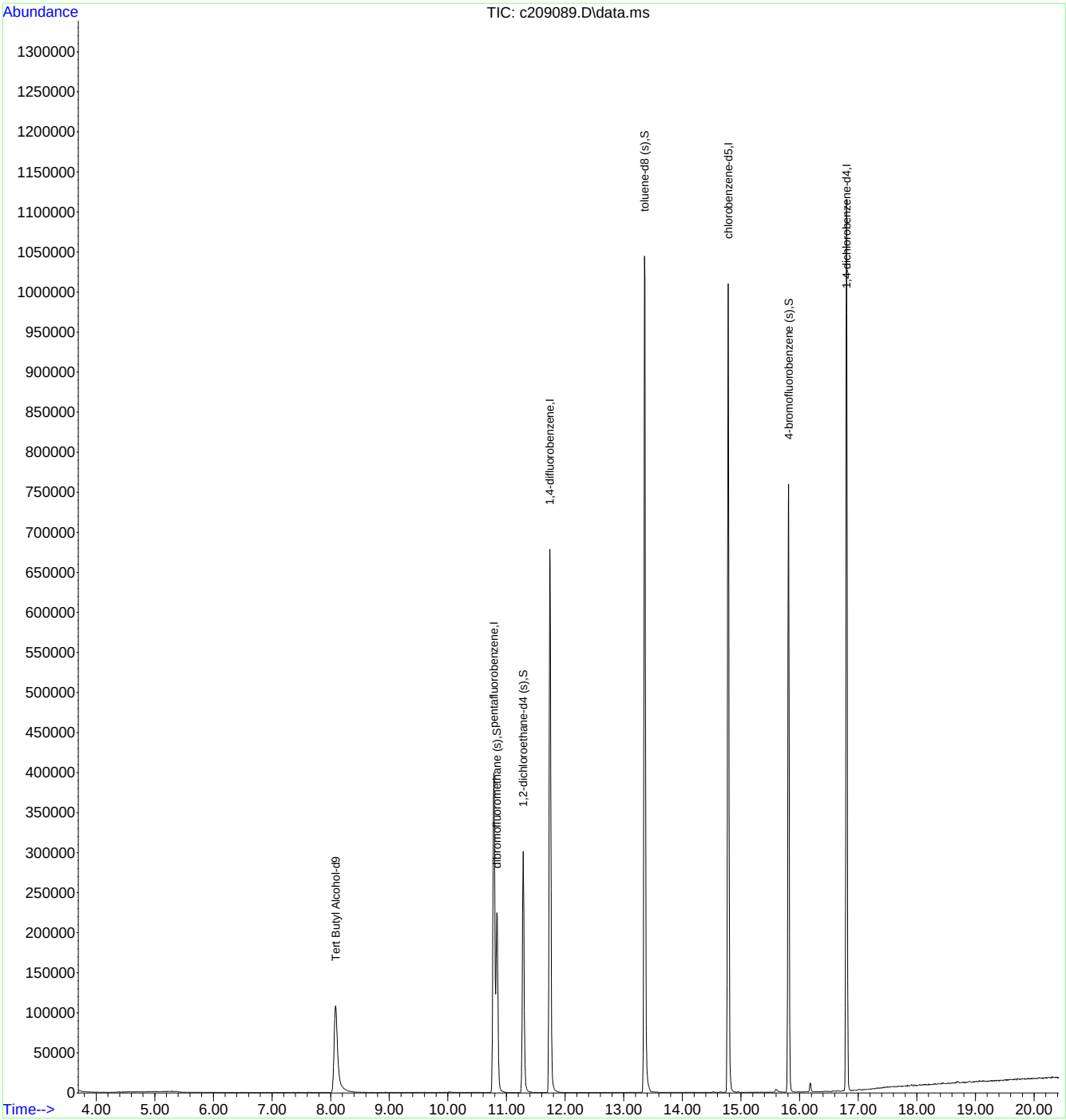
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : c209089.D
Acq On : 14 Apr 2016 10:48 pm
Operator : VIANNAC
Sample : mb2
Misc : MS900,VC7691,5.0,,,,1
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Apr 18 12:45:53 2016
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Fri Apr 15 15:18:17 2016
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : c209089.D
Acq On : 14 Apr 2016 10:48 pm
Operator : VIANNAC
Sample : mb2
Misc : MS900,VC7691,5.0,,,,1
ALS Vial : 28 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 10 prefer < Tangent else baseline drop >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MC7650.M
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

Signal : TIC: c20908

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.007	60	61	125	rBV2	478	2507	0.13%	0.023%
2	4.399	125	136	143	rBV3	714	1847	0.10%	0.017%
3	4.535	143	162	179	rBV3	696	3660	0.19%	0.034%
4	4.854	184	223	225	rBB5	617	4489	0.23%	0.042%
5	5.204	225	290	291	rBV4	1011	11387	0.59%	0.106%
6	5.304	291	309	476	rVB2	2000	31144	1.62%	0.290%
7	6.198	476	480	504	rVB2	445	2364	0.12%	0.022%
8	6.328	504	505	527	rBB2	391	1648	0.09%	0.015%
9	6.469	527	532	558	rBB2	342	2175	0.11%	0.020%
10	6.762	587	588	601	rVB	319	825	0.04%	0.008%
11	6.846	601	604	610	rVB2	381	645	0.03%	0.006%
12	6.930	616	620	630	rBV2	280	577	0.03%	0.005%
13	7.018	630	637	640	rVB2	338	657	0.03%	0.006%
14	7.107	650	654	660	rVB	310	454	0.02%	0.004%
15	7.201	666	672	674	rBB	381	537	0.03%	0.005%
16	7.222	674	676	687	rBB2	424	965	0.05%	0.009%
17	7.295	687	690	696	rBV2	266	543	0.03%	0.005%
18	7.395	696	709	712	rVB2	345	919	0.05%	0.009%
19	7.426	712	715	732	rBV2	368	922	0.05%	0.009%
20	7.546	732	738	743	rBV2	356	481	0.03%	0.004%
21	7.630	750	754	773	rVB3	588	2167	0.11%	0.020%
22	7.740	773	775	786	rBB2	315	640	0.03%	0.006%
23	7.860	793	798	800	rVB2	344	556	0.03%	0.005%
24	7.959	809	817	824	rBV	315	705	0.04%	0.007%
25	8.085	824	841	932	rBB2	108508	495220	25.75%	4.605%
26	8.571	932	934	954	rVB2	605	1957	0.10%	0.018%
27	8.697	954	958	971	rBB	327	932	0.05%	0.009%
28	8.801	975	978	988	rVB	408	756	0.04%	0.007%
29	8.874	988	992	999	rBV	361	737	0.04%	0.007%
30	8.927	999	1002	1008	rVB2	672	898	0.05%	0.008%
31	9.005	1015	1017	1025	rBV	417	645	0.03%	0.006%
32	9.151	1044	1045	1055	rBB	301	566	0.03%	0.005%
33	9.366	1071	1086	1093	rBB	347	1117	0.06%	0.010%
34	9.507	1109	1113	1118	rBB	340	557	0.03%	0.005%
35	9.554	1118	1122	1126	rBB	343	485	0.03%	0.005%
36	9.601	1128	1131	1134	rBV2	511	466	0.02%	0.004%
37	9.632	1134	1137	1141	rVB	387	517	0.03%	0.005%
38	9.690	1141	1148	1158	rBV	390	1177	0.06%	0.011%
39	9.831	1164	1175	1178	rBV	388	776	0.04%	0.007%
40	9.862	1178	1181	1185	rBB	511	492	0.03%	0.005%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : c209089.D
Acq On : 14 Apr 2016 10:48 pm
Operator : VIANNAC
Sample : mb2
Misc : MS900,VC7691,5.0,,,,1
ALS Vial : 28 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 10 prefer < Tangent else baseline drop >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MC7650.M
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

41	9.957	1193	1199	1204	rVB2	475	944	0.05%	0.009%
42	10.024	1208	1212	1224	rBB3	893	2118	0.11%	0.020%
43	10.129	1230	1232	1242	rBB2	269	588	0.03%	0.005%
44	10.202	1242	1246	1252	rBB	421	615	0.03%	0.006%
45	10.343	1262	1273	1283	rVB	334	921	0.05%	0.009%
46	10.448	1287	1293	1298	rVB2	374	704	0.04%	0.007%
47	10.511	1302	1305	1315	rVB2	354	741	0.04%	0.007%
48	10.605	1320	1323	1333	rBV2	343	642	0.03%	0.006%
49	10.783	1345	1357	1363	rBV	399893	930969	48.41%	8.658%
50	10.835	1363	1367	1405	rVB	224790	504956	26.26%	4.696%
51	11.117	1416	1421	1425	rBB2	274	502	0.03%	0.005%
52	11.211	1425	1439	1441	rBB2	340	1074	0.06%	0.010%
53	11.284	1441	1453	1490	rBB	301498	640781	33.32%	5.959%
54	11.494	1490	1493	1510	rBB3	916	1902	0.10%	0.018%
55	11.624	1510	1518	1520	rBB	270	525	0.03%	0.005%
56	11.656	1520	1524	1526	rBV	378	460	0.02%	0.004%
57	11.739	1529	1540	1579	rBB	678512	1383526	71.95%	12.867%
58	11.959	1579	1582	1589	rVB2	529	895	0.05%	0.008%
59	12.069	1597	1603	1605	rVB2	274	431	0.02%	0.004%
60	12.095	1605	1608	1612	rBV2	458	708	0.04%	0.007%
61	12.131	1612	1615	1620	rVB2	490	676	0.04%	0.006%
62	12.163	1620	1621	1627	rVB	524	761	0.04%	0.007%
63	12.236	1627	1635	1637	rBV	548	1228	0.06%	0.011%
64	12.257	1637	1639	1658	rVB	462	1608	0.08%	0.015%
65	12.382	1658	1663	1665	rBV	436	586	0.03%	0.005%
66	12.482	1679	1682	1688	rVB2	501	722	0.04%	0.007%
67	12.550	1688	1695	1697	rBV3	452	891	0.05%	0.008%
68	12.586	1697	1702	1710	rVB2	249	451	0.02%	0.004%
69	12.686	1720	1721	1739	rVB2	306	1037	0.05%	0.010%
70	12.811	1739	1745	1752	rBV2	372	871	0.05%	0.008%
71	13.114	1799	1803	1813	rVB2	258	710	0.04%	0.007%
72	13.182	1813	1816	1824	rBV2	263	527	0.03%	0.005%
73	13.355	1840	1849	1905	rBB	1044502	1922994	100.00%	17.884%
74	13.768	1920	1928	1929	rBB3	319	588	0.03%	0.005%
75	13.794	1929	1933	1943	rBB3	426	945	0.05%	0.009%
76	13.893	1951	1952	1959	rBB3	326	434	0.02%	0.004%
77	13.977	1960	1968	1975	rBB2	339	895	0.05%	0.008%
78	14.223	1980	2015	2023	rBB3	542	2859	0.15%	0.027%
79	14.270	2023	2024	2031	rBV	374	518	0.03%	0.005%
80	14.311	2031	2032	2040	rVB2	345	492	0.03%	0.005%
81	14.385	2040	2046	2050	rBV3	330	580	0.03%	0.005%
82	14.421	2050	2053	2058	rVB2	313	538	0.03%	0.005%
83	14.453	2058	2059	2067	rBV	391	647	0.03%	0.006%
84	14.531	2067	2074	2091	rBB3	1001	2697	0.14%	0.025%
85	14.646	2091	2096	2105	rBV4	828	2194	0.11%	0.020%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : c209089.D
Acq On : 14 Apr 2016 10:48 pm
Operator : VIANNAC
Sample : mb2
Misc : MS900,VC7691,5.0,,,,1
ALS Vial : 28 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 10 prefer < Tangent else baseline drop >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MC7650.M
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

86	14.730	2105	2112	2113	rBV	319	538	0.03%	0.005%
87	14.782	2113	2122	2150	rBB	1009759	1651030	85.86%	15.354%
88	14.954	2150	2155	2173	rVB3	1488	3274	0.17%	0.030%
89	15.111	2173	2185	2188	rBV2	456	1461	0.08%	0.014%
90	15.556	2188	2270	2272	rBV3	522	7482	0.39%	0.070%
91	15.598	2272	2278	2305	rBB3	3792	10915	0.57%	0.102%
92	15.812	2310	2319	2345	rBB	759472	1213702	63.12%	11.287%
93	15.979	2345	2351	2384	rBV3	796	4811	0.25%	0.045%
94	16.183	2384	2390	2427	rBB2	11080	18931	0.98%	0.176%
95	16.387	2427	2429	2435	rBV2	816	1000	0.05%	0.009%
96	16.434	2435	2438	2447	rBB3	733	1531	0.08%	0.014%
97	16.539	2447	2458	2460	rBV4	572	1101	0.06%	0.010%
98	16.565	2460	2463	2476	rBB4	929	2087	0.11%	0.019%
99	16.753	2476	2499	2500	rBV5	1425	4698	0.24%	0.044%
100	16.800	2500	2508	3196	rBB2	1112975	1829697	95.15%	17.016%

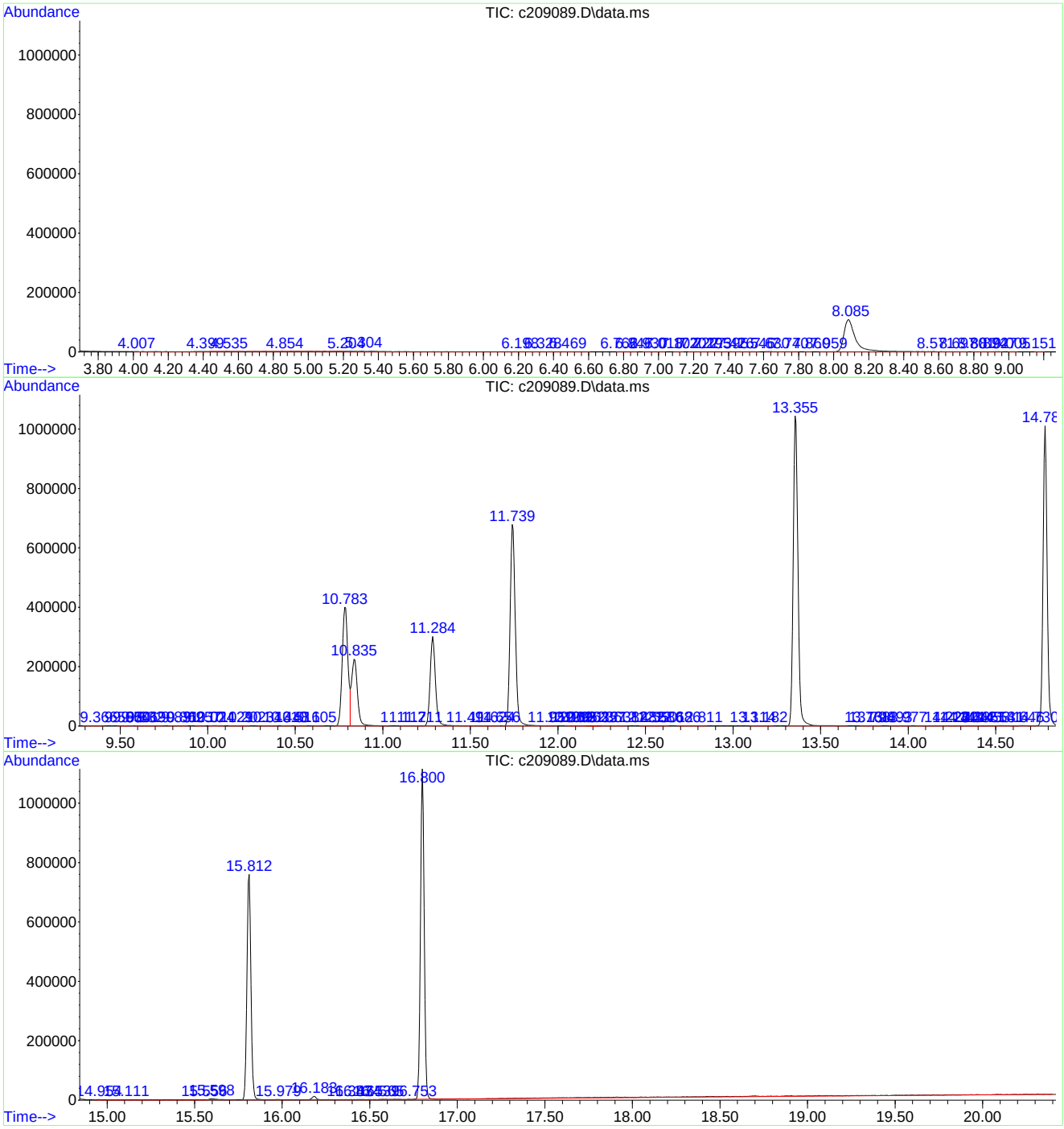
Sum of corrected areas: 10752821

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\
Data File : c209089.D
Acq On : 14 Apr 2016 10:48 pm
Operator : VIANNAC
Sample : mb2
Misc : MS900,VC7691,5.0,,,,1
ALS Vial : 28 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P



Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\
Data File : c209089.D
Acq On : 14 Apr 2016 10:48 pm
Operator : VIANNAC
Sample : mb2
Misc : MS900,VC7691,5.0,,,,1
ALS Vial : 28 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

					|--Internal Standard---|	
TIC Top Hit name	RT	EstConc	Units	Response	# RT Resp Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : c209115.D
Acq On : 15 Apr 2016 1:13 pm
Operator : VIANNAC
Sample : mb
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 18 11:36:33 2016
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Fri Apr 15 15:18:17 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.080	65	291229	500.00	ug/L	0.00
5) pentafluorobenzene	10.783	168	308328	50.00	ug/L	0.00
59) 1,4-difluorobenzene	11.740	114	571565	50.00	ug/L	0.00
88) chlorobenzene-d5	14.783	117	518811	50.00	ug/L	0.00
104) 1,4-dichlorobenzene-d4	16.801	152	250191	50.00	ug/L	0.00
System Monitoring Compounds						
50) dibromofluoromethane (s)	10.836	113	161238	48.78	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 97.56%			
51) 1,2-dichloroethane-d4 (s)	11.285	65	227776	49.56	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 99.12%			
80) toluene-d8 (s)	13.355	98	730724	50.29	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 100.58%			
106) 4-bromofluorobenzene (s)	15.813	174	182110	51.87	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 103.74%			

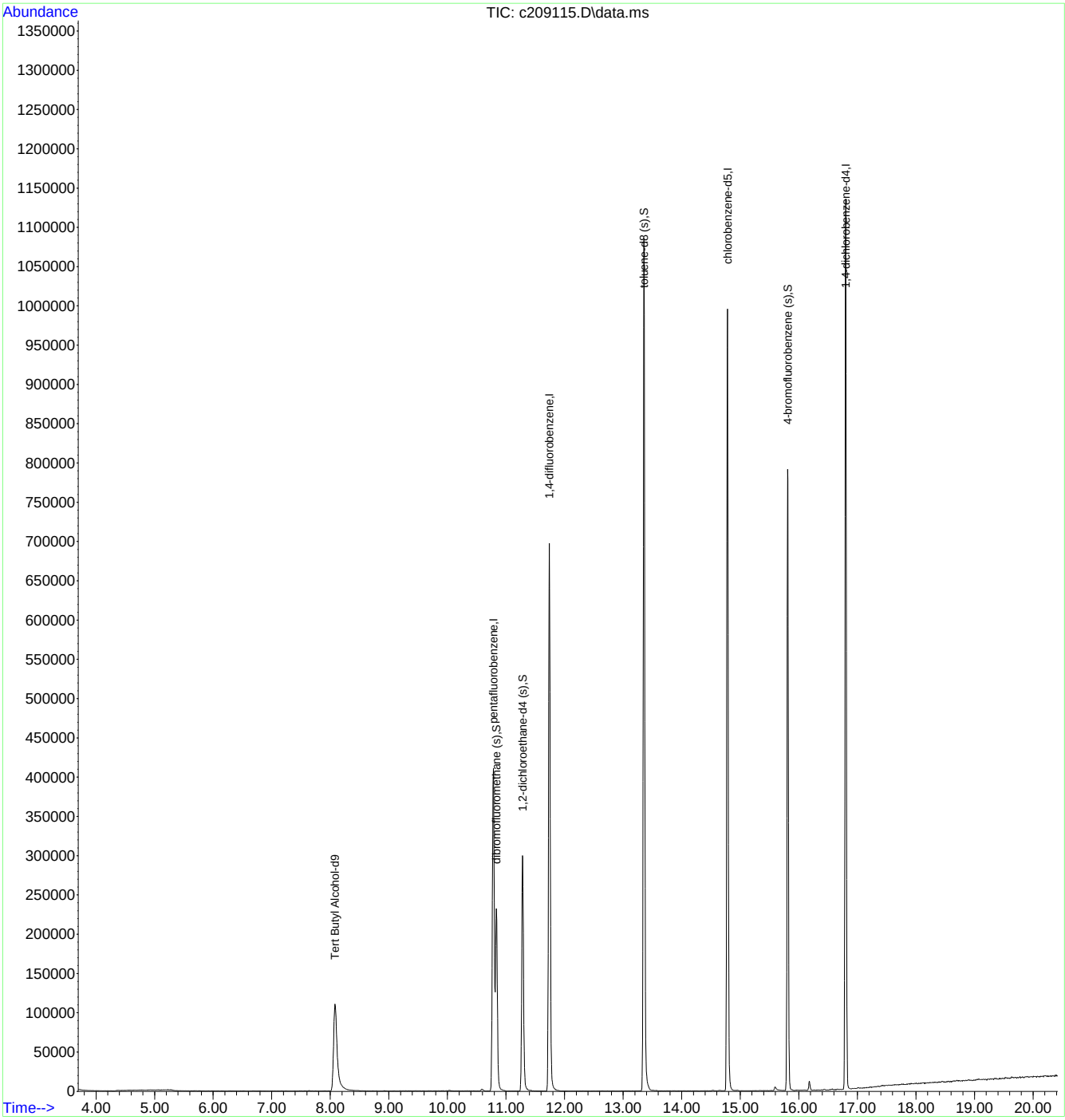
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : c209115.D
Acq On : 15 Apr 2016 1:13 pm
Operator : VIANNAC
Sample : mb
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 18 11:36:33 2016
Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Fri Apr 15 15:18:17 2016
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : c209115.D
Acq On : 15 Apr 2016 1:13 pm
Operator : VIANNAC
Sample : mb
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 10 prefer < Tangent else baseline drop >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MC7650.M
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

Signal : TIC: c20911

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.940	46	48	82	rVB2	425	2576	0.13%	0.023%
2	4.128	82	84	114	rVB2	482	3121	0.16%	0.028%
3	4.353	120	127	129	rBV2	543	757	0.04%	0.007%
4	4.379	129	132	138	rVB3	566	1011	0.05%	0.009%
5	4.426	138	141	143	rBV2	453	483	0.02%	0.004%
6	4.541	143	163	167	rBV4	772	2315	0.12%	0.021%
7	4.625	167	179	181	rBB4	595	1237	0.06%	0.011%
8	5.158	181	281	291	rBV5	1044	22030	1.11%	0.200%
9	5.226	291	294	359	rVB4	1806	11582	0.58%	0.105%
10	5.759	393	396	416	rVB2	518	1213	0.06%	0.011%
11	6.005	424	443	445	rBV2	296	943	0.05%	0.009%
12	6.088	453	459	471	rVB2	370	1566	0.08%	0.014%
13	6.271	471	494	496	rBV2	389	2071	0.10%	0.019%
14	6.350	505	509	517	rVB2	348	918	0.05%	0.008%
15	6.470	529	532	540	rBB	363	862	0.04%	0.008%
16	6.538	540	545	553	rBV	355	988	0.05%	0.009%
17	6.669	560	570	572	rBV2	262	642	0.03%	0.006%
18	6.711	576	578	584	rBB	320	474	0.02%	0.004%
19	6.773	584	590	593	rBV	345	623	0.03%	0.006%
20	6.794	593	594	604	rVB2	326	776	0.04%	0.007%
21	6.852	604	605	610	rVB2	390	523	0.03%	0.005%
22	6.988	610	631	632	rBV	409	2084	0.11%	0.019%
23	7.160	659	664	677	rVB2	354	1279	0.06%	0.012%
24	7.249	677	681	695	rBV	512	1184	0.06%	0.011%
25	7.558	735	740	749	rVB2	348	796	0.04%	0.007%
26	7.631	749	754	760	rBB3	686	1079	0.05%	0.010%
27	7.688	764	765	773	rBV2	328	599	0.03%	0.005%
28	7.741	773	775	783	rVB2	361	650	0.03%	0.006%
29	7.971	816	819	825	rVB	428	527	0.03%	0.005%
30	8.080	825	840	925	rBB	110887	499024	25.18%	4.525%
31	8.551	925	930	934	rVB3	336	686	0.03%	0.006%
32	8.587	934	937	943	rVB	455	705	0.04%	0.006%
33	8.933	997	1003	1007	rBB2	647	1008	0.05%	0.009%
34	8.964	1007	1009	1019	rVB	441	799	0.04%	0.007%
35	9.220	1049	1058	1059	rBB	302	600	0.03%	0.005%
36	9.251	1059	1064	1066	rBV2	388	491	0.02%	0.004%
37	9.288	1069	1071	1077	rBV2	396	678	0.03%	0.006%
38	9.330	1077	1079	1085	rVB	408	509	0.03%	0.005%
39	9.466	1100	1105	1107	rVB	412	539	0.03%	0.005%
40	9.492	1107	1110	1122	rBB2	383	924	0.05%	0.008%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : c209115.D
Acq On : 15 Apr 2016 1:13 pm
Operator : VIANNAC
Sample : mb
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 10 prefer < Tangent else baseline drop >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MC7650.M
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

41	9.597	1122	1130	1144	rBV2	376	1001	0.05%	0.009%
42	9.722	1144	1154	1156	rBB2	423	702	0.04%	0.006%
43	9.806	1161	1170	1174	rBB	329	749	0.04%	0.007%
44	9.858	1174	1180	1186	rBV2	246	726	0.04%	0.007%
45	9.994	1198	1206	1209	rBV2	524	1006	0.05%	0.009%
46	10.025	1209	1212	1220	rBB4	743	1198	0.06%	0.011%
47	10.083	1220	1223	1231	rVB	349	503	0.03%	0.005%
48	10.334	1268	1271	1281	rVB2	415	1127	0.06%	0.010%
49	10.490	1299	1301	1307	rBB2	403	487	0.02%	0.004%
50	10.590	1310	1320	1339	rBB3	2530	6473	0.33%	0.059%
51	10.783	1345	1357	1363	rBV	410654	957268	48.30%	8.681%
52	10.836	1363	1367	1403	rVB	232324	496324	25.04%	4.501%
53	11.170	1429	1431	1436	rVB2	304	490	0.02%	0.004%
54	11.280	1441	1452	1484	rBB	299853	652403	32.92%	5.916%
55	11.463	1484	1487	1492	rVB3	435	646	0.03%	0.006%
56	11.510	1492	1496	1499	rVB3	478	528	0.03%	0.005%
57	11.646	1519	1522	1528	rBB2	429	675	0.03%	0.006%
58	11.740	1528	1540	1577	rBB	697511	1400837	70.69%	12.703%
59	11.944	1577	1579	1583	rVB	404	524	0.03%	0.005%
60	12.017	1587	1593	1596	rBB	377	498	0.03%	0.005%
61	12.059	1596	1601	1603	rBV2	407	494	0.02%	0.004%
62	12.315	1648	1650	1655	rBB2	414	542	0.03%	0.005%
63	12.383	1659	1663	1666	rBB	445	608	0.03%	0.006%
64	12.503	1680	1686	1697	rBV2	562	1654	0.08%	0.015%
65	12.817	1736	1746	1747	rBV2	429	1041	0.05%	0.009%
66	12.838	1747	1750	1755	rBV3	286	470	0.02%	0.004%
67	13.094	1796	1799	1803	rVB3	452	750	0.04%	0.007%
68	13.193	1807	1818	1820	rBB2	290	667	0.03%	0.006%
69	13.355	1840	1849	1888	rBB	1085677	1953749	98.59%	17.717%
70	13.570	1888	1890	1902	rVB3	930	2310	0.12%	0.021%
71	13.669	1902	1909	1910	rBV3	487	984	0.05%	0.009%
72	13.758	1920	1926	1927	rBB3	417	500	0.03%	0.005%
73	13.815	1927	1937	1939	rBB2	391	901	0.05%	0.008%
74	13.883	1939	1950	1954	rBV3	405	1182	0.06%	0.011%
75	13.925	1954	1958	1961	rVB2	472	790	0.04%	0.007%
76	13.951	1961	1963	1966	rBV3	501	597	0.03%	0.005%
77	14.051	1974	1982	1984	rBV2	426	827	0.04%	0.007%
78	14.066	1984	1985	1997	rVB	257	535	0.03%	0.005%
79	14.260	2020	2022	2031	rVB3	261	507	0.03%	0.005%
80	14.427	2037	2054	2068	rVB3	331	1960	0.10%	0.018%
81	14.527	2068	2073	2086	rBB2	843	2176	0.11%	0.020%
82	14.647	2092	2096	2112	rBB3	672	1086	0.05%	0.010%
83	14.783	2114	2122	2150	rBB	995460	1678193	84.68%	15.218%
84	14.955	2150	2155	2186	rVB3	960	2239	0.11%	0.020%
85	15.175	2186	2197	2199	rVB3	411	1028	0.05%	0.009%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : c209115.D
Acq On : 15 Apr 2016 1:13 pm
Operator : VIANNAC
Sample : mb
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 10 prefer < Tangent else baseline drop >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MC7650.M
Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

86	15.253	2199	2212	2224	rBV3	429	2081	0.11%	0.019%
87	15.326	2224	2226	2256	rVB3	475	2724	0.14%	0.025%
88	15.593	2271	2277	2309	rBB3	4809	14176	0.72%	0.129%
89	15.807	2309	2318	2340	rBB	791144	1238074	62.47%	11.227%
90	15.964	2346	2348	2356	rBB5	921	1420	0.07%	0.013%
91	16.100	2356	2374	2383	rBV6	804	3916	0.20%	0.036%
92	16.179	2383	2389	2399	rBB3	11809	18874	0.95%	0.171%
93	16.267	2399	2406	2411	rBV4	758	1360	0.07%	0.012%
94	16.304	2411	2413	2426	rBV4	568	1053	0.05%	0.010%
95	16.388	2426	2429	2434	rBV3	554	752	0.04%	0.007%
96	16.430	2434	2437	2461	rBV6	1035	2811	0.14%	0.025%
97	16.571	2461	2464	2474	rVB4	1759	2794	0.14%	0.025%
98	16.633	2474	2476	2478	rBV2	1010	708	0.04%	0.006%
99	16.665	2478	2482	2500	rBV5	1222	4248	0.21%	0.039%
100	16.801	2500	2508	3195	rBB2	1133591	1981758	100.00%	17.971%

Sum of corrected areas: 11027576

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\
Data File : c209115.D
Acq On : 15 Apr 2016 1:13 pm
Operator : VIANNAC
Sample : mb
Misc : MS951,VC7692,5.0,,,,1
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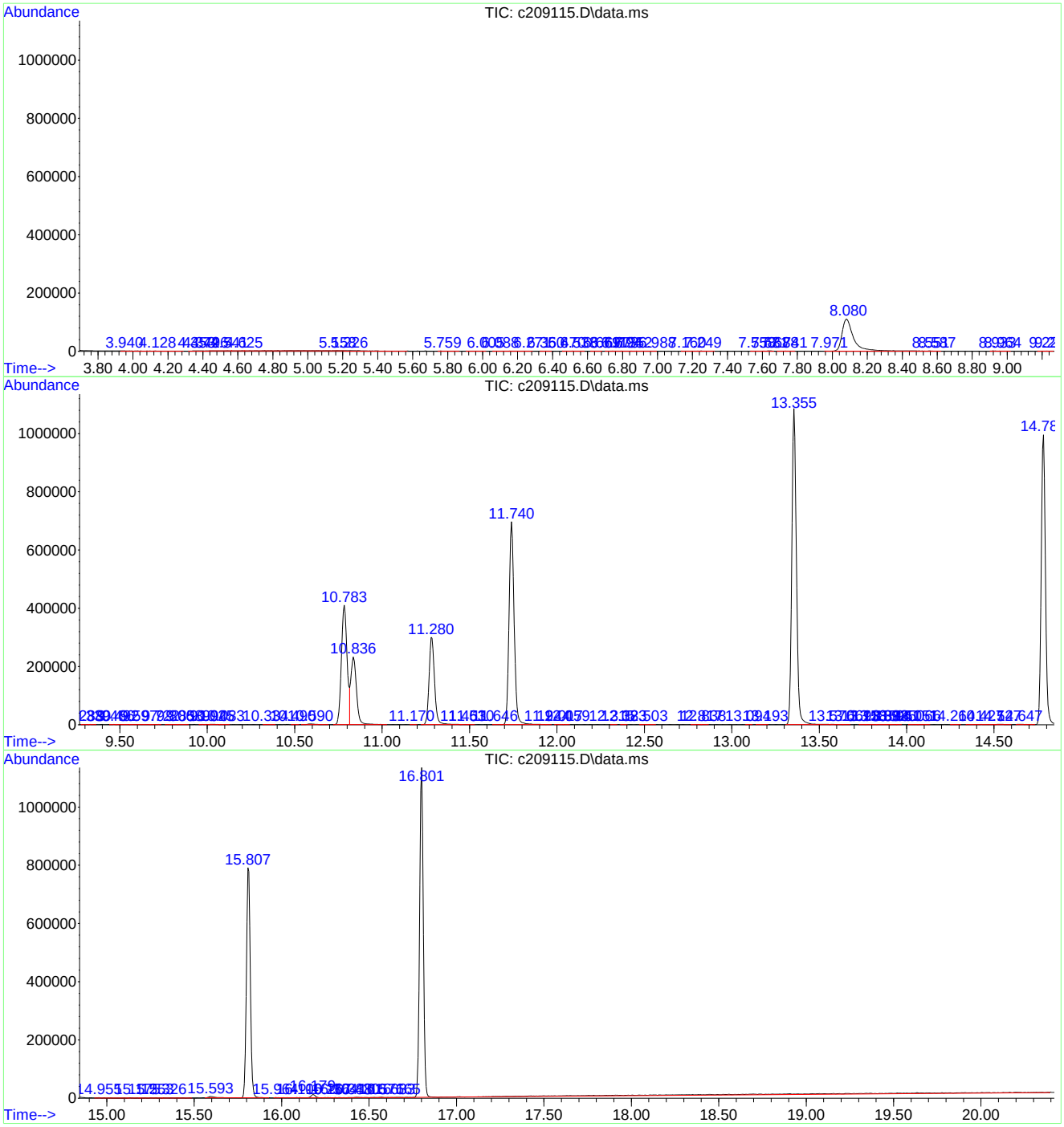
TIC Integration Parameters: lscINT.P



Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\
Data File : c209115.D
Acq On : 15 Apr 2016 1:13 pm
Operator : VIANNAC
Sample : mb
Misc : MS951,VC7692,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MC7650.M
Quant Title : Method 8260C, ZB-624 60 m x 0.25 mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscINT.P

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	Internal Standard RT	Internal Standard Resp	Internal Standard Conc

No Library Search Compounds Detected
****

SGS ACCUTEST IS PART OF SGS, THE WORLD'S LEADING INSPECTION, VERIFICATION, TESTING AND CERTIFICATION COMPANY.

e-Hardcopy 2.0
Automated Report

Technical Report for

Atlantic Richfield Company

ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

SGS Accutest Job Number: JC30522

Sampling Date: 10/25/16

Report to:

Envirotrac
400 E Corporate Court
South Plainfield, NJ 07080
Christineh@envirotrac.com

ATTN: Christine Hahn

Total number of pages in report: **371**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Kelly Patterson 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (L-A-B L2248)

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Sample Summary

Atlantic Richfield Company

Job No: JC30522

ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC30522-1	10/25/16	13:25	FR	10/26/16	AQ	Ground Water	MW-3
JC30522-2	10/25/16	16:15	FR	10/26/16	AQ	Ground Water	MW-11
JC30522-3	10/25/16	15:55	FR	10/26/16	AQ	Ground Water	MW-12
JC30522-4	10/25/16	15:28	FR	10/26/16	AQ	Ground Water	MW-14
JC30522-5	10/25/16	14:40	FR	10/26/16	AQ	Ground Water	MW-16R
JC30522-6	10/25/16	14:12	FR	10/26/16	AQ	Ground Water	MW-18R
JC30522-7	10/25/16	13:48	FR	10/26/16	AQ	Ground Water	MW-19

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Atlantic Richfield Company **Job No** JC30522

Site: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ **Report Date** 11/10/2016 4:06:54 P

On 10/26/2016, 7 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS Accutest at a maximum corrected temperature of 2.9 C. Samples were intact and chemically preserved, unless noted below. A SGS Accutest Job Number of JC30522 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

Volatiles by GCMS By Method SW846 8260C

Matrix: AQ **Batch ID:** V3D5253

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC30773-10DUP, JC30773-12MS, JC30773-10DUP were used as the QC samples indicated.
- RPD(s) for Duplicate for Carbon disulfide, Chloromethane are outside control limits for sample JC30773-10DUP. High RPD due to possible sample analyzed from different vials.

Matrix: AQ **Batch ID:** V4D3199

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC30567-3MS, JC30567-3MSD were used as the QC samples indicated.

Matrix: AQ **Batch ID:** V4D3202

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC31264-1MS, JC31264-1MSD were used as the QC samples indicated.

Metals By Method EPA 200.7

Matrix: AQ **Batch ID:** MP96853

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC30522-4MS, JC30522-4MSD, JC30522-4SDL were used as the QC samples for metals.
- JC30522-6 for Iron: Elevated sample detection limit due to difficult sample matrix.

SGS Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS Accutest is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS Accutest indicated via signature on the report cover

Summary of Hits

Job Number: JC30522
Account: Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Collected: 10/25/16

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC30522-1	**MW-3**					
Benzene		47.1	0.50	0.14	ug/l	SW846 8260C
Cyclohexane		13.9	5.0	0.73	ug/l	SW846 8260C
Ethylbenzene		0.22 J	1.0	0.20	ug/l	SW846 8260C
Isopropylbenzene		8.9	1.0	0.16	ug/l	SW846 8260C
Methylcyclohexane		10	5.0	0.78	ug/l	SW846 8260C
Methyl Tert Butyl Ether		2.2	1.0	0.34	ug/l	SW846 8260C
Tert Butyl Alcohol		10.9	10	3.0	ug/l	SW846 8260C
Toluene		1.3	1.0	0.23	ug/l	SW846 8260C
m,p-Xylene		3.0	1.0	0.42	ug/l	SW846 8260C
Xylene (total)		3.0	1.0	0.21	ug/l	SW846 8260C
Total TIC, Volatile		202 J			ug/l	
Total Alkanes		197 J			ug/l	
Iron		4700	100		ug/l	EPA 200.7
JC30522-2	**MW-11**					
Benzene		0.43 J	0.50	0.14	ug/l	SW846 8260C
Cyclohexane		25.6	5.0	0.73	ug/l	SW846 8260C
Ethylbenzene		1.6	1.0	0.20	ug/l	SW846 8260C
Isopropylbenzene		1.6	1.0	0.16	ug/l	SW846 8260C
Methylcyclohexane		29.5	5.0	0.78	ug/l	SW846 8260C
4-Methyl-2-pentanone(MIBK)		4.0 J	5.0	1.2	ug/l	SW846 8260C
Tert Butyl Alcohol		115	10	3.0	ug/l	SW846 8260C
Toluene		2.5	1.0	0.23	ug/l	SW846 8260C
m,p-Xylene		26.6	1.0	0.42	ug/l	SW846 8260C
o-Xylene		19.0	1.0	0.21	ug/l	SW846 8260C
Xylene (total)		45.6	1.0	0.21	ug/l	SW846 8260C
Total TIC, Volatile		413 J			ug/l	
Total Alkanes		1295 J			ug/l	
Iron		2610	100		ug/l	EPA 200.7
JC30522-3	**MW-12**					
Benzene		29.9	0.50	0.14	ug/l	SW846 8260C
Cyclohexane		26.1	5.0	0.73	ug/l	SW846 8260C
Ethylbenzene		96.2	1.0	0.20	ug/l	SW846 8260C
2-Hexanone		6.3	5.0	1.5	ug/l	SW846 8260C
Isopropylbenzene		11.1	1.0	0.16	ug/l	SW846 8260C
Methylcyclohexane		30.2	5.0	0.78	ug/l	SW846 8260C
Methyl Tert Butyl Ether		0.60 J	1.0	0.34	ug/l	SW846 8260C
4-Methyl-2-pentanone(MIBK)		3.0 J	5.0	1.2	ug/l	SW846 8260C
Tert Butyl Alcohol		10.4	10	3.0	ug/l	SW846 8260C
Toluene		26.9	1.0	0.23	ug/l	SW846 8260C

Summary of Hits

Job Number: JC30522
Account: Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Collected: 10/25/16

Lab Sample ID / Client Sample ID / Analyte	Result/ Qual	RL	MDL	Units	Method
m,p-Xylene	493	10	4.2	ug/l	SW846 8260C
o-Xylene	172	1.0	0.21	ug/l	SW846 8260C
Xylene (total)	665	10	2.1	ug/l	SW846 8260C
Total TIC, Volatile	2563 J			ug/l	
Total Alkanes	470 J			ug/l	
Iron	712	100		ug/l	EPA 200.7
JC30522-4 MW-14					
Benzene	64.9	0.50	0.14	ug/l	SW846 8260C
Cyclohexane	83.8	5.0	0.73	ug/l	SW846 8260C
Ethylbenzene	91.2	1.0	0.20	ug/l	SW846 8260C
2-Hexanone	4.1 J	5.0	1.5	ug/l	SW846 8260C
Isopropylbenzene	26.3	1.0	0.16	ug/l	SW846 8260C
Methylcyclohexane	92.9	5.0	0.78	ug/l	SW846 8260C
Methyl Tert Butyl Ether	3.2	1.0	0.34	ug/l	SW846 8260C
4-Methyl-2-pentanone(MIBK)	1.7 J	5.0	1.2	ug/l	SW846 8260C
Toluene	6.1	1.0	0.23	ug/l	SW846 8260C
m,p-Xylene	197	1.0	0.42	ug/l	SW846 8260C
o-Xylene	29.6	1.0	0.21	ug/l	SW846 8260C
Xylene (total)	227	1.0	0.21	ug/l	SW846 8260C
Total TIC, Volatile	3090 J			ug/l	
Total Alkanes	390 J			ug/l	
Iron	244	100		ug/l	EPA 200.7
JC30522-5 MW-16R					
Benzene	76.3	0.50	0.14	ug/l	SW846 8260C
Cyclohexane	10.5	5.0	0.73	ug/l	SW846 8260C
Ethylbenzene	56.0	1.0	0.20	ug/l	SW846 8260C
2-Hexanone	4.8 J	5.0	1.5	ug/l	SW846 8260C
Isopropylbenzene	10	1.0	0.16	ug/l	SW846 8260C
Methylcyclohexane	16.3	5.0	0.78	ug/l	SW846 8260C
Methyl Tert Butyl Ether	4.1	1.0	0.34	ug/l	SW846 8260C
4-Methyl-2-pentanone(MIBK)	2.0 J	5.0	1.2	ug/l	SW846 8260C
Tert Butyl Alcohol	39.4	10	3.0	ug/l	SW846 8260C
Toluene	20.4	1.0	0.23	ug/l	SW846 8260C
m,p-Xylene	106	1.0	0.42	ug/l	SW846 8260C
o-Xylene	78.6	1.0	0.21	ug/l	SW846 8260C
Xylene (total)	185	1.0	0.21	ug/l	SW846 8260C
Total TIC, Volatile	2077 J			ug/l	
Iron	8080	100		ug/l	EPA 200.7

Summary of Hits

Job Number: JC30522
Account: Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Collected: 10/25/16

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC30522-6	**MW-18R**					
Acetone		90.5	10	5.0	ug/l	SW846 8260C
Benzene		18.8	0.50	0.14	ug/l	SW846 8260C
2-Butanone (MEK)		24.8	10	1.9	ug/l	SW846 8260C
Cyclohexane		4.7 J	5.0	0.73	ug/l	SW846 8260C
Ethylbenzene		3.2	1.0	0.20	ug/l	SW846 8260C
2-Hexanone		2.3 J	5.0	1.5	ug/l	SW846 8260C
Isopropylbenzene		1.1	1.0	0.16	ug/l	SW846 8260C
Methylcyclohexane		3.1 J	5.0	0.78	ug/l	SW846 8260C
Methyl Tert Butyl Ether		3.9	1.0	0.34	ug/l	SW846 8260C
4-Methyl-2-pentanone(MIBK)		4.3 J	5.0	1.2	ug/l	SW846 8260C
Tert Butyl Alcohol		15.7	10	3.0	ug/l	SW846 8260C
Toluene		6.5	1.0	0.23	ug/l	SW846 8260C
m,p-Xylene		54.7	1.0	0.42	ug/l	SW846 8260C
o-Xylene		28.9	1.0	0.21	ug/l	SW846 8260C
Xylene (total)		83.6	1.0	0.21	ug/l	SW846 8260C
Total TIC, Volatile		773 J			ug/l	
Iron [a]		6030	200		ug/l	EPA 200.7
JC30522-7	**MW-19**					
Methyl Tert Butyl Ether		4.0	1.0	0.34	ug/l	SW846 8260C
Iron		1590	100		ug/l	EPA 200.7

(a) Elevated sample detection limit due to difficult sample matrix.

Sample Results

Report of Analysis

SGS Accutest

Report of Analysis

Client Sample ID: MW-3
Lab Sample ID: JC30522-1 **Date Sampled:** 10/25/16
Matrix: AQ - Ground Water **Date Received:** 10/26/16
Method: SW846 8260C **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4D73693.D	1	11/08/16	XC	n/a	n/a	V4D3202
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	47.1	0.50	0.14	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
110-82-7	Cyclohexane	13.9	5.0	0.73	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
123-91-1	1,4-Dioxane	ND	130	32	ug/l	
100-41-4	Ethylbenzene	0.22	1.0	0.20	ug/l	J
76-13-1	Freon 113	ND	5.0	1.2	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	JC30522-1	**Date Sampled:**	10/25/16
Matrix:	AQ - Ground Water	**Date Received:**	10/26/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
98-82-8	Isopropylbenzene	8.9	1.0	0.16	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.5	ug/l	
108-87-2	Methylcyclohexane	10	5.0	0.78	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2.2	1.0	0.34	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	10.9	10	3.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	1.3	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	3.0	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	3.0	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		76-120%
17060-07-0	1,2-Dichloroethane-D4	103%		73-122%
2037-26-5	Toluene-D8	101%		84-119%
460-00-4	4-Bromofluorobenzene	103%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	3.27	270	ug/l	JB
	alkene	7.66	20	ug/l	J
96-37-7	Cyclopentane, methyl-	9.30	43	ug/l	JN
	alkene	10.63	16	ug/l	J
103-65-1	Benzene, propyl-	15.77	27	ug/l	JN
496-11-7	Indane	16.98	40	ug/l	JN
	C4 alkyl benzene	17.36	15	ug/l	J
	1H-Indene-dihydro-methyl- isomer	17.52	12	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	JC30522-1	**Date Sampled:**	10/25/16
Matrix:	AQ - Ground Water	**Date Received:**	10/26/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	C4 alkyl benzene	17.73	10	ug/l	J
	1H-Indene-dihydro-methyl- isomer	18.23	19	ug/l	J
	Total TIC, Volatile		202	ug/l	J
	Total Alkanes		197	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	JC30522-1	**Date Sampled:**	10/25/16
Matrix:	AQ - Ground Water	**Date Received:**	10/26/16
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	4700	100	ug/l	1	10/29/16	11/02/16	AB	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA40671
(2) Prep QC Batch: MP96853

RL = Reporting Limit

SGS Accutest

Report of Analysis

Client Sample ID: MW-11
Lab Sample ID: JC30522-2 **Date Sampled:** 10/25/16
Matrix: AQ - Ground Water **Date Received:** 10/26/16
Method: SW846 8260C **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4D73694.D	1	11/08/16	XC	n/a	n/a	V4D3202
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	0.43	0.50	0.14	ug/l	J
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
110-82-7	Cyclohexane	25.6	5.0	0.73	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
123-91-1	1,4-Dioxane	ND	130	32	ug/l	
100-41-4	Ethylbenzene	1.6	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-11		
Lab Sample ID:	JC30522-2	**Date Sampled:**	10/25/16
Matrix:	AQ - Ground Water	**Date Received:**	10/26/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
98-82-8	Isopropylbenzene	1.6	1.0	0.16	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.5	ug/l	
108-87-2	Methylcyclohexane	29.5	5.0	0.78	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.34	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	4.0	5.0	1.2	ug/l	J
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	115	10	3.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	2.5	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	26.6	1.0	0.42	ug/l	
95-47-6	o-Xylene	19.0	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	45.6	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		76-120%
17060-07-0	1,2-Dichloroethane-D4	99%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	101%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	3.27	380	ug/l	J
	alkene	4.47	46	ug/l	J
	alkene	6.15	60	ug/l	J
	alkene	6.36	29	ug/l	J
	alkene	6.47	65	ug/l	J
	alkene	7.66	50	ug/l	J
96-37-7	Cyclopentane, methyl-	9.30	100	ug/l	JN
	C3 alkyl benzene	16.16	32	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-11		
Lab Sample ID:	JC30522-2	**Date Sampled:**	10/25/16
Matrix:	AQ - Ground Water	**Date Received:**	10/26/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
95-63-6	Benzene, 1,2,4-trimethyl-	16.32	31	ug/l	JN
	Total TIC, Volatile		413	ug/l	J
	Total Alkanes		1295	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-11		
Lab Sample ID:	JC30522-2	**Date Sampled:**	10/25/16
Matrix:	AQ - Ground Water	**Date Received:**	10/26/16
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	2610	100	ug/l	1	10/29/16	11/02/16	AB	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA40671
(2) Prep QC Batch: MP96853

RL = Reporting Limit

SGS Accutest

Report of Analysis

Client Sample ID:	MW-12		
Lab Sample ID:	JC30522-3	**Date Sampled:**	10/25/16
Matrix:	AQ - Ground Water	**Date Received:**	10/26/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4D73698.D	1	11/08/16	XC	n/a	n/a	V4D3202
Run #2	4D73608.D	10	11/04/16	XC	n/a	n/a	V4D3199

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	29.9	0.50	0.14	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
110-82-7	Cyclohexane	26.1	5.0	0.73	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
123-91-1	1,4-Dioxane	ND	130	32	ug/l	
100-41-4	Ethylbenzene	96.2	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-12		
Lab Sample ID:	JC30522-3	**Date Sampled:**	10/25/16
Matrix:	AQ - Ground Water	**Date Received:**	10/26/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	6.3	5.0	1.5	ug/l	
98-82-8	Isopropylbenzene	11.1	1.0	0.16	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.5	ug/l	
108-87-2	Methylcyclohexane	30.2	5.0	0.78	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.60	1.0	0.34	ug/l	J
108-10-1	4-Methyl-2-pentanone(MIBK)	3.0	5.0	1.2	ug/l	J
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	10.4	10	3.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	26.9	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	493 [a]	10	4.2	ug/l	
95-47-6	o-Xylene	172	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	665 [a]	10	2.1	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	103%	76-120%
17060-07-0	1,2-Dichloroethane-D4	103%	104%	73-122%
2037-26-5	Toluene-D8	102%	99%	84-119%
460-00-4	4-Bromofluorobenzene	106%	109%	78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	3.27	450	ug/l	JB
96-37-7	Cyclopentane, methyl-	9.30	88	ug/l	JN
	C3 alkyl benzene	15.85	200	ug/l	J
	C3 alkyl benzene	15.88	140	ug/l	J
108-67-8	Benzene, 1,3,5-trimethyl-	15.93	240	ug/l	JN
	C3 alkyl benzene	16.16	290	ug/l	J
95-63-6	Benzene, 1,2,4-trimethyl-	16.32	520	ug/l	JN
	C3 alkyl benzene	16.76	360	ug/l	J

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J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-12		
Lab Sample ID:	JC30522-3	**Date Sampled:**	10/25/16
Matrix:	AQ - Ground Water	**Date Received:**	10/26/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Indane + C4 alkyl benzene	16.98	240	ug/l	J
	C4 alkyl benzene	17.36	170	ug/l	J
	C4 alkyl benzene	17.73	100	ug/l	J
	C4 alkyl benzene	17.79	95	ug/l	J
	1H-Indene-dihydro-methyl- isomer	18.23	120	ug/l	J
	Total TIC, Volatile		2563	ug/l	J
	Total Alkanes		470	ug/l	J

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-12		
Lab Sample ID:	JC30522-3	**Date Sampled:**	10/25/16
Matrix:	AQ - Ground Water	**Date Received:**	10/26/16
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	712	100	ug/l	1	10/29/16	11/02/16	AB	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA40671
(2) Prep QC Batch: MP96853

RL = Reporting Limit

SGS Accutest

Report of Analysis

Client Sample ID: MW-14
Lab Sample ID: JC30522-4 **Date Sampled:** 10/25/16
Matrix: AQ - Ground Water **Date Received:** 10/26/16
Method: SW846 8260C **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4D73697.D	1	11/08/16	XC	n/a	n/a	V4D3202
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	64.9	0.50	0.14	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
110-82-7	Cyclohexane	83.8	5.0	0.73	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
123-91-1	1,4-Dioxane	ND	130	32	ug/l	
100-41-4	Ethylbenzene	91.2	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	JC30522-4	**Date Sampled:**	10/25/16
Matrix:	AQ - Ground Water	**Date Received:**	10/26/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	4.1	5.0	1.5	ug/l	J
98-82-8	Isopropylbenzene	26.3	1.0	0.16	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.5	ug/l	
108-87-2	Methylcyclohexane	92.9	5.0	0.78	ug/l	
1634-04-4	Methyl Tert Butyl Ether	3.2	1.0	0.34	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	1.7	5.0	1.2	ug/l	J
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	3.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	6.1	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	197	1.0	0.42	ug/l	
95-47-6	o-Xylene	29.6	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	227	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		76-120%
17060-07-0	1,2-Dichloroethane-D4	100%		73-122%
2037-26-5	Toluene-D8	103%		84-119%
460-00-4	4-Bromofluorobenzene	105%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	3.27	320	ug/l	JB
96-37-7	Cyclopentane, methyl-	9.30	170	ug/l	JN
	C3 alkyl benzene	15.85	120	ug/l	J
	C3 alkyl benzene	15.88	190	ug/l	J
108-67-8	Benzene, 1,3,5-trimethyl-	15.93	210	ug/l	JN
	C3 alkyl benzene	16.16	270	ug/l	J
95-63-6	Benzene, 1,2,4-trimethyl-	16.32	790	ug/l	JN
	C3 alkyl benzene	16.76	390	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	JC30522-4	**Date Sampled:**	10/25/16
Matrix:	AQ - Ground Water	**Date Received:**	10/26/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	C4 alkyl benzene	16.90	120	ug/l	J
	Indane + C4 alkyl benzene	16.98	240	ug/l	J
	C4 alkyl benzene	17.36	200	ug/l	J
	1H-Indene-dihydro-methyl- isomer	17.52	120	ug/l	J
	C4 alkyl benzene	17.79	120	ug/l	J
	1H-Indene-dihydro-methyl- isomer	18.23	150	ug/l	J
	Total TIC, Volatile		3090	ug/l	J
	Total Alkanes		390	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	JC30522-4	**Date Sampled:**	10/25/16
Matrix:	AQ - Ground Water	**Date Received:**	10/26/16
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	244	100	ug/l	1	10/29/16	11/02/16	AB	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA40671
(2) Prep QC Batch: MP96853

RL = Reporting Limit

SGS Accutest

Report of Analysis

Client Sample ID: MW-16R
Lab Sample ID: JC30522-5 **Date Sampled:** 10/25/16
Matrix: AQ - Ground Water **Date Received:** 10/26/16
Method: SW846 8260C **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4D73696.D	1	11/08/16	XC	n/a	n/a	V4D3202
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	76.3	0.50	0.14	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
110-82-7	Cyclohexane	10.5	5.0	0.73	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
123-91-1	1,4-Dioxane	ND	130	32	ug/l	
100-41-4	Ethylbenzene	56.0	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-16R		
Lab Sample ID:	JC30522-5	**Date Sampled:**	10/25/16
Matrix:	AQ - Ground Water	**Date Received:**	10/26/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	4.8	5.0	1.5	ug/l	J
98-82-8	Isopropylbenzene	10	1.0	0.16	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.5	ug/l	
108-87-2	Methylcyclohexane	16.3	5.0	0.78	ug/l	
1634-04-4	Methyl Tert Butyl Ether	4.1	1.0	0.34	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	2.0	5.0	1.2	ug/l	J
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	39.4	10	3.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	20.4	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	106	1.0	0.42	ug/l	
95-47-6	o-Xylene	78.6	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	185	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		76-120%
17060-07-0	1,2-Dichloroethane-D4	99%		73-122%
2037-26-5	Toluene-D8	101%		84-119%
460-00-4	4-Bromofluorobenzene	102%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	3.27	560	ug/l	JB
	C3 alkyl benzene	15.85	73	ug/l	J
	C3 alkyl benzene	15.88	90	ug/l	J
108-67-8	Benzene, 1,3,5-trimethyl-	15.93	100	ug/l	JN
	C3 alkyl benzene	16.16	170	ug/l	J
95-63-6	Benzene, 1,2,4-trimethyl-	16.32	450	ug/l	JN
	C3 alkyl benzene	16.76	180	ug/l	J
	C4 alkyl benzene	16.90	90	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-16R		
Lab Sample ID:	JC30522-5	**Date Sampled:**	10/25/16
Matrix:	AQ - Ground Water	**Date Received:**	10/26/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Indane + C4 alkyl benzene	16.98	200	ug/l	J
	C4 alkyl benzene	17.25	79	ug/l	J
	C4 alkyl benzene	17.36	170	ug/l	J
	1H-Indene-dihydro-methyl- isomer	17.51	74	ug/l	J
	C4 alkyl benzene	17.73	97	ug/l	J
	C4 alkyl benzene	17.79	120	ug/l	J
	1H-Indene-dihydro-methyl- isomer	18.07	64	ug/l	J
	1H-Indene-dihydro-methyl- isomer	18.23	120	ug/l	J
	Total TIC, Volatile		2077	ug/l	J
	Total Alkanes		0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-16R		
Lab Sample ID:	JC30522-5	**Date Sampled:**	10/25/16
Matrix:	AQ - Ground Water	**Date Received:**	10/26/16
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	8080	100	ug/l	1	10/29/16	11/02/16	AB	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA40671
(2) Prep QC Batch: MP96853

RL = Reporting Limit

SGS Accutest

Report of Analysis

Client Sample ID:	MW-18R		
Lab Sample ID:	JC30522-6	**Date Sampled:**	10/25/16
Matrix:	AQ - Ground Water	**Date Received:**	10/26/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4D73695.D	1	11/08/16	XC	n/a	n/a	V4D3202
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	90.5	10	5.0	ug/l	
71-43-2	Benzene	18.8	0.50	0.14	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	24.8	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
110-82-7	Cyclohexane	4.7	5.0	0.73	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
123-91-1	1,4-Dioxane	ND	130	32	ug/l	
100-41-4	Ethylbenzene	3.2	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-18R		
Lab Sample ID:	JC30522-6	**Date Sampled:**	10/25/16
Matrix:	AQ - Ground Water	**Date Received:**	10/26/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	2.3	5.0	1.5	ug/l	J
98-82-8	Isopropylbenzene	1.1	1.0	0.16	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.5	ug/l	
108-87-2	Methylcyclohexane	3.1	5.0	0.78	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	3.9	1.0	0.34	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	4.3	5.0	1.2	ug/l	J
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	15.7	10	3.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	6.5	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	54.7	1.0	0.42	ug/l	
95-47-6	o-Xylene	28.9	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	83.6	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		76-120%
17060-07-0	1,2-Dichloroethane-D4	100%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	100%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	3.27	89	ug/l	JB
	C3 alkyl benzene	15.85	52	ug/l	J
	C3 alkyl benzene	15.88	48	ug/l	J
108-67-8	Benzene, 1,3,5-trimethyl-	15.93	85	ug/l	JN
	C3 alkyl benzene	16.16	60	ug/l	J
95-63-6	Benzene, 1,2,4-trimethyl-	16.32	120	ug/l	JN
	C4 alkyl benzene	16.90	36	ug/l	J
	C4 alkyl benzene	16.93	23	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-18R		
Lab Sample ID:	JC30522-6	**Date Sampled:**	10/25/16
Matrix:	AQ - Ground Water	**Date Received:**	10/26/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	C4 alkyl benzene	16.98	95	ug/l	J
	C4 alkyl benzene	17.25	24	ug/l	J
	C4 alkyl benzene	17.29	24	ug/l	J
	C4 alkyl benzene	17.36	75	ug/l	J
	C4 alkyl benzene	17.73	35	ug/l	J
	C4 alkyl benzene	17.79	39	ug/l	J
	C4 alkyl benzene	18.19	22	ug/l	J
	1H-Indene-dihydro-methyl- isomer	18.23	35	ug/l	J
	Total TIC, Volatile		773	ug/l	J
	Total Alkanes		0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-18R		
Lab Sample ID:	JC30522-6	**Date Sampled:**	10/25/16
Matrix:	AQ - Ground Water	**Date Received:**	10/26/16
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron [a]	6030	200	ug/l	1	10/29/16	11/02/16	AB	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA40671
(2) Prep QC Batch: MP96853

(a) Elevated sample detection limit due to difficult sample matrix.

RL = Reporting Limit

SGS Accutest

Report of Analysis

Client Sample ID: MW-19
Lab Sample ID: JC30522-7 **Date Sampled:** 10/25/16
Matrix: AQ - Ground Water **Date Received:** 10/26/16
Method: SW846 8260C **Percent Solids:** n/a
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3D123771A.D	1	11/08/16	XC	n/a	n/a	V3D5253
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.73	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
123-91-1	1,4-Dioxane	ND	130	32	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-19		
Lab Sample ID:	JC30522-7	**Date Sampled:**	10/25/16
Matrix:	AQ - Ground Water	**Date Received:**	10/26/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.16	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.5	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.78	ug/l	
1634-04-4	Methyl Tert Butyl Ether	4.0	1.0	0.34	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	3.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		76-120%
17060-07-0	1,2-Dichloroethane-D4	102%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	96%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	
	Total Alkanes		0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-19		
Lab Sample ID:	JC30522-7	**Date Sampled:**	10/25/16
Matrix:	AQ - Ground Water	**Date Received:**	10/26/16
		Percent Solids:	n/a
Project:	ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	1590	100	ug/l	1	10/29/16	11/02/16	AB	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA40671
(2) Prep QC Batch: MP96853

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

GW

JC30522
10/04

L

ACCUTEST Laboratories
Mid Atlantic
2235 Route 130, Dayton, NJ 08810
Tel. (732) 329-0200 Fax: (732) 329-3499/3480

Chain Of Custody Record

☐ SCIENCE & ENGINEERING
☐ TECHNICAL SERVICES
☑ BILL CONSULTANT

Accutest Job #
Accutest Quote #

DATE: October 2015
PAGE: 1 of 1

CONSULTANT: EnviroTrac Ltd.
ADDRESS: 400 E Corporate Court
CITY: South Plainfield, NJ 07080
TELEPHONE: (908) 757-1900 FAX: (908) 757-0017 E-MAIL: christineh@envirotrac.com

SITE ADDRESS (Street and City): 945 Pleasant Vally Way, West Orange
PROJECT NAME: BP 84849
PROJECT CONTACT (Report to): Christine Hahn
CONSULTANT PROJECT NO.
LAB JOB NUMBER (SDG):

TURNAROUND TIME (BUSINESS DAYS): ☑ STANDARD ☐ DAYS ☐ DAYS ☐ DAYS ☐ 4 HOURS
DATA DELIVERABLES (CHECK ONE) ☐ COMMA ☐ COMMB ☑ NJ REDT2 ☐ FULL T1 ☐ OTHER
SPECIAL INSTRUCTIONS OR NOTES :

REQUESTED ANALYSIS if more than one method is listed, circle one

LAB Sample #	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VO+15, MTBE,TBA via 8260	Total Iron 200.7	Container PID Readings or Laboratory Notes
1	MW-3	10/25/16	13:25	GW	3	1				4	X	X	AJ
2	MW-11		16:15	GW	3	1				4	X	X	V358
3	MW-12		15:55	GW	3	1				4	X	X	
4	MW-14		15:28	GW	3	1				4	X	X	
5	MW-16R		14:40	GW	3	1				4	X	X	
	~~MW-17R~~			GW	3	1				4	X	X	
6	MW-18R		14:12	GW	3	1				4	X	X	
7	MW-19		13:48	GW	3	1				4	X	X	

INITIAL ASSESSMENT 28
LABEL VERIFICATION 10

ALL SAMPLES RECEIVED PROPERLY PRESERVED AS APPLICABLE

		Date	Time
Relinquished by: (Sampler Signature) Fred Neubert	Received by: (Signature)	10/24/16	0930
Relinquished by: (Signature)	Received by: (Signature)	10/26/16	1005
Relinquished by: (Signature)	Received by: (Signature)	10/26/16	1120

#292 SAMPLE RECEIVED @ LAB ☐ ICE ☐ NO SAMPLE TEMP UPON RECEIPT: 3.0 Degrees C -15

5.1 5

JC30522: Chain of Custody
Page 1 of 3

SGS Accutest Sample Receipt Summary

Job Number: JC30522 **Client:** ENVIROTRAC **Project:** 945 Pleasant Vally Way, West Orange

Date / Time Received: 10/26/2016 11:20:00 AM **Delivery Method:** Accutest Courier **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (3.0);

Cooler Temps (Corrected) °C: Cooler 1: (2.9);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Bar Therm		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☐		☑	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments -5 Sample rec'd underpreserved with a pH of approx 7.0. HNO3 was added and pH has been corrected.
-6 Sample rec'd underpreserved with a pH of approx 8.0. HNO3 was added and pH has been corrected.

HNO3 added 10/26/16 at 13:00. Lot # MA-013-20-624

SGS Accutest Sample - Problem Resolution

Accutest Job Number: JC30522

CSR: Kelly **Response Date:** 10/28/2016

Response: Please proceed as noted

JC30522: Chain of Custody
Page 3 of 3

Internal Sample Tracking Chronicle

Atlantic Richfield Company

Job No: JC30522

ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC30522-1 MW-3	Collected: 25-OCT-16 13:25 By: FR		Received: 26-OCT-16 By: AS			
JC30522-1	EPA 200.7	02-NOV-16 07:01	AB	29-OCT-16	JA	FE
JC30522-1	SW846 8260C	08-NOV-16 11:33	XC			V8260TCL11+
JC30522-2 MW-11	Collected: 25-OCT-16 16:15 By: FR		Received: 26-OCT-16 By: AS			
JC30522-2	EPA 200.7	02-NOV-16 07:07	AB	29-OCT-16	JA	FE
JC30522-2	SW846 8260C	08-NOV-16 12:00	XC			V8260TCL11+
JC30522-3 MW-12	Collected: 25-OCT-16 15:55 By: FR		Received: 26-OCT-16 By: AS			
JC30522-3	EPA 200.7	02-NOV-16 07:13	AB	29-OCT-16	JA	FE
JC30522-3	SW846 8260C	04-NOV-16 22:49	XC			V8260TCL11+
JC30522-3	SW846 8260C	08-NOV-16 13:50	XC			V8260TCL11+
JC30522-4 MW-14	Collected: 25-OCT-16 15:28 By: FR		Received: 26-OCT-16 By: AS			
JC30522-4	EPA 200.7	02-NOV-16 06:37	AB	29-OCT-16	JA	FE
JC30522-4	SW846 8260C	08-NOV-16 13:22	XC			V8260TCL11+
JC30522-5 MW-16R	Collected: 25-OCT-16 14:40 By: FR		Received: 26-OCT-16 By: AS			
JC30522-5	EPA 200.7	02-NOV-16 07:19	AB	29-OCT-16	JA	FE
JC30522-5	SW846 8260C	08-NOV-16 12:55	XC			V8260TCL11+
JC30522-6 MW-18R	Collected: 25-OCT-16 14:12 By: FR		Received: 26-OCT-16 By: AS			
JC30522-6	EPA 200.7	02-NOV-16 07:24	AB	29-OCT-16	JA	FE
JC30522-6	SW846 8260C	08-NOV-16 12:28	XC			V8260TCL11+
JC30522-7 MW-19	Collected: 25-OCT-16 13:48 By: FR		Received: 26-OCT-16 By: AS			

Internal Sample Tracking Chronicle

Atlantic Richfield Company

Job No: JC30522

ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC30522-7	EPA 200.7	02-NOV-16 07:31	AB	29-OCT-16	JA	FE
JC30522-7	SW846 8260C	08-NOV-16 14:39	XC			V8260TCL11+

SGS Accutest Internal Chain of Custody

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Received: 10/26/16

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC30522-1.1	Secured Storage	Jessica Adametz	10/29/16 07:11	Retrieve from Storage
JC30522-1.1	Jessica Adametz	Secured Storage	10/29/16 08:26	Return to Storage
JC30522-1.1.1	Jessica Adametz	Metals Digestion	10/29/16 08:25	Digestate from JC30522-1.1
JC30522-1.1.1	Metals Digestion	Jessica Adametz	10/29/16 08:26	Digestate from JC30522-1.1
JC30522-1.1.1	Jessica Adametz	Metals Digestate Storage	10/29/16 08:26	Return to Storage
JC30522-1.1.1	Metals Digestate Storage	April Birnie	11/01/16 15:29	Retrieve from Storage
JC30522-1.1.1	April Birnie	Metals Digestate Storage	11/01/16 16:08	Return to Storage
JC30522-1.2	Secured Storage	Ximena Collado	11/04/16 11:58	Retrieve from Storage
JC30522-1.2	Ximena Collado	GCMS4D	11/04/16 11:58	Load on Instrument
JC30522-1.2	GCMS4D	Ximena Collado	11/08/16 11:29	Unload from Instrument
JC30522-1.2	Ximena Collado	Secured Storage	11/08/16 11:29	Return to Storage
JC30522-1.3	Secured Storage	Ximena Collado	11/09/16 09:08	Retrieve from Storage
JC30522-1.3	Ximena Collado	GCMS4D	11/09/16 09:08	Load on Instrument
JC30522-1.3	GCMS4D	Ximena Collado	11/09/16 09:08	Unload from Instrument
JC30522-1.3	Ximena Collado	Secured Storage	11/09/16 09:08	Return to Storage
JC30522-2.2	Secured Storage	Jessica Adametz	10/29/16 07:11	Retrieve from Storage
JC30522-2.2	Jessica Adametz	Secured Storage	10/29/16 08:26	Return to Storage
JC30522-2.2.1	Jessica Adametz	Metals Digestion	10/29/16 08:25	Digestate from JC30522-2.2
JC30522-2.2.1	Metals Digestion	Jessica Adametz	10/29/16 08:26	Digestate from JC30522-2.2
JC30522-2.2.1	Jessica Adametz	Metals Digestate Storage	10/29/16 08:26	Return to Storage
JC30522-2.2.1	Metals Digestate Storage	April Birnie	11/01/16 15:29	Retrieve from Storage
JC30522-2.2.1	April Birnie	Metals Digestate Storage	11/01/16 16:08	Return to Storage
JC30522-2.3	Secured Storage	Ximena Collado	11/04/16 11:58	Retrieve from Storage
JC30522-2.3	Ximena Collado	GCMS4D	11/04/16 11:58	Load on Instrument
JC30522-2.3	GCMS4D	Ximena Collado	11/08/16 11:29	Unload from Instrument
JC30522-2.3	Ximena Collado	Secured Storage	11/08/16 11:29	Return to Storage
JC30522-2.4	Secured Storage	Ximena Collado	11/09/16 09:08	Retrieve from Storage
JC30522-2.4	Ximena Collado	GCMS4D	11/09/16 09:08	Load on Instrument
JC30522-2.4	GCMS4D	Ximena Collado	11/09/16 09:08	Unload from Instrument
JC30522-2.4	Ximena Collado	Secured Storage	11/09/16 09:08	Return to Storage
JC30522-3.1	Secured Storage	Jessica Adametz	10/29/16 07:11	Retrieve from Storage
JC30522-3.1	Jessica Adametz	Secured Storage	10/29/16 08:26	Return to Storage
JC30522-3.1.1	Jessica Adametz	Metals Digestion	10/29/16 08:25	Digestate from JC30522-3.1
JC30522-3.1.1	Metals Digestion	Jessica Adametz	10/29/16 08:26	Digestate from JC30522-3.1
JC30522-3.1.1	Jessica Adametz	Metals Digestate Storage	10/29/16 08:26	Return to Storage

SGS Accutest Internal Chain of Custody

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Received: 10/26/16

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC30522-3.1.1	Metals Digestate Storage	April Birnie	11/01/16 15:29	Retrieve from Storage
JC30522-3.1.1	April Birnie	Metals Digestate Storage	11/01/16 16:08	Return to Storage
JC30522-3.2	Secured Storage	Ximena Collado	11/04/16 11:58	Retrieve from Storage
JC30522-3.2	Ximena Collado	GCMS4D	11/04/16 11:58	Load on Instrument
JC30522-3.2	GCMS4D	Ximena Collado	11/08/16 11:29	Unload from Instrument
JC30522-3.2	Ximena Collado	Secured Storage	11/08/16 11:29	Return to Storage
JC30522-3.3	Secured Storage	Ximena Collado	11/09/16 09:08	Retrieve from Storage
JC30522-3.3	Ximena Collado	GCMS4D	11/09/16 09:08	Load on Instrument
JC30522-3.3	GCMS4D	Ximena Collado	11/09/16 09:08	Unload from Instrument
JC30522-3.3	Ximena Collado	Secured Storage	11/09/16 09:08	Return to Storage
JC30522-4.1	Secured Storage	Jessica Adametz	10/29/16 07:11	Retrieve from Storage
JC30522-4.1	Jessica Adametz	Secured Storage	10/29/16 08:26	Return to Storage
JC30522-4.1.1	Jessica Adametz	Metals Digestion	10/29/16 08:25	Digestate from JC30522-4.1
JC30522-4.1.1	Metals Digestion	Jessica Adametz	10/29/16 08:26	Digestate from JC30522-4.1
JC30522-4.1.1	Jessica Adametz	Metals Digestate Storage	10/29/16 08:26	Return to Storage
JC30522-4.1.1	Metals Digestate Storage	April Birnie	11/01/16 15:29	Retrieve from Storage
JC30522-4.1.1	April Birnie	Metals Digestate Storage	11/01/16 16:08	Return to Storage
JC30522-4.2	Secured Storage	Ximena Collado	11/04/16 11:58	Retrieve from Storage
JC30522-4.2	Ximena Collado	GCMS4D	11/04/16 11:58	Load on Instrument
JC30522-4.2	GCMS4D	Ximena Collado	11/08/16 11:29	Unload from Instrument
JC30522-4.2	Ximena Collado	Secured Storage	11/08/16 11:29	Return to Storage
JC30522-4.3	Secured Storage	Ximena Collado	11/09/16 09:08	Retrieve from Storage
JC30522-4.3	Ximena Collado	GCMS4D	11/09/16 09:08	Load on Instrument
JC30522-4.3	GCMS4D	Ximena Collado	11/09/16 09:08	Unload from Instrument
JC30522-4.3	Ximena Collado	Secured Storage	11/09/16 09:08	Return to Storage
JC30522-5.1	Secured Storage	Jessica Adametz	10/29/16 07:11	Retrieve from Storage
JC30522-5.1	Jessica Adametz	Secured Storage	10/29/16 08:26	Return to Storage
JC30522-5.1.1	Jessica Adametz	Metals Digestion	10/29/16 08:25	Digestate from JC30522-5.1
JC30522-5.1.1	Metals Digestion	Jessica Adametz	10/29/16 08:26	Digestate from JC30522-5.1
JC30522-5.1.1	Jessica Adametz	Metals Digestate Storage	10/29/16 08:26	Return to Storage
JC30522-5.1.1	Metals Digestate Storage	April Birnie	11/01/16 15:29	Retrieve from Storage
JC30522-5.1.1	April Birnie	Metals Digestate Storage	11/01/16 16:08	Return to Storage
JC30522-5.2	Secured Storage	Ximena Collado	11/04/16 11:58	Retrieve from Storage
JC30522-5.2	Ximena Collado	GCMS4D	11/04/16 11:58	Load on Instrument
JC30522-5.2	GCMS4D	Ximena Collado	11/08/16 11:29	Unload from Instrument

SGS Accutest Internal Chain of Custody

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ
Received: 10/26/16

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC30522-5.2	Ximena Collado	Secured Storage	11/08/16 11:29	Return to Storage
JC30522-5.3	Secured Storage	Ximena Collado	11/09/16 09:08	Retrieve from Storage
JC30522-5.3	Ximena Collado	GCMS4D	11/09/16 09:08	Load on Instrument
JC30522-5.3	GCMS4D	Ximena Collado	11/09/16 09:08	Unload from Instrument
JC30522-5.3	Ximena Collado	Secured Storage	11/09/16 09:08	Return to Storage
JC30522-6.1	Secured Storage	Jessica Adametz	10/29/16 07:11	Retrieve from Storage
JC30522-6.1	Jessica Adametz	Secured Storage	10/29/16 08:26	Return to Storage
JC30522-6.1.1	Jessica Adametz	Metals Digestion	10/29/16 08:25	Digestate from JC30522-6.1
JC30522-6.1.1	Metals Digestion	Jessica Adametz	10/29/16 08:26	Digestate from JC30522-6.1
JC30522-6.1.1	Jessica Adametz	Metals Digestate Storage	10/29/16 08:26	Return to Storage
JC30522-6.1.1	Metals Digestate Storage	April Birnie	11/01/16 15:29	Retrieve from Storage
JC30522-6.1.1	April Birnie	Metals Digestate Storage	11/01/16 16:08	Return to Storage
JC30522-6.2	Secured Storage	Ximena Collado	11/04/16 11:58	Retrieve from Storage
JC30522-6.2	Ximena Collado	GCMS4D	11/04/16 11:58	Load on Instrument
JC30522-6.2	GCMS4D	Ximena Collado	11/08/16 11:29	Unload from Instrument
JC30522-6.2	Ximena Collado	Secured Storage	11/08/16 11:29	Return to Storage
JC30522-6.3	Secured Storage	Ximena Collado	11/09/16 09:08	Retrieve from Storage
JC30522-6.3	Ximena Collado	GCMS4D	11/09/16 09:08	Load on Instrument
JC30522-6.3	GCMS4D	Ximena Collado	11/09/16 09:08	Unload from Instrument
JC30522-6.3	Ximena Collado	Secured Storage	11/09/16 09:08	Return to Storage
JC30522-7.1	Secured Storage	Jessica Adametz	10/29/16 07:11	Retrieve from Storage
JC30522-7.1	Jessica Adametz	Secured Storage	10/29/16 08:26	Return to Storage
JC30522-7.1.1	Jessica Adametz	Metals Digestion	10/29/16 08:25	Digestate from JC30522-7.1
JC30522-7.1.1	Metals Digestion	Jessica Adametz	10/29/16 08:26	Digestate from JC30522-7.1
JC30522-7.1.1	Jessica Adametz	Metals Digestate Storage	10/29/16 08:26	Return to Storage
JC30522-7.1.1	Metals Digestate Storage	April Birnie	11/01/16 15:29	Retrieve from Storage
JC30522-7.1.1	April Birnie	Metals Digestate Storage	11/01/16 16:08	Return to Storage
JC30522-7.2	Secured Storage	Ximena Collado	11/04/16 11:58	Retrieve from Storage
JC30522-7.2	Ximena Collado	GCMS4D	11/04/16 11:58	Load on Instrument
JC30522-7.2	GCMS4D	Ximena Collado	11/08/16 11:29	Unload from Instrument
JC30522-7.2	Ximena Collado	Secured Storage	11/08/16 11:29	Return to Storage
JC30522-7.3	Secured Storage	Ximena Collado	11/08/16 16:12	Retrieve from Storage
JC30522-7.3	Ximena Collado	GCMS3D	11/08/16 16:12	Load on Instrument
JC30522-7.3	GCMS3D	Ximena Collado	11/09/16 09:09	Unload from Instrument
JC30522-7.3	Ximena Collado	Secured Storage	11/09/16 09:09	Return to Storage

GC/MS Volatiles

6

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4D3199-MB2	4D73602.D	1	11/04/16	XC	n/a	n/a	V4D3199

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC30522-3

CAS No.	Compound	Result	RL	MDL	Units	Q
	m,p-Xylene	ND	1.0	0.42	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	76-120%
17060-07-0	1,2-Dichloroethane-D4	101%	73-122%
2037-26-5	Toluene-D8	99%	84-119%
460-00-4	4-Bromofluorobenzene	106%	78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	3.27	23	ug/l	J
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4D3202-MB	4D73690.D	1	11/08/16	XC	n/a	n/a	V4D3202

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC30522-1, JC30522-2, JC30522-3, JC30522-4, JC30522-5, JC30522-6

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.73	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
123-91-1	1,4-Dioxane	ND	130	32	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.16	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.5	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.78	ug/l	

Method Blank Summary

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4D3202-MB	4D73690.D	1	11/08/16	XC	n/a	n/a	V4D3202

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC30522-1, JC30522-2, JC30522-3, JC30522-4, JC30522-5, JC30522-6

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.34	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	3.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	76-120%
17060-07-0	1,2-Dichloroethane-D4	103%	73-122%
2037-26-5	Toluene-D8	100%	84-119%
460-00-4	4-Bromofluorobenzene	104%	78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	3.28	33	ug/l	J
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3D5253-MB	3D123763.D	1	11/08/16	XC	n/a	n/a	V3D5253

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC30522-7

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.73	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
123-91-1	1,4-Dioxane	ND	130	32	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.16	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.5	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.78	ug/l	

Method Blank Summary

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3D5253-MB	3D123763.D	1	11/08/16	XC	n/a	n/a	V3D5253

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC30522-7

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.34	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
75-65-0	Tert Butyl Alcohol	ND	10	3.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	104%	76-120%
17060-07-0	1,2-Dichloroethane-D4	97%	73-122%
2037-26-5	Toluene-D8	102%	84-119%
460-00-4	4-Bromofluorobenzene	96%	78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4D3199-MB	4D73581.D	1	11/04/16	XC	n/a	n/a	V4D3199

The QC reported here applies to the following samples: **Method:** SW846 8260C

V4D3199-BS, JC30567-3MS, JC30567-3MSD

CAS No.	Compound	Result	RL	MDL	Units	Q
	m,p-Xylene	ND	1.0	0.42	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	76-120%
17060-07-0	1,2-Dichloroethane-D4	86%	73-122%
2037-26-5	Toluene-D8	99%	84-119%
460-00-4	4-Bromofluorobenzene	109%	78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	3.28	33	ug/l	J
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4D3199-BS	4D73582.D	1	11/04/16	XC	n/a	n/a	V4D3199

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC30522-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
	m,p-Xylene	100	102	102	83-117
1330-20-7	Xylene (total)	150	153	102	84-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	105%	76-120%
17060-07-0	1,2-Dichloroethane-D4	103%	73-122%
2037-26-5	Toluene-D8	101%	84-119%
460-00-4	4-Bromofluorobenzene	104%	78-117%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4D3202-BS	4D73691.D	1	11/08/16	XC	n/a	n/a	V4D3202

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC30522-1, JC30522-2, JC30522-3, JC30522-4, JC30522-5, JC30522-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	51.0	102	60-143
71-43-2	Benzene	50	49.9	100	79-117
74-97-5	Bromochloromethane	50	50.8	102	85-121
75-27-4	Bromodichloromethane	50	50.3	101	82-122
75-25-2	Bromoform	50	52.8	106	78-127
74-83-9	Bromomethane	50	55.9	112	62-141
78-93-3	2-Butanone (MEK)	50	50.8	102	74-132
75-15-0	Carbon disulfide	50	48.5	97	70-131
56-23-5	Carbon tetrachloride	50	56.5	113	76-132
108-90-7	Chlorobenzene	50	52.4	105	84-117
75-00-3	Chloroethane	50	54.1	108	69-140
67-66-3	Chloroform	50	52.1	104	82-124
74-87-3	Chloromethane	50	42.7	85	55-129
110-82-7	Cyclohexane	50	41.5	83	72-130
96-12-8	1,2-Dibromo-3-chloropropane	50	42.2	84	73-123
124-48-1	Dibromochloromethane	50	52.8	106	81-122
106-93-4	1,2-Dibromoethane	50	50.6	101	81-119
95-50-1	1,2-Dichlorobenzene	50	51.1	102	83-116
541-73-1	1,3-Dichlorobenzene	50	52.4	105	81-115
106-46-7	1,4-Dichlorobenzene	50	52.1	104	81-114
75-71-8	Dichlorodifluoromethane	50	56.2	112	45-138
75-34-3	1,1-Dichloroethane	50	48.9	98	79-125
107-06-2	1,2-Dichloroethane	50	52.5	105	77-127
75-35-4	1,1-Dichloroethene	50	50.1	100	71-131
156-59-2	cis-1,2-Dichloroethene	50	49.2	98	75-118
156-60-5	trans-1,2-Dichloroethene	50	48.9	98	75-120
78-87-5	1,2-Dichloropropane	50	46.4	93	79-120
10061-01-5	cis-1,3-Dichloropropene	50	51.0	102	82-120
10061-02-6	trans-1,3-Dichloropropene	50	51.0	102	78-120
123-91-1	1,4-Dioxane	1250	1300	104	64-140
100-41-4	Ethylbenzene	50	52.9	106	81-116
76-13-1	Freon 113	50	58.8	118	70-148
591-78-6	2-Hexanone	50	48.6	97	69-131
98-82-8	Isopropylbenzene	50	51.5	103	80-120
79-20-9	Methyl Acetate	50	46.3	93	67-130
108-87-2	Methylcyclohexane	50	49.4	99	67-132

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4D3202-BS	4D73691.D	1	11/08/16	XC	n/a	n/a	V4D3202

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC30522-1, JC30522-2, JC30522-3, JC30522-4, JC30522-5, JC30522-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	100	105	105	77-120
108-10-1	4-Methyl-2-pentanone(MIBK)	50	46.9	94	77-128
75-09-2	Methylene chloride	50	49.0	98	78-122
100-42-5	Styrene	50	53.0	106	82-118
75-65-0	Tert Butyl Alcohol	250	260	104	73-130
79-34-5	1,1,2,2-Tetrachloroethane	50	45.5	91	76-118
127-18-4	Tetrachloroethene	50	52.9	106	73-133
108-88-3	Toluene	50	51.7	103	82-119
87-61-6	1,2,3-Trichlorobenzene	50	45.5	91	75-128
120-82-1	1,2,4-Trichlorobenzene	50	50.6	101	77-129
71-55-6	1,1,1-Trichloroethane	50	55.3	111	81-132
79-00-5	1,1,2-Trichloroethane	50	49.2	98	80-119
79-01-6	Trichloroethene	50	50.9	102	83-119
75-69-4	Trichlorofluoromethane	50	56.6	113	66-137
75-01-4	Vinyl chloride	50	47.8	96	58-131
	m,p-Xylene	100	107	107	83-117
95-47-6	o-Xylene	50	53.6	107	85-122
1330-20-7	Xylene (total)	150	161	107	84-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	76-120%
17060-07-0	1,2-Dichloroethane-D4	102%	73-122%
2037-26-5	Toluene-D8	101%	84-119%
460-00-4	4-Bromofluorobenzene	99%	78-117%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3D5253-BS	3D123764.D	1	11/08/16	XC	n/a	n/a	V3D5253

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC30522-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	63.8	128	60-143
71-43-2	Benzene	50	49.2	98	79-117
74-97-5	Bromochloromethane	50	50.2	100	85-121
75-27-4	Bromodichloromethane	50	49.8	100	82-122
75-25-2	Bromoform	50	51.1	102	78-127
74-83-9	Bromomethane	50	49.0	98	62-141
78-93-3	2-Butanone (MEK)	50	55.2	110	74-132
75-15-0	Carbon disulfide	50	44.0	88	70-131
56-23-5	Carbon tetrachloride	50	48.9	98	76-132
108-90-7	Chlorobenzene	50	49.0	98	84-117
75-00-3	Chloroethane	50	49.0	98	69-140
67-66-3	Chloroform	50	50.3	101	82-124
74-87-3	Chloromethane	50	47.2	94	55-129
110-82-7	Cyclohexane	50	41.0	82	72-130
96-12-8	1,2-Dibromo-3-chloropropane	50	46.0	92	73-123
124-48-1	Dibromochloromethane	50	51.2	102	81-122
106-93-4	1,2-Dibromoethane	50	46.8	94	81-119
95-50-1	1,2-Dichlorobenzene	50	49.3	99	83-116
541-73-1	1,3-Dichlorobenzene	50	48.8	98	81-115
106-46-7	1,4-Dichlorobenzene	50	48.5	97	81-114
75-71-8	Dichlorodifluoromethane	50	47.1	94	45-138
75-34-3	1,1-Dichloroethane	50	46.0	92	79-125
107-06-2	1,2-Dichloroethane	50	47.0	94	77-127
75-35-4	1,1-Dichloroethene	50	42.3	85	71-131
156-59-2	cis-1,2-Dichloroethene	50	48.3	97	75-118
156-60-5	trans-1,2-Dichloroethene	50	44.7	89	75-120
78-87-5	1,2-Dichloropropane	50	48.3	97	79-120
10061-01-5	cis-1,3-Dichloropropene	50	49.5	99	82-120
10061-02-6	trans-1,3-Dichloropropene	50	49.3	99	78-120
123-91-1	1,4-Dioxane	1250	1460	117	64-140
100-41-4	Ethylbenzene	50	48.0	96	81-116
76-13-1	Freon 113	50	54.8	110	70-148
591-78-6	2-Hexanone	50	45.6	91	69-131
98-82-8	Isopropylbenzene	50	50.6	101	80-120
79-20-9	Methyl Acetate	50	38.7	77	67-130
108-87-2	Methylcyclohexane	50	48.4	97	67-132

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3D5253-BS	3D123764.D	1	11/08/16	XC	n/a	n/a	V3D5253

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC30522-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	100	86.0	86	77-120
108-10-1	4-Methyl-2-pentanone(MIBK)	50	44.4	89	77-128
75-09-2	Methylene chloride	50	45.0	90	78-122
100-42-5	Styrene	50	48.3	97	82-118
75-65-0	Tert Butyl Alcohol	250	280	112	73-130
79-34-5	1,1,2,2-Tetrachloroethane	50	46.5	93	76-118
127-18-4	Tetrachloroethene	50	44.5	89	73-133
108-88-3	Toluene	50	49.6	99	82-119
87-61-6	1,2,3-Trichlorobenzene	50	48.6	97	75-128
120-82-1	1,2,4-Trichlorobenzene	50	50.3	101	77-129
71-55-6	1,1,1-Trichloroethane	50	50.0	100	81-132
79-00-5	1,1,2-Trichloroethane	50	48.7	97	80-119
79-01-6	Trichloroethene	50	48.9	98	83-119
75-69-4	Trichlorofluoromethane	50	49.5	99	66-137
75-01-4	Vinyl chloride	50	45.2	90	58-131
	m,p-Xylene	100	98.7	99	83-117
95-47-6	o-Xylene	50	48.4	97	85-122
1330-20-7	Xylene (total)	150	147	98	84-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	104%	76-120%
17060-07-0	1,2-Dichloroethane-D4	97%	73-122%
2037-26-5	Toluene-D8	102%	84-119%
460-00-4	4-Bromofluorobenzene	99%	78-117%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC30773-12MS	3D123773.D	1	11/08/16	XC	n/a	n/a	V3D5253
JC30773-12	3D123769.D	1	11/08/16	XC	n/a	n/a	V3D5253

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC30522-7

CAS No.	Compound	JC30773-12 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
67-64-1	Acetone	ND		50	40.5	81	49-155
71-43-2	Benzene	17.2		50	70.3	106	46-141
74-97-5	Bromochloromethane	ND		50	52.9	106	80-124
75-27-4	Bromodichloromethane	ND		50	51.5	103	77-125
75-25-2	Bromoform	ND		50	48.9	98	71-129
74-83-9	Bromomethane	ND		50	42.8	86	58-147
78-93-3	2-Butanone (MEK)	ND		50	45.0	90	62-146
75-15-0	Carbon disulfide	6.4		50	54.7	97	64-139
56-23-5	Carbon tetrachloride	ND		50	53.0	106	67-142
108-90-7	Chlorobenzene	ND		50	51.3	103	76-124
75-00-3	Chloroethane	ND		50	45.2	90	62-150
67-66-3	Chloroform	ND		50	54.0	108	76-129
74-87-3	Chloromethane	ND		50	38.4	77	51-133
110-82-7	Cyclohexane	1.4	J	50	51.8	101	56-148
96-12-8	1,2-Dibromo-3-chloropropane	ND		50	46.5	93	68-127
124-48-1	Dibromochloromethane	ND		50	51.8	104	76-125
106-93-4	1,2-Dibromoethane	ND		50	46.2	92	75-121
95-50-1	1,2-Dichlorobenzene	ND		50	51.3	103	76-121
541-73-1	1,3-Dichlorobenzene	ND		50	51.6	103	74-121
106-46-7	1,4-Dichlorobenzene	ND		50	51.4	103	74-120
75-71-8	Dichlorodifluoromethane	ND		50	42.2	84	40-149
75-34-3	1,1-Dichloroethane	ND		50	50.2	100	73-131
107-06-2	1,2-Dichloroethane	1.2		50	49.1	96	70-132
75-35-4	1,1-Dichloroethene	ND		50	47.4	95	64-140
156-59-2	cis-1,2-Dichloroethene	ND		50	52.3	105	59-131
156-60-5	trans-1,2-Dichloroethene	ND		50	49.5	99	68-127
78-87-5	1,2-Dichloropropane	ND		50	51.0	102	75-124
10061-01-5	cis-1,3-Dichloropropene	ND		50	50.6	101	77-123
10061-02-6	trans-1,3-Dichloropropene	ND		50	50.1	100	73-121
123-91-1	1,4-Dioxane	ND		1250	1410	113	60-140
100-41-4	Ethylbenzene	1.9		50	52.6	101	46-141
76-13-1	Freon 113	ND		50	60.6	121	59-165
591-78-6	2-Hexanone	ND		50	36.8	74	64-140
98-82-8	Isopropylbenzene	0.55	J	50	56.0	111	70-129
79-20-9	Methyl Acetate	ND		50	37.0	74	60-133
108-87-2	Methylcyclohexane	1.3	J	50	54.8	107	51-150

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC30773-12MS	3D123773.D	1	11/08/16	XC	n/a	n/a	V3D5253
JC30773-12	3D123769.D	1	11/08/16	XC	n/a	n/a	V3D5253

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC30522-7

CAS No.	Compound	JC30773-12 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
1634-04-4	Methyl Tert Butyl Ether	1.7		100	87.2	86	68-125
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		50	43.9	88	73-135
75-09-2	Methylene chloride	ND		50	48.0	96	73-127
100-42-5	Styrene	ND		50	49.7	99	74-126
75-65-0	Tert Butyl Alcohol	ND		250	280	112	68-134
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	47.0	94	71-121
127-18-4	Tetrachloroethene	ND		50	47.8	96	58-147
108-88-3	Toluene	0.85	J	50	53.1	105	58-137
87-61-6	1,2,3-Trichlorobenzene	ND		50	49.4	99	69-132
120-82-1	1,2,4-Trichlorobenzene	ND		50	51.5	103	71-133
71-55-6	1,1,1-Trichloroethane	ND		50	54.5	109	72-143
79-00-5	1,1,2-Trichloroethane	ND		50	48.9	98	75-122
79-01-6	Trichloroethene	ND		50	53.6	107	63-139
75-69-4	Trichlorofluoromethane	ND		50	45.8	92	57-151
75-01-4	Vinyl chloride	ND		50	37.9	76	51-141
	m,p-Xylene	1.5		100	107	106	46-144
95-47-6	o-Xylene	ND		50	50.2	100	63-137
1330-20-7	Xylene (total)	1.5		150	157	104	52-141

CAS No.	Surrogate Recoveries	MS	JC30773-12	Limits
1868-53-7	Dibromofluoromethane	106%	108%	76-120%
17060-07-0	1,2-Dichloroethane-D4	97%	99%	73-122%
2037-26-5	Toluene-D8	102%	100%	84-119%
460-00-4	4-Bromofluorobenzene	99%	96%	78-117%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC30567-3MS	4D73590.D	1	11/04/16	XC	n/a	n/a	V4D3199
JC30567-3MSD	4D73591.D	1	11/04/16	XC	n/a	n/a	V4D3199
JC30567-3	4D73587.D	1	11/04/16	XC	n/a	n/a	V4D3199

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC30522-3

CAS No.	Compound	JC30567-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
	m,p-Xylene	ND		100	111	111	100	112	112	1	46-144/20
1330-20-7	Xylene (total)	ND		150	166	111	150	167	111	1	52-141/20

CAS No.	Surrogate Recoveries	MS	MSD	JC30567-3	Limits
1868-53-7	Dibromofluoromethane	104%	100%	105%	76-120%
17060-07-0	1,2-Dichloroethane-D4	101%	96%	104%	73-122%
2037-26-5	Toluene-D8	101%	100%	99%	84-119%
460-00-4	4-Bromofluorobenzene	103%	102%	107%	78-117%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC31264-1MS	4D73704.D	1	11/08/16	XC	n/a	n/a	V4D3202
JC31264-1MSD	4D73705.D	1	11/08/16	XC	n/a	n/a	V4D3202
JC31264-1	4D73700.D	1	11/08/16	XC	n/a	n/a	V4D3202

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC30522-1, JC30522-2, JC30522-3, JC30522-4, JC30522-5, JC30522-6

CAS No.	Compound	JC31264-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50	47.7	95	50	48.5	97	2	49-155/16
71-43-2	Benzene	ND		50	56.2	112	50	55.7	111	1	46-141/20
74-97-5	Bromochloromethane	ND		50	53.1	106	50	53.3	107	0	80-124/20
75-27-4	Bromodichloromethane	ND		50	53.6	107	50	53.1	106	1	77-125/20
75-25-2	Bromoform	ND		50	53.3	107	50	52.3	105	2	71-129/20
74-83-9	Bromomethane	ND		50	57.3	115	50	58.5	117	2	58-147/14
78-93-3	2-Butanone (MEK)	ND		50	52.9	106	50	53.0	106	0	62-146/13
75-15-0	Carbon disulfide	ND		50	59.2	118	50	58.6	117	1	64-139/14
56-23-5	Carbon tetrachloride	ND		50	60.5	121	50	59.8	120	1	67-142/12
108-90-7	Chlorobenzene	ND		50	54.8	110	50	55.2	110	1	76-124/20
75-00-3	Chloroethane	ND		50	59.3	119	50	59.9	120	1	62-150/14
67-66-3	Chloroform	0.29	J	50	57.4	114	50	56.5	112	2	76-129/20
74-87-3	Chloromethane	ND		50	53.7	107	50	53.6	107	0	51-133/15
110-82-7	Cyclohexane	ND		50	47.6	95	50	48.2	96	1	56-148/15
96-12-8	1,2-Dibromo-3-chloropropane	ND		50	46.8	94	50	46.8	94	0	68-127/10
124-48-1	Dibromochloromethane	ND		50	53.8	108	50	53.4	107	1	76-125/20
106-93-4	1,2-Dibromoethane	ND		50	52.0	104	50	52.6	105	1	75-121/20
95-50-1	1,2-Dichlorobenzene	ND		50	54.0	108	50	54.1	108	0	76-121/20
541-73-1	1,3-Dichlorobenzene	ND		50	55.3	111	50	55.0	110	1	74-121/20
106-46-7	1,4-Dichlorobenzene	ND		50	54.8	110	50	55.0	110	0	74-120/20
75-71-8	Dichlorodifluoromethane	ND		50	64.3	129	50	63.7	127	1	40-149/16
75-34-3	1,1-Dichloroethane	ND		50	56.6	113	50	56.3	113	1	73-131/11
107-06-2	1,2-Dichloroethane	ND		50	54.9	110	50	54.1	108	1	70-132/20
75-35-4	1,1-Dichloroethene	ND		50	59.1	118	50	58.9	118	0	64-140/13
156-59-2	cis-1,2-Dichloroethene	ND		50	54.6	109	50	54.4	109	0	59-131/10
156-60-5	trans-1,2-Dichloroethene	ND		50	56.7	113	50	56.6	113	0	68-127/11
78-87-5	1,2-Dichloropropane	ND		50	53.4	107	50	52.9	106	1	75-124/20
10061-01-5	cis-1,3-Dichloropropene	ND		50	55.9	112	50	55.2	110	1	77-123/20
10061-02-6	trans-1,3-Dichloropropene	ND		50	55.5	111	50	55.3	111	0	73-121/20
123-91-1	1,4-Dioxane	ND		1250	1240	99	1250	1260	101	2	60-140/25
100-41-4	Ethylbenzene	ND		50	56.6	113	50	56.7	113	0	46-141/20
76-13-1	Freon 113	ND		50	66.7	133	50	65.6	131	2	59-165/15
591-78-6	2-Hexanone	ND		50	54.7	109	50	54.4	109	1	64-140/12
98-82-8	Isopropylbenzene	ND		50	57.7	115	50	57.4	115	1	70-129/11
79-20-9	Methyl Acetate	ND		50	51.6	103	50	51.2	102	1	60-133/13
108-87-2	Methylcyclohexane	ND		50	59.2	118	50	58.5	117	1	51-150/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC31264-1MS	4D73704.D	1	11/08/16	XC	n/a	n/a	V4D3202
JC31264-1MSD	4D73705.D	1	11/08/16	XC	n/a	n/a	V4D3202
JC31264-1	4D73700.D	1	11/08/16	XC	n/a	n/a	V4D3202

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC30522-1, JC30522-2, JC30522-3, JC30522-4, JC30522-5, JC30522-6

CAS No.	Compound	JC31264-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	ND		100	115	115	100	115	115	0	68-125/20
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		50	56.0	112	50	55.4	111	1	73-135/20
75-09-2	Methylene chloride	ND		50	54.4	109	50	54.0	108	1	73-127/11
100-42-5	Styrene	ND		50	55.5	111	50	55.1	110	1	74-126/10
75-65-0	Tert Butyl Alcohol	ND		250	277	111	250	286	114	3	68-134/13
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	51.7	103	50	51.9	104	0	71-121/20
127-18-4	Tetrachloroethene	ND		50	55.4	111	50	55.6	111	0	58-147/10
108-88-3	Toluene	ND		50	56.7	113	50	56.5	113	0	58-137/20
87-61-6	1,2,3-Trichlorobenzene	ND		50	50.8	102	50	50.7	101	0	69-132/12
120-82-1	1,2,4-Trichlorobenzene	ND		50	56.3	113	50	55.3	111	2	71-133/11
71-55-6	1,1,1-Trichloroethane	ND		50	61.7	123	50	60.2	120	2	72-143/11
79-00-5	1,1,2-Trichloroethane	ND		50	53.0	106	50	53.8	108	1	75-122/20
79-01-6	Trichloroethene	4.4		50	61.1	113	50	60.2	112	1	63-139/20
75-69-4	Trichlorofluoromethane	ND		50	60.3	121	50	60.9	122	1	57-151/14
75-01-4	Vinyl chloride	ND		50	58.1	116	50	57.8	116	1	51-141/14
	m,p-Xylene	ND		100	113	113	100	114	114	1	46-144/20
95-47-6	o-Xylene	ND		50	56.0	112	50	55.8	112	0	63-137/20
1330-20-7	Xylene (total)	ND		150	169	113	150	170	113	1	52-141/20

CAS No.	Surrogate Recoveries	MS	MSD	JC31264-1	Limits
1868-53-7	Dibromofluoromethane	102%	101%	101%	76-120%
17060-07-0	1,2-Dichloroethane-D4	104%	102%	108%	73-122%
2037-26-5	Toluene-D8	101%	102%	100%	84-119%
460-00-4	4-Bromofluorobenzene	104%	103%	107%	78-117%

* = Outside of Control Limits.

Duplicate Summary

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC30773-10DUP	3D123775.D	1	11/08/16	XC	n/a	n/a	V3D5253
JC30773-10	3D123768.D	1	11/08/16	XC	n/a	n/a	V3D5253

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC30522-7

CAS No.	Compound	JC30773-10 ug/l	Q	DUP ug/l	Q	RPD	Limits
67-64-1	Acetone	ND		ND		nc	13
71-43-2	Benzene	ND		ND		nc	12
74-97-5	Bromochloromethane	ND		ND		nc	20
75-27-4	Bromodichloromethane	ND		ND		nc	20
75-25-2	Bromoform	ND		ND		nc	20
74-83-9	Bromomethane	ND		ND		nc	20
78-93-3	2-Butanone (MEK)	ND		ND		nc	20
75-15-0	Carbon disulfide	1.0	J	0.56	J	56* [a]	20
56-23-5	Carbon tetrachloride	ND		ND		nc	20
108-90-7	Chlorobenzene	ND		ND		nc	20
75-00-3	Chloroethane	ND		ND		nc	20
67-66-3	Chloroform	ND		ND		nc	20
74-87-3	Chloromethane	1.3		0.99	J	27* [a]	20
110-82-7	Cyclohexane	ND		ND		nc	11
96-12-8	1,2-Dibromo-3-chloropropane	ND		ND		nc	20
124-48-1	Dibromochloromethane	ND		ND		nc	20
106-93-4	1,2-Dibromoethane	ND		ND		nc	20
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	20
541-73-1	1,3-Dichlorobenzene	ND		ND		nc	20
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	20
75-71-8	Dichlorodifluoromethane	ND		ND		nc	20
75-34-3	1,1-Dichloroethane	ND		ND		nc	20
107-06-2	1,2-Dichloroethane	ND		ND		nc	20
75-35-4	1,1-Dichloroethene	ND		ND		nc	20
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	15
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	20
78-87-5	1,2-Dichloropropane	ND		ND		nc	20
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	20
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	20
123-91-1	1,4-Dioxane	ND		ND		nc	20
100-41-4	Ethylbenzene	ND		ND		nc	11
76-13-1	Freon 113	ND		ND		nc	20
591-78-6	2-Hexanone	ND		ND		nc	20
98-82-8	Isopropylbenzene	ND		ND		nc	20
79-20-9	Methyl Acetate	ND		ND		nc	20
108-87-2	Methylcyclohexane	ND		ND		nc	20

* = Outside of Control Limits.

Duplicate Summary

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC30773-10DUP	3D123775.D	1	11/08/16	XC	n/a	n/a	V3D5253
JC30773-10	3D123768.D	1	11/08/16	XC	n/a	n/a	V3D5253

The QC reported here applies to the following samples: **Method:** SW846 8260C

JC30522-7

CAS No.	Compound	JC30773-10 ug/l	Q	DUP ug/l	Q	RPD	Limits
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	12
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		ND		nc	20
75-09-2	Methylene chloride	ND		ND		nc	20
100-42-5	Styrene	ND		ND		nc	20
75-65-0	Tert Butyl Alcohol	ND		ND		nc	20
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	20
127-18-4	Tetrachloroethene	ND		ND		nc	11
108-88-3	Toluene	ND		ND		nc	15
87-61-6	1,2,3-Trichlorobenzene	ND		ND		nc	20
120-82-1	1,2,4-Trichlorobenzene	ND		ND		nc	20
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	20
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	20
79-01-6	Trichloroethene	ND		ND		nc	14
75-69-4	Trichlorofluoromethane	ND		ND		nc	20
75-01-4	Vinyl chloride	ND		ND		nc	20
	m,p-Xylene	ND		ND		nc	13
95-47-6	o-Xylene	ND		ND		nc	12
1330-20-7	Xylene (total)	ND		ND		nc	16

CAS No.	Surrogate Recoveries	DUP	JC30773-10	Limits
1868-53-7	Dibromofluoromethane	111%	108%	76-120%
17060-07-0	1,2-Dichloroethane-D4	103%	101%	73-122%
2037-26-5	Toluene-D8	100%	100%	84-119%
460-00-4	4-Bromofluorobenzene	95%	98%	78-117%

(a) High RPD due to possible sample analyzed from different vials.

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample:	V3D5245-BFB	**Injection Date:**	11/01/16
Lab File ID:	3D123563.D	**Injection Time:**	12:56
Instrument ID:	GCMS3D		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	11122	20.8		Pass
75	30.0 - 60.0% of mass 95	26440	49.4		Pass
95	Base peak, 100% relative abundance	53514	100.0		Pass
96	5.0 - 9.0% of mass 95	3409	6.37		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	51296	95.9		Pass
175	5.0 - 9.0% of mass 174	3797	7.10	(7.40) [a]	Pass
176	95.0 - 101.0% of mass 174	49997	93.4	(97.5) [a]	Pass
177	5.0 - 9.0% of mass 176	3294	6.16	(6.59) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3D5245-IC5245	3D123564.D	11/01/16	13:25	00:29	Initial cal 0.2
V3D5245-IC5245	3D123565.D	11/01/16	13:52	00:56	Initial cal 0.5
V3D5245-IC5245	3D123566.D	11/01/16	14:20	01:24	Initial cal 1
V3D5245-IC5245	3D123567.D	11/01/16	14:48	01:52	Initial cal 2
V3D5245-IC5245	3D123568.D	11/01/16	15:16	02:20	Initial cal 5
V3D5245-IC5245	3D123569.D	11/01/16	15:44	02:48	Initial cal 10
V3D5245-IC5245	3D123570.D	11/01/16	16:11	03:15	Initial cal 20
V3D5245-ICC5245	3D123571.D	11/01/16	16:39	03:43	Initial cal 50
V3D5245-IC5245	3D123572.D	11/01/16	17:07	04:11	Initial cal 100
V3D5245-IC5245	3D123573.D	11/01/16	17:35	04:39	Initial cal 200
V3D5245-ICV5245	3D123576.D	11/01/16	18:58	06:02	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample: V3D5253-BFB
Lab File ID: 3D123760.D
Instrument ID: GCMS3D
Injection Date: 11/08/16
Injection Time: 08:44

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	11350	18.2		Pass
75	30.0 - 60.0% of mass 95	29453	47.3		Pass
95	Base peak, 100% relative abundance	62290	100.0		Pass
96	5.0 - 9.0% of mass 95	4153	6.67		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	61493	98.7		Pass
175	5.0 - 9.0% of mass 174	5072	8.14	(8.25) [a]	Pass
176	95.0 - 101.0% of mass 174	60592	97.3	(98.5) [a]	Pass
177	5.0 - 9.0% of mass 176	3871	6.21	(6.39) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3D5253-CC5245	3D123761.D	11/08/16	09:13	00:29	Continuing cal 20
V3D5253-MB	3D123763.D	11/08/16	10:10	01:26	Method Blank
V3D5253-BS	3D123764.D	11/08/16	10:38	01:54	Blank Spike
ZZZZZZ	3D123765.D	11/08/16	11:15	02:31	(unrelated sample)
ZZZZZZ	3D123766.D	11/08/16	11:43	02:59	(unrelated sample)
ZZZZZZ	3D123767.D	11/08/16	12:10	03:26	(unrelated sample)
JC30773-10	3D123768.D	11/08/16	12:43	03:59	(used for QC only; not part of job JC30522)
JC30773-12	3D123769.D	11/08/16	13:11	04:27	(used for QC only; not part of job JC30522)
ZZZZZZ	3D123770.D	11/08/16	13:39	04:55	(unrelated sample)
ZZZZZZ	3D123771.D	11/08/16	14:07	05:23	(unrelated sample)
JC30522-7	3D123771A.D	11/08/16	14:39	05:55	MW-19
ZZZZZZ	3D123772.D	11/08/16	15:07	06:23	(unrelated sample)
JC30773-12MS	3D123773.D	11/08/16	15:35	06:51	Matrix Spike
JC30773-10DUP	3D123775.D	11/08/16	16:31	07:47	Duplicate
ZZZZZZ	3D123776.D	11/08/16	16:59	08:15	(unrelated sample)
ZZZZZZ	3D123777.D	11/08/16	17:27	08:43	(unrelated sample)
ZZZZZZ	3D123778.D	11/08/16	17:54	09:10	(unrelated sample)
ZZZZZZ	3D123779.D	11/08/16	18:22	09:38	(unrelated sample)
ZZZZZZ	3D123780.D	11/08/16	18:50	10:06	(unrelated sample)
ZZZZZZ	3D123781.D	11/08/16	19:18	10:34	(unrelated sample)
ZZZZZZ	3D123782.D	11/08/16	19:46	11:02	(unrelated sample)
ZZZZZZ	3D123783.D	11/08/16	20:14	11:30	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample:	V4D3126-BFB	**Injection Date:**	09/13/16
Lab File ID:	4D71643.D	**Injection Time:**	14:55
Instrument ID:	GCMS4D		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	14158	16.6		Pass
75	30.0 - 60.0% of mass 95	38112	44.7		Pass
95	Base peak, 100% relative abundance	85315	100.0		Pass
96	5.0 - 9.0% of mass 95	5668	6.64		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	75101	88.0		Pass
175	5.0 - 9.0% of mass 174	5950	6.97	(7.92) [a]	Pass
176	95.0 - 101.0% of mass 174	72773	85.3	(96.9) [a]	Pass
177	5.0 - 9.0% of mass 176	4819	5.65	(6.62) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V4D3126-IC3126	4D71644.D	09/13/16	15:29	00:34	Initial cal 0.2
V4D3126-IC3126	4D71645.D	09/13/16	15:56	01:01	Initial cal 0.5
V4D3126-IC3126	4D71646.D	09/13/16	16:23	01:28	Initial cal 1
V4D3126-IC3126	4D71647.D	09/13/16	16:50	01:55	Initial cal 2
V4D3126-IC3126	4D71648.D	09/13/16	17:17	02:22	Initial cal 5
V4D3126-IC3126	4D71649.D	09/13/16	17:44	02:49	Initial cal 10
V4D3126-IC3126	4D71650.D	09/13/16	18:11	03:16	Initial cal 20
V4D3126-ICC3126	4D71651.D	09/13/16	18:38	03:43	Initial cal 50
V4D3126-IC3126	4D71652.D	09/13/16	19:05	04:10	Initial cal 100
V4D3126-IC3126	4D71653.D	09/13/16	19:33	04:38	Initial cal 200
V4D3126-ICV3126	4D71656.D	09/13/16	20:54	05:59	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample: V4D3199-BFB
Lab File ID: 4D73578.D
Instrument ID: GCMS4D
Injection Date: 11/04/16
Injection Time: 08:33

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	12708	16.3		Pass
75	30.0 - 60.0% of mass 95	34309	44.0		Pass
95	Base peak, 100% relative abundance	77973	100.0		Pass
96	5.0 - 9.0% of mass 95	5139	6.59		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	63245	81.1		Pass
175	5.0 - 9.0% of mass 174	4729	6.06	(7.48) [a]	Pass
176	95.0 - 101.0% of mass 174	61677	79.1	(97.5) [a]	Pass
177	5.0 - 9.0% of mass 176	4039	5.18	(6.55) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V4D3199-CC3126	4D73579.D	11/04/16	09:18	00:45	Continuing cal 20
V4D3199-CC3126	4D73580.D	11/04/16	09:55	01:22	Continuing cal 1
V4D3199-MB	4D73581.D	11/04/16	10:25	01:52	Method Blank
V4D3199-BS	4D73582.D	11/04/16	10:53	02:20	Blank Spike
ZZZZZZ	4D73584.D	11/04/16	11:51	03:18	(unrelated sample)
ZZZZZZ	4D73585.D	11/04/16	12:18	03:45	(unrelated sample)
ZZZZZZ	4D73586.D	11/04/16	12:46	04:13	(unrelated sample)
JC30567-3	4D73587.D	11/04/16	13:13	04:40	(used for QC only; not part of job JC30522)
ZZZZZZ	4D73588.D	11/04/16	13:41	05:08	(unrelated sample)
ZZZZZZ	4D73589.D	11/04/16	14:08	05:35	(unrelated sample)
JC30567-3MS	4D73590.D	11/04/16	14:36	06:03	Matrix Spike
JC30567-3MSD	4D73591.D	11/04/16	15:03	06:30	Matrix Spike Duplicate
ZZZZZZ	4D73593.D	11/04/16	15:58	07:25	(unrelated sample)
ZZZZZZ	4D73594.D	11/04/16	16:26	07:53	(unrelated sample)
ZZZZZZ	4D73595.D	11/04/16	16:53	08:20	(unrelated sample)
ZZZZZZ	4D73596.D	11/04/16	17:21	08:48	(unrelated sample)
ZZZZZZ	4D73597.D	11/04/16	17:49	09:16	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample:	V4D3199-BFB2	**Injection Date:**	11/04/16
Lab File ID:	4D73599.D	**Injection Time:**	18:43
Instrument ID:	GCMS4D		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	12599	16.0		Pass
75	30.0 - 60.0% of mass 95	34349	43.6		Pass
95	Base peak, 100% relative abundance	78781	100.0		Pass
96	5.0 - 9.0% of mass 95	5417	6.88		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	65491	83.1		Pass
175	5.0 - 9.0% of mass 174	4975	6.31	(7.60) [a]	Pass
176	95.0 - 101.0% of mass 174	63525	80.6	(97.0) [a]	Pass
177	5.0 - 9.0% of mass 176	4269	5.42	(6.72) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V4D3199-CC3126	4D73600.D	11/04/16	19:11	00:28	Continuing cal 50
V4D3199-MB2	4D73602.D	11/04/16	20:05	01:22	Method Blank
JC30522-3	4D73608.D	11/04/16	22:49	04:06	MW-12

Instrument Performance Check (BFB)

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sample:	V4D3202-BFB	**Injection Date:**	11/08/16
Lab File ID:	4D73687.D	**Injection Time:**	08:39
Instrument ID:	GCMS4D		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	14681	16.7		Pass
75	30.0 - 60.0% of mass 95	40061	45.7		Pass
95	Base peak, 100% relative abundance	87725	100.0		Pass
96	5.0 - 9.0% of mass 95	5919	6.75		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	74440	84.9		Pass
175	5.0 - 9.0% of mass 174	6080	6.93	(8.17) [a]	Pass
176	95.0 - 101.0% of mass 174	73051	83.3	(98.1) [a]	Pass
177	5.0 - 9.0% of mass 176	4751	5.42	(6.50) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V4D3202-CC3126	4D73688.D	11/08/16	09:06	00:27	Continuing cal 20
V4D3202-MB	4D73690.D	11/08/16	10:02	01:23	Method Blank
V4D3202-BS	4D73691.D	11/08/16	10:29	01:50	Blank Spike
JC30522-1	4D73693.D	11/08/16	11:33	02:54	MW-3
JC30522-2	4D73694.D	11/08/16	12:00	03:21	MW-11
JC30522-6	4D73695.D	11/08/16	12:28	03:49	MW-18R
JC30522-5	4D73696.D	11/08/16	12:55	04:16	MW-16R
JC30522-4	4D73697.D	11/08/16	13:22	04:43	MW-14
JC30522-3	4D73698.D	11/08/16	13:50	05:11	MW-12
JC31264-1	4D73700.D	11/08/16	14:45	06:06	(used for QC only; not part of job JC30522)
ZZZZZZ	4D73701.D	11/08/16	15:17	06:38	(unrelated sample)
ZZZZZZ	4D73702.D	11/08/16	15:45	07:06	(unrelated sample)
ZZZZZZ	4D73703.D	11/08/16	16:12	07:33	(unrelated sample)
JC31264-1MS	4D73704.D	11/08/16	17:07	08:28	Matrix Spike
JC31264-1MSD	4D73705.D	11/08/16	17:35	08:56	Matrix Spike Duplicate
ZZZZZZ	4D73707.D	11/08/16	18:30	09:51	(unrelated sample)
ZZZZZZ	4D73708.D	11/08/16	18:57	10:18	(unrelated sample)
ZZZZZZ	4D73709.D	11/08/16	19:25	10:46	(unrelated sample)
ZZZZZZ	4D73710.D	11/08/16	19:52	11:13	(unrelated sample)
ZZZZZZ	4D73711.D	11/08/16	20:20	11:41	(unrelated sample)

Volatile Internal Standard Area Summary

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Check Std:	V3D5253-CC5245	**Injection Date:**	11/08/16
Lab File ID:	3D123761.D	**Injection Time:**	09:13
Instrument ID:	GCMS3D	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	87383	7.29	155962	9.57	230047	10.51	198035	13.65	131642	15.99
Upper Limit [a]	174766	7.79	311924	10.07	460094	11.01	396070	14.15	263284	16.49
Lower Limit [b]	43692	6.79	77981	9.07	115024	10.01	99018	13.15	65821	15.49

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V3D5253-MB	79282	7.29	141039	9.57	199310	10.51	170471	13.65	113229	15.99
V3D5253-BS	86251	7.29	166504	9.57	242754	10.51	207511	13.65	133278	15.99
ZZZZZZ	98276	7.29	162187	9.57	231873	10.51	190792	13.65	124867	15.99
ZZZZZZ	90991	7.29	151309	9.57	219655	10.51	180782	13.65	115731	15.99
ZZZZZZ	87571	7.28	143596	9.57	209390	10.51	171451	13.65	114528	15.99
JC30773-10	91021	7.29	151173	9.57	219621	10.51	179511	13.65	114765	15.99
JC30773-12	83104	7.29	146767	9.57	215497	10.51	177083	13.65	114027	15.99
ZZZZZZ	79413	7.30	141222	9.57	206358	10.51	168959	13.65	107580	15.99
ZZZZZZ	75663	7.29	131993	9.57	193400	10.51	161621	13.65	105848	15.99
JC30522-7	83455	7.29	137084	9.57	199912	10.51	163574	13.65	107660	15.98
ZZZZZZ	75431	7.29	134115	9.57	197952	10.51	164722	13.65	107536	15.99
JC30773-12MS	90332	7.33	165086	9.57	243964	10.52	209301	13.65	130052	15.99
JC30773-10DUP	75010	7.28	134598	9.57	201001	10.51	164747	13.65	106566	15.98
ZZZZZZ	74922	7.29	142964	9.57	209573	10.51	170444	13.65	107381	15.98
ZZZZZZ	72517	7.31	136128	9.57	199653	10.51	164015	13.65	106661	15.98
ZZZZZZ	69199	7.30	123461	9.57	182326	10.51	153375	13.65	102323	15.99
ZZZZZZ	71294	7.28	124556	9.57	185673	10.51	154305	13.65	103005	15.99
ZZZZZZ	67099	7.28	119282	9.57	177484	10.51	149093	13.65	97962	15.99
ZZZZZZ	68252	7.29	127498	9.57	190457	10.51	160752	13.65	104099	15.99
ZZZZZZ	65466	7.29	122137	9.57	182461	10.51	156931	13.65	104931	15.99
ZZZZZZ	78974	7.29	140991	9.57	211195	10.51	184841	13.65	123756	15.99

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Check Std: V4D3199-CC3126 **Injection Date:** 11/04/16
Lab File ID: 4D73579.D **Injection Time:** 09:18
Instrument ID: GCMS4D **Method:** SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	96076	7.44	182792	10.00	280656	10.95	258642	14.31	132764	16.71
Upper Limit [a]	192152	7.94	365584	10.50	561312	11.45	517284	14.81	265528	17.21
Lower Limit [b]	48038	6.94	91396	9.50	140328	10.45	129321	13.81	66382	16.21

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V4D3199-MB	53508	7.46	219563	10.01	340695	10.95	304913	14.31	145779	16.71
V4D3199-BS	69436	7.46	175583	10.01	273129	10.95	253914	14.31	131003	16.71
ZZZZZZ	77597	7.46	167316	10.01	260057	10.95	239149	14.31	122776	16.71
ZZZZZZ	79822	7.45	180631	10.01	277893	10.95	258501	14.31	130244	16.71
ZZZZZZ	85084	7.46	183915	10.01	284465	10.95	263216	14.31	133306	16.71
JC30567-3	88494	7.45	185474	10.01	288829	10.95	266399	14.31	134521	16.71
ZZZZZZ	84354	7.45	177388	10.01	275035	10.95	255274	14.31	130325	16.71
ZZZZZZ	85302	7.45	180037	10.01	279696	10.95	260208	14.31	131534	16.71
JC30567-3MS	82550	7.45	173307	10.01	267554	10.95	253179	14.31	131172	16.71
JC30567-3MSD	79855	7.45	173824	10.01	262063	10.95	245896	14.31	130853	16.71
ZZZZZZ	82207	7.45	180247	10.01	269750	10.95	257027	14.31	129354	16.71
ZZZZZZ	84560	7.46	183623	10.01	283059	10.95	261636	14.31	131653	16.71
ZZZZZZ	87353	7.45	184061	10.01	281650	10.95	262491	14.31	136065	16.71
ZZZZZZ	82374	7.45	179701	10.01	279689	10.95	257753	14.31	132717	16.71
ZZZZZZ	80629	7.45	178543	10.01	268273	10.95	252137	14.31	130544	16.71

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Check Std:	V4D3199-CC3126	**Injection Date:**	11/04/16
Lab File ID:	4D73600.D	**Injection Time:**	19:11
Instrument ID:	GCMS4D	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	81111	7.45	171444	10.01	263622	10.95	247147	14.31	130362	16.71
Upper Limit [a]	162222	7.95	342888	10.51	527244	11.45	494294	14.81	260724	17.21
Lower Limit [b]	40556	6.95	85722	9.51	131811	10.45	123574	13.81	65181	16.21

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V4D3199-MB2	81957	7.45	182215	10.01	281494	10.95	257378	14.31	130210	16.71
JC30522-3	93358	7.45	192236	10.01	299566	10.95	276393	14.31	138124	16.71

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Check Std:	V4D3202-CC3126	**Injection Date:**	11/08/16
Lab File ID:	4D73688.D	**Injection Time:**	09:06
Instrument ID:	GCMS4D	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	93999	7.45	210036	10.01	312442	10.95	288540	14.31	159318	16.71
Upper Limit [a]	187998	7.95	420072	10.51	624884	11.45	577080	14.81	318636	17.21
Lower Limit [b]	47000	6.95	105018	9.51	156221	10.45	144270	13.81	79659	16.21

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V4D3202-MB	92583	7.45	220557	10.01	326279	10.95	305148	14.31	155412	16.71
V4D3202-BS	87290	7.45	205139	10.01	304708	10.95	281954	14.31	155802	16.71
JC30522-1	93246	7.45	203492	10.01	296532	10.95	276255	14.31	144235	16.71
JC30522-2	97874	7.45	217362	10.01	318936	10.95	303114	14.31	161158	16.71
JC30522-6	98765	7.44	221848	10.00	326149	10.95	301376	14.31	161446	16.71
JC30522-5	102231	7.45	222180	10.01	321986	10.95	302464	14.31	160578	16.71
JC30522-4	115180	7.45	242904	10.01	361490	10.95	343923	14.31	182110	16.71
JC30522-3	125922	7.45	256988	10.01	391316	10.95	366487	14.31	188378	16.71
JC31264-1	139429	7.45	273105	10.00	420685	10.95	383741	14.31	194121	16.71
ZZZZZZ	139997	7.45	269603	10.00	408768	10.95	375065	14.31	194390	16.71
ZZZZZZ	130868	7.45	264765	10.01	407052	10.95	369420	14.31	190132	16.71
ZZZZZZ	136128	7.44	271983	10.00	409211	10.95	364735	14.31	198135	16.71
JC31264-1MS	127405	7.45	256651	10.01	391250	10.95	366893	14.31	191589	16.71
JC31264-1MSD	127497	7.45	257331	10.01	390063	10.95	365180	14.31	191101	16.71
ZZZZZZ	133249	7.45	273087	10.01	417153	10.95	385772	14.31	194072	16.71
ZZZZZZ	128944	7.45	259742	10.01	399610	10.95	367417	14.31	185721	16.71
ZZZZZZ	127789	7.45	251440	10.00	384503	10.95	352027	14.31	176253	16.71
ZZZZZZ	121892	7.45	254298	10.01	388458	10.95	355208	14.31	180594	16.71
ZZZZZZ	122424	7.45	247276	10.01	376155	10.95	345411	14.31	177934	16.71

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: JC30522
Account: BPAMSS Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Method: SW846 8260C **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JC30522-1	4D73693.D	99	103	101	103
JC30522-2	4D73694.D	98	99	100	101
JC30522-3	4D73698.D	101	103	102	106
JC30522-3	4D73608.D	103	104	99	109
JC30522-4	4D73697.D	99	100	103	105
JC30522-5	4D73696.D	98	99	101	102
JC30522-6	4D73695.D	98	100	99	100
JC30522-7	3D123771A.D	109	102	100	96
JC30567-3MS	4D73590.D	104	101	101	103
JC30567-3MSD	4D73591.D	100	96	100	102
JC30773-10DUP	3D123775.D	111	103	100	95
JC30773-12MS	3D123773.D	106	97	102	99
JC31264-1MS	4D73704.D	102	104	101	104
JC31264-1MSD	4D73705.D	101	102	102	103
V3D5253-BS	3D123764.D	104	97	102	99
V3D5253-MB	3D123763.D	104	97	102	96
V4D3199-BS	4D73582.D	105	103	101	104
V4D3199-MB2	4D73602.D	102	101	99	106
V4D3202-BS	4D73691.D	99	102	101	99
V4D3202-MB	4D73690.D	100	103	100	104
V4D3199-MB	4D73581.D	102	86	99	109

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	76-120%
S2 = 1,2-Dichloroethane-D4	73-122%
S3 = Toluene-D8	84-119%
S4 = 4-Bromofluorobenzene	78-117%

Initial Calibration Summary

Job Number: JC30522 **Sample:** V3D5245-ICC5245
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 3D123571.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Response Factor Report MS3D

Method : C:\MSDCHEM\1\METHODS\M3D5245.M (RTE Integrator)
Title : Method SW846 8260C, RXI 624 60m x 0.25mm x 1.4 um
Last Update : Wed Nov 02 10:51:49 2016
Response via : Initial Calibration

Calibration Files
5 =3D123568.D 0.5 =3D123565.D 2 =3D123567.D 50 =3D123571.D
100 =3D123572.D 1 =3D123566.D 200 =3D123573.D 20 =3D123570.D
10 =3D123569.D 0.2 =3D123564.D = =

Compound	5	0.5	2	50	100	1	200	20	10	0.2	Avg	%RSD
1) I Tert Butyl Alcohol-d9	----------ISTD----------											
2) 1,4-dioxane	0.079		0.097	0.097		0.093	0.087	0.090			0.091	7.41
3) tertiary butyl alcohol	1.121		1.060	1.187	1.134		1.105	1.133	1.153		1.128	3.49
4) I pentafluorobenzene	----------ISTD----------											
5) freon 143a											0.000#	-1.00
6) FREON 115											0.000#	-1.00
7) FREON 152A											0.000#	-1.00
8) PROPYLENE											0.000#	-1.00
9) chlorotrifluoroethene											0.000#	-1.00
10) chlorodifluoromethane	0.922		0.875	1.006	0.901		0.881	0.968	0.932		0.926	5.11
11) dichlorodifluoromethane	1.141		1.069	1.139	1.038	1.069	0.961	1.149	1.163		1.091	6.39
12) freon 142b											0.000#	-1.00
13) chloromethane	1.241		1.223	1.267	1.209	1.260	1.171	1.235	1.217		1.228	2.47
14) vinyl chloride	1.216		1.269	1.217	1.116	1.308	1.083	1.223	1.226		1.207	6.15
15) bromomethane	0.657		0.687	0.639	0.587	0.674	0.461	0.641	0.651		0.625	11.57
16) chloroethane	0.512		0.501	0.487	0.467	0.509	0.418	0.497	0.511		0.488	6.51
17) 1,3-butadiene											0.000#	-1.00
18) vinyl bromide											0.000#	-1.00
19) trichlorofluoromethane	1.099		1.020	1.111	1.029	1.028	0.986	1.112	1.107		1.061	4.77
20) pentane											0.000#	-1.00
21) ethyl ether	0.271		0.242	0.269	0.269		0.246	0.268	0.273		0.263	4.84
22) freon 141b											0.000#	-1.00
23) freon 123a												

											0.000#	-1.00
24)	FREON 123											
											0.000#	-1.00
25)	acrolein											
	0.141	0.162	0.147	0.139	0.129	0.168	0.131	0.141	0.140	0.172	0.147	10.29
26)	1,1-dichloroethene											
	1.181		1.181	1.159	1.161	1.049	1.038	1.163	1.131		1.133	5.07
27)	acetone											
	0.059			0.069	0.072		0.059	0.069	0.058		0.065	9.75
28)	allyl chloride											
	0.361		0.332	0.360	0.397		0.341	0.370	0.342		0.358	6.17
29)	acetonitrile											
	0.058			0.052	0.048		0.048	0.054	0.055		0.053	7.85
30)	acetaldehyde											
											0.000#	-1.00
31)	iodomethane											
	1.362		1.301	1.350	1.316	1.234	1.247	1.342	1.311		1.308	3.57
32)	iso-butyl alcohol											
											0.000#	-1.00
33)	carbon disulfide											
	2.520		2.453	2.523	2.416	2.196	2.275	2.528	2.420		2.416	5.05
34)	methylene chloride											
	0.761		0.763	0.726	0.720	0.746	0.673	0.738	0.725		0.731	3.93
35)	methyl acetate											
	0.501		0.536	0.498	0.498		0.472	0.498	0.503		0.501	3.70
36)	methyl tert butyl ether											
	2.059		2.041	2.077	1.981	1.987	1.904	2.114	2.063		2.028	3.31
37)	trans-1,2-dichloroethene											
	1.043		1.012	0.980	0.975	0.911	0.881	0.981	0.959		0.968	5.36
38)	di-isopropyl ether											
	2.347		2.397	2.387	2.239	2.078	2.192	2.364	2.358		2.295	4.97
39)	ethyl tert-butyl ether											
	2.165		2.225	2.269	2.167	1.798	2.104	2.224	2.173		2.141	6.88
40)	2-butanone											
				0.065	0.068		0.065	0.054	0.054		0.061	11.00
41)	1,1-dichloroethane											
	1.167		1.132	1.127	1.112	1.057	1.024	1.150	1.116		1.111	4.27
42)	chloroprene											
	0.934		0.935	0.935	0.931		0.850	0.943	0.927		0.922	3.51
43)	acrylonitrile											
	0.232	0.157	0.233	0.241	0.246	0.221	0.229	0.241	0.234	0.265	0.230	12.31
44)	vinyl acetate											
	0.065			0.083	0.081		0.084	0.076	0.071		0.076	9.88
45)	ethyl acetate											
	0.073			0.078	0.078		0.078	0.073	0.073		0.075	3.65
46)	2,2-dichloropropane											
	1.085		1.069	1.079	0.967	1.037	0.933	1.114	1.073		1.045	6.00
47)	cis-1,2-dichloroethene											
	0.636		0.654	0.635	0.627	0.565	0.585	0.646	0.635		0.623	5.02
48)	propionitrile											
	0.083		0.080	0.088	0.089	0.078	0.085	0.087	0.084		0.084	4.49
49)	methyl acrylate											
	0.066			0.077	0.078		0.078	0.076	0.069		0.074	7.24
50)	bromochloromethane											
	0.296		0.270	0.307	0.312	0.258	0.298	0.313	0.298		0.294	6.79
51)	tetrahydrofuran											
	0.245			0.202	0.198		0.195	0.204	0.216		0.210	8.86
52)	chloroform											
	1.046		1.028	1.038	1.037	0.914	0.975	1.050	1.001		1.011	4.60
53)	Tert-Butyl Formate											

```
      0.699       0.681 0.736 0.701       0.744 0.712 0.711        0.712    3.05
54)  dibromofluoromethane (s)
      0.532 0.517 0.514 0.525 0.540 0.513 0.536 0.525 0.521 0.518  0.524    1.79
55)  1,2-dichloroethane-d4 (s)
      0.620 0.609 0.611 0.629 0.637 0.604 0.634 0.614 0.612 0.604  0.617    1.96
56)  freon 113
      0.530       0.490 0.544 0.504       0.471 0.554 0.527        0.517    5.76
57)  methacrylonitrile
      0.383       0.411 0.391 0.388 0.402 0.378 0.382 0.380        0.389    2.99
58)  1,1,1-trichloroethane
      1.042       0.997 1.024 0.966 0.913 0.947 1.041 0.984        0.989    4.66
59)  tert amyl alcohol
                                                                   0.000#  -1.00
60)  2,2,4-Trimethylpentane
      2.482       2.332 2.667 2.533       2.342 2.669 2.432        2.494    5.56
61)  tert-amyl methyl ether
      1.926       1.951 2.037 1.948 1.722 1.926 2.012 1.992        1.939    4.99

62) I   1,4-difluorobenzene   ----------------ISTD---------------------
63)  epichlorohydrin
      0.034       0.035 0.038 0.037       0.038 0.038 0.036        0.037    3.81
64)  n-butyl alcohol
      0.011       0.011 0.013 0.012       0.012 0.012 0.012        0.012    6.05
65)  cyclohexane
      0.684       0.706 0.675 0.612 0.729 0.570 0.718 0.658        0.669    8.17
66)  carbon tetrachloride
      0.650       0.621 0.641 0.599 0.590 0.568 0.674 0.638        0.623    5.61
67)  1,1-dichloropropene
      0.508       0.473 0.500 0.484 0.470 0.448 0.512 0.492        0.486    4.44
68)  hexane
      0.523       0.523 0.492 0.460       0.402 0.523 0.483        0.487    9.13
69)  benzene
      1.486 1.112 1.513 1.469 1.432 1.402 1.347 1.518 1.452        1.414    8.88
70)  heptane
      0.263       0.272 0.263 0.245 0.220 0.222 0.278 0.258        0.253    8.59
71)  isopropyl acetate
      0.899       0.917 0.905 0.866 0.835 0.879 0.916 0.907        0.890    3.20
72)  1,2-dichloroethane
      0.546       0.532 0.550 0.547 0.496 0.520 0.562 0.544        0.537    3.86
73)  trichloroethene
      0.370       0.371 0.369 0.364 0.350 0.338 0.376 0.359        0.362    3.51
74)  ethyl acrylate
                                                                   0.000#  -1.00
75)  tert amyl ethyl ether
                                                                   0.000#  -1.00
76)  2-nitropropane
      0.105       0.101 0.103 0.099       0.102 0.102 0.098        0.101    2.17
77)  2-chloroethyl vinyl ether
      0.207       0.207 0.216 0.203 0.180 0.196 0.218 0.216        0.205    6.25
78)  methyl methacrylate
      0.074       0.060 0.086 0.082       0.084 0.084 0.081        0.079   11.40
79)  1,2-dichloropropane
      0.375       0.375 0.384 0.370 0.354 0.356 0.401 0.379        0.374    4.04
80)  methylcyclohexane
      0.727       0.733 0.732 0.672       0.617 0.772 0.704        0.708    7.14
81)  dibromomethane
      0.232       0.237 0.244 0.240 0.200 0.233 0.251 0.240        0.235    6.51
82)  bromodichloromethane
      0.467       0.466 0.502 0.498 0.405 0.490 0.499 0.475        0.475    6.69
83)  cis-1,3-dichloropropene
```

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      0.533       0.508 0.562 0.549 0.476 0.536 0.558 0.537        0.532    5.34
 84)  toluene-d8 (s)
      1.077 1.077 1.071 1.096 1.067 1.073 1.099 1.095 1.078 1.065  1.080    1.14
 85)  4-methyl-2-pentanone
      0.164       0.153 0.178 0.166       0.171 0.176 0.162        0.167    5.14
 86)  toluene
      0.768       0.753 0.780 0.741 0.741 0.720 0.787 0.758        0.756    2.94
 87)  3-methyl-1-butanol
      0.010       0.009 0.011 0.011 0.007 0.011 0.011 0.010        0.010   13.60
 88)  trans-1,3-dichloropropene
      0.472       0.445 0.505 0.484 0.466 0.475 0.507 0.481        0.479    4.19
 89)  ethyl methacrylate
      0.444       0.404 0.466 0.443 0.386 0.448 0.470 0.445        0.438    6.58
 90)  1,1,2-trichloroethane
      0.245       0.238 0.255 0.242 0.219 0.240 0.252 0.242        0.242    4.47
 91)  2-hexanone
      0.162       0.152 0.174 0.161       0.155 0.172 0.168        0.164    4.90

 92) I   chlorobenzene-d5      ----------------ISTD---------------------
 93)  tetrachloroethene
      0.496       0.457 0.535 0.534 0.409 0.406 0.560 0.466        0.483   12.05
 94)  1,3-dichloropropane
      0.559       0.551 0.561 0.548 0.503 0.527 0.569 0.538        0.545    3.92
 95)  butyl acetate
      0.288       0.311 0.310 0.299 0.263 0.298 0.311 0.310        0.299    5.60
 96)  3,3-Dimethyl-1-Butanol
      0.045       0.044 0.056 0.058 0.041 0.059 0.051 0.049        0.050   13.07
 97)  dibromochloromethane
      0.396       0.396 0.435 0.436 0.340 0.431 0.428 0.395        0.407    8.05
 98)  1,2-dibromoethane
      0.365       0.371 0.394 0.384 0.344 0.374 0.401 0.374        0.376    4.69
 99)  n-Butyl Ether
      1.770       1.707 1.752 1.648 1.629 1.565 1.804 1.719        1.699    4.73
100)  chlorobenzene
      0.976       0.988 1.024 0.992 0.958 0.954 1.036 0.992        0.990    2.93
101)  1,1,1,2-tetrachloroethane
      0.447       0.435 0.489 0.472 0.382 0.461 0.496 0.456        0.455    7.88
102)  ethylbenzene
      1.801       1.827 1.784 1.698 1.669 1.604 1.841 1.781        1.751    4.81
103)  m,p-xylene
      0.674 0.536 0.670 0.658 0.632 0.611 0.605 0.684 0.655        0.636    7.31
104)  o-xylene
      0.706       0.722 0.712 0.678 0.645 0.649 0.725 0.692        0.691    4.50
105)  styrene
      1.132       1.099 1.149 1.094 0.983 1.044 1.170 1.118        1.099    5.49
106)  Butyl Acrylate
                                                                   0.000#  -1.00
107)  bromoform
      0.307       0.299 0.348 0.345 0.278 0.353 0.344 0.314        0.324    8.58

108) I   1,4-dichlorobenzene-d ----------------ISTD---------------------
109)  isopropylbenzene
      2.861       2.744 2.939 2.852 2.477 2.709 2.921 2.765        2.783    5.35
110)  4-bromofluorobenzene (s)
      0.810 0.796 0.796 0.805 0.804 0.811 0.837 0.796 0.801 0.802  0.806    1.53
111)  bromobenzene
      0.791       0.793 0.796 0.788 0.727 0.781 0.799 0.779        0.782    2.95
112)  cyclohexanone
      0.102       0.091 0.092 0.084       0.063 0.098 0.097        0.090   14.43
113)  1,1,2,2-tetrachloroethane
```

Initial Calibration Summary

Job Number: JC30522 **Sample:** V3D5245-ICC5245
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 3D123571.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

```
       0.824       0.801 0.849 0.820 0.799 0.827 0.835 0.825        0.823    1.99
114)  trans-1,4-dichloro-2-butene
       0.209       0.183 0.233 0.231       0.235 0.226 0.206        0.218    8.73
115)  1,2,3-trichloropropane
       0.187       0.178 0.199 0.187       0.191 0.200 0.191        0.190    3.98
116)  n-propylbenzene
       3.429       3.319 3.319 3.214 3.111 3.060 3.403 3.300        3.269    4.03
117)  4-Ethyltoluene
                                                                    0.000#  -1.00
118)  2-chlorotoluene
       0.725       0.665 0.723 0.713 0.663 0.687 0.737 0.707        0.702    3.97
119)  4-chlorotoluene
       0.689       0.665 0.717 0.684 0.666 0.676 0.709 0.685        0.686    2.71
120)  1,3,5-trimethylbenzene
       2.464       2.438 2.594 2.500 2.183 2.387 2.586 2.427        2.447    5.30
121)  tert-butylbenzene
       1.867       1.807 2.119 2.117       2.008 2.025 1.878        1.974    6.33
122)  pentachloroethane
       0.448       0.489 0.448 0.418 0.405 0.568 0.409 0.454        0.455   11.75
123)  1,2,4-trimethylbenzene
       2.538       2.474 2.603 2.512 2.356 2.386 2.627 2.521        2.502    3.80
124)  sec-butylbenzene
       3.222       3.209 3.415 3.285 2.907 3.080 3.386 3.185        3.211    5.11
125)  1,3-dichlorobenzene
       1.655       1.626 1.644 1.573 1.573 1.530 1.638 1.617        1.607    2.72
126)  p-isopropyltoluene
       2.736       2.664 2.876 2.745 2.369 2.596 2.846 2.719        2.694    5.91
127)  1,4-dichlorobenzene
       1.690       1.697 1.698 1.626 1.598 1.583 1.707 1.682        1.660    3.00
128)  1,2-dichlorobenzene
       1.678       1.696 1.759 1.650 1.570 1.577 1.748 1.739        1.677    4.40
129)  1,4-Diethylbenzene
                                                                    0.000#  -1.00
130)  n-butylbenzene
       1.613       1.551 1.627 1.525 1.382 1.396 1.637 1.584        1.539    6.51
131)  1,2,4,5-Tetramethylbenzene
                                                                    0.000#  -1.00
132)  1,2-dibromo-3-chloropropane
       0.193       0.185 0.238 0.223       0.210 0.230 0.211        0.213    8.99
133)  1,3,5-trichlorobenzene  **This compound fails Initial Calibration QC criteria**
       2.590       2.579 2.749 2.512 2.447 2.178 2.729 2.628        2.551    7.11
134)  1,2,4-trichlorobenzene
       1.512       1.417 1.611 1.463 1.478 1.249 1.624 1.545        1.487    8.05
135)  hexachlorobutadiene
       0.757       0.743 0.818 0.760 0.844 0.653 0.801 0.749        0.766    7.60
136)  naphthalene
       2.942       2.983 3.218 2.904 2.802 2.433 3.220 3.079        2.947    8.64
137)  1,2,3-trichlorobenzene
       1.306       1.309 1.415 1.268 1.219 1.029 1.425 1.349        1.290    9.81
138)  hexachloroethane
       0.513       0.486 0.654 0.655       0.623 0.588 0.536        0.579   11.85
139)  Benzyl chloride
       1.679       1.705 1.866 1.753       1.704 1.789 1.738        1.748    3.64
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          M3D5245.M         Wed Nov 02 10:57:01 2016   3D
```

Initial Calibration Verification

Job Number: JC30522 **Sample:** V3D5245-ICV5245
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 3D123576.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\3D123576.D Vial: 16
Acq On : 1 Nov 2016 6:58 pm Operator: ximenac
Sample : ICV5245-50 Inst : MS3D
Misc : MS8659,V3D5245,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M3D5245.M (RTE Integrator)
Title : Method SW846 8260C, RXI 624 60m x 0.25mm x 1.4 um
Last Update : Wed Nov 02 10:51:49 2016
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.30min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	105	0.00	7.29
2		1,4-dioxane	0.091	0.087	4.4	94	0.00	11.16
3	M	tertiary butyl alcohol	1.128	1.200	-6.4	106	0.01	7.41
4	I	pentafluorobenzene	1.000	1.000	0.0	106	0.00	9.57
5		freon 143a		----------NA----------				
6		FREON 115		----------NA----------				
7		FREON 152A		----------NA----------				
8		PROPYLENE		----------NA----------				
9		chlorotrifluoroethene		----------NA----------				
10		chlorodifluoromethane	0.926	1.058	-14.3	112	0.00	3.99
11		dichlorodifluoromethane	1.091	0.981	10.1	91	0.00	3.96
12		freon 142b		----------NA----------				
13		chloromethane	1.228	1.048	14.7	88	0.00	4.29
14		vinyl chloride	1.207	0.997	17.4	87	0.00	4.56
15		bromomethane	0.625	0.553	11.5	92	0.01	5.17
16		chloroethane	0.488	0.432	11.5	94	0.00	5.33
17		1,3-butadiene		----------NA----------				
18		vinyl bromide		----------NA----------				
19		trichlorofluoromethane	1.061	0.971	8.5	93	0.00	5.84
20		pentane		----------NA----------				
21		ethyl ether	0.263	0.256	2.7	101	0.00	6.20
22		freon 141b		----------NA----------				
23		freon 123a		----------NA----------				
24		FREON 123		----------NA----------				
25		acrolein	0.147	0.135	8.2	103	0.00	6.43
26		1,1-dichloroethene	1.133	1.127	0.5	103	0.00	6.63
27		acetone	0.065	0.070	-7.7	108	0.00	6.62
28		allyl chloride	0.358	0.348	2.8	103	0.00	7.16
29		acetonitrile	0.053	0.051	3.8	104	0.00	7.04
30	m	acetaldehyde		----------NA----------				
31		iodomethane	1.308	1.236	5.5	97	0.00	6.89
32		iso-butyl alcohol		----------NA----------				
33		carbon disulfide	2.416	2.396	0.8	101	0.00	7.04
34		methylene chloride	0.731	0.695	4.9	102	0.00	7.35
35		methyl acetate	0.501	0.488	2.6	104	0.00	7.09
36		methyl tert butyl ether	2.028	1.979	2.4	101	0.00	7.71
37		trans-1,2-dichloroethene	0.968	0.923	4.6	100	0.00	7.74
38		di-isopropyl ether	2.295	2.350	-2.4	105	0.00	8.31
39		ethyl tert-butyl ether	2.141	2.261	-5.6	106	0.00	8.78
40		2-butanone	0.061	0.058	4.9	94	0.00	8.96
41	M	1,1-dichloroethane	1.111	1.091	1.8	103	0.00	8.32

Initial Calibration Verification

Job Number: JC30522 **Sample:** V3D5245-ICV5245
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 3D123576.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

42		chloroprene	0.922	0.907	1.6	103	0.00	8.42
43		acrylonitrile	0.230	0.238	-3.5	105	0.00	7.62
44		vinyl acetate	0.076	0.078	-2.6	100	0.00	8.25
45		ethyl acetate	0.075	0.078	-4.0	107	0.00	8.98
46		2,2-dichloropropane	1.045	0.978	6.4	96	0.00	9.07
47		cis-1,2-dichloroethene	0.623	0.622	0.2	104	0.00	9.03
48		propionitrile	0.084	0.087	-3.6	105	0.00	9.03
49		methyl acrylate	0.074	0.076	-2.7	105	0.00	9.07
50		bromochloromethane	0.294	0.299	-1.7	104	0.00	9.33
51		tetrahydrofuran	0.210	0.198	5.7	104	0.00	9.35
52		chloroform	1.011	1.050	-3.9	107	0.00	9.42
53		Tert-Butyl Formate	0.712	0.535	24.9	77	0.00	9.46
54	S	dibromofluoromethane (s)	0.524	0.533	-1.7	108	0.00	9.61
55	S	1,2-dichloroethane-d4 (s)	0.617	0.625	-1.3	106	0.00	10.04
56		freon 113	0.517	0.591	-14.3	115	0.00	6.65
57		methacrylonitrile	0.389	0.378	2.8	103	0.00	9.23
58		1,1,1-trichloroethane	0.989	1.046	-5.8	108	0.00	9.68
59		tert amyl alcohol		----------NA----------				
60		2,2,4-Trimethylpentane	2.494	2.826	-13.3	113	0.00	10.20
61		tert-amyl methyl ether	1.939	1.978	-2.0	103	0.00	10.19
62	I	1,4-difluorobenzene	1.000	1.000	0.0	106	0.00	10.51
63		epichlorohydrin	0.037	0.038	-2.7	106	0.00	11.70
64		n-butyl alcohol	0.012	0.012	0.0	99	0.00	10.56
65	M	cyclohexane	0.669	0.681	-1.8	107	0.00	9.80
66		carbon tetrachloride	0.623	0.640	-2.7	106	0.00	9.88
67		1,1-dichloropropene	0.486	0.501	-3.1	106	0.00	9.85
68		hexane	0.487	0.414	15.0	89	0.00	8.10
69	M	benzene	1.414	1.433	-1.3	103	0.00	10.10
70		heptane	0.253	0.274	-8.3	111	0.00	10.36
71		isopropyl acetate	0.890	0.915	-2.8	107	0.00	10.00
72		1,2-dichloroethane	0.537	0.554	-3.2	107	0.00	10.13
73		trichloroethene	0.362	0.363	-0.3	104	0.00	10.83
74		ethyl acrylate		----------NA----------				
75		tert amyl ethyl ether		----------NA----------				
76		2-nitropropane	0.101	0.102	-1.0	105	0.00	11.57
77		2-chloroethyl vinyl ether	0.205	0.219	-6.8	107	0.00	11.61
78		methyl methacrylate	0.079	0.085	-7.6	105	0.00	11.07
79		1,2-dichloropropane	0.374	0.374	0.0	103	0.00	11.12
80		methylcyclohexane	0.708	0.754	-6.5	109	0.00	11.13
81		dibromomethane	0.235	0.241	-2.6	104	0.00	11.23
82		bromodichloromethane	0.475	0.482	-1.5	102	0.00	11.38
83		cis-1,3-dichloropropene	0.532	0.554	-4.1	104	0.00	11.83
84	S	toluene-d8 (s)	1.080	1.096	-1.5	106	0.00	12.14
85		4-methyl-2-pentanone	0.167	0.172	-3.0	103	0.00	11.93
86		toluene	0.756	0.752	0.5	102	0.00	12.22
87		3-methyl-1-butanol	0.010	0.011	-10.0	102	0.00	11.93
88		trans-1,3-dichloropropene	0.479	0.489	-2.1	103	0.00	12.40
89		ethyl methacrylate	0.438	0.447	-2.1	102	0.00	12.39
90		1,1,2-trichloroethane	0.242	0.249	-2.9	103	0.00	12.62
91		2-hexanone	0.164	0.170	-3.7	103	0.00	12.78
92	I	chlorobenzene-d5	1.000	1.000	0.0	105	0.00	13.65
93		tetrachloroethene	0.483	0.573	-18.6	112	0.00	12.77
94		1,3-dichloropropane	0.545	0.548	-0.6	103	0.00	12.80
95		butyl acetate	0.299	0.311	-4.0	105	0.00	12.86
96		3,3-Dimethyl-1-Butanol	0.050	0.054	-8.0	102	0.00	12.96
97		dibromochloromethane	0.407	0.429	-5.4	103	0.00	13.05
98		1,2-dibromoethane	0.376	0.383	-1.9	102	0.00	13.21
99		n-Butyl Ether	1.699	2.065	-21.5	124	0.00	13.64

Initial Calibration Verification

Job Number: JC30522 **Sample:** V3D5245-ICV5245
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 3D123576.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

100		chlorobenzene	0.990	0.998	-0.8	102	0.00	13.69
101		1,1,1,2-tetrachloroethane	0.455	0.472	-3.7	101	0.00	13.75
102		ethylbenzene	1.751	1.753	-0.1	103	0.00	13.75
103		m,p-xylene	0.636	0.645	-1.4	103	0.00	13.86
104		o-xylene	0.691	0.712	-3.0	105	0.00	14.27
105		styrene	1.099	1.135	-3.3	104	0.00	14.28
106		Butyl Acrylate		----------NA----------				
107		bromoform	0.324	0.340	-4.9	102	0.00	14.51
108	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	105	0.00	15.98
109		isopropylbenzene	2.783	2.891	-3.9	103	0.00	14.62
110	S	4-bromofluorobenzene (s)	0.806	0.808	-0.2	105	0.00	14.82
111		bromobenzene	0.782	0.771	1.4	102	0.00	15.00
112		cyclohexanone	0.090	0.084	6.7	96	0.00	14.74
113		1,1,2,2-tetrachloroethane	0.823	0.825	-0.2	102	0.00	14.89
114		trans-1,4-dichloro-2-bute	0.218	0.233	-6.9	105	0.00	14.93
115		1,2,3-trichloropropane	0.190	0.195	-2.6	103	0.00	14.98
116		n-propylbenzene	3.269	3.386	-3.6	107	0.00	15.03
117		4-Ethyltoluene		----------NA----------				
118		2-chlorotoluene	0.702	0.703	-0.1	102	0.00	15.16
119		4-chlorotoluene	0.686	0.693	-1.0	101	0.00	15.28
120		1,3,5-trimethylbenzene	2.447	2.525	-3.2	102	0.00	15.19
121		tert-butylbenzene	1.974	2.108	-6.8	104	0.00	15.53
122		pentachloroethane	0.455	0.369	18.9	86	0.00	15.60
123		1,2,4-trimethylbenzene	2.502	2.604	-4.1	105	0.00	15.58
124		sec-butylbenzene	3.211	3.372	-5.0	104	0.00	15.75
125		1,3-dichlorobenzene	1.607	1.585	1.4	101	0.00	15.91
126		p-isopropyltoluene	2.694	2.853	-5.9	104	0.00	15.88
127		1,4-dichlorobenzene	1.660	1.638	1.3	101	0.00	16.01
128		1,2-dichlorobenzene	1.677	1.696	-1.1	101	0.00	16.37
129		1,4-Diethylbenzene		----------NA----------				
130		n-butylbenzene	1.539	1.561	-1.4	101	0.00	16.28
131		1,2,4,5-Tetramethylbenzen		----------NA----------				
132		1,2-dibromo-3-chloropropa	0.213	0.230	-8.0	101	0.00	17.09
133		1,3,5-trichlorobenzene	2.551	1.747	31.5#	67	0.00	17.27
134		1,2,4-trichlorobenzene	1.487	1.578	-6.1	103	0.00	17.84
135		hexachlorobutadiene	0.766	0.778	-1.6	100	0.00	17.94
136		naphthalene	2.947	3.117	-5.8	102	0.00	18.09
137		1,2,3-trichlorobenzene	1.290	1.381	-7.1	102	0.00	18.28
138		hexachloroethane	0.579	0.633	-9.3	102	0.00	16.65
139		Benzyl chloride	1.748	1.601	8.4	90	0.00	16.10

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3D123571.D M3D5245.M Wed Nov 02 10:56:51 2016 3D

Continuing Calibration Summary

Job Number: JC30522 **Sample:** V3D5253-CC5245
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 3D123761.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\3D123761.D Vial: 3
Acq On : 8 Nov 2016 9:13 am Operator: ximenac
Sample : cc5245-20 Inst : MS3D
Misc : MS8985,V3D5253,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M3D5245.M (RTE Integrator)
Title : Method SW846 8260C, RXI 624 60m x 0.25mm x 1.4 um
Last Update : Wed Nov 02 10:51:49 2016
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.30min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	88	0.00	7.29
2		1,4-dioxane	0.091	0.104	-14.3	105	0.00	11.16
3	M	tertiary butyl alcohol	1.128	1.238	-9.8	96	0.02	7.42
4	I	pentafluorobenzene	1.000	1.000	0.0	109	0.00	9.57
5		freon 143a		----------NA----------				
6		FREON 115		----------NA----------				
7		FREON 152A		----------NA----------				
8		PROPYLENE		----------NA----------				
9		chlorotrifluoroethene		----------NA----------				
10		chlorodifluoromethane	0.926	1.108	-19.7	125	0.00	3.99
11		dichlorodifluoromethane	1.091	1.167	-7.0	111	0.02	3.98
12		freon 142b		----------NA----------				
13		chloromethane	1.228	1.256	-2.3	111	0.00	4.29
14		vinyl chloride	1.207	1.237	-2.5	111	0.00	4.56
15		bromomethane	0.625	0.693	-10.9	118	0.02	5.18
16		chloroethane	0.488	0.544	-11.5	120	0.02	5.34
17		1,3-butadiene		----------NA----------				
18		vinyl bromide		----------NA----------				
19		trichlorofluoromethane	1.061	1.160	-9.3	114	0.01	5.85
20		pentane		----------NA----------				
21		ethyl ether	0.263	0.258	1.9	105	0.00	6.20
22		freon 141b		----------NA----------				
23		freon 123a		----------NA----------				
24		FREON 123		----------NA----------				
25		acrolein	0.147	0.125	15.0	97	0.00	6.43
26		1,1-dichloroethene	1.133	1.073	5.3	101	0.00	6.63
27		acetone	0.065	0.091	-40.0#	144	0.00	6.62
28		allyl chloride	0.358	0.349	2.5	103	0.00	7.16
29		acetonitrile	0.053	0.049	7.5	99	-0.02	7.03
30	m	acetaldehyde		----------NA----------				
31		iodomethane	1.308	1.346	-2.9	110	0.00	6.88
32		iso-butyl alcohol		----------NA----------				
33		carbon disulfide	2.416	2.520	-4.3	109	0.00	7.03
34		methylene chloride	0.731	0.726	0.7	108	0.00	7.35
35		methyl acetate	0.501	0.416	17.0	91	0.00	7.09
36		methyl tert butyl ether	2.028	1.905	6.1	99	0.00	7.71
37		trans-1,2-dichloroethene	0.968	0.955	1.3	107	0.00	7.74
38		di-isopropyl ether	2.295	2.159	5.9	100	0.00	8.31
39		ethyl tert-butyl ether	2.141	2.305	-7.7	113	0.00	8.77
40		2-butanone	0.061	0.068	-11.5	138	0.00	8.96
41	M	1,1-dichloroethane	1.111	1.114	-0.3	106	0.00	8.32

Continuing Calibration Summary

Job Number: JC30522 **Sample:** V3D5253-CC5245
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 3D123761.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

42		chloroprene	0.922	0.872	5.4	101	0.00	8.42
43		acrylonitrile	0.230	0.209	9.1	95	0.00	7.62
44		vinyl acetate	0.076	0.078	-2.6	112	0.00	8.25
45		ethyl acetate	0.075	0.066	12.0	99	0.00	8.98
46		2,2-dichloropropane	1.045	1.118	-7.0	110	0.00	9.07
47		cis-1,2-dichloroethene	0.623	0.626	-0.5	106	0.00	9.03
48		propionitrile	0.084	0.076	9.5	97	0.00	9.03
49		methyl acrylate	0.074	0.065	12.2	94	0.00	9.06
50		bromochloromethane	0.294	0.309	-5.1	108	0.00	9.33
51		tetrahydrofuran	0.210	0.173	17.6	93	0.00	9.35
52		chloroform	1.011	1.035	-2.4	108	0.00	9.42
53		Tert-Butyl Formate	0.712	0.647	9.1	99	0.00	9.45
54	S	dibromofluoromethane (s)	0.524	0.545	-4.0	114	0.00	9.61
55	S	1,2-dichloroethane-d4 (s)	0.617	0.600	2.8	107	0.00	10.04
56		freon 113	0.517	0.536	-3.7	106	0.01	6.66
57		methacrylonitrile	0.389	0.319	18.0	92	0.00	9.23
58		1,1,1-trichloroethane	0.989	1.041	-5.3	110	0.00	9.68
59		tert amyl alcohol		----------NA----------				
60		2,2,4-Trimethylpentane	2.494	2.535	-1.6	104	0.00	10.20
61		tert-amyl methyl ether	1.939	1.840	5.1	100	0.00	10.18
62	I	1,4-difluorobenzene	1.000	1.000	0.0	113	0.00	10.51
63		epichlorohydrin	0.037	0.032	13.5	97	0.00	11.70
64		n-butyl alcohol	0.012	0.011	8.3	102	0.00	10.56
65	M	cyclohexane	0.669	0.652	2.5	103	0.00	9.81
66		carbon tetrachloride	0.623	0.654	-5.0	110	0.00	9.88
67		1,1-dichloropropene	0.486	0.487	-0.2	108	0.00	9.85
68		hexane	0.487	0.510	-4.7	111	0.00	8.10
69	M	benzene	1.414	1.455	-2.9	109	0.00	10.10
70		heptane	0.253	0.274	-8.3	112	0.00	10.36
71		isopropyl acetate	0.890	0.759	14.7	94	0.00	10.00
72		1,2-dichloroethane	0.537	0.512	4.7	103	0.00	10.13
73		trichloroethene	0.362	0.362	0.0	109	0.00	10.83
74		ethyl acrylate		----------NA----------				
75		tert amyl ethyl ether		----------NA----------				
76		2-nitropropane	0.101	0.085	15.8	94	0.00	11.57
77		2-chloroethyl vinyl ether	0.205	0.194	5.4	101	0.00	11.61
78		methyl methacrylate	0.079	0.073	7.6	99	0.00	11.07
79		1,2-dichloropropane	0.374	0.377	-0.8	106	0.00	11.12
80		methylcyclohexane	0.708	0.730	-3.1	107	0.00	11.13
81		dibromomethane	0.235	0.239	-1.7	108	0.00	11.23
82		bromodichloromethane	0.475	0.491	-3.4	112	0.00	11.38
83		cis-1,3-dichloropropene	0.532	0.542	-1.9	110	0.00	11.83
84	S	toluene-d8 (s)	1.080	1.103	-2.1	114	0.00	12.14
85		4-methyl-2-pentanone	0.167	0.150	10.2	97	0.00	11.93
86		toluene	0.756	0.776	-2.6	112	0.00	12.22
87		3-methyl-1-butanol	0.010	0.009#	10.0	91	0.00	11.93
88		trans-1,3-dichloropropene	0.479	0.488	-1.9	109	0.00	12.40
89		ethyl methacrylate	0.438	0.396	9.6	95	0.00	12.39
90		1,1,2-trichloroethane	0.242	0.247	-2.1	111	0.00	12.63
91		2-hexanone	0.164	0.158	3.7	105	0.00	12.78
92	I	chlorobenzene-d5	1.000	1.000	0.0	116	0.00	13.65
93		tetrachloroethene	0.483	0.439	9.1	91	0.00	12.77
94		1,3-dichloropropane	0.545	0.527	3.3	108	0.00	12.80
95		butyl acetate	0.299	0.259	13.4	97	0.00	12.86
96		3,3-Dimethyl-1-Butanol	0.050	0.038	24.0#	86	0.00	12.96
97		dibromochloromethane	0.407	0.426	-4.7	116	0.00	13.05
98		1,2-dibromoethane	0.376	0.363	3.5	105	0.00	13.21
99		n-Butyl Ether	1.699	1.509	11.2	97	0.00	13.64

Continuing Calibration Summary

Job Number: JC30522 **Sample:** V3D5253-CC5245
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 3D123761.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

100		chlorobenzene	0.990	0.999	-0.9	112	0.00	13.69
101		1,1,1,2-tetrachloroethane	0.455	0.483	-6.2	114	0.00	13.75
102		ethylbenzene	1.751	1.718	1.9	109	0.00	13.75
103		m,p-xylene	0.636	0.644	-1.3	110	0.00	13.87
104		o-xylene	0.691	0.687	0.6	110	0.00	14.27
105		styrene	1.099	1.079	1.8	107	0.00	14.28
106		Butyl Acrylate		----------NA----------				
107		bromoform	0.324	0.341	-5.2	116	0.00	14.51
108	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	113	0.00	15.99
109		isopropylbenzene	2.783	2.773	0.4	107	0.00	14.62
110	S	4-bromofluorobenzene (s)	0.806	0.781	3.1	110	0.00	14.82
111		bromobenzene	0.782	0.804	-2.8	113	0.00	15.00
112		cyclohexanone	0.090	0.139	-54.4#	160	0.00	14.74
113		1,1,2,2-tetrachloroethane	0.823	0.796	3.3	107	0.00	14.89
114		trans-1,4-dichloro-2-bute	0.218	0.194	11.0	97	0.00	14.92
115		1,2,3-trichloropropane	0.190	0.186	2.1	105	0.00	14.98
116		n-propylbenzene	3.269	3.254	0.5	108	0.00	15.03
117		4-Ethyltoluene		----------NA----------				
118		2-chlorotoluene	0.702	0.706	-0.6	108	0.00	15.17
119		4-chlorotoluene	0.686	0.690	-0.6	109	0.00	15.28
120		1,3,5-trimethylbenzene	2.447	2.464	-0.7	107	0.00	15.19
121		tert-butylbenzene	1.974	1.897	3.9	105	0.00	15.53
122		pentachloroethane	0.455	0.600	-31.9#	165	0.00	15.60
123		1,2,4-trimethylbenzene	2.502	2.486	0.6	106	0.00	15.58
124		sec-butylbenzene	3.211	3.185	0.8	106	0.00	15.75
125		1,3-dichlorobenzene	1.607	1.640	-2.1	113	0.00	15.91
126		p-isopropyltoluene	2.694	2.694	0.0	107	0.00	15.88
127		1,4-dichlorobenzene	1.660	1.670	-0.6	110	0.00	16.01
128		1,2-dichlorobenzene	1.677	1.694	-1.0	109	0.00	16.37
129		1,4-Diethylbenzene		----------NA----------				
130		n-butylbenzene	1.539	1.488	3.3	102	0.00	16.28
131		1,2,4,5-Tetramethylbenzen		----------NA----------				
132		1,2-dibromo-3-chloropropa	0.213	0.194	8.9	95	0.00	17.09
133		1,3,5-trichlorobenzene	2.551	2.626	-2.9	108	0.00	17.27
134		1,2,4-trichlorobenzene	1.487	1.481	0.4	103	0.00	17.84
135		hexachlorobutadiene	0.766	0.771	-0.7	108	0.00	17.94
136		naphthalene	2.947	2.703	8.3	94	0.00	18.09
137		1,2,3-trichlorobenzene	1.290	1.285	0.4	101	0.00	18.29
138		hexachloroethane	0.579	0.585	-1.0	112	0.00	16.66
139		Benzyl chloride	1.748	1.769	-1.2	111	0.00	16.10

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3D123570.D M3D5245.M Tue Nov 08 14:36:44 2016 3D

Initial Calibration Summary

Job Number: JC30522 **Sample:** V4D3126-ICC3126
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4D71651.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Response Factor Report MS4D

Method : C:\MSDCHEM\1\METHODS\M4D3126.M (RTE Integrator)
Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um
Last Update : Wed Sep 14 11:09:30 2016
Response via : Initial Calibration

Calibration Files
10 =4D71649.D 0.5 =4D71645.D 5 =4D71648.D 50 =4D71651.D
100 =4D71652.D 1 =4D71646.D 200 =4D71653.D 20 =4D71650.D
2 =4D71647.D 0.2 =4D71644.D = =

Compound	10	0.5	5	50	100	1	200	20	2	0.2	Avg	%RSD
1) I Tert Butyl Alcohol-d9	----------ISTD----------											
2) 1,4-dioxane	0.149	0.137	0.145	0.142	0.143	0.149					0.144	3.21
3) tertiary butyl alcohol	1.586	1.433	1.528	1.463	1.478	1.545	1.243				1.468	7.64
4) I pentafluorobenzene	----------ISTD----------											
5) freon 143a											0.000#	-1.00
6) chlorodifluoromethane	0.813	0.744	0.735	0.729	0.601	0.748	0.761	0.576			0.714	11.43
7) dichlorodifluoromethane	0.833	0.833	0.756	0.771	0.779	0.775	0.662				0.773	7.41
8) freon 142b											0.000#	-1.00
9) chloromethane	1.020	0.967	1.026	0.963	0.956	0.920	0.977	0.983	0.959		0.975	3.36
10) vinyl chloride	0.965	0.985	0.921	0.923	0.759	0.945	0.938	0.874			0.914	7.74
11) acetaldehyde											0.000#	-1.00
12) bromomethane	0.640	0.639	0.600	0.569	0.508	0.523	0.618	0.576			0.584	8.54
13) chloroethane	0.466	0.462	0.421	0.412	0.349	0.395	0.440	0.393			0.417	9.34
14) trichlorofluoromethane	1.022	1.007	0.922	0.915	0.930	0.950	0.879				0.947	5.43
15) vinyl bromide											0.000#	-1.00
16) freon 141b											0.000#	-1.00
17) ethyl ether	0.333	0.318	0.322	0.312	0.234	0.323	0.317	0.288			0.306	10.42
18) pentane	0.105	0.110	0.097	0.092	0.093	0.099					0.100	6.98
19) 2-chloropropane	1.018	0.916	1.036	0.963	0.924	0.919	0.937	0.983	0.874		0.952	5.50
20) acrolein	0.132	0.137	0.129	0.129	0.128	0.131	0.110				0.128	6.76
21) 1,1-dichloroethene	0.940	0.952	0.891	0.855	0.707	0.876	0.910	0.730			0.858	10.68
22) acetone	0.066	0.056	0.053	0.052	0.053	0.055	0.048				0.055	10.02
23) allyl chloride												

	0.368	0.367	0.334	0.322	0.328	0.352	0.293			0.338	7.94
24)	acetonitrile											
	0.039	0.037	0.038	0.037	0.037	0.040	0.036			0.038	3.56
25)	iodomethane											
	1.234	1.213	1.183	1.138	1.020	1.150	1.198	1.013		1.144	7.39
26)	iso-butyl alcohol											
	0.024	0.023	0.021	0.021	0.022	0.023	0.021			0.022	5.12
27)	carbon disulfide											
	2.114	2.151	2.023	1.953	1.780	1.999	2.097	1.725		1.980	7.84
28)	methylene chloride											
	0.706	0.644	0.700	0.673	0.648	0.617	0.653	0.681	0.636	0.662	4.51
29)	1-chloropropane											
										0.000#	-1.00
30)	methyl acetate											
	0.095	0.089	0.095	0.095	0.098	0.097				0.095	3.29
31)	methyl tert butyl ether											
	1.825	1.468	1.824	1.742	1.706	1.493	1.688	1.809	1.634	1.260	1.645	11.27
32)	trans-1,2-dichloroethene											
	0.973	0.730	0.966	0.908	0.870	0.826	0.878	0.935	0.815		0.878	8.99
33)	di-isopropyl ether											
	2.205	2.024	2.072	2.021	1.938	1.896	1.970	2.132	1.752		2.001	6.67
34)	ethyl tert-butyl ether											
	2.110	1.865	1.972	1.952	1.907	1.841	1.916	2.056	1.681	1.697	1.900	7.25
35)	2-butanone											
	0.073	0.069	0.072	0.069	0.072	0.071				0.071	2.38
36)	1,1-dichloroethane											
	1.205	0.983	1.199	1.130	1.085	1.003	1.105	1.156	1.050		1.102	7.21
37)	chloroprene											
	0.935	0.892	0.844	0.821	0.740	0.838	0.895	0.686			0.832	9.97
38)	acrylonitrile											
	0.225	0.219	0.222	0.216	0.172	0.220	0.226	0.206			0.213	8.25
39)	vinyl acetate											
	0.099	0.090	0.097	0.098	0.100	0.105					0.098	5.22
40)	ethyl acetate											
	0.087	0.085	0.083	0.079	0.081	0.088					0.084	3.85
41)	2,2-dichloropropane											
	0.936	0.960	0.860	0.812	0.789	0.809	0.917	0.777			0.857	8.33
42)	cis-1,2-dichloroethene											
	0.747	0.682	0.746	0.696	0.673	0.652	0.687	0.714	0.671		0.696	4.75
43)	propionitrile											
	0.088	0.087	0.086	0.083	0.085	0.088	0.080				0.085	3.33
44)	methyl acrylate											
	0.095	0.096	0.097	0.094	0.097	0.098	0.080				0.094	6.65
45)	bromochloromethane											
	0.376	0.373	0.362	0.351	0.277	0.354	0.365	0.314			0.346	9.84
46)	tetrahydrofuran											
	0.211	0.220	0.182	0.176	0.177	0.195	0.244				0.201	12.72
47)	chloroform											
	1.193	1.060	1.195	1.109	1.071	1.071	1.085	1.143	1.055	1.059	1.104	4.92
48)	dibromofluoromethane (s)											
	0.514	0.517	0.511	0.516	0.511	0.519	0.512	0.516	0.512	0.516	0.514	0.56
49)	1,2-dichloroethane-d4 (s)											
	0.526	0.536	0.524	0.521	0.513	0.536	0.506	0.524	0.526	0.533	0.525	1.80
50)	freon 113											
	0.459	0.426	0.418	0.410	0.420	0.426					0.427	3.98
51)	methacrylonitrile											
	0.262	0.251	0.257	0.251	0.257	0.260	0.225				0.252	4.92
52)	1,1,1-trichloroethane											
	0.954	0.957	0.896	0.868	0.782	0.880	0.930	0.757			0.878	8.50
53)	tert-amyl methyl ether											

```
      1.992 1.839 1.874 1.821 1.775 1.772 1.758 1.922 1.638 1.687  1.808    5.86

 54) I   1,4-difluorobenzene   ----------------ISTD--------------------
 55)  epichlorohydrin
       0.042       0.041 0.041 0.040       0.041 0.042 0.034        0.040    7.14
 56)  n-butyl alcohol
       0.012       0.012 0.012 0.012 0.010 0.012 0.012 0.010        0.012    8.76
 57)  cyclohexane
       0.596       0.640 0.528 0.528       0.523 0.543              0.560    8.50
 58)  tert amyl alcohol
                                                                    0.000#  -1.00
 59)  carbon tetrachloride
       0.582       0.594 0.552 0.535 0.434 0.543 0.569 0.451        0.533   11.07
 60)  1,1-dichloropropene
       0.586       0.598 0.540 0.514 0.483 0.528 0.559 0.480        0.536    8.15

61)  hexane  **This compound fails IC QC criteria.**
       0.591       0.557 0.511 0.497 0.396 0.506 0.536 0.451        0.505   12.03

62)  benzene
       1.710 1.476 1.740 1.616 1.536 1.503 1.554 1.650 1.535 1.397  1.572    6.81
 63)  ISO-OCTANE
       1.631       1.523 1.373 1.352 1.165 1.358 1.434 1.214        1.381   10.99
 64)  heptane
       0.338       0.319 0.281 0.276 0.230 0.282 0.294 0.247        0.283   12.33
 65)  isopropyl acetate
       0.814 0.740 0.784 0.761 0.732 0.741 0.740 0.797 0.686        0.755    5.14
 66)  1,2-dichloroethane
       0.593       0.598 0.563 0.533 0.480 0.533 0.569 0.542        0.551    6.92
 67)  trichloroethene
       0.457       0.462 0.439 0.417 0.378 0.428 0.440 0.396        0.427    6.80
 68)  ethyl acrylate
       0.526       0.518 0.516 0.505 0.427 0.515 0.515 0.456        0.497    7.21
 69)  2-nitropropane
       0.090       0.089 0.092 0.092       0.097 0.089 0.083        0.090    4.54
 70)  2-chloroethyl vinyl ether
       0.079       0.074 0.083 0.089       0.100 0.081 0.064        0.082   13.78
 71)  methyl methacrylate
       0.107       0.103 0.107 0.105       0.107 0.106 0.089        0.104    6.14
 72)  1,2-dichloropropane
       0.482       0.485 0.459 0.438 0.378 0.450 0.464 0.434        0.449    7.56
 73)  methylcyclohexane
       0.747       0.706 0.660 0.650       0.661 0.678 0.554        0.665    8.91
 74)  tert-amyl ethyl ether
                                                                    0.000#  -1.00
 75)  dibromomethane
       0.317       0.316 0.305 0.296 0.258 0.296 0.311 0.296        0.299    6.35
 76)  bromodichloromethane
       0.619       0.608 0.596 0.583 0.495 0.595 0.603 0.541        0.580    7.18
 77)  cis-1,3-dichloropropene
       0.758 0.598 0.759 0.744 0.712 0.648 0.733 0.726 0.679 0.549  0.691   10.36
 78)  toluene-d8 (s)
       1.173 1.178 1.175 1.204 1.198 1.167 1.203 1.178 1.179 1.169  1.183    1.17
 79)  4-methyl-2-pentanone
       0.170       0.164 0.171 0.164       0.169 0.172 0.152        0.166    4.08
 80)  toluene
       1.054 0.839 1.071 1.010 0.975 0.897 0.996 1.005 0.923        0.974    7.72
 81)  3-methyl-1-butanol
       0.010       0.009 0.010 0.010 0.007 0.011 0.011 0.007        0.009#  14.93
 82)  trans-1,3-dichloropropene
```

Initial Calibration Summary

Job Number: JC30522 **Sample:** V4D3126-ICC3126
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4D71651.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

```
      0.701 0.540 0.689 0.680 0.659 0.534 0.671 0.678 0.608        0.640    9.95
 83)  ethyl methacrylate
      0.568       0.555 0.551 0.538 0.445 0.546 0.542 0.494        0.530    7.63
 84)  1,1,2-trichloroethane
      0.372 0.300 0.373 0.361 0.349 0.303 0.356 0.359 0.340        0.346    7.87
 85)  2-hexanone
      0.163       0.153 0.157 0.153       0.158 0.157 0.136        0.154    5.69

 86) I   chlorobenzene-d5      ----------------ISTD--------------------
 87)  tetrachloroethene
      0.544 0.432 0.550 0.492 0.477 0.428 0.483 0.511 0.438        0.484    9.45
 88)  1,3-dichloropropane
      0.744 0.602 0.740 0.694 0.673 0.629 0.670 0.706 0.680        0.682    6.84
 89)  butyl acetate
                                                                   0.000#  -1.00
 90)  dibromochloromethane
      0.552       0.544 0.547 0.541 0.442 0.546 0.545 0.477        0.524    7.85
 91)  1,2-dibromoethane
      0.512 0.409 0.512 0.488 0.475 0.404 0.475 0.496 0.456        0.470    8.52
 92)  n-Butyl Ether
      1.949       1.961 1.836 1.763       1.760 1.883 1.718        1.838    5.24
 93)  chlorobenzene
      1.334 1.065 1.353 1.249 1.209 1.132 1.204 1.281 1.193        1.224    7.54
 94)  1,1,1,2-tetrachloroethane
      0.506 0.388 0.497 0.486 0.478 0.418 0.471 0.498 0.441        0.465    8.74
 95)  ethylbenzene
      2.250 1.866 2.290 2.044 2.006 1.877 1.993 2.151 1.932 1.862  2.027    7.73
 96)  m,p-xylene
      0.851 0.693 0.866 0.779 0.759 0.722 0.750 0.819 0.745 0.612  0.760    9.96
 97)  o-xylene
      1.831 1.563 1.852 1.698 1.641 1.553 1.618 1.753 1.623 1.408  1.654    8.15
 98)  styrene
      1.456 1.104 1.434 1.359 1.329 1.184 1.315 1.399 1.295        1.319    8.69
 99)  butyl acrylate
                                                                   0.000#  -1.00
100)  bromoform
      0.376       0.366 0.384 0.388 0.270 0.395 0.377 0.316        0.359   12.04

101) I   1,4-dichlorobenzene-d ----------------ISTD--------------------
102)  isopropylbenzene
      4.133 3.223 4.221 3.967 3.777 3.474 3.837 4.039 3.592        3.807    8.59
103)  4-bromofluorobenzene (s)
      0.923 0.941 0.929 0.936 0.928 0.941 0.935 0.925 0.939 0.944  0.934    0.78
104)  bromobenzene
      1.150 0.872 1.173 1.096 1.061 0.992 1.079 1.091 1.026        1.060    8.49
105)  cyclohexanone
                                                                   0.000#  -1.00
106)  1,1,2,2-tetrachloroethane
      1.248       1.231 1.216 1.181 1.075 1.181 1.230 1.191        1.194    4.52
107)  trans-1,4-dichloro-2-butene
      0.268       0.263 0.268 0.263 0.206 0.270 0.264 0.230        0.254    9.13
108)  1,2,3-trichloropropane
      0.286       0.294 0.279 0.273 0.223 0.273 0.286 0.274        0.274    7.97
109)  n-propylbenzene
      4.895 3.988 4.925 4.570 4.381 4.222 4.456 4.710 4.275 4.004  4.443    7.52
110)  2-chlorotoluene
      1.034 0.792 1.048 0.973 0.951 0.908 0.959 0.998 0.910        0.952    8.13
111)  4-chlorotoluene
      3.051 2.613 3.095 2.861 2.737 2.648 2.745 2.920 2.783 2.537  2.799    6.55
112)  1,3,5-trimethylbenzene
```

Initial Calibration Summary

Job Number: JC30522 **Sample:** V4D3126-ICC3126
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4D71651.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

	3.530	2.882	3.559	3.346	3.228	3.002	3.218	3.395	3.095	2.832	3.209	7.94
113)	tert-butylbenzene											
	0.640		0.645	0.617	0.596	0.522	0.604	0.632	0.564		0.602	6.96
114)	pentachloroethane											
	0.692		0.679	0.695	0.681	0.533	0.684	0.698	0.595		0.657	9.15
115)	1,2,4-trimethylbenzene											
	3.655	2.893	3.644	3.428	3.340	3.017	3.302	3.531	3.264	2.905	3.298	8.57
116)	sec-butylbenzene											
	4.652	3.630	4.693	4.363	4.247	3.761	4.264	4.536	3.949		4.233	9.02
117)	1,3-dichlorobenzene											
	2.144	1.695	2.152	2.004	1.965	1.797	1.970	2.061	1.963	1.682	1.943	8.66
118)	p-isopropyltoluene											
	3.873	2.885	3.807	3.649	3.513	3.146	3.539	3.739	3.297	3.116	3.456	9.59
119)	1,4-dichlorobenzene											
	2.154	1.725	2.145	2.039	1.975	1.863	1.993	2.061	1.957	1.755	1.967	7.50
120)	1,2-dichlorobenzene											
	2.115	1.636	2.068	2.017	1.965	1.795	1.969	2.050	1.898		1.946	7.73
121)	n-butylbenzene											
	2.063		2.086	1.956	1.891	1.701	1.928	2.017	1.743		1.923	7.32
122)	1,2-dibromo-3-chloropropane											
	0.243		0.230	0.260	0.259		0.263	0.252	0.202		0.244	8.98
123)	1,3,5-trichlorobenzene											
	1.609		1.557	1.603	1.568	1.285	1.560	1.585	1.385		1.519	7.77
124)	1,2,4-trichlorobenzene											
	1.414		1.318	1.491	1.476	1.087	1.500	1.430	1.156		1.359	11.65
125)	hexachlorobutadiene											
	0.808		0.804	0.782	0.748	0.661	0.748	0.793	0.676		0.753	7.55
126)	naphthalene											
	2.909		2.695	3.204	3.226		3.263	3.060	2.347		2.958	11.39
127)	1,2,3-trichlorobenzene											
	1.250		1.144	1.318	1.302	0.889	1.318	1.261	1.011		1.186	13.47
128)	hexachloroethane											
	0.737		0.722	0.753	0.757	0.617	0.777	0.747	0.651		0.720	7.79
129)	Benzyl chloride											
	2.161	1.885	2.007	2.104	2.054	1.888	2.092	2.128	1.731		2.006	7.10

(#) = Out of Range ### Number of calibration levels exceeded format ###

M4D3126.M Wed Sep 14 11:22:53 2016 RPT1

Initial Calibration Verification

Job Number: JC30522 **Sample:** V4D3126-ICV3126
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4D71656.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\4D71656.D Vial: 17
Acq On : 13 Sep 2016 8:54 pm Operator: XimenaC
Sample : ICV3126-50 Inst : MS4D
Misc : MS6697,V4D3126,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4D3126.M (RTE Integrator)
Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um
Last Update : Wed Sep 14 11:09:30 2016
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	104	0.00	7.46
2		1,4-dioxane	0.144	0.127	11.8	91	0.00	11.69
3	M	tertiary butyl alcohol	1.468	1.390	5.3	95	0.00	7.59
4	I	pentafluorobenzene	1.000	1.000	0.0	103	0.00	10.01
5		freon 143a		----------NA----------				
6		chlorodifluoromethane	0.714	0.542	24.1	76	0.00	3.72
7		dichlorodifluoromethane	0.773	0.691	10.6	94	0.00	3.70
8		freon 142b		----------NA----------				
9		chloromethane	0.975	0.985	-1.0	105	0.01	4.06
10		vinyl chloride	0.914	0.849	7.1	95	0.00	4.33
11		acetaldehyde		----------NA----------				
12		bromomethane	0.584	0.617	-5.7	106	0.00	5.03
13		chloroethane	0.417	0.451	-8.2	110	0.00	5.23
14		trichlorofluoromethane	0.947	0.920	2.9	103	0.00	5.78
15		vinyl bromide		----------NA----------				
16		freon 141b		----------NA----------				
17		ethyl ether	0.306	0.314	-2.6	101	0.00	6.26
18		pentane	0.100	0.094	6.0	100	0.00	6.26
19		2-chloropropane	0.952	1.020	-7.1	109	0.00	6.44
20		acrolein	0.128	0.142	-10.9	114	0.00	6.47
21		1,1-dichloroethene	0.858	0.889	-3.6	103	0.00	6.70
22		acetone	0.055	0.051	7.3	99	0.00	6.72
23		allyl chloride	0.338	0.334	1.2	103	0.00	7.29
24		acetonitrile	0.038	0.032	15.8	87	0.00	7.18
25		iodomethane	1.144	1.153	-0.8	100	0.00	6.97
26		iso-butyl alcohol	0.022	0.019	13.6	91	0.00	10.28
27		carbon disulfide	1.980	2.050	-3.5	104	0.00	7.12
28		methylene chloride	0.662	0.656	0.9	100	0.00	7.48
29		1-chloropropane		----------NA----------				
30		methyl acetate	0.095	0.085	10.5	93	0.00	7.28
31		methyl tert butyl ether	1.645	1.589	3.4	94	0.00	7.94
32		trans-1,2-dichloroethene	0.878	0.875	0.3	99	0.00	7.94
33		di-isopropyl ether	2.001	1.726	13.7	88	0.00	8.65
34		ethyl tert-butyl ether	1.900	1.672	12.0	88	0.00	9.17
35		2-butanone	0.071	0.068	4.2	97	0.00	9.35
36	M	1,1-dichloroethane	1.102	1.111	-0.8	101	0.00	8.57
37		chloroprene	0.832	0.727	12.6	89	0.00	8.72
38		acrylonitrile	0.213	0.222	-4.2	103	0.00	7.83
39		vinyl acetate	0.098	0.086	12.2	92	0.00	8.59
40		ethyl acetate	0.084	0.074	11.9	92	0.00	9.42
41		2,2-dichloropropane	0.857	0.807	5.8	97	0.00	9.42

Initial Calibration Verification

Job Number: JC30522 **Sample:** V4D3126-ICV3126
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4D71656.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

42		cis-1,2-dichloroethene	0.696	0.681	2.2	101	0.00	9.39
43		propionitrile	0.085	0.085	0.0	101	0.00	9.42
44		methyl acrylate	0.094	0.096	-2.1	102	0.00	9.49
45		bromochloromethane	0.346	0.347	-0.3	99	0.00	9.71
46		tetrahydrofuran	0.201	0.181	10.0	102	0.00	9.77
47		chloroform	1.104	1.115	-1.0	103	0.00	9.78
48	S	dibromofluoromethane (s)	0.514	0.515	-0.2	103	0.00	9.99
49	S	1,2-dichloroethane-d4 (s)	0.525	0.508	3.2	100	0.00	10.44
50		freon 113	0.427	0.367	14.1	90	0.00	6.72
51		methacrylonitrile	0.252	0.246	2.4	99	0.00	9.64
52		1,1,1-trichloroethane	0.878	0.907	-3.3	104	0.00	10.09
53		tert-amyl methyl ether	1.808	1.536	15.0	87	0.00	10.65
54	I	1,4-difluorobenzene	1.000	1.000	0.0	103	0.00	10.96
55		epichlorohydrin	0.040	0.036	10.0	92	0.00	12.24
56		n-butyl alcohol	0.012	0.011	8.3	92	0.00	11.07
57	M	cyclohexane	0.560	0.538	3.9	105	0.00	10.20
58		tert amyl alcohol		----------NA----------				
59		carbon tetrachloride	0.533	0.535	-0.4	100	0.00	10.32
60		1,1-dichloropropene	0.536	0.533	0.6	102	0.00	10.29
61		hexane	0.505	0.338	33.1#	68	0.00	8.38
62	M	benzene	1.572	1.568	0.3	100	0.00	10.56
63		ISO-OCTANE	1.381	1.159	16.1	87	0.00	10.66
64		heptane	0.283	0.236	16.6	87	0.00	10.83
65		isopropyl acetate	0.755	0.660	12.6	89	0.00	10.52
66		1,2-dichloroethane	0.551	0.539	2.2	99	0.00	10.53
67		trichloroethene	0.427	0.430	-0.7	101	0.00	11.32
68		ethyl acrylate	0.497	0.500	-0.6	100	0.00	11.34
69		2-nitropropane	0.090	0.089	1.1	100	0.00	12.09
70		2-chloroethyl vinyl ether	0.082	0.076	7.3	95	0.00	12.15
71		methyl methacrylate	0.104	0.105	-1.0	101	0.00	11.63
72		1,2-dichloropropane	0.449	0.435	3.1	98	0.00	11.57
73		methylcyclohexane	0.665	0.566	14.9	89	-0.03	11.59
74	M	tert-amyl ethyl ether		----------NA----------				
75		dibromomethane	0.299	0.294	1.7	100	0.00	11.71
76		bromodichloromethane	0.580	0.563	2.9	97	0.00	11.87
77		cis-1,3-dichloropropene	0.691	0.718	-3.9	100	0.00	12.37
78	S	toluene-d8 (s)	1.183	1.193	-0.8	102	0.00	12.71
79		4-methyl-2-pentanone	0.166	0.166	0.0	100	0.00	12.50
80		toluene	0.974	0.983	-0.9	100	0.00	12.79
81		3-methyl-1-butanol	0.009	0.010#	-11.1	98	0.00	12.51
82		trans-1,3-dichloropropene	0.640	0.641	-0.2	97	0.00	12.97
83		ethyl methacrylate	0.530	0.522	1.5	98	0.00	13.01
84		1,1,2-trichloroethane	0.346	0.344	0.6	98	0.00	13.19
85		2-hexanone	0.154	0.153	0.6	100	0.00	13.41
86	I	chlorobenzene-d5	1.000	1.000	0.0	102	0.00	14.31
87		tetrachloroethene	0.484	0.494	-2.1	103	0.00	13.42
88		1,3-dichloropropane	0.682	0.666	2.3	98	0.00	13.39
89		butyl acetate		----------NA----------				
90		dibromochloromethane	0.524	0.528	-0.8	99	0.00	13.66
91		1,2-dibromoethane	0.470	0.467	0.6	98	0.00	13.82
92		n-Butyl Ether	1.838	2.155	-17.2	120	0.00	14.34
93		chlorobenzene	1.224	1.230	-0.5	101	0.00	14.35
94		1,1,1,2-tetrachloroethane	0.465	0.461	0.9	97	0.00	14.41
95		ethylbenzene	2.027	2.024	0.1	101	0.00	14.44
96		m,p-xylene	0.760	0.773	-1.7	101	0.00	14.55
97		o-xylene	1.654	1.662	-0.5	100	0.00	14.99
98		styrene	1.319	1.337	-1.4	100	0.00	14.99
99		butyl acrylate		----------NA----------				

Initial Calibration Verification

Job Number: JC30522 **Sample:** V4D3126-ICV3126
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4D71656.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

100		bromoform	0.359	0.370	-3.1	98	0.00	15.22
101	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	102	0.00	16.71
102		isopropylbenzene	3.807	3.822	-0.4	98	0.00	15.36
103	S	4-bromofluorobenzene (s)	0.934	0.925	1.0	101	0.00	15.54
104		bromobenzene	1.060	1.060	0.0	99	0.00	15.73
105		cyclohexanone		----------NA----------				
106		1,1,2,2-tetrachloroethane	1.194	1.159	2.9	97	0.00	15.62
107		trans-1,4-dichloro-2-bute	0.254	0.269	-5.9	102	0.00	15.67
108		1,2,3-trichloropropane	0.274	0.271	1.1	99	0.00	15.69
109		n-propylbenzene	4.443	4.627	-4.1	103	0.00	15.78
110		2-chlorotoluene	0.952	0.952	0.0	100	0.00	15.91
111		4-chlorotoluene	2.799	2.776	0.8	99	0.00	16.01
112		1,3,5-trimethylbenzene	3.209	3.267	-1.8	100	0.00	15.93
113		tert-butylbenzene	0.602	0.609	-1.2	101	0.00	16.29
114		pentachloroethane	0.657	0.681	-3.7	100	0.00	16.33
115		1,2,4-trimethylbenzene	3.298	3.387	-2.7	101	0.00	16.33
116		sec-butylbenzene	4.233	4.280	-1.1	100	0.00	16.50
117		1,3-dichlorobenzene	1.943	1.967	-1.2	100	0.00	16.65
118		p-isopropyltoluene	3.456	3.615	-4.6	101	0.00	16.62
119		1,4-dichlorobenzene	1.967	1.996	-1.5	100	0.00	16.74
120		1,2-dichlorobenzene	1.946	1.977	-1.6	100	0.00	17.11
121		n-butylbenzene	1.923	1.897	1.4	99	0.00	17.03
122		1,2-dibromo-3-chloropropa	0.244	0.251	-2.9	99	0.00	17.83
123	m	1,3,5-trichlorobenzene	1.519	1.692	-11.4	108	0.00	18.03
124		1,2,4-trichlorobenzene	1.359	1.477	-8.7	101	0.00	18.62
125		hexachlorobutadiene	0.753	0.772	-2.5	101	0.00	18.76
126		naphthalene	2.958	3.089	-4.4	99	0.00	18.88
127		1,2,3-trichlorobenzene	1.186	1.276	-7.6	99	0.00	19.12
128		hexachloroethane	0.720	0.752	-4.4	102	0.00	17.39
129		Benzyl chloride	2.006	1.695	15.5	82	0.00	16.84

(#) = Out of Range SPCC's out = 0 CCC's out = 0

4D71651.D M4D3126.M Wed Sep 14 11:24:45 2016 RPT1

Continuing Calibration Summary

Job Number: JC30522 **Sample:** V4D3199-CC3126
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4D73579.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\4D\v4d3199-3200\4D73579.D Vial: 2
Acq On : 4 Nov 2016 9:18 am Operator: XimenaC
Sample : cc3126-20 Inst : MS4D
Misc : MS8746,V4D3199,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4D3126.M (RTE Integrator)
Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um
Last Update : Fri Sep 23 08:47:12 2016
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	102	-0.01	7.44
2		1,4-dioxane	0.144	0.139	3.5	95	0.00	11.69
3	M	tertiary butyl alcohol	1.468	1.400	4.6	93	-0.01	7.58
4	I	pentafluorobenzene	1.000	1.000	0.0	91	0.00	10.00
5		freon 143a		----------NA----------				
6		chlorodifluoromethane	0.714	0.606	15.1	73	0.00	3.71
7		dichlorodifluoromethane	0.773	0.708	8.4	83	0.00	3.70
8		freon 142b		----------NA----------				
9		chloromethane	0.975	0.727	25.4#	67	0.00	4.04
10		vinyl chloride	0.914	0.747	18.3	73	0.00	4.32
11		acetaldehyde		----------NA----------				
12		bromomethane	0.584	0.562	3.8	83	0.00	5.02
13		chloroethane	0.417	0.421	-1.0	87	0.00	5.23
14		trichlorofluoromethane	0.947	0.882	6.9	85	0.00	5.77
15		vinyl bromide		----------NA----------				
16		freon 141b		----------NA----------				
17		ethyl ether	0.306	0.321	-4.9	92	0.00	6.25
18		pentane	0.100	0.106	-6.0	97	-0.01	6.25
19		2-chloropropane	0.952	0.857	10.0	79	0.00	6.43
20		acrolein	0.128	0.135	-5.5	94	-0.01	6.46
21		1,1-dichloroethene	0.858	0.818	4.7	82	-0.01	6.69
22		acetone	0.055	0.053	3.6	87	-0.02	6.71
23		allyl chloride	0.338	0.330	2.4	86	-0.01	7.28
24		acetonitrile	0.038	0.040	-5.3	92	-0.01	7.16
25		iodomethane	1.144	1.038	9.3	79	-0.01	6.96
26		iso-butyl alcohol	0.022	0.022	0.0	88	0.00	10.27
27		carbon disulfide	1.980	1.765	10.9	77	-0.01	7.11
28		methylene chloride	0.662	0.688	-3.9	92	-0.01	7.47
29		1-chloropropane		----------NA----------				
30		methyl acetate	0.095	0.101	-6.3	95	-0.02	7.27
31		methyl tert butyl ether	1.645	1.811	-10.1	91	-0.01	7.92
32		trans-1,2-dichloroethene	0.878	0.891	-1.5	87	0.00	7.93
33		di-isopropyl ether	2.001	2.002	-0.0	86	-0.01	8.64
34		ethyl tert-butyl ether	1.900	1.972	-3.8	87	-0.01	9.16
35		2-butanone	0.071	0.074	-4.2	95	0.00	9.34
36	M	1,1-dichloroethane	1.102	1.130	-2.5	89	-0.01	8.56
37		chloroprene	0.832	0.855	-2.8	87	-0.01	8.71
38		acrylonitrile	0.213	0.231	-8.5	93	-0.02	7.81
39		vinyl acetate	0.098	0.108	-10.2	93	0.00	8.58
40		ethyl acetate	0.084	0.086	-2.4	89	-0.01	9.41
41		2,2-dichloropropane	0.857	0.929	-8.4	92	0.00	9.41

Continuing Calibration Summary

Job Number: JC30522 **Sample:** V4D3199-CC3126
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4D73579.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

42		cis-1,2-dichloroethene	0.696	0.707	-1.6	90	0.00	9.38
43		propionitrile	0.085	0.091	-7.1	95	-0.01	9.41
44		methyl acrylate	0.094	0.100	-6.4	93	0.00	9.48
45		bromochloromethane	0.346	0.361	-4.3	90	-0.01	9.70
46		tetrahydrofuran	0.201	0.187	7.0	88	-0.01	9.76
47		chloroform	1.104	1.159	-5.0	92	0.00	9.78
48	S	dibromofluoromethane (s)	0.514	0.537	-4.5	95	0.00	9.98
49	S	1,2-dichloroethane-d4 (s)	0.525	0.538	-2.5	94	0.00	10.43
50		freon 113	0.427	0.430	-0.7	92	0.00	6.72
51		methacrylonitrile	0.252	0.270	-7.1	95	-0.01	9.63
52		1,1,1-trichloroethane	0.878	0.906	-3.2	89	0.00	10.08
53		tert-amyl methyl ether	1.808	1.908	-5.5	90	0.00	10.64
54	I	1,4-difluorobenzene	1.000	1.000	0.0	94	0.00	10.95
55		epichlorohydrin	0.040	0.042	-5.0	96	0.00	12.24
56		n-butyl alcohol	0.012	0.012	0.0	94	-0.01	11.06
57	M	cyclohexane	0.560	0.452	19.3	78	-0.01	10.19
58		tert amyl alcohol		----------NA----------				
59		carbon tetrachloride	0.533	0.549	-3.0	91	-0.01	10.31
60		1,1-dichloropropene	0.536	0.527	1.7	89	0.00	10.28
61		hexane	0.505	0.494	2.2	87	-0.01	8.37
62	M	benzene	1.572	1.592	-1.3	91	0.00	10.55
63		ISO-OCTANE	1.381	1.310	5.1	86	0.00	10.64
64		heptane	0.283	0.280	1.1	90	0.00	10.83
65		isopropyl acetate	0.755	0.728	3.6	86	0.00	10.51
66		1,2-dichloroethane	0.551	0.547	0.7	90	-0.01	10.52
67		trichloroethene	0.427	0.434	-1.6	93	0.00	11.31
68		ethyl acrylate	0.497	0.503	-1.2	92	-0.01	11.33
69		2-nitropropane	0.090	0.094	-4.4	100	0.00	12.08
70		2-chloroethyl vinyl ether	0.082	0.291	-254.9#	337#	0.00	12.15
71		methyl methacrylate	0.104	0.102	1.9	91	0.00	11.61
72		1,2-dichloropropane	0.449	0.453	-0.9	92	0.00	11.57
73		methylcyclohexane	0.665	0.629	5.4	87	-0.03	11.59
74	M	tert-amyl ethyl ether		----------NA----------				
75		dibromomethane	0.299	0.313	-4.7	95	-0.01	11.70
76		bromodichloromethane	0.580	0.593	-2.2	93	-0.01	11.86
77		cis-1,3-dichloropropene	0.706	0.730	-3.4	95	0.00	12.36
78	S	toluene-d8 (s)	1.183	1.172	0.9	94	0.00	12.70
79		4-methyl-2-pentanone	0.166	0.177	-6.6	97	0.00	12.50
80		toluene	0.974	0.997	-2.4	93	0.00	12.78
81		3-methyl-1-butanol	0.009	0.011	-22.2#	100	-0.01	12.50
82		trans-1,3-dichloropropene	0.640	0.655	-2.3	91	0.00	12.96
83		ethyl methacrylate	0.530	0.552	-4.2	96	0.00	13.01
84		1,1,2-trichloroethane	0.346	0.375	-8.4	98	0.00	13.18
85		2-hexanone	0.154	0.162	-5.2	98	0.00	13.41
86	I	chlorobenzene-d5	1.000	1.000	0.0	94	0.00	14.31
87		tetrachloroethene	0.484	0.478	1.2	88	0.00	13.41
88		1,3-dichloropropane	0.682	0.725	-6.3	97	0.00	13.38
89		butyl acetate		----------NA----------				
90		dibromochloromethane	0.524	0.540	-3.1	94	0.00	13.65
91		1,2-dibromoethane	0.470	0.498	-6.0	95	-0.01	13.81
92		n-Butyl Ether	1.838	1.834	0.2	92	0.00	14.33
93		chlorobenzene	1.224	1.280	-4.6	94	0.00	14.34
94		1,1,1,2-tetrachloroethane	0.465	0.494	-6.2	94	0.00	14.40
95		ethylbenzene	2.027	2.151	-6.1	94	0.00	14.42
96		m,p-xylene	0.760	0.806	-6.1	93	0.00	14.55
97		o-xylene	1.654	1.757	-6.2	95	0.00	14.98
98		styrene	1.319	1.372	-4.0	93	0.00	14.99
99		butyl acrylate		----------NA----------				

Continuing Calibration Summary

Job Number: JC30522 **Sample:** V4D3199-CC3126
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4D73579.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

100		bromoform	0.359	0.371	-3.3	93	0.00	15.22
101	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	90	0.00	16.71
102		isopropylbenzene	3.807	4.103	-7.8	91	0.00	15.35
103	S	4-bromofluorobenzene (s)	0.934	0.981	-5.0	95	0.00	15.53
104		bromobenzene	1.060	1.117	-5.4	92	0.00	15.73
105		cyclohexanone		----------NA----------				
106		1,1,2,2-tetrachloroethane	1.194	1.347	-12.8	98	0.00	15.61
107		trans-1,4-dichloro-2-bute	0.254	0.218	14.2	74	0.00	15.66
108		1,2,3-trichloropropane	0.274	0.305	-11.3	96	0.00	15.69
109		n-propylbenzene	4.443	4.976	-12.0	95	0.00	15.77
110		2-chlorotoluene	0.952	1.021	-7.2	92	0.00	15.90
111		4-chlorotoluene	2.799	3.118	-11.4	96	0.00	16.00
112		1,3,5-trimethylbenzene	3.209	3.502	-9.1	92	0.00	15.93
113		tert-butylbenzene	0.602	0.617	-2.5	88	0.00	16.28
114		pentachloroethane	0.657	0.723	-10.0	93	0.00	16.33
115		1,2,4-trimethylbenzene	3.298	3.619	-9.7	92	0.00	16.32
116		sec-butylbenzene	4.233	4.550	-7.5	90	0.00	16.50
117		1,3-dichlorobenzene	1.943	2.096	-7.9	91	0.00	16.65
118		p-isopropyltoluene	3.456	3.746	-8.4	90	0.00	16.62
119		1,4-dichlorobenzene	1.967	2.097	-6.6	91	0.00	16.73
120		1,2-dichlorobenzene	1.946	2.047	-5.2	89	0.00	17.11
121		n-butylbenzene	1.923	2.070	-7.6	92	0.00	17.02
122		1,2-dibromo-3-chloropropa	0.244	0.218	10.7	77	0.00	17.83
123	m	1,3,5-trichlorobenzene	1.519	2.513	-65.4#	142	0.00	18.03
124		1,2,4-trichlorobenzene	1.359	1.289	5.2	81	0.00	18.61
125		hexachlorobutadiene	0.753	0.704	6.5	80	0.00	18.76
126		naphthalene	2.958	2.474	16.4	72	0.00	18.88
127		1,2,3-trichlorobenzene	1.186	1.045	11.9	74	0.00	19.11
128		hexachloroethane	0.720	0.796	-10.6	95	0.00	17.38
129		Benzyl chloride	2.006	2.357	-17.5	99	0.00	16.84

(#) = Out of Range SPCC's out = 0 CCC's out = 0
4D71650.D M4D3126.M Mon Nov 07 14:35:16 2016

Continuing Calibration Summary

Job Number: JC30522 **Sample:** V4D3199-CC3126
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4D73580.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Sensitivity check for Chloromethane

Data File : C:\msdchem\1\data\4D\v4d3199-3200\4D73580.D Vial: 3
Acq On : 4 Nov 2016 9:55 am Operator: XimenaC
Sample : cc3126-1 Inst : MS4D
Misc : MS8746,V4D3199,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4D3126.M (RTE Integrator)
Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um
Last Update : Fri Sep 23 08:47:12 2016
Response via : Multiple Level Calibration

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	97	0.00	7.45
2		1,4-dioxane		----------	NA	----------		
3	M	tertiary butyl alcohol		----------	NA	----------		
4	I	pentafluorobenzene	1.000	1.000	0.0	91	0.00	10.00
5		freon 143a		----------	NA	----------		
6		chlorodifluoromethane		----------	NA	----------		
7		dichlorodifluoromethane		----------	NA	----------		
8		freon 142b		----------	NA	----------		
9		chloromethane	0.975	0.954	2.2	94	-0.01	4.03
10		vinyl chloride		----------	NA	----------		
11		acetaldehyde		----------	NA	----------		
12		bromomethane		----------	NA	----------		
13		chloroethane		----------	NA	----------		
14		trichlorofluoromethane		----------	NA	----------		
15		vinyl bromide		----------	NA	----------		
16		freon 141b		----------	NA	----------		
17		ethyl ether		----------	NA	----------		
18		pentane		----------	NA	----------		
19		2-chloropropane		----------	NA	----------		
20		acrolein		----------	NA	----------		
21		1,1-dichloroethene		----------	NA	----------		
22		acetone		----------	NA	----------		
23		allyl chloride		----------	NA	----------		
24		acetonitrile		----------	NA	----------		
25		iodomethane		----------	NA	----------		
26		iso-butyl alcohol		----------	NA	----------		
27		carbon disulfide		----------	NA	----------		
28		methylene chloride		----------	NA	----------		
29		1-chloropropane		----------	NA	----------		
30		methyl acetate		----------	NA	----------		
31		methyl tert butyl ether		----------	NA	----------		
32		trans-1,2-dichloroethene		----------	NA	----------		
33		di-isopropyl ether		----------	NA	----------		
34		ethyl tert-butyl ether		----------	NA	----------		
35		2-butanone		----------	NA	----------		
36	M	1,1-dichloroethane		----------	NA	----------		
37		chloroprene		----------	NA	----------		
38		acrylonitrile		----------	NA	----------		
39		vinyl acetate		----------	NA	----------		
40		ethyl acetate		----------	NA	----------		
41		2,2-dichloropropane		----------	NA	----------		
42		cis-1,2-dichloroethene		----------	NA	----------		
43		propionitrile		----------	NA	----------		
44		methyl acrylate		----------	NA	----------		

Continuing Calibration Summary

Job Number: JC30522 **Sample:** V4D3199-CC3126
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4D73580.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

45		bromochloromethane		----------NA----------					
46		tetrahydrofuran		----------NA----------					
47		chloroform		----------NA----------					
48	S	dibromofluoromethane (s)	0.514	0.534	-3.9	93	0.00	9.98	
49	S	1,2-dichloroethane-d4 (s)	0.525	0.538	-2.5	91	0.00	10.43	
50		freon 113		----------NA----------					
51		methacrylonitrile		----------NA----------					
52		1,1,1-trichloroethane		----------NA----------					
53		tert-amyl methyl ether		----------NA----------					
54	I	1,4-difluorobenzene	1.000	1.000	0.0	94	0.00	10.95	
55		epichlorohydrin		----------NA----------					
56		n-butyl alcohol		----------NA----------					
57	M	cyclohexane		----------NA----------					
58		tert amyl alcohol		----------NA----------					
59		carbon tetrachloride		----------NA----------					
60		1,1-dichloropropene		----------NA----------					
61		hexane		----------NA----------					
62	M	benzene		----------NA----------					
63		ISO-OCTANE		----------NA----------					
64		heptane		----------NA----------					
65		isopropyl acetate		----------NA----------					
66		1,2-dichloroethane		----------NA----------					
67		trichloroethene		----------NA----------					
68		ethyl acrylate		----------NA----------					
69		2-nitropropane		----------NA----------					
70		2-chloroethyl vinyl ether		----------NA----------					
71		methyl methacrylate		----------NA----------					
72		1,2-dichloropropane		----------NA----------					
73		methylcyclohexane		----------NA----------					
74	M	tert-amyl ethyl ether		----------NA----------					
75		dibromomethane		----------NA----------					
76		bromodichloromethane		----------NA----------					
77		cis-1,3-dichloropropene		----------NA----------					
78	S	toluene-d8 (s)	1.183	1.176	0.6	94	0.00	12.70	
79		4-methyl-2-pentanone		----------NA----------					
80		toluene		----------NA----------					
81		3-methyl-1-butanol		----------NA----------					
82		trans-1,3-dichloropropene		----------NA----------					
83		ethyl methacrylate		----------NA----------					
84		1,1,2-trichloroethane		----------NA----------					
85		2-hexanone		----------NA----------					
86	I	chlorobenzene-d5	1.000	1.000	0.0	94	0.00	14.31	
87		tetrachloroethene		----------NA----------					
88		1,3-dichloropropane		----------NA----------					
89		butyl acetate		----------NA----------					
90		dibromochloromethane		----------NA----------					
91		1,2-dibromoethane		----------NA----------					
92		n-Butyl Ether		----------NA----------					
93		chlorobenzene		----------NA----------					
94		1,1,1,2-tetrachloroethane		----------NA----------					
95		ethylbenzene		----------NA----------					
96		m,p-xylene		----------NA----------					
97		o-xylene		----------NA----------					
98		styrene		----------NA----------					
99		butyl acrylate		----------NA----------					
100		bromoform		----------NA----------					
101	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	89	0.00	16.71	

Continuing Calibration Summary

Job Number: JC30522 **Sample:** V4D3199-CC3126
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4D73580.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

102		isopropylbenzene			----------NA----------			
103	S	4-bromofluorobenzene (s)	0.934	1.005	-7.6	95	0.00	15.53
104		bromobenzene			----------NA----------			
105		cyclohexanone			----------NA----------			
106		1,1,2,2-tetrachloroethane			----------NA----------			
107		trans-1,4-dichloro-2-bute			----------NA----------			
108		1,2,3-trichloropropane			----------NA----------			
109		n-propylbenzene			----------NA----------			
110		2-chlorotoluene			----------NA----------			
111		4-chlorotoluene			----------NA----------			
112		1,3,5-trimethylbenzene			----------NA----------			
113		tert-butylbenzene			----------NA----------			
114		pentachloroethane			----------NA----------			
115		1,2,4-trimethylbenzene			----------NA----------			
116		sec-butylbenzene			----------NA----------			
117		1,3-dichlorobenzene			----------NA----------			
118		p-isopropyltoluene			----------NA----------			
119		1,4-dichlorobenzene			----------NA----------			
120		1,2-dichlorobenzene			----------NA----------			
121		n-butylbenzene			----------NA----------			
122		1,2-dibromo-3-chloropropa			----------NA----------			
123	m	1,3,5-trichlorobenzene			----------NA----------			
124		1,2,4-trichlorobenzene			----------NA----------			
125		hexachlorobutadiene			----------NA----------			
126		naphthalene			----------NA----------			
127		1,2,3-trichlorobenzene			----------NA----------			
128		hexachloroethane			----------NA----------			
129		Benzyl chloride			----------NA----------			

(#) = Out of Range SPCC's out = 0 CCC's out = 0
4D71646.D M4D3126.M Mon Nov 07 14:36:11 2016

Continuing Calibration Summary

Job Number: JC30522 **Sample:** V4D3199-CC3126
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4D73600.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\4D\v4d3199-3200\4D73600.D Vial: 23
Acq On : 4 Nov 2016 7:11 pm Operator: XimenaC
Sample : cc3126-50 Inst : MS4D
Misc : MS8844,V4D3199,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4D3126.M (RTE Integrator)
Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um
Last Update : Fri Sep 23 08:47:12 2016
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	88	0.00	7.45
2		1,4-dioxane	0.144	0.152	-5.6	93	0.00	11.69
3	M	tertiary butyl alcohol	1.468	1.442	1.8	83	0.00	7.59
4	I	pentafluorobenzene	1.000	1.000	0.0	86	0.00	10.01
5		freon 143a		----------NA----------				
6		chlorodifluoromethane	0.714	0.623	12.7	73	0.00	3.72
7		dichlorodifluoromethane	0.773	0.830	-7.4	94	0.01	3.71
8		freon 142b		----------NA----------				
9		chloromethane	0.975	0.906	7.1	81	0.01	4.06
10		vinyl chloride	0.914	0.924	-1.1	86	0.01	4.33
11		acetaldehyde		----------NA----------				
12		bromomethane	0.584	0.698	-19.5	100	0.00	5.03
13		chloroethane	0.417	0.497	-19.2	101	0.00	5.23
14		trichlorofluoromethane	0.947	1.030	-8.8	96	0.00	5.78
15		vinyl bromide		----------NA----------				
16		freon 141b		----------NA----------				
17		ethyl ether	0.306	0.360	-17.6	96	0.00	6.26
18		pentane	0.100	0.103	-3.0	91	0.00	6.26
19		2-chloropropane	0.952	0.962	-1.1	86	0.00	6.44
20		acrolein	0.128	0.131	-2.3	87	0.00	6.46
21		1,1-dichloroethene	0.858	0.968	-12.8	93	0.00	6.70
22		acetone	0.055	0.053	3.6	87	0.00	6.72
23		allyl chloride	0.338	0.366	-8.3	94	0.00	7.29
24		acetonitrile	0.038	0.036	5.3	80	0.00	7.17
25		iodomethane	1.144	1.302	-13.8	94	0.00	6.97
26		iso-butyl alcohol	0.022	0.020	9.1	82	0.00	10.27
27		carbon disulfide	1.980	2.332	-17.8	99	0.00	7.12
28		methylene chloride	0.662	0.732	-10.6	93	0.00	7.48
29		1-chloropropane		----------NA----------				
30		methyl acetate	0.095	0.096	-1.1	87	0.00	7.28
31		methyl tert butyl ether	1.645	1.893	-15.1	93	0.00	7.94
32		trans-1,2-dichloroethene	0.878	0.991	-12.9	94	0.00	7.94
33		di-isopropyl ether	2.001	1.934	3.3	82	0.00	8.65
34		ethyl tert-butyl ether	1.900	1.942	-2.2	85	0.00	9.17
35		2-butanone	0.071	0.075	-5.6	90	0.00	9.35
36	M	1,1-dichloroethane	1.102	1.210	-9.8	92	0.00	8.57
37		chloroprene	0.832	0.879	-5.6	89	0.00	8.72
38		acrylonitrile	0.213	0.223	-4.7	86	0.00	7.82
39		vinyl acetate	0.098	0.103	-5.1	91	0.00	8.59
40		ethyl acetate	0.084	0.077	8.3	80	0.00	9.42
41		2,2-dichloropropane	0.857	0.929	-8.4	93	0.00	9.41

Continuing Calibration Summary

Job Number: JC30522 **Sample:** V4D3199-CC3126
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4D73600.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

42		cis-1,2-dichloroethene	0.696	0.759	-9.1	94	0.00	9.38
43		propionitrile	0.085	0.086	-1.2	85	0.00	9.41
44		methyl acrylate	0.094	0.102	-8.5	90	0.00	9.49
45		bromochloromethane	0.346	0.387	-11.8	92	0.00	9.70
46		tetrahydrofuran	0.201	0.172	14.4	81	0.00	9.77
47		chloroform	1.104	1.202	-8.9	93	0.00	9.78
48	S	dibromofluoromethane (s)	0.514	0.530	-3.1	88	0.00	9.99
49	S	1,2-dichloroethane-d4 (s)	0.525	0.519	1.1	85	0.00	10.44
50		freon 113	0.427	0.455	-6.6	93	0.00	6.72
51		methacrylonitrile	0.252	0.263	-4.4	88	0.00	9.64
52		1,1,1-trichloroethane	0.878	0.976	-11.2	94	0.00	10.09
53		tert-amyl methyl ether	1.808	1.887	-4.4	89	0.00	10.64
54	I	1,4-difluorobenzene	1.000	1.000	0.0	89	0.00	10.95
55		epichlorohydrin	0.040	0.038	5.0	84	0.00	12.24
56		n-butyl alcohol	0.012	0.012	0.0	87	0.00	11.07
57	M	cyclohexane	0.560	0.550	1.8	93	0.00	10.20
58		tert amyl alcohol		----------NA----------				
59		carbon tetrachloride	0.533	0.593	-11.3	96	0.00	10.31
60		1,1-dichloropropene	0.536	0.568	-6.0	94	0.00	10.28
61		hexane	0.505	0.499	1.2	87	0.00	8.37
62	M	benzene	1.572	1.696	-7.9	94	0.00	10.55
63		ISO-OCTANE	1.381	1.370	0.8	89	0.00	10.65
64		heptane	0.283	0.283	0.0	90	0.00	10.83
65		isopropyl acetate	0.755	0.664	12.1	78	0.00	10.52
66		1,2-dichloroethane	0.551	0.559	-1.5	89	0.00	10.53
67		trichloroethene	0.427	0.456	-6.8	93	0.00	11.31
68		ethyl acrylate	0.497	0.485	2.4	84	0.00	11.34
69		2-nitropropane	0.090	0.091	-1.1	88	0.00	12.09
70		2-chloroethyl vinyl ether	0.082	0.270	-229.3#	290#	0.00	12.15
71		methyl methacrylate	0.104	0.106	-1.9	88	0.00	11.62
72		1,2-dichloropropane	0.449	0.462	-2.9	90	0.00	11.57
73		methylcyclohexane	0.665	0.660	0.8	89	-0.03	11.59
74	M	tert-amyl ethyl ether		----------NA----------				
75		dibromomethane	0.299	0.315	-5.4	92	0.00	11.71
76		bromodichloromethane	0.580	0.618	-6.6	92	0.00	11.86
77		cis-1,3-dichloropropene	0.706	0.737	-4.4	88	0.00	12.37
78	S	toluene-d8 (s)	1.183	1.175	0.7	87	0.00	12.71
79		4-methyl-2-pentanone	0.166	0.170	-2.4	89	0.00	12.50
80		toluene	0.974	1.053	-8.1	93	0.00	12.78
81		3-methyl-1-butanol	0.009	0.011	-22.2#	94	0.00	12.51
82		trans-1,3-dichloropropene	0.640	0.663	-3.6	87	0.00	12.96
83		ethyl methacrylate	0.530	0.556	-4.9	90	0.00	13.01
84		1,1,2-trichloroethane	0.346	0.366	-5.8	90	0.00	13.18
85		2-hexanone	0.154	0.156	-1.3	88	0.00	13.41
86	I	chlorobenzene-d5	1.000	1.000	0.0	89	0.00	14.31
87		tetrachloroethene	0.484	0.517	-6.8	93	0.00	13.41
88		1,3-dichloropropane	0.682	0.705	-3.4	90	0.00	13.38
89		butyl acetate		----------NA----------				
90		dibromochloromethane	0.524	0.558	-6.5	91	0.00	13.65
91		1,2-dibromoethane	0.470	0.499	-6.2	91	0.00	13.82
92		n-Butyl Ether	1.838	1.848	-0.5	89	0.00	14.33
93		chlorobenzene	1.224	1.311	-7.1	93	0.00	14.34
94		1,1,1,2-tetrachloroethane	0.465	0.502	-8.0	92	0.00	14.40
95		ethylbenzene	2.027	2.181	-7.6	95	0.00	14.43
96		m,p-xylene	0.760	0.820	-7.9	94	0.00	14.55
97		o-xylene	1.654	1.753	-6.0	92	0.00	14.98
98		styrene	1.319	1.393	-5.6	91	0.00	14.99
99		butyl acrylate		----------NA----------				

Continuing Calibration Summary

Job Number: JC30522 **Sample:** V4D3199-CC3126
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4D73600.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

100		bromoform	0.359	0.378	-5.3	87	0.00	15.22
101	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	88	0.00	16.71
102		isopropylbenzene	3.807	4.085	-7.3	91	0.00	15.35
103	S	4-bromofluorobenzene (s)	0.934	0.951	-1.8	89	0.00	15.53
104		bromobenzene	1.060	1.119	-5.6	90	0.00	15.73
105		cyclohexanone		----------NA----------				
106		1,1,2,2-tetrachloroethane	1.194	1.230	-3.0	89	0.00	15.62
107		trans-1,4-dichloro-2-bute	0.254	0.130	48.8#	43#	0.00	15.66
108		1,2,3-trichloropropane	0.274	0.282	-2.9	89	0.00	15.69
109		n-propylbenzene	4.443	4.882	-9.9	94	0.00	15.77
110		2-chlorotoluene	0.952	1.041	-9.3	94	0.00	15.90
111		4-chlorotoluene	2.799	3.047	-8.9	94	0.00	16.00
112		1,3,5-trimethylbenzene	3.209	3.486	-8.6	92	0.00	15.93
113		tert-butylbenzene	0.602	0.638	-6.0	91	0.00	16.29
114		pentachloroethane	0.657	0.746	-13.5	94	0.00	16.33
115		1,2,4-trimethylbenzene	3.298	3.608	-9.4	93	0.00	16.32
116		sec-butylbenzene	4.233	4.561	-7.7	92	0.00	16.50
117		1,3-dichlorobenzene	1.943	2.098	-8.0	92	0.00	16.65
118		p-isopropyltoluene	3.456	3.749	-8.5	90	0.00	16.62
119		1,4-dichlorobenzene	1.967	2.103	-6.9	91	0.00	16.73
120		1,2-dichlorobenzene	1.946	2.036	-4.6	89	0.00	17.11
121		n-butylbenzene	1.923	2.074	-7.9	93	0.00	17.02
122		1,2-dibromo-3-chloropropa	0.244	0.222	9.0	75	0.00	17.82
123	m	1,3,5-trichlorobenzene	1.519	2.647	-74.3#	145	0.00	18.03
124		1,2,4-trichlorobenzene	1.359	1.407	-3.5	83	0.00	18.61
125		hexachlorobutadiene	0.753	0.756	-0.4	85	0.00	18.76
126		naphthalene	2.958	2.616	11.6	72	0.00	18.88
127		1,2,3-trichlorobenzene	1.186	1.131	4.6	75	0.00	19.11
128		hexachloroethane	0.720	0.804	-11.7	94	0.00	17.38
129		Benzyl chloride	2.006	2.028	-1.1	85	0.00	16.84

(#) = Out of Range SPCC's out = 0 CCC's out = 0
4D71651.D M4D3126.M Mon Nov 07 14:45:24 2016

6.9.8

6

Continuing Calibration Summary

Job Number: JC30522 **Sample:** V4D3202-CC3126
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4D73688.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\4D\v4d3201-3203\4D73688.D Vial: 30
Acq On : 8 Nov 2016 9:06 am Operator: XimenaC
Sample : cc3126-20 Inst : MS4D
Misc : MS9058,V4D3202,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4D3126.M (RTE Integrator)
Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um
Last Update : Fri Sep 23 08:47:12 2016
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	100	0.00	7.45
2		1,4-dioxane	0.144	0.152	-5.6	102	0.00	11.69
3	M	tertiary butyl alcohol	1.468	1.455	0.9	94	0.00	7.58
4	I	pentafluorobenzene	1.000	1.000	0.0	105	0.00	10.01
5		freon 143a		----------NA----------				
6		chlorodifluoromethane	0.714	0.635	11.1	87	-0.01	3.70
7		dichlorodifluoromethane	0.773	0.869	-12.4	117	0.00	3.70
8		freon 142b		----------NA----------				
9		chloromethane	0.975	0.813	16.6	87	0.00	4.05
10		vinyl chloride	0.914	0.840	8.1	94	0.00	4.32
11		acetaldehyde		----------NA----------				
12		bromomethane	0.584	0.664	-13.7	113	0.00	5.02
13		chloroethane	0.417	0.454	-8.9	108	0.00	5.23
14		trichlorofluoromethane	0.947	1.072	-13.2	118	-0.01	5.76
15		vinyl bromide		----------NA----------				
16		freon 141b		----------NA----------				
17		ethyl ether	0.306	0.312	-2.0	103	-0.01	6.25
18		pentane	0.100	0.110	-10.0	116	-0.01	6.25
19		2-chloropropane	0.952	0.940	1.3	100	0.00	6.43
20		acrolein	0.128	0.119	7.0	95	-0.01	6.46
21		1,1-dichloroethene	0.858	0.943	-9.9	109	-0.01	6.69
22		acetone	0.055	0.047	14.5	89	-0.02	6.71
23		allyl chloride	0.338	0.354	-4.7	106	-0.01	7.28
24		acetonitrile	0.038	0.034	10.5	89	-0.01	7.16
25		iodomethane	1.144	1.219	-6.6	107	-0.01	6.96
26		iso-butyl alcohol	0.022	0.020	9.1	90	0.00	10.27
27		carbon disulfide	1.980	2.169	-9.5	108	0.00	7.11
28		methylene chloride	0.662	0.695	-5.0	107	0.00	7.47
29		1-chloropropane		----------NA----------				
30		methyl acetate	0.095	0.091	4.2	98	-0.01	7.27
31		methyl tert butyl ether	1.645	1.840	-11.9	107	0.00	7.93
32		trans-1,2-dichloroethene	0.878	0.945	-7.6	106	0.00	7.94
33		di-isopropyl ether	2.001	1.847	7.7	91	0.00	8.65
34		ethyl tert-butyl ether	1.900	2.172	-14.3	111	0.00	9.16
35		2-butanone	0.071	0.068	4.2	100	0.00	9.34
36	M	1,1-dichloroethane	1.102	1.136	-3.1	103	0.00	8.56
37		chloroprene	0.832	0.881	-5.9	103	-0.01	8.71
38		acrylonitrile	0.213	0.203	4.7	94	-0.01	7.82
39		vinyl acetate	0.098	0.092	6.1	92	0.00	8.59
40		ethyl acetate	0.084	0.073	13.1	88	0.00	9.41
41		2,2-dichloropropane	0.857	1.011	-18.0	116	0.00	9.41

Continuing Calibration Summary

Job Number: JC30522 **Sample:** V4D3202-CC3126
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4D73688.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

42		cis-1,2-dichloroethene	0.696	0.723	-3.9	106	0.00	9.38
43		propionitrile	0.085	0.080	5.9	96	-0.01	9.41
44		methyl acrylate	0.094	0.091	3.2	98	0.00	9.48
45		bromochloromethane	0.346	0.366	-5.8	105	0.00	9.70
46		tetrahydrofuran	0.201	0.166	17.4	89	0.00	9.77
47		chloroform	1.104	1.174	-6.3	108	0.00	9.78
48	S	dibromofluoromethane (s)	0.514	0.515	-0.2	105	0.00	9.98
49	S	1,2-dichloroethane-d4 (s)	0.525	0.541	-3.0	108	0.00	10.44
50		freon 113	0.427	0.496	-16.2	122	0.00	6.71
51		methacrylonitrile	0.252	0.242	4.0	97	0.00	9.64
52		1,1,1-trichloroethane	0.878	1.003	-14.2	113	0.00	10.08
53		tert-amyl methyl ether	1.808	1.852	-2.4	101	0.00	10.64
54	I	1,4-difluorobenzene	1.000	1.000	0.0	105	0.00	10.95
55		epichlorohydrin	0.040	0.039	2.5	98	0.00	12.24
56		n-butyl alcohol	0.012	0.011	8.3	92	-0.01	11.06
57	M	cyclohexane	0.560	0.551	1.6	106	0.00	10.19
58		tert amyl alcohol		----------NA----------				
59		carbon tetrachloride	0.533	0.641	-20.3#	118	-0.01	10.31
60		1,1-dichloropropene	0.536	0.565	-5.4	106	0.00	10.28
61		hexane	0.505	0.546	-8.1	107	-0.01	8.37
62	M	benzene	1.572	1.644	-4.6	104	0.00	10.55
63		ISO-OCTANE	1.381	1.445	-4.6	106	0.00	10.64
64		heptane	0.283	0.301	-6.4	107	0.00	10.83
65		isopropyl acetate	0.755	0.688	8.9	90	0.00	10.51
66		1,2-dichloroethane	0.551	0.595	-8.0	110	0.00	10.53
67		trichloroethene	0.427	0.462	-8.2	110	0.00	11.31
68		ethyl acrylate	0.497	0.462	7.0	94	0.00	11.34
69		2-nitropropane	0.090	0.100	-11.1	117	0.00	12.09
70		2-chloroethyl vinyl ether	0.082	0.266	-224.4#	343#	0.00	12.15
71		methyl methacrylate	0.104	0.103	1.0	102	0.00	11.62
72		1,2-dichloropropane	0.449	0.446	0.7	101	0.00	11.57
73		methylcyclohexane	0.665	0.700	-5.3	108	-0.03	11.59
74	M	tert-amyl ethyl ether		----------NA----------				
75		dibromomethane	0.299	0.315	-5.4	106	0.00	11.71
76		bromodichloromethane	0.580	0.622	-7.2	108	0.00	11.86
77		cis-1,3-dichloropropene	0.706	0.734	-4.0	106	0.00	12.36
78	S	toluene-d8 (s)	1.183	1.186	-0.3	105	0.00	12.71
79		4-methyl-2-pentanone	0.166	0.161	3.0	98	0.00	12.50
80		toluene	0.974	1.056	-8.4	110	0.00	12.78
81		3-methyl-1-butanol	0.009	0.010#	-11.1	98	-0.01	12.50
82		trans-1,3-dichloropropene	0.640	0.673	-5.2	104	0.00	12.96
83		ethyl methacrylate	0.530	0.524	1.1	101	0.00	13.01
84		1,1,2-trichloroethane	0.346	0.363	-4.9	106	0.00	13.18
85		2-hexanone	0.154	0.146	5.2	98	0.00	13.41
86	I	chlorobenzene-d5	1.000	1.000	0.0	105	0.00	14.31
87		tetrachloroethene	0.484	0.530	-9.5	109	0.00	13.41
88		1,3-dichloropropane	0.682	0.705	-3.4	105	0.00	13.38
89		butyl acetate		----------NA----------				
90		dibromochloromethane	0.524	0.571	-9.0	110	0.00	13.65
91		1,2-dibromoethane	0.470	0.494	-5.1	105	0.00	13.82
92		n-Butyl Ether	1.838	1.766	3.9	99	0.00	14.33
93		chlorobenzene	1.224	1.343	-9.7	110	0.00	14.34
94		1,1,1,2-tetrachloroethane	0.465	0.520	-11.8	110	0.00	14.40
95		ethylbenzene	2.027	2.254	-11.2	110	0.00	14.43
96		m,p-xylene	0.760	0.858	-12.9	110	0.00	14.55
97		o-xylene	1.654	1.839	-11.2	111	0.00	14.98
98		styrene	1.319	1.428	-8.3	108	0.00	14.99
99		butyl acrylate		----------NA----------				

Continuing Calibration Summary

Job Number: JC30522 **Sample:** V4D3202-CC3126
Account: BPAMSS Atlantic Richfield Company **Lab FileID:** 4D73688.D
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

100		bromoform	0.359	0.389	-8.4	109	0.00	15.22
101	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	107	0.00	16.71
102		isopropylbenzene	3.807	4.080	-7.2	109	0.00	15.35
103	S	4-bromofluorobenzene (s)	0.934	0.929	0.5	108	0.00	15.53
104		bromobenzene	1.060	1.117	-5.4	110	0.00	15.73
105		cyclohexanone		----------NA----------				
106		1,1,2,2-tetrachloroethane	1.194	1.180	1.2	103	0.00	15.61
107		trans-1,4-dichloro-2-bute	0.254	0.240	5.5	98	0.00	15.66
108		1,2,3-trichloropropane	0.274	0.279	-1.8	105	0.00	15.69
109		n-propylbenzene	4.443	4.875	-9.7	111	0.00	15.77
110		2-chlorotoluene	0.952	1.031	-8.3	111	0.00	15.90
111		4-chlorotoluene	2.799	3.050	-9.0	112	0.00	16.00
112		1,3,5-trimethylbenzene	3.209	3.548	-10.6	112	0.00	15.93
113		tert-butylbenzene	0.602	0.617	-2.5	105	0.00	16.28
114		pentachloroethane	0.657	0.747	-13.7	115	0.00	16.33
115		1,2,4-trimethylbenzene	3.298	3.613	-9.6	110	0.00	16.32
116		sec-butylbenzene	4.233	4.579	-8.2	108	0.00	16.50
117		1,3-dichlorobenzene	1.943	2.140	-10.1	112	0.00	16.65
118		p-isopropyltoluene	3.456	3.808	-10.2	109	0.00	16.62
119		1,4-dichlorobenzene	1.967	2.139	-8.7	112	0.00	16.73
120		1,2-dichlorobenzene	1.946	2.056	-5.7	108	0.00	17.11
121		n-butylbenzene	1.923	2.037	-5.9	109	0.00	17.02
122		1,2-dibromo-3-chloropropa	0.244	0.209	14.3	89	0.00	17.83
123	m	1,3,5-trichlorobenzene	1.519	2.633	-73.3#	179	0.00	18.03
124		1,2,4-trichlorobenzene	1.359	1.307	3.8	98	0.00	18.61
125		hexachlorobutadiene	0.753	0.796	-5.7	108	0.00	18.75
126		naphthalene	2.958	2.315	21.7#	81	0.00	18.88
127		1,2,3-trichlorobenzene	1.186	1.021	13.9	87	0.00	19.11
128		hexachloroethane	0.720	0.824	-14.4	118	0.00	17.38
129		Benzyl chloride	2.006	2.223	-10.8	112	0.00	16.84

(#) = Out of Range SPCC's out = 0 CCC's out = 0
4D71650.D M4D3126.M Wed Nov 09 13:42:49 2016

GC/MS Volatiles

Raw Data

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73693.D
Acq On : 8 Nov 2016 11:33 am
Operator : XimenaC
Sample : jc30522-1
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Time: Nov 09 15:02:15 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um
QLast Update : Fri Sep 23 08:47:12 2016
Response via : Initial Calibration

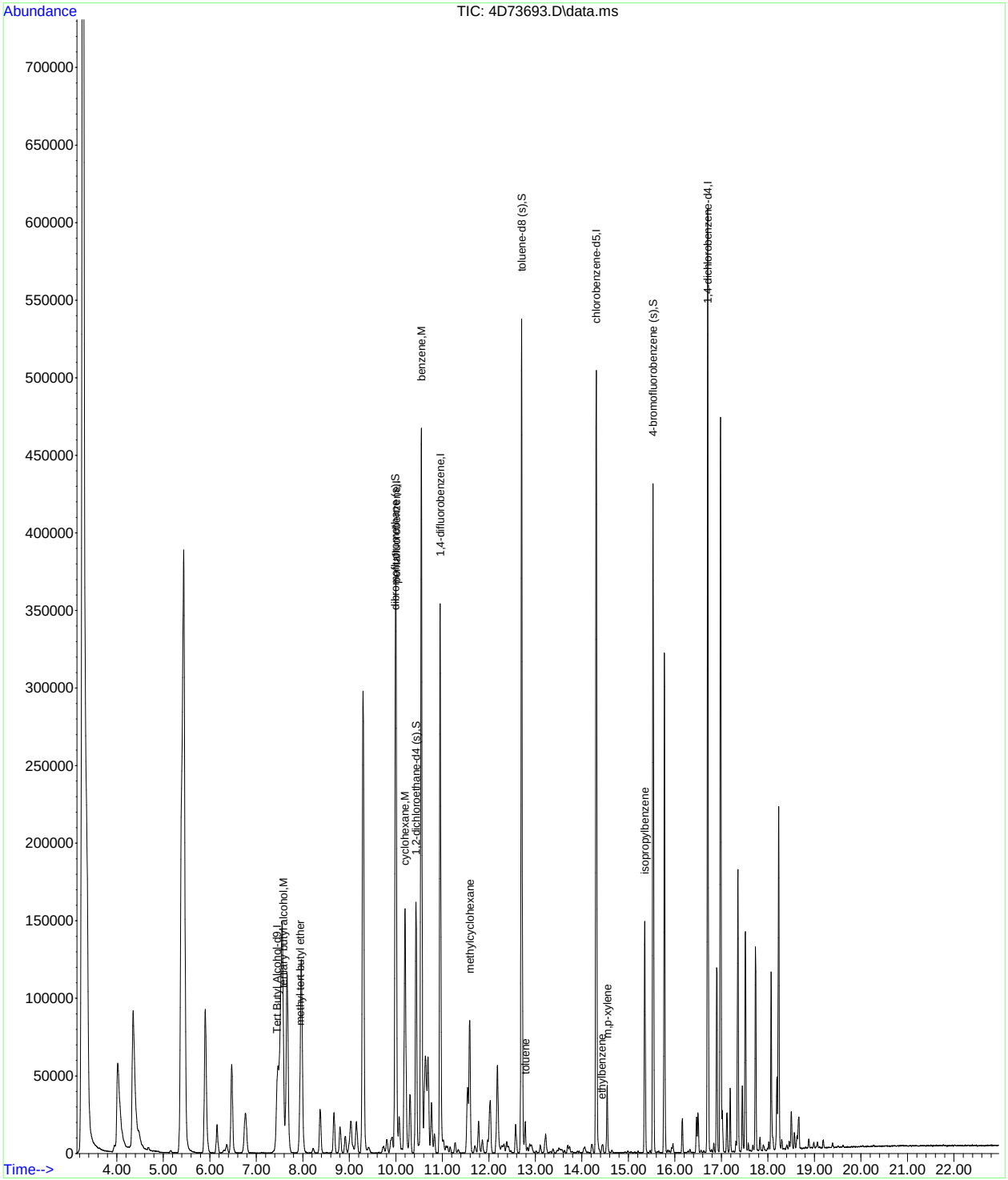
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.447	65	93246	500.00	ug/L	0.00
4) pentafluorobenzene	10.005	168	203492	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.954	114	296532	50.00	ug/L	0.00
86) chlorobenzene-d5	14.310	117	276255	50.00	ug/L	0.00
101) 1,4-dichlorobenzene-d4	16.706	152	144235	50.00	ug/L	0.00
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.990	113	103300	49.35	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 98.70%			
49) 1,2-dichloroethane-d4 (s)	10.435	65	109440	51.27	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 102.54%			
78) toluene-d8 (s)	12.705	98	352486	50.26	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 100.52%			
103) 4-bromofluorobenzene (s)	15.531	95	138553	51.42	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 102.84%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.583	59	2993	10.93	ug/L #	1
31) methyl tert butyl ether	7.939	73	14935	2.23	ug/L #	1
57) cyclohexane	10.194	84	46267	13.94	ug/L #	63
62) benzene	10.551	78	439196	47.11	ug/L	99
73) methylcyclohexane	11.589	83	39435	10.00	ug/L	99
80) toluene	12.784	92	7735	1.34	ug/L	93
95) ethylbenzene	14.430	91	2490	0.22	ug/L	95
96) m,p-xylene	14.546	106	12503	2.98	ug/L	98
102) isopropylbenzene	15.353	105	98212	8.94	ug/L	98

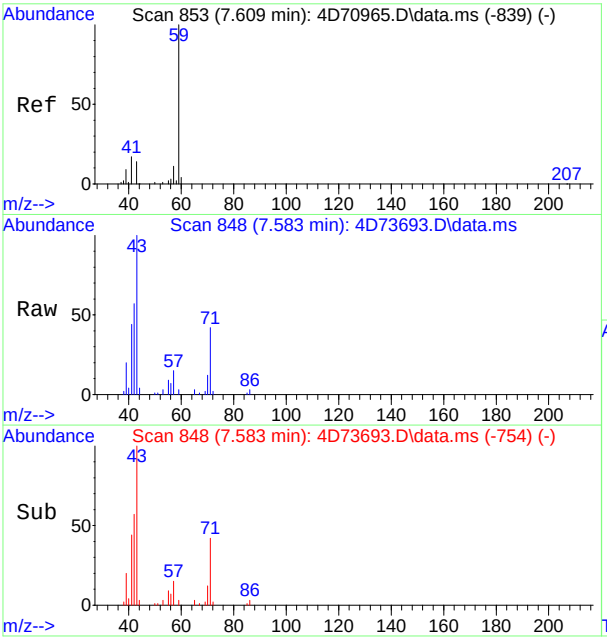
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73693.D
Acq On : 8 Nov 2016 11:33 am
Operator : XimenaC
Sample : jc30522-1
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Time: Nov 09 15:02:15 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um
QLast Update : Fri Sep 23 08:47:12 2016
Response via : Initial Calibration

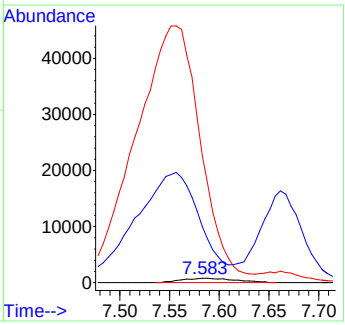


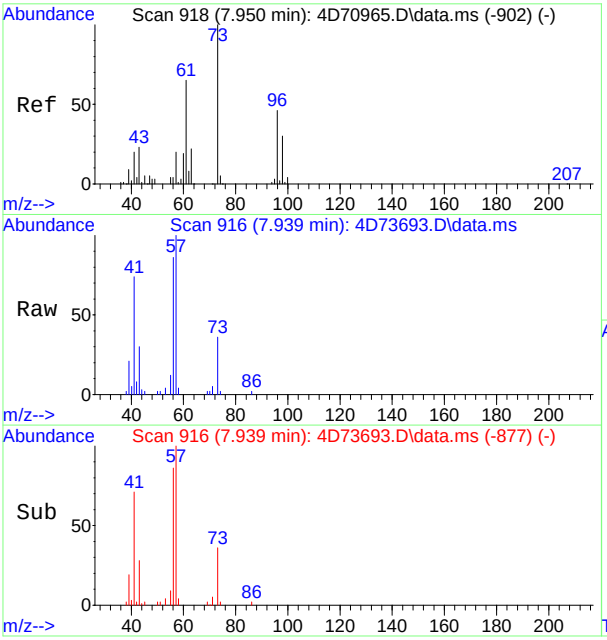


#3
tertiary butyl alcohol
Concen: 10.93 ug/L
RT: 7.583 min Scan# 848
Delta R.T. -0.006 min
Lab File: 4D73693.D
Acq: 8 Nov 2016 11:33 am

Tgt Ion: 59 Resp: 2993

Ion	Ratio	Lower	Upper
59	100		
41	0.0	0.0	53.7
43	2662.4	0.0	45.8#

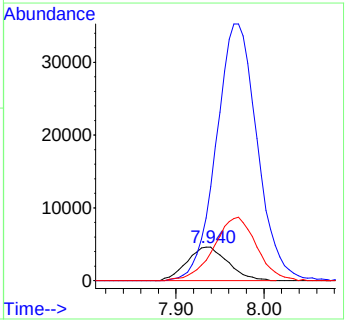


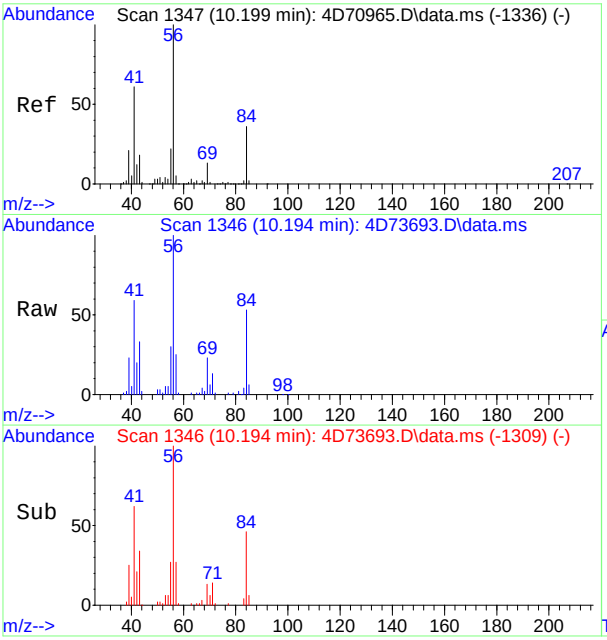


#31
methyl tert butyl ether
Concen: 2.23 ug/L
RT: 7.939 min Scan# 916
Delta R.T. 0.002 min
Lab File: 4D73693.D
Acq: 8 Nov 2016 11:33 am

Tgt Ion: 73 Resp: 14935

Ion	Ratio	Lower	Upper
73	100		
57	279.9	0.0	51.4#
43	82.8	0.0	49.3#

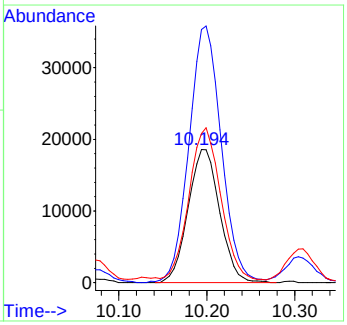


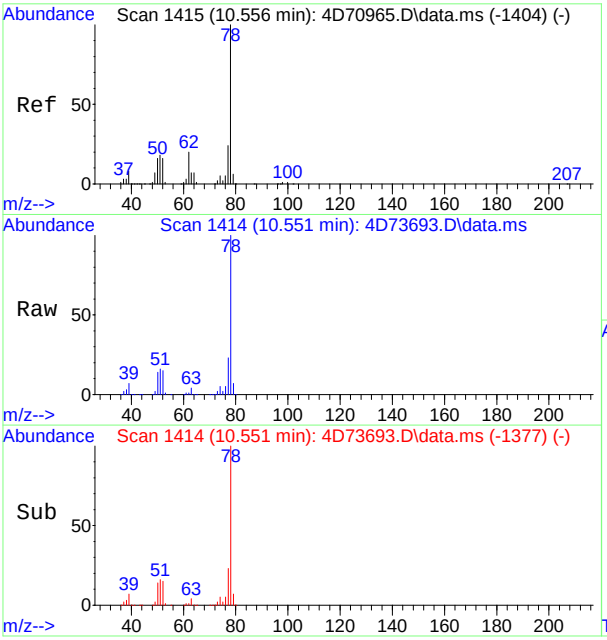


#57
cyclohexane
Concen: 13.94 ug/L
RT: 10.194 min Scan# 1346
Delta R.T. -0.006 min
Lab File: 4D73693.D
Acq: 8 Nov 2016 11:33 am

Tgt Ion: 84 Resp: 46267

Ion	Ratio	Lower	Upper
84	100		
56	189.1	230.1	290.1#
41	108.4	118.6	178.6#

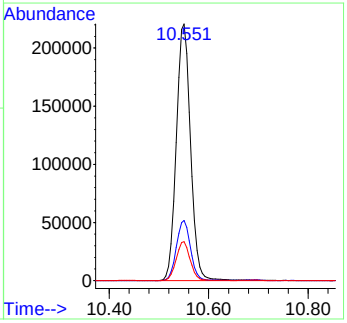


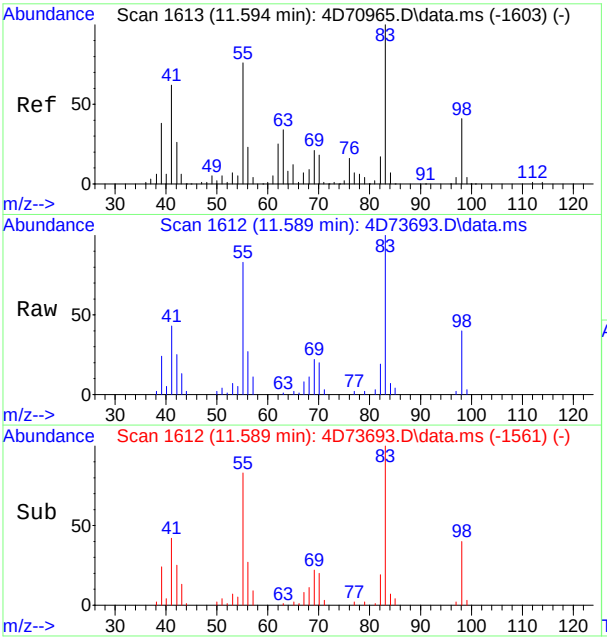


#62
benzene
Concen: 47.11 ug/L
RT: 10.551 min Scan# 1414
Delta R.T. -0.004 min
Lab File: 4D73693.D
Acq: 8 Nov 2016 11:33 am

Tgt Ion: 78 Resp: 439196

Ion	Ratio	Lower	Upper
78	100		
77	23.4	0.0	53.6
52	15.1	0.0	45.7

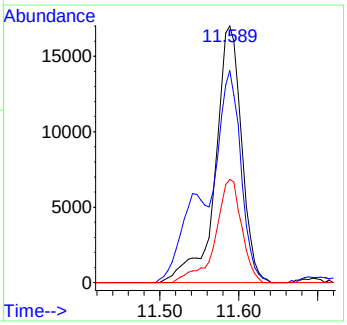


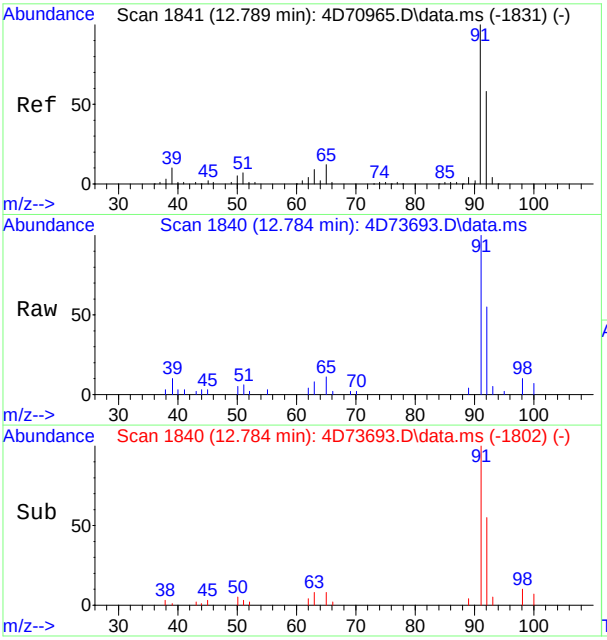


#73
methylcyclohexane
Concen: 10.00 ug/L
RT: 11.589 min Scan# 1612
Delta R.T. -0.034 min
Lab File: 4D73693.D
Acq: 8 Nov 2016 11:33 am

Tgt Ion: 83 Resp: 39435

Ion	Ratio	Lower	Upper
83	100		
55	82.6	51.3	111.3
98	40.2	10.1	70.1

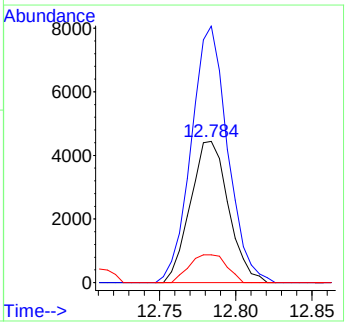


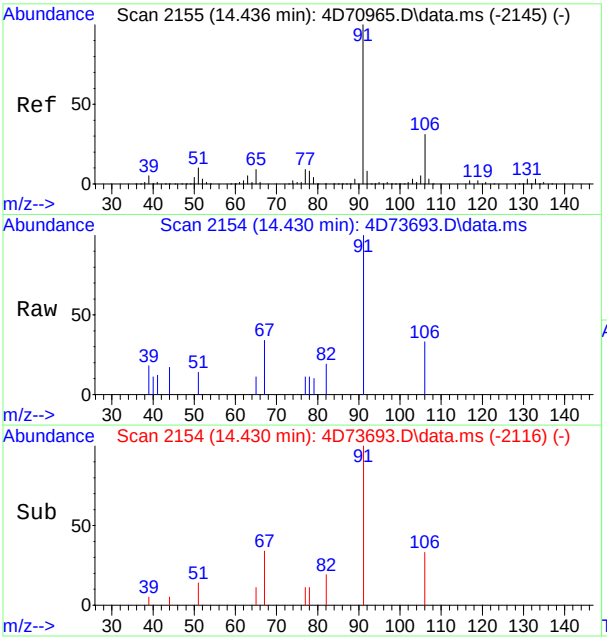


#80
toluene
Concen: 1.34 ug/L
RT: 12.784 min Scan# 1840
Delta R.T. -0.001 min
Lab File: 4D73693.D
Acq: 8 Nov 2016 11:33 am

Tgt Ion: 92 Resp: 7735

Ion	Ratio	Lower	Upper
92	100		
91	181.7	140.6	200.6
65	19.6	0.0	49.1

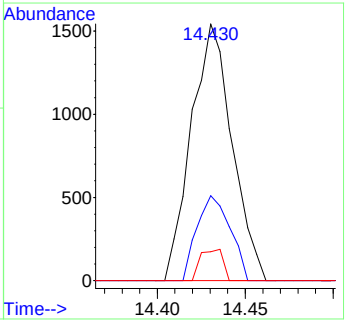


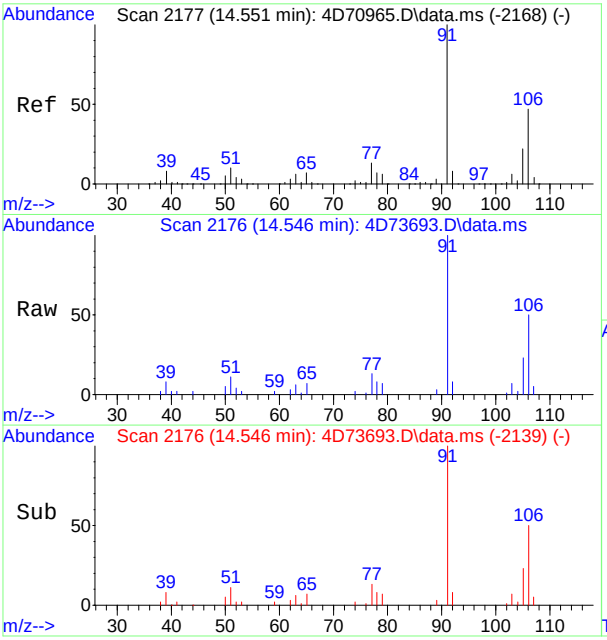


#95
ethylbenzene
Concen: 0.22 ug/L
RT: 14.430 min Scan# 2154
Delta R.T. -0.002 min
Lab File: 4D73693.D
Acq: 8 Nov 2016 11:33 am

Tgt Ion: 91 Resp: 2490

Ion	Ratio	Lower	Upper
91	100		
106	33.1	0.5	60.5
77	11.3	0.0	38.4

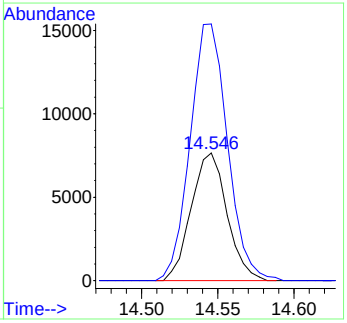


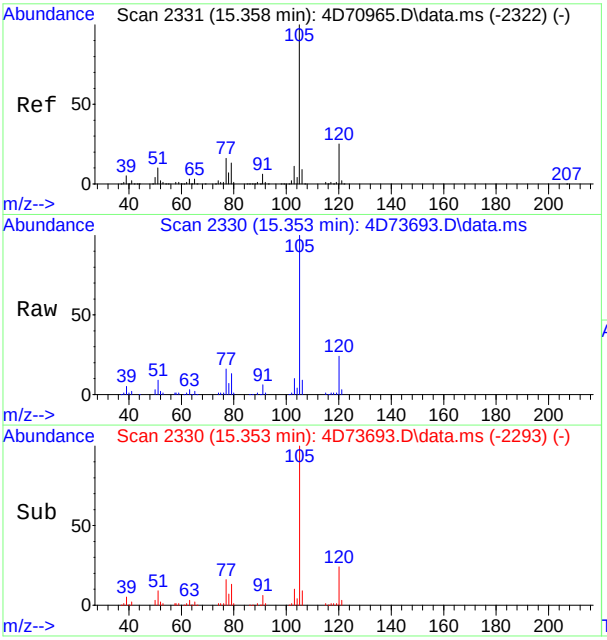


#96
m,p-xylene
Concen: 2.98 ug/L
RT: 14.546 min Scan# 2176
Delta R.T. -0.005 min
Lab File: 4D73693.D
Acq: 8 Nov 2016 11:33 am

Tgt Ion:106 Resp: 12503

Ion	Ratio	Lower	Upper
106	100		
91	201.1	173.4	233.4

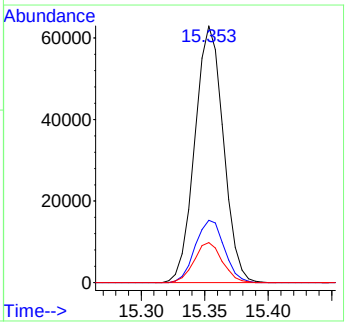




#102
isopropylbenzene
Concen: 8.94 ug/L
RT: 15.353 min Scan# 2330
Delta R.T. -0.005 min
Lab File: 4D73693.D
Acq: 8 Nov 2016 11:33 am

Tgt Ion:105 Resp: 98212

Ion	Ratio	Lower	Upper
105	100		
120	24.3	0.0	55.5
77	15.7	0.0	45.2



LSC Area Percent Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73693.D
Acq On : 8 Nov 2016 11:33 am
Operator : XimenaC
Sample : jc30522-1
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.5 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

Signal : TIC: 4D73693.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.273	3	26	80	rBV	1126239	4837080	100.00%	21.927%
2	3.955	147	156	159	rBV4	4304	10255	0.21%	0.046%
3	4.023	159	169	205	rVB	55542	277564	5.74%	1.258%
4	4.353	218	232	252	rBV2	87805	369850	7.65%	1.677%
5	5.439	414	439	468	rBV	388664	1898910	39.26%	8.608%
6	5.905	515	528	551	rBV	92449	275474	5.70%	1.249%
7	6.157	566	576	591	rBV	18398	44521	0.92%	0.202%
8	6.361	609	615	625	rVV2	5240	13180	0.27%	0.060%
9	6.471	625	636	650	rVV	56818	150379	3.11%	0.682%
10	6.765	676	692	708	rVB3	25759	94679	1.96%	0.429%
11	7.468	800	826	829	rBV3	56043	191963	3.97%	0.870%
12	7.557	830	843	854	rVV3	148919	669498	13.84%	3.035%
13	7.662	854	863	881	rVB	115958	354854	7.34%	1.609%
14	7.971	905	922	939	rBV2	124605	410017	8.48%	1.859%
15	8.223	963	970	982	rVB3	2976	7208	0.15%	0.033%
16	8.375	989	999	1011	rBV	28210	69403	1.43%	0.315%
17	8.674	1046	1056	1067	rVB3	26018	61750	1.28%	0.280%
18	8.799	1069	1080	1092	rVB2	16811	42979	0.89%	0.195%
19	8.915	1092	1102	1111	rBV2	10784	26539	0.55%	0.120%
20	9.035	1111	1125	1138	rVV5	20532	71592	1.48%	0.325%
21	9.156	1139	1148	1160	rVV	20209	56081	1.16%	0.254%
22	9.297	1163	1175	1192	rVV	297768	757803	15.67%	3.435%
23	9.738	1249	1259	1265	rBV4	4548	12676	0.26%	0.057%
24	9.806	1265	1272	1280	rVV3	8872	21095	0.44%	0.096%
25	9.895	1280	1289	1290	rVV2	8325	14927	0.31%	0.068%
26	9.921	1290	1294	1299	rVV2	10173	22603	0.47%	0.102%
27	10.000	1299	1309	1318	rVV2	371024	880202	18.20%	3.990%
28	10.073	1318	1323	1332	rVV2	23427	55072	1.14%	0.250%
29	10.199	1336	1347	1360	rVV2	157477	413491	8.55%	1.874%
30	10.304	1360	1367	1377	rVV	37800	86653	1.79%	0.393%
31	10.435	1380	1392	1401	rBV	161753	333131	6.89%	1.510%
32	10.551	1404	1414	1422	rVV	467353	934975	19.33%	4.238%
33	10.634	1422	1430	1437	rVV4	62695	215928	4.46%	0.979%
34	10.692	1437	1441	1449	rVV2	62049	136195	2.82%	0.617%
35	10.765	1449	1455	1462	rVV	32626	73474	1.52%	0.333%
36	10.834	1462	1468	1474	rVB2	12479	25218	0.52%	0.114%
37	10.954	1482	1491	1501	rBV	354007	674584	13.95%	3.058%
38	11.022	1502	1504	1511	rVV4	8463	14714	0.30%	0.067%
39	11.080	1511	1515	1518	rVV2	4580	8166	0.17%	0.037%
40	11.112	1518	1521	1527	rVV3	4330	7392	0.15%	0.034%
41	11.169	1527	1532	1539	rVB2	3791	6879	0.14%	0.031%
42	11.274	1544	1552	1559	rBV2	6541	13670	0.28%	0.062%
43	11.541	1592	1603	1607	rBV2	42303	99829	2.06%	0.453%
44	11.589	1607	1612	1626	rVB	85238	175046	3.62%	0.794%
45	11.699	1626	1633	1641	rBV4	4573	10757	0.22%	0.049%

LSC Area Percent Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73693.D
Acq On : 8 Nov 2016 11:33 am
Operator : XimenaC
Sample : jc30522-1
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.5 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

46	11.777	1641	1648	1658	rVV	20129	41268	0.85%	0.187%
47	11.861	1658	1664	1672	rVB2	8106	16401	0.34%	0.074%
48	11.977	1677	1686	1688	rVV3	8371	14055	0.29%	0.064%
49	12.029	1688	1696	1706	rVB3	33764	88740	1.83%	0.402%
50	12.186	1714	1726	1737	rBV3	56678	145421	3.01%	0.659%
51	12.328	1749	1753	1758	rVV3	5759	11121	0.23%	0.050%
52	12.386	1758	1764	1768	rVV3	7291	15351	0.32%	0.070%
53	12.417	1768	1770	1776	rVV4	4292	7707	0.16%	0.035%
54	12.574	1794	1800	1812	rVB5	18543	38077	0.79%	0.173%
55	12.705	1814	1825	1835	rBV	537682	933552	19.30%	4.232%
56	12.784	1835	1840	1845	rVV	20151	34514	0.71%	0.156%
57	12.878	1853	1858	1861	rVV5	5492	10373	0.21%	0.047%
58	12.915	1861	1865	1873	rVB5	4959	11914	0.25%	0.054%
59	13.104	1896	1901	1909	rVB2	5251	9444	0.20%	0.043%
60	13.219	1911	1923	1932	rBV6	12438	30377	0.63%	0.138%
61	13.696	2009	2014	2018	rBV3	5013	9139	0.19%	0.041%
62	13.733	2018	2021	2028	rVV4	4065	6963	0.14%	0.032%
63	14.063	2073	2084	2093	rBV5	3884	11022	0.23%	0.050%
64	14.215	2107	2113	2122	rVB4	5730	13013	0.27%	0.059%
65	14.310	2123	2131	2148	rVV	504375	818836	16.93%	3.712%
66	14.446	2148	2157	2163	rVB3	5286	12196	0.25%	0.055%
67	14.546	2169	2176	2185	rBV	43107	68985	1.43%	0.313%
68	15.353	2323	2330	2342	rVB	149145	233389	4.82%	1.058%
69	15.531	2356	2364	2377	rBV	431357	651119	13.46%	2.952%
70	15.773	2402	2410	2421	rBV	322304	473132	9.78%	2.145%
71	15.961	2442	2446	2452	rVB	5897	8428	0.17%	0.038%
72	16.161	2477	2484	2490	rBV	22139	30979	0.64%	0.140%
73	16.465	2534	2542	2545	rBV	22962	32823	0.68%	0.149%
74	16.496	2545	2548	2557	rVB	25643	36466	0.75%	0.165%
75	16.706	2581	2588	2601	rBV	608266	870074	17.99%	3.944%
76	16.837	2608	2613	2618	rBV	5899	7763	0.16%	0.035%
77	16.900	2619	2625	2633	rVV	118773	169203	3.50%	0.767%
78	16.984	2633	2641	2646	rVV	473626	698822	14.45%	3.168%
79	17.020	2646	2648	2661	rVB	26898	30954	0.64%	0.140%
80	17.120	2661	2667	2673	rBV	25333	35968	0.74%	0.163%
81	17.188	2673	2680	2688	rBV	41222	57674	1.19%	0.261%
82	17.314	2699	2704	2706	rBV	6988	10046	0.21%	0.046%
83	17.356	2706	2712	2719	rVB	181646	257093	5.32%	1.165%
84	17.450	2724	2730	2736	rBV	42567	62784	1.30%	0.285%
85	17.519	2736	2743	2750	rVV	141429	213180	4.41%	0.966%
86	17.733	2777	2784	2791	rVB	130994	179904	3.72%	0.816%
87	17.828	2797	2802	2812	rVB	8832	12258	0.25%	0.056%
88	17.901	2812	2816	2822	rBV3	3972	7373	0.15%	0.033%
89	18.017	2835	2838	2842	rVV	5552	6905	0.14%	0.031%
90	18.069	2842	2848	2861	rVB	114943	168864	3.49%	0.765%
91	18.195	2861	2872	2874	rBV	47076	69305	1.43%	0.314%
92	18.232	2874	2879	2888	rVV	220997	323168	6.68%	1.465%
93	18.300	2888	2892	2896	rVB2	6198	8127	0.17%	0.037%

LSC Area Percent Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73693.D
Acq On : 8 Nov 2016 11:33 am
Operator : XimenaC
Sample : jc30522-1
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.5 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

94	18.504	2925	2931	2938	rVB2	23843	41871	0.87%	0.190%
95	18.567	2938	2943	2948	rBV	10190	14079	0.29%	0.064%
96	18.630	2948	2955	2956	rVV2	8082	11854	0.25%	0.054%
97	18.662	2956	2961	2967	rVB	19882	36129	0.75%	0.164%
98	18.876	2997	3002	3008	rBV	5865	8354	0.17%	0.038%
99	19.065	3030	3038	3043	rVV2	4010	7229	0.15%	0.033%
100	19.191	3058	3062	3068	rBV2	5293	7689	0.16%	0.035%

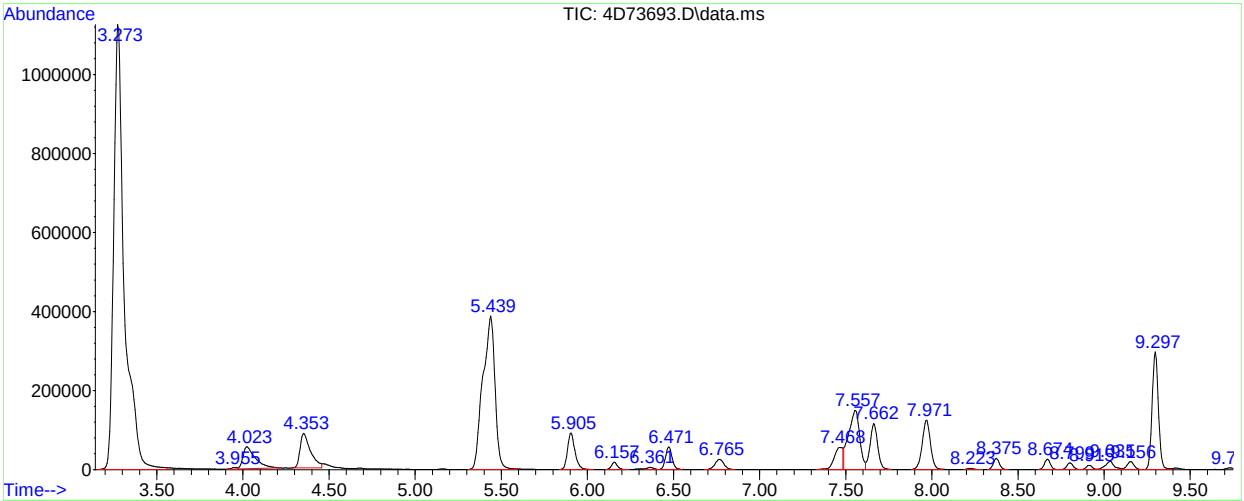
Sum of corrected areas: 22059731

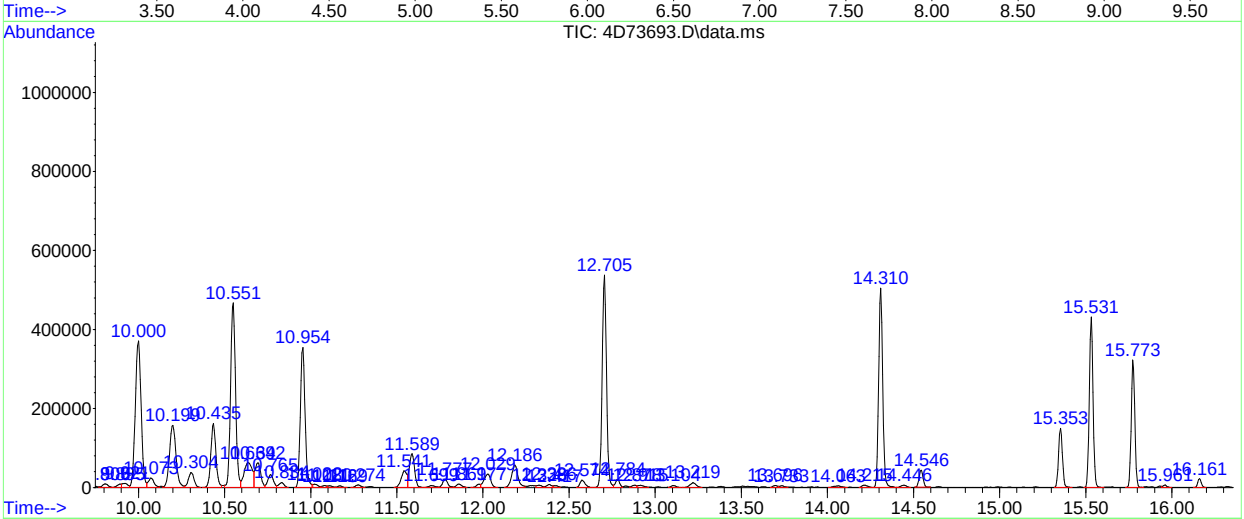
LSC Report - Integrated Chromatogram

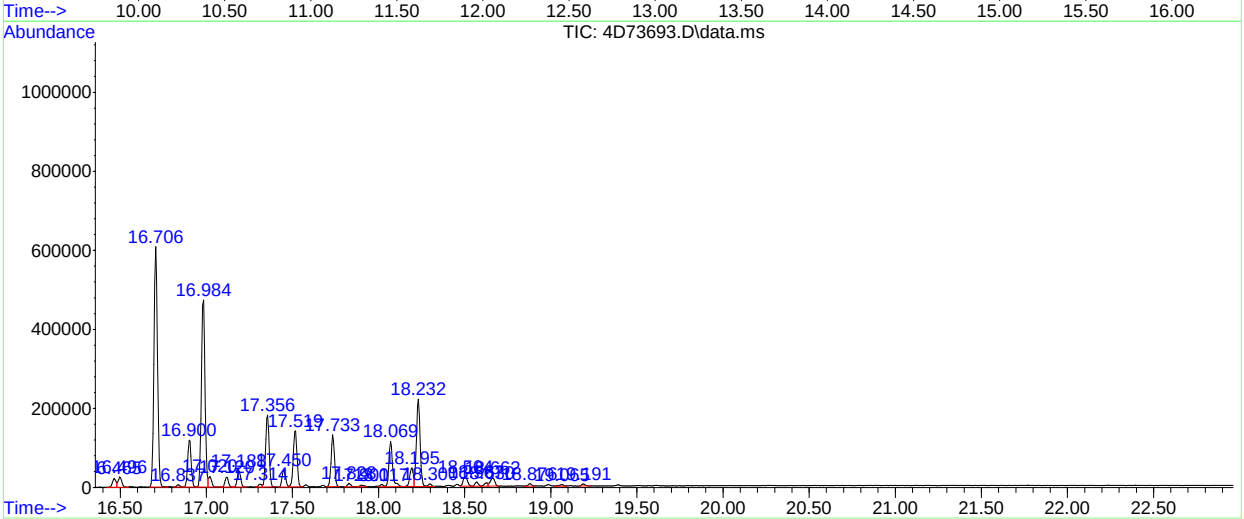
Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73693.D
Acq On : 8 Nov 2016 11:33 am
Operator : XimenaC
Sample : jc30522-1
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p







M4D3126.M Wed Nov 09 16:51:11 2016 Page: 4

SGS ACCUTEST JC30522

Library Search Compound Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73693.D
Acq On : 8 Nov 2016 11:33 am
Operator : XimenaC
Sample : jc30522-1
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

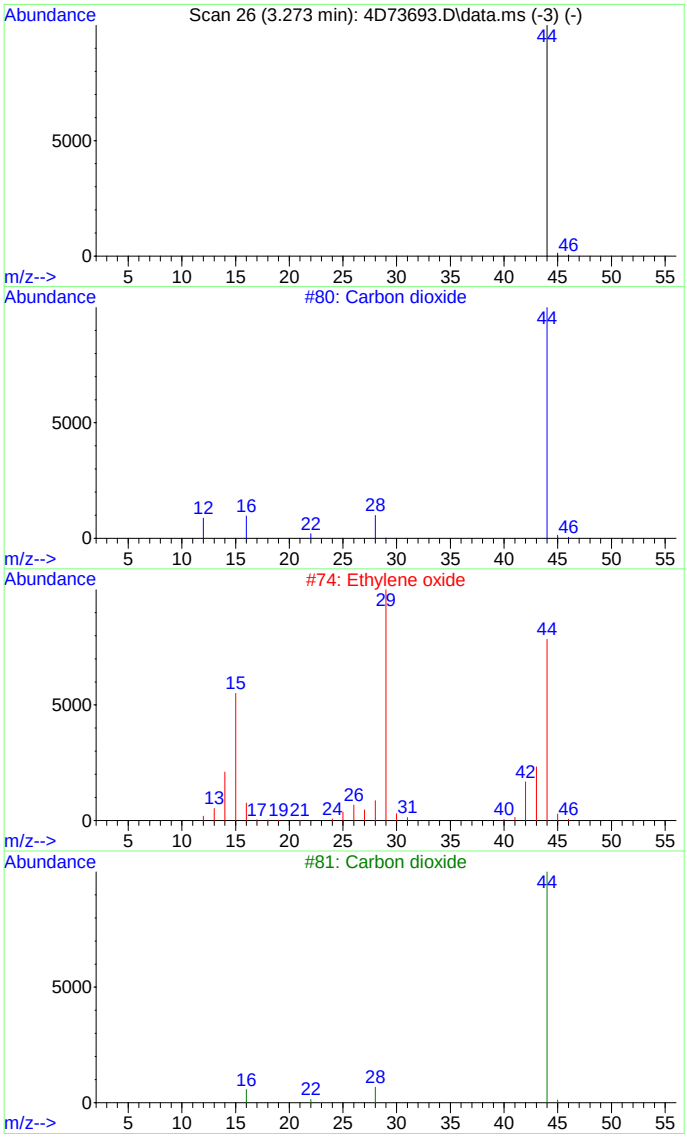
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

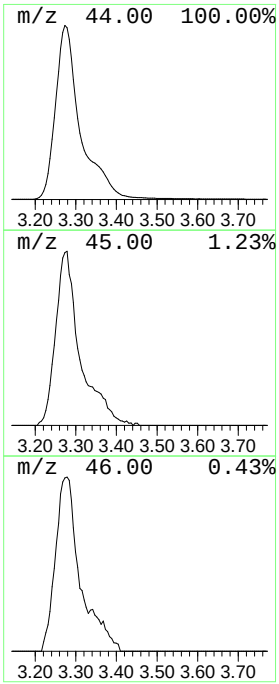
****

Peak Number 1 system artifact Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.273	274.77 ug/L	4837080	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Ethylene oxide	44	C2H4O	000075-21-8	3
3	Carbon dioxide	44	CO2	000124-38-9	3
4	Nitrous Oxide	44	N2O	010024-97-2	3
5	Nitrous Oxide	44	N2O	010024-97-2	3





SGS ACCUTEST JC30522

Library Search Compound Report

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Acq On : 8 Nov 2016 11:33 am
Operator : XimenaC
Sample : jc30522-1
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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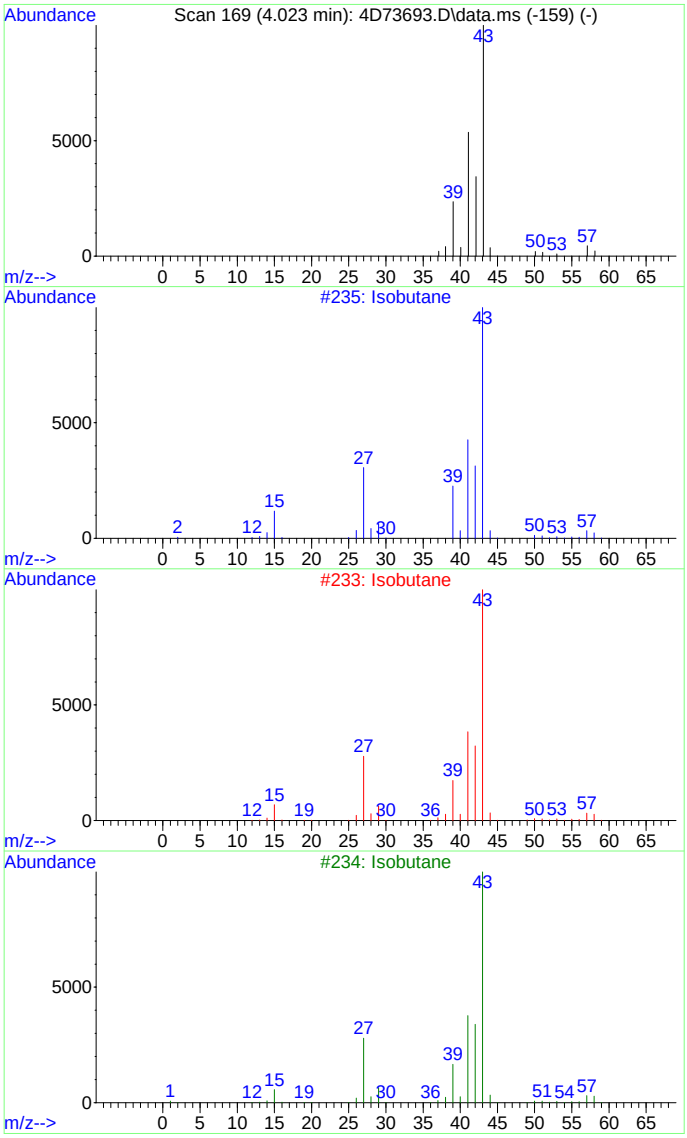
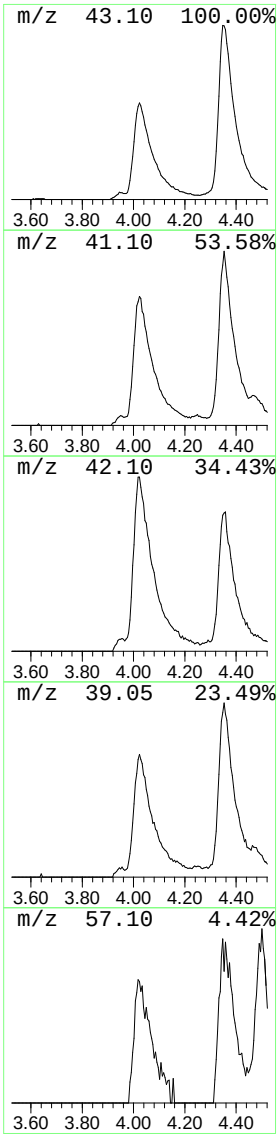
Peak Number 2 alkane Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.023	15.77 ug/L	277564	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Isobutane	58	C4H10	000075-28-5	78
2	Isobutane	58	C4H10	000075-28-5	78
3	Isobutane	58	C4H10	000075-28-5	9
4	Propane, 1-chloro-2-methyl-	92	C4H9Cl	000513-36-0	9
5	Propane, 2-nitro-	89	C3H7NO2	000079-46-9	9





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Sample : jc30522-1
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ALS Vial : 35 Sample Multiplier: 1

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Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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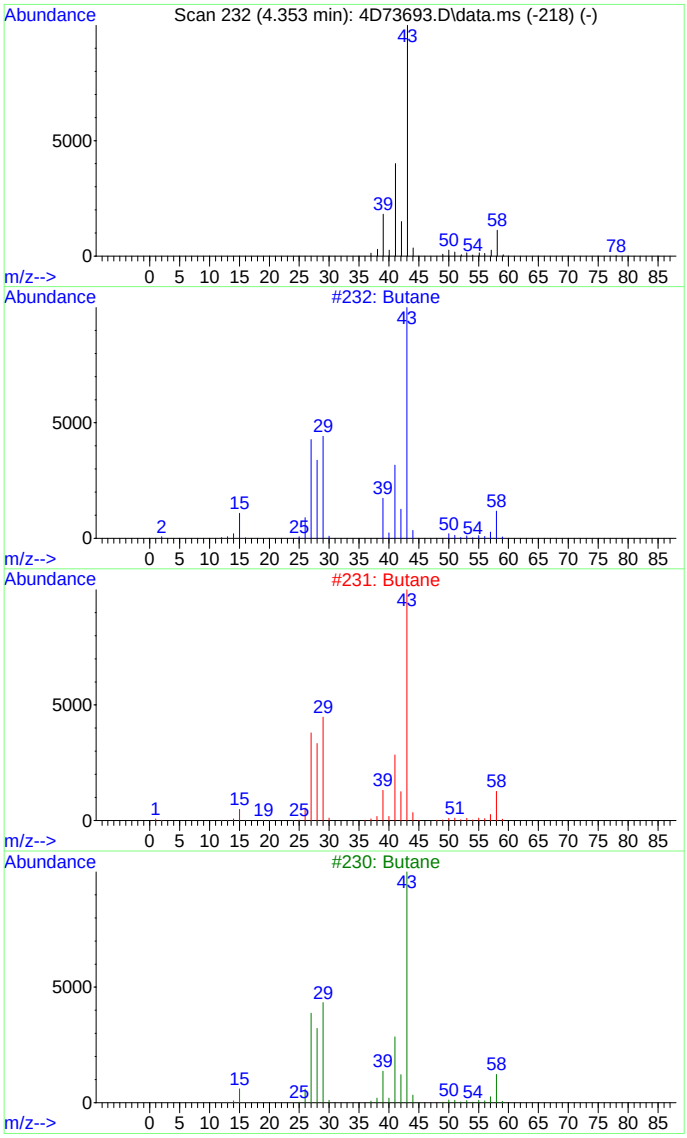
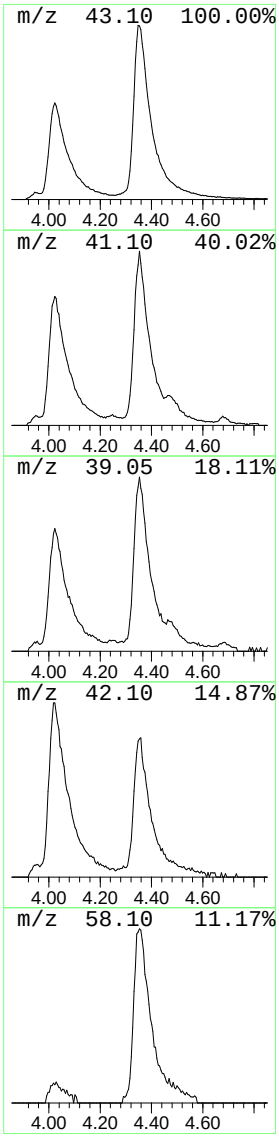
Peak Number 3 alkane Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.353	21.01 ug/L	369850	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	72
2	Butane	58	C4H10	000106-97-8	72
3	Butane	58	C4H10	000106-97-8	72
4	Isobutane	58	C4H10	000075-28-5	9
5	Isopropylsulfonyl chloride	142	C3H7ClO2S	010147-37-2	9





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Sample : jc30522-1
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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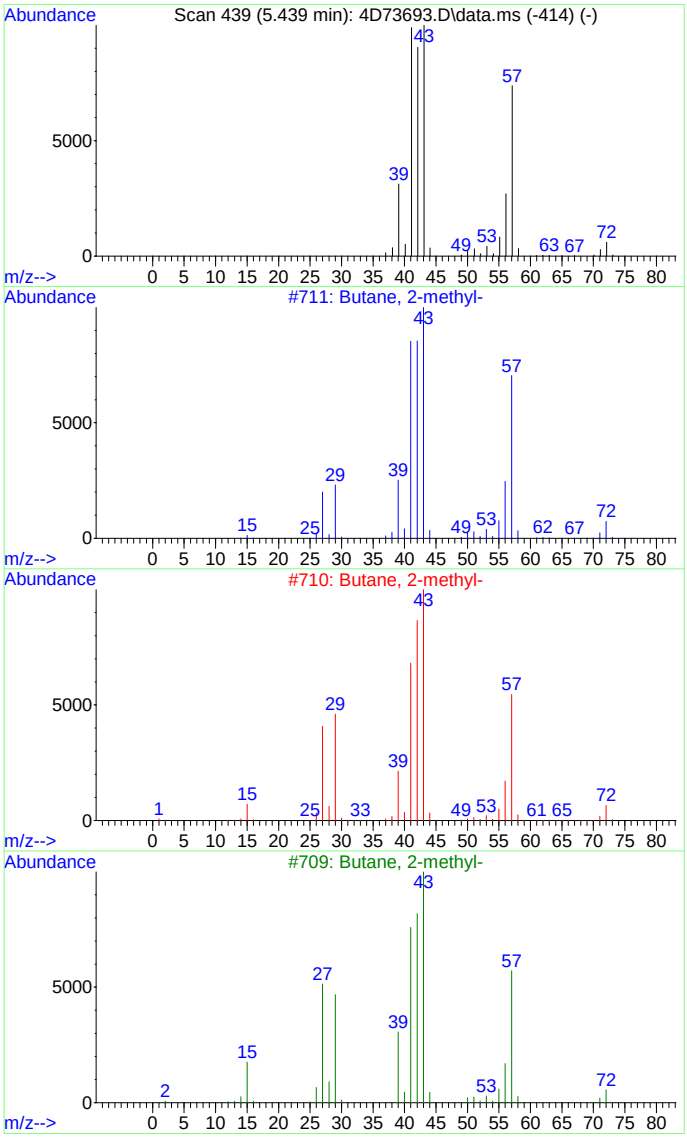
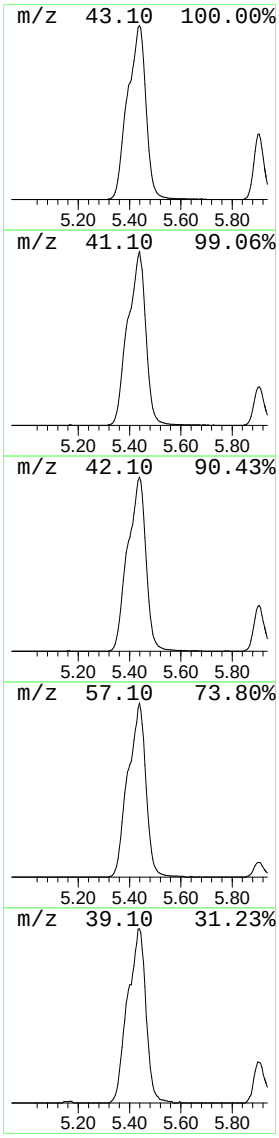
Peak Number 4 alkane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.439	107.87 ug/L	1898910	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	91
2	Butane, 2-methyl-	72	C5H12	000078-78-4	86
3	Butane, 2-methyl-	72	C5H12	000078-78-4	80
4	3-Buten-1-ol	72	C4H8O	000627-27-0	43
5	Pentane	72	C5H12	000109-66-0	40





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Sample : jc30522-1
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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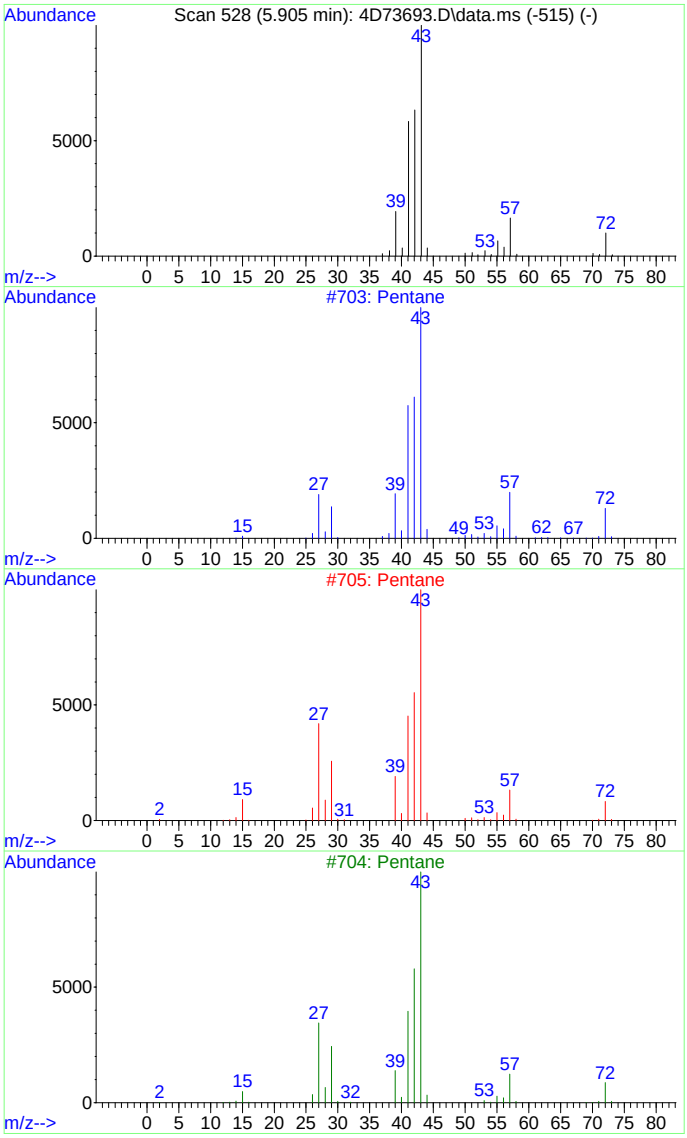
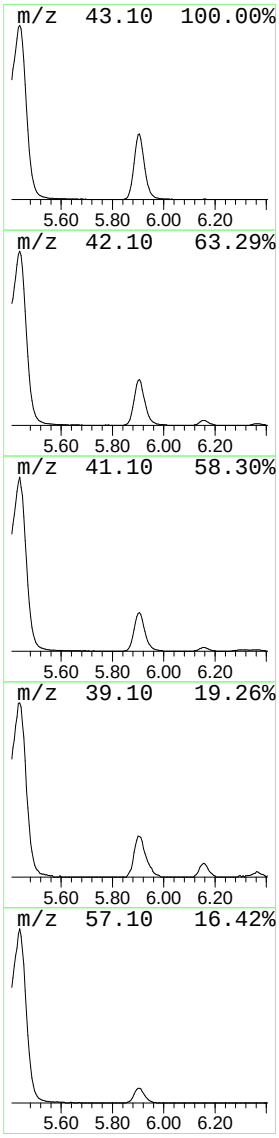
Peak Number 5 alkane-Pentane Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.905	15.65 ug/L	275474	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	91
2	Pentane	72	C5H12	000109-66-0	90
3	Pentane	72	C5H12	000109-66-0	86
4	Butane, 2-methyl-	72	C5H12	000078-78-4	72
5	Pentane	72	C5H12	000109-66-0	64





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Sample : jc30522-1
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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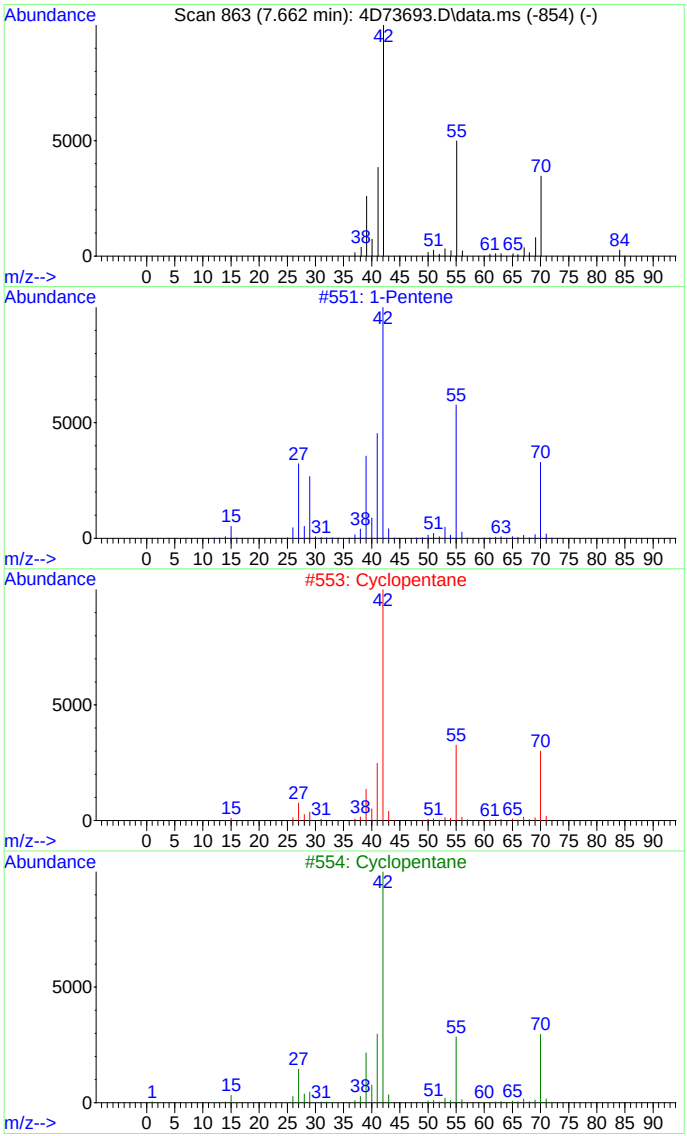
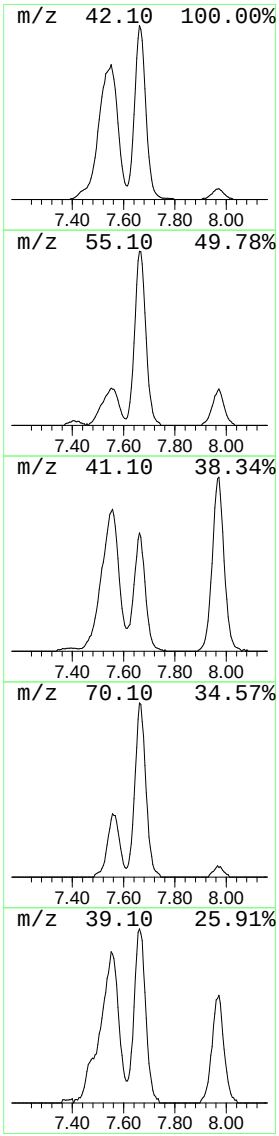
Peak Number 6 cycloalkene Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.662	20.16 ug/L	354854	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Pentene	70	C5H10	000109-67-1	86
2	Cyclopentane	70	C5H10	000287-92-3	80
3	Cyclopentane	70	C5H10	000287-92-3	72
4	Cyclobutane, methyl-	70	C5H10	000598-61-8	72
5	Cyclopropane, ethyl-	70	C5H10	001191-96-4	56





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Sample : jc30522-1
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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Peak Number 7 cycloalkene Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.297	43.05 ug/L	757803	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	94
2	Cyclobutane, ethyl-	84	C6H12	004806-61-5	78
3	Cyclopentane, methyl-	84	C6H12	000096-37-7	78
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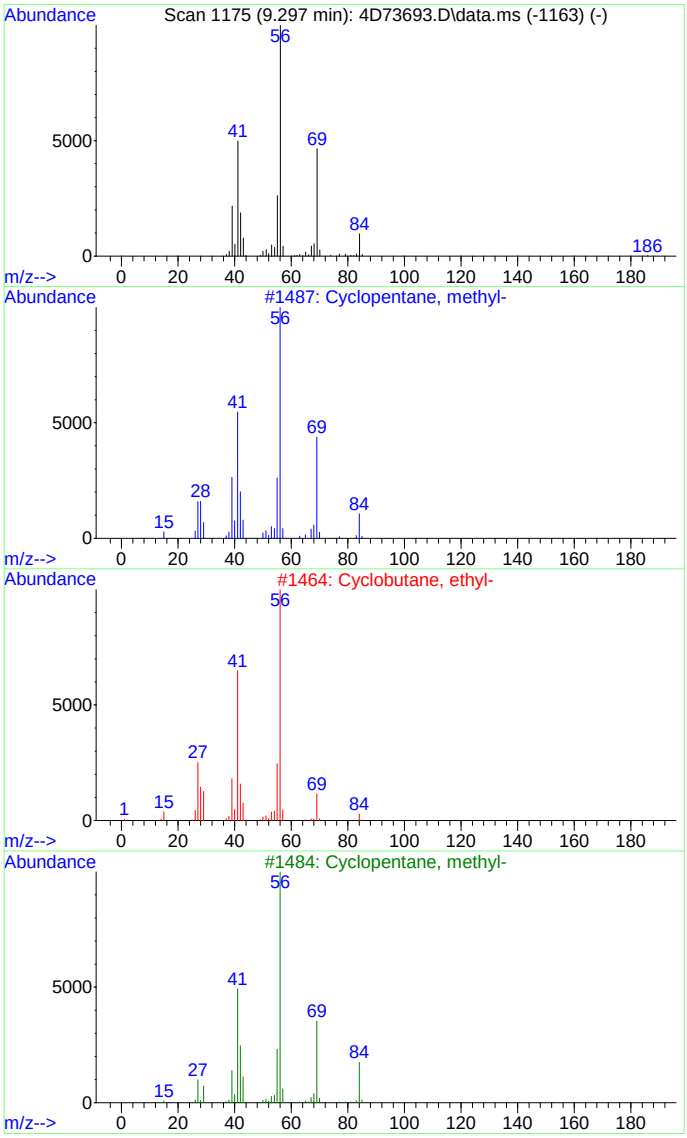
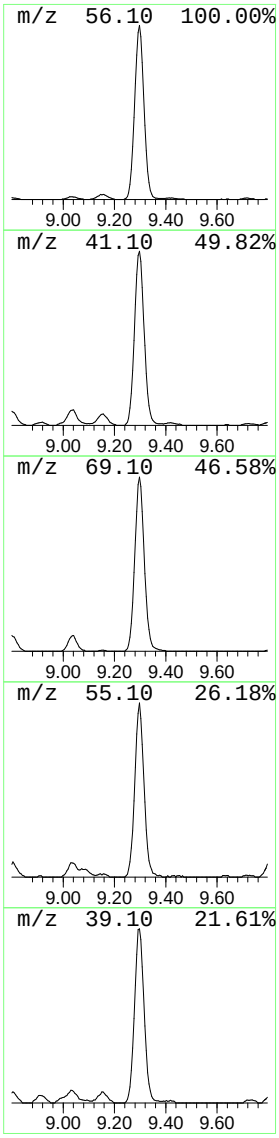
5	Cyclopentane, 1,1-dimethyl-	98	C7H14	001638-26-2	64





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Sample : jc30522-1
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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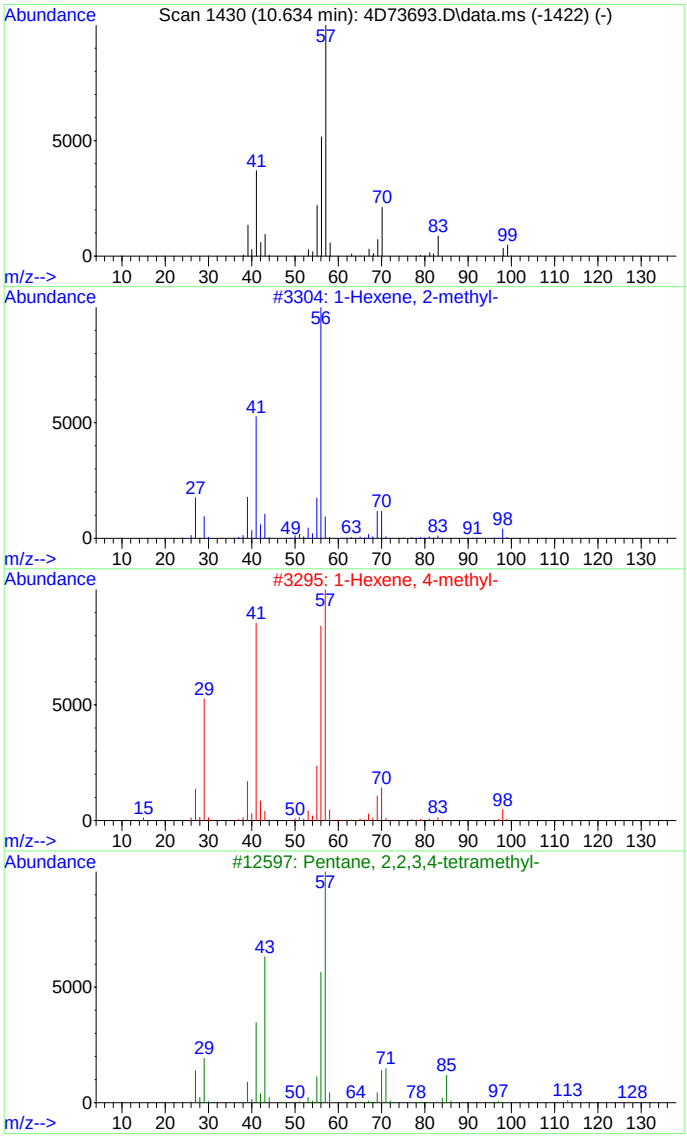
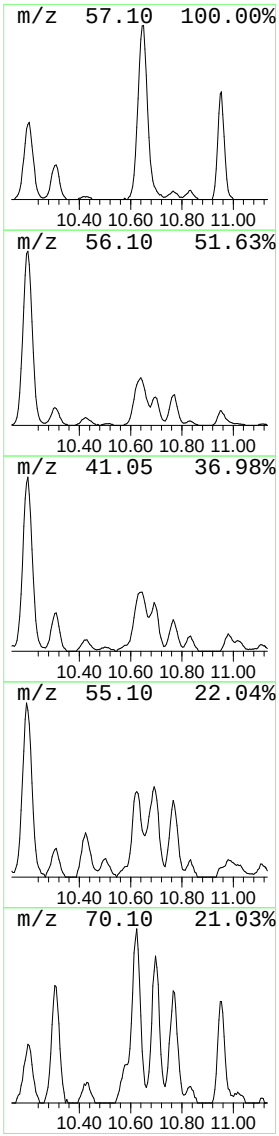
Peak Number 8 alkene Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.634	16.00 ug/L	215928	1,4-difluorobenzene	10.954

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Hexene, 2-methyl-	98	C7H14	006094-02-6	47
2	1-Hexene, 4-methyl-	98	C7H14	003769-23-1	40
3	Pentane, 2,2,3,4-tetramethyl-	128	C9H20	001186-53-4	38
4	Acetamide, N-2-propenyl-	99	C5H9NO	000692-33-1	37
5	1-Hexene, 2-methyl-	98	C7H14	006094-02-6	37





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Sample : jc30522-1
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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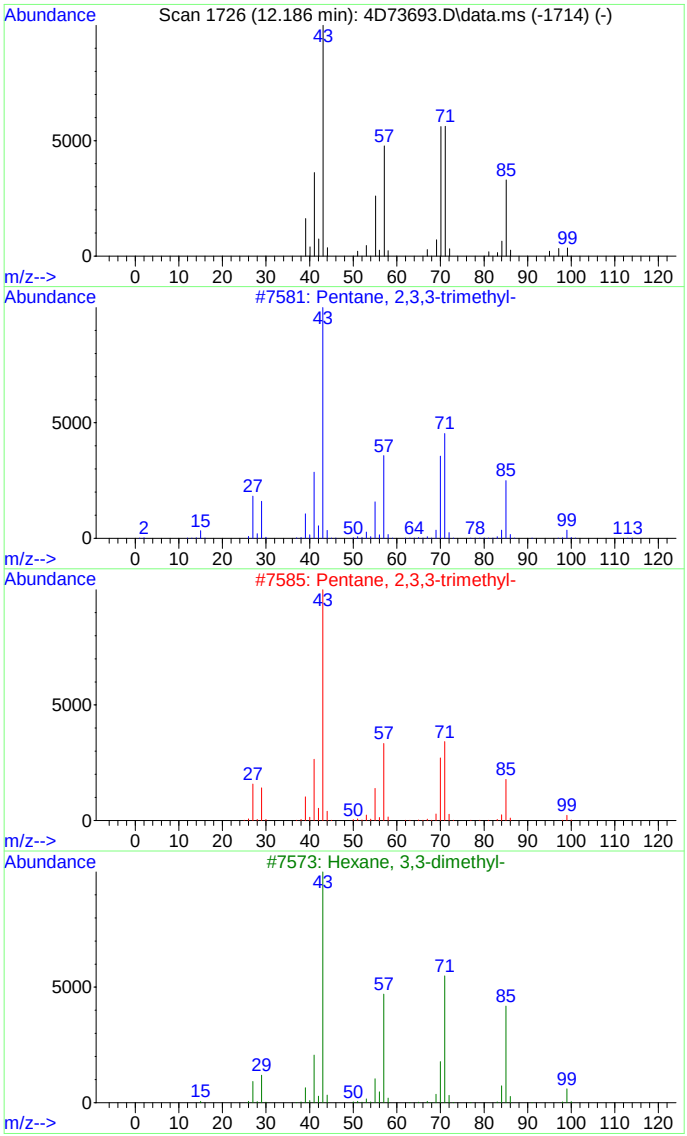
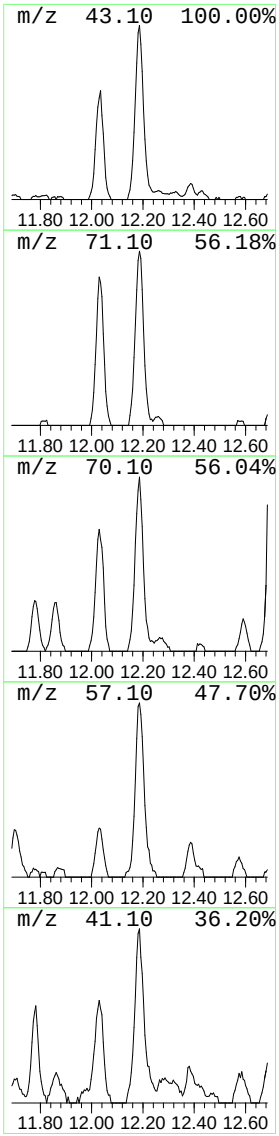
Peak Number 10 alkane Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.186	10.78 ug/L	145421	1,4-difluorobenzene	10.954

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	83
2	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	64
3	Hexane, 3,3-dimethyl-	114	C8H18	000563-16-6	59
4	Hexane, 2,3,4-trimethyl-	128	C9H20	000921-47-1	59
5	Sulfurous acid, hexyl pentyl ester	236	C11H24O3S	1000309-14-1	53





SGS ACCUTEST JC30522

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Sample : jc30522-1
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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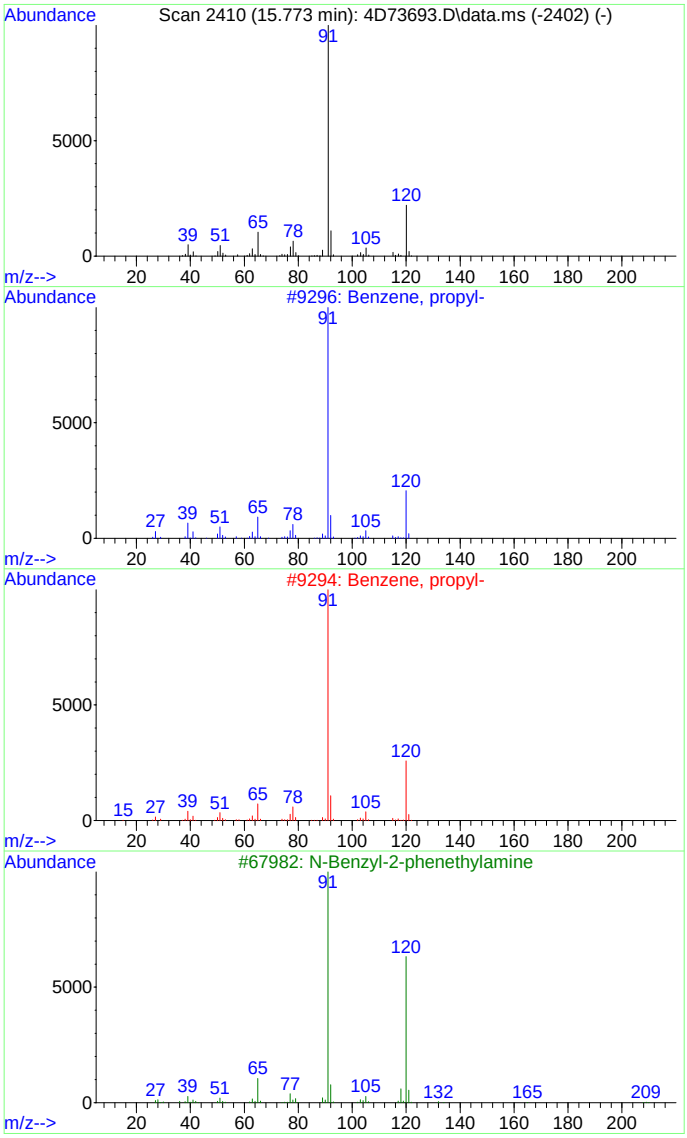
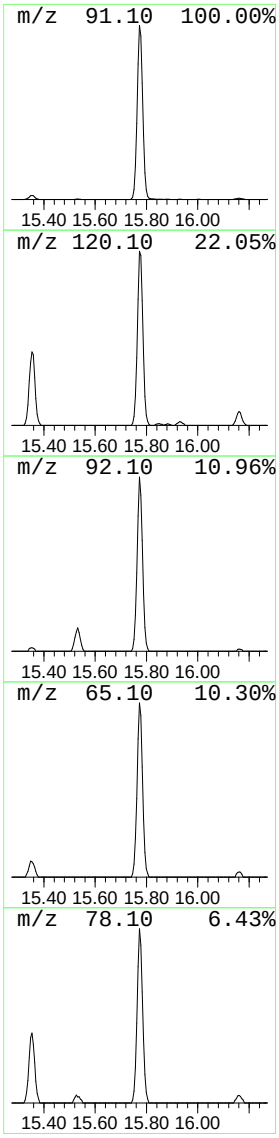
Peak Number 11 Benzene, propyl- Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.773	27.19 ug/L	473132	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, propyl-	120	C9H12	000103-65-1	91
2	Benzene, propyl-	120	C9H12	000103-65-1	91
3	N-Benzyl-2-phenethylamine	211	C15H17N	003647-71-0	78
4	1,2-Ethanediamine, N,N'-bis(phen...	240	C16H20N2	000140-28-3	64
5	N-Benzyl-2-phenethylamine	211	C15H17N	003647-71-0	56





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Sample : jc30522-1
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

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Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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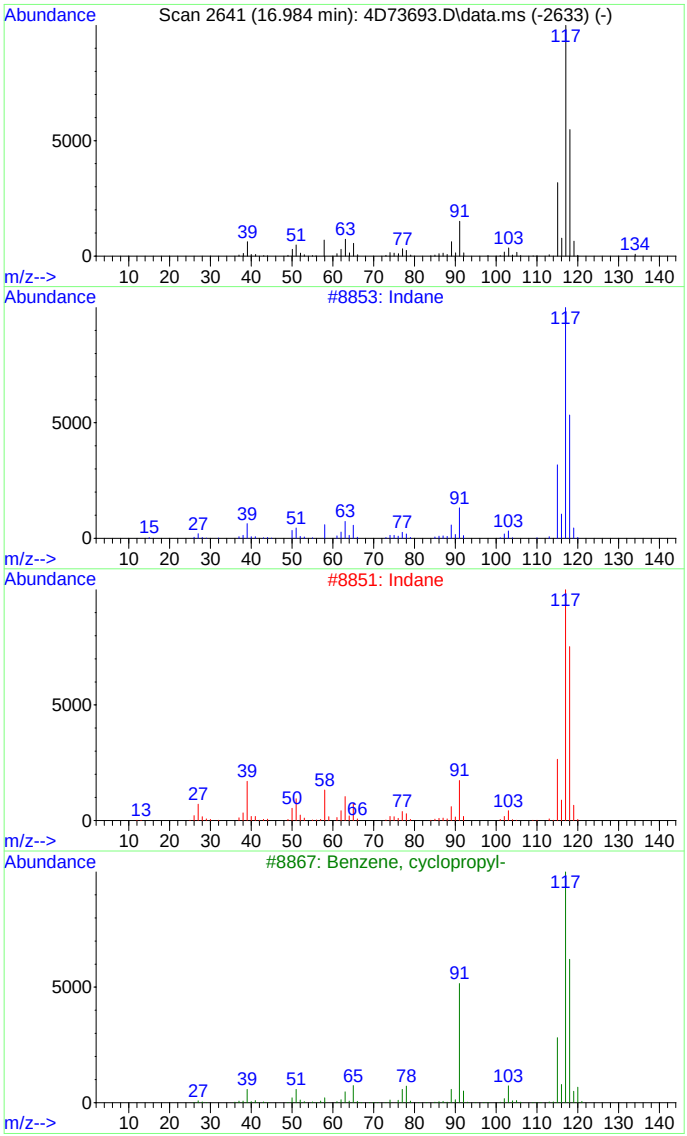
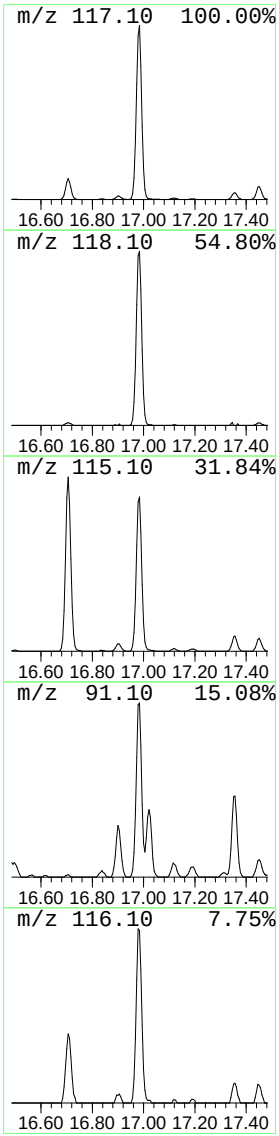
Peak Number 12 Indane Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.984	40.16 ug/L	698822	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indane	118	C9H10	000496-11-7	93
2	Indane	118	C9H10	000496-11-7	91
3	Benzene, cyclopropyl-	118	C9H10	000873-49-4	87
4	Deltacyclene	118	C9H10	007785-10-6	80
5	Benzene, 1-ethenyl-4-methyl-	118	C9H10	000622-97-9	64





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Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

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Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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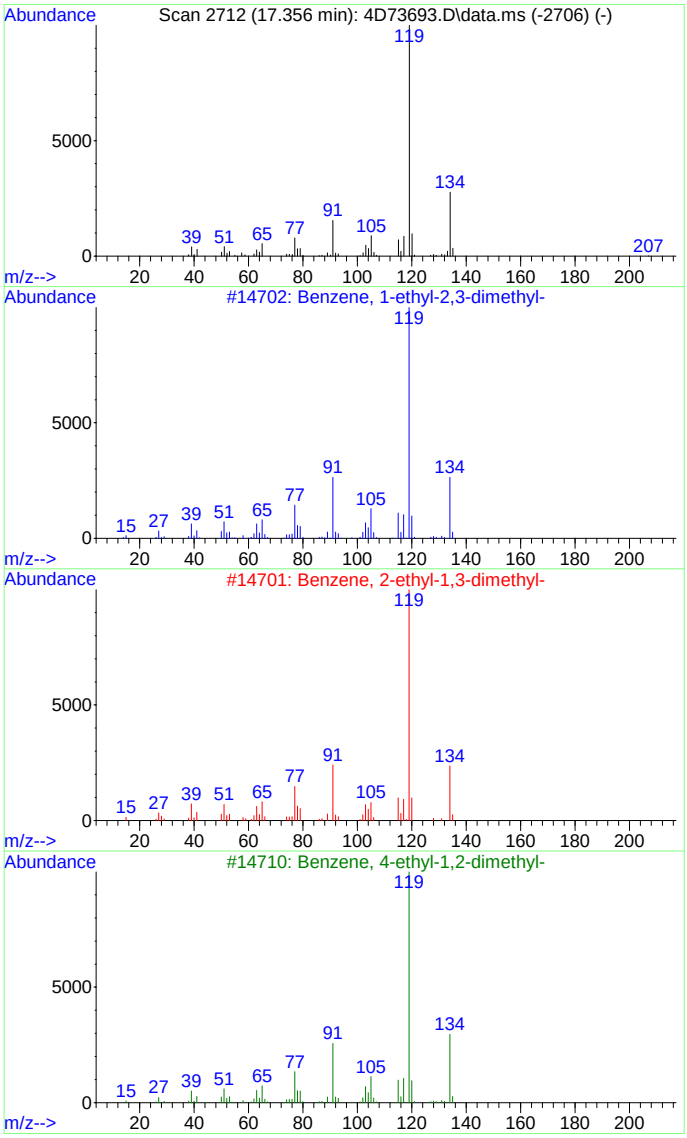
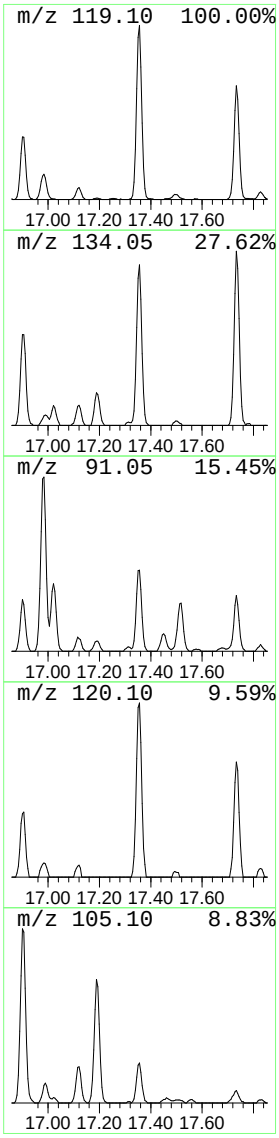
Peak Number 13 C4 alkyl benzene Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.356	14.77 ug/L	257093	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	96
2	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14	002870-04-4	95
3	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	95
4	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	94
5	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	94





SGS ACCUTEST JC30522

Library Search Compound Report

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Sample : jc30522-1
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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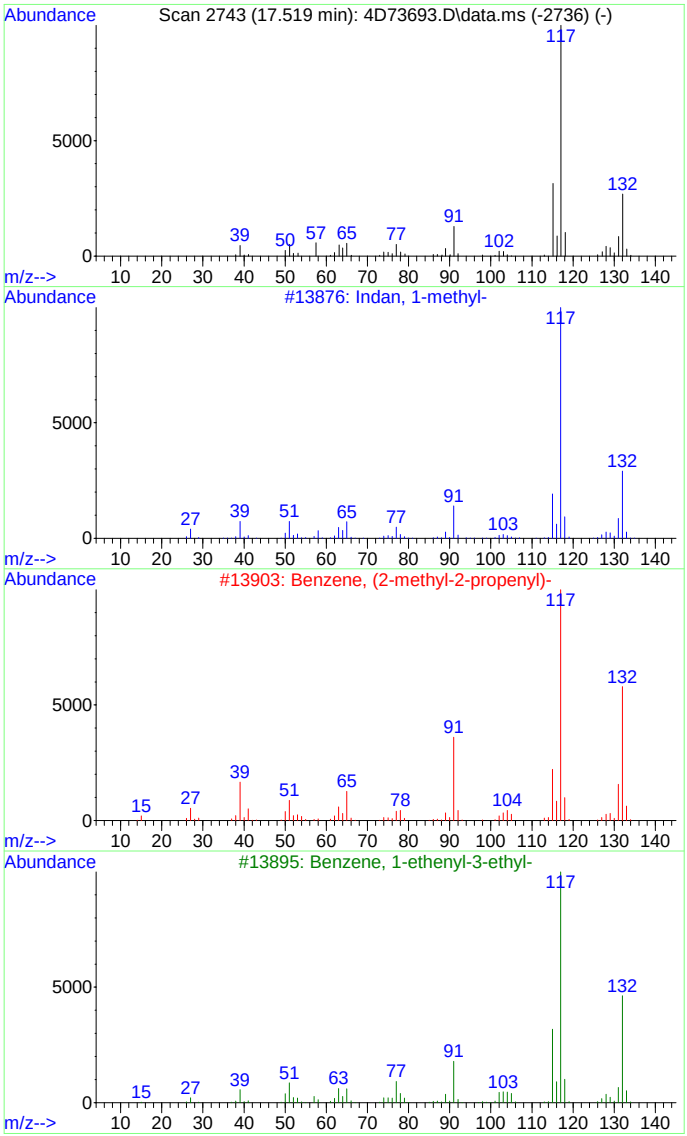
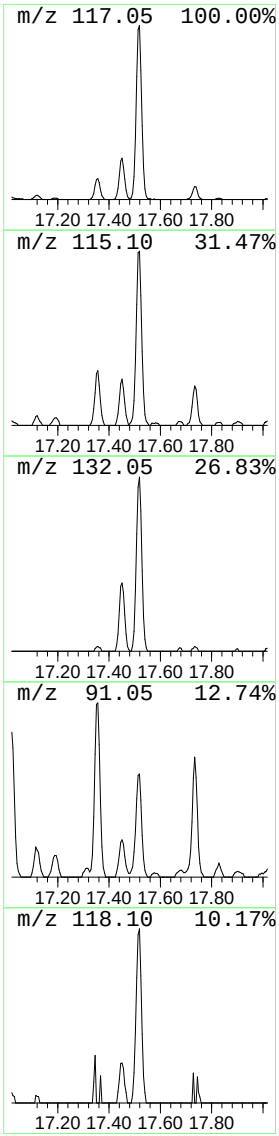
Peak Number 14 1H-Indene-dihydro-methyl- i... Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.519	12.25 ug/L	213180	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indan, 1-methyl-	132	C10H12	000767-58-8	87
2	Benzene, (2-methyl-2-propenyl)-	132	C10H12	003290-53-7	87
3	Benzene, 1-ethenyl-3-ethyl-	132	C10H12	007525-62-4	87
4	Benzene, 2-butenyl-	132	C10H12	001560-06-1	87
5	1H-Indene, 2,3-dihydro-2-methyl-	132	C10H12	000824-63-5	87





Library Search Compound Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73693.D
Acq On : 8 Nov 2016 11:33 am
Operator : XimenaC
Sample : jc30522-1
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

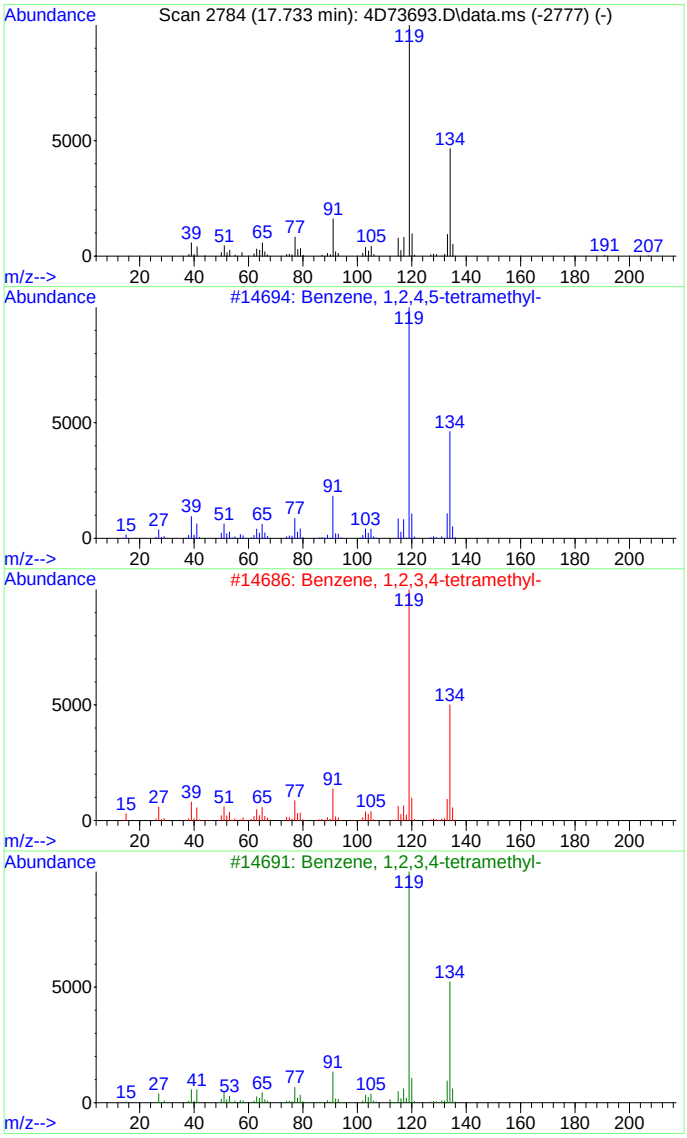
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

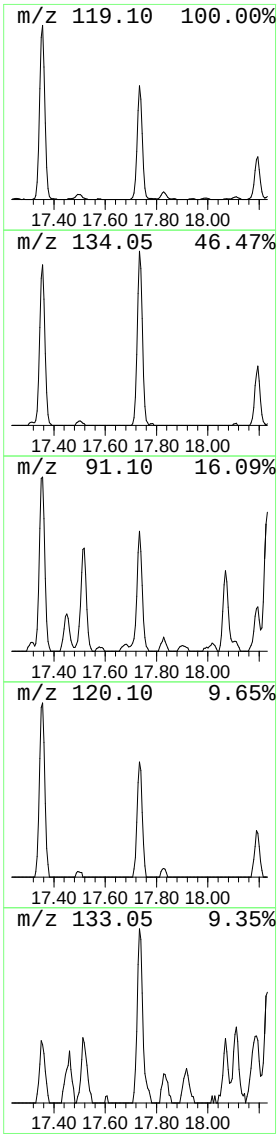
****

Peak Number 15 C4 alkyl benzene Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.733	10.34 ug/L	179904	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	97
2	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	95
3	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	95
4	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	95
5	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	95





Library Search Compound Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73693.D
Acq On : 8 Nov 2016 11:33 am
Operator : XimenaC
Sample : jc30522-1
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

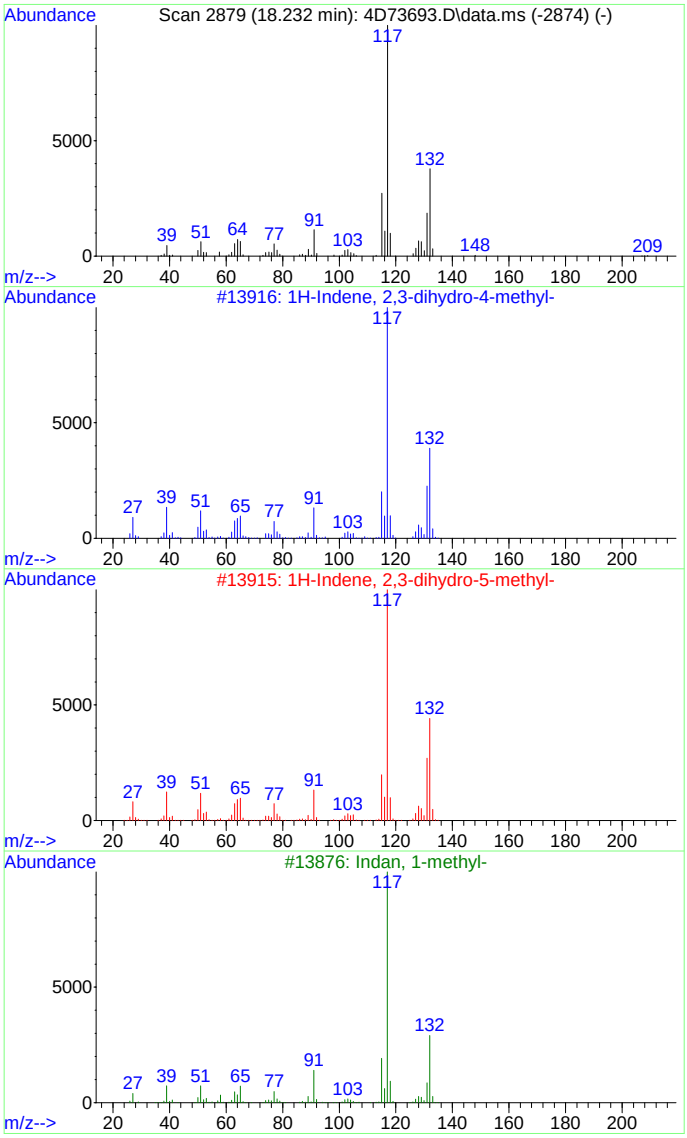
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

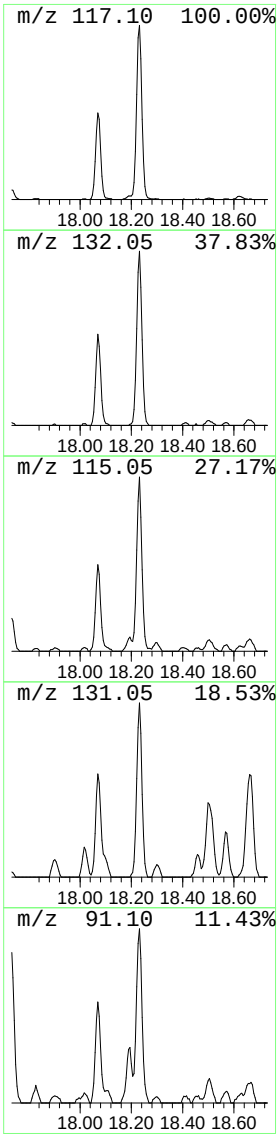
****

Peak Number 16 1H-Indene-dihydro-methyl- i... Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.232	18.57 ug/L	323168	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	90
2	1H-Indene, 2,3-dihydro-5-methyl-	132	C10H12	000874-35-1	90
3	Indan, 1-methyl-	132	C10H12	000767-58-8	87
4	Benzene, 1-ethenyl-4-ethyl-	132	C10H12	003454-07-7	81
5	Benzene, 1-ethenyl-4-ethyl-	132	C10H12	003454-07-7	81





Library Search Compound Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73693.D
Acq On : 8 Nov 2016 11:33 am
Operator : XimenaC
Sample : jc30522-1
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

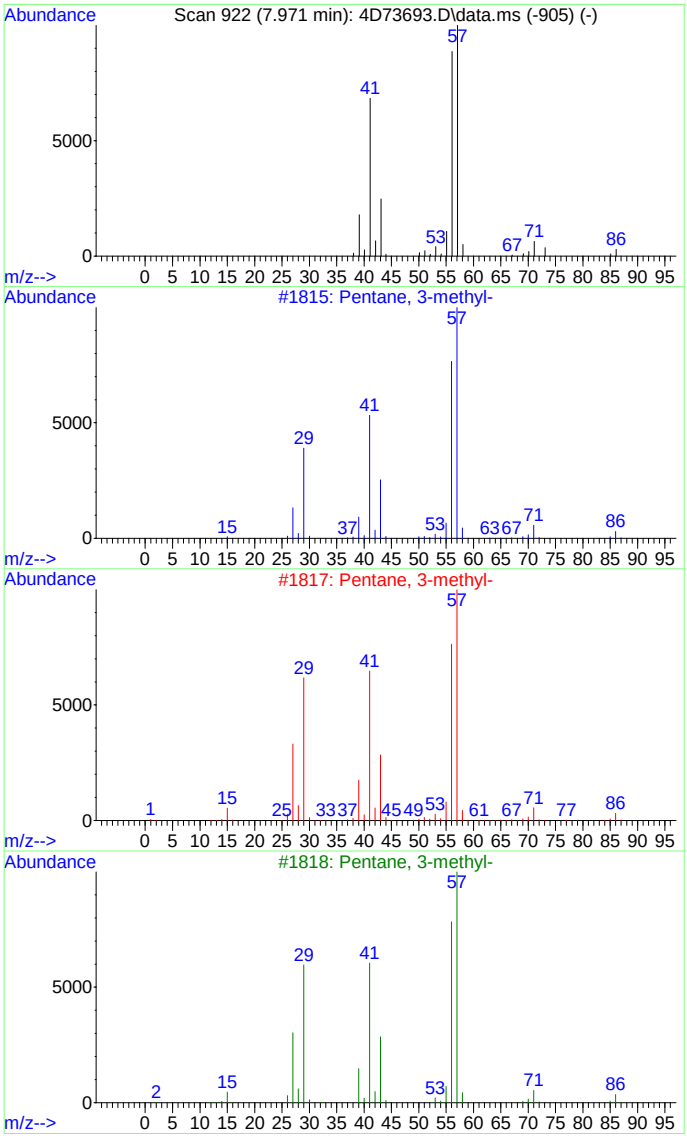
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

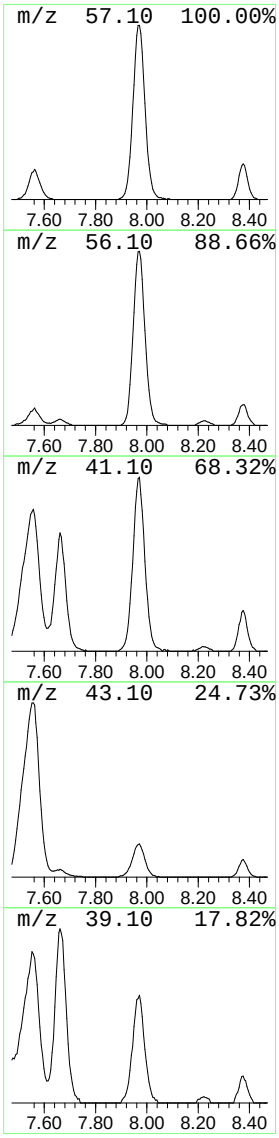
****

Peak Number 17 alkane Concentration Rank 17

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.971	23.29 ug/L	410017	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
2	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
3	Pentane, 3-methyl-	86	C6H14	000096-14-0	86
4	Hexane, 2,2,3-trimethyl-	128	C9H20	016747-25-4	64
5	Sulphuric acid dibutyl ester	210	C8H18O4S	000625-22-9	56





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73693.D
Acq On : 8 Nov 2016 11:33 am
Operator : XimenaC
Sample : jc30522-1
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
system artifact	3.273	274.8	ug/L	4837080	2	10.005	880202	50.0
alkane	4.023	15.8	ug/L	277564	2	10.005	880202	50.0
alkane	4.353	21.0	ug/L	369850	2	10.005	880202	50.0
alkane	5.439	107.9	ug/L	1898910	2	10.005	880202	50.0
alkane-Pentane	5.905	15.7	ug/L	275474	2	10.005	880202	50.0
cycloalkene	7.662	20.2	ug/L	354854	2	10.005	880202	50.0
cycloalkene	9.297	43.0	ug/L	757803	2	10.005	880202	50.0
alkene	10.634	16.0	ug/L	215928	3	10.954	674584	50.0
alkane	12.186	10.8	ug/L	145421	3	10.954	674584	50.0
Benzene, propyl-	15.773	27.2	ug/L	473132	5	16.706	870074	50.0
Indane	16.984	40.2	ug/L	698822	5	16.706	870074	50.0
C4 alkyl benzene	17.356	14.8	ug/L	257093	5	16.706	870074	50.0
1H-Indene-dihyd...	17.519	12.3	ug/L	213180	5	16.706	870074	50.0
C4 alkyl benzene	17.733	10.3	ug/L	179904	5	16.706	870074	50.0
1H-Indene-dihyd...	18.232	18.6	ug/L	323168	5	16.706	870074	50.0
alkane	7.971	23.3	ug/L	410017	2	10.005	880202	50.0

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73694.D
Acq On : 8 Nov 2016 12:00 pm
Operator : XimenaC
Sample : jc30522-2
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Nov 09 13:45:37 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um
QLast Update : Fri Sep 23 08:47:12 2016
Response via : Initial Calibration

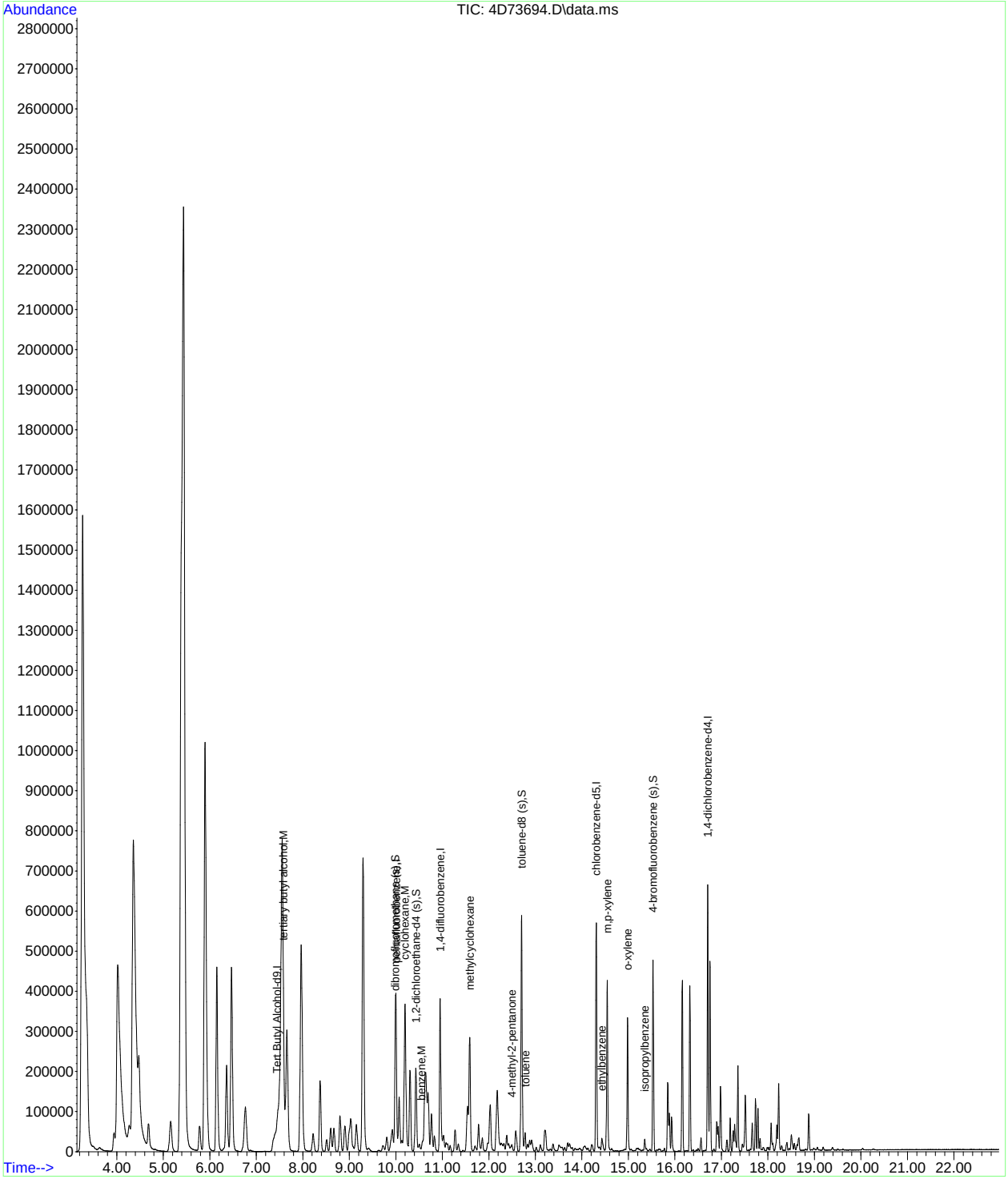
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.447	65	97874	500.00	ug/L	0.00
4) pentafluorobenzene	10.005	168	217362	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.954	114	318936	50.00	ug/L	0.00
86) chlorobenzene-d5	14.310	117	303114	50.00	ug/L	0.00
101) 1,4-dichlorobenzene-d4	16.706	152	161158	50.00	ug/L	0.00
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.984	113	109531	48.99	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 97.98%			
49) 1,2-dichloroethane-d4 (s)	10.435	65	112972	49.54	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 99.08%			
78) toluene-d8 (s)	12.705	98	379027	50.25	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 100.50%			
103) 4-bromofluorobenzene (s)	15.531	95	152173	50.54	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 101.08%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.583	59	33049	115.00	ug/L #	1
57) cyclohexane	10.194	84	91295	25.57	ug/L #	78
62) benzene	10.551	78	4352	0.43	ug/L	98
73) methylcyclohexane	11.589	83	124958	29.46	ug/L	97
79) 4-methyl-2-pentanone	12.496	58	4193	3.96	ug/L #	61
80) toluene	12.784	92	15636	2.52	ug/L	100
95) ethylbenzene	14.430	91	20063	1.63	ug/L	97
96) m,p-xylene	14.546	106	122582	26.62	ug/L	98
97) o-xylene	14.981	91	190967	19.05	ug/L	100
102) isopropylbenzene	15.353	105	19089	1.56	ug/L	97

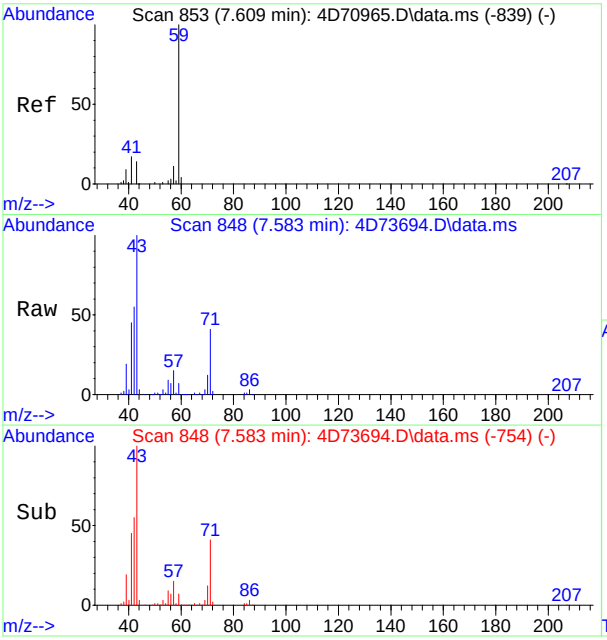
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73694.D
Acq On : 8 Nov 2016 12:00 pm
Operator : XimenaC
Sample : jc30522-2
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Nov 09 13:45:37 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um
QLast Update : Fri Sep 23 08:47:12 2016
Response via : Initial Calibration

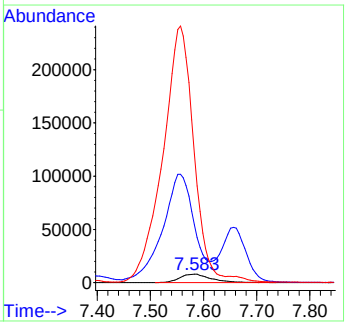


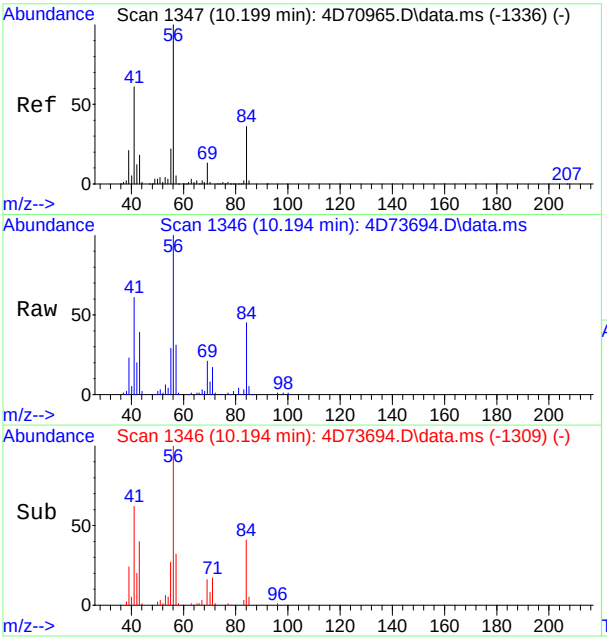


#3
tertiary butyl alcohol
Concen: 115.00 ug/L
RT: 7.583 min Scan# 848
Delta R.T. -0.006 min
Lab File: 4D73694.D
Acq: 8 Nov 2016 12:00 pm

Tgt Ion: 59 Resp: 33049

Ion	Ratio	Lower	Upper
59	100		
41	672.5	0.0	53.7#
43	1513.4	0.0	45.8#

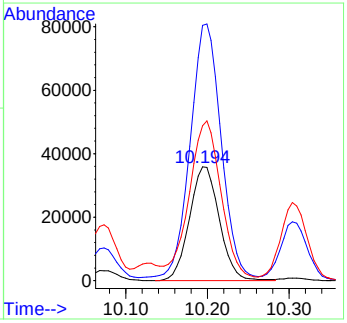


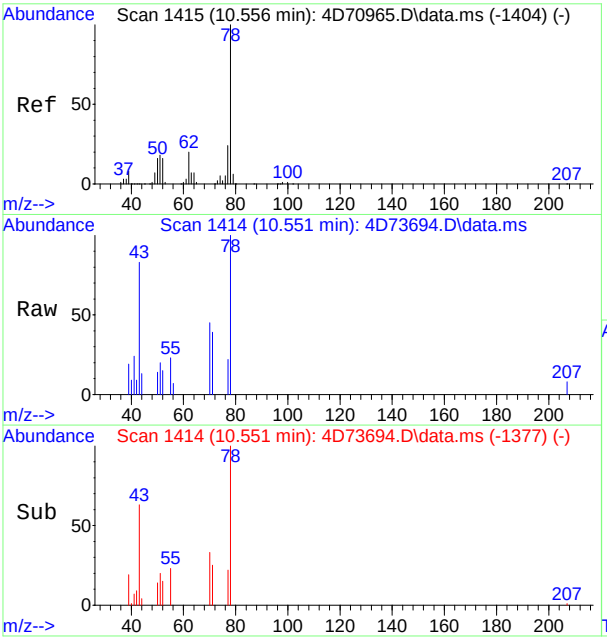


#57
cyclohexane
Concen: 25.57 ug/L
RT: 10.194 min Scan# 1346
Delta R.T. -0.006 min
Lab File: 4D73694.D
Acq: 8 Nov 2016 12:00 pm

Tgt Ion: 84 Resp: 91295

Ion	Ratio	Lower	Upper
84	100		
56	220.4	230.1	290.1#
41	122.5	118.6	178.6

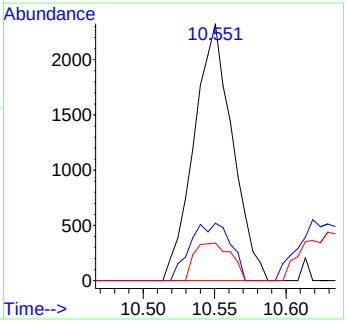


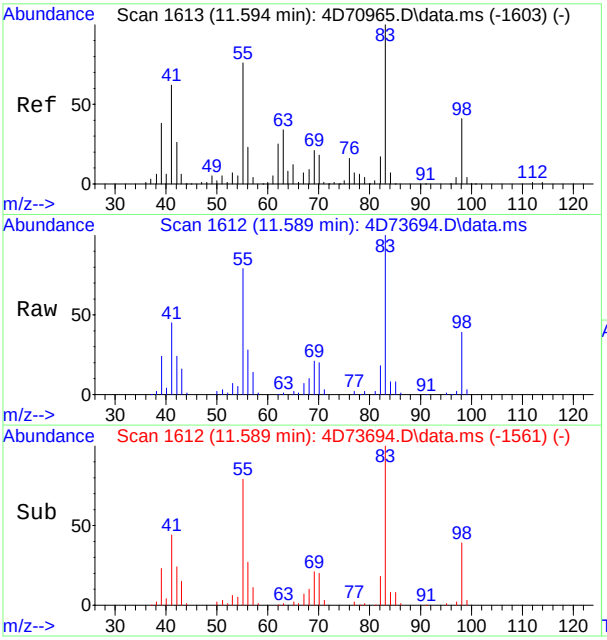


#62
benzene
Concen: 0.43 ug/L
RT: 10.551 min Scan# 1414
Delta R.T. -0.004 min
Lab File: 4D73694.D
Acq: 8 Nov 2016 12:00 pm

Tgt Ion: 78 Resp: 4352

Ion	Ratio	Lower	Upper
78	100		
77	22.4	0.0	53.6
52	14.7	0.0	45.7

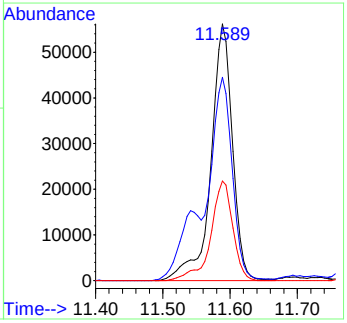


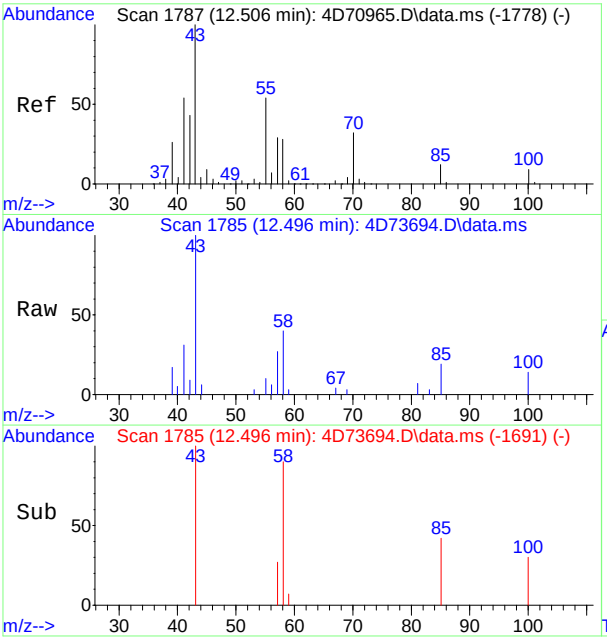


#73
methylcyclohexane
Concen: 29.46 ug/L
RT: 11.589 min Scan# 1612
Delta R.T. -0.034 min
Lab File: 4D73694.D
Acq: 8 Nov 2016 12:00 pm

Tgt Ion: 83 Resp: 124958

Ion	Ratio	Lower	Upper
83	100		
55	78.9	51.3	111.3
98	38.8	10.1	70.1

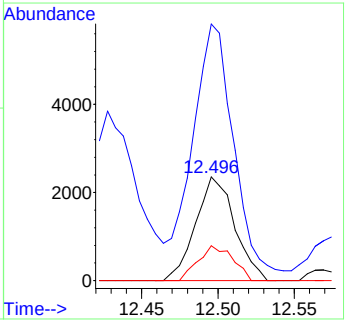


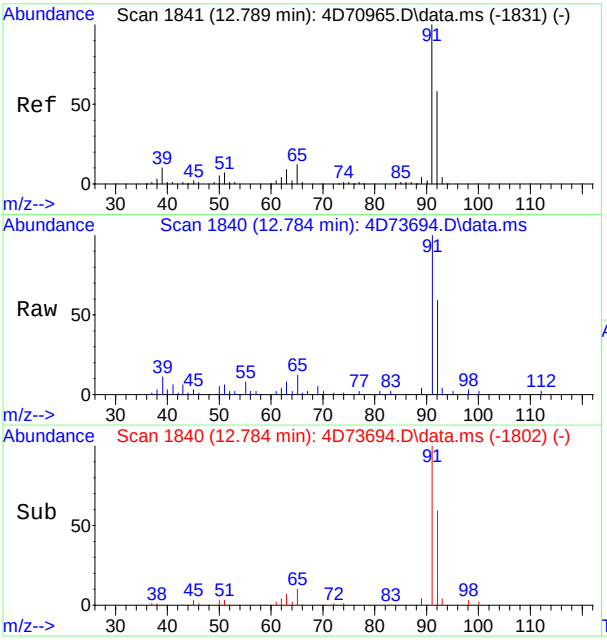


#79
4-methyl-2-pentanone
Concen: 3.96 ug/L
RT: 12.496 min Scan# 1785
Delta R.T. -0.006 min
Lab File: 4D73694.D
Acq: 8 Nov 2016 12:00 pm

Tgt Ion: 58 Resp: 4193

Ion	Ratio	Lower	Upper
58	100		
43	236.9	294.6	354.6#
100	33.7	0.0	60.0

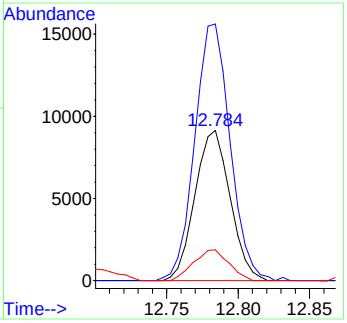


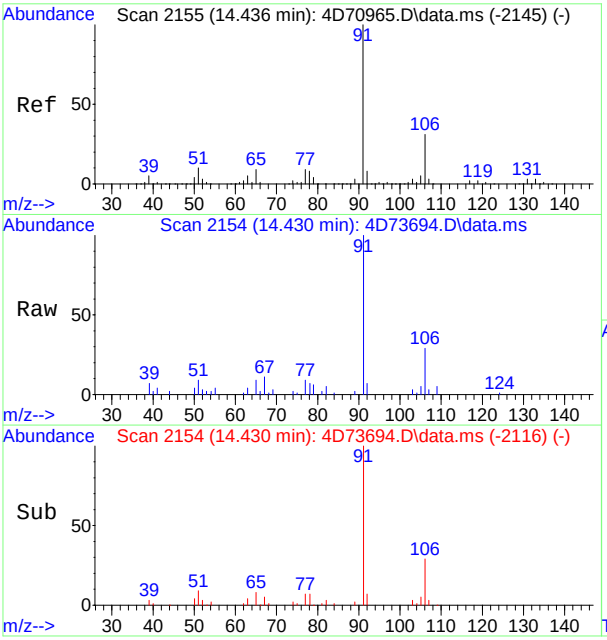


#80
toluene
Concen: 2.52 ug/L
RT: 12.784 min Scan# 1840
Delta R.T. -0.001 min
Lab File: 4D73694.D
Acq: 8 Nov 2016 12:00 pm

Tgt Ion: 92 Resp: 15636

Ion	Ratio	Lower	Upper
92	100		
91	170.8	140.6	200.6
65	20.4	0.0	49.1

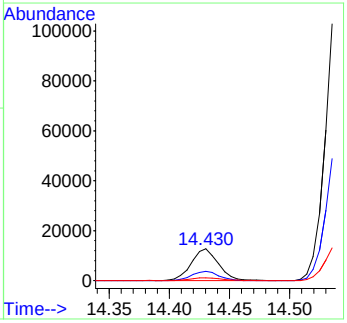


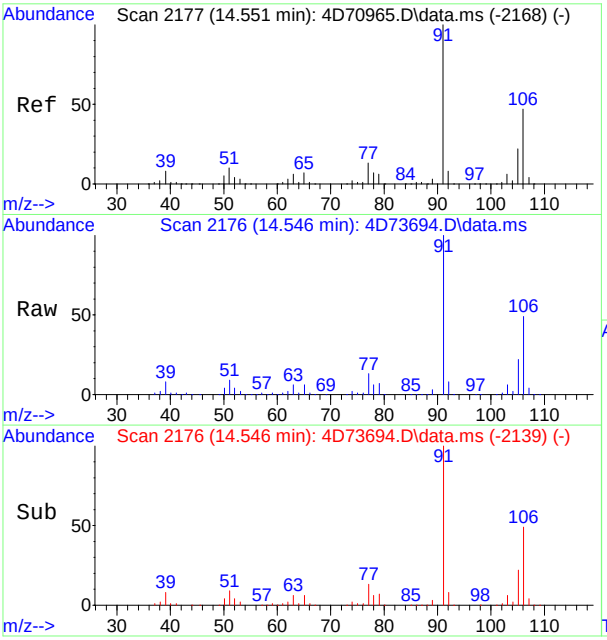


#95
ethylbenzene
Concen: 1.63 ug/L
RT: 14.430 min Scan# 2154
Delta R.T. -0.002 min
Lab File: 4D73694.D
Acq: 8 Nov 2016 12:00 pm

Tgt Ion: 91 Resp: 20063

Ion	Ratio	Lower	Upper
91	100		
106	28.8	0.5	60.5
77	9.1	0.0	38.4

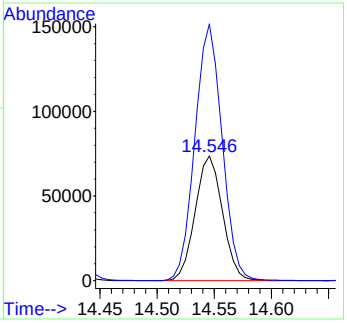


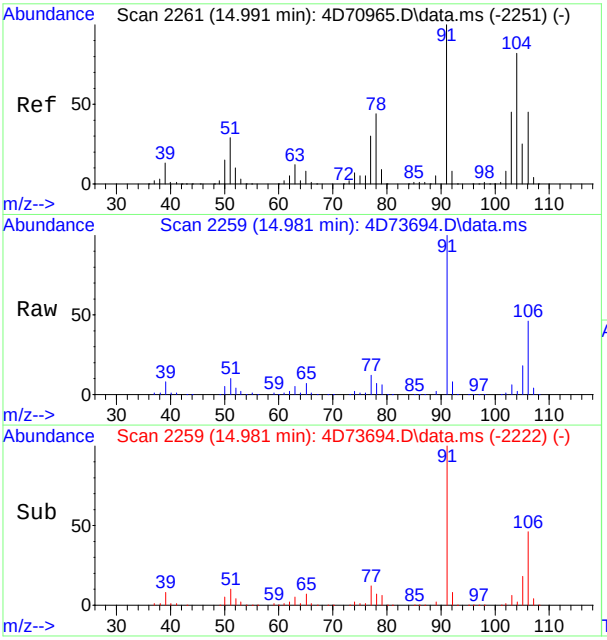


#96
m,p-xylene
Concen: 26.62 ug/L
RT: 14.546 min Scan# 2176
Delta R.T. -0.005 min
Lab File: 4D73694.D
Acq: 8 Nov 2016 12:00 pm

Tgt Ion:106 Resp: 122582

Ion	Ratio	Lower	Upper
106	100		
91	205.9	173.4	233.4

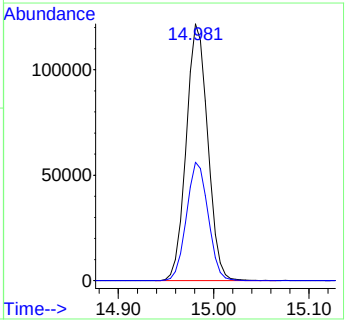


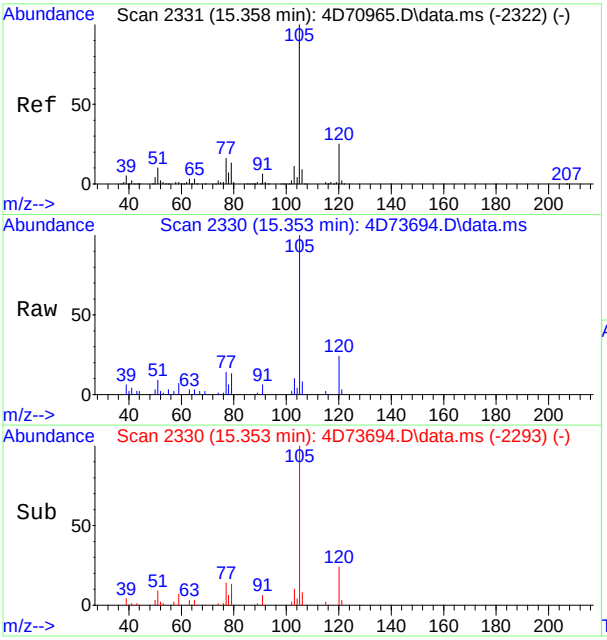


#97
o-xylene
Concen: 19.05 ug/L
RT: 14.981 min Scan# 2259
Delta R.T. -0.005 min
Lab File: 4D73694.D
Acq: 8 Nov 2016 12:00 pm

Tgt Ion: 91 Resp: 190967

Ion	Ratio	Lower	Upper
91	100		
106	46.1	16.4	76.4

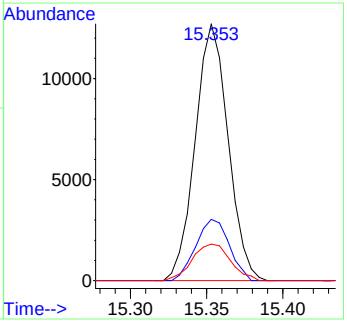




#102
isopropylbenzene
Concen: 1.56 ug/L
RT: 15.353 min Scan# 2330
Delta R.T. -0.005 min
Lab File: 4D73694.D
Acq: 8 Nov 2016 12:00 pm

Tgt Ion:105 Resp: 19089

Ion	Ratio	Lower	Upper
105	100		
120	23.8	0.0	55.5
77	14.3	0.0	45.2



LSC Area Percent Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73694.D
Acq On : 8 Nov 2016 12:00 pm
Operator : XimenaC
Sample : jc30522-2
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 36 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.5 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

Signal : TIC: 4D73694.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.268	5	25	66	rBV	1585963	7321307	60.04%	11.550%
2	3.939	143	153	158	rBV	45571	114675	0.94%	0.181%
3	4.023	158	169	207	rVV	463912	2760961	22.64%	4.356%
4	4.269	208	216	220	rVV2	62895	200275	1.64%	0.316%
5	4.358	221	233	251	rVV	772874	3894417	31.94%	6.144%
6	4.474	252	255	287	rVV2	234896	890588	7.30%	1.405%
7	4.684	287	295	314	rVB	63255	189520	1.55%	0.299%
8	5.161	371	386	407	rVB	75129	251995	2.07%	0.398%
9	5.433	413	438	473	rBV	2354983	12194772	100.00%	19.238%
10	5.779	494	504	514	rBV	60364	156231	1.28%	0.246%
11	5.900	514	527	557	rVB2	1018349	3179406	26.07%	5.016%
12	6.152	563	575	596	rBV	458173	1150999	9.44%	1.816%
13	6.361	596	615	625	rVV	213633	561941	4.61%	0.887%
14	6.466	625	635	660	rVB	458228	1244117	10.20%	1.963%
15	6.765	674	692	708	rBV	111247	403179	3.31%	0.636%
16	7.557	796	843	854	rBV2	780008	3624209	29.72%	5.717%
17	7.656	854	862	885	rVB	301328	969308	7.95%	1.529%
18	7.966	906	921	950	rVB	514834	1644196	13.48%	2.594%
19	8.223	958	970	986	rVB2	44785	126773	1.04%	0.200%
20	8.375	986	999	1015	rBV	176299	438551	3.60%	0.692%
21	8.516	1015	1026	1033	rVV	29314	69541	0.57%	0.110%
22	8.600	1033	1042	1049	rVV2	58492	142249	1.17%	0.224%
23	8.668	1049	1055	1069	rVV2	58299	139611	1.14%	0.220%
24	8.799	1069	1080	1091	rVV	88890	229632	1.88%	0.362%
25	8.904	1091	1100	1110	rVV4	63319	179147	1.47%	0.283%
26	9.030	1110	1124	1139	rVV3	81995	330919	2.71%	0.522%
27	9.151	1139	1147	1161	rVV	67373	192239	1.58%	0.303%
28	9.297	1162	1175	1191	rVV	732116	1945455	15.95%	3.069%
29	9.727	1247	1257	1264	rVV5	14466	43436	0.36%	0.069%
30	9.806	1264	1272	1280	rVV2	35654	89101	0.73%	0.141%
31	9.927	1280	1295	1300	rVV3	54090	177891	1.46%	0.281%
32	10.000	1300	1309	1317	rVV2	394316	964401	7.91%	1.521%
33	10.073	1317	1323	1330	rVV	134736	307533	2.52%	0.485%
34	10.131	1330	1334	1337	rVV	26693	52257	0.43%	0.082%
35	10.199	1337	1347	1359	rVV2	366505	1013801	8.31%	1.599%
36	10.304	1359	1367	1380	rVB	201530	459557	3.77%	0.725%
37	10.430	1380	1391	1400	rBV2	206807	467338	3.83%	0.737%
38	10.503	1400	1405	1412	rVV3	16860	42775	0.35%	0.067%
39	10.645	1412	1432	1438	rVV3	195585	777984	6.38%	1.227%
40	10.692	1438	1441	1449	rVV2	145639	298118	2.44%	0.470%
41	10.765	1449	1455	1462	rVV	92349	212219	1.74%	0.335%
42	10.828	1462	1467	1479	rVB	37686	78914	0.65%	0.124%
43	10.954	1482	1491	1500	rBV	381165	772078	6.33%	1.218%
44	11.028	1500	1505	1511	rVV4	38033	88542	0.73%	0.140%
45	11.080	1511	1515	1519	rVV2	19669	41302	0.34%	0.065%

LSC Area Percent Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73694.D
Acq On : 8 Nov 2016 12:00 pm
Operator : XimenaC
Sample : jc30522-2
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 36 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.5 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

46	11.274	1540	1552	1559	rBV2	54213	115401	0.95%	0.182%
47	11.342	1559	1565	1576	rVB2	18925	39816	0.33%	0.063%
48	11.541	1590	1603	1606	rBV3	112588	263031	2.16%	0.415%
49	11.589	1606	1612	1626	rVB	283285	607354	4.98%	0.958%
50	11.777	1641	1648	1658	rVV	64647	133203	1.09%	0.210%
51	11.861	1658	1664	1675	rVB2	32726	67584	0.55%	0.107%
52	12.029	1688	1696	1707	rVB2	113032	278914	2.29%	0.440%
53	12.181	1713	1725	1737	rBV3	150158	466705	3.83%	0.736%
54	12.265	1738	1741	1748	rVV5	18477	48975	0.40%	0.077%
55	12.386	1757	1764	1769	rVV2	38225	79183	0.65%	0.125%
56	12.496	1777	1785	1793	rVB3	15051	38580	0.32%	0.061%
57	12.580	1793	1801	1813	rVB5	50936	127345	1.04%	0.201%
58	12.705	1813	1825	1833	rBV	588205	1114873	9.14%	1.759%
59	12.779	1833	1839	1845	rVV	44093	83738	0.69%	0.132%
60	12.878	1853	1858	1862	rVV2	24945	50859	0.42%	0.080%
61	12.920	1862	1866	1877	rVB4	27562	64990	0.53%	0.103%
62	13.104	1895	1901	1912	rBV3	16712	39089	0.32%	0.062%
63	13.203	1912	1920	1933	rBV6	51077	148344	1.22%	0.234%
64	13.508	1970	1978	1985	rBV5	14388	38870	0.32%	0.061%
65	13.696	2007	2014	2018	rBV3	19959	38783	0.32%	0.061%
66	14.063	2073	2084	2093	rBV7	11431	40319	0.33%	0.064%
67	14.215	2104	2113	2122	rVB3	16732	40359	0.33%	0.064%
68	14.310	2122	2131	2140	rBV	569174	921238	7.55%	1.453%
69	14.430	2149	2154	2165	rVB2	29906	62814	0.52%	0.099%
70	14.546	2165	2176	2189	rBV	423616	720545	5.91%	1.137%
71	14.981	2252	2259	2270	rVB	330195	520223	4.27%	0.821%
72	15.353	2324	2330	2335	rBV	27849	42493	0.35%	0.067%
73	15.531	2357	2364	2374	rVB	476934	720174	5.91%	1.136%
74	15.846	2418	2424	2428	rBV	172037	268543	2.20%	0.424%
75	15.877	2428	2430	2435	rVV	94723	124923	1.02%	0.197%
76	15.930	2435	2440	2450	rVB	85802	134241	1.10%	0.212%
77	16.161	2476	2484	2492	rVV	426730	630486	5.17%	0.995%
78	16.323	2508	2515	2522	rVV	413153	603875	4.95%	0.953%
79	16.559	2554	2560	2567	rVV	33841	49978	0.41%	0.079%
80	16.706	2581	2588	2593	rVV	664725	979177	8.03%	1.545%
81	16.753	2593	2597	2609	rVV	473894	693356	5.69%	1.094%
82	16.900	2619	2625	2628	rBV	73611	107303	0.88%	0.169%
83	16.931	2628	2631	2635	rVV	61324	83053	0.68%	0.131%
84	16.978	2635	2640	2653	rVB2	161699	266510	2.19%	0.420%
85	17.120	2657	2667	2672	rBV	28062	43576	0.36%	0.069%
86	17.188	2672	2680	2687	rBV	83189	121043	0.99%	0.191%
87	17.251	2687	2692	2695	rVV	50366	72269	0.59%	0.114%
88	17.288	2695	2699	2707	rVV2	66744	124331	1.02%	0.196%
89	17.356	2707	2712	2719	rVB	212395	294319	2.41%	0.464%
90	17.513	2734	2742	2751	rVB2	138615	241412	1.98%	0.381%
91	17.660	2765	2770	2777	rVV	68251	103490	0.85%	0.163%
92	17.733	2777	2784	2789	rVV	129073	179163	1.47%	0.283%
93	17.786	2789	2794	2799	rVV	105006	143254	1.17%	0.226%

LSC Area Percent Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73694.D
Acq On : 8 Nov 2016 12:00 pm
Operator : XimenaC
Sample : jc30522-2
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 36 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.5 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

94	17.828	2799	2802	2807	rVV	29601	40102	0.33%	0.063%
95	18.069	2842	2848	2852	rVV	68765	103487	0.85%	0.163%
96	18.190	2860	2871	2875	rBV	63910	118043	0.97%	0.186%
97	18.232	2875	2879	2886	rVV	166880	243379	2.00%	0.384%
98	18.504	2926	2931	2939	rVV3	38891	82479	0.68%	0.130%
99	18.667	2957	2962	2968	rVB2	31021	55547	0.46%	0.088%
100	18.876	2996	3002	3010	rVB	90580	134072	1.10%	0.212%

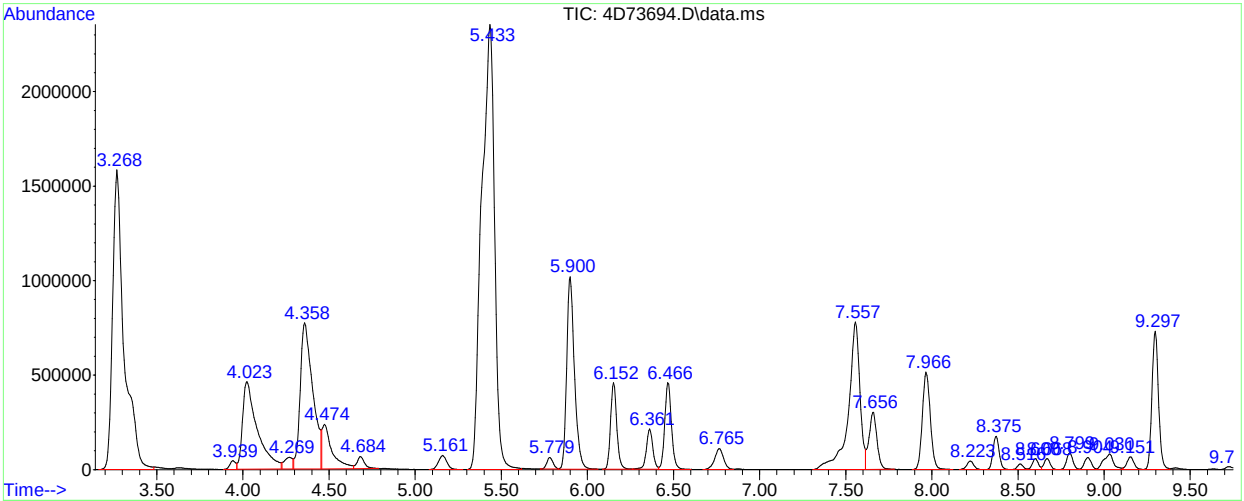
Sum of corrected areas: 63388673

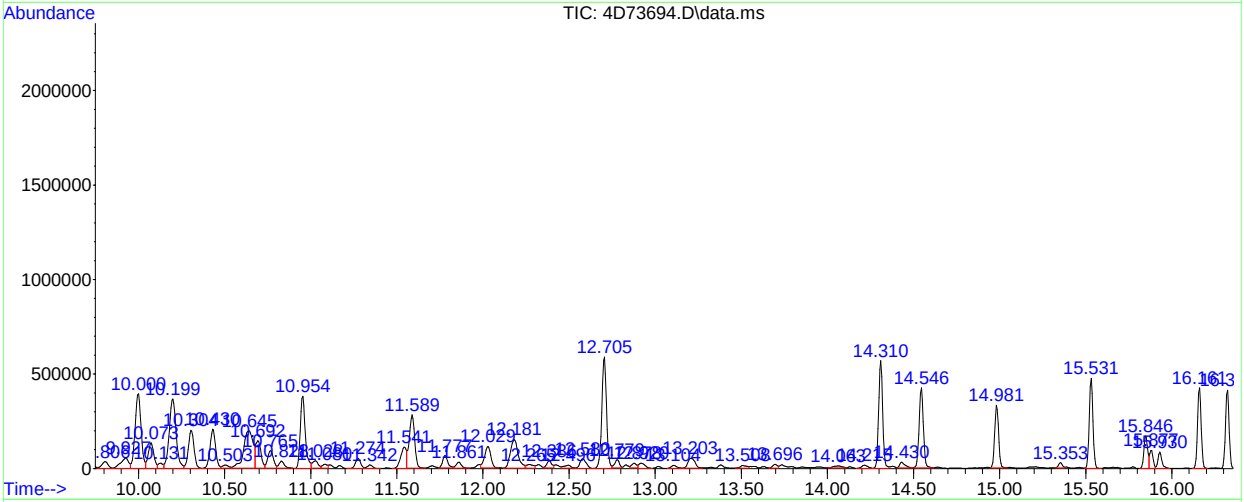
LSC Report - Integrated Chromatogram

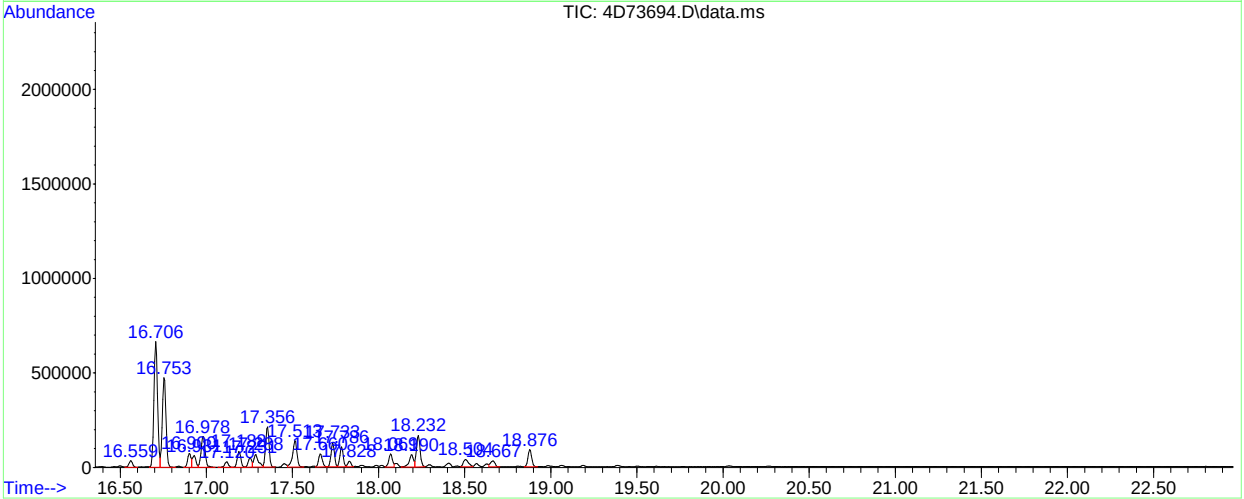
Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73694.D
Acq On : 8 Nov 2016 12:00 pm
Operator : XimenaC
Sample : jc30522-2
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p







SGS ACCUTEST JC30522

Library Search Compound Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73694.D
Acq On : 8 Nov 2016 12:00 pm
Operator : XimenaC
Sample : jc30522-2
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

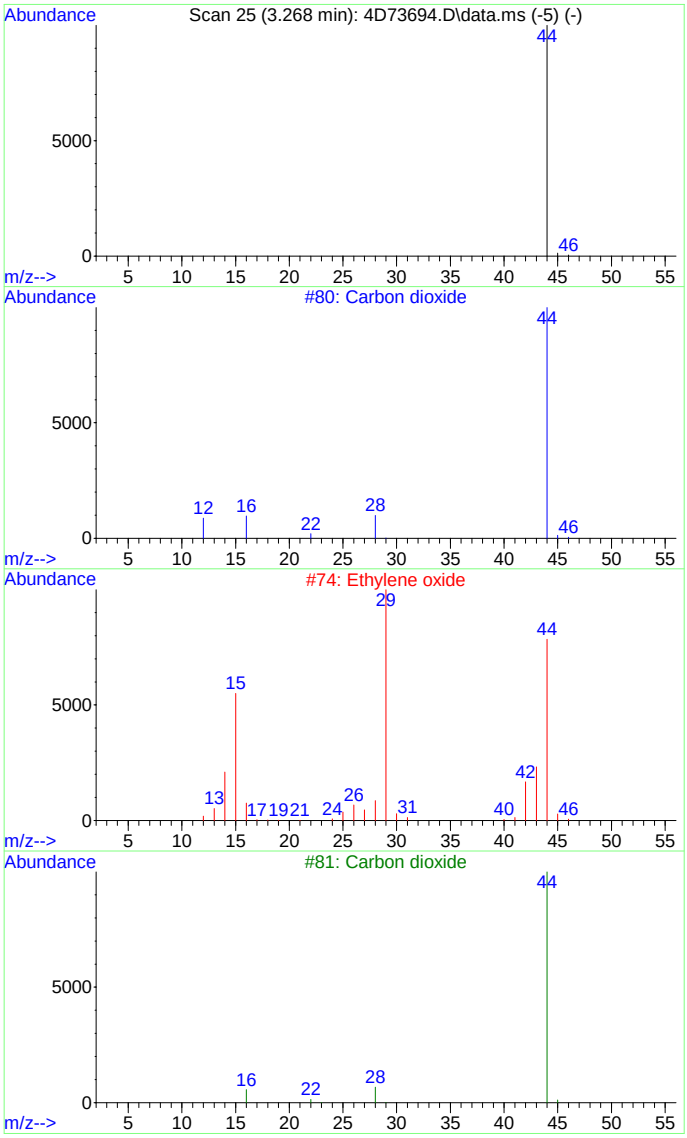
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

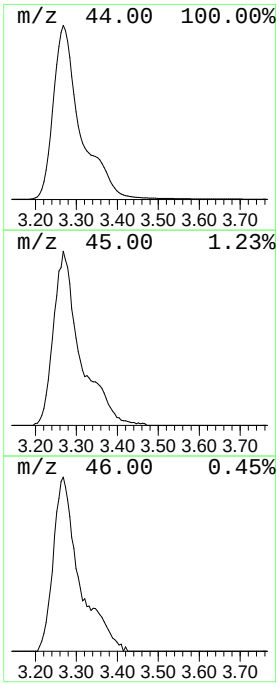
****

Peak Number 1 system artifact Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.268	379.58 ug/L	7321310	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Ethylene oxide	44	C2H4O	000075-21-8	3
3	Carbon dioxide	44	CO2	000124-38-9	3
4	Nitrous Oxide	44	N2O	010024-97-2	3
5	Nitrous Oxide	44	N2O	010024-97-2	3





SGS ACCUTEST JC30522

Library Search Compound Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73694.D
Acq On : 8 Nov 2016 12:00 pm
Operator : XimenaC
Sample : jc30522-2
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

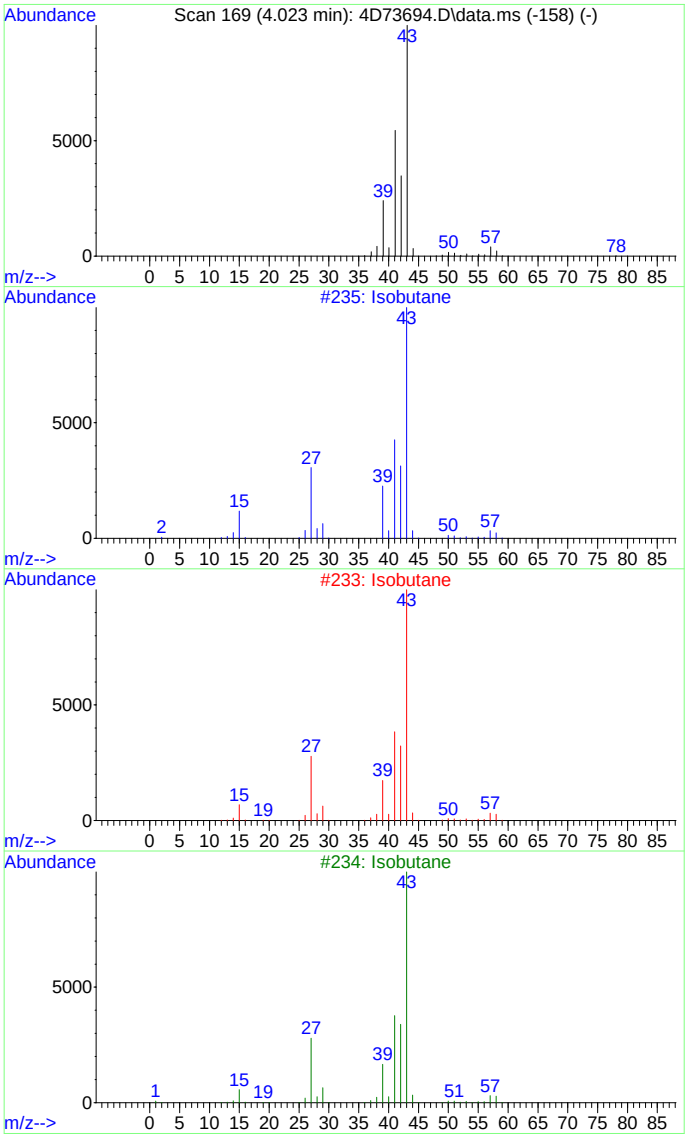
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

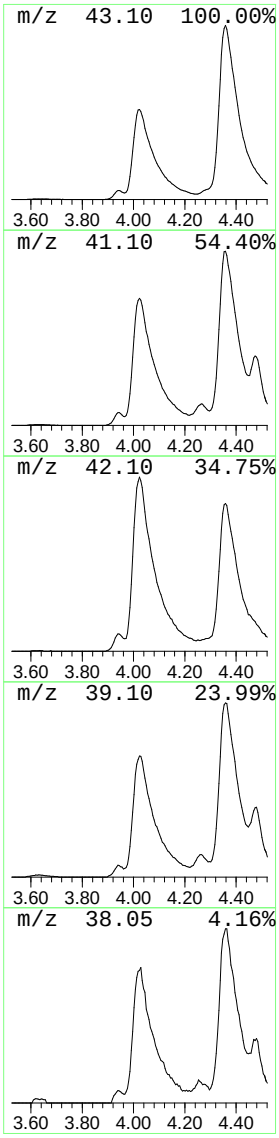
****

Peak Number 2 alkane Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.023	143.14 ug/L	2760960	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Isobutane	58	C4H10	000075-28-5	64
2	Isobutane	58	C4H10	000075-28-5	53
3	Isobutane	58	C4H10	000075-28-5	50
4	Isobutane	58	C4H10	000075-28-5	36
5	Propane, 2-nitro-	89	C3H7NO2	000079-46-9	9





SGS ACCUTEST JC30522

Library Search Compound Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73694.D
Acq On : 8 Nov 2016 12:00 pm
Operator : XimenaC
Sample : jc30522-2
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

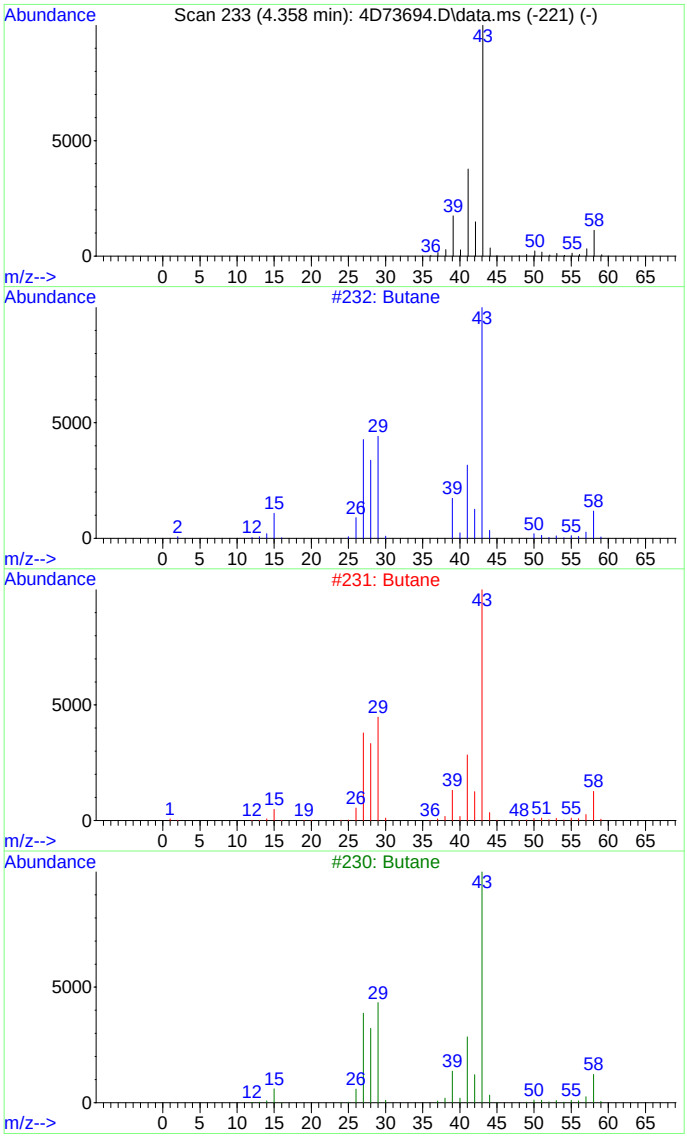
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

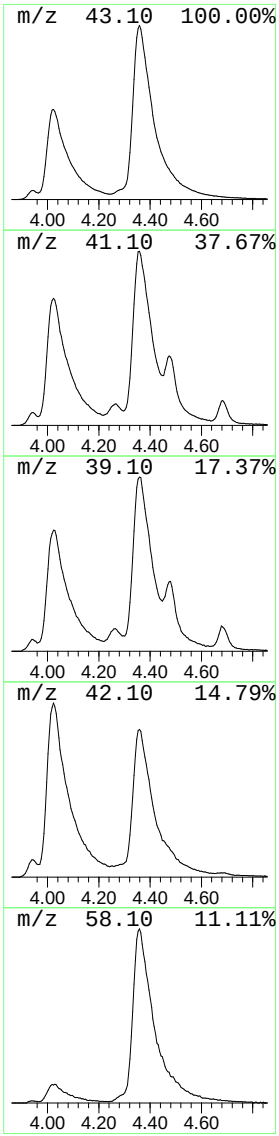
****

Peak Number 3 alkane Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.358	201.91 ug/L	3894420	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane	58	C4H10	000106-97-8	72
2	Butane	58	C4H10	000106-97-8	64
3	Butane	58	C4H10	000106-97-8	64
4	Isopropylsulfonyl chloride	142	C3H7ClO2S	010147-37-2	9
5	Isobutane	58	C4H10	000075-28-5	9





SGS ACCUTEST JC30522

Library Search Compound Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73694.D
Acq On : 8 Nov 2016 12:00 pm
Operator : XimenaC
Sample : jc30522-2
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

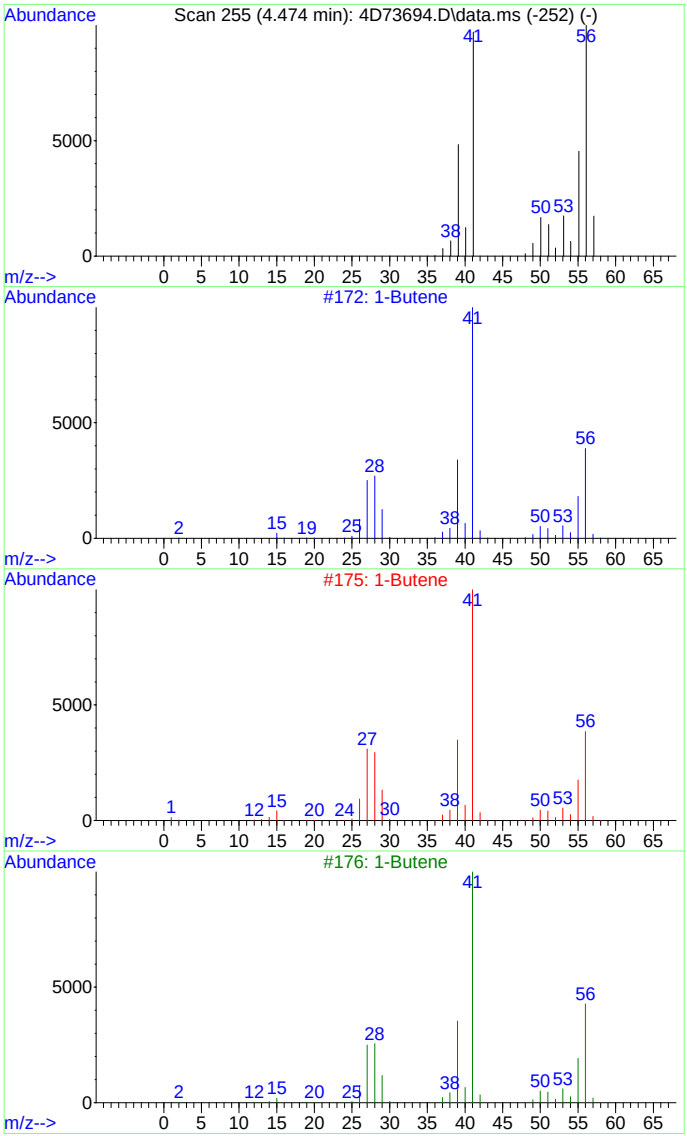
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

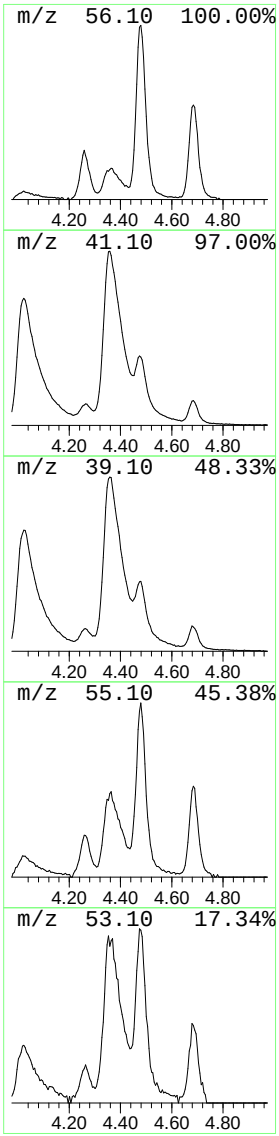
****

Peak Number 4 alkene Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.474	46.17 ug/L	890588	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Butene	56	C4H8	000106-98-9	52
2	1-Butene	56	C4H8	000106-98-9	50
3	1-Butene	56	C4H8	000106-98-9	50
4	Cyclobutane	56	C4H8	000287-23-0	47
5	2-Butene, (Z)-	56	C4H8	000590-18-1	47





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Acq On : 8 Nov 2016 12:00 pm
Operator : XimenaC
Sample : jc30522-2
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

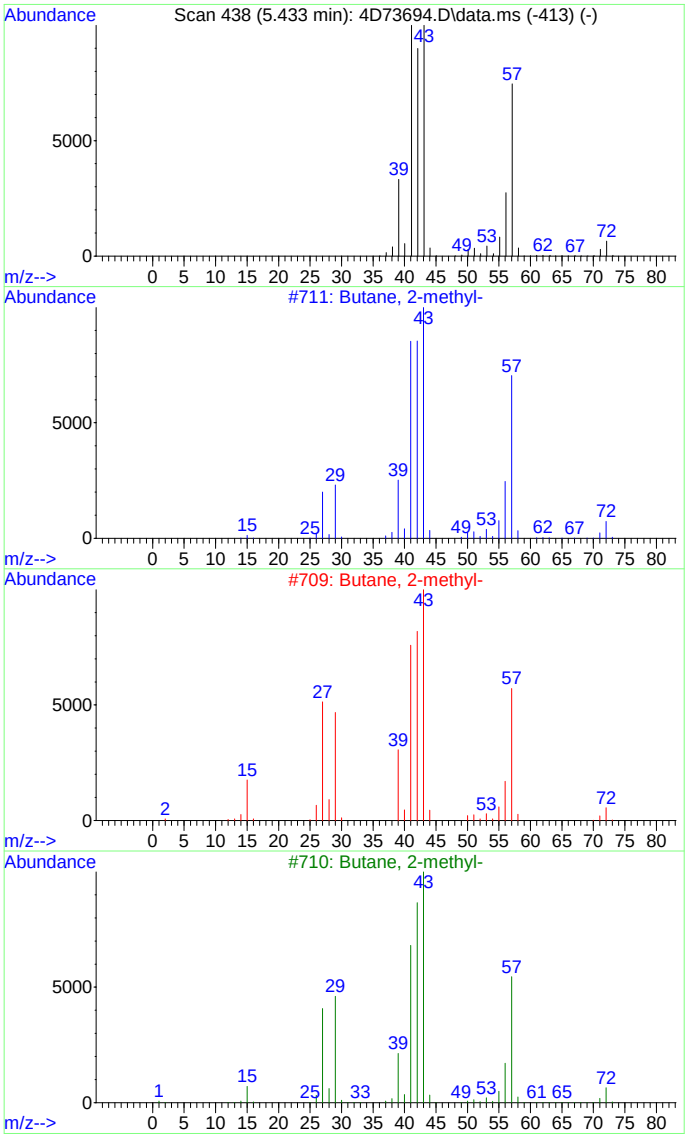
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

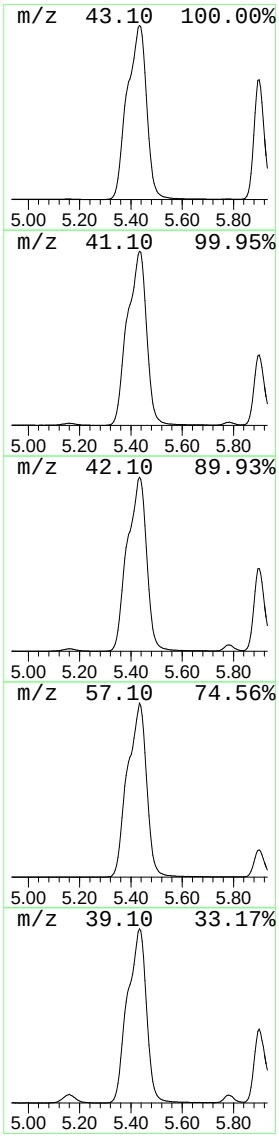
****

Peak Number 5 alkane Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.433	632.25 ug/L	12194800	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	94
2	Butane, 2-methyl-	72	C5H12	000078-78-4	86
3	Butane, 2-methyl-	72	C5H12	000078-78-4	86
4	3-Buten-1-ol	72	C4H8O	000627-27-0	43
5	Pentane	72	C5H12	000109-66-0	40





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ALS Vial : 36 Sample Multiplier: 1

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Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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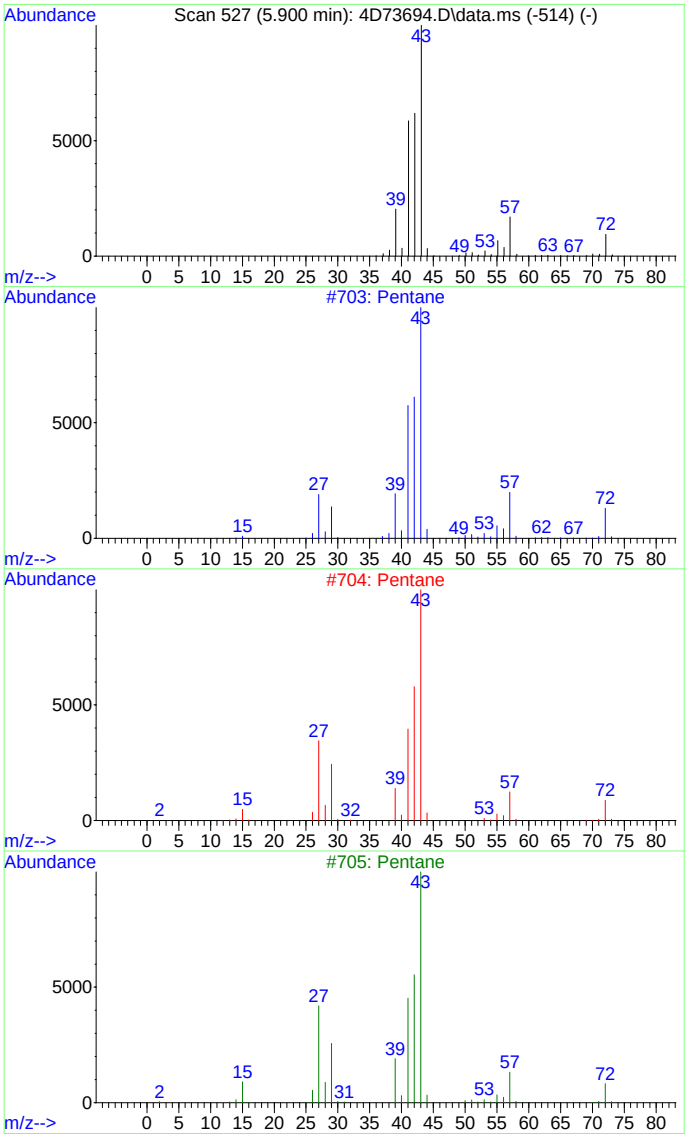
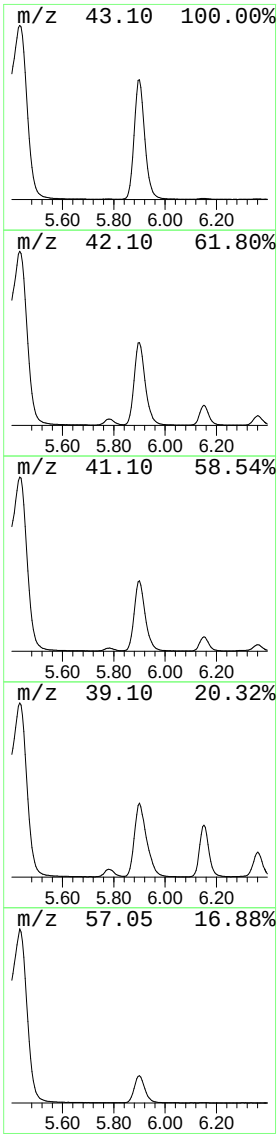
Peak Number 6 alkane-Pentane Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.900	164.84 ug/L	3179410	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane	72	C5H12	000109-66-0	91
2	Pentane	72	C5H12	000109-66-0	86
3	Pentane	72	C5H12	000109-66-0	86
4	Pentane	72	C5H12	000109-66-0	72
5	Butane, 2-methyl-	72	C5H12	000078-78-4	72





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ALS Vial : 36 Sample Multiplier: 1

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Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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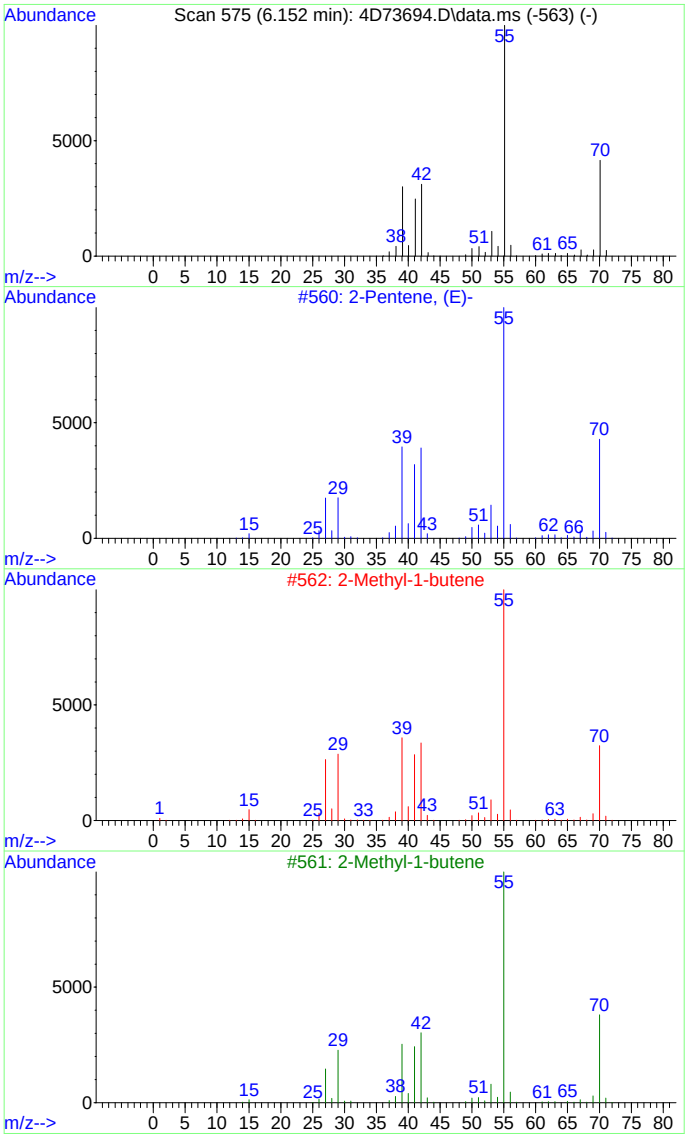
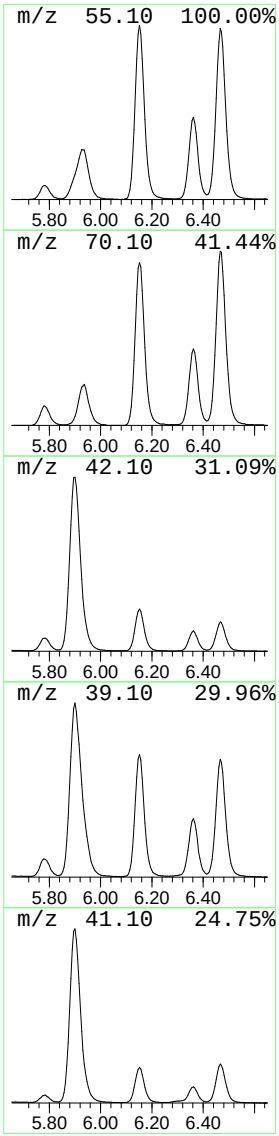
Peak Number 7 alkene Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.152	59.67 ug/L	1151000	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentene, (E)-	70	C5H10	000646-04-8	94
2	2-Methyl-1-butene	70	C5H10	000563-46-2	91
3	2-Methyl-1-butene	70	C5H10	000563-46-2	91
4	Cyclopropane, 1,2-dimethyl-, cis-	70	C5H10	000930-18-7	90
5	Cyclopropane, 1,2-dimethyl-, cis-	70	C5H10	000930-18-7	87





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ALS Vial : 36 Sample Multiplier: 1

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Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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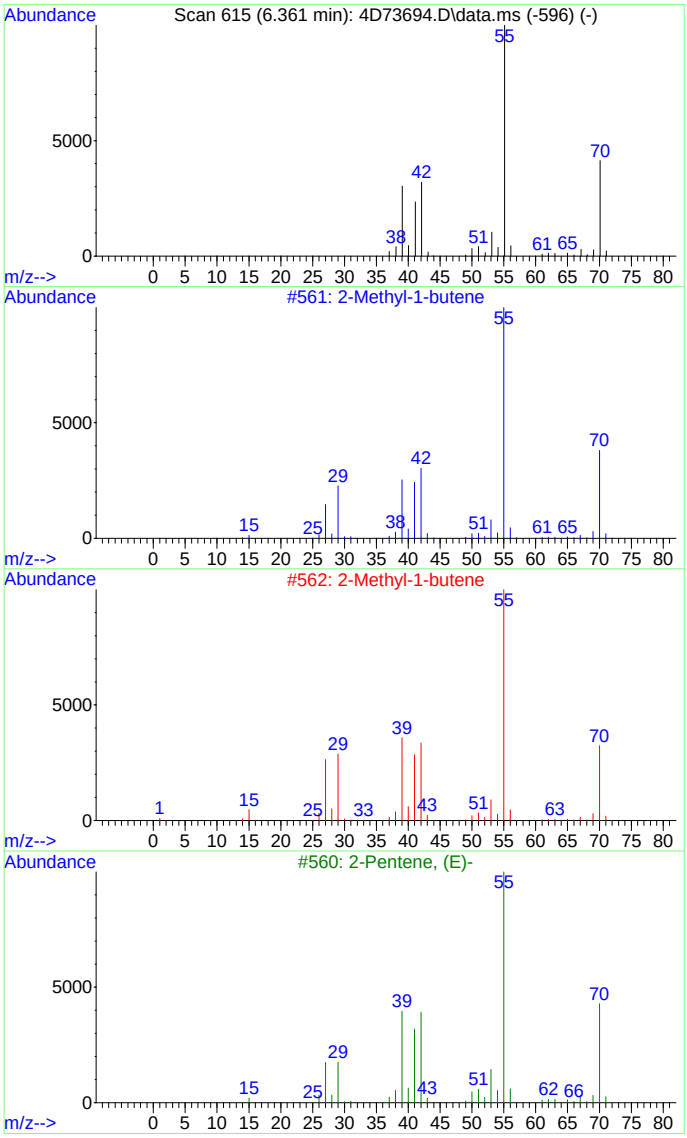
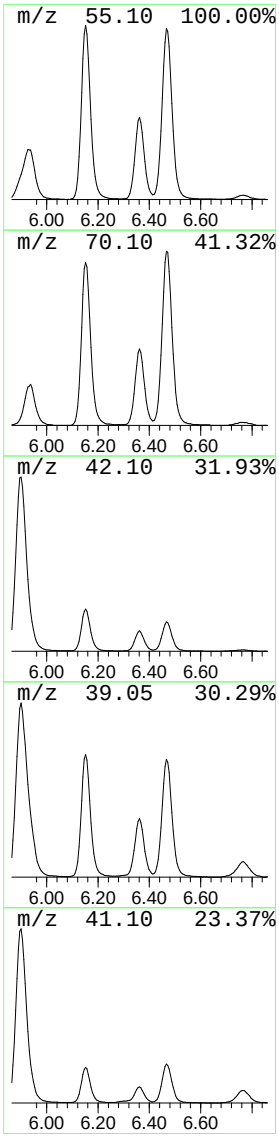
Peak Number 8 alkene Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.361	29.13 ug/L	561941	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Methyl-1-butene	70	C5H10	000563-46-2	91
2	2-Methyl-1-butene	70	C5H10	000563-46-2	91
3	2-Pentene, (E)-	70	C5H10	000646-04-8	90
4	Cyclopropane, 1,2-dimethyl-, cis-	70	C5H10	000930-18-7	87
5	2-Butene, 2-methyl-	70	C5H10	000513-35-9	87





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Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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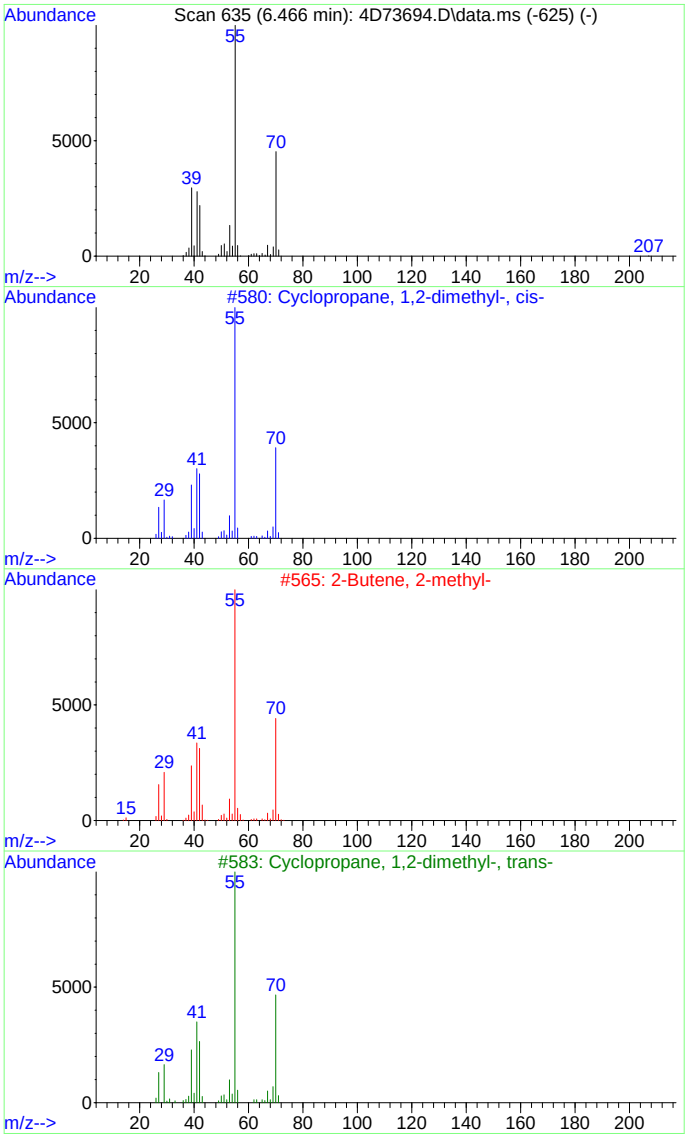
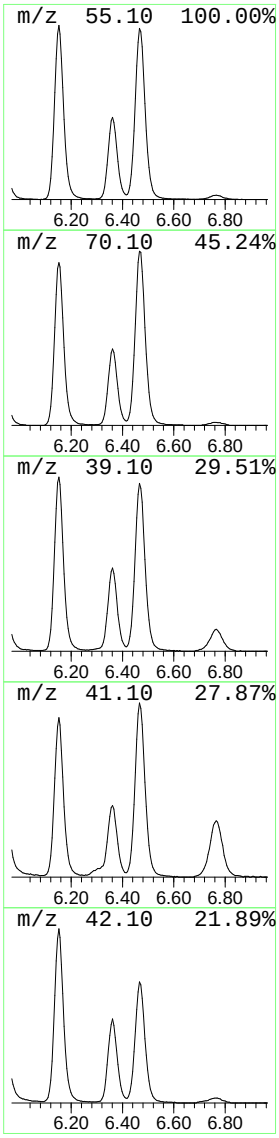
Peak Number 9 cycloalkene Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.466	64.50 ug/L	1244120	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopropane, 1,2-dimethyl-, cis-	70	C5H10	000930-18-7	91
2	2-Butene, 2-methyl-	70	C5H10	000513-35-9	90
3	Cyclopropane, 1,2-dimethyl-, trans-	70	C5H10	002402-06-4	87
4	Cyclopropane, 1,2-dimethyl-, trans-	70	C5H10	002402-06-4	83
5	Cyclopropane, 1,1-dimethyl-	70	C5H10	001630-94-0	80





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ALS Vial : 36 Sample Multiplier: 1

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Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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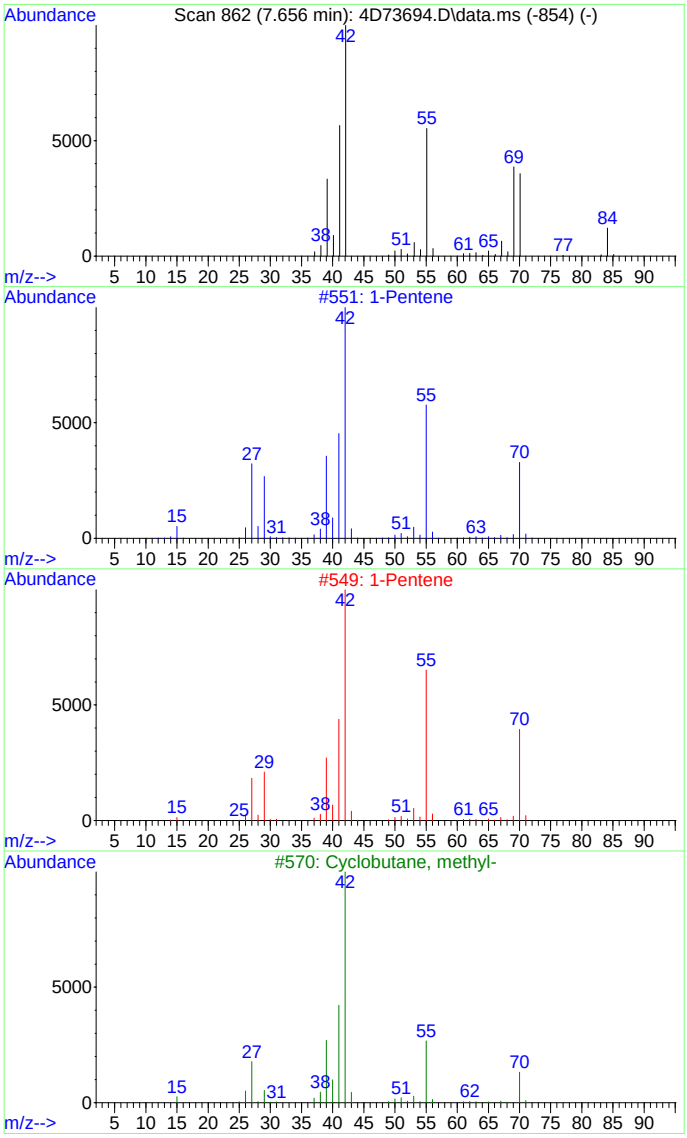
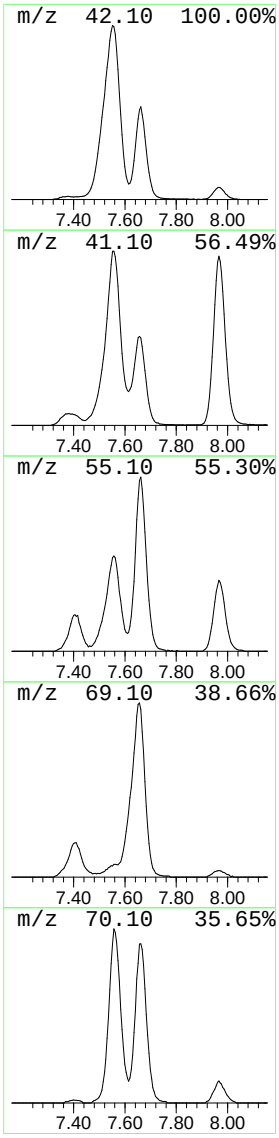
Peak Number 10 alkene Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.656	50.25 ug/L	969308	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Pentene	70	C5H10	000109-67-1	72
2	1-Pentene	70	C5H10	000109-67-1	72
3	Cyclobutane, methyl-	70	C5H10	000598-61-8	64
4	Cyclopropane, ethyl-	70	C5H10	001191-96-4	32
5	Cyclopropane, 1,2-dimethyl-, cis-	70	C5H10	000930-18-7	30





SGS ACCUTEST JC30522

Library Search Compound Report

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ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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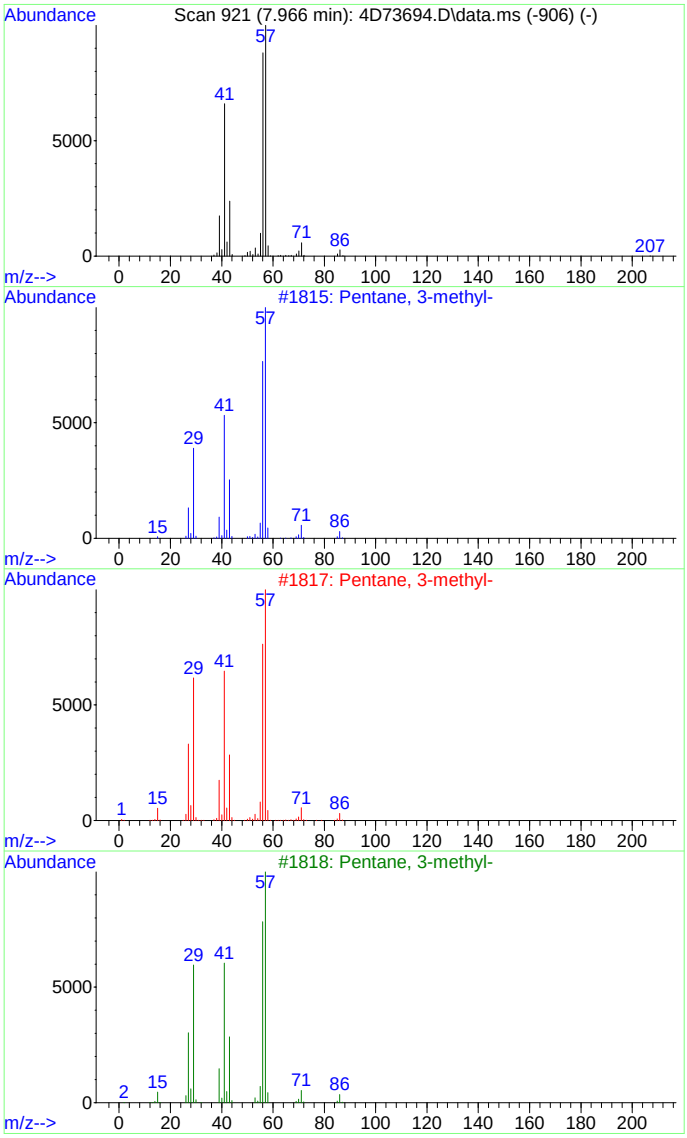
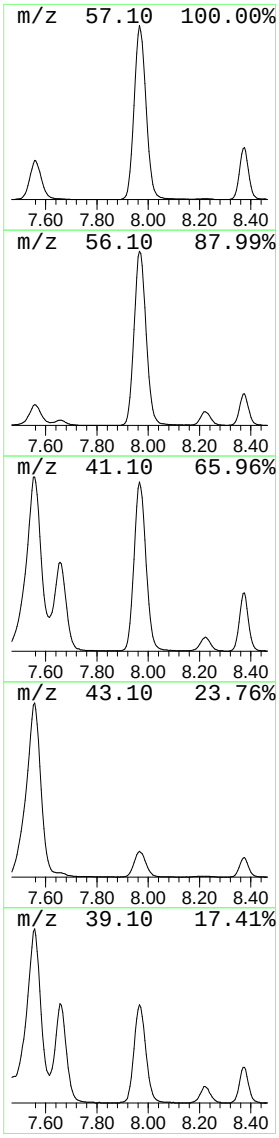
Peak Number 11 alkane Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.966	85.24 ug/L	1644200	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
2	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
3	Pentane, 3-methyl-	86	C6H14	000096-14-0	91
4	Hexane, 2,2,3-trimethyl-	128	C9H20	016747-25-4	74
5	Oxirane, (1-methylethyl)-	86	C5H10O	001438-14-8	50





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ALS Vial : 36 Sample Multiplier: 1

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Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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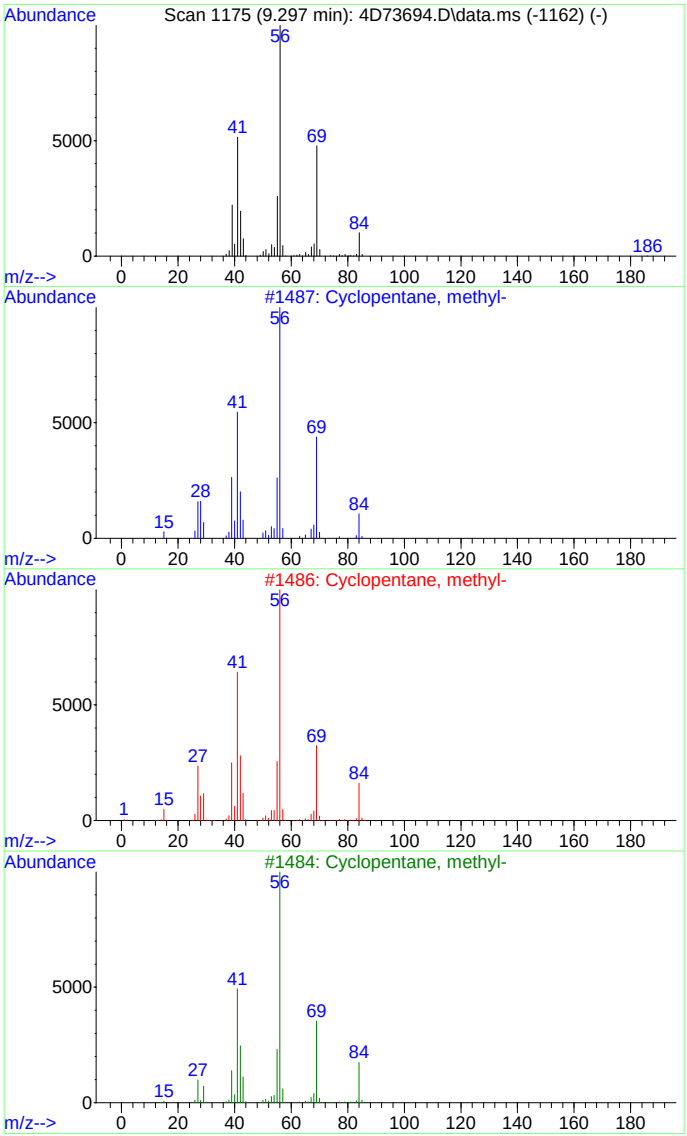
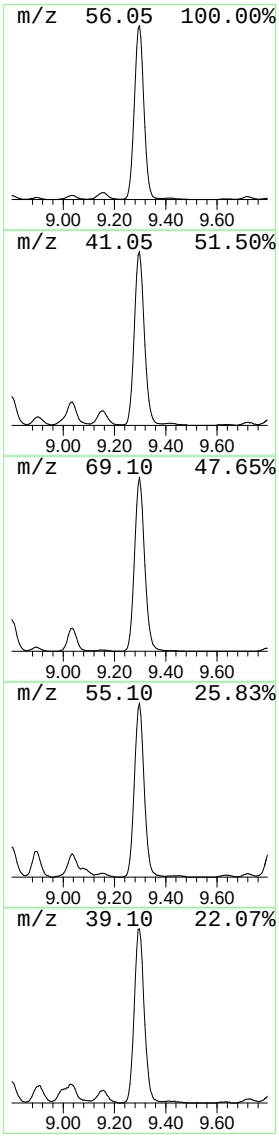
Peak Number 12 Cyclopentane, methyl- Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.297	100.86 ug/L	1945460	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	94
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	90
3	Cyclopentane, methyl-	84	C6H12	000096-37-7	78
4	Cyclobutane, ethyl-	84	C6H12	004806-61-5	72
5	1H-Tetrazole, 5-methyl-	84	C2H4N4	004076-36-2	72





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ALS Vial : 36 Sample Multiplier: 1

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Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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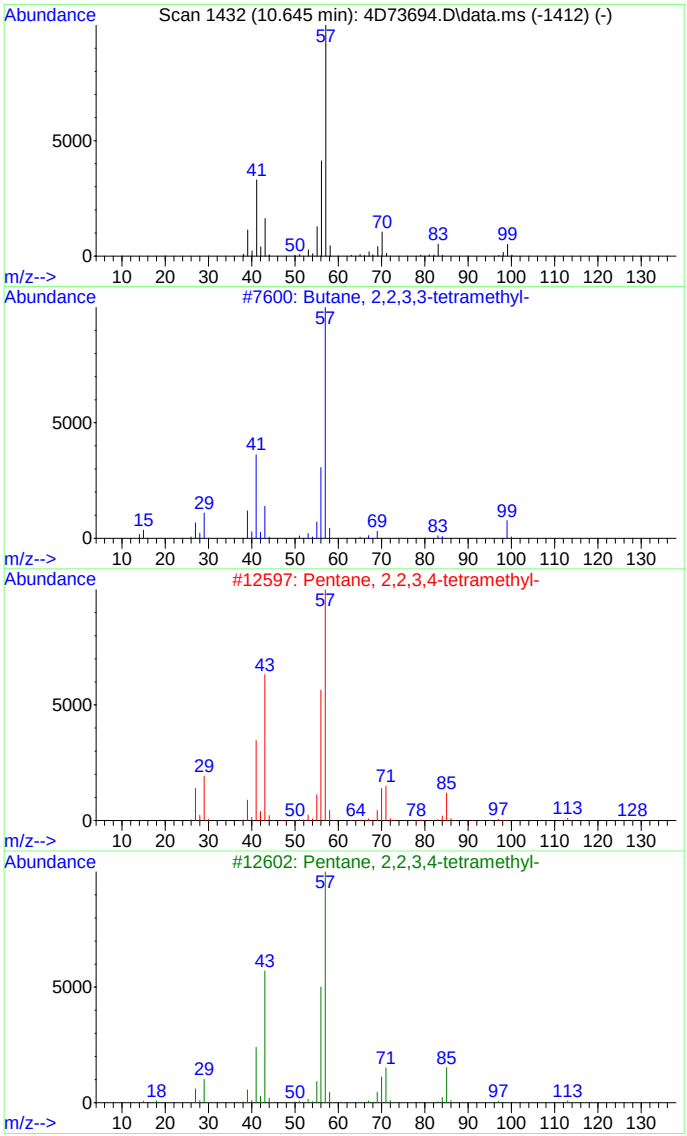
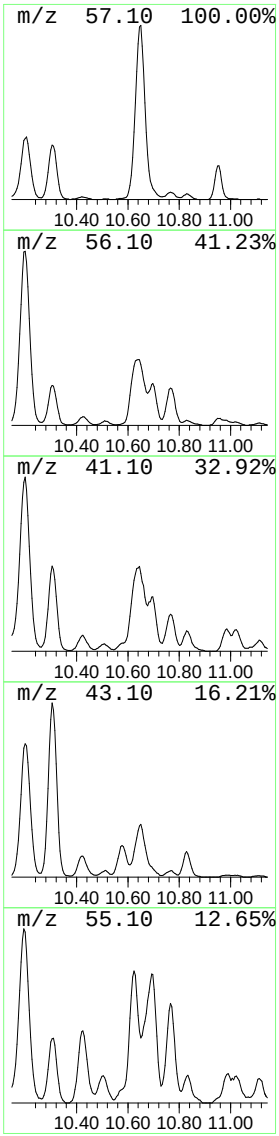
Peak Number 13 alkane Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.645	50.38 ug/L	777984	1,4-difluorobenzene	10.954

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2,2,3,3-tetramethyl-	114	C8H18	000594-82-1	64
2	Pentane, 2,2,3,4-tetramethyl-	128	C9H20	001186-53-4	56
3	Pentane, 2,2,3,4-tetramethyl-	128	C9H20	001186-53-4	56
4	Hexane, 2,2-dimethyl-	114	C8H18	000590-73-8	53
5	Pentane, 3-ethyl-2,2-dimethyl-	128	C9H20	016747-32-3	50





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Sample : jc30522-2
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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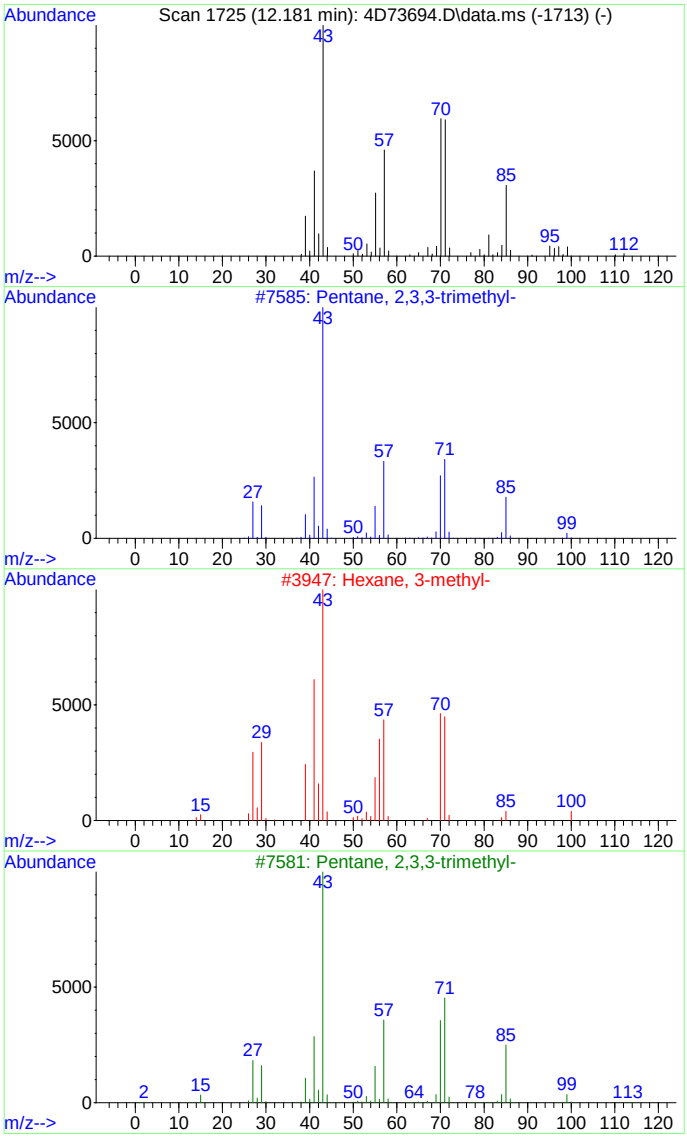
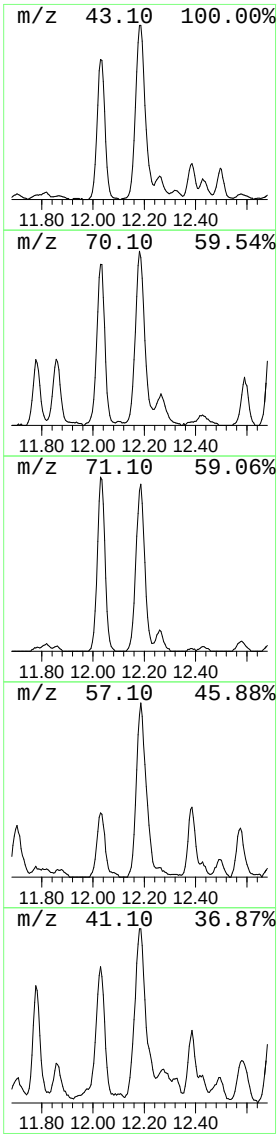
Peak Number 14 alkane Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.181	30.22 ug/L	466705	1,4-difluorobenzene	10.954

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	59
2	Hexane, 3-methyl-	100	C7H16	000589-34-4	53
3	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	53
4	Heptane, 4-methyl-	114	C8H18	000589-53-7	53
5	3,3-Dimethyl-2-pentanol	116	C7H16O	019781-24-9	50





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ALS Vial : 36 Sample Multiplier: 1

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Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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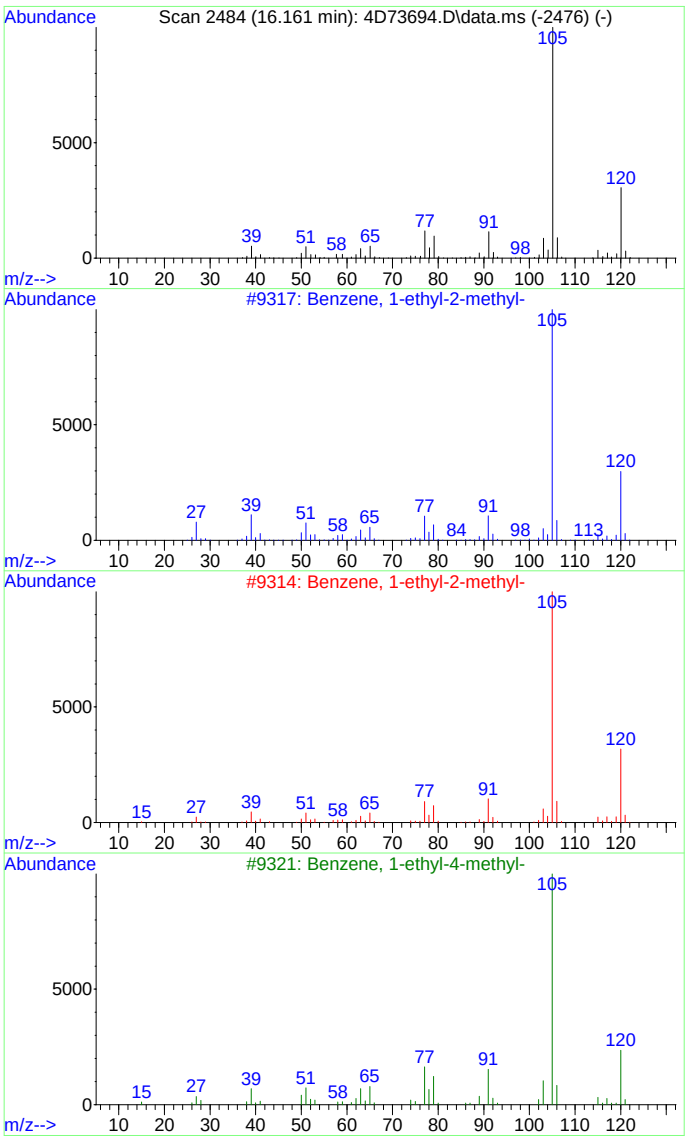
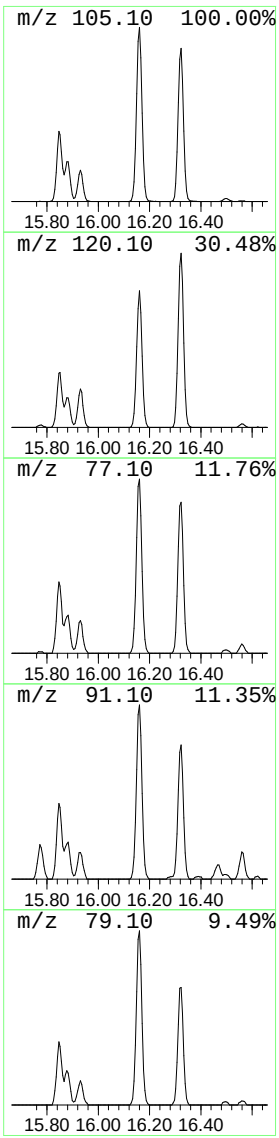
Peak Number 15 C3 alkyl benzene Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.161	32.19 ug/L	630486	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
3	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	93
4	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91





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Sample : jc30522-2
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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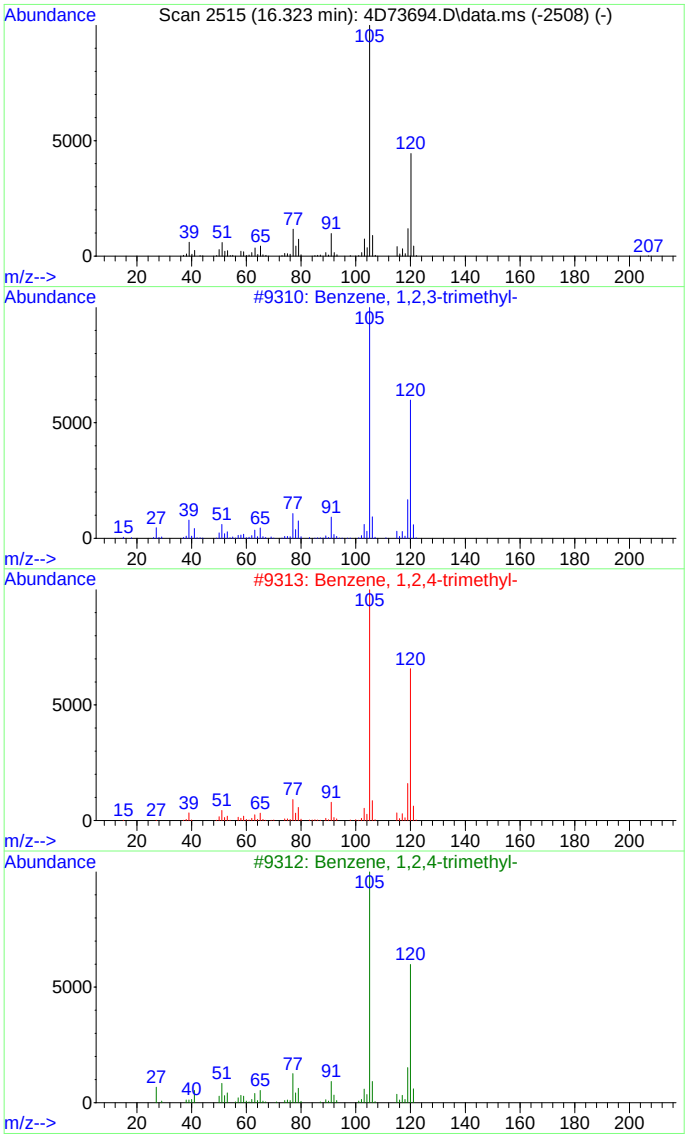
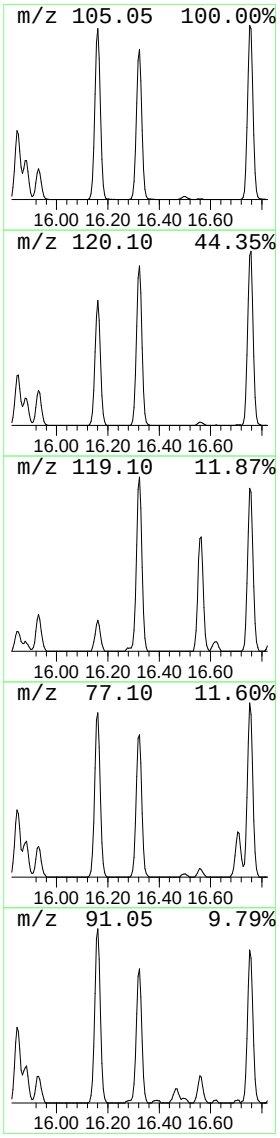
Peak Number 16 Benzene, 1,2,4-trimethyl- Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.323	30.84 ug/L	603875	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
5	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	94





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73694.D
Acq On : 8 Nov 2016 12:00 pm
Operator : XimenaC
Sample : jc30522-2
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
system artifact	3.268	379.6	ug/L	7321310	2	10.005	964401	50.0
alkane	4.023	143.1	ug/L	2760960	2	10.005	964401	50.0
alkane	4.358	201.9	ug/L	3894420	2	10.005	964401	50.0
alkene	4.474	46.2	ug/L	890588	2	10.005	964401	50.0
alkane	5.433	632.3	ug/L	12194800	2	10.005	964401	50.0
alkane-Pentane	5.900	164.8	ug/L	3179410	2	10.005	964401	50.0
alkene	6.152	59.7	ug/L	1151000	2	10.005	964401	50.0
alkene	6.361	29.1	ug/L	561941	2	10.005	964401	50.0
cycloalkene	6.466	64.5	ug/L	1244120	2	10.005	964401	50.0
alkene	7.656	50.3	ug/L	969308	2	10.005	964401	50.0
alkane	7.966	85.2	ug/L	1644200	2	10.005	964401	50.0
Cyclopentane, m...	9.297	100.9	ug/L	1945460	2	10.005	964401	50.0
alkane	10.645	50.4	ug/L	777984	3	10.954	772078	50.0
alkane	12.181	30.2	ug/L	466705	3	10.954	772078	50.0
C3 alkyl benzene	16.161	32.2	ug/L	630486	5	16.706	979177	50.0
Benzene, 1,2,4-...	16.323	30.8	ug/L	603875	5	16.706	979177	50.0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4D\v4d3199-3200\
Data File : 4D73608.D
Acq On : 4 Nov 2016 10:49 pm
Operator : XimenaC
Sample : jc30522-3
Misc : MS8838,V4D3199,5,,,,10
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Nov 07 15:00:17 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um
QLast Update : Wed Sep 14 10:25:10 2016
Response via : Initial Calibration

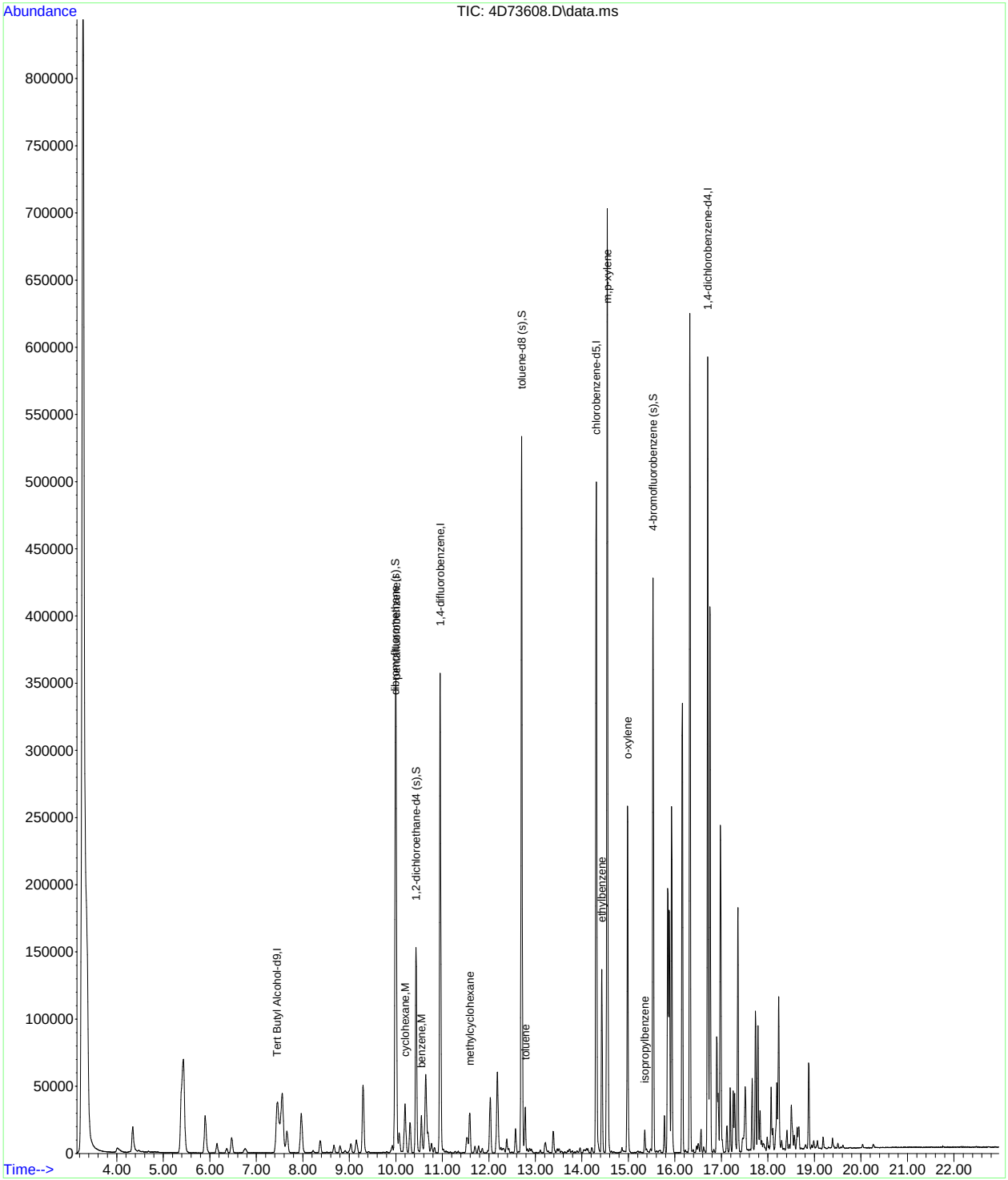
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.447	65	93358	500.00	ug/L	0.00
4) pentafluorobenzene	10.005	168	192236	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.954	114	299566	50.00	ug/L	0.00
86) chlorobenzene-d5	14.310	117	276393	50.00	ug/L	0.00
101) 1,4-dichlorobenzene-d4	16.706	152	138124	50.00	ug/L	0.00
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.989	113	101928	51.55	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 103.10%			
49) 1,2-dichloroethane-d4 (s)	10.435	65	104707	51.92	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 103.84%			
78) toluene-d8 (s)	12.705	98	351076	49.55	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.10%			
103) 4-bromofluorobenzene (s)	15.531	95	140024	54.27	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 108.54%			
Target Compounds						Qvalue
57) cyclohexane	10.199	84	7808	2.33	ug/L	98
62) benzene	10.550	78	25368	2.69	ug/L	98
73) methylcyclohexane	11.589	83	9848	2.47	ug/L	93
80) toluene	12.784	92	13706	2.35	ug/L	97
95) ethylbenzene	14.430	91	95788	8.55	ug/L	100
96) m,p-xylene	14.546	106	207110	49.33	ug/L	98
97) o-xylene	14.981	91	147328	16.11	ug/L	100
102) isopropylbenzene	15.353	105	10674	1.01	ug/L	99

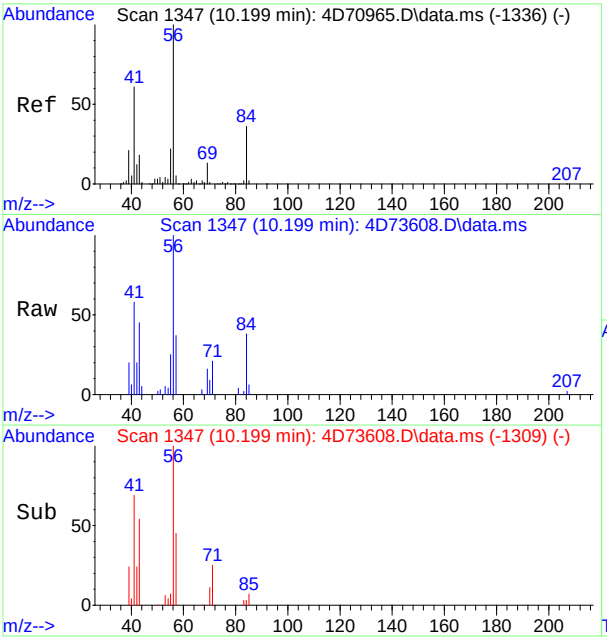
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\4D\v4d3199-3200\
Data File : 4D73608.D
Acq On : 4 Nov 2016 10:49 pm
Operator : XimenaC
Sample : jc30522-3
Misc : MS8838,V4D3199,5,,,,10
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Nov 07 15:00:17 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um
QLast Update : Wed Sep 14 10:25:10 2016
Response via : Initial Calibration

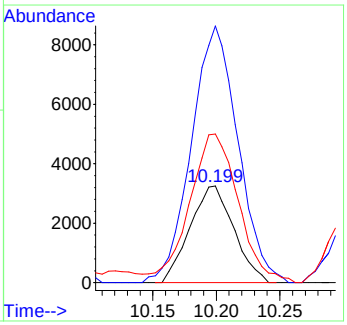


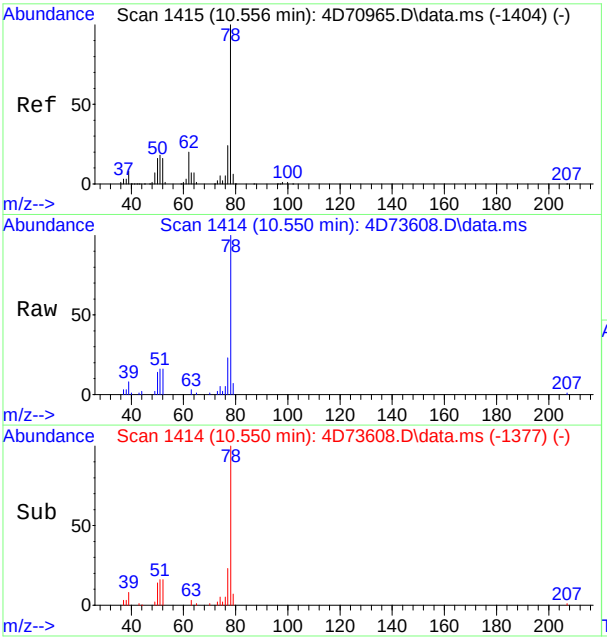


#57
cyclohexane
Concen: 2.33 ug/L
RT: 10.199 min Scan# 1347
Delta R.T. -0.001 min
Lab File: 4D73608.D
Acq: 4 Nov 2016 10:49 pm

Tgt Ion: 84 Resp: 7808

Ion	Ratio	Lower	Upper
84	100		
56	258.7	230.1	290.1
41	144.4	118.6	178.6

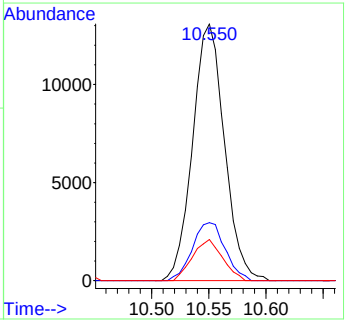


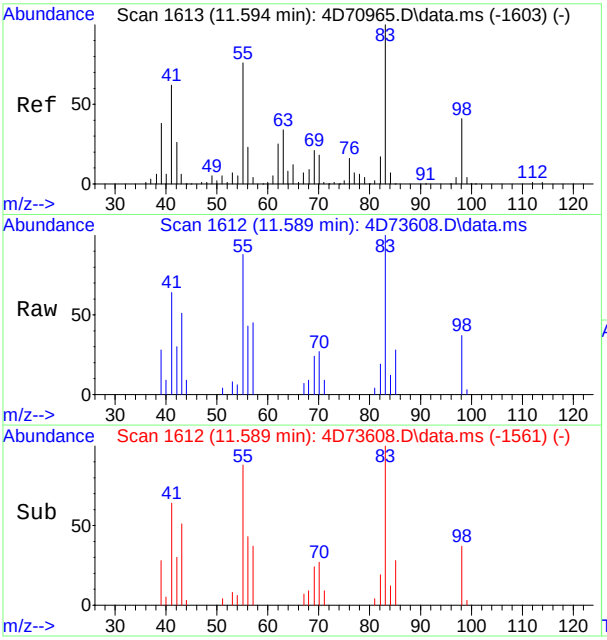


#62
benzene
Concen: 2.69 ug/L
RT: 10.550 min Scan# 1414
Delta R.T. -0.005 min
Lab File: 4D73608.D
Acq: 4 Nov 2016 10:49 pm

Tgt Ion: 78 Resp: 25368

Ion	Ratio	Lower	Upper
78	100		
77	22.6	0.0	53.6
52	16.0	0.0	45.7

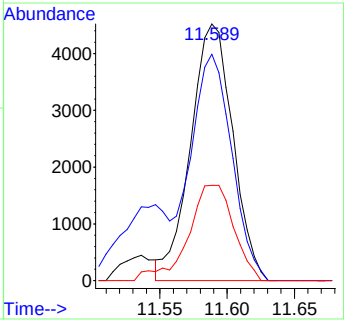


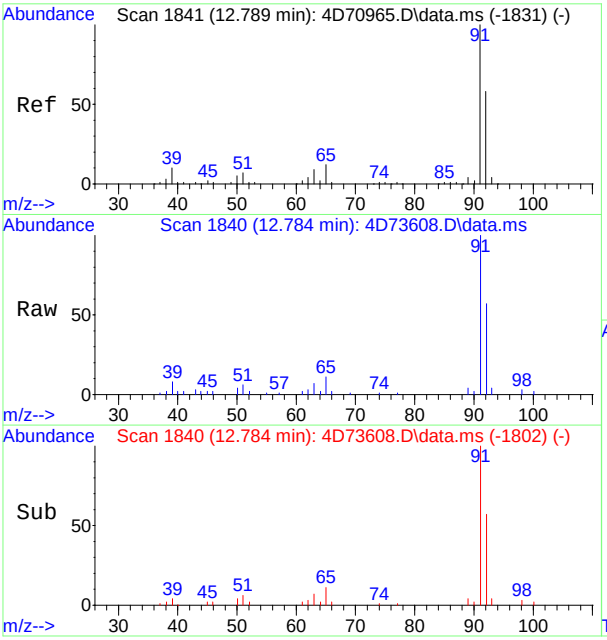


#73
methylcyclohexane
Concen: 2.47 ug/L
RT: 11.589 min Scan# 1612
Delta R.T. -0.034 min
Lab File: 4D73608.D
Acq: 4 Nov 2016 10:49 pm

Tgt Ion: 83 Resp: 9848

Ion	Ratio	Lower	Upper
83	100		
55	88.2	51.3	111.3
98	37.1	10.1	70.1

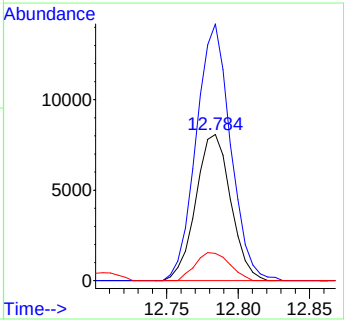


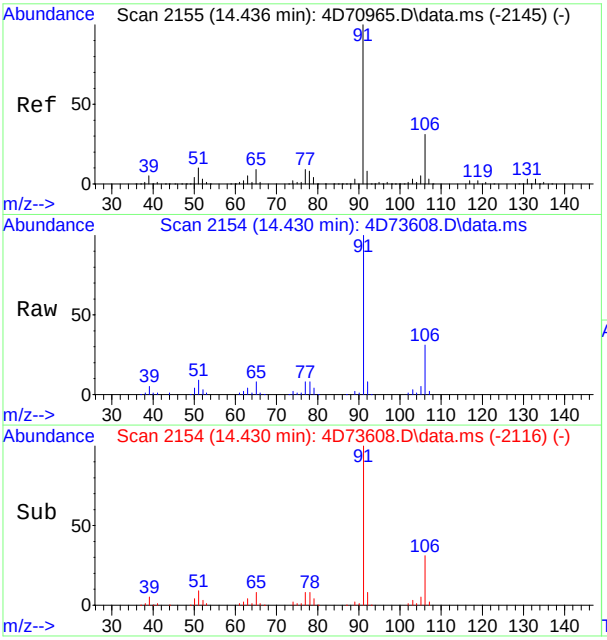


#80
toluene
Concen: 2.35 ug/L
RT: 12.784 min Scan# 1840
Delta R.T. -0.001 min
Lab File: 4D73608.D
Acq: 4 Nov 2016 10:49 pm

Tgt Ion: 92 Resp: 13706

Ion	Ratio	Lower	Upper
92	100		
91	175.7	140.6	200.6
65	18.7	0.0	49.1

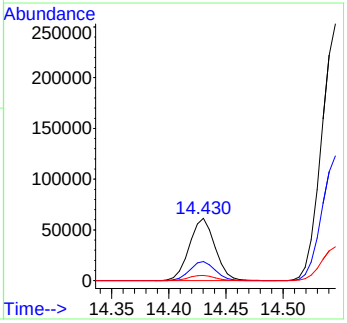


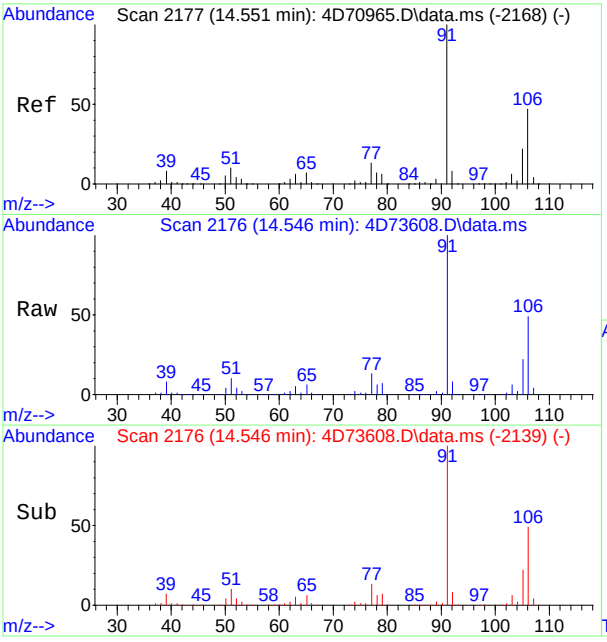


#95
ethylbenzene
Concen: 8.55 ug/L
RT: 14.430 min Scan# 2154
Delta R.T. -0.002 min
Lab File: 4D73608.D
Acq: 4 Nov 2016 10:49 pm

Tgt Ion: 91 Resp: 95788

Ion	Ratio	Lower	Upper
91	100		
106	30.7	0.5	60.5
77	8.4	0.0	38.4

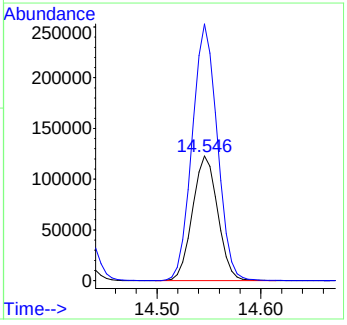


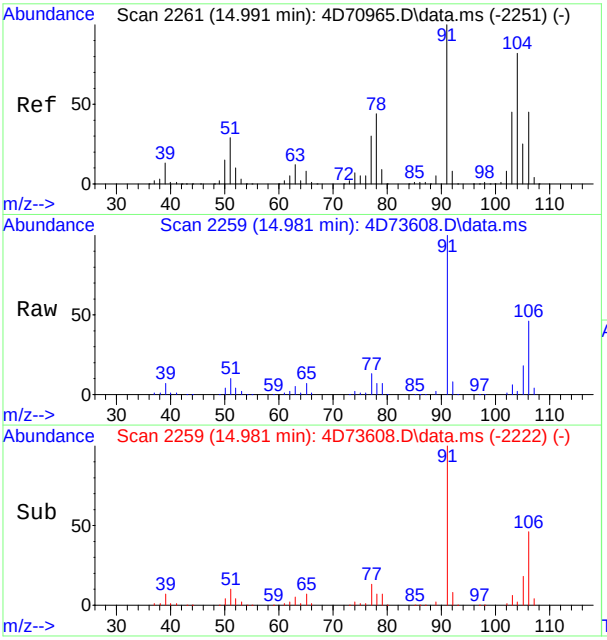


#96
m,p-xylene
Concen: 49.33 ug/L
RT: 14.546 min Scan# 2176
Delta R.T. -0.005 min
Lab File: 4D73608.D
Acq: 4 Nov 2016 10:49 pm

Tgt Ion:106 Resp: 207110

Ion	Ratio	Lower	Upper
106	100		
91	205.9	173.4	233.4

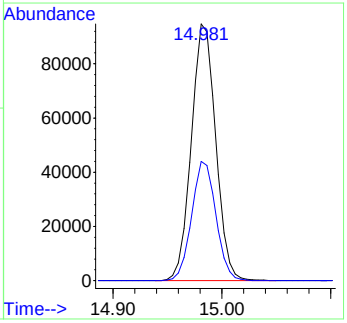


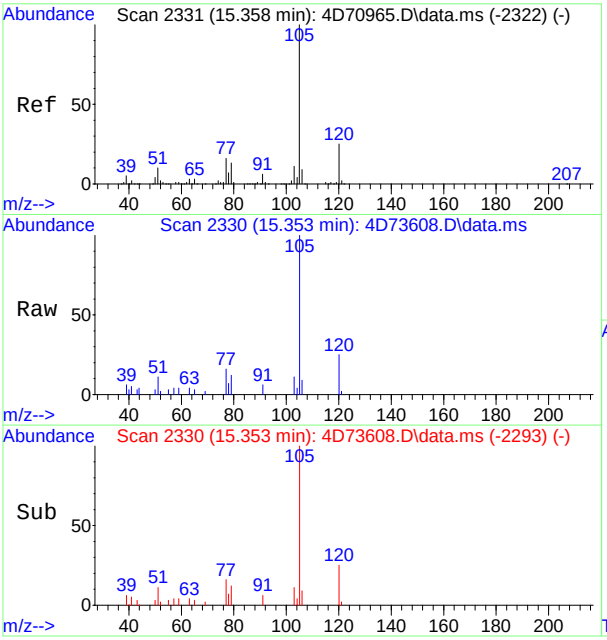


#97
o-xylene
Concen: 16.11 ug/L
RT: 14.981 min Scan# 2259
Delta R.T. -0.005 min
Lab File: 4D73608.D
Acq: 4 Nov 2016 10:49 pm

Tgt Ion: 91 Resp: 147328

Ion	Ratio	Lower	Upper
91	100		
106	46.4	16.4	76.4

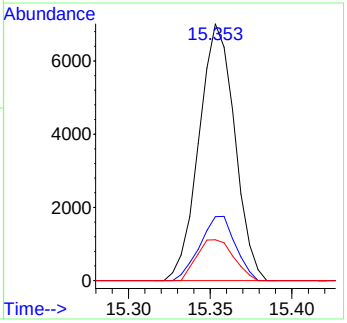




#102
isopropylbenzene
Concen: 1.01 ug/L
RT: 15.353 min Scan# 2330
Delta R.T. -0.005 min
Lab File: 4D73608.D
Acq: 4 Nov 2016 10:49 pm

Tgt Ion:105 Resp: 10674

Ion	Ratio	Lower	Upper
105	100		
120	24.9	0.0	55.5
77	15.9	0.0	45.2



Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73698.D
Acq On : 8 Nov 2016 1:50 pm
Operator : XimenaC
Sample : jc30522-3
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Time: Nov 09 15:25:03 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um
QLast Update : Wed Sep 14 10:25:10 2016
Response via : Initial Calibration

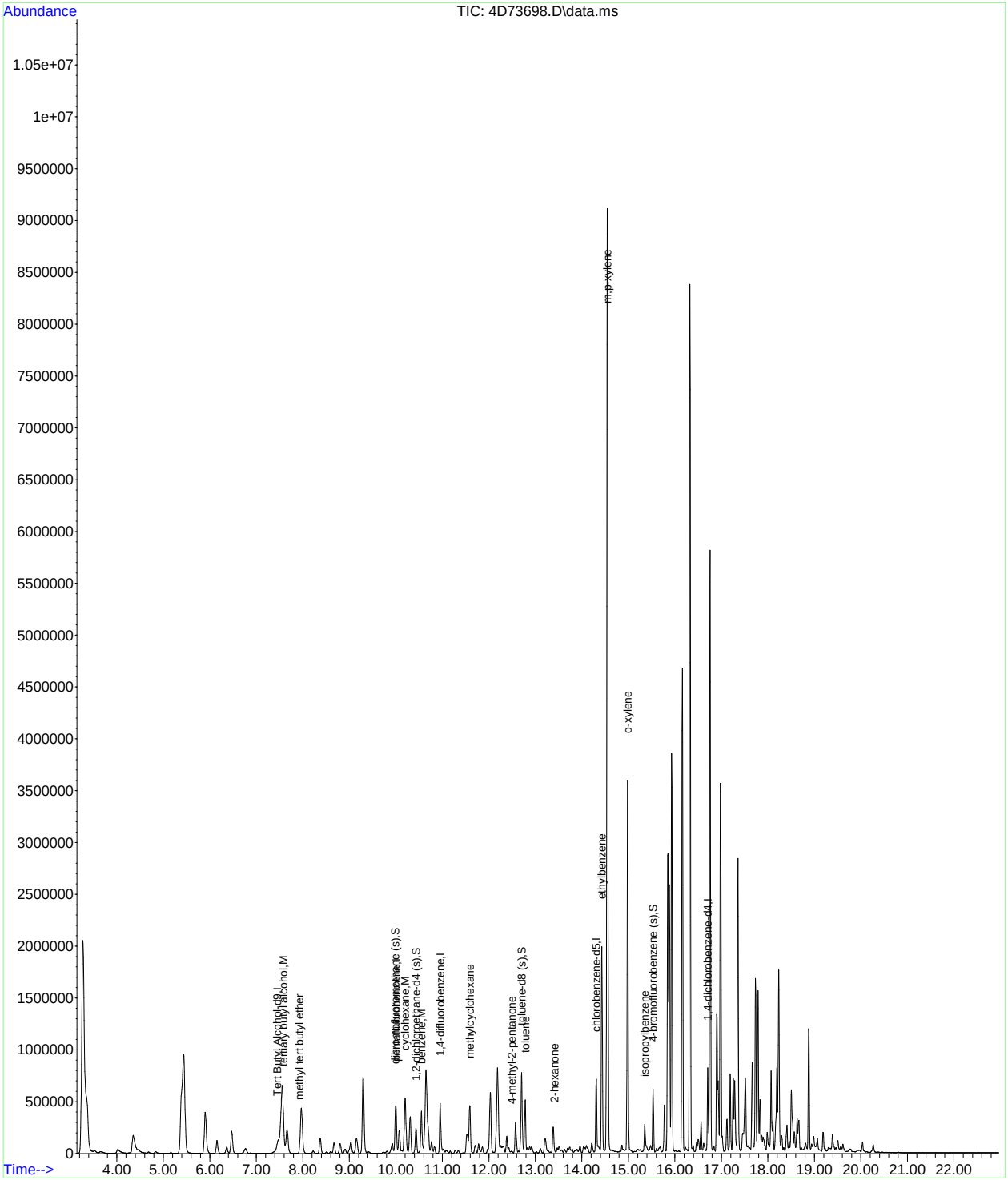
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Tert Butyl Alcohol-d9	7.452	65	125922	500.00	ug/L		0.00
4) pentafluorobenzene	10.005	168	256988	50.00	ug/L		0.00
54) 1,4-difluorobenzene	10.954	114	391316	50.00	ug/L		0.00
86) chlorobenzene-d5	14.310	117	366487	50.00	ug/L		0.00
101) 1,4-dichlorobenzene-d4	16.706	152	188378	50.00	ug/L		0.00
System Monitoring Compounds							
48) dibromofluoromethane (s)	9.989	113	132960	50.30	ug/L		0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 100.60%				
49) 1,2-dichloroethane-d4 (s)	10.435	65	138226	51.27	ug/L		0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 102.54%				
78) toluene-d8 (s)	12.705	98	472220	51.02	ug/L		0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 102.04%				
103) 4-bromofluorobenzene (s)	15.531	95	186115	52.89	ug/L		0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 105.78%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.583	59	3852	10.42	ug/L	#	1
31) methyl tert butyl ether	7.929	73	5055	0.60	ug/L	#	1
57) cyclohexane	10.199	84	114158	26.06	ug/L		97
62) benzene	10.550	78	368000	29.91	ug/L		100
73) methylcyclohexane	11.589	83	157382	30.24	ug/L		93
79) 4-methyl-2-pentanone	12.496	58	3942	3.03	ug/L	#	62
80) toluene	12.784	92	205090	26.90	ug/L		99
85) 2-hexanone	13.413	58	7624	6.33	ug/L	#	1
95) ethylbenzene	14.430	91	1429014	96.18	ug/L		100
96) m,p-xylene	14.546	106	2733432	490.99	ug/L		99
97) o-xylene	14.981	91	2079838	171.56	ug/L		100
102) isopropylbenzene	15.353	105	159299	11.11	ug/L		99

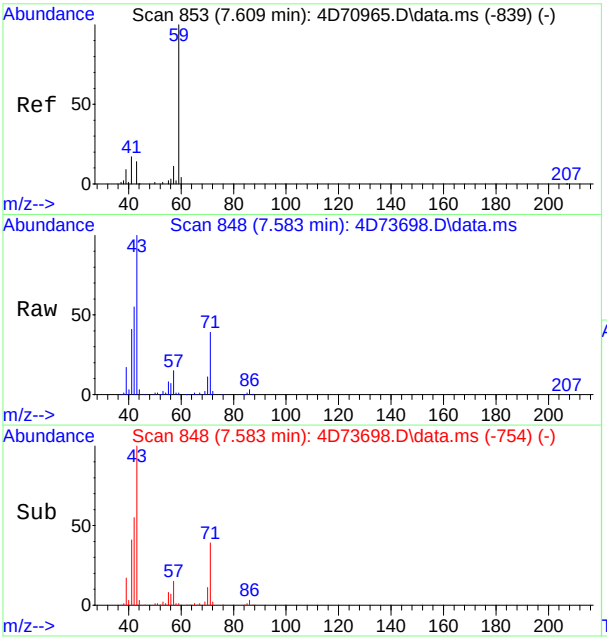
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73698.D
Acq On : 8 Nov 2016 1:50 pm
Operator : XimenaC
Sample : jc30522-3
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Time: Nov 09 15:25:03 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um
QLast Update : Wed Sep 14 10:25:10 2016
Response via : Initial Calibration

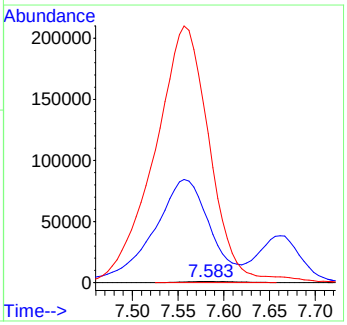


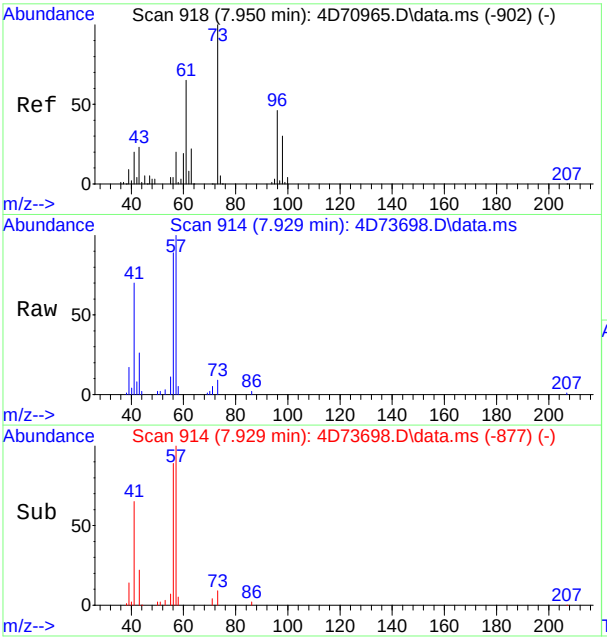


#3
tertiary butyl alcohol
Concen: 10.42 ug/L
RT: 7.583 min Scan# 848
Delta R.T. -0.006 min
Lab File: 4D73698.D
Acq: 8 Nov 2016 1:50 pm

Tgt Ion: 59 Resp: 3852

Ion	Ratio	Lower	Upper
59	100		
41	1310.4	0.0	53.7#
43	12291.0	0.0	45.8#

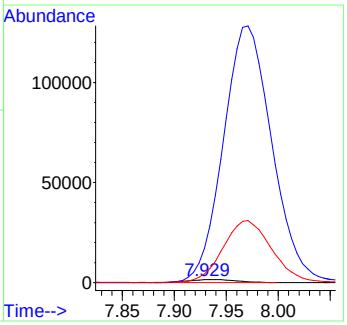


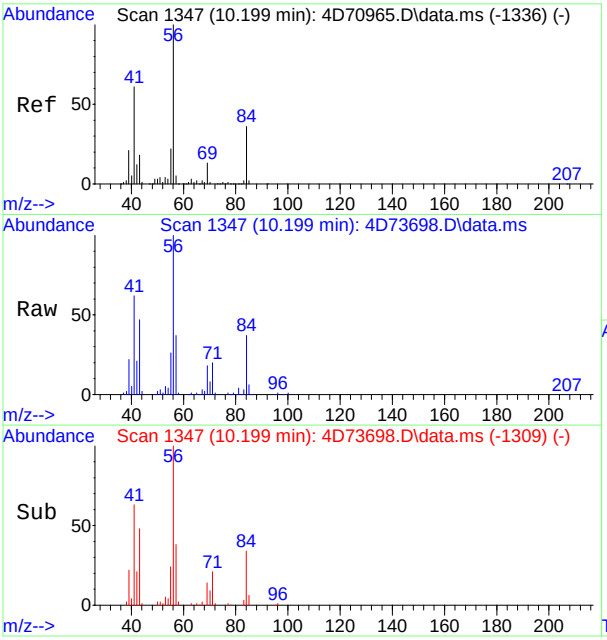


#31
methyl tert butyl ether
Concen: 0.60 ug/L
RT: 7.929 min Scan# 914
Delta R.T. -0.008 min
Lab File: 4D73698.D
Acq: 8 Nov 2016 1:50 pm

Tgt Ion: 73 Resp: 5055

Ion	Ratio	Lower	Upper
73	100		
57	1105.9	0.0	51.4#
43	274.0	0.0	49.3#

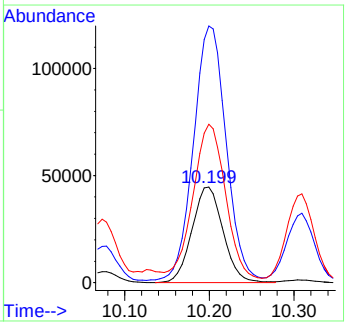


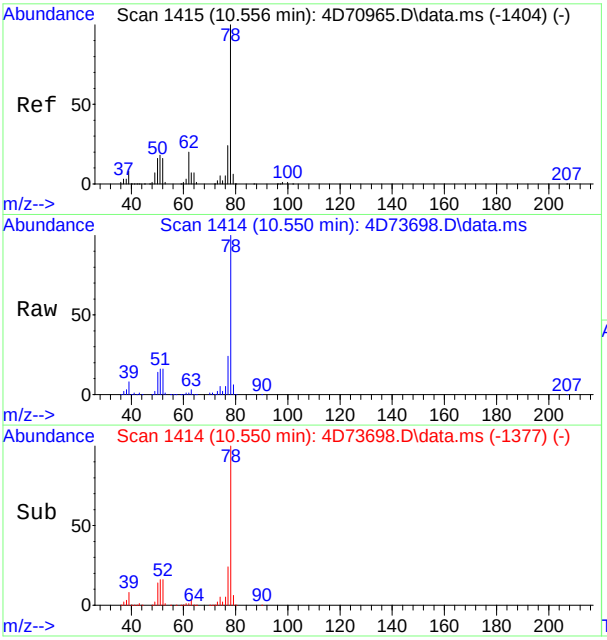


#57
cyclohexane
Concen: 26.06 ug/L
RT: 10.199 min Scan# 1347
Delta R.T. -0.001 min
Lab File: 4D73698.D
Acq: 8 Nov 2016 1:50 pm

Tgt Ion: 84 Resp: 114158

Ion	Ratio	Lower	Upper
84	100		
56	265.5	230.1	290.1
41	154.0	118.6	178.6

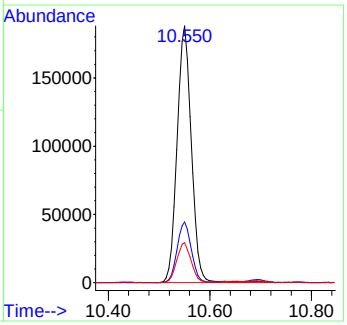


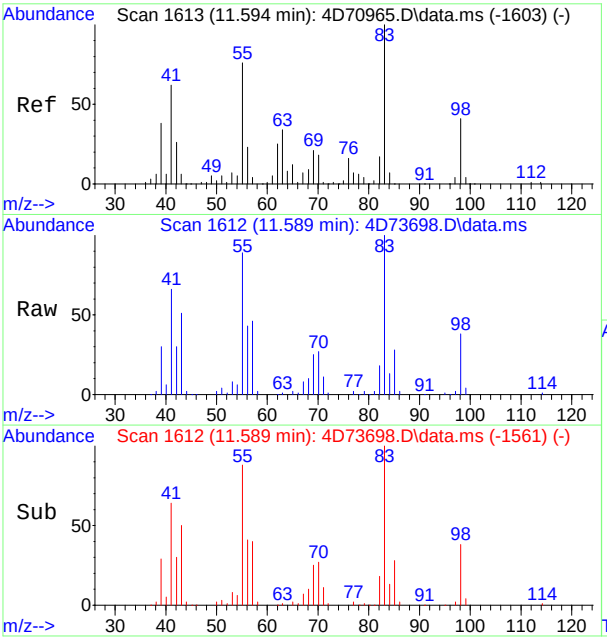


#62
benzene
Concen: 29.91 ug/L
RT: 10.550 min Scan# 1414
Delta R.T. -0.005 min
Lab File: 4D73698.D
Acq: 8 Nov 2016 1:50 pm

Tgt Ion: 78 Resp: 368000

Ion	Ratio	Lower	Upper
78	100		
77	23.7	0.0	53.6
52	15.6	0.0	45.7

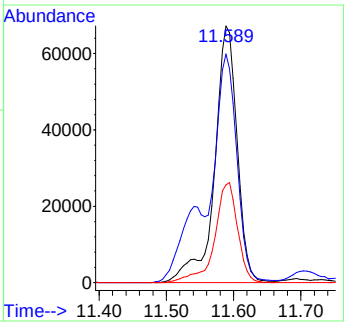


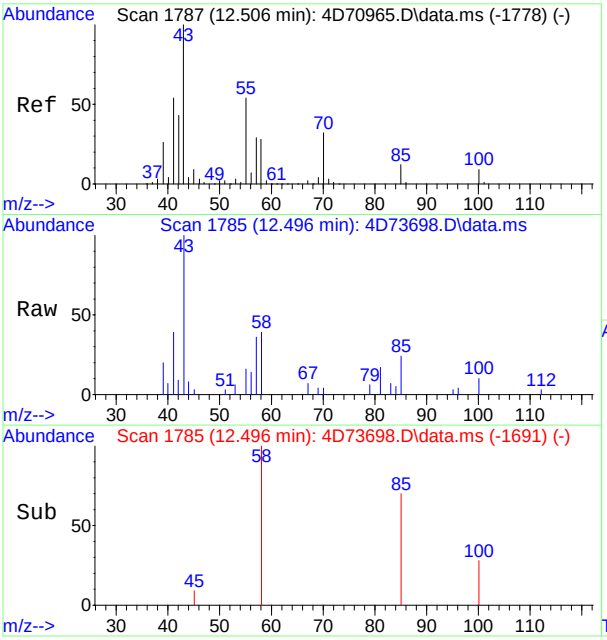


#73
methylcyclohexane
Concen: 30.24 ug/L
RT: 11.589 min Scan# 1612
Delta R.T. -0.034 min
Lab File: 4D73698.D
Acq: 8 Nov 2016 1:50 pm

Tgt Ion: 83 Resp: 157382

Ion	Ratio	Lower	Upper
83	100		
55	88.8	51.3	111.3
98	38.1	10.1	70.1

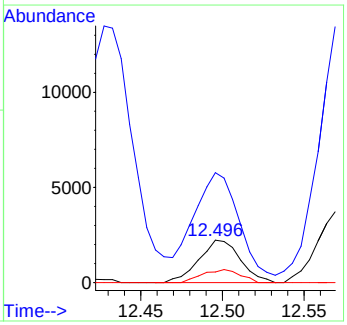


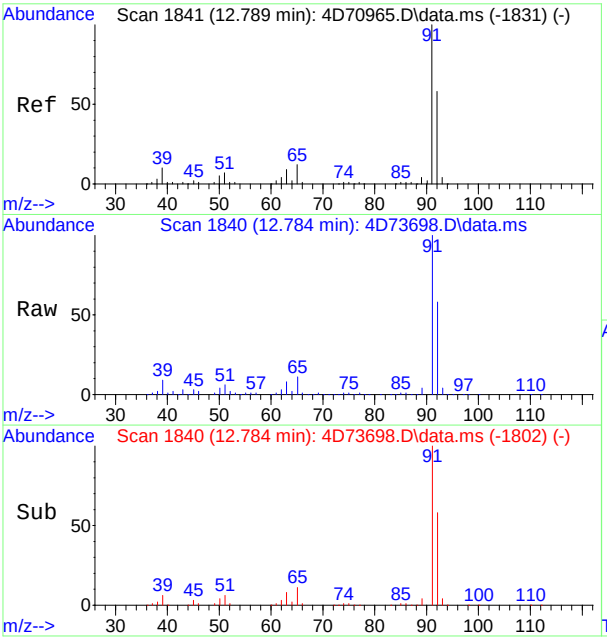


#79
4-methyl-2-pentanone
Concen: 3.03 ug/L
RT: 12.496 min Scan# 1785
Delta R.T. -0.006 min
Lab File: 4D73698.D
Acq: 8 Nov 2016 1:50 pm

Tgt Ion: 58 Resp: 3942

Ion	Ratio	Lower	Upper
58	100		
43	240.9	294.6	354.6#
100	25.0	0.0	60.0

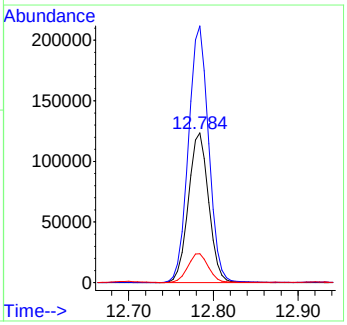


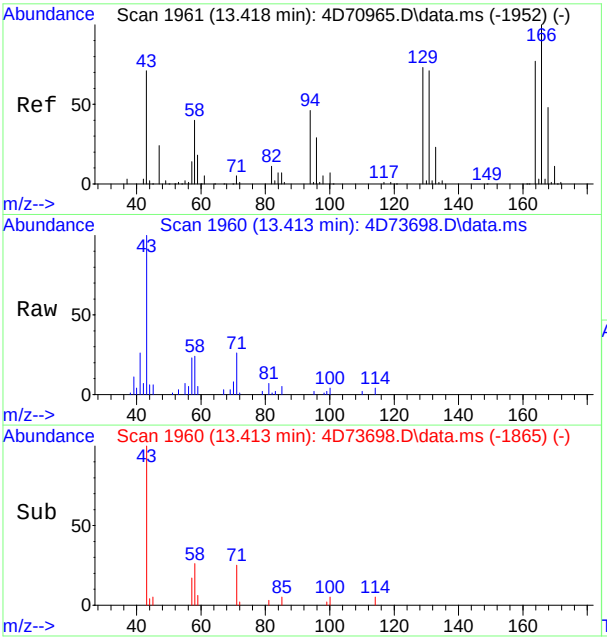


#80
toluene
Concen: 26.90 ug/L
RT: 12.784 min Scan# 1840
Delta R.T. -0.001 min
Lab File: 4D73698.D
Acq: 8 Nov 2016 1:50 pm

Tgt Ion: 92 Resp: 205090

Ion	Ratio	Lower	Upper
92	100		
91	171.6	140.6	200.6
65	19.2	0.0	49.1

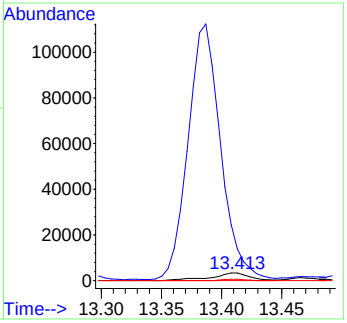


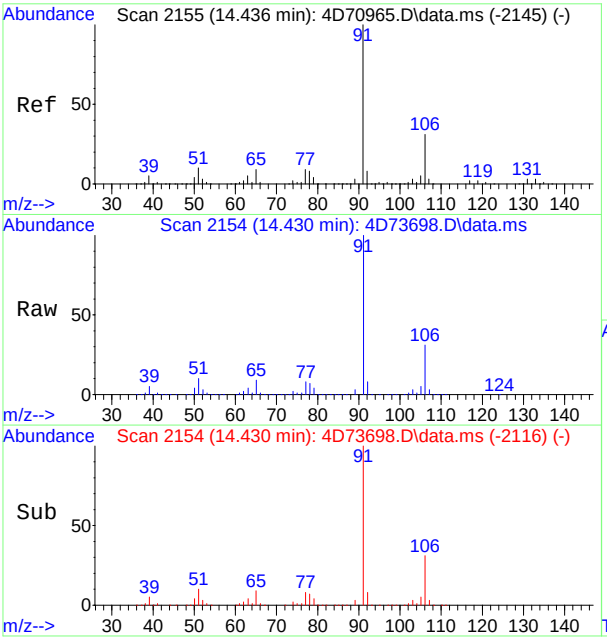


#85
2-hexanone
Concen: 6.33 ug/L
RT: 13.413 min Scan# 1960
Delta R.T. -0.001 min
Lab File: 4D73698.D
Acq: 8 Nov 2016 1:50 pm

Tgt Ion: 58 Resp: 7624

Ion	Ratio	Lower	Upper
58	100		
43	390.1	147.0	207.0#
100	17.4	0.0	47.0

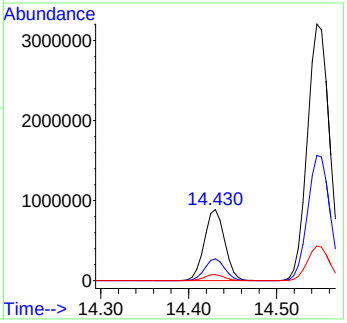


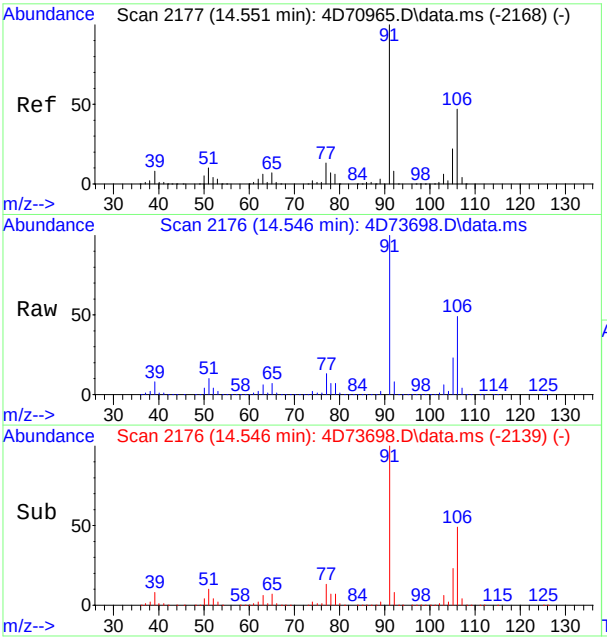


#95
ethylbenzene
Concen: 96.18 ug/L
RT: 14.430 min Scan# 2154
Delta R.T. -0.002 min
Lab File: 4D73698.D
Acq: 8 Nov 2016 1:50 pm

Tgt Ion: 91 Resp: 1429014

Ion	Ratio	Lower	Upper
91	100		
106	30.6	0.5	60.5
77	8.4	0.0	38.4

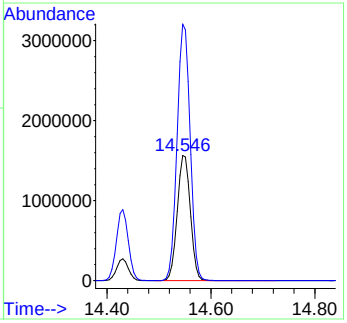


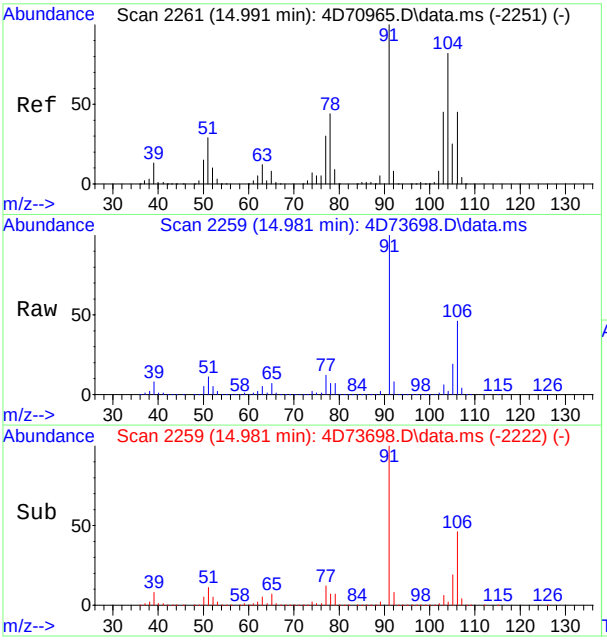


#96
m,p-xylene
Concen: 490.99 ug/L
RT: 14.546 min Scan# 2176
Delta R.T. -0.005 min
Lab File: 4D73698.D
Acq: 8 Nov 2016 1:50 pm

Tgt Ion:106 Resp: 2733432

Ion	Ratio	Lower	Upper
106	100		
91	205.2	173.4	233.4

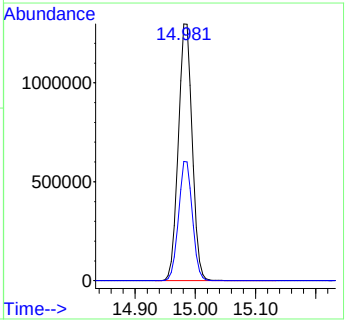


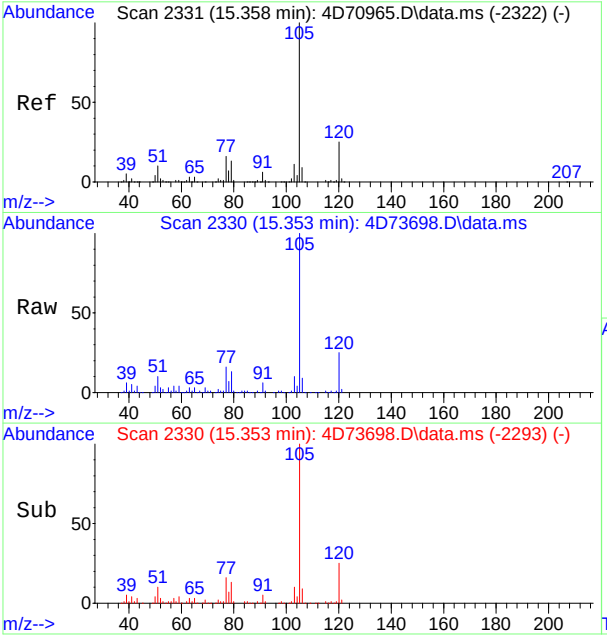


#97
o-xylene
Concen: 171.56 ug/L
RT: 14.981 min Scan# 2259
Delta R.T. -0.005 min
Lab File: 4D73698.D
Acq: 8 Nov 2016 1:50 pm

Tgt Ion: 91 Resp: 2079838

Ion	Ratio	Lower	Upper
91	100		
106	46.4	16.4	76.4

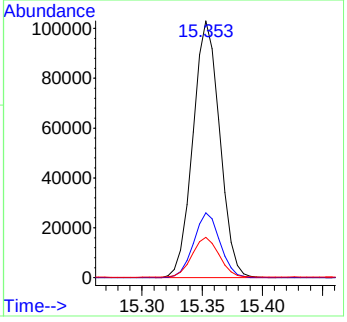




#102
isopropylbenzene
Concen: 11.11 ug/L
RT: 15.353 min Scan# 2330
Delta R.T. -0.005 min
Lab File: 4D73698.D
Acq: 8 Nov 2016 1:50 pm

Tgt Ion:105 Resp: 159299

Ion	Ratio	Lower	Upper
105	100		
120	25.3	0.0	55.5
77	15.5	0.0	45.2



LSC Area Percent Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73698.D
Acq On : 8 Nov 2016 1:50 pm
Operator : XimenaC
Sample : jc30522-3
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 40 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.5 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

Signal : TIC: 4D73698.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.273	3	26	68	rBV	2054959	9991431	63.06%	6.337%
2	4.023	157	169	200	rVV3	35854	180386	1.14%	0.114%
3	4.353	219	232	251	rVV	169233	736303	4.65%	0.467%
4	5.439	413	439	476	rBV	959703	4896114	30.90%	3.105%
5	5.900	514	527	550	rBV	397933	1205917	7.61%	0.765%
6	6.157	565	576	596	rVB	125225	317584	2.00%	0.201%
7	6.367	605	616	625	rVV	61451	160351	1.01%	0.102%
8	6.471	625	636	652	rVB	212426	570781	3.60%	0.362%
9	6.770	676	693	708	rBV3	46878	181152	1.14%	0.115%
10	7.473	796	827	828	rBV5	130314	412988	2.61%	0.262%
11	7.557	829	843	855	rVV2	655031	2736034	17.27%	1.735%
12	7.662	855	863	889	rVB2	232618	752782	4.75%	0.477%
13	7.971	906	922	958	rVV	437062	1431504	9.04%	0.908%
14	8.375	988	999	1015	rBV	146711	372096	2.35%	0.236%
15	8.673	1047	1056	1069	rVV	100584	247848	1.56%	0.157%
16	8.805	1069	1081	1092	rVV	93859	244909	1.55%	0.155%
17	9.035	1110	1125	1136	rVV2	107941	344626	2.18%	0.219%
18	9.156	1136	1148	1162	rVV	150379	440999	2.78%	0.280%
19	9.297	1162	1175	1190	rVV	740614	1975037	12.47%	1.253%
20	9.927	1280	1295	1300	rBV2	92699	264620	1.67%	0.168%
21	10.000	1300	1309	1317	rVV2	460572	1122059	7.08%	0.712%
22	10.073	1317	1323	1332	rVV	219148	508457	3.21%	0.322%
23	10.199	1337	1347	1359	rVV2	529452	1423398	8.98%	0.903%
24	10.309	1359	1368	1380	rVB	350913	805519	5.08%	0.511%
25	10.435	1380	1392	1401	rBV2	240504	533535	3.37%	0.338%
26	10.550	1401	1414	1422	rBV	400457	847829	5.35%	0.538%
27	10.650	1422	1433	1449	rVV	792201	2734397	17.26%	1.734%
28	10.765	1449	1455	1462	rVV2	97657	213343	1.35%	0.135%
29	10.834	1462	1468	1482	rVB	64238	139584	0.88%	0.089%
30	10.954	1482	1491	1501	rBV	484601	977829	6.17%	0.620%
31	11.531	1589	1601	1606	rBV4	184713	531446	3.35%	0.337%
32	11.589	1606	1612	1626	rVV	459192	1021654	6.45%	0.648%
33	11.704	1626	1634	1642	rVV	75049	174623	1.10%	0.111%
34	11.777	1642	1648	1658	rVV2	88954	206066	1.30%	0.131%
35	12.029	1687	1696	1709	rVB	575117	1330863	8.40%	0.844%
36	12.186	1713	1726	1737	rBV2	815882	2231453	14.08%	1.415%
37	12.296	1744	1747	1757	rVB4	55722	157005	0.99%	0.100%
38	12.386	1757	1764	1769	rBV	152031	276344	1.74%	0.175%
39	12.574	1791	1800	1809	rBV3	294461	616949	3.89%	0.391%
40	12.705	1815	1825	1832	rBV	765573	1501231	9.48%	0.952%
41	12.784	1832	1840	1846	rVV	499026	886582	5.60%	0.562%
42	13.214	1912	1922	1931	rBV5	138387	401756	2.54%	0.255%
43	13.382	1947	1954	1965	rBV2	243921	488337	3.08%	0.310%
44	14.037	2072	2079	2086	rBV3	54485	161936	1.02%	0.103%
45	14.215	2105	2113	2122	rBV	88003	188794	1.19%	0.120%

LSC Area Percent Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73698.D
Acq On : 8 Nov 2016 1:50 pm
Operator : XimenaC
Sample : jc30522-3
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 40 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.5 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

46	14.310	2122	2131	2137	rBV	702968	1147341	7.24%	0.728%
47	14.430	2147	2154	2164	rVB	1967379	3159882	19.94%	2.004%
48	14.546	2166	2176	2190	rVB	9085599	15843821	100.00%	10.049%
49	14.981	2252	2259	2268	rBV	3566941	5673279	35.81%	3.598%
50	15.353	2321	2330	2335	rVV	267947	471396	2.98%	0.299%
51	15.531	2358	2364	2371	rVB	609417	915227	5.78%	0.580%
52	15.773	2399	2410	2416	rBV	450588	682461	4.31%	0.433%
53	15.851	2416	2425	2428	rBV	2874308	4769501	30.10%	3.025%
54	15.883	2428	2431	2435	rVV	2565290	3396524	21.44%	2.154%
55	15.930	2435	2440	2452	rVB	3842280	5663771	35.75%	3.592%
56	16.161	2475	2484	2492	rBV	4662575	6877679	43.41%	4.362%
57	16.323	2507	2515	2523	rVV	8366332	12312501	77.71%	7.809%
58	16.465	2534	2542	2545	rBV	88293	136953	0.86%	0.087%
59	16.501	2545	2549	2555	rVV2	116223	240420	1.52%	0.152%
60	16.564	2555	2561	2567	rVV	290308	458336	2.89%	0.291%
61	16.617	2567	2571	2581	rVV2	80009	177878	1.12%	0.113%
62	16.706	2581	2588	2592	rVV	808086	1194708	7.54%	0.758%
63	16.758	2592	2598	2609	rVV	5799829	8621765	54.42%	5.468%
64	16.900	2619	2625	2629	rVV	1321528	2082577	13.14%	1.321%
65	16.931	2629	2631	2635	rVV	681496	808236	5.10%	0.513%
66	16.978	2635	2640	2647	rVV3	3550186	5825995	36.77%	3.695%
67	17.120	2654	2667	2674	rVV	308796	514035	3.24%	0.326%
68	17.188	2674	2680	2686	rVV	743545	1087079	6.86%	0.689%
69	17.251	2686	2692	2696	rVV	704196	1104327	6.97%	0.700%
70	17.288	2696	2699	2706	rVV	681091	1005439	6.35%	0.638%
71	17.356	2706	2712	2724	rVV	2824518	3963745	25.02%	2.514%
72	17.461	2724	2732	2734	rVV3	170720	342193	2.16%	0.217%
73	17.513	2734	2742	2750	rVV2	707681	1616512	10.20%	1.025%
74	17.660	2764	2770	2777	rVV	860596	1280247	8.08%	0.812%
75	17.733	2777	2784	2789	rVV	1663393	2433713	15.36%	1.544%
76	17.786	2789	2794	2799	rVV	1546597	2269682	14.33%	1.440%
77	17.828	2799	2802	2807	rVV	493941	747914	4.72%	0.474%
78	17.865	2807	2809	2812	rVV	149530	192516	1.22%	0.122%
79	17.896	2812	2815	2822	rVV4	132084	303403	1.91%	0.192%
80	17.985	2827	2832	2836	rVV2	179367	282090	1.78%	0.179%
81	18.069	2842	2848	2852	rVV	771137	1218013	7.69%	0.773%
82	18.106	2852	2855	2861	rVV2	292767	428621	2.71%	0.272%
83	18.195	2861	2872	2875	rVV2	813491	1660633	10.48%	1.053%
84	18.232	2875	2879	2887	rVV2	1743467	2823040	17.82%	1.791%
85	18.294	2887	2891	2897	rVV2	145662	246409	1.56%	0.156%
86	18.410	2905	2913	2918	rBV2	247917	457370	2.89%	0.290%
87	18.457	2918	2922	2925	rVV3	93777	137284	0.87%	0.087%
88	18.504	2925	2931	2940	rVV3	586483	1334229	8.42%	0.846%
89	18.567	2940	2943	2949	rVV	181056	286750	1.81%	0.182%
90	18.630	2949	2955	2958	rVV2	306547	533641	3.37%	0.338%
91	18.667	2958	2962	2968	rVV	292303	491499	3.10%	0.312%
92	18.808	2978	2989	2996	rVV4	69981	186330	1.18%	0.118%
93	18.876	2996	3002	3010	rVV	1173802	1780247	11.24%	1.129%

LSC Area Percent Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73698.D
Acq On : 8 Nov 2016 1:50 pm
Operator : XimenaC
Sample : jc30522-3
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 40 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.5 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

94	18.987	3018	3023	3029	rVV2	134170	265779	1.68%	0.169%
95	19.060	3033	3037	3049	rVB2	111702	203884	1.29%	0.129%
96	19.186	3055	3061	3067	rBV	182439	308913	1.95%	0.196%
97	19.390	3093	3100	3110	rVV	147492	273370	1.73%	0.173%
98	19.506	3117	3122	3129	rVV	92291	167152	1.05%	0.106%
99	20.035	3216	3223	3229	rBV	90032	146510	0.92%	0.093%
100	20.266	3253	3267	3275	rBV	75614	165408	1.04%	0.105%

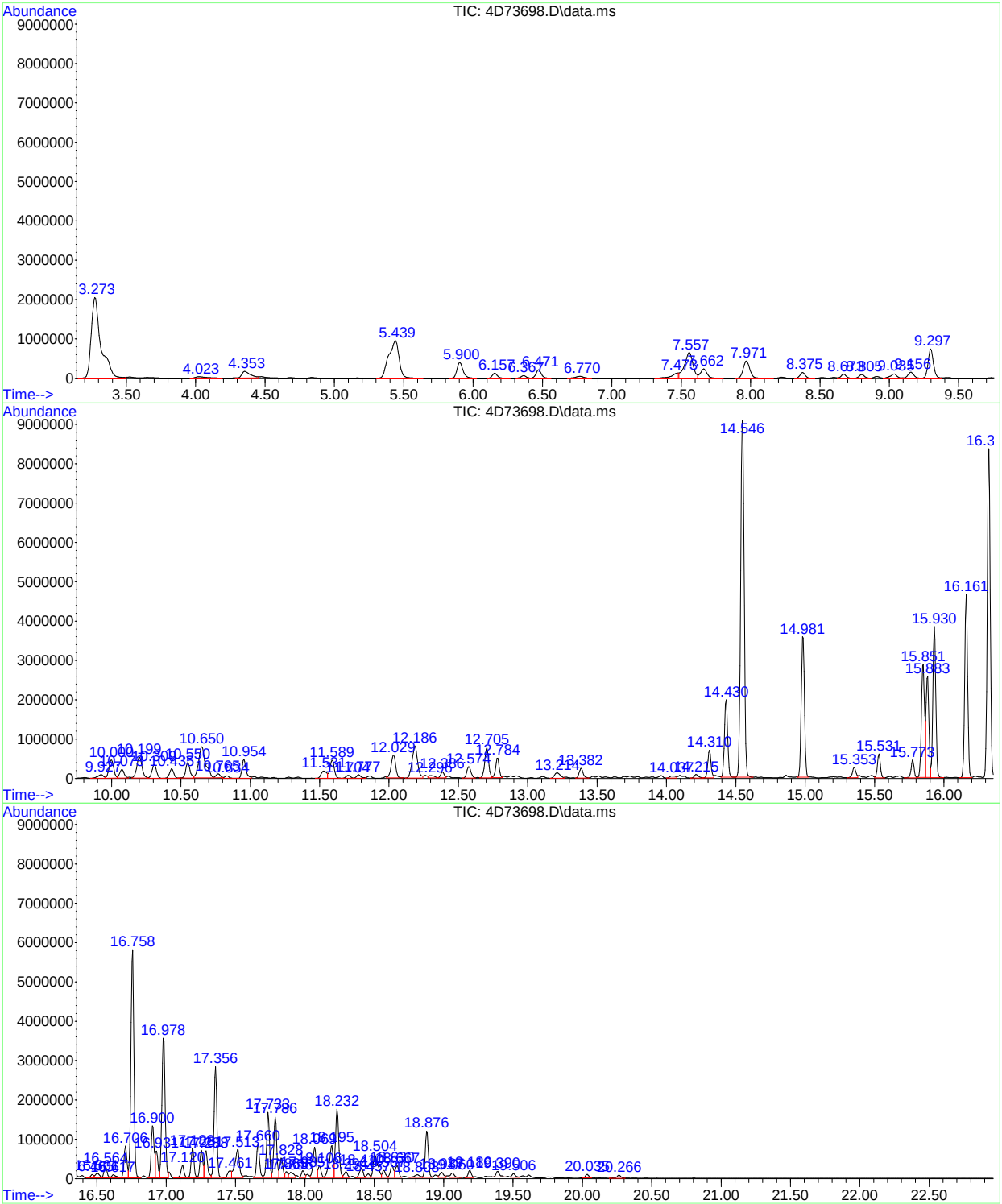
Sum of corrected areas: 157662679

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73698.D
Acq On : 8 Nov 2016 1:50 pm
Operator : XimenaC
Sample : jc30522-3
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p



SGS ACCUTEST JC30522

Library Search Compound Report

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Sample : jc30522-3
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 40 Sample Multiplier: 1

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Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

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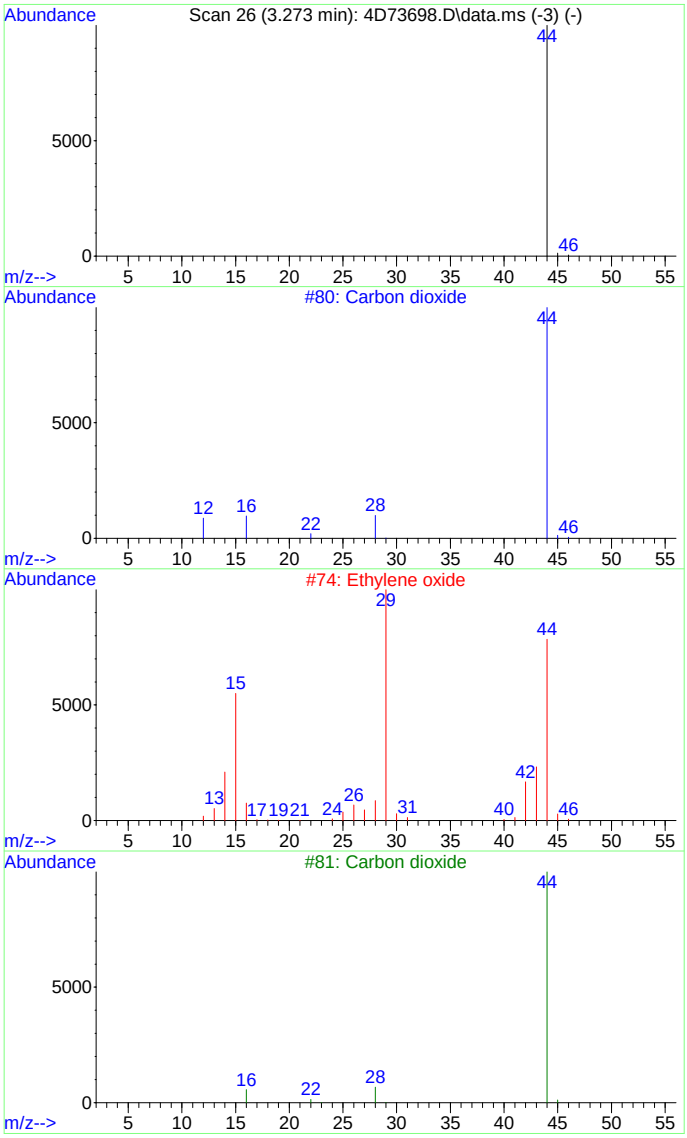
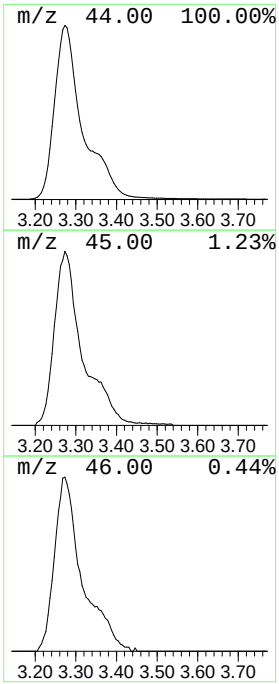
Peak Number 1 system artifact Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.273	445.23 ug/L	9991430	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Ethylene oxide	44	C2H4O	000075-21-8	3
3	Carbon dioxide	44	CO2	000124-38-9	3
4	Nitrous Oxide	44	N2O	010024-97-2	3
5	Nitrous Oxide	44	N2O	010024-97-2	3





Library Search Compound Report

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Acq On : 8 Nov 2016 1:50 pm
Operator : XimenaC
Sample : jc30522-3
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
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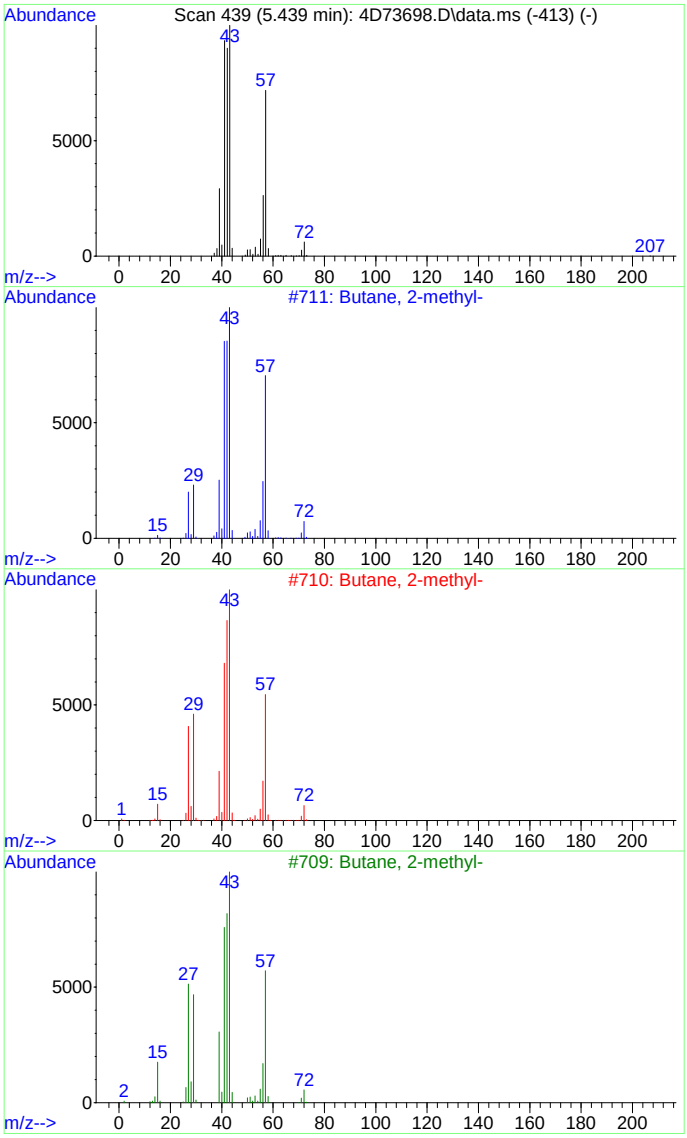
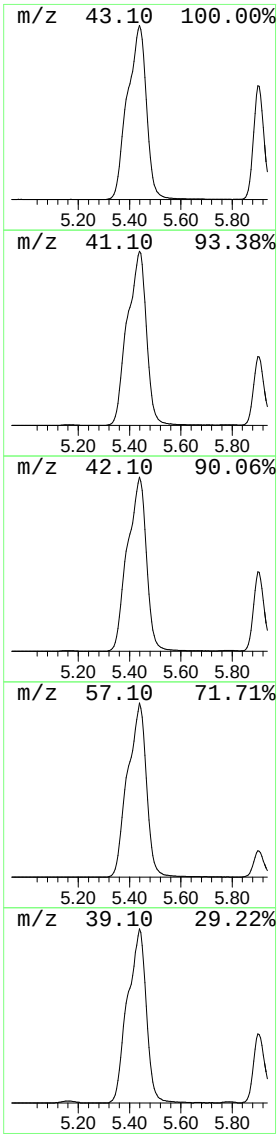
Peak Number 2 alkane Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.439	218.18 ug/L	4896110	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	94
2	Butane, 2-methyl-	72	C5H12	000078-78-4	87
3	Butane, 2-methyl-	72	C5H12	000078-78-4	80
4	3-Buten-1-ol	72	C4H8O	000627-27-0	47
5	Pentane	72	C5H12	000109-66-0	36





Library Search Compound Report

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Operator : XimenaC
Sample : jc30522-3
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
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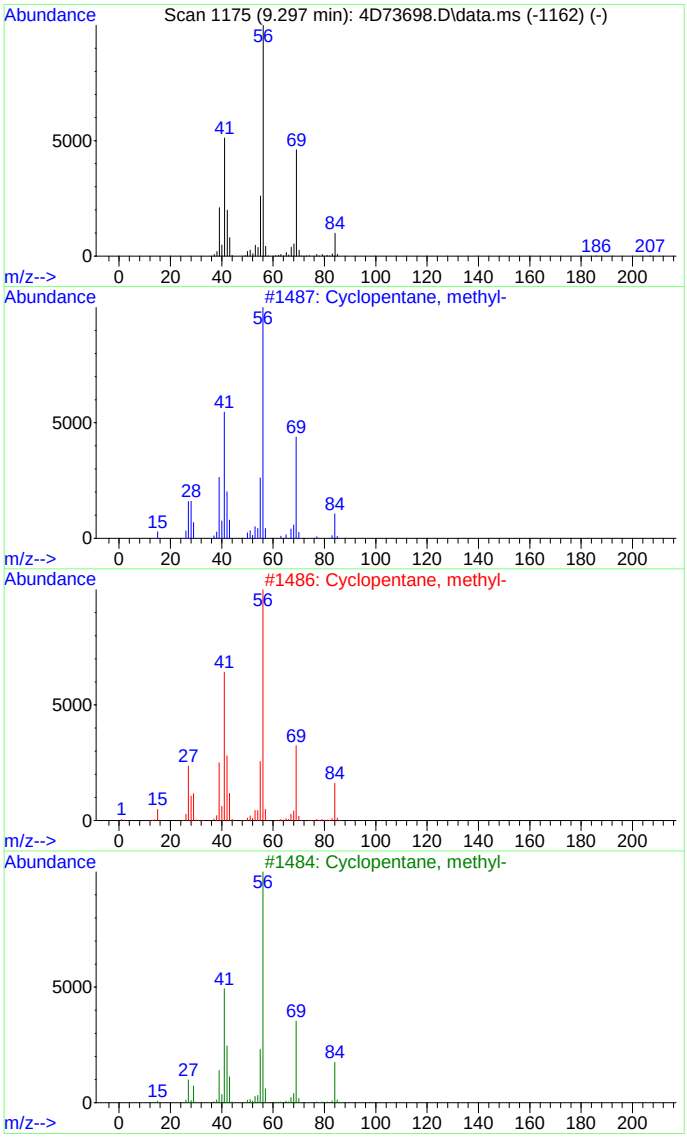
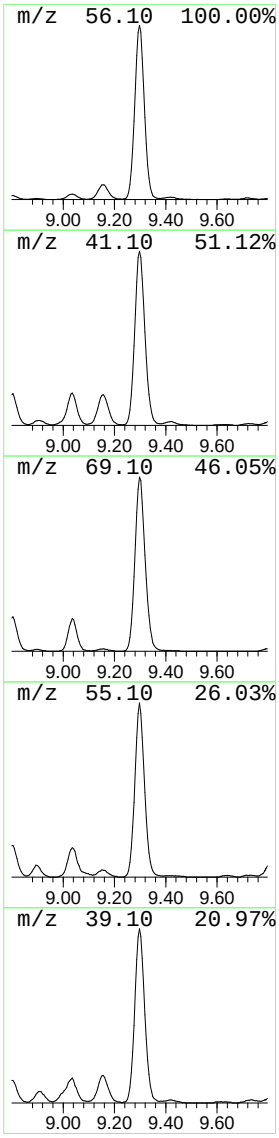
Peak Number 3 Cyclopentane, methyl- Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.297	88.01 ug/L	1975040	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	94
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	90
3	Cyclopentane, methyl-	84	C6H12	000096-37-7	78
4	Cyclohexane	84	C6H12	000110-82-7	78
5	Propane, 2-cyclopropyl-	84	C6H12	003638-35-5	64





Library Search Compound Report

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Operator : XimenaC
Sample : jc30522-3
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
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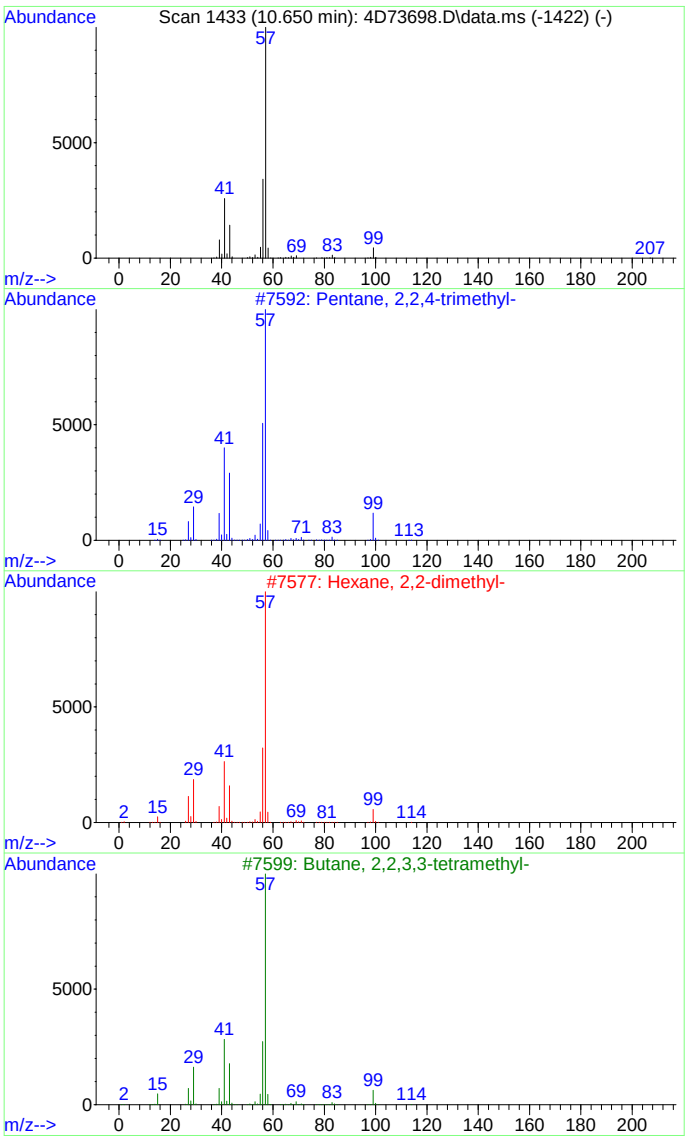
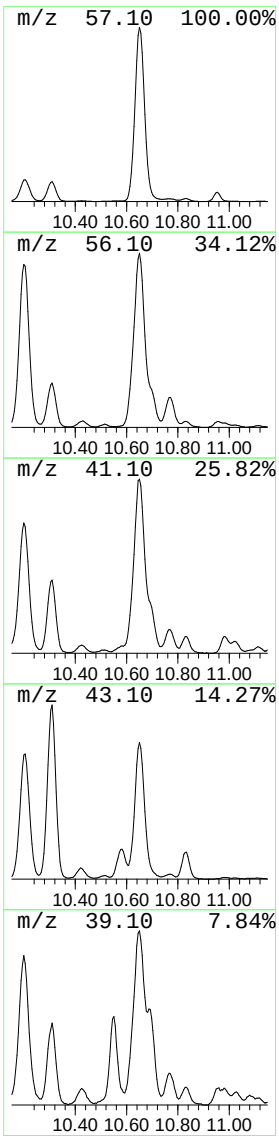
Peak Number 4 alkane Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.650	139.82 ug/L	2734400	1,4-difluorobenzene	10.954

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,2,4-trimethyl-	114	C8H18	000540-84-1	83
2	Hexane, 2,2-dimethyl-	114	C8H18	000590-73-8	78
3	Butane, 2,2,3,3-tetramethyl-	114	C8H18	000594-82-1	78
4	Pentane, 2,2,4-trimethyl-	114	C8H18	000540-84-1	72
5	Hexane, 2,2-dimethyl-	114	C8H18	000590-73-8	72





Library Search Compound Report

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Acq On : 8 Nov 2016 1:50 pm
Operator : XimenaC
Sample : jc30522-3
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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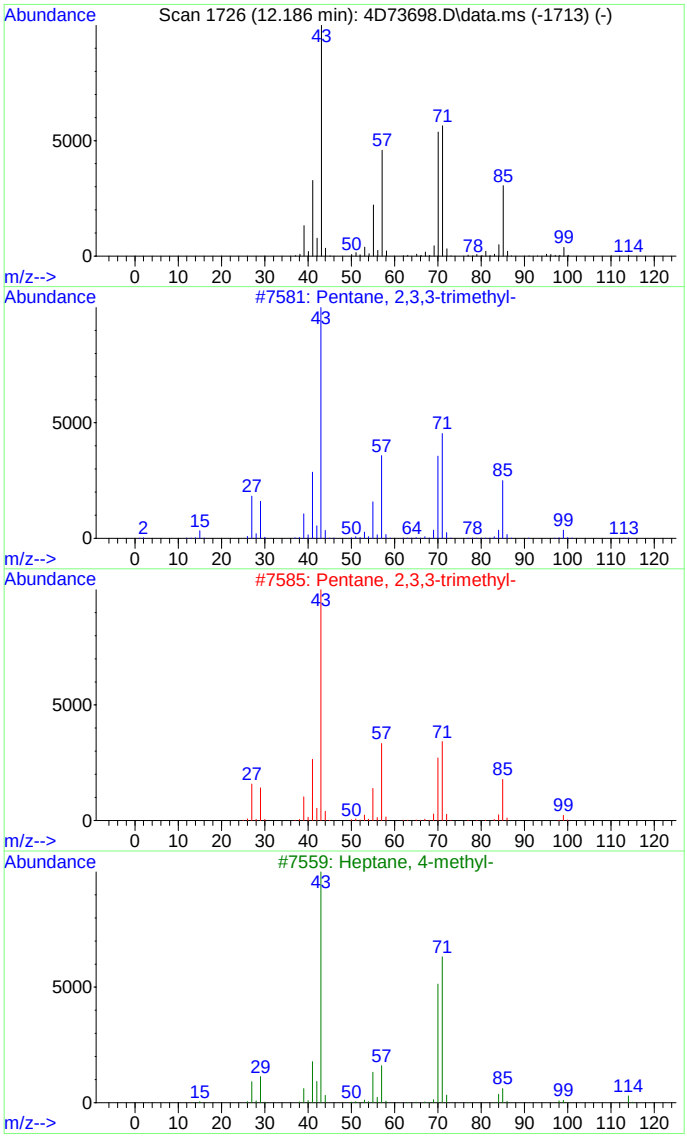
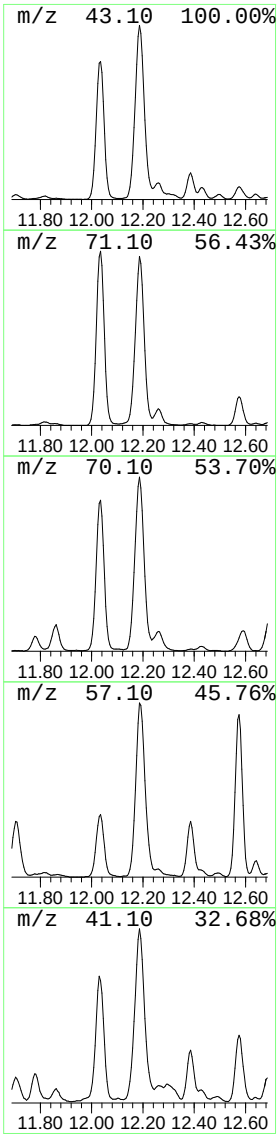
Peak Number 5 alkane Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.186	114.10 ug/L	2231450	1,4-difluorobenzene	10.954

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	80
2	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	64
3	Heptane, 4-methyl-	114	C8H18	000589-53-7	64
4	Hexane, 3,3-dimethyl-	114	C8H18	000563-16-6	59
5	Hexane, 2,3-dimethyl-	114	C8H18	000584-94-1	59





Library Search Compound Report

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Acq On : 8 Nov 2016 1:50 pm
Operator : XimenaC
Sample : jc30522-3
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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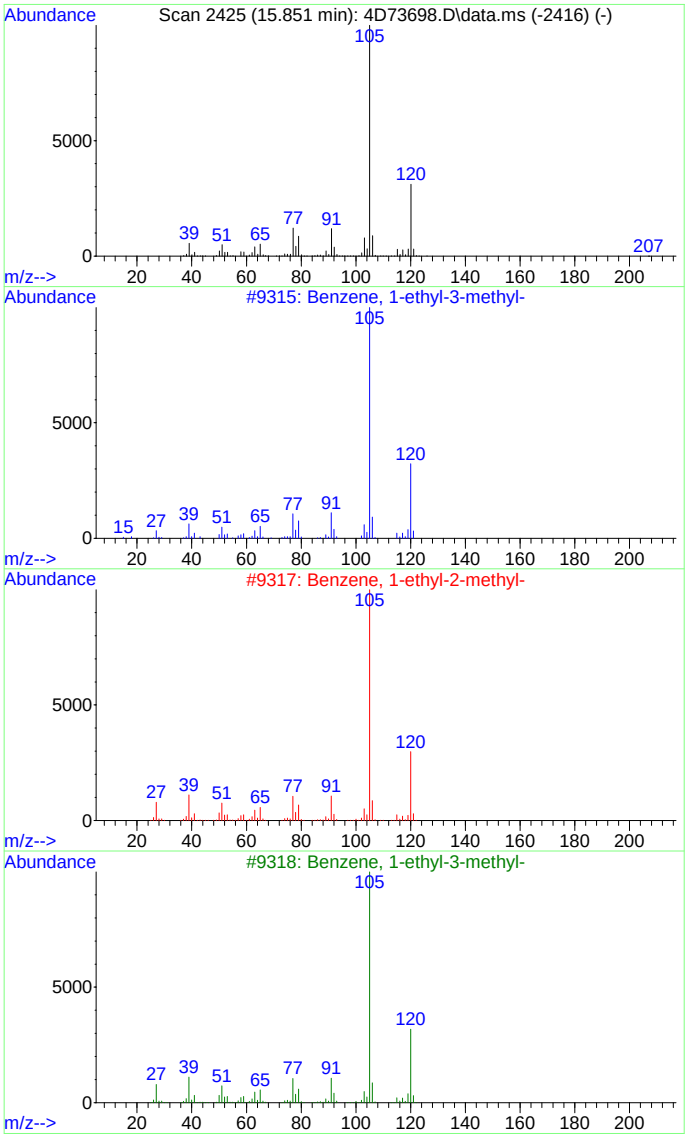
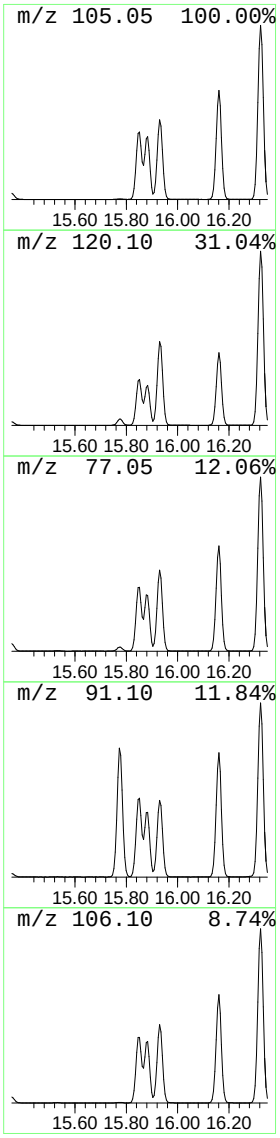
Peak Number 6 C3 alkyl benzene Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.851	199.61 ug/L	4769500	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
3	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	95
4	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
5	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91





SGS ACCUTEST JC30522

Library Search Compound Report

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Data File : 4D73698.D
Acq On : 8 Nov 2016 1:50 pm
Operator : XimenaC
Sample : jc30522-3
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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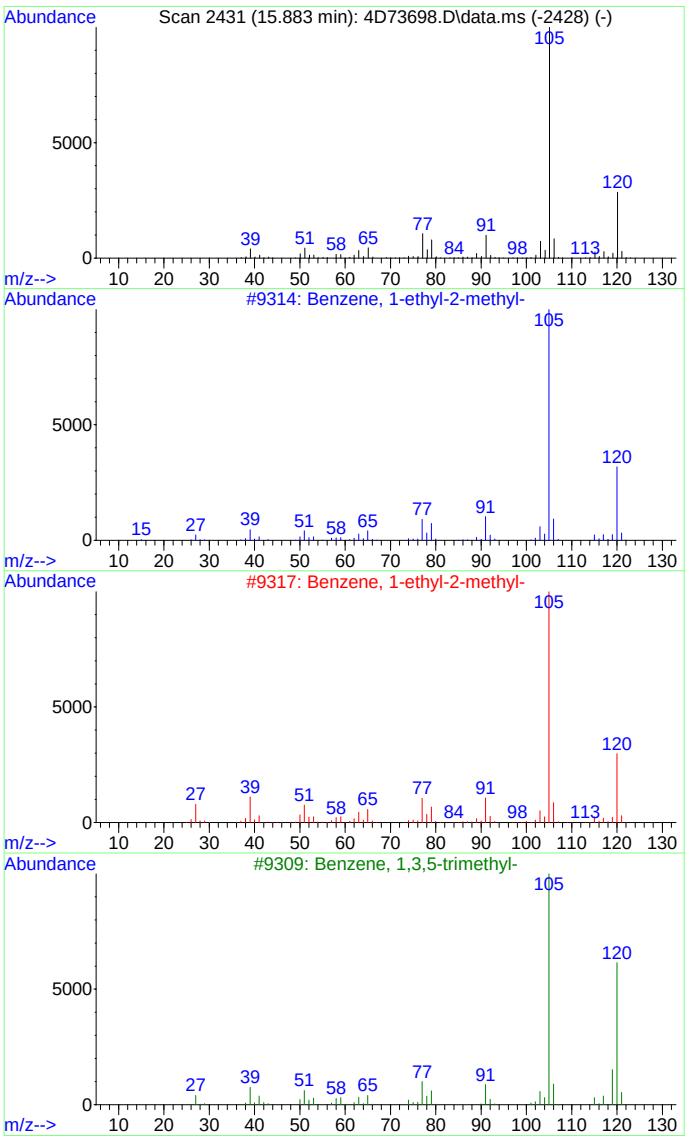
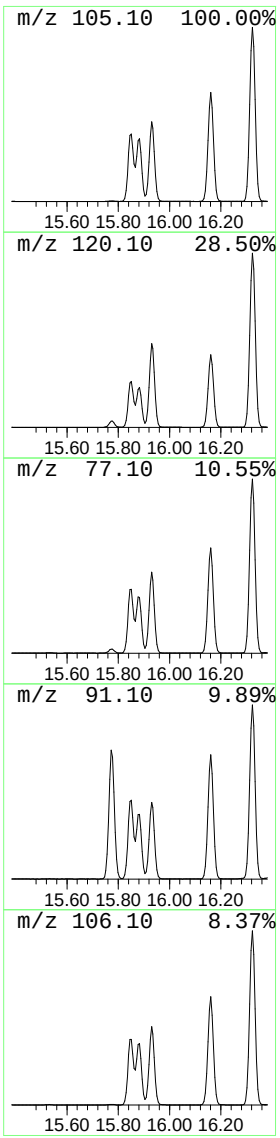
Peak Number 7 C3 alkyl benzene Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.883	142.15 ug/L	3396520	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
4	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91
5	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91





Library Search Compound Report

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Operator : XimenaC
Sample : jc30522-3
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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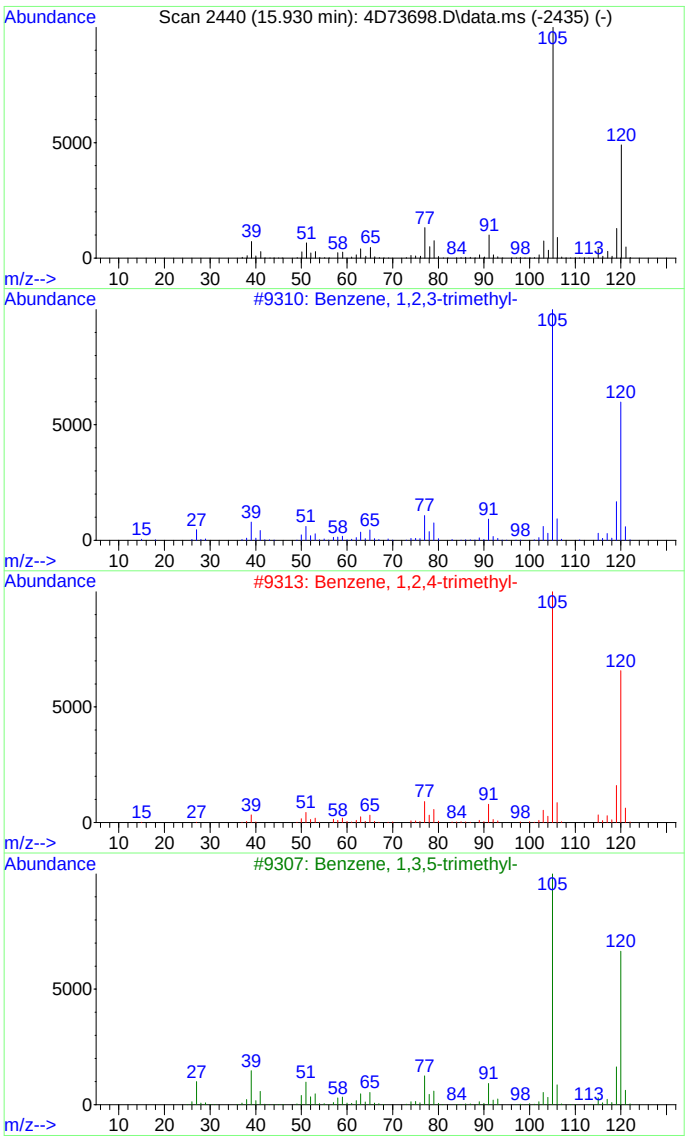
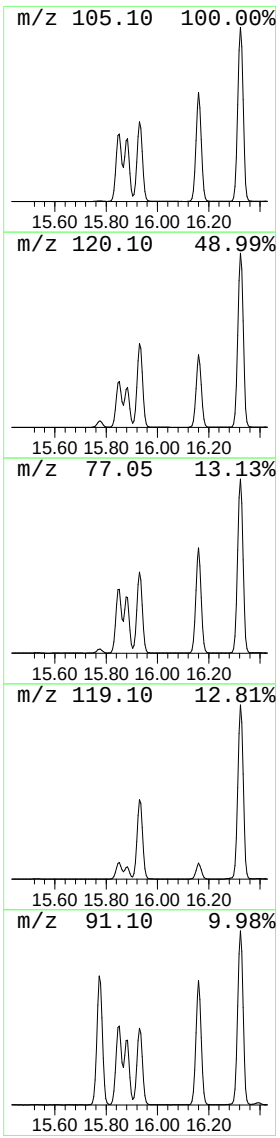
Peak Number 8 Benzene, 1,2,4-trimethyl- Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.930	237.04 ug/L	5663770	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95





Library Search Compound Report

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Operator : XimenaC
Sample : jc30522-3
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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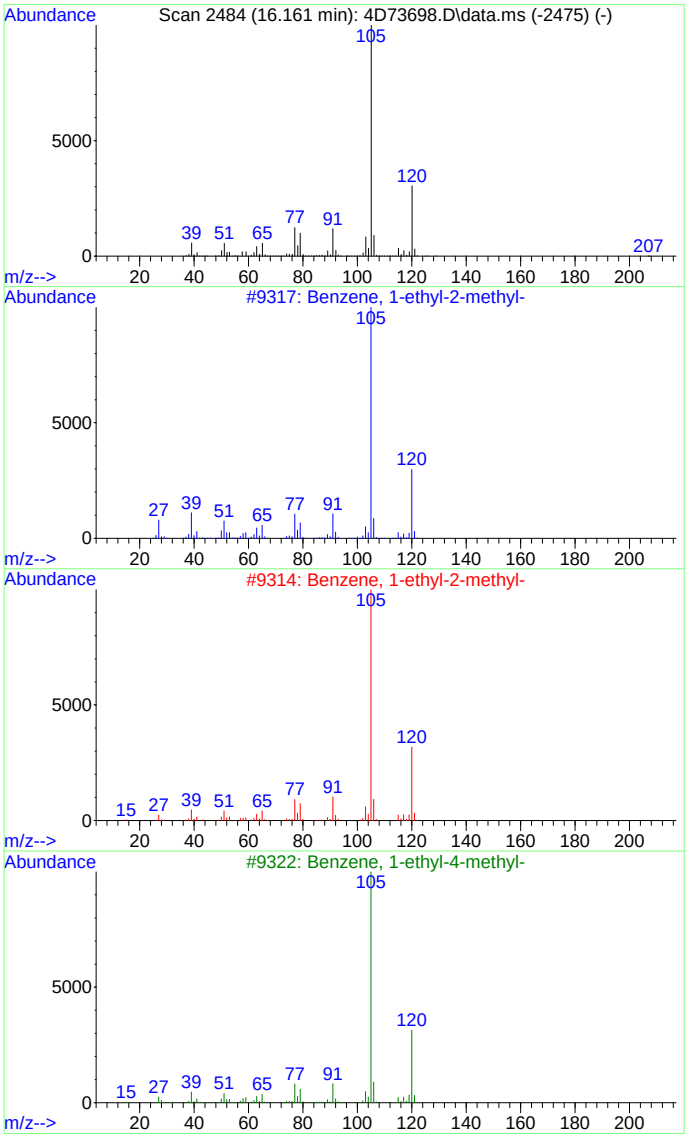
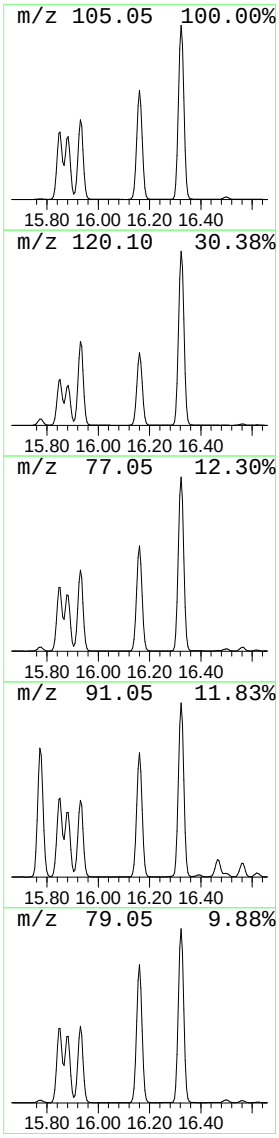
Peak Number 9 C3 alkyl benzene Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.160	287.84 ug/L	6877680	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91





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Operator : XimenaC
Sample : jc30522-3
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

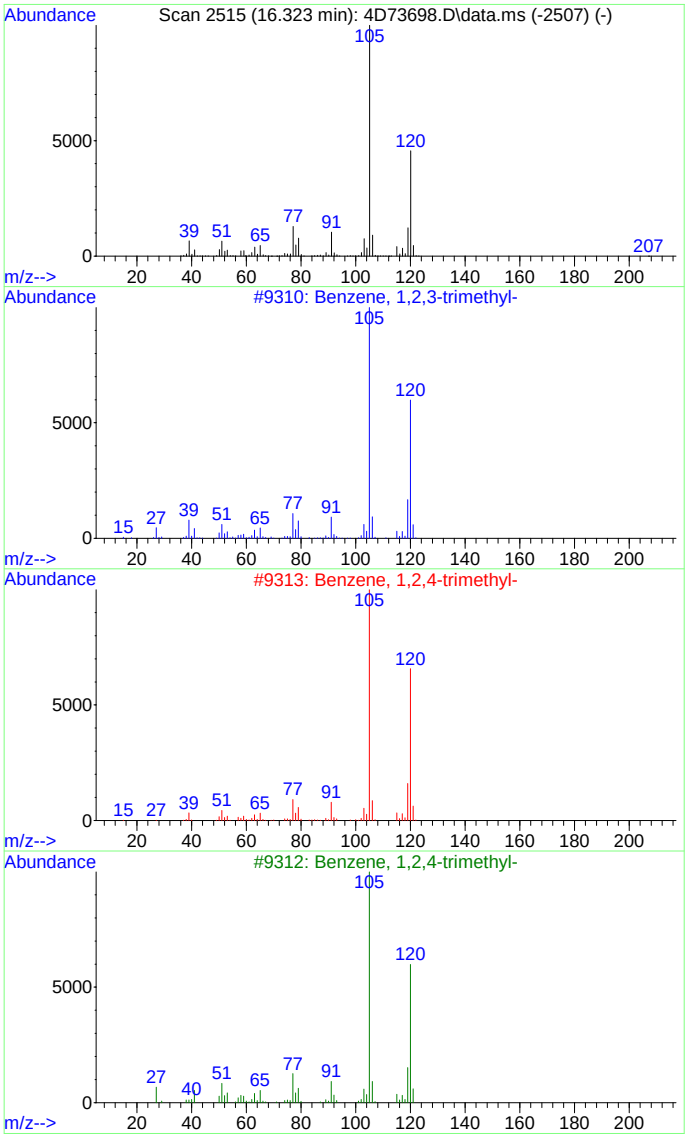
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

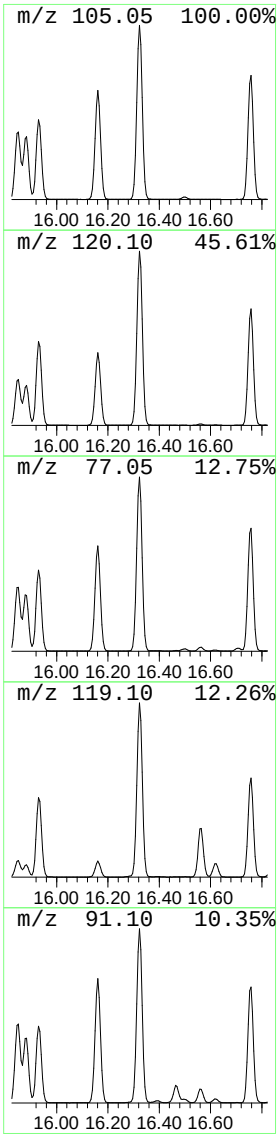
****

Peak Number 10 C3 alkyl benzene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.323	515.29 ug/L	12312500	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	93





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Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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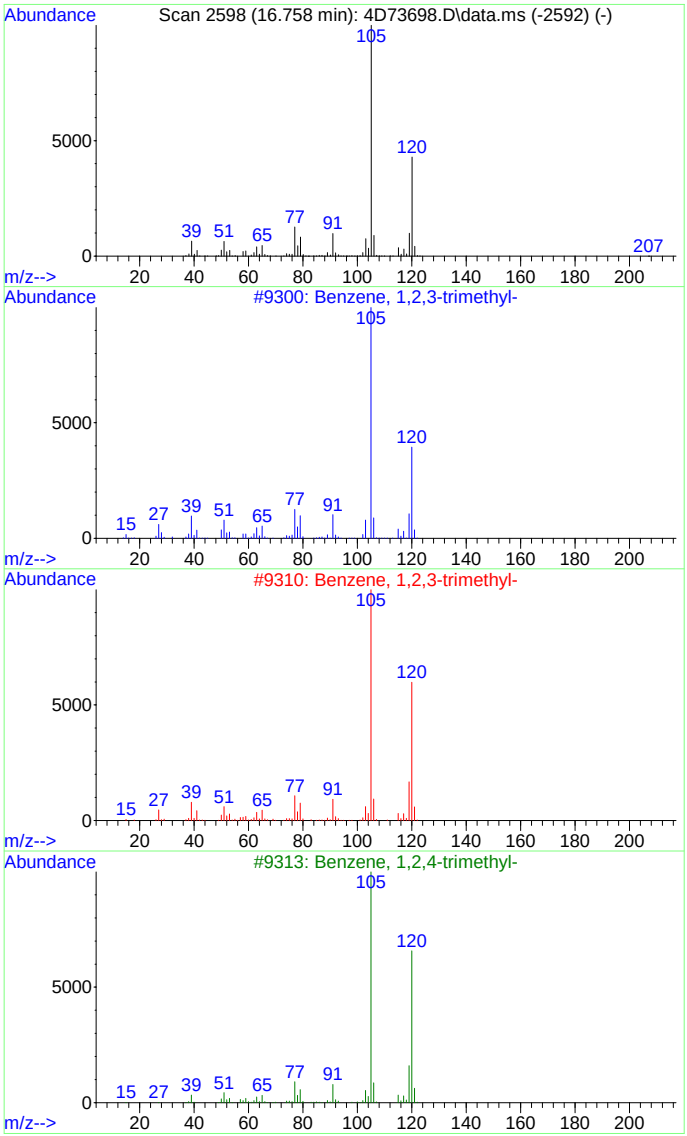
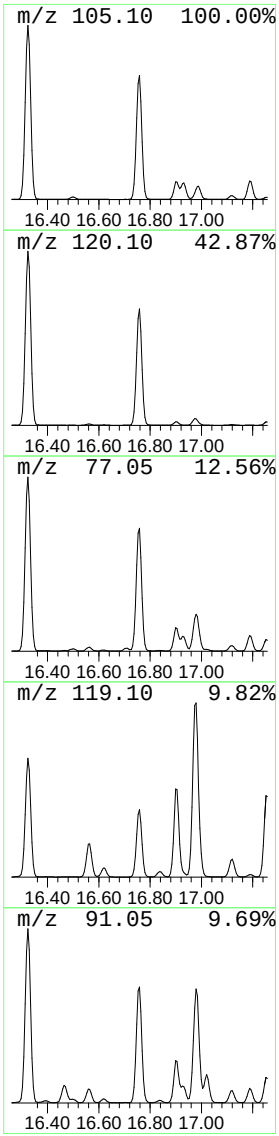
Peak Number 11 C3 alkyl benzene Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.758	360.83 ug/L	8621770	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
2	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	93
5	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	91





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Data File : 4D73698.D
Acq On : 8 Nov 2016 1:50 pm
Operator : XimenaC
Sample : jc30522-3
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

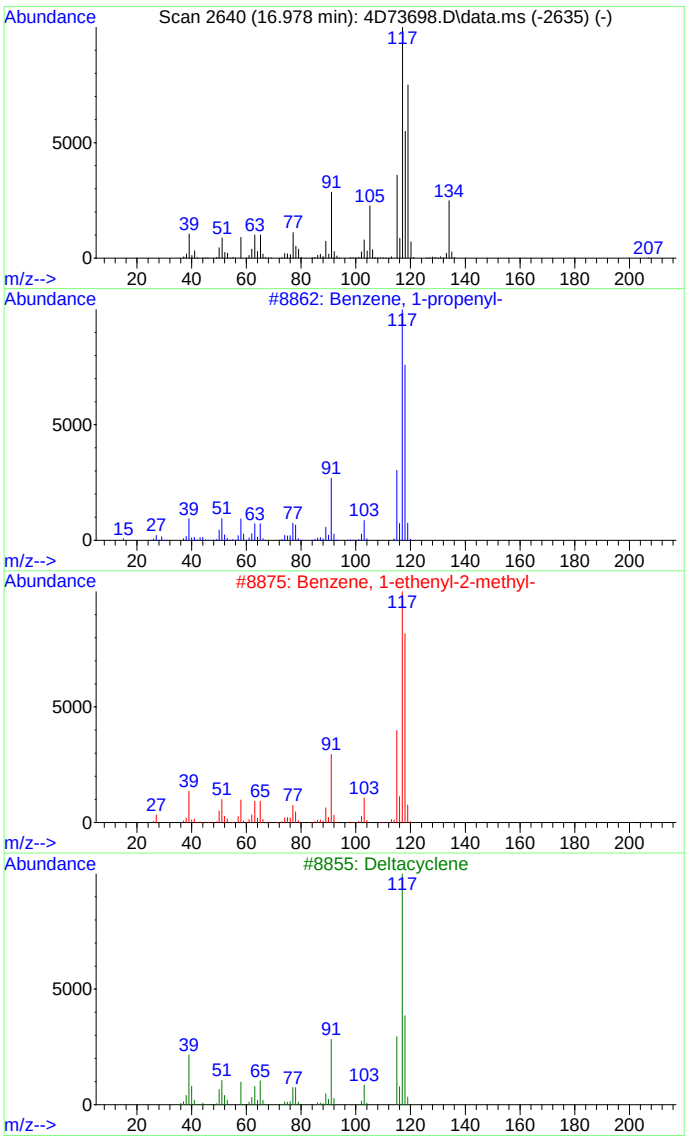
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

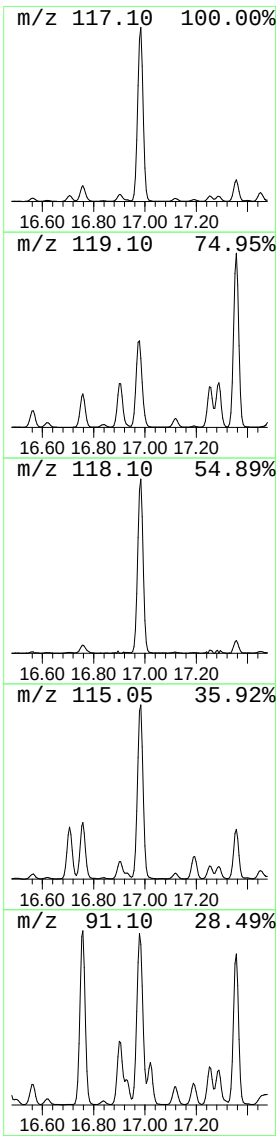
****

Peak Number 12 unknown Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.978	243.82 ug/L	5826000	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-propenyl-	118	C9H10	000637-50-3	86
2	Benzene, 1-ethenyl-2-methyl-	118	C9H10	000611-15-4	83
3	Deltacyclene	118	C9H10	007785-10-6	46
4	Benzene, 1-ethenyl-2-methyl-	118	C9H10	000611-15-4	46
5	Benzene, cyclopropyl-	118	C9H10	000873-49-4	46





Library Search Compound Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73698.D
Acq On : 8 Nov 2016 1:50 pm
Operator : XimenaC
Sample : jc30522-3
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

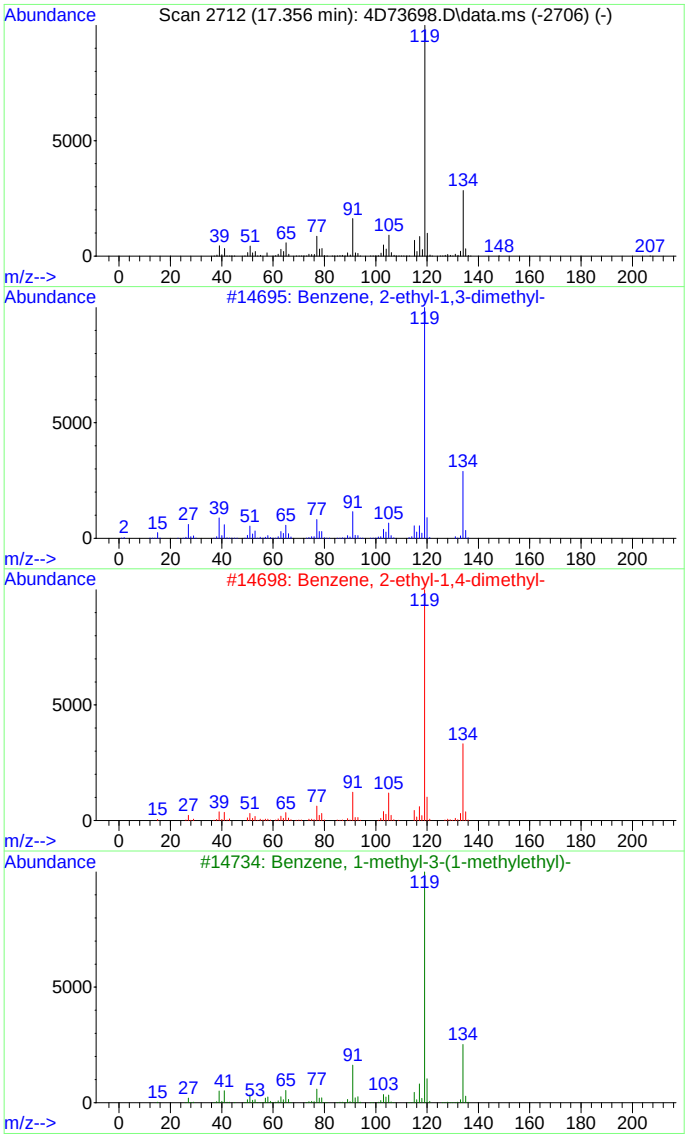
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

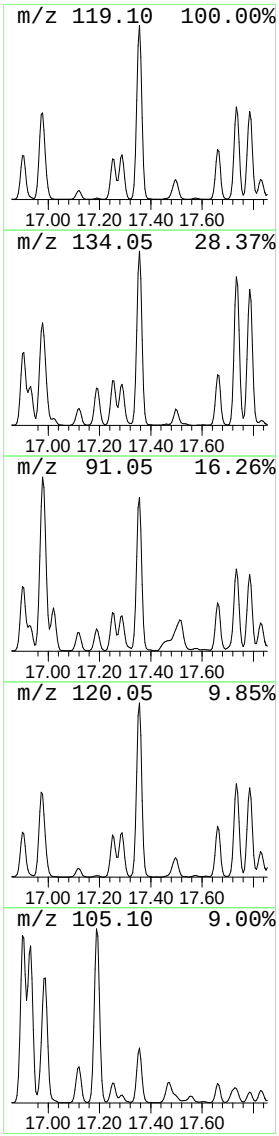
****

Peak Number 13 C4 alkyl benzene Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.356	165.89 ug/L	3963750	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14	002870-04-4	95
2	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	95
3	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	95
4	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	95
5	Benzene, 1-methyl-4-(1-methyleth...	134	C10H14	000099-87-6	95





SGS ACCUTEST JC30522

Library Search Compound Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73698.D
Acq On : 8 Nov 2016 1:50 pm
Operator : XimenaC
Sample : jc30522-3
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

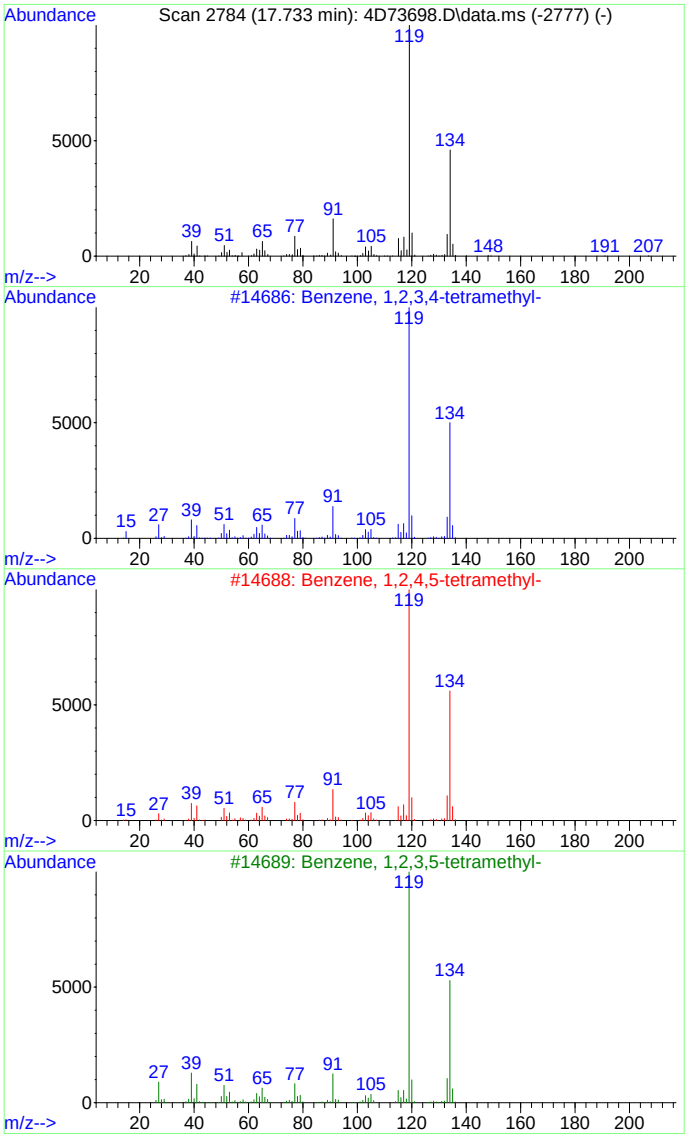
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

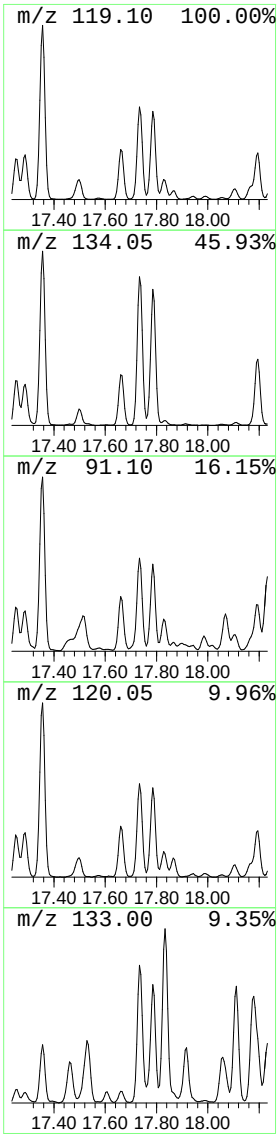
****

Peak Number 14 C4 alkyl benzene Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.733	101.85 ug/L	2433710	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	97
2	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	97
3	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	97
4	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	97
5	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	96





Library Search Compound Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73698.D
Acq On : 8 Nov 2016 1:50 pm
Operator : XimenaC
Sample : jc30522-3
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

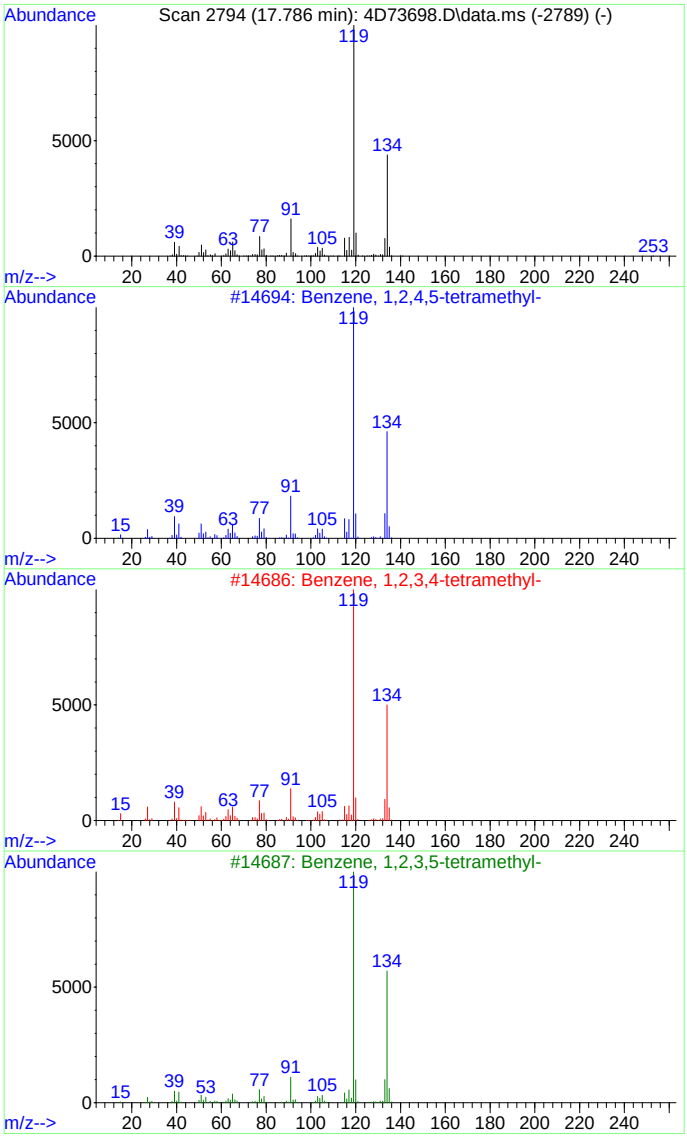
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

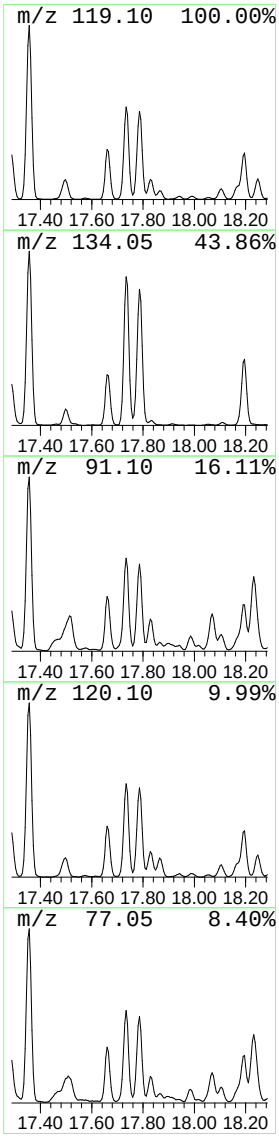
****

Peak Number 15 C4 alkyl benzene Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.786	94.99 ug/L	2269680	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	97
2	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	95
3	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	95
4	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	95
5	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	95





SGS ACCUTEST JC30522

Library Search Compound Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73698.D
Acq On : 8 Nov 2016 1:50 pm
Operator : XimenaC
Sample : jc30522-3
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

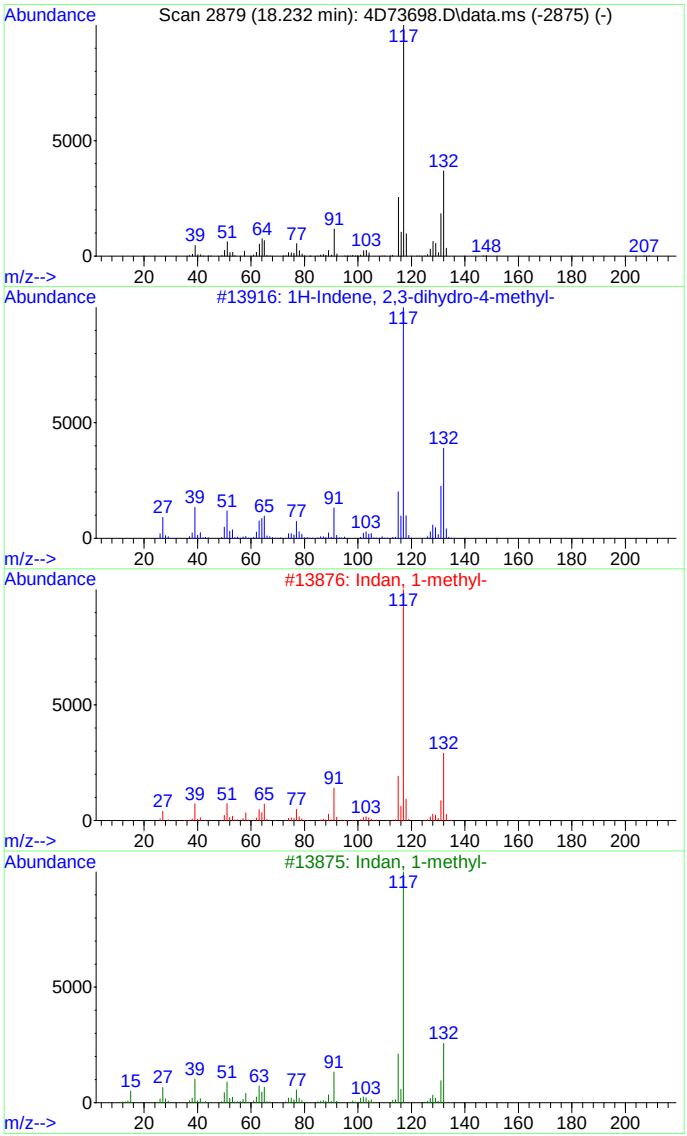
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

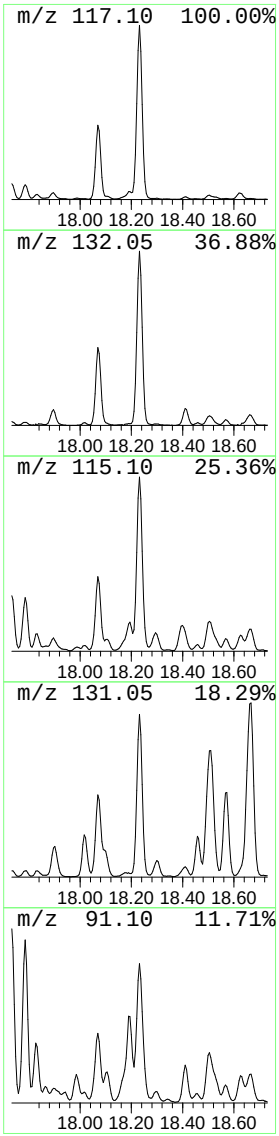
****

Peak Number 16 1H-Indene-dihydro-methyl- i... Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.232	118.15 ug/L	2823040	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	94
2	Indan, 1-methyl-	132	C10H12	000767-58-8	91
3	Indan, 1-methyl-	132	C10H12	000767-58-8	87
4	1H-Indene, 2,3-dihydro-2-methyl-	132	C10H12	000824-63-5	86
5	Benzene, 1-ethenyl-4-ethyl-	132	C10H12	003454-07-7	81





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73698.D
Acq On : 8 Nov 2016 1:50 pm
Operator : XimenaC
Sample : jc30522-3
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
system artifact	3.273	445.2	ug/L	9991430	2	10.005	1122060	50.0
alkane	5.439	218.2	ug/L	4896110	2	10.005	1122060	50.0
Cyclopentane, m...	9.297	88.0	ug/L	1975040	2	10.005	1122060	50.0
alkane	10.650	139.8	ug/L	2734400	3	10.954	977829	50.0
alkane	12.186	114.1	ug/L	2231450	3	10.954	977829	50.0
C3 alkyl benzene	15.851	199.6	ug/L	4769500	5	16.706	1194710	50.0
C3 alkyl benzene	15.883	142.2	ug/L	3396520	5	16.706	1194710	50.0
Benzene, 1,2,4-...	15.930	237.0	ug/L	5663770	5	16.706	1194710	50.0
C3 alkyl benzene	16.160	287.8	ug/L	6877680	5	16.706	1194710	50.0
C3 alkyl benzene	16.323	515.3	ug/L	12312500	5	16.706	1194710	50.0
C3 alkyl benzene	16.758	360.8	ug/L	8621770	5	16.706	1194710	50.0
unknown	16.978	243.8	ug/L	5826000	5	16.706	1194710	50.0
C4 alkyl benzene	17.356	165.9	ug/L	3963750	5	16.706	1194710	50.0
C4 alkyl benzene	17.733	101.8	ug/L	2433710	5	16.706	1194710	50.0
C4 alkyl benzene	17.786	95.0	ug/L	2269680	5	16.706	1194710	50.0
1H-Indene-dihyd...	18.232	118.2	ug/L	2823040	5	16.706	1194710	50.0

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73697.D
Acq On : 8 Nov 2016 1:22 pm
Operator : XimenaC
Sample : jc30522-4
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 39 Sample Multiplier: 1

Quant Time: Nov 09 15:24:54 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um
QLast Update : Wed Sep 14 10:25:10 2016
Response via : Initial Calibration

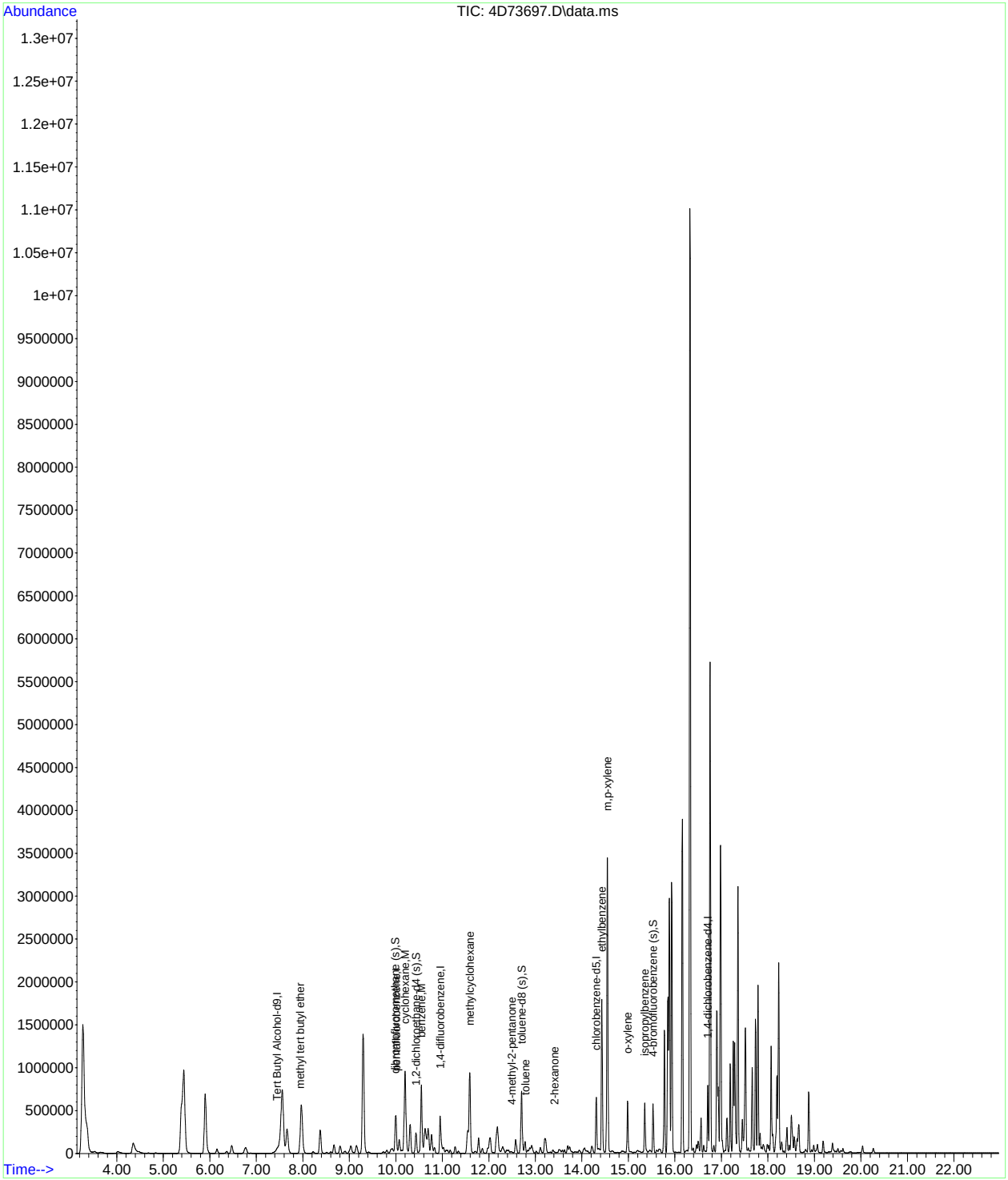
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.447	65	115180	500.00	ug/L	0.00
4) pentafluorobenzene	10.005	168	242904	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.954	114	361490	50.00	ug/L	0.00
86) chlorobenzene-d5	14.310	117	343923	50.00	ug/L	0.00
101) 1,4-dichlorobenzene-d4	16.706	152	182110	50.00	ug/L	0.00
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.990	113	123174	49.30	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 98.60%			
49) 1,2-dichloroethane-d4 (s)	10.435	65	127149	49.90	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 99.80%			
78) toluene-d8 (s)	12.705	98	440741	51.55	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 103.10%			
103) 4-bromofluorobenzene (s)	15.531	95	179294	52.70	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 105.40%			
Target Compounds						Qvalue
31) methyl tert butyl ether	7.940	73	25892	3.24	ug/L #	1
57) cyclohexane	10.199	84	339001	83.78	ug/L #	52
62) benzene	10.551	78	737476	64.90	ug/L	99
73) methylcyclohexane	11.589	83	446719	92.92	ug/L	99
79) 4-methyl-2-pentanone	12.496	58	2067	1.72	ug/L #	69
80) toluene	12.784	92	43112	6.12	ug/L	95
85) 2-hexanone	13.413	58	4552	4.09	ug/L	94
95) ethylbenzene	14.430	91	1271796	91.22	ug/L	100
96) m,p-xylene	14.551	106	1031296	197.40	ug/L	99
97) o-xylene	14.981	91	336695	29.59	ug/L	99
102) isopropylbenzene	15.353	105	364518	26.29	ug/L	99

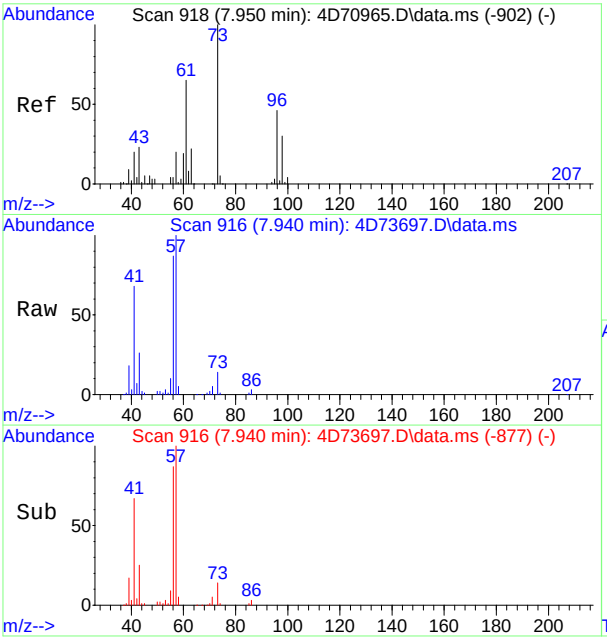
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73697.D
Acq On : 8 Nov 2016 1:22 pm
Operator : XimenaC
Sample : jc30522-4
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 39 Sample Multiplier: 1

Quant Time: Nov 09 15:24:54 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um
QLast Update : Wed Sep 14 10:25:10 2016
Response via : Initial Calibration

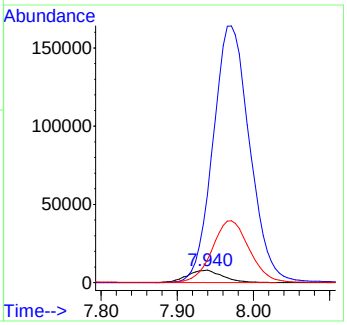


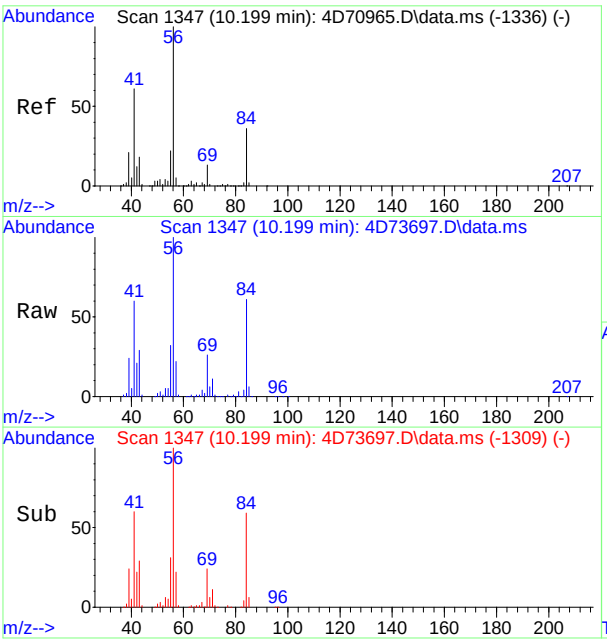


#31
methyl tert butyl ether
Concen: 3.24 ug/L
RT: 7.940 min Scan# 916
Delta R.T. 0.003 min
Lab File: 4D73697.D
Acq: 8 Nov 2016 1:22 pm

Tgt Ion: 73 Resp: 25892

Ion	Ratio	Lower	Upper
73	100		
57	707.5	0.0	51.4#
43	182.4	0.0	49.3#

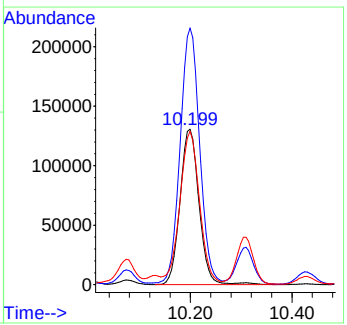


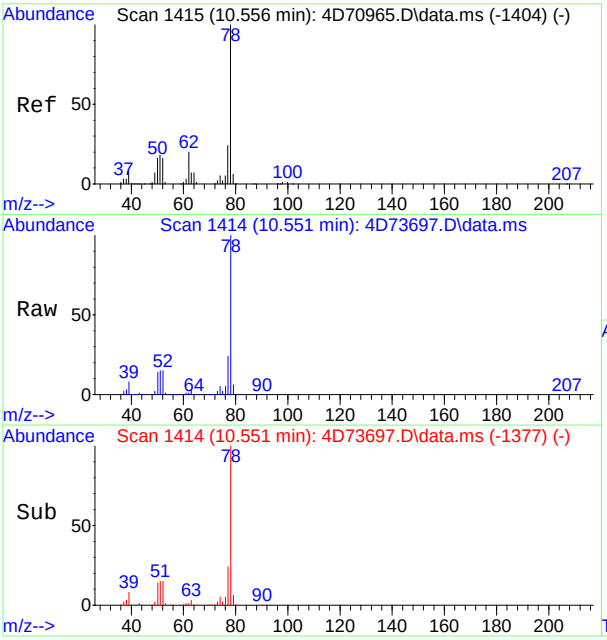


#57
cyclohexane
Concen: 83.78 ug/L
RT: 10.199 min Scan# 1347
Delta R.T. -0.001 min
Lab File: 4D73697.D
Acq: 8 Nov 2016 1:22 pm

Tgt Ion: 84 Resp: 339001

Ion	Ratio	Lower	Upper
84	100		
56	164.8	230.1	290.1#
41	98.4	118.6	178.6#

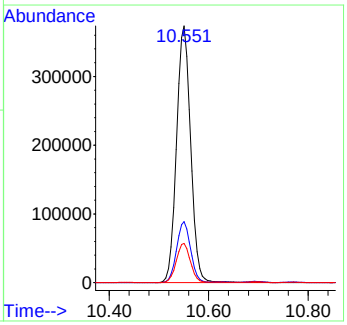


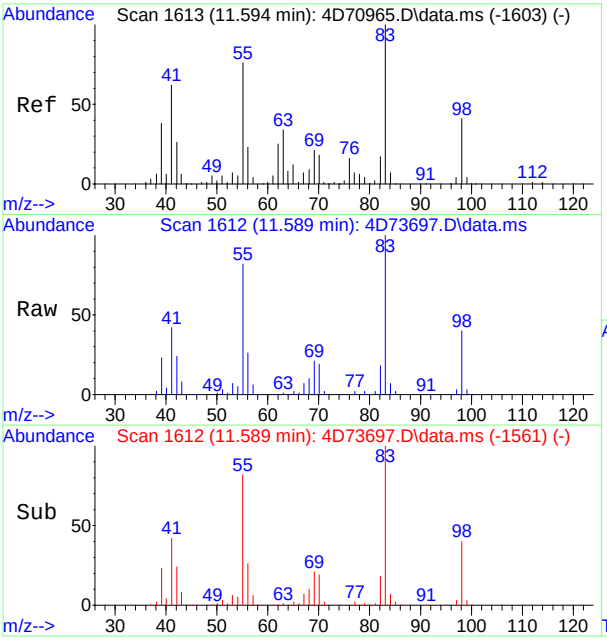


#62
benzene
Concen: 64.90 ug/L
RT: 10.551 min Scan# 1414
Delta R.T. -0.004 min
Lab File: 4D73697.D
Acq: 8 Nov 2016 1:22 pm

Tgt Ion: 78 Resp: 737476

Ion	Ratio	Lower	Upper
78	100		
77	23.7	0.0	53.6
52	15.2	0.0	45.7

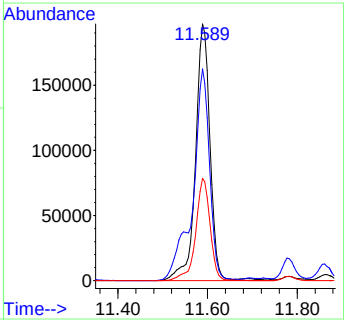


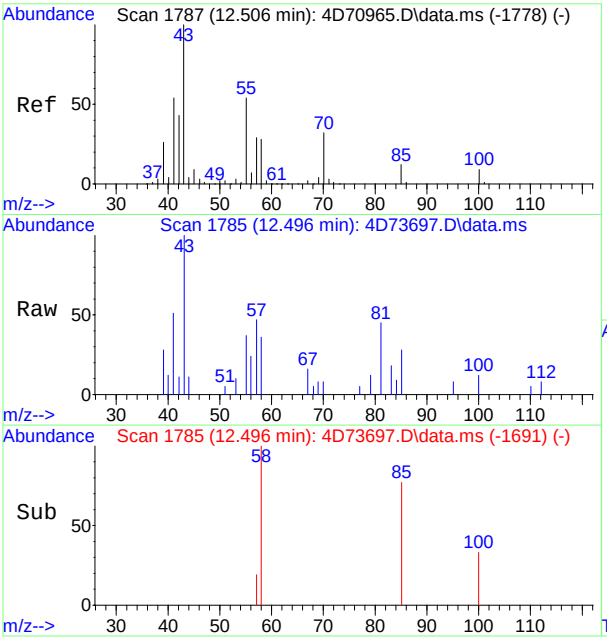


#73
methylcyclohexane
Concen: 92.92 ug/L
RT: 11.589 min Scan# 1612
Delta R.T. -0.034 min
Lab File: 4D73697.D
Acq: 8 Nov 2016 1:22 pm

Tgt Ion: 83 Resp: 446719

Ion	Ratio	Lower	Upper
83	100		
55	82.4	51.3	111.3
98	39.9	10.1	70.1

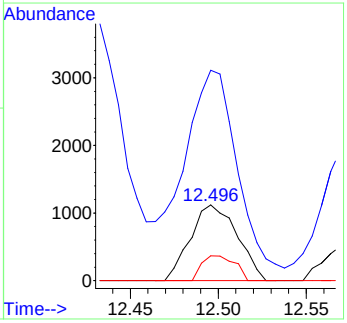


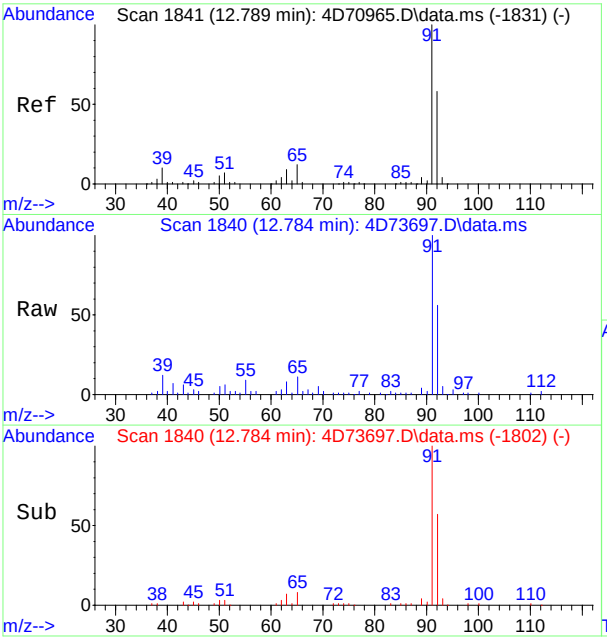


#79
4-methyl-2-pentanone
Concen: 1.72 ug/L
RT: 12.496 min Scan# 1785
Delta R.T. -0.006 min
Lab File: 4D73697.D
Acq: 8 Nov 2016 1:22 pm

Tgt Ion: 58 Resp: 2067

Ion	Ratio	Lower	Upper
58	100		
43	255.5	294.6	354.6#
100	32.8	0.0	60.0

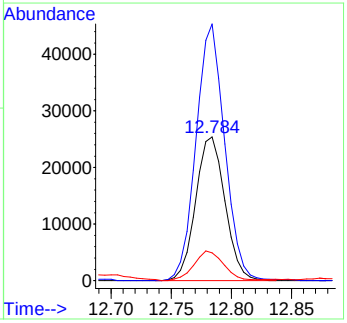


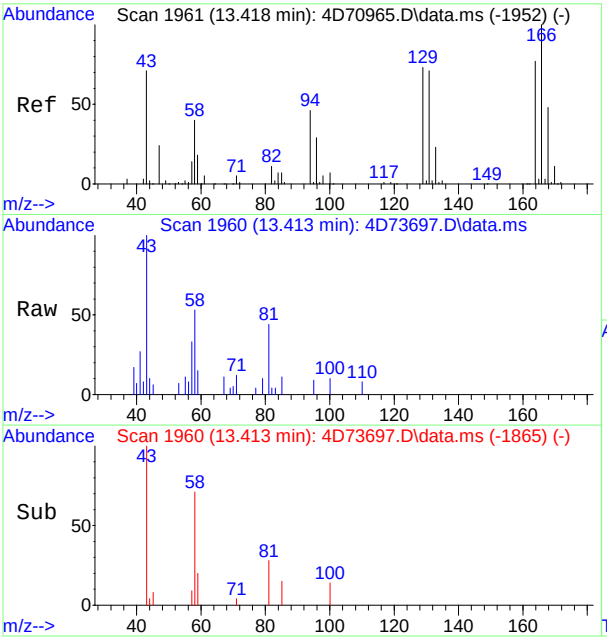


#80
toluene
Concen: 6.12 ug/L
RT: 12.784 min Scan# 1840
Delta R.T. -0.001 min
Lab File: 4D73697.D
Acq: 8 Nov 2016 1:22 pm

Tgt Ion: 92 Resp: 43112

Ion	Ratio	Lower	Upper
92	100		
91	178.6	140.6	200.6
65	18.7	0.0	49.1

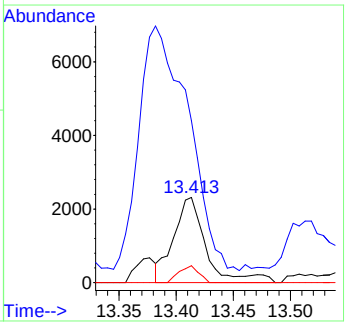


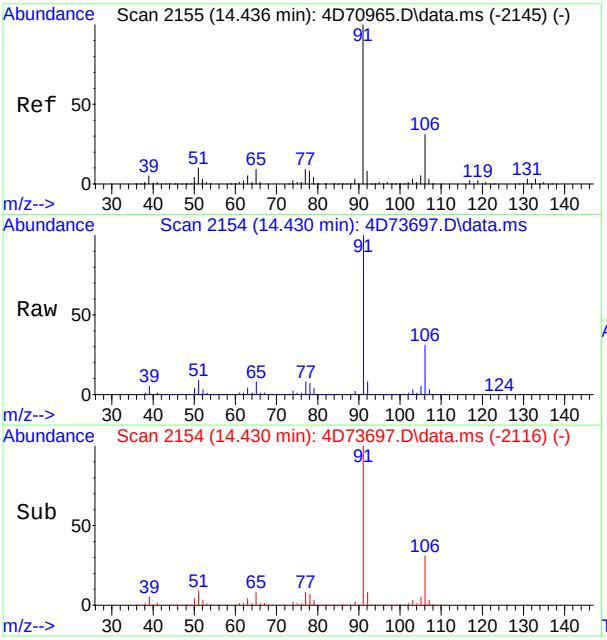


#85
2-hexanone
Concen: 4.09 ug/L
RT: 13.413 min Scan# 1960
Delta R.T. -0.001 min
Lab File: 4D73697.D
Acq: 8 Nov 2016 1:22 pm

Tgt Ion: 58 Resp: 4552

Ion	Ratio	Lower	Upper
58	100		
43	168.8	147.0	207.0
100	19.8	0.0	47.0

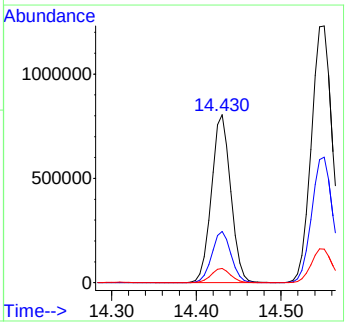


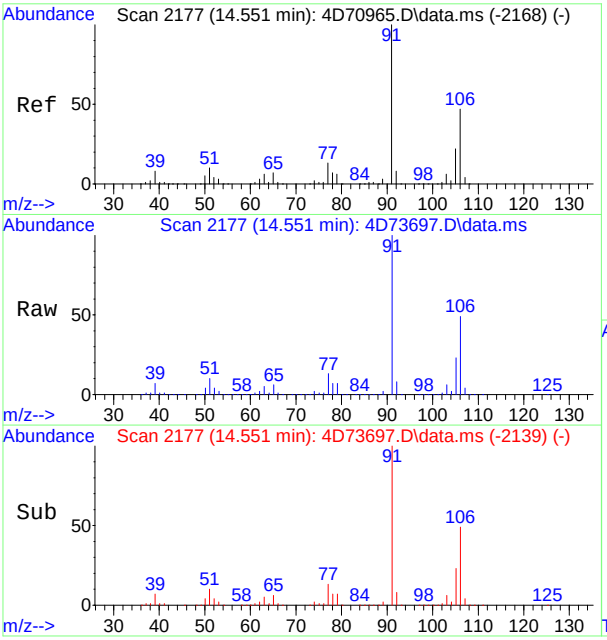


#95
ethylbenzene
Concen: 91.22 ug/L
RT: 14.430 min Scan# 2154
Delta R.T. -0.002 min
Lab File: 4D73697.D
Acq: 8 Nov 2016 1:22 pm

Tgt Ion: 91 Resp: 1271796

Ion	Ratio	Lower	Upper
91	100		
106	30.6	0.5	60.5
77	8.4	0.0	38.4

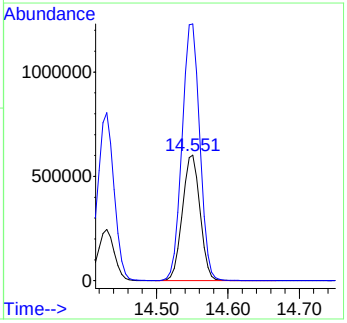


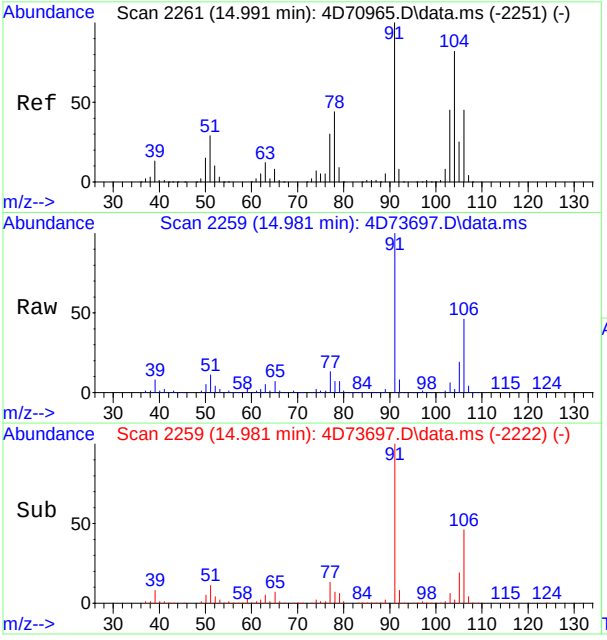


#96
m,p-xylene
Concen: 197.40 ug/L
RT: 14.551 min Scan# 2177
Delta R.T. 0.000 min
Lab File: 4D73697.D
Acq: 8 Nov 2016 1:22 pm

Tgt Ion:106 Resp: 1031296

Ion	Ratio	Lower	Upper
106	100		
91	204.6	173.4	233.4

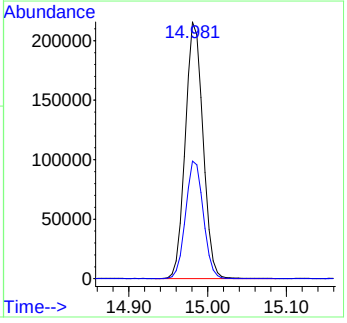


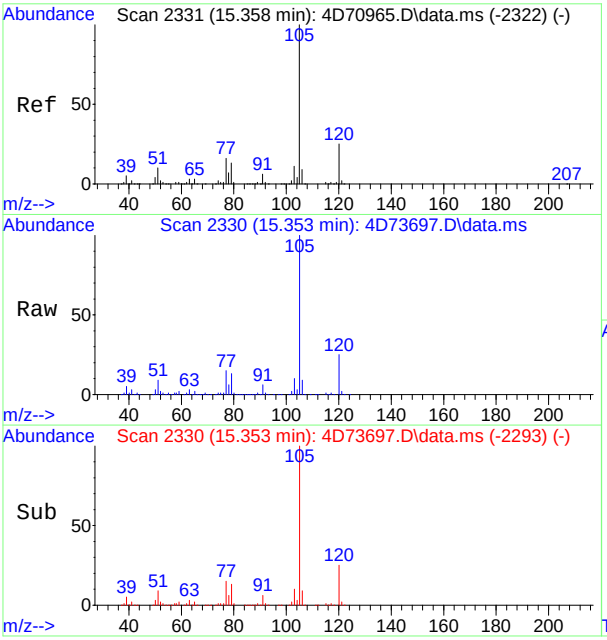


#97
o-xylene
Concen: 29.59 ug/L
RT: 14.981 min Scan# 2259
Delta R.T. -0.005 min
Lab File: 4D73697.D
Acq: 8 Nov 2016 1:22 pm

Tgt Ion: 91 Resp: 336695

Ion	Ratio	Lower	Upper
91	100		
106	45.8	16.4	76.4

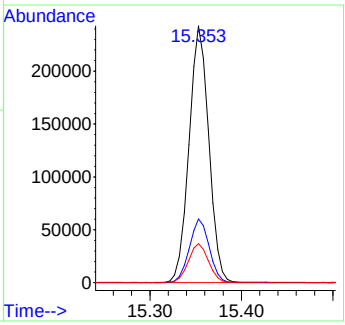




#102
isopropylbenzene
Concen: 26.29 ug/L
RT: 15.353 min Scan# 2330
Delta R.T. -0.005 min
Lab File: 4D73697.D
Acq: 8 Nov 2016 1:22 pm

Tgt Ion:105 Resp: 364518

Ion	Ratio	Lower	Upper
105	100		
120	24.8	0.0	55.5
77	15.1	0.0	45.2



LSC Area Percent Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73697.D
Acq On : 8 Nov 2016 1:22 pm
Operator : XimenaC
Sample : jc30522-4
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 39 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.5 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

Signal : TIC: 4D73697.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.273	3	26	64	rBV	1501757	6938607	40.12%	4.698%
2	4.353	220	232	252	rBV2	115395	496746	2.87%	0.336%
3	5.439	411	439	470	rBV	972479	4861465	28.11%	3.291%
4	5.900	512	527	553	rBV	691881	2048537	11.84%	1.387%
5	6.157	566	576	594	rVB	52061	131064	0.76%	0.089%
6	6.471	626	636	652	rVB	91369	244581	1.41%	0.166%
7	6.770	672	693	707	rBV2	69287	252901	1.46%	0.171%
8	7.557	796	843	855	rBV2	741643	3422714	19.79%	2.317%
9	7.662	855	863	883	rVB2	282822	903080	5.22%	0.611%
10	7.971	904	922	951	rBV	564256	1912498	11.06%	1.295%
11	8.375	985	999	1017	rBV	273050	686900	3.97%	0.465%
12	8.674	1047	1056	1070	rVV	99200	244743	1.42%	0.166%
13	8.799	1070	1080	1091	rVV	84468	220264	1.27%	0.149%
14	9.035	1110	1125	1138	rVV2	86809	288403	1.67%	0.195%
15	9.156	1138	1148	1162	rVV	90899	265475	1.53%	0.180%
16	9.297	1162	1175	1191	rVV	1390996	3712833	21.47%	2.514%
17	9.921	1280	1294	1300	rVV6	53980	220001	1.27%	0.149%
18	10.000	1300	1309	1317	rVV2	442015	1074034	6.21%	0.727%
19	10.073	1317	1323	1330	rVV	160599	372458	2.15%	0.252%
20	10.199	1336	1347	1360	rVV2	956526	2608742	15.08%	1.766%
21	10.309	1360	1368	1380	rVV	334243	767678	4.44%	0.520%
22	10.435	1380	1392	1400	rVV2	238738	518225	3.00%	0.351%
23	10.551	1400	1414	1422	rVV	794691	1701594	9.84%	1.152%
24	10.629	1422	1429	1436	rVV3	288704	910808	5.27%	0.617%
25	10.697	1436	1442	1449	rVV2	288568	713358	4.12%	0.483%
26	10.771	1449	1456	1463	rVV	217305	520026	3.01%	0.352%
27	10.828	1463	1467	1483	rVB	68516	143055	0.83%	0.097%
28	10.954	1483	1491	1501	rBV	435225	986871	5.71%	0.668%
29	11.022	1501	1504	1511	rVV3	66650	135864	0.79%	0.092%
30	11.274	1541	1552	1560	rBV	76833	164597	0.95%	0.111%
31	11.547	1590	1604	1606	rBV3	266395	565597	3.27%	0.383%
32	11.589	1606	1612	1627	rVV	936316	2027848	11.72%	1.373%
33	11.777	1641	1648	1657	rVV	174338	343109	1.98%	0.232%
34	11.861	1657	1664	1675	rVB2	56589	120609	0.70%	0.082%
35	12.024	1688	1695	1707	rVV5	177065	505545	2.92%	0.342%
36	12.186	1713	1726	1738	rBV3	304690	986914	5.71%	0.668%
37	12.296	1738	1747	1758	rVV2	72089	224814	1.30%	0.152%
38	12.574	1793	1800	1811	rVB4	156002	344582	1.99%	0.233%
39	12.705	1811	1825	1833	rBV2	719437	1517309	8.77%	1.027%
40	12.779	1833	1839	1845	rVV2	127881	250945	1.45%	0.170%
41	12.878	1852	1858	1861	rVV2	56491	118834	0.69%	0.080%
42	12.920	1861	1866	1878	rVB5	87795	228624	1.32%	0.155%
43	13.109	1893	1902	1911	rBV	68411	160152	0.93%	0.108%
44	13.209	1911	1921	1936	rBV4	167789	505933	2.93%	0.343%
45	13.696	2007	2014	2018	rBV2	83064	160347	0.93%	0.109%

LSC Area Percent Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73697.D
Acq On : 8 Nov 2016 1:22 pm
Operator : XimenaC
Sample : jc30522-4
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 39 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.5 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

46	13.738	2018	2022	2037	rVB4	68993	156033	0.90%	0.106%
47	14.058	2072	2083	2088	rBV3	59035	170455	0.99%	0.115%
48	14.215	2103	2113	2123	rBV2	79161	187145	1.08%	0.127%
49	14.310	2123	2131	2137	rBV	645686	1061238	6.14%	0.718%
50	14.430	2147	2154	2165	rVV	1786631	2931244	16.95%	1.985%
51	14.551	2165	2177	2191	rVV	3433034	5978138	34.56%	4.047%
52	14.981	2252	2259	2270	rBV	598049	947450	5.48%	0.641%
53	15.353	2321	2330	2342	rVV	575039	919362	5.32%	0.622%
54	15.531	2358	2364	2372	rVB	569462	853811	4.94%	0.578%
55	15.663	2383	2389	2400	rVB7	44234	141606	0.82%	0.096%
56	15.773	2400	2410	2417	rBV	1429017	2198085	12.71%	1.488%
57	15.851	2417	2425	2427	rBV	1810897	2729490	15.78%	1.848%
58	15.883	2427	2431	2435	rVV	2915963	4251582	24.58%	2.878%
59	15.930	2435	2440	2450	rVB	3146980	4686608	27.10%	3.173%
60	16.161	2476	2484	2493	rBV	3887033	5874014	33.96%	3.977%
61	16.323	2507	2515	2524	rBV	10987480	17295849	100.00%	11.710%
62	16.465	2534	2542	2545	rBV	89894	144517	0.84%	0.098%
63	16.501	2545	2549	2555	rVB2	112896	179462	1.04%	0.121%
64	16.564	2555	2561	2567	rVB	394678	592230	3.42%	0.401%
65	16.706	2582	2588	2592	rBV	771939	1094884	6.33%	0.741%
66	16.758	2592	2598	2608	rVB	5707654	8466451	48.95%	5.732%
67	16.900	2618	2625	2629	rBV	1643478	2556654	14.78%	1.731%
68	16.931	2629	2631	2635	rVB	636497	628627	3.63%	0.426%
69	16.984	2635	2641	2647	rBV2	3452372	5322524	30.77%	3.603%
70	17.120	2660	2667	2673	rVV	396705	598428	3.46%	0.405%
71	17.188	2673	2680	2686	rVV	1027745	1497795	8.66%	1.014%
72	17.251	2686	2692	2696	rVV	1291985	2018267	11.67%	1.366%
73	17.288	2696	2699	2706	rVV	1273347	1850526	10.70%	1.253%
74	17.356	2706	2712	2723	rVB	3097036	4480104	25.90%	3.033%
75	17.450	2723	2730	2734	rBV	381097	629809	3.64%	0.426%
76	17.519	2734	2743	2750	rVV2	1448010	2722860	15.74%	1.843%
77	17.660	2764	2770	2777	rVV	985708	1470653	8.50%	0.996%
78	17.734	2777	2784	2789	rVV	1548658	2189462	12.66%	1.482%
79	17.786	2789	2794	2799	rVV	1946421	2677139	15.48%	1.812%
80	17.828	2799	2802	2807	rVV	217873	329555	1.91%	0.223%
81	17.901	2812	2816	2827	rVB5	89049	204286	1.18%	0.138%
82	17.985	2827	2832	2835	rBV2	88776	128089	0.74%	0.087%
83	18.017	2835	2838	2842	rVV	80655	113604	0.66%	0.077%
84	18.069	2842	2848	2853	rVV	1233727	1829501	10.58%	1.239%
85	18.101	2853	2854	2861	rVV2	209707	243245	1.41%	0.165%
86	18.195	2861	2872	2875	rVV	890287	1586587	9.17%	1.074%
87	18.232	2875	2879	2886	rVV	2208906	3260629	18.85%	2.208%
88	18.295	2886	2891	2897	rVV2	117751	199318	1.15%	0.135%
89	18.410	2904	2913	2918	rBV3	293504	505636	2.92%	0.342%
90	18.457	2918	2922	2925	rVV	81562	116632	0.67%	0.079%
91	18.504	2925	2931	2940	rVV3	431204	999104	5.78%	0.676%
92	18.567	2940	2943	2949	rVV	178483	265835	1.54%	0.180%
93	18.625	2949	2954	2957	rVV2	155619	262110	1.52%	0.177%

LSC Area Percent Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73697.D
Acq On : 8 Nov 2016 1:22 pm
Operator : XimenaC
Sample : jc30522-4
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 39 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.5 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

94	18.662	2957	2961	2969	rVB	321604	563164	3.26%	0.381%
95	18.877	2996	3002	3010	rVV	709686	1070995	6.19%	0.725%
96	18.981	3018	3022	3029	rVV3	87157	157071	0.91%	0.106%
97	19.065	3029	3038	3049	rVB2	96324	198879	1.15%	0.135%
98	19.186	3054	3061	3076	rBV	137341	243252	1.41%	0.165%
99	19.390	3093	3100	3110	rVV	113860	249644	1.44%	0.169%
100	20.035	3216	3223	3240	rVB	82824	147107	0.85%	0.100%

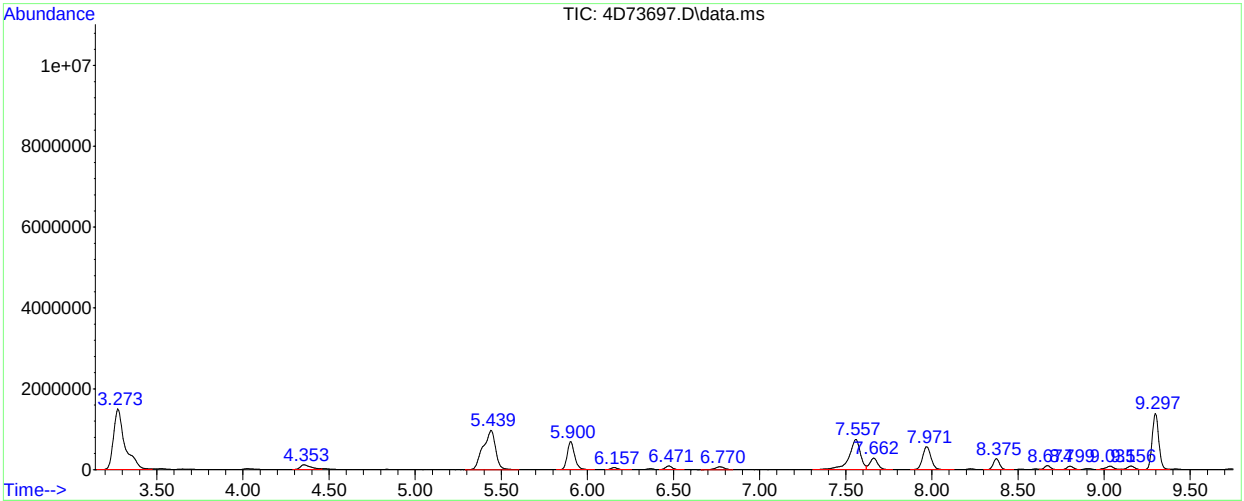
Sum of corrected areas: 147706029

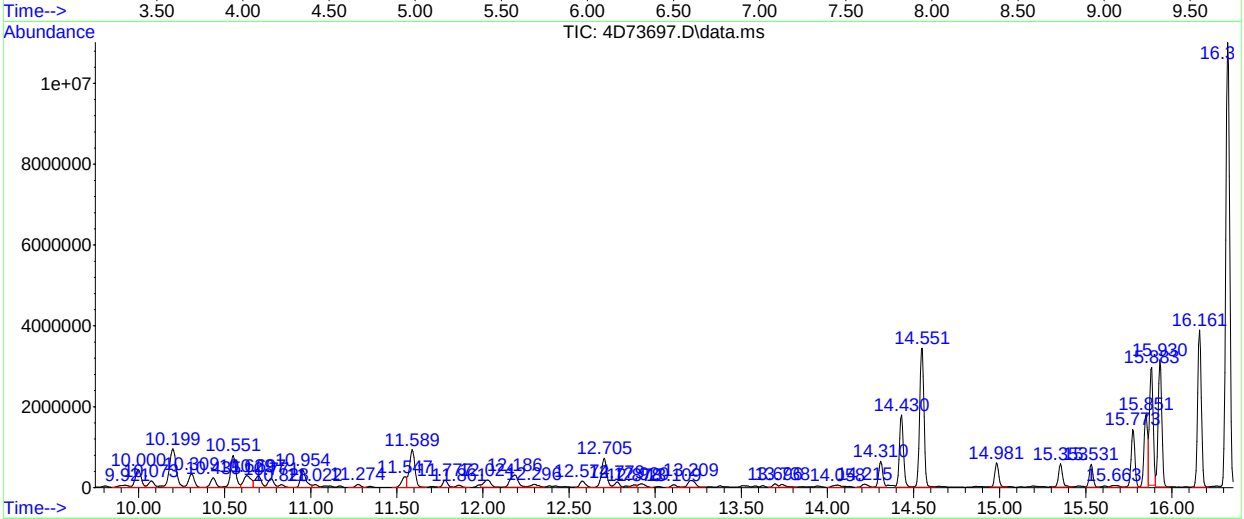
LSC Report - Integrated Chromatogram

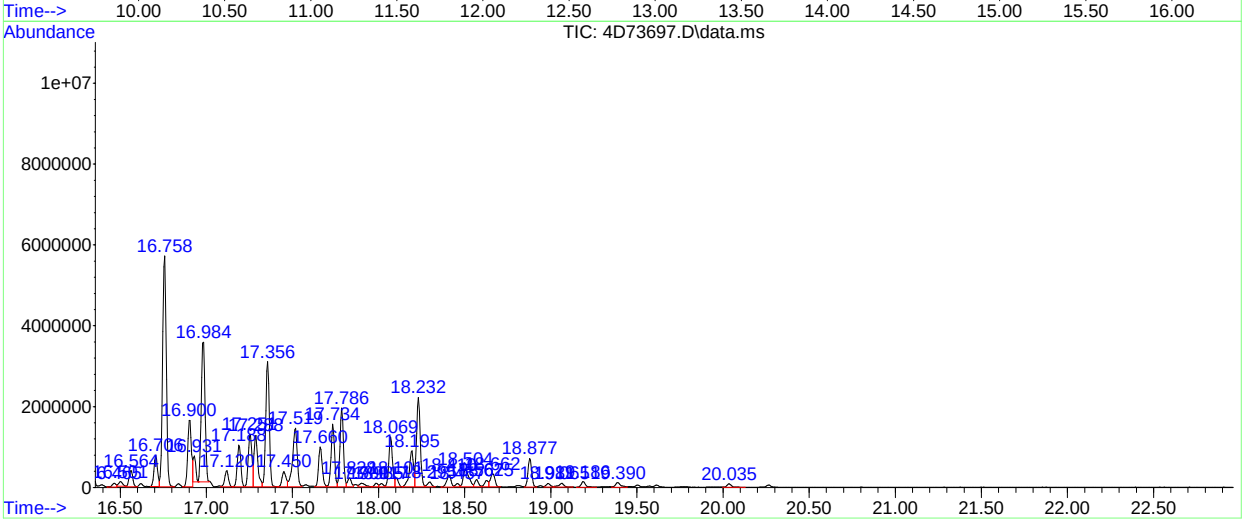
Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73697.D
Acq On : 8 Nov 2016 1:22 pm
Operator : XimenaC
Sample : jc30522-4
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 39 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p







Library Search Compound Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73697.D
Acq On : 8 Nov 2016 1:22 pm
Operator : XimenaC
Sample : jc30522-4
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 39 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

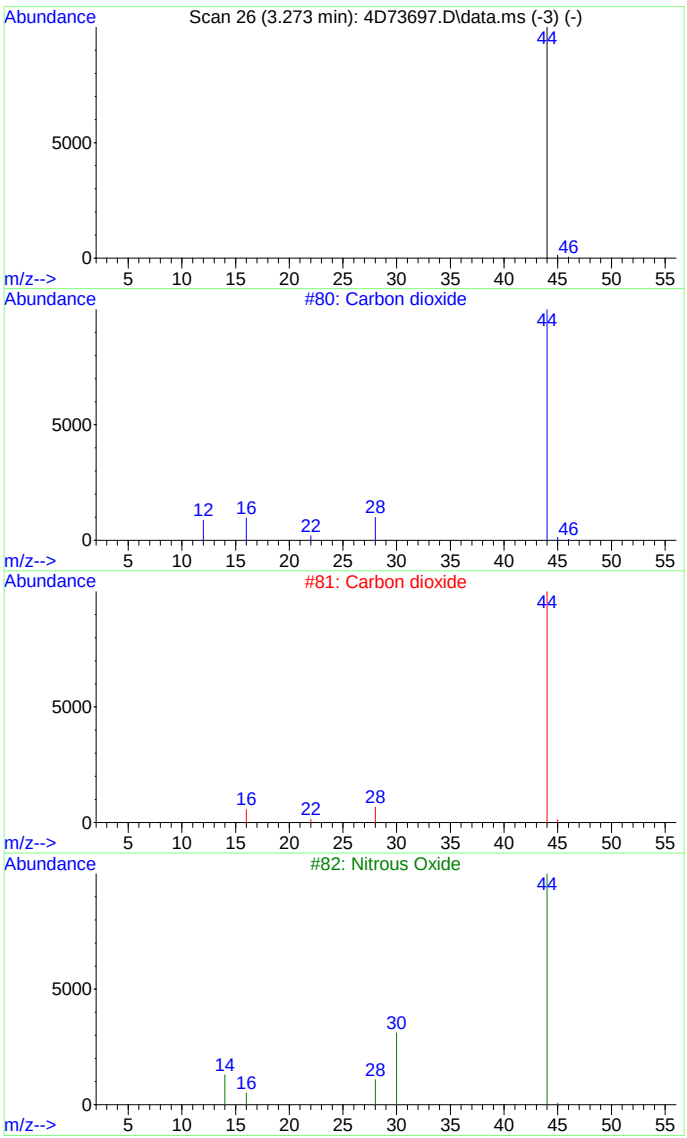
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

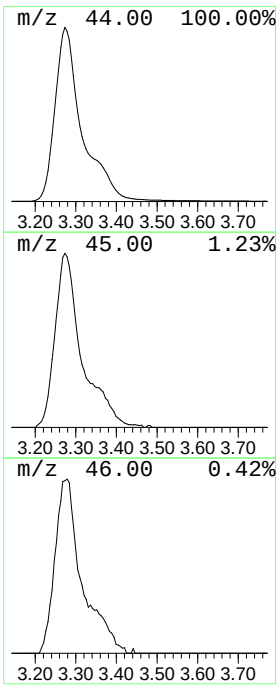
****

Peak Number 1 system artifact Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.273	323.02 ug/L	6938610	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	3
3	Nitrous Oxide	44	N2O	010024-97-2	3
4	Nitrous Oxide	44	N2O	010024-97-2	3
5	Acetaldehyde	44	C2H4O	000075-07-0	2





SGS ACCUTEST JC30522

Library Search Compound Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73697.D
Acq On : 8 Nov 2016 1:22 pm
Operator : XimenaC
Sample : jc30522-4
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 39 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

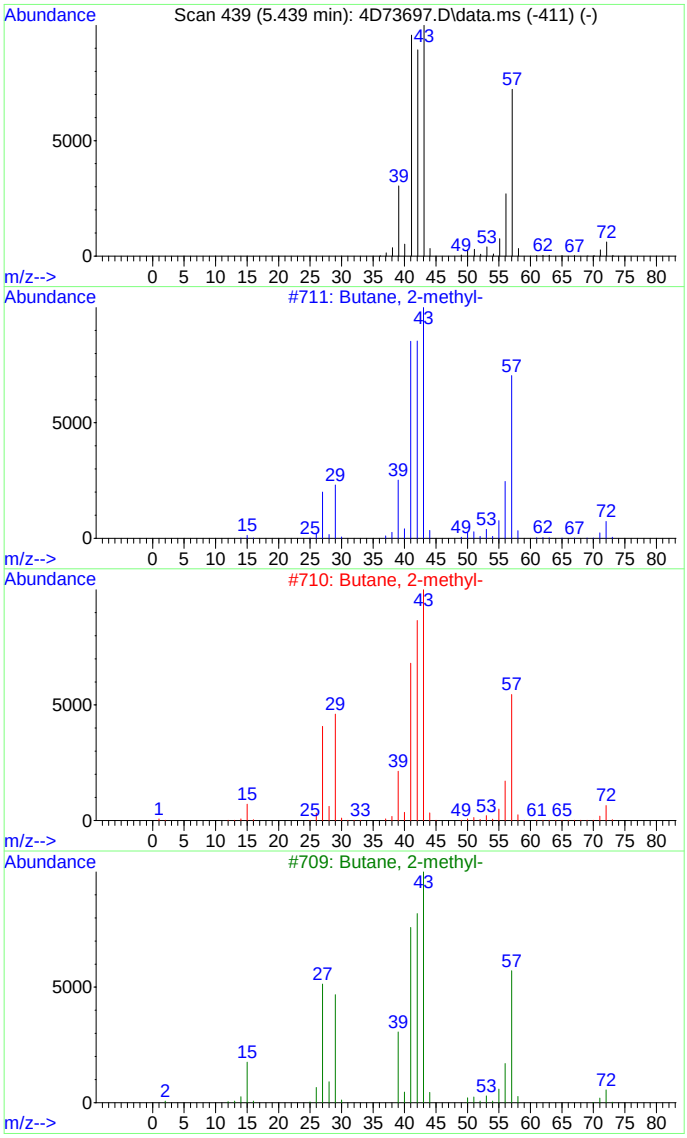
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

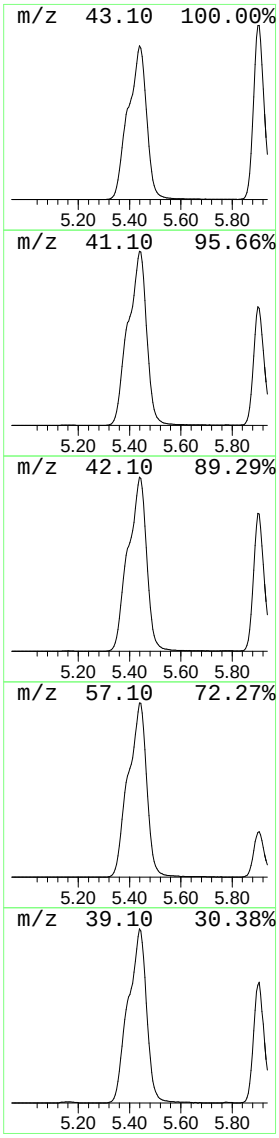
****

Peak Number 2 alkane Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.439	226.32 ug/L	4861470	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	94
2	Butane, 2-methyl-	72	C5H12	000078-78-4	87
3	Butane, 2-methyl-	72	C5H12	000078-78-4	80
4	3-Buten-1-ol	72	C4H8O	000627-27-0	47
5	Pentane	72	C5H12	000109-66-0	36





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Operator : XimenaC
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Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 39 Sample Multiplier: 1

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Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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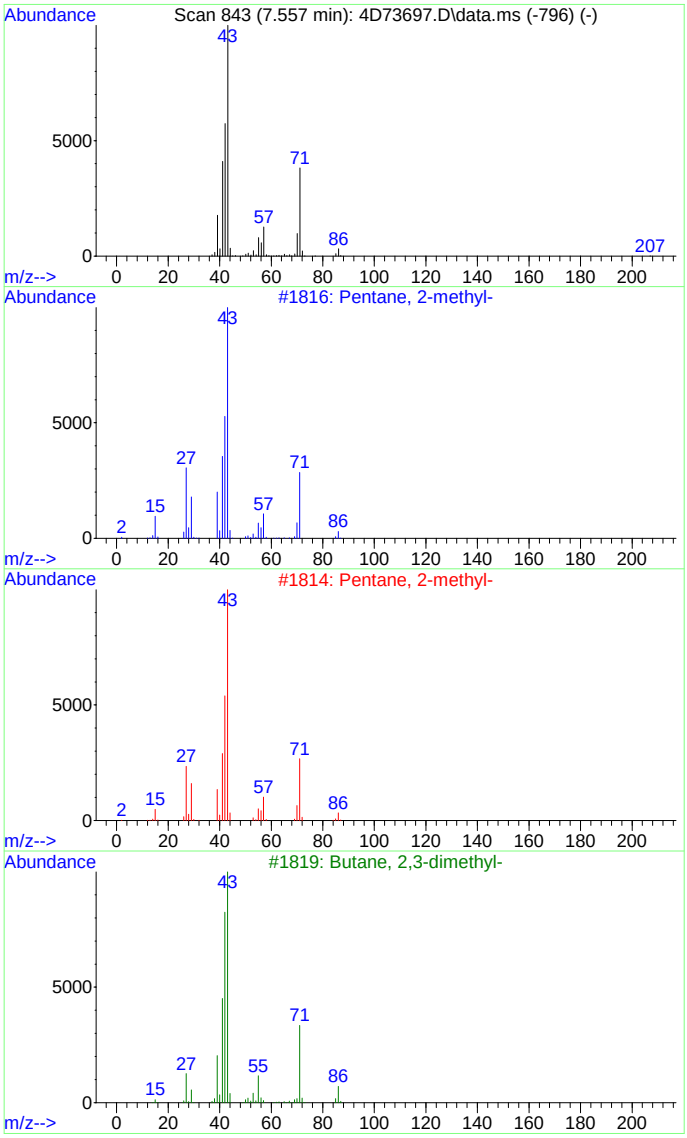
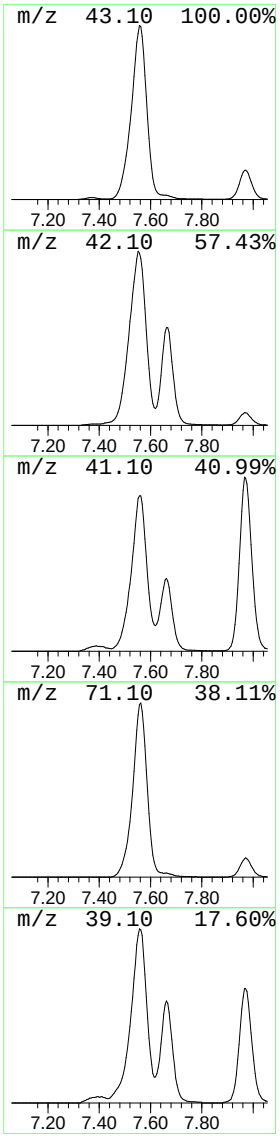
Peak Number 3 alkane Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.557	159.34 ug/L	3422710	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2-methyl-	86	C6H14	000107-83-5	91
2	Pentane, 2-methyl-	86	C6H14	000107-83-5	91
3	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	72
4	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	59
5	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	47





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Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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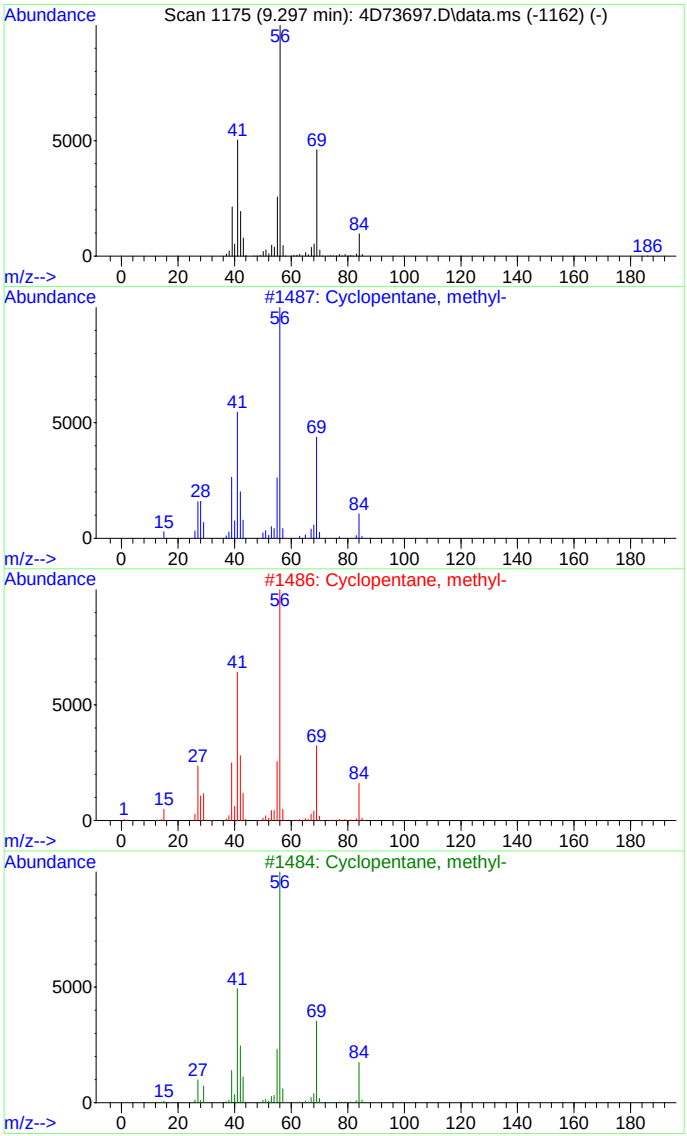
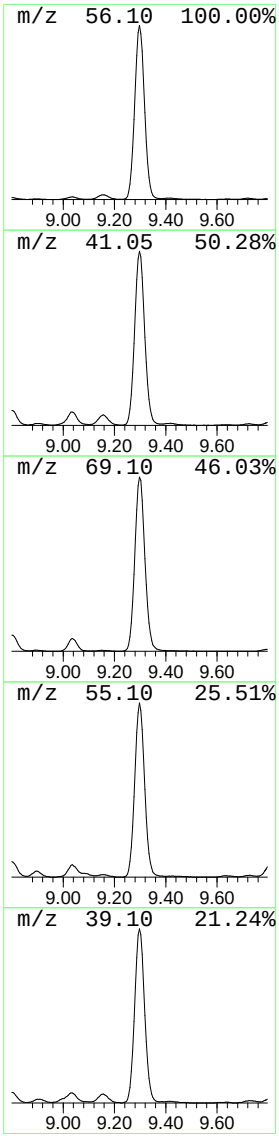
Peak Number 4 Cyclopentane, methyl- Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.297	172.85 ug/L	3712830	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, methyl-	84	C6H12	000096-37-7	94
2	Cyclopentane, methyl-	84	C6H12	000096-37-7	91
3	Cyclopentane, methyl-	84	C6H12	000096-37-7	78
4	1H-Tetrazole, 5-methyl-	84	C2H4N4	004076-36-2	72
5	Cyclobutane, ethyl-	84	C6H12	004806-61-5	64





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ALS Vial : 39 Sample Multiplier: 1

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Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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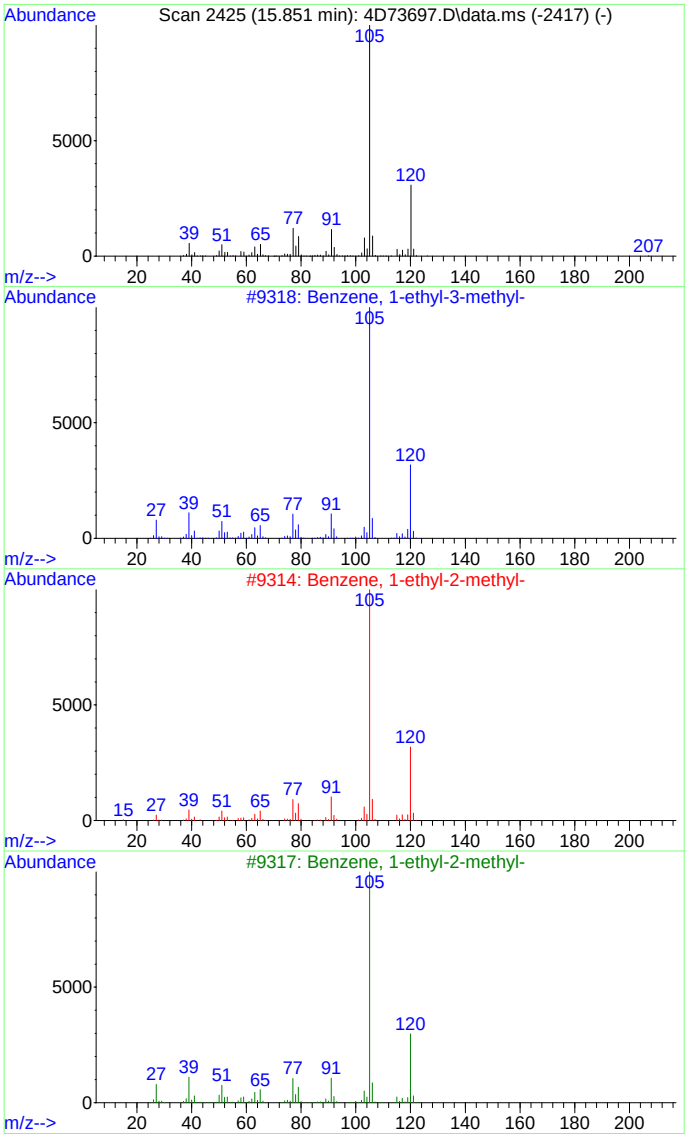
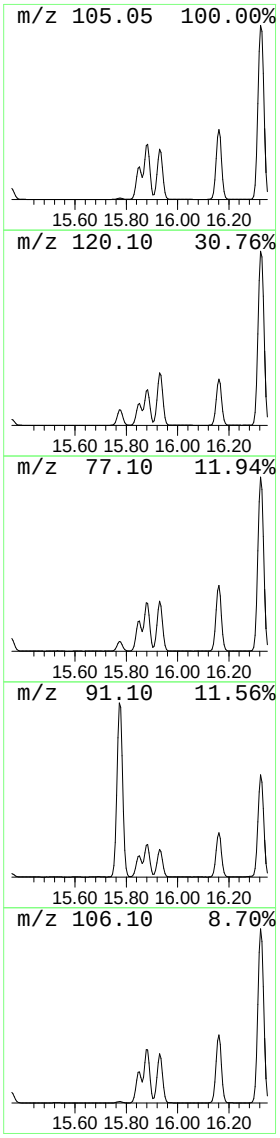
Peak Number 5 C3 alkyl benzene Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.851	124.65 ug/L	2729490	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
3	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
4	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	95
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91





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ALS Vial : 39 Sample Multiplier: 1

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Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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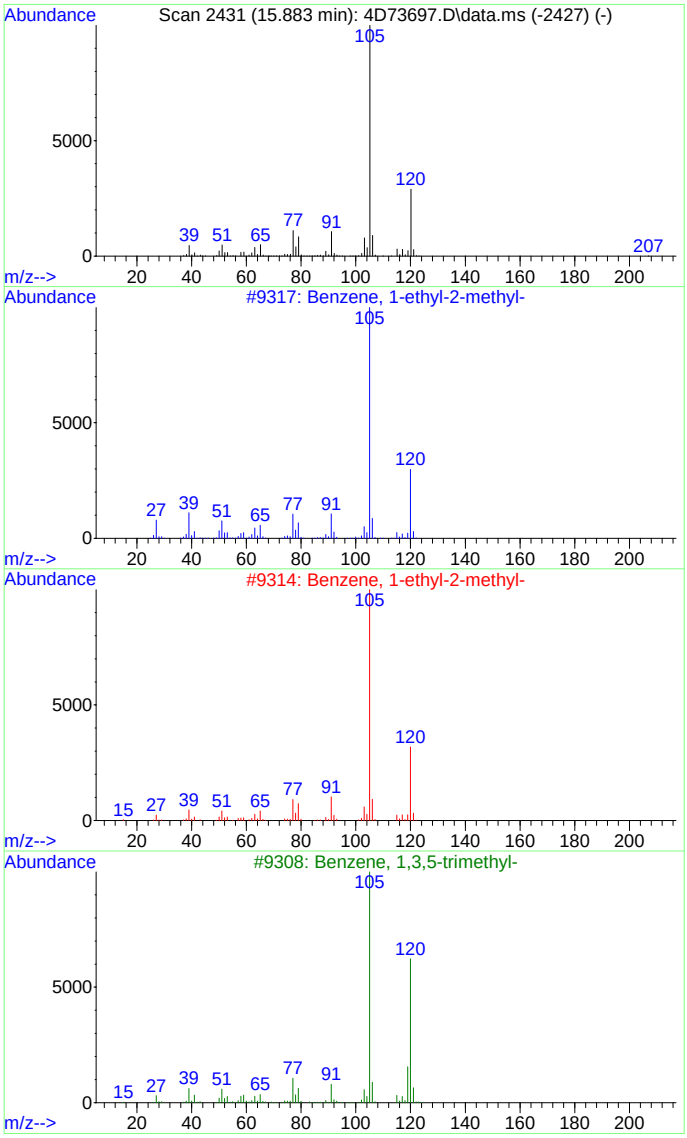
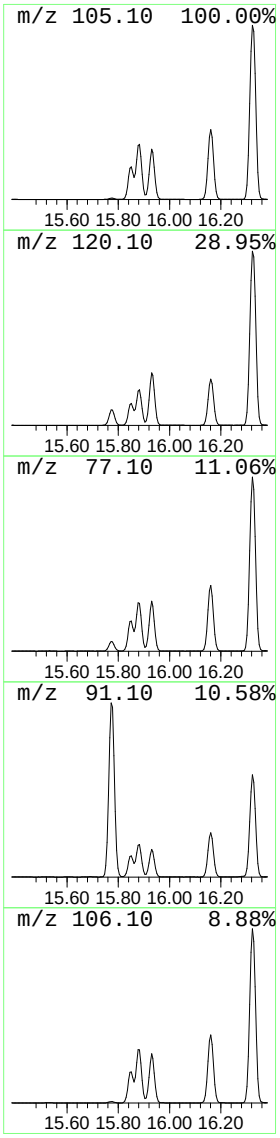
Peak Number 6 C3 alkyl benzene Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.883	194.16 ug/L	4251580	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
4	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91
5	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91





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ALS Vial : 39 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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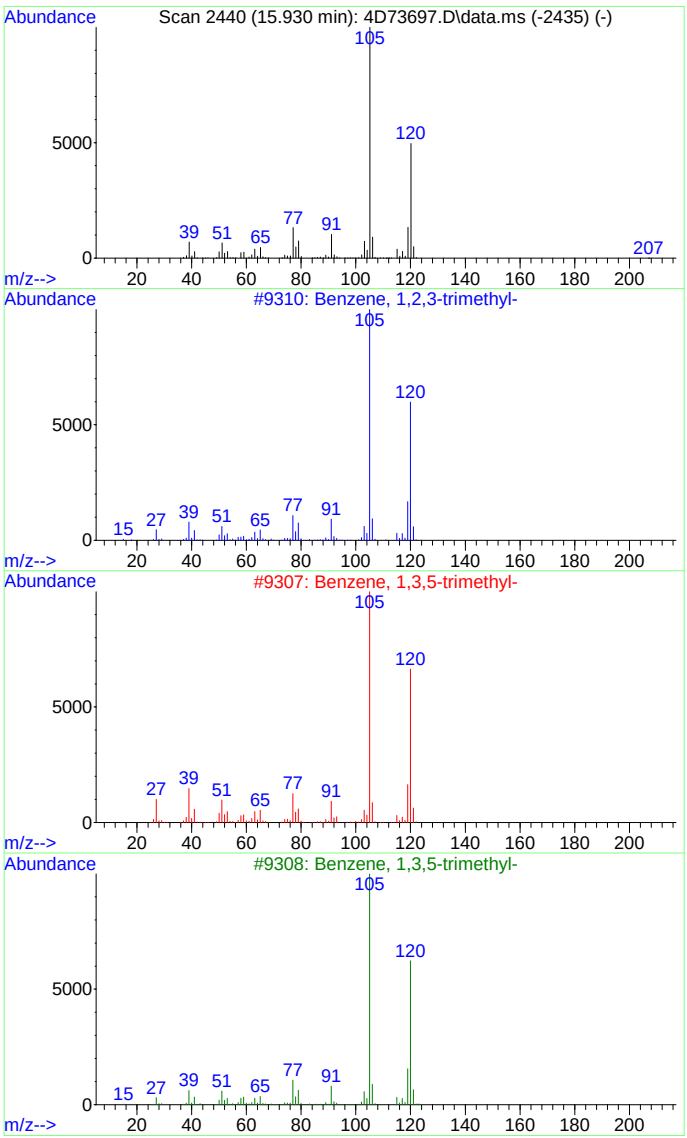
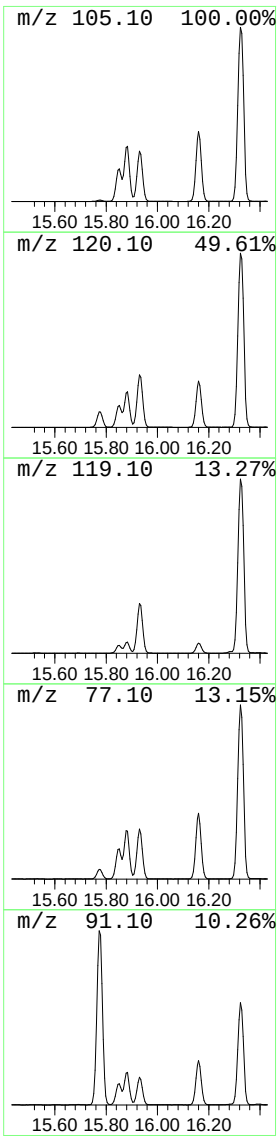
Peak Number 7 Benzene, 1,3,5-trimethyl- Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.930	214.02 ug/L	4686610	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95





SGS ACCUTEST JC30522

Library Search Compound Report

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ALS Vial : 39 Sample Multiplier: 1

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Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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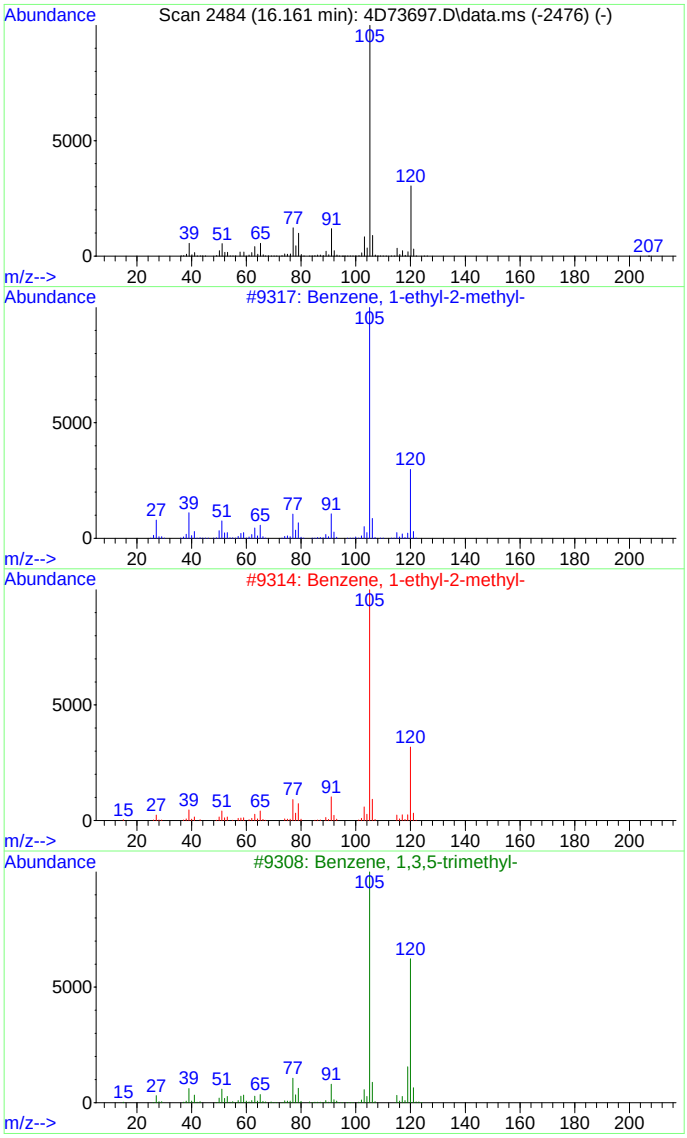
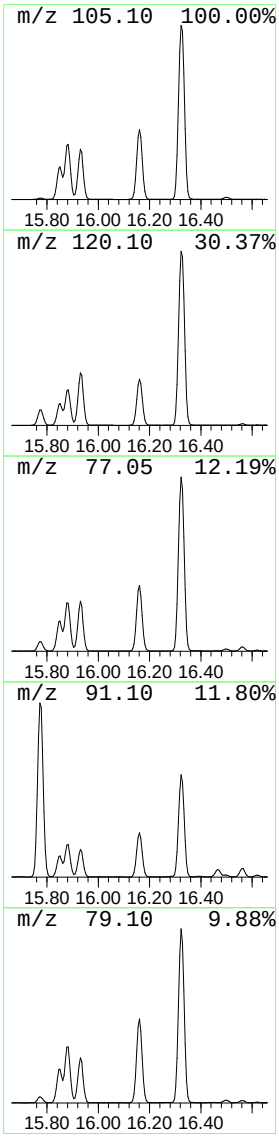
Peak Number 8 C3 alkyl benzene Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.161	268.25 ug/L	5874010	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
4	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91
5	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91





SGS ACCUTEST JC30522

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Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 39 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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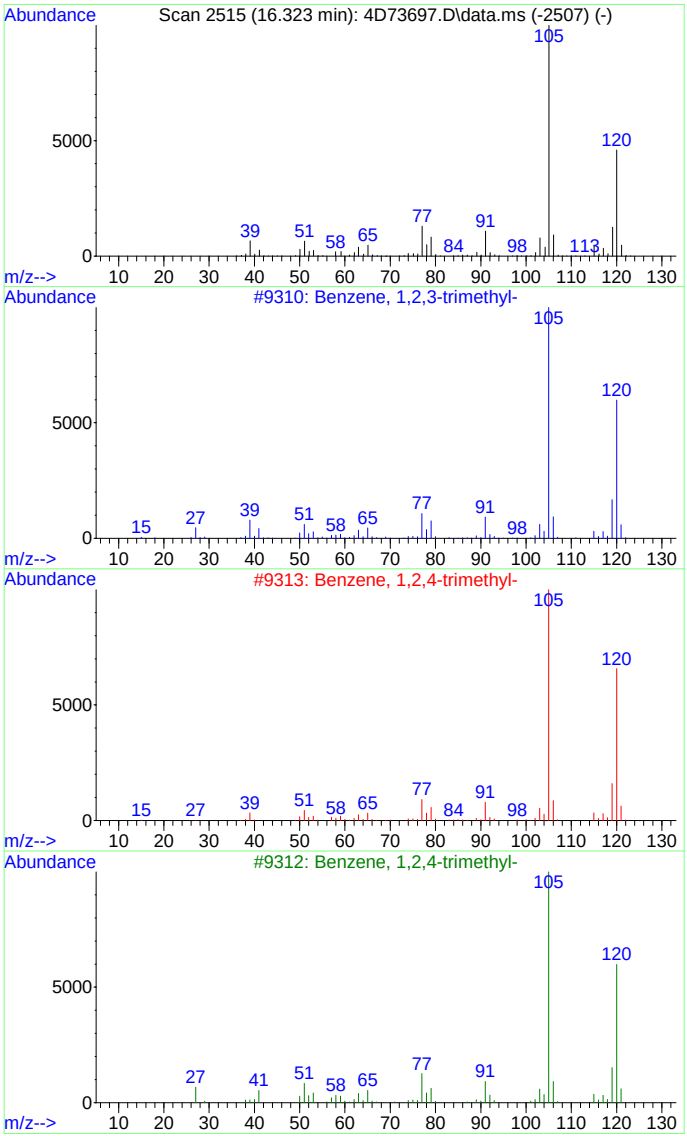
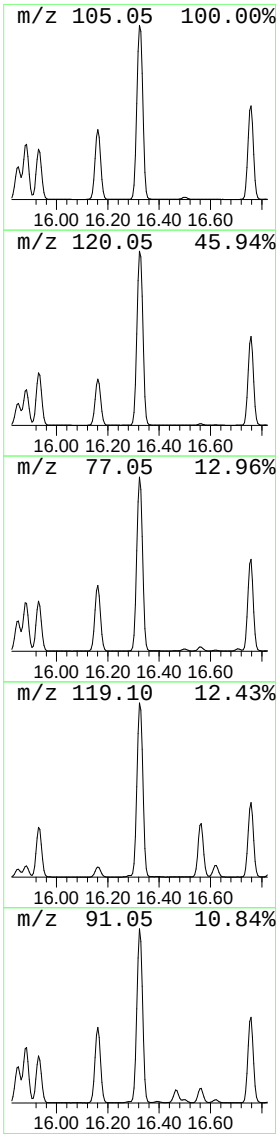
Peak Number 9 Benzene, 1,2,4-trimethyl- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.323	789.85 ug/L	17295800	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	93





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ALS Vial : 39 Sample Multiplier: 1

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Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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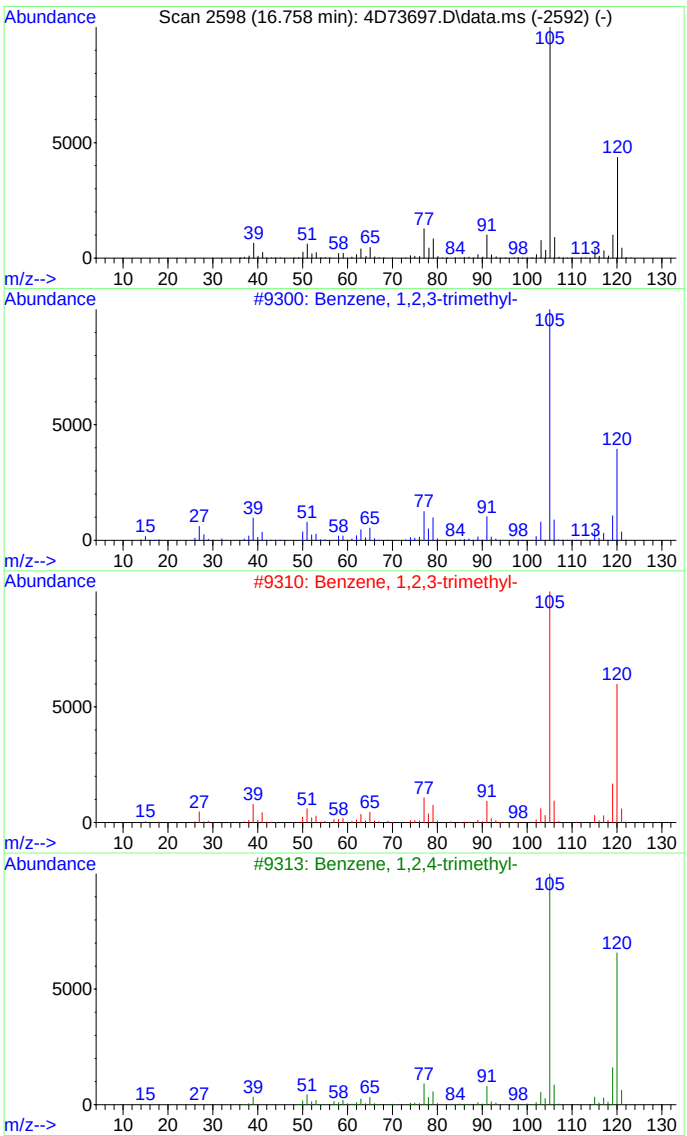
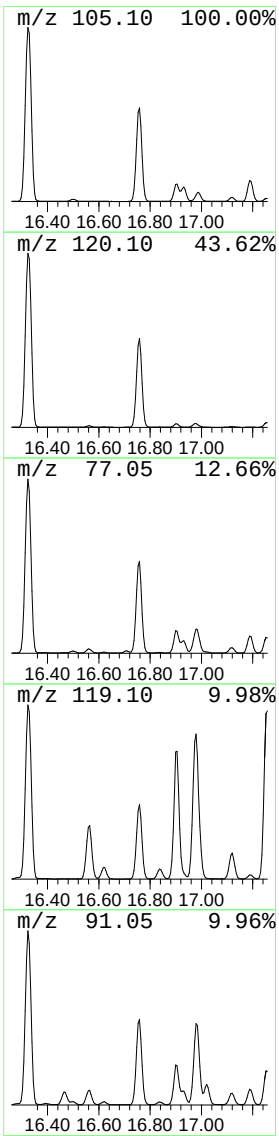
Peak Number 10 C3 alkyl benzene Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.758	386.64 ug/L	8466450	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
2	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	93
5	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91





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Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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Peak Number 11 C4 alkyl benzene Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.900	116.76 ug/L	2556650	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	97
2	Benzene, 1,2-diethyl-	134	C10H14	000135-01-3	96
3	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	95
4	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	94
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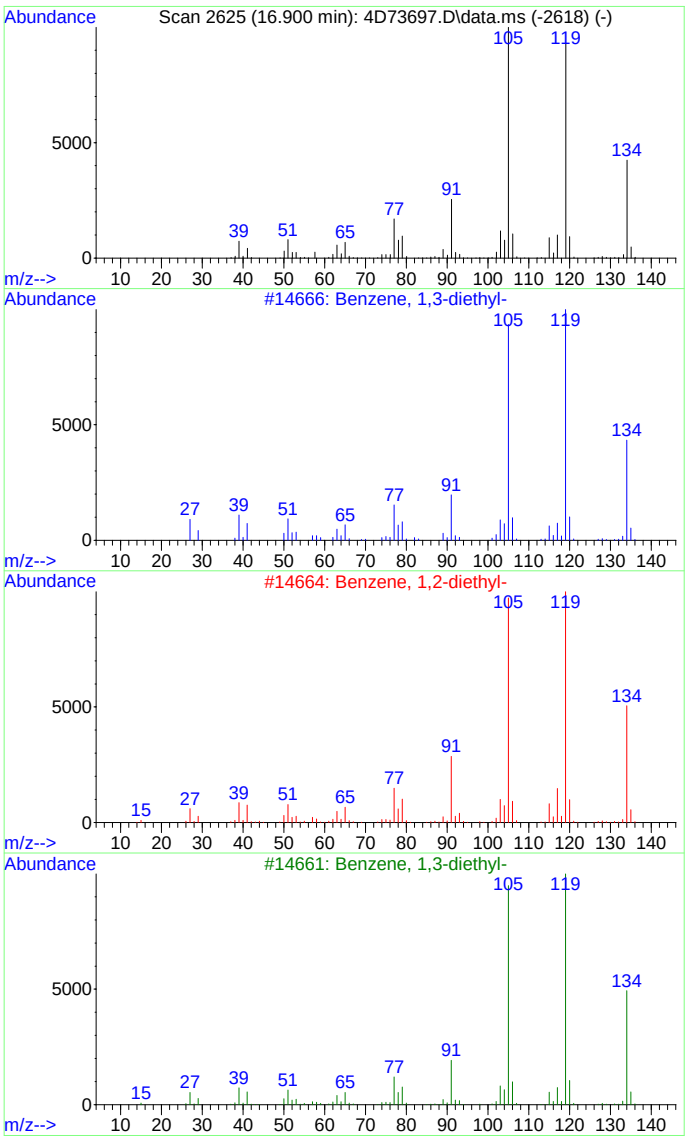

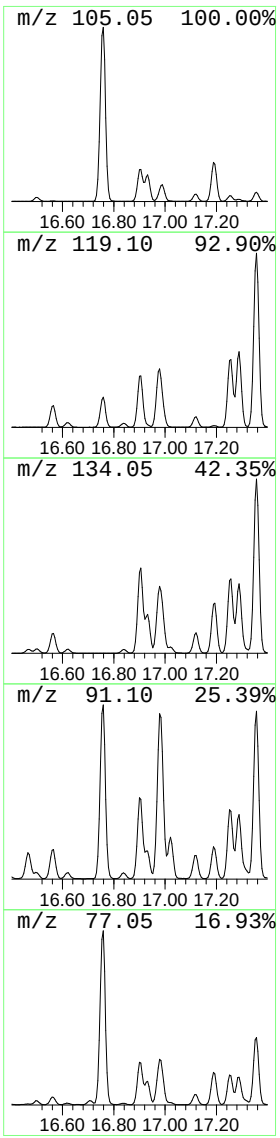

SGS ACCUTEST JC30522

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Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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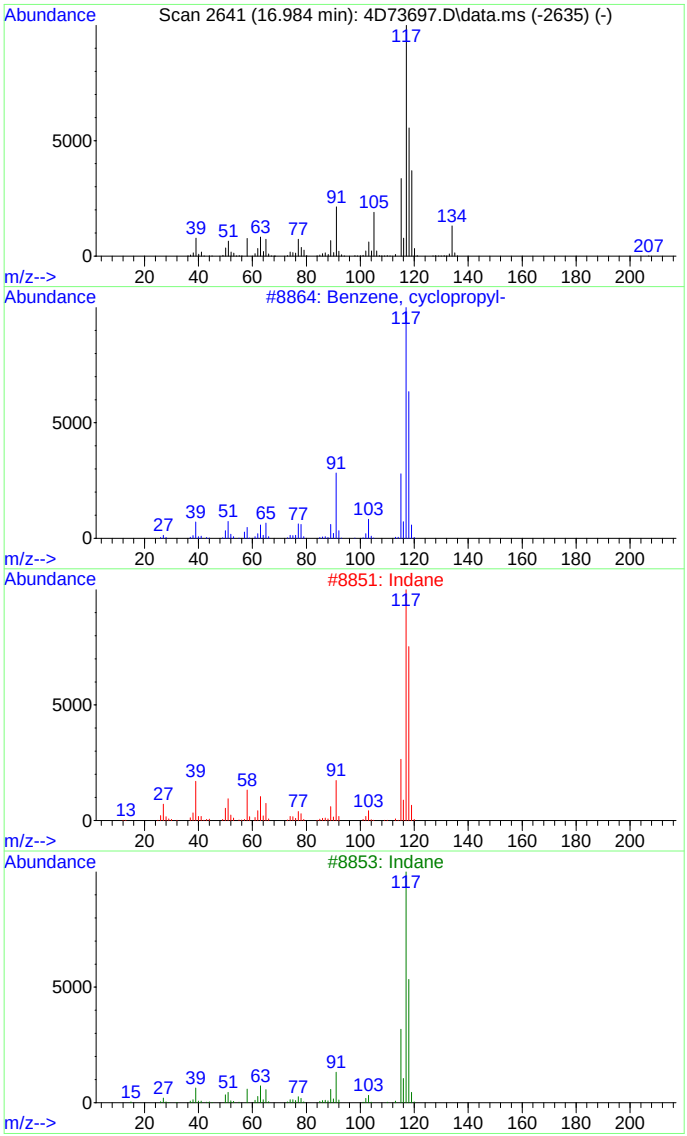
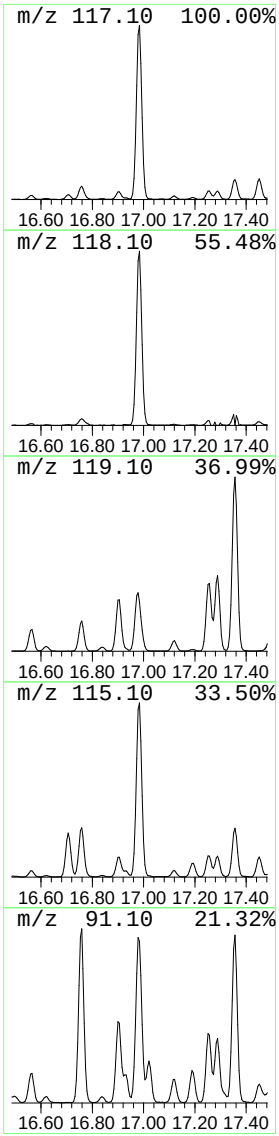
Peak Number 12 Indane Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.984	243.06 ug/L	5322520	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, cyclopropyl-	118	C9H10	000873-49-4	70
2	Indane	118	C9H10	000496-11-7	70
3	Indane	118	C9H10	000496-11-7	64
4	Tetracyclo[3.3.1.0(2,8).0(4,6)]-...	118	C9H10	1000191-13-7	62
5	Benzene, cyclopropyl-	118	C9H10	000873-49-4	58





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Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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Peak Number 13 C4 alkyl benzene Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.356	204.59 ug/L	4480100	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	94
2	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	94
3	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	94
4	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14	002870-04-4	94
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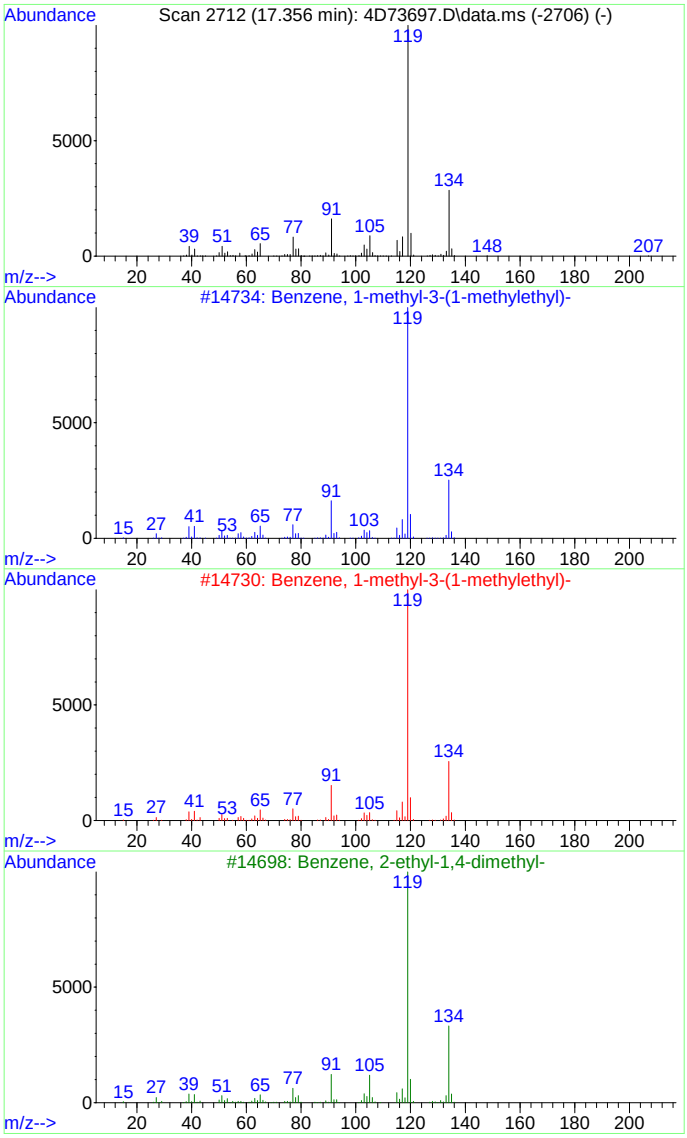

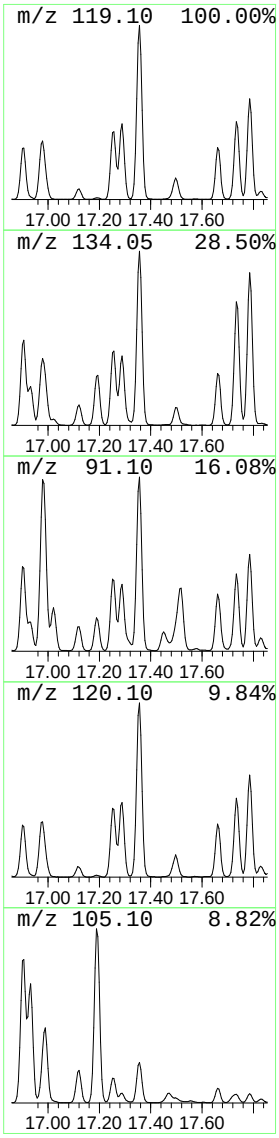

SGS ACCUTEST JC30522

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Operator : XimenaC
Sample : jc30522-4
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 39 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

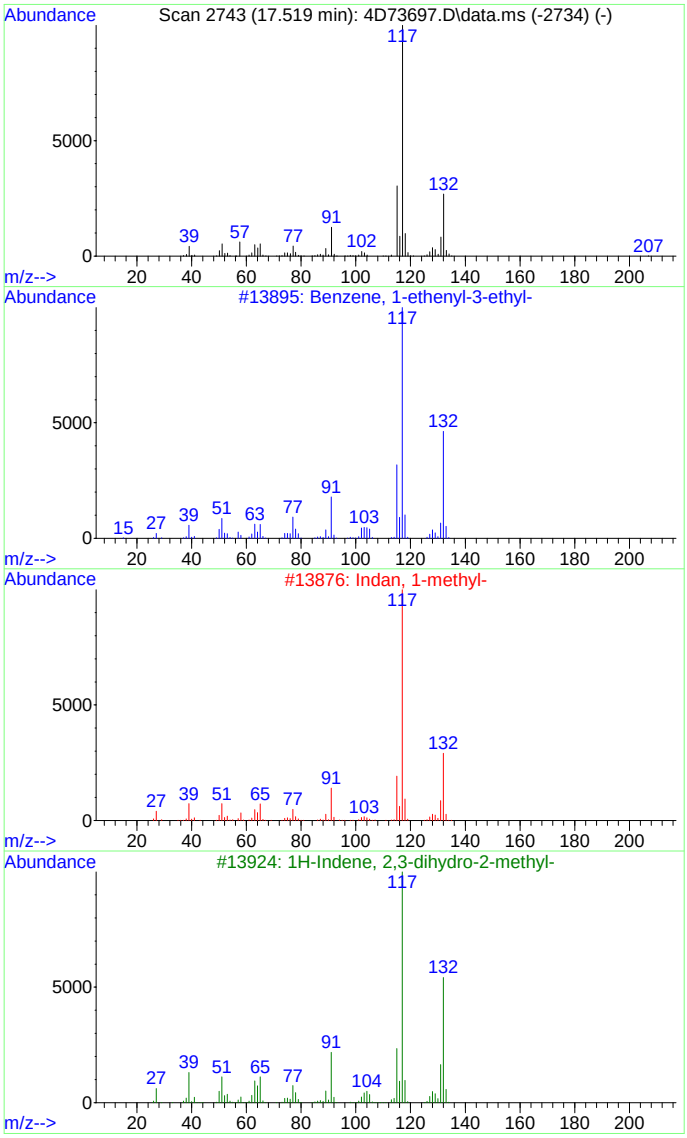
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

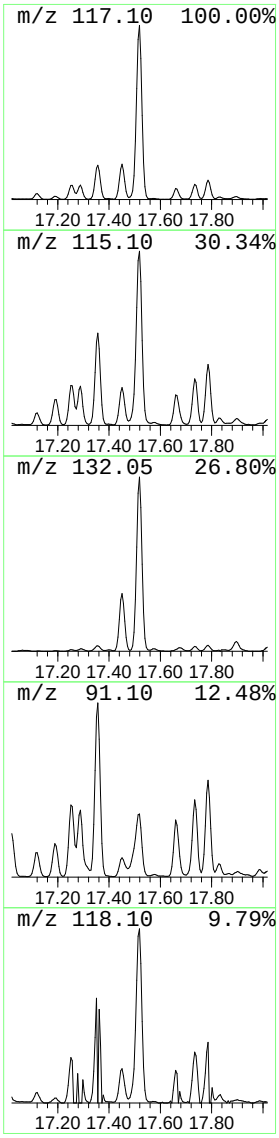
****

Peak Number 14 1H-Indene-dihydro-methyl- i... Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.519	124.35 ug/L	2722860	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethenyl-3-ethyl-	132	C10H12	007525-62-4	87
2	Indan, 1-methyl-	132	C10H12	000767-58-8	87
3	1H-Indene, 2,3-dihydro-2-methyl-	132	C10H12	000824-63-5	87
4	Benzene, 2-butenyl-	132	C10H12	001560-06-1	87
5	Benzene, (1-methyl-1-propenyl)-,...	132	C10H12	000768-00-3	87





Library Search Compound Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73697.D
Acq On : 8 Nov 2016 1:22 pm
Operator : XimenaC
Sample : jc30522-4
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 39 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

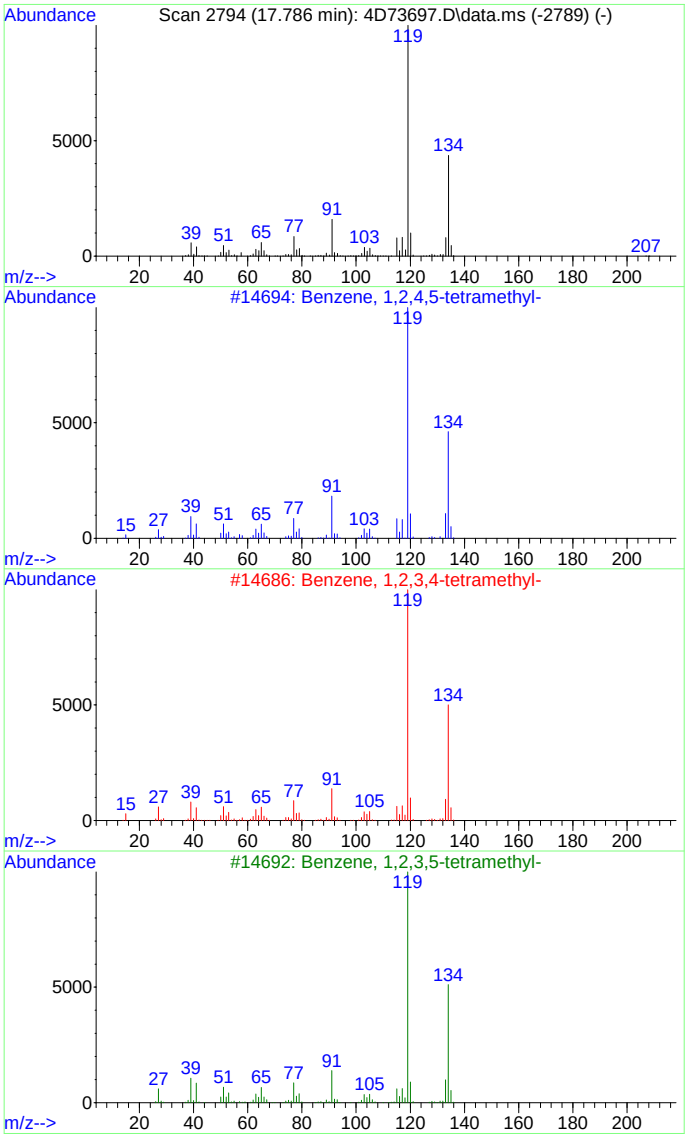
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

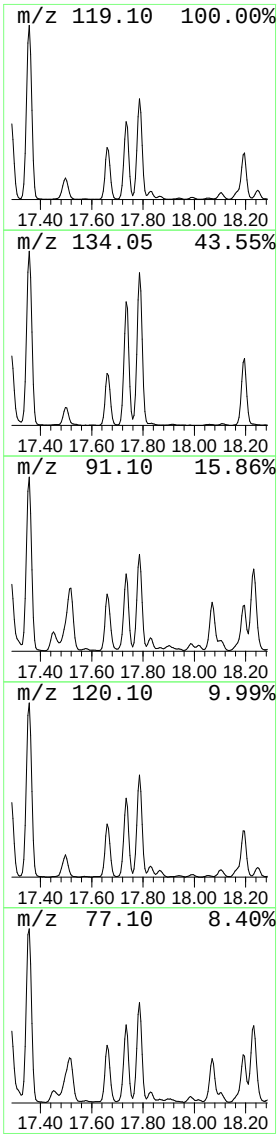
****

Peak Number 15 C4 alkyl benzene Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.786	122.26 ug/L	2677140	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	97
2	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	97
3	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	95
4	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	95
5	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	95





Library Search Compound Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73697.D
Acq On : 8 Nov 2016 1:22 pm
Operator : XimenaC
Sample : jc30522-4
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 39 Sample Multiplier: 1

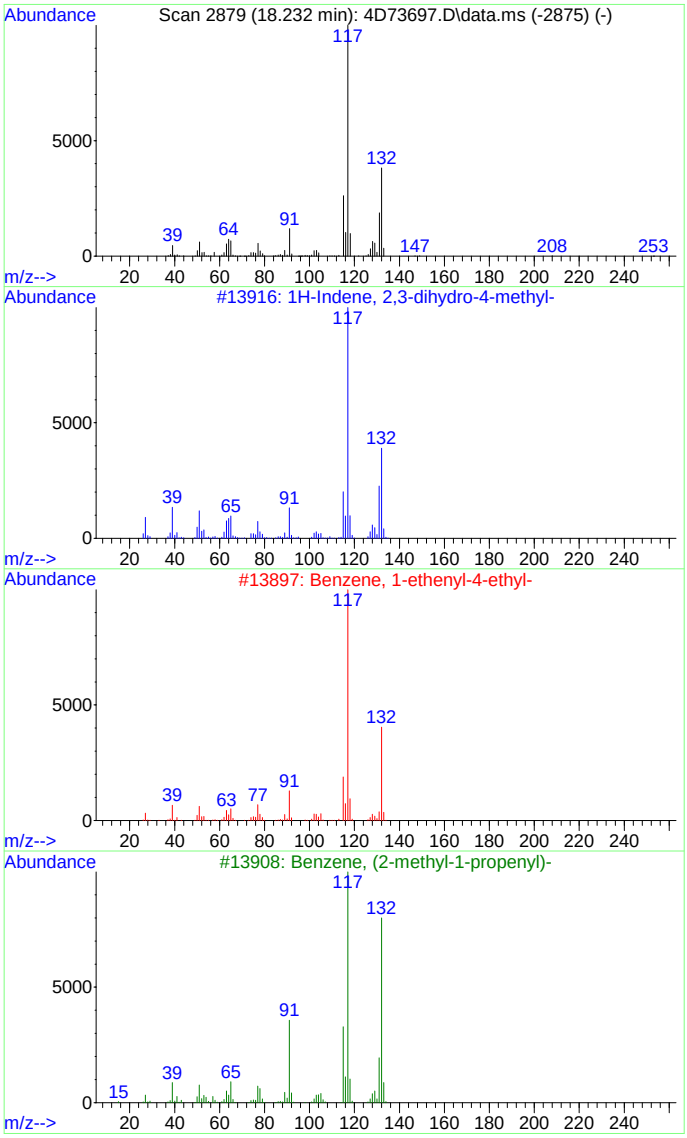
Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

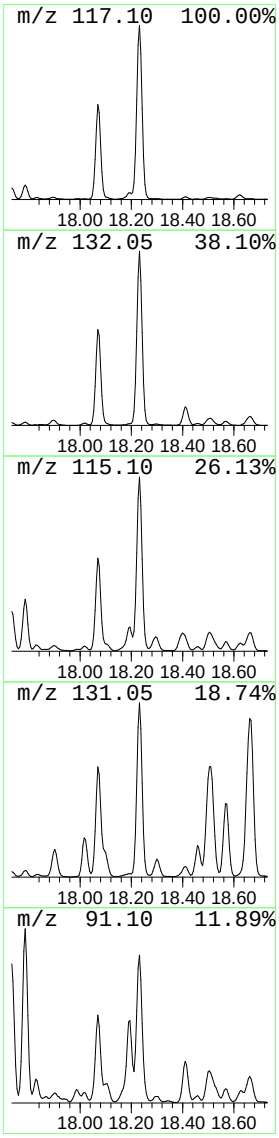
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

****
Peak Number 16 1H-Indene-dihydro-methyl- i... Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.232	148.90 ug/L	3260630	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	94
2	Benzene, 1-ethenyl-4-ethyl-	132	C10H12	003454-07-7	87
3	Benzene, (2-methyl-1-propenyl)-	132	C10H12	000768-49-0	87
4	Indan, 1-methyl-	132	C10H12	000767-58-8	87
5	Indan, 1-methyl-	132	C10H12	000767-58-8	83





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73697.D
Acq On : 8 Nov 2016 1:22 pm
Operator : XimenaC
Sample : jc30522-4
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 39 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
system artifact	3.273	323.0	ug/L	6938610	2	10.005	1074030	50.0
alkane	5.439	226.3	ug/L	4861470	2	10.005	1074030	50.0
alkane	7.557	159.3	ug/L	3422710	2	10.005	1074030	50.0
Cyclopentane, m...	9.297	172.8	ug/L	3712830	2	10.005	1074030	50.0
C3 alkyl benzene	15.851	124.7	ug/L	2729490	5	16.706	1094880	50.0
C3 alkyl benzene	15.883	194.2	ug/L	4251580	5	16.706	1094880	50.0
Benzene, 1,3,5-...	15.930	214.0	ug/L	4686610	5	16.706	1094880	50.0
C3 alkyl benzene	16.161	268.3	ug/L	5874010	5	16.706	1094880	50.0
Benzene, 1,2,4-...	16.323	789.9	ug/L	17295800	5	16.706	1094880	50.0
C3 alkyl benzene	16.758	386.6	ug/L	8466450	5	16.706	1094880	50.0
C4 alkyl benzene	16.900	116.8	ug/L	2556650	5	16.706	1094880	50.0
Indane	16.984	243.1	ug/L	5322520	5	16.706	1094880	50.0
C4 alkyl benzene	17.356	204.6	ug/L	4480100	5	16.706	1094880	50.0
1H-Indene-dihyd...	17.519	124.3	ug/L	2722860	5	16.706	1094880	50.0
C4 alkyl benzene	17.786	122.3	ug/L	2677140	5	16.706	1094880	50.0
1H-Indene-dihyd...	18.232	148.9	ug/L	3260630	5	16.706	1094880	50.0

Manual Integrations APPROVED (compounds with "m" flag)
Kanya Veerawat 11/09/16 16:31

Quantitation Report (LSC Reviewed)

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73696.D
Acq On : 8 Nov 2016 12:55 pm
Operator : XimenaC
Sample : jc30522-5
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Time: Nov 09 15:24:48 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um
QLast Update : Wed Sep 14 10:25:10 2016
Response via : Initial Calibration

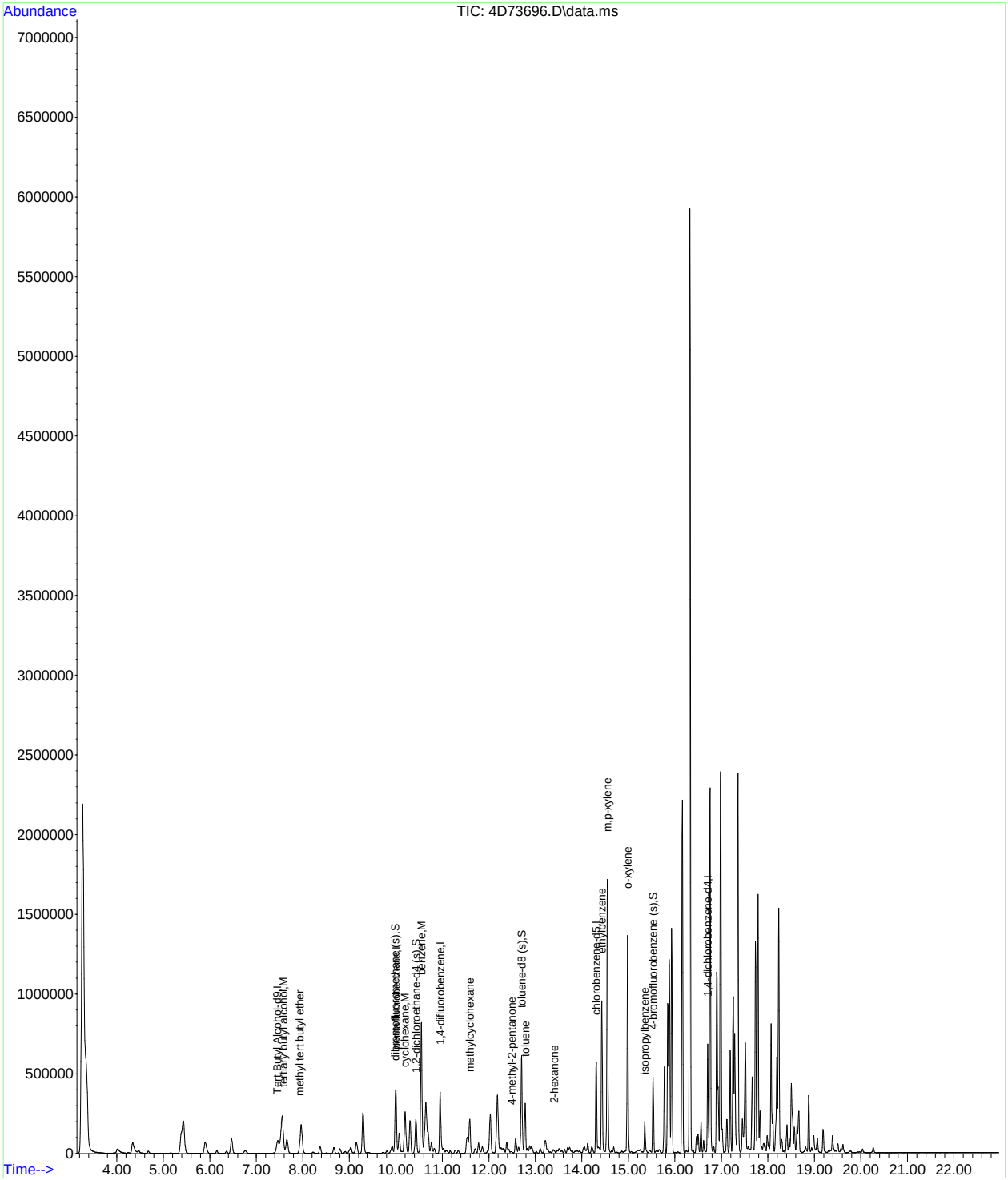
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.452	65	102231	500.00	ug/L	0.00
4) pentafluorobenzene	10.005	168	222180	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.954	114	321986	50.00	ug/L	0.00
86) chlorobenzene-d5	14.310	117	302464	50.00	ug/L	0.00
101) 1,4-dichlorobenzene-d4	16.706	152	160578	50.00	ug/L	0.00
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.984	113	111941	48.98	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 97.96%			
49) 1,2-dichloroethane-d4 (s)	10.435	65	115337	49.48	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 98.96%			
78) toluene-d8 (s)	12.705	98	383511	50.36	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 100.72%			
103) 4-bromofluorobenzene (s)	15.531	95	153020	51.01	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 102.02%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.583	59	11823	39.39	ug/L #	1
31) methyl tert butyl ether	7.934	73	29894	4.09	ug/L #	1
57) cyclohexane	10.194	84	38004	10.55	ug/L #	47
62) benzene	10.550	78	772056	76.27	ug/L	99
73) methylcyclohexane	11.589	83	69961	16.34	ug/L	99
79) 4-methyl-2-pentanone	12.496	58	2113m	1.98	ug/L	
80) toluene	12.784	92	127996	20.40	ug/L	100
85) 2-hexanone	13.408	58	4774	4.82	ug/L #	77
95) ethylbenzene	14.430	91	686298	55.97	ug/L	100
96) m,p-xylene	14.551	106	486757	105.94	ug/L	100
97) o-xylene	14.981	91	786688	78.63	ug/L	100
102) isopropylbenzene	15.353	105	121762	9.96	ug/L	99

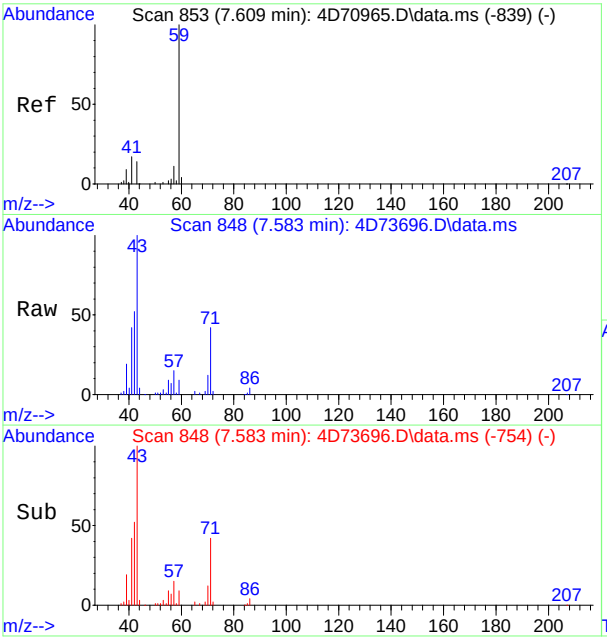
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (LSC Reviewed)

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73696.D
Acq On : 8 Nov 2016 12:55 pm
Operator : XimenaC
Sample : jc30522-5
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Time: Nov 09 15:24:48 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um
QLast Update : Wed Sep 14 10:25:10 2016
Response via : Initial Calibration

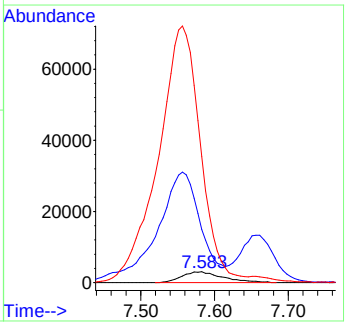


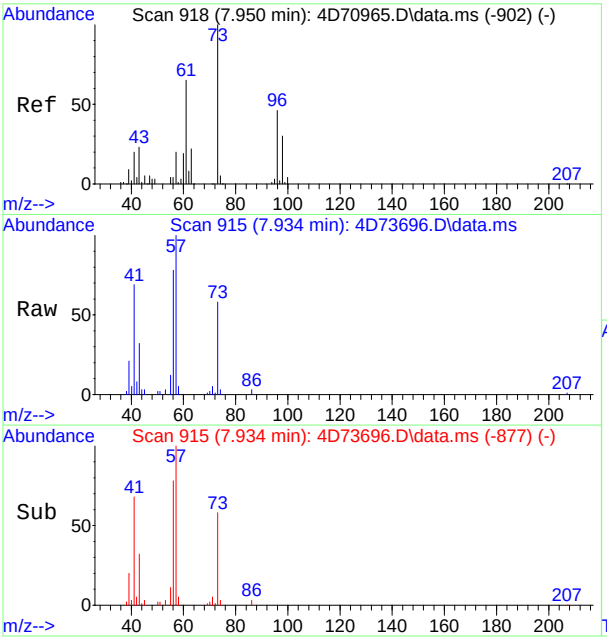


#3
tertiary butyl alcohol
Concen: 39.39 ug/L
RT: 7.583 min Scan# 848
Delta R.T. -0.006 min
Lab File: 4D73696.D
Acq: 8 Nov 2016 12:55 pm

Tgt Ion: 59 Resp: 11823

Ion	Ratio	Lower	Upper
59	100		
41	263.3	0.0	53.7#
43	1137.8	0.0	45.8#

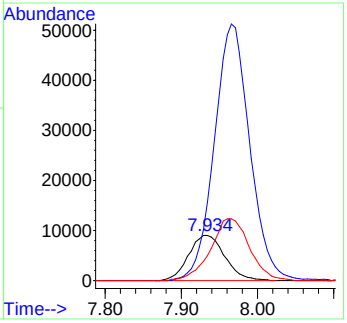


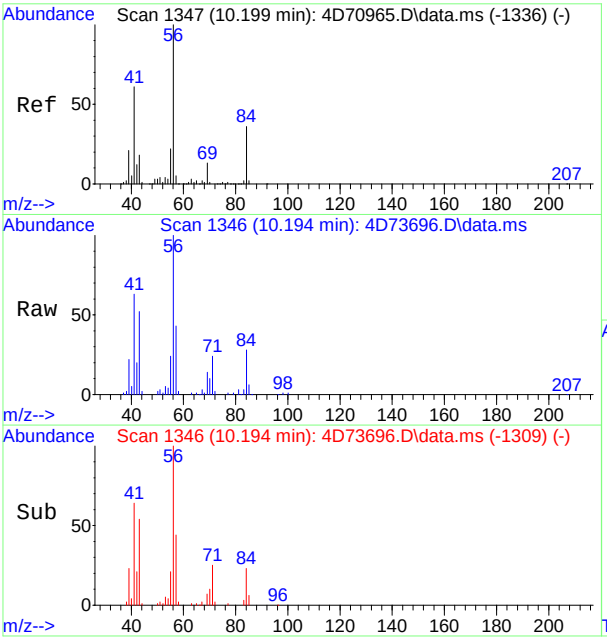


#31
methyl tert butyl ether
Concen: 4.09 ug/L
RT: 7.934 min Scan# 915
Delta R.T. -0.003 min
Lab File: 4D73696.D
Acq: 8 Nov 2016 12:55 pm

Tgt Ion: 73 Resp: 29894

Ion	Ratio	Lower	Upper
73	100		
57	173.6	0.0	51.4#
43	55.7	0.0	49.3#

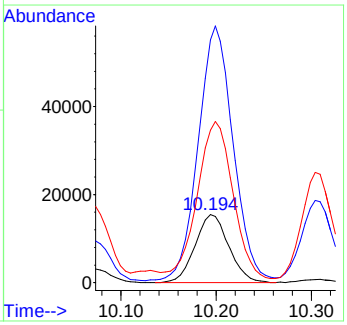


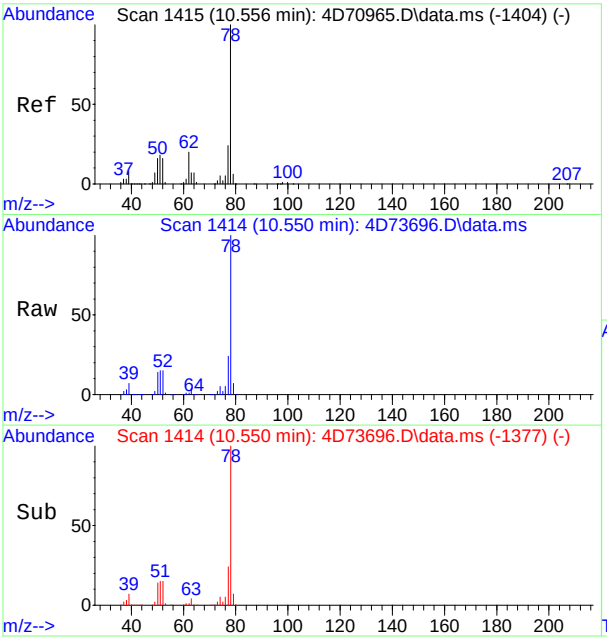


#57
cyclohexane
Concen: 10.55 ug/L
RT: 10.194 min Scan# 1346
Delta R.T. -0.006 min
Lab File: 4D73696.D
Acq: 8 Nov 2016 12:55 pm

Tgt Ion: 84 Resp: 38004

Ion	Ratio	Lower	Upper
84	100		
56	352.7	230.1	290.1#
41	217.8	118.6	178.6#

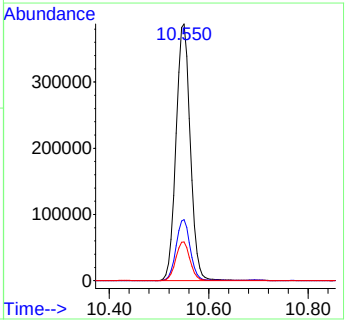




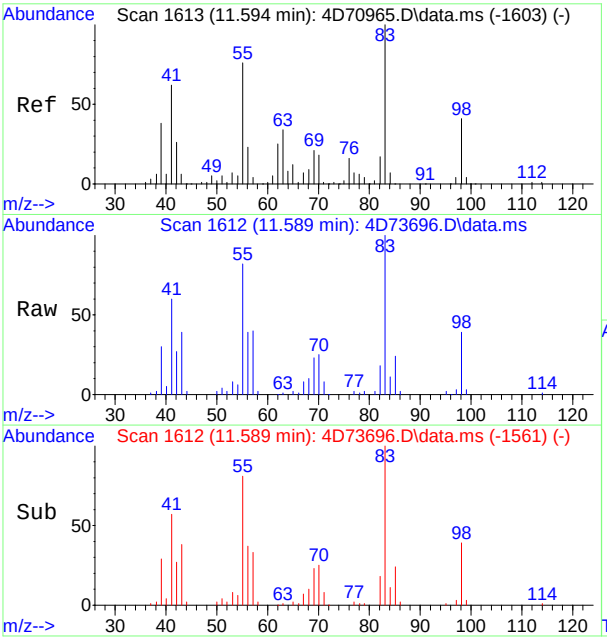
#62
benzene
Concen: 76.27 ug/L
RT: 10.550 min Scan# 1414
Delta R.T. -0.005 min
Lab File: 4D73696.D
Acq: 8 Nov 2016 12:55 pm

Tgt Ion: 78 Resp: 772056

Ion	Ratio	Lower	Upper
78	100		
77	23.8	0.0	53.6
52	15.1	0.0	45.7



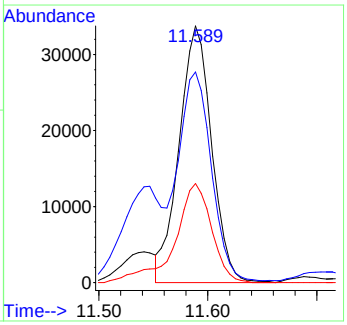
SGS ACCUTEST JC30522

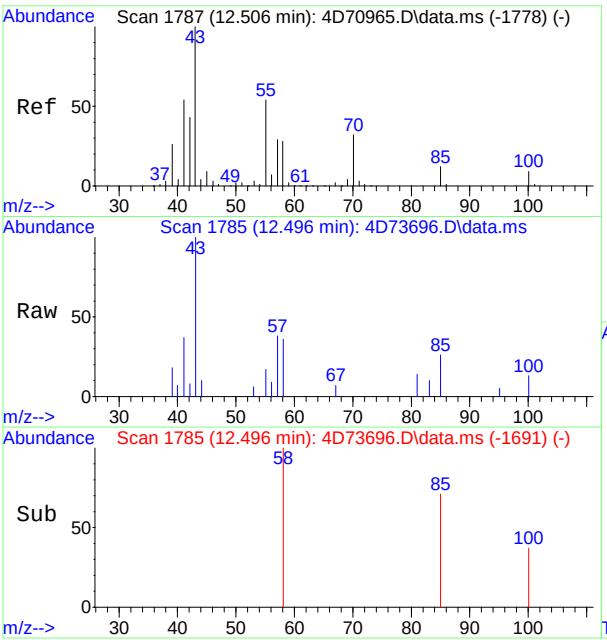


#73
methylcyclohexane
Concen: 16.34 ug/L
RT: 11.589 min Scan# 1612
Delta R.T. -0.034 min
Lab File: 4D73696.D
Acq: 8 Nov 2016 12:55 pm

Tgt Ion: 83 Resp: 69961

Ion	Ratio	Lower	Upper
83	100		
55	81.3	51.3	111.3
98	38.6	10.1	70.1

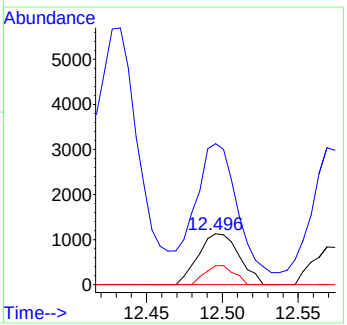


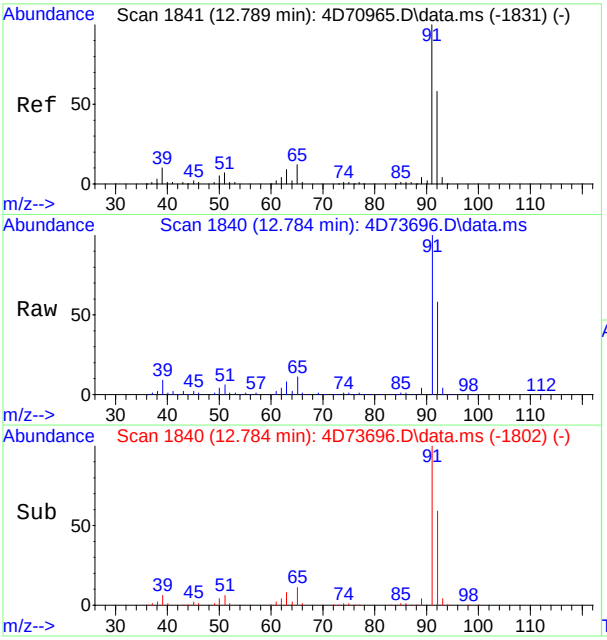


#79
4-methyl-2-pentanone
Concen: 1.98 ug/L m
RT: 12.496 min Scan# 1785
Delta R.T. -0.007 min
Lab File: 4D73696.D
Acq: 8 Nov 2016 12:55 pm

Tgt Ion: 58 Resp: 2113

Ion	Ratio	Lower	Upper
58	100		
43	276.4	294.6	354.6#
100	36.7	0.0	60.0

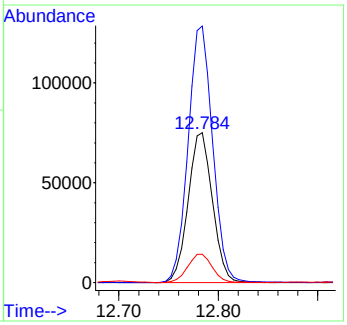


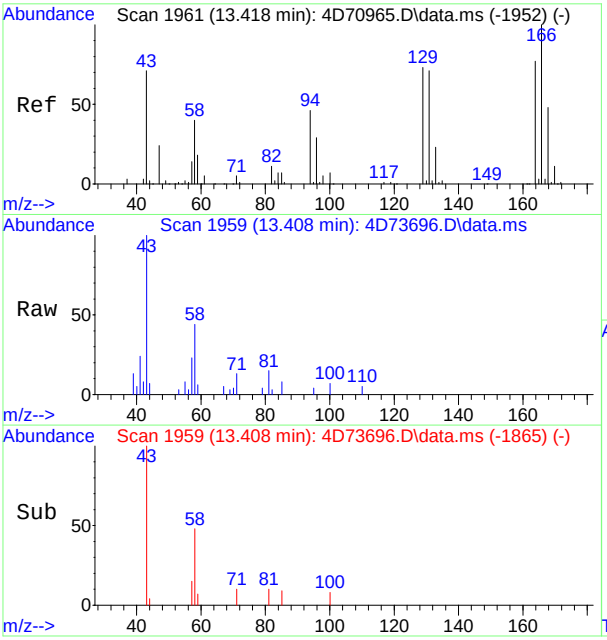


#80
toluene
Concen: 20.40 ug/L
RT: 12.784 min Scan# 1840
Delta R.T. -0.001 min
Lab File: 4D73696.D
Acq: 8 Nov 2016 12:55 pm

Tgt Ion: 92 Resp: 127996

Ion	Ratio	Lower	Upper
92	100		
91	171.1	140.6	200.6
65	18.9	0.0	49.1

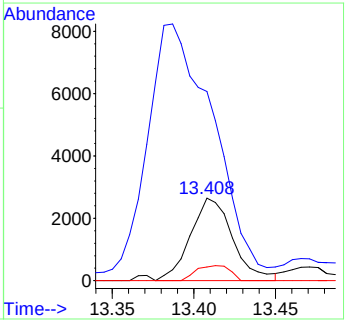


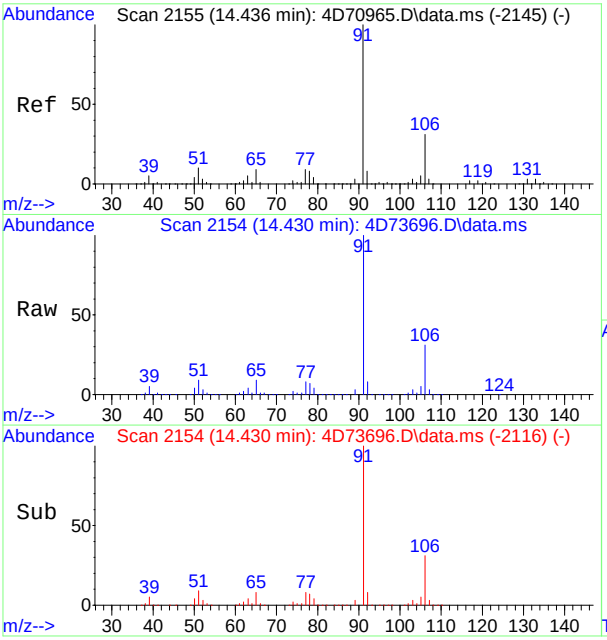


#85
2-hexanone
Concen: 4.82 ug/L
RT: 13.408 min Scan# 1959
Delta R.T. -0.007 min
Lab File: 4D73696.D
Acq: 8 Nov 2016 12:55 pm

Tgt Ion: 58 Resp: 4774

Ion	Ratio	Lower	Upper
58	100		
43	212.8	147.0	207.0#
100	16.7	0.0	47.0

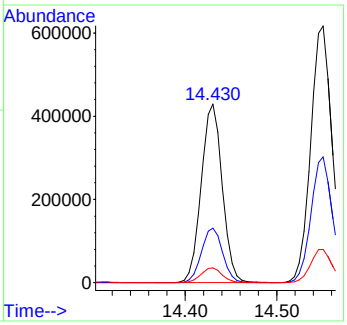


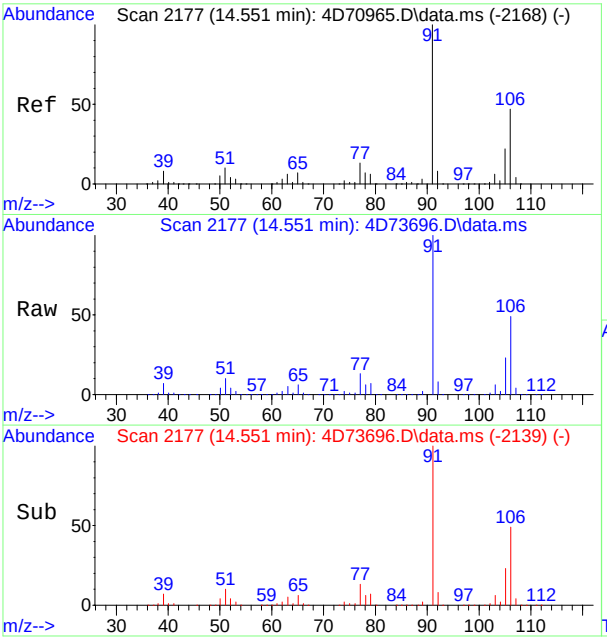


#95
ethylbenzene
Concen: 55.97 ug/L
RT: 14.430 min Scan# 2154
Delta R.T. -0.002 min
Lab File: 4D73696.D
Acq: 8 Nov 2016 12:55 pm

Tgt Ion: 91 Resp: 686298

Ion	Ratio	Lower	Upper
91	100		
106	30.5	0.5	60.5
77	8.3	0.0	38.4

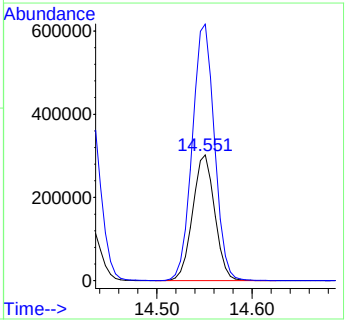




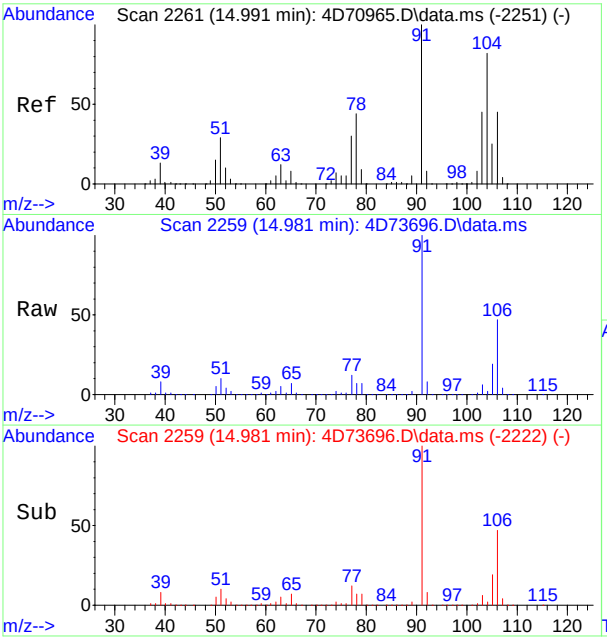
#96
m,p-xylene
Concen: 105.94 ug/L
RT: 14.551 min Scan# 2177
Delta R.T. -0.000 min
Lab File: 4D73696.D
Acq: 8 Nov 2016 12:55 pm

Tgt Ion:106 Resp: 486757

Ion	Ratio	Lower	Upper
106	100		
91	204.1	173.4	233.4



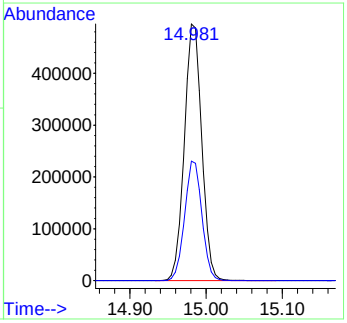
SGS ACCUTEST JC30522

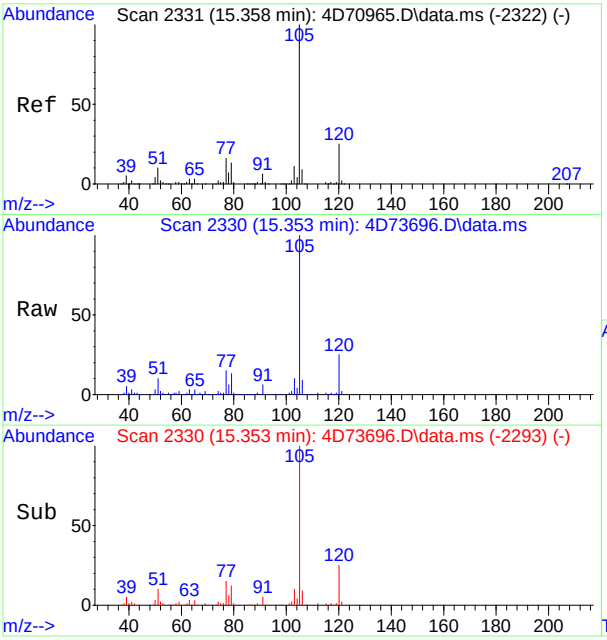


#97
o-xylene
Concen: 78.63 ug/L
RT: 14.981 min Scan# 2259
Delta R.T. -0.005 min
Lab File: 4D73696.D
Acq: 8 Nov 2016 12:55 pm

Tgt Ion: 91 Resp: 786688

Ion	Ratio	Lower	Upper
91	100		
106	46.5	16.4	76.4

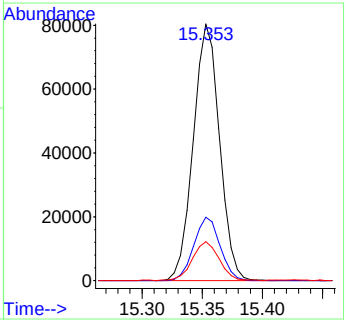




#102
isopropylbenzene
Concen: 9.96 ug/L
RT: 15.353 min Scan# 2330
Delta R.T. -0.005 min
Lab File: 4D73696.D
Acq: 8 Nov 2016 12:55 pm

Tgt Ion:105 Resp: 121762

Ion	Ratio	Lower	Upper
105	100		
120	24.7	0.0	55.5
77	15.1	0.0	45.2



LSC Area Percent Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73696.D
Acq On : 8 Nov 2016 12:55 pm
Operator : XimenaC
Sample : jc30522-5
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.5 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

Signal : TIC: 4D73696.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.268	3	25	78	rBV	2191433	10133625	100.00%	11.428%
2	4.018	157	168	192	rVV2	25854	116879	1.15%	0.132%
3	4.343	219	230	249	rVV	64786	250239	2.47%	0.282%
4	5.428	416	437	458	rBV2	203646	998671	9.86%	1.126%
5	5.900	516	527	549	rBV3	72537	254275	2.51%	0.287%
6	6.466	624	635	653	rVB	93600	252257	2.49%	0.284%
7	7.462	799	825	830	rBV4	81274	291434	2.88%	0.329%
8	7.557	831	843	854	rVV2	234690	904570	8.93%	1.020%
9	7.662	854	863	881	rVB3	88001	281469	2.78%	0.317%
10	7.966	902	921	943	rBV3	180183	607755	6.00%	0.685%
11	8.375	989	999	1011	rVB2	42280	106428	1.05%	0.120%
12	8.668	1045	1055	1067	rVB2	37677	89892	0.89%	0.101%
13	8.799	1072	1080	1091	rVV3	28576	72844	0.72%	0.082%
14	9.030	1110	1124	1137	rVV3	37114	129923	1.28%	0.147%
15	9.151	1137	1147	1162	rVV	70686	200793	1.98%	0.226%
16	9.292	1162	1174	1191	rVV	255076	672535	6.64%	0.758%
17	9.921	1280	1294	1300	rBV3	45097	132332	1.31%	0.149%
18	10.000	1300	1309	1317	rVV2	388929	911481	8.99%	1.028%
19	10.073	1317	1323	1331	rVB	114528	239231	2.36%	0.270%
20	10.199	1336	1347	1359	rVB2	252591	641266	6.33%	0.723%
21	10.304	1359	1367	1380	rVB	204181	463083	4.57%	0.522%
22	10.430	1380	1391	1402	rBV2	213614	496707	4.90%	0.560%
23	10.550	1402	1414	1422	rBV	814398	1645652	16.24%	1.856%
24	10.645	1422	1432	1439	rBV	281224	809667	7.99%	0.913%
25	10.765	1449	1455	1462	rVV	58437	123226	1.22%	0.139%
26	10.828	1462	1467	1476	rVB3	31796	67940	0.67%	0.077%
27	10.954	1482	1491	1501	rBV	385985	797133	7.87%	0.899%
28	11.536	1590	1602	1607	rBV4	101004	303588	3.00%	0.342%
29	11.589	1607	1612	1625	rVB2	213220	436272	4.31%	0.492%
30	11.704	1625	1634	1642	rBV	27656	65622	0.65%	0.074%
31	11.777	1642	1648	1658	rVV	61572	123833	1.22%	0.140%
32	11.861	1658	1664	1675	rVB3	40923	90029	0.89%	0.102%
33	12.029	1675	1696	1713	rBV	244467	602229	5.94%	0.679%
34	12.186	1713	1726	1737	rBV2	363419	966913	9.54%	1.090%
35	12.385	1757	1764	1769	rBV	61467	114123	1.13%	0.129%
36	12.574	1792	1800	1808	rBV3	88316	198593	1.96%	0.224%
37	12.705	1816	1825	1832	rVV	608105	1172058	11.57%	1.322%
38	12.779	1832	1839	1846	rVV	306882	561836	5.54%	0.634%
39	12.878	1853	1858	1862	rVV2	39342	75908	0.75%	0.086%
40	12.920	1862	1866	1879	rVB5	40974	97077	0.96%	0.109%
41	13.104	1892	1901	1911	rBV4	29782	70706	0.70%	0.080%
42	13.214	1911	1922	1930	rBV6	78864	238742	2.36%	0.269%
43	14.053	2072	2082	2088	rBV4	35044	101976	1.01%	0.115%
44	14.126	2088	2096	2105	rVB2	59486	120340	1.19%	0.136%
45	14.215	2105	2113	2123	rBV3	37552	90061	0.89%	0.102%

LSC Area Percent Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73696.D
Acq On : 8 Nov 2016 12:55 pm
Operator : XimenaC
Sample : jc30522-5
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.5 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

46	14.310	2123	2131	2137	rBV	568665	916840	9.05%	1.034%
47	14.430	2147	2154	2166	rVB	944279	1529035	15.09%	1.724%
48	14.551	2168	2177	2190	rVB	1710420	2804099	27.67%	3.162%
49	14.981	2252	2259	2271	rVB	1359556	2144218	21.16%	2.418%
50	15.353	2323	2330	2342	rVB	196601	322658	3.18%	0.364%
51	15.531	2357	2364	2371	rVB	473952	713109	7.04%	0.804%
52	15.772	2398	2410	2417	rBV	540079	812981	8.02%	0.917%
53	15.846	2417	2424	2427	rBV	935497	1398503	13.80%	1.577%
54	15.877	2427	2430	2435	rVV	1207785	1741778	17.19%	1.964%
55	15.930	2435	2440	2450	rVB	1407337	2014447	19.88%	2.272%
56	16.160	2475	2484	2494	rBV	2214481	3247214	32.04%	3.662%
57	16.323	2507	2515	2524	rVV	5918302	8708621	85.94%	9.821%
58	16.465	2534	2542	2545	rBV	101934	156118	1.54%	0.176%
59	16.501	2545	2549	2555	rVV	112410	170556	1.68%	0.192%
60	16.559	2555	2560	2567	rVV	190084	283272	2.80%	0.319%
61	16.617	2567	2571	2576	rVV	73687	103331	1.02%	0.117%
62	16.706	2581	2588	2592	rVV	679202	963075	9.50%	1.086%
63	16.758	2592	2598	2609	rVV	2285703	3406592	33.62%	3.842%
64	16.900	2618	2625	2629	rBV	1130782	1739790	17.17%	1.962%
65	16.926	2629	2630	2635	rVV	412547	456776	4.51%	0.515%
66	16.984	2635	2641	2647	rVV3	2386872	3942671	38.91%	4.446%
67	17.020	2647	2648	2654	rVB	145452	119345	1.18%	0.135%
68	17.115	2654	2666	2673	rBV	206951	337062	3.33%	0.380%
69	17.188	2673	2680	2686	rVV	641864	939690	9.27%	1.060%
70	17.251	2686	2692	2696	rVV	977102	1520064	15.00%	1.714%
71	17.288	2696	2699	2706	rVV	745977	1066800	10.53%	1.203%
72	17.356	2706	2712	2724	rVB	2376979	3350471	33.06%	3.779%
73	17.450	2724	2730	2734	rBV2	210649	359976	3.55%	0.406%
74	17.513	2734	2742	2751	rVV2	692718	1416952	13.98%	1.598%
75	17.660	2765	2770	2777	rVV	472302	706638	6.97%	0.797%
76	17.733	2777	2784	2789	rVV	1321771	1867220	18.43%	2.106%
77	17.786	2789	2794	2799	rVV	1617884	2263183	22.33%	2.552%
78	17.828	2799	2802	2807	rVV2	260643	365162	3.60%	0.412%
79	17.912	2812	2818	2821	rVV2	56517	118292	1.17%	0.133%
80	17.985	2827	2832	2836	rVV2	105425	168102	1.66%	0.190%
81	18.017	2836	2838	2841	rVV	61143	70766	0.70%	0.080%
82	18.069	2841	2848	2852	rVV	806718	1240884	12.25%	1.399%
83	18.106	2852	2855	2861	rVV2	241789	344310	3.40%	0.388%
84	18.190	2861	2871	2875	rVV2	598011	1160311	11.45%	1.309%
85	18.231	2875	2879	2887	rVV2	1533122	2330858	23.00%	2.629%
86	18.294	2887	2891	2897	rVV2	81372	133982	1.32%	0.151%
87	18.410	2905	2913	2918	rBV3	173669	295607	2.92%	0.333%
88	18.457	2918	2922	2926	rVV	90195	141947	1.40%	0.160%
89	18.504	2926	2931	2940	rVV2	432275	1014522	10.01%	1.144%
90	18.567	2940	2943	2949	rVV	160147	241807	2.39%	0.273%
91	18.625	2949	2954	2957	rVV2	176117	286141	2.82%	0.323%
92	18.661	2957	2961	2968	rVV	260268	457945	4.52%	0.516%
93	18.808	2983	2989	2996	rVV3	35428	83237	0.82%	0.094%

SGS ACCUTEST JC30522

LSC Area Percent Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73696.D
Acq On : 8 Nov 2016 12:55 pm
Operator : XimenaC
Sample : jc30522-5
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.5 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

94	18.876	2996	3002	3010	rVV	358093	545870	5.39%	0.616%
95	18.986	3018	3023	3029	rVV2	106724	194803	1.92%	0.220%
96	19.060	3032	3037	3054	rVB	87686	168101	1.66%	0.190%
97	19.186	3054	3061	3076	rBV	145894	244849	2.42%	0.276%
98	19.390	3093	3100	3110	rVV	107902	221690	2.19%	0.250%
99	19.506	3116	3122	3129	rVV	55699	102225	1.01%	0.115%
100	19.616	3138	3143	3156	rVB	51840	96175	0.95%	0.108%

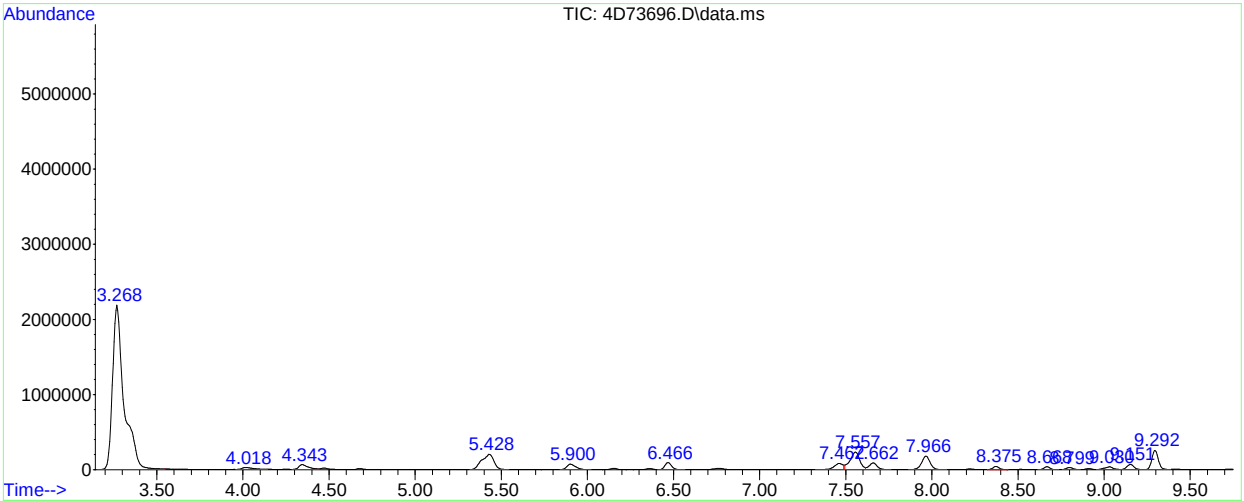
Sum of corrected areas: 88671884

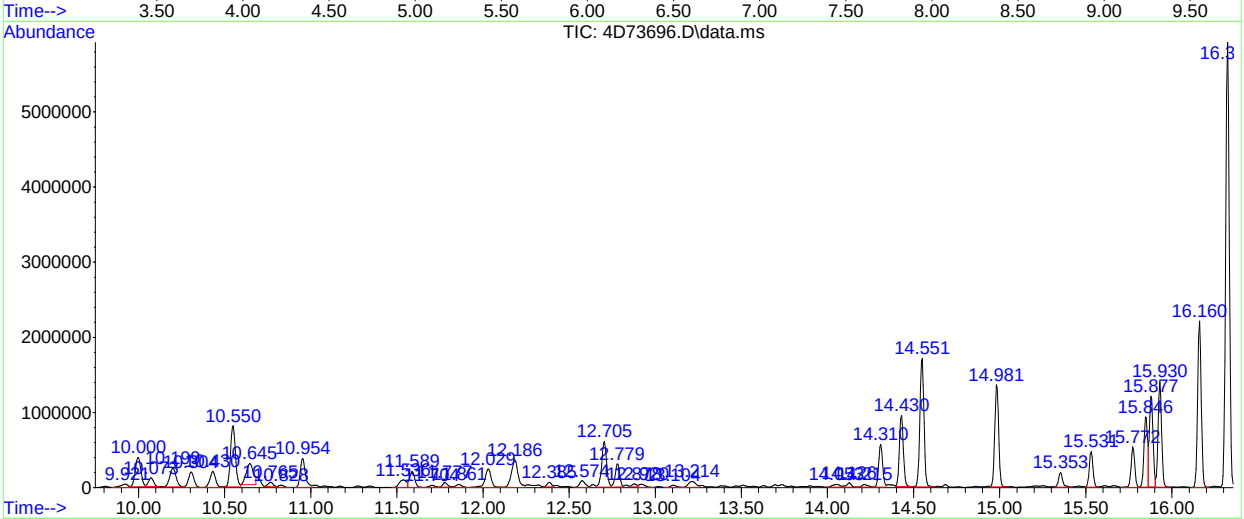
LSC Report - Integrated Chromatogram

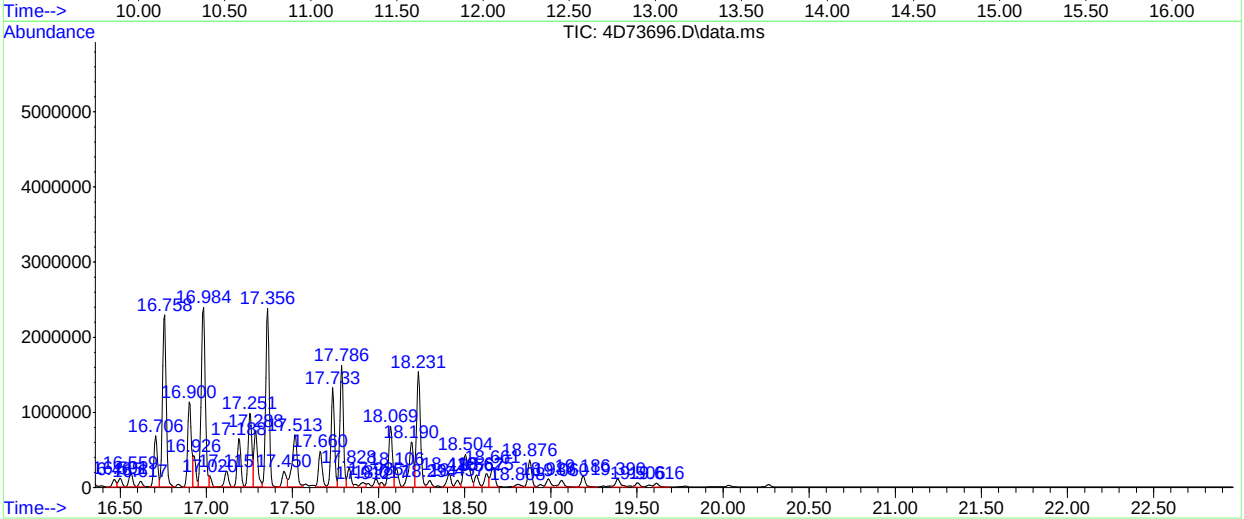
Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73696.D
Acq On : 8 Nov 2016 12:55 pm
Operator : XimenaC
Sample : jc30522-5
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p







SGS ACCUTEST JC30522

Library Search Compound Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73696.D
Acq On : 8 Nov 2016 12:55 pm
Operator : XimenaC
Sample : jc30522-5
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

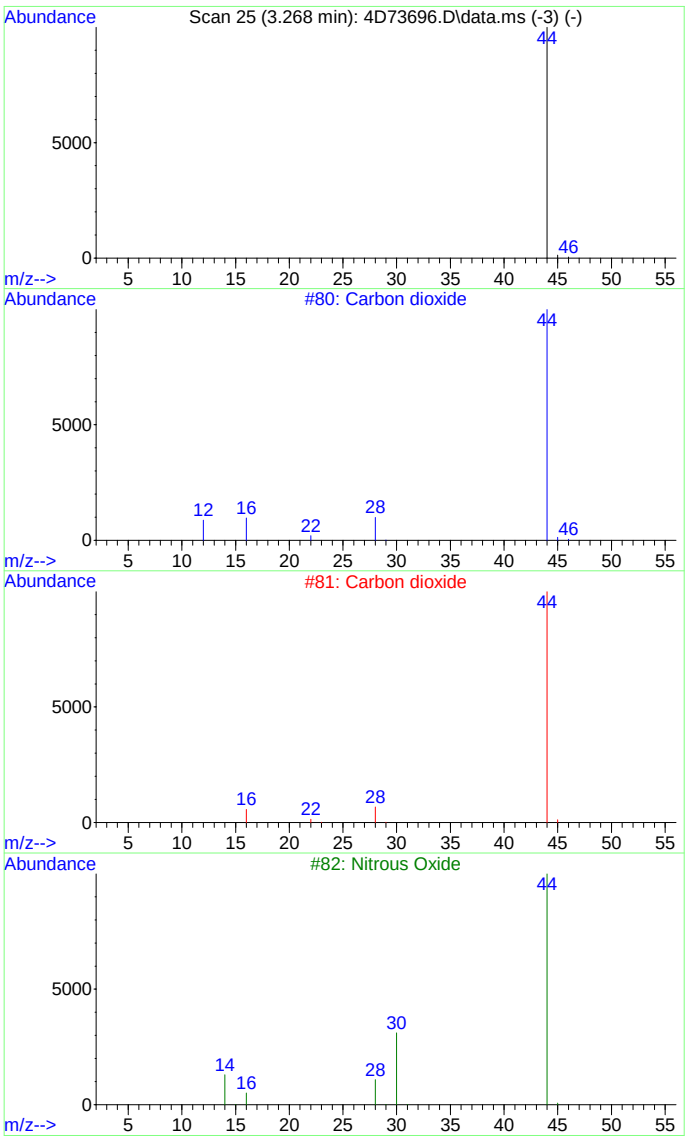
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

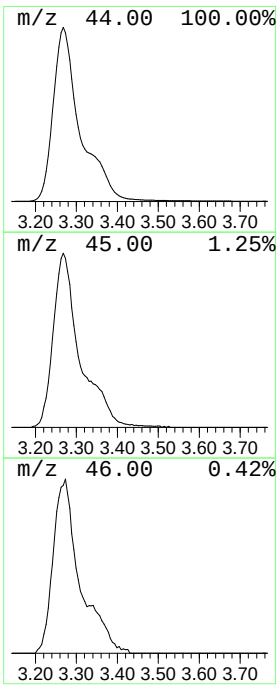
****

Peak Number 1 system artifact Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.268	555.89 ug/L	10133600	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	3
3	Nitrous Oxide	44	N2O	010024-97-2	3
4	Nitrous Oxide	44	N2O	010024-97-2	3
5	Acetaldehyde	44	C2H4O	000075-07-0	2





Library Search Compound Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73696.D
Acq On : 8 Nov 2016 12:55 pm
Operator : XimenaC
Sample : jc30522-5
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

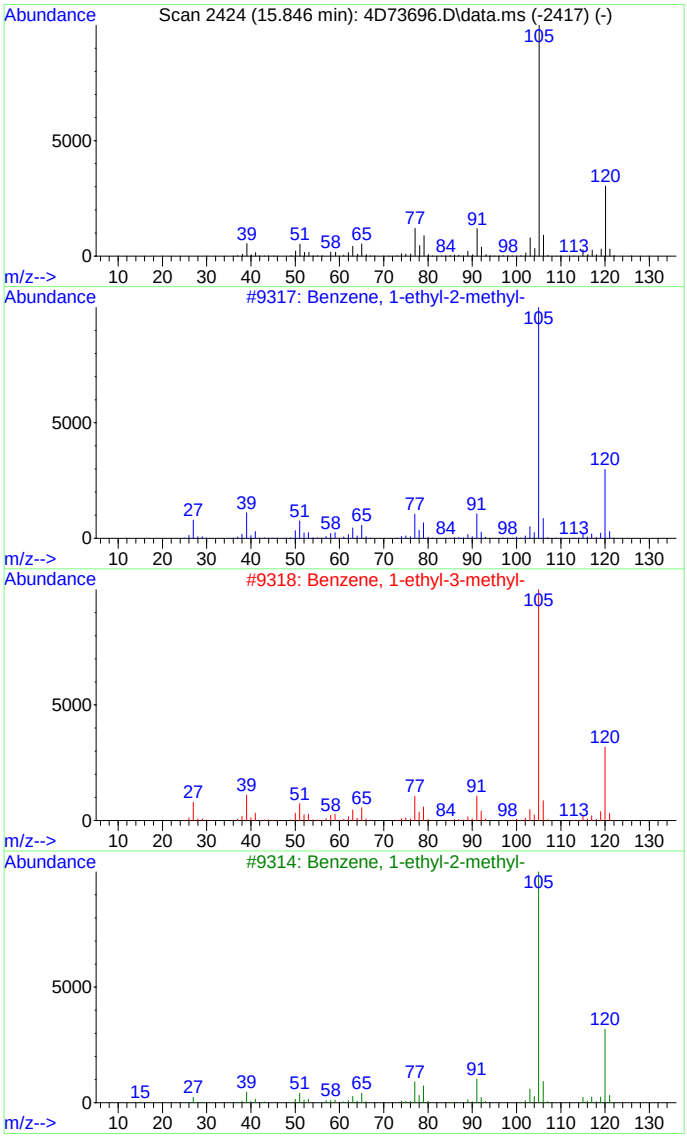
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

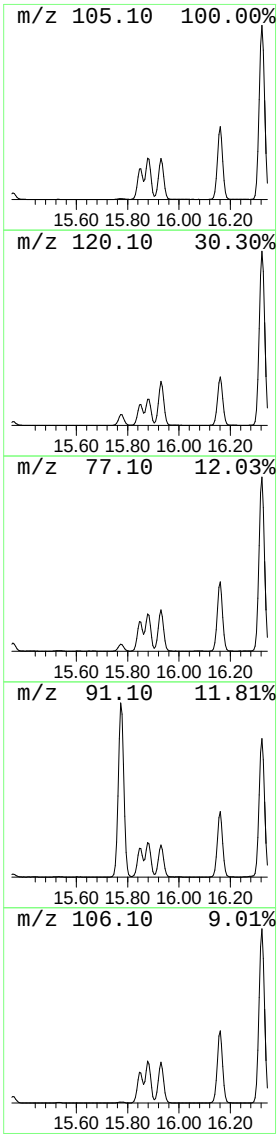
****

Peak Number 2 C3 alkyl benzene Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.846	72.61 ug/L	1398500	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
2	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	95
3	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
4	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	95
5	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	91





Library Search Compound Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73696.D
Acq On : 8 Nov 2016 12:55 pm
Operator : XimenaC
Sample : jc30522-5
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

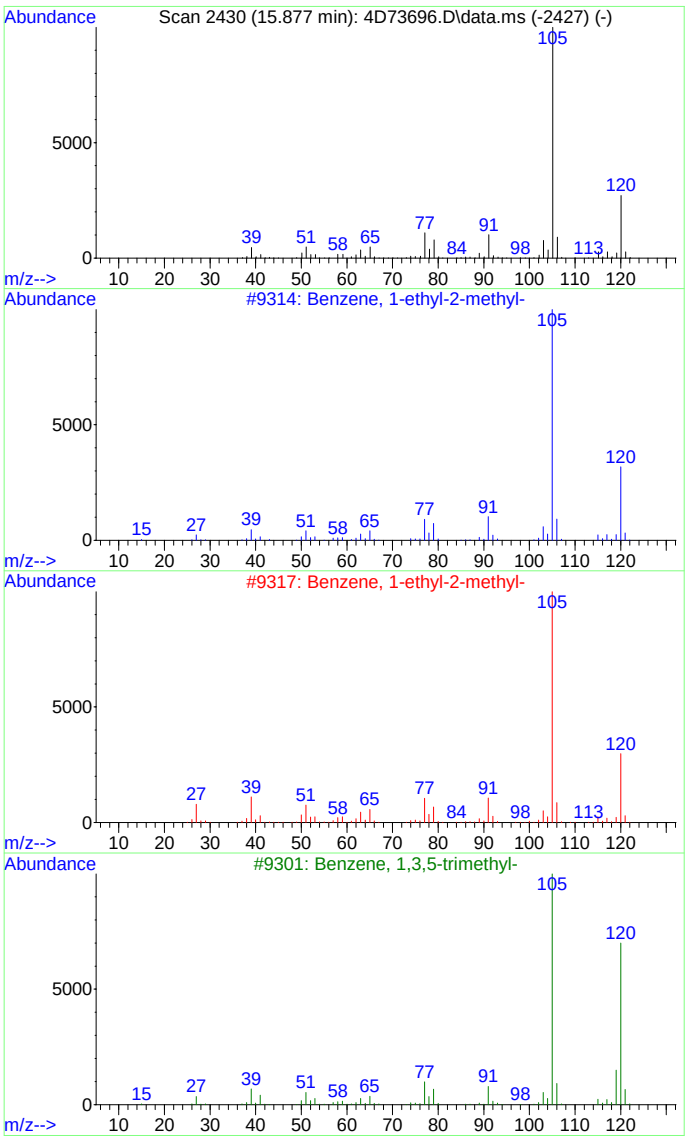
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

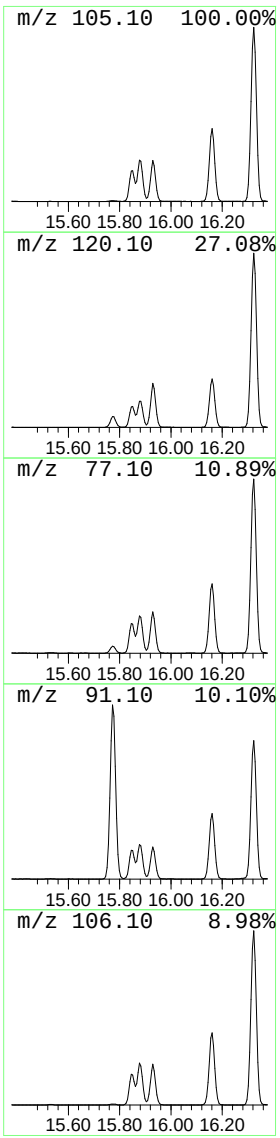
****

Peak Number 3 C3 alkyl benzene Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.877	90.43 ug/L	1741780	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
4	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91
5	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91





SGS ACCUTEST JC30522

Library Search Compound Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73696.D
Acq On : 8 Nov 2016 12:55 pm
Operator : XimenaC
Sample : jc30522-5
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

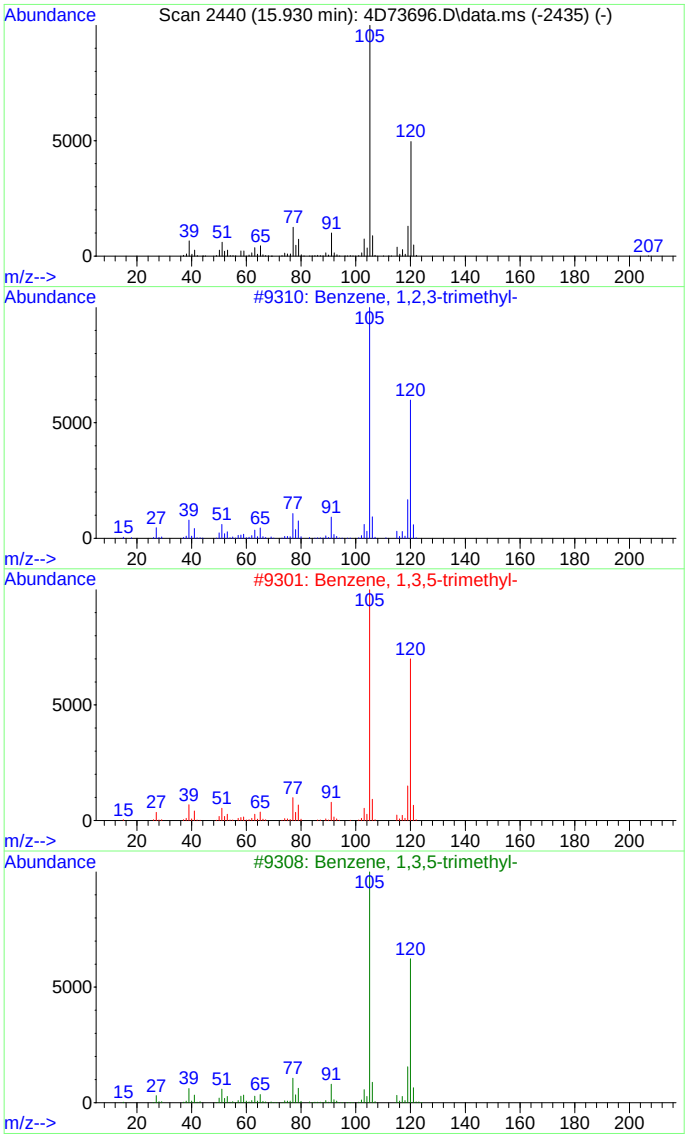
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

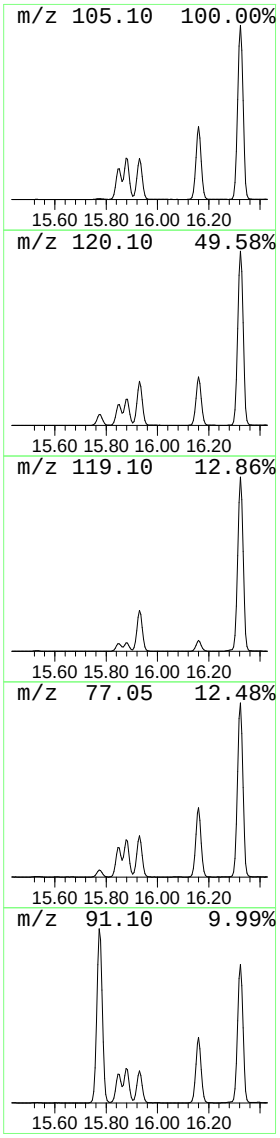
****

Peak Number 4 Benzene, 1,3,5-trimethyl- Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.930	104.58 ug/L	2014450	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	97
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
5	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95





Library Search Compound Report

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Sample : jc30522-5
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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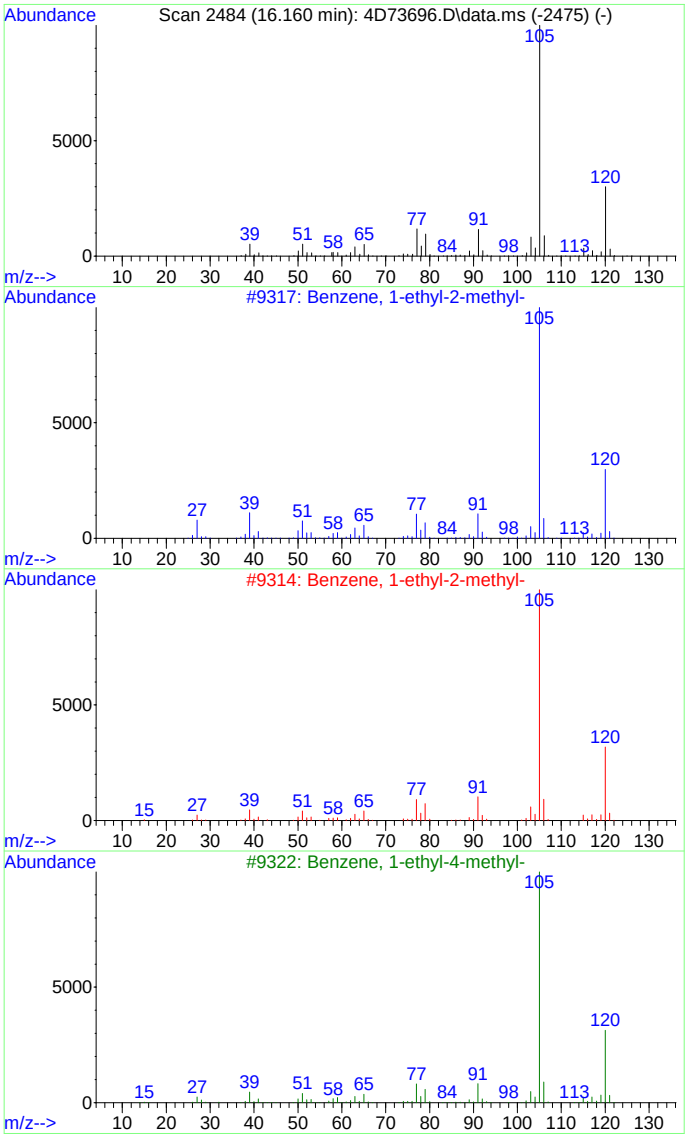
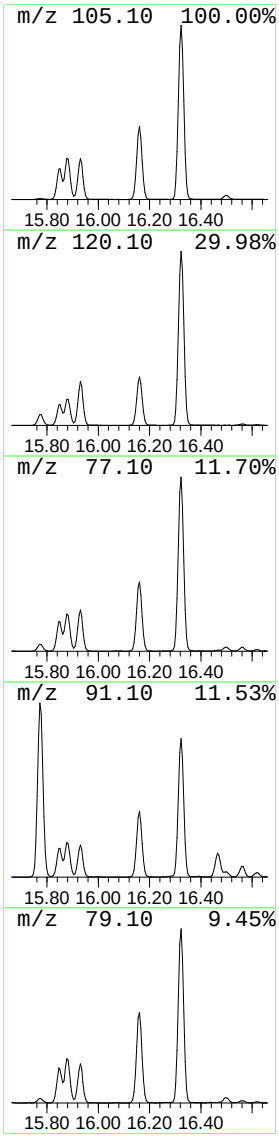
Peak Number 5 C3 alkyl benzene Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.160	168.59 ug/L	3247210	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
5	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91





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Operator : XimenaC
Sample : jc30522-5
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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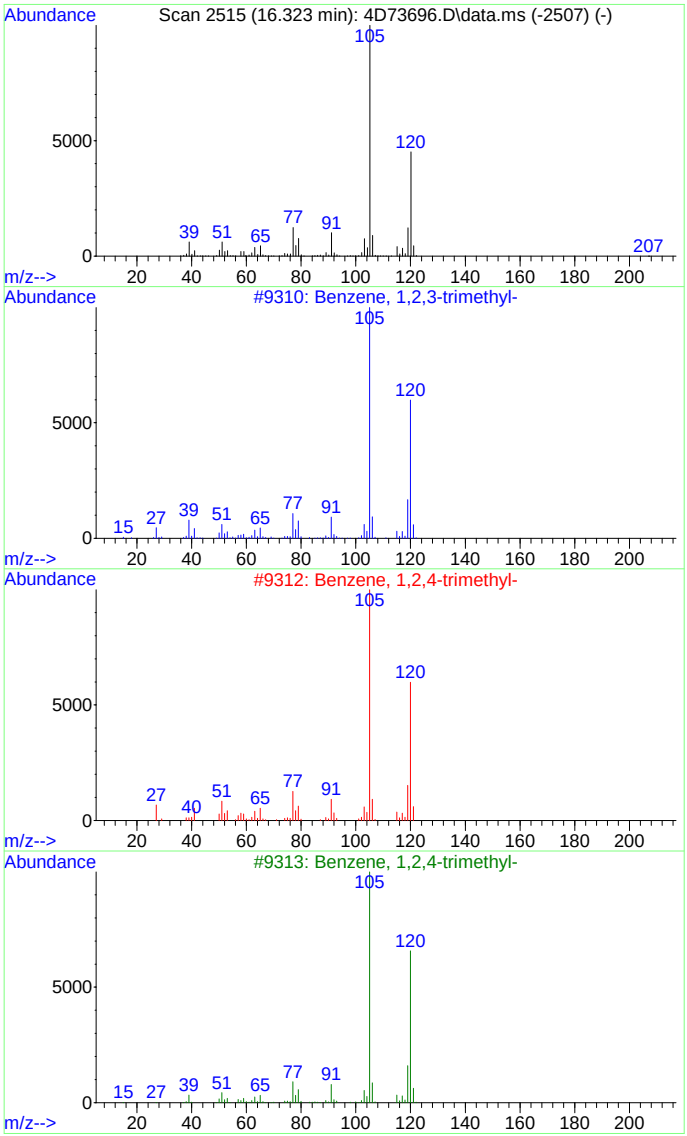
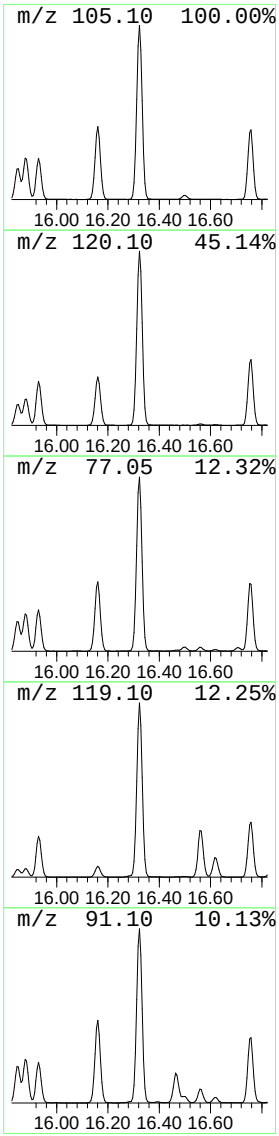
Peak Number 6 Benzene, 1,2,4-trimethyl- Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.323	452.13 ug/L	8708620	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
4	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	93
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91





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Sample : jc30522-5
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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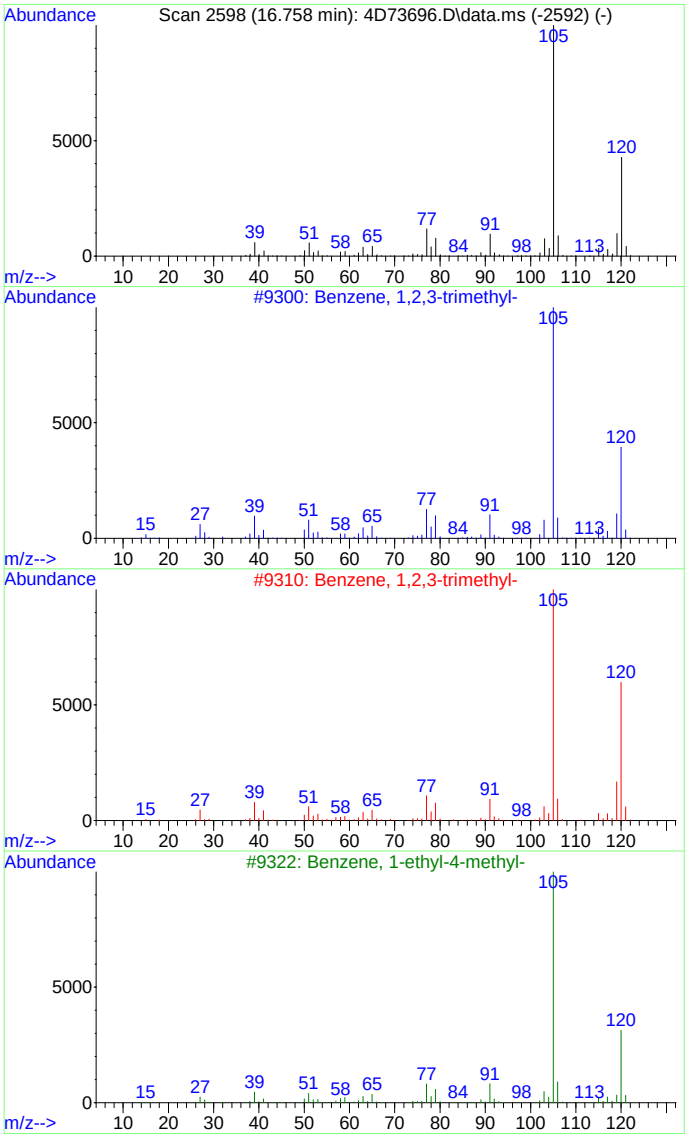
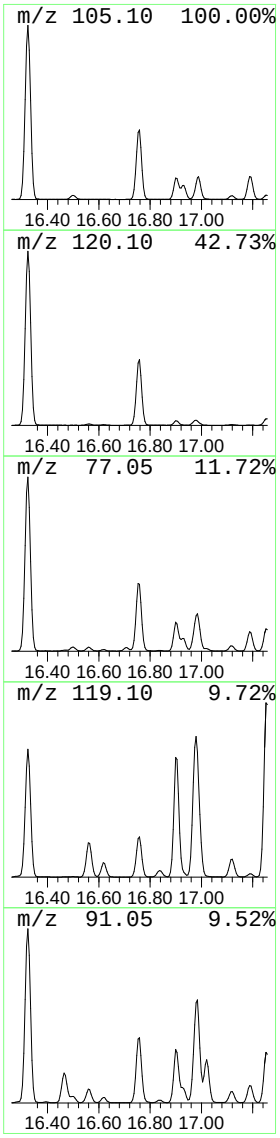
Peak Number 7 C3 alkyl benzene Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.758	176.86 ug/L	3406590	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
2	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
3	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
5	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	91





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Operator : XimenaC
Sample : jc30522-5
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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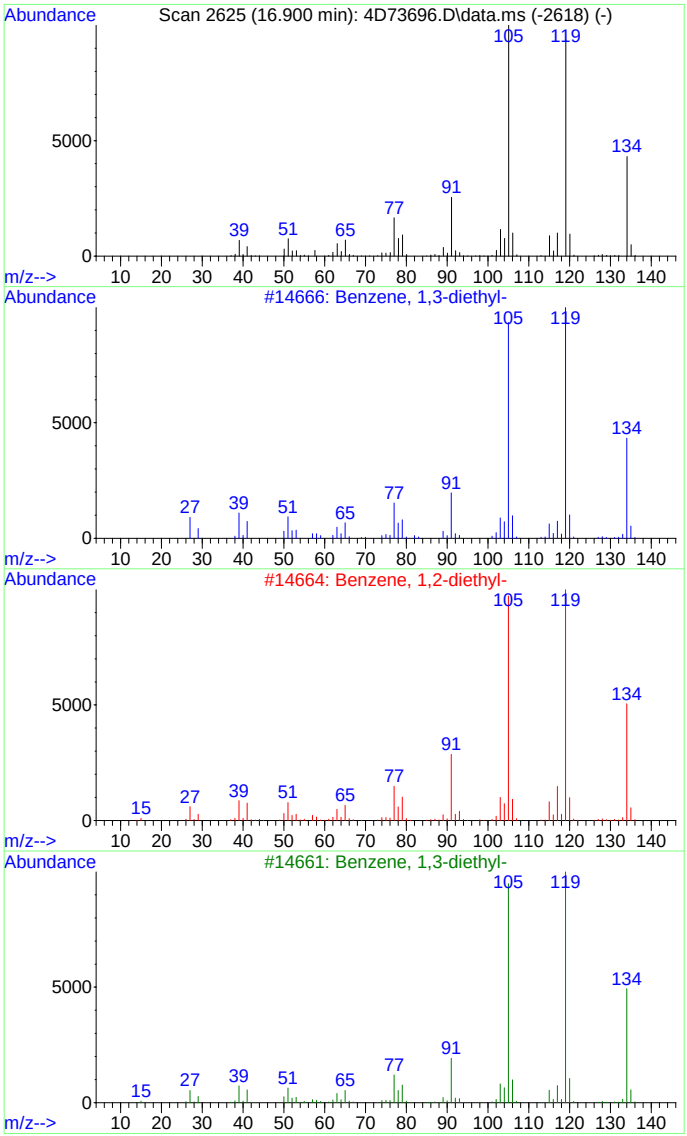
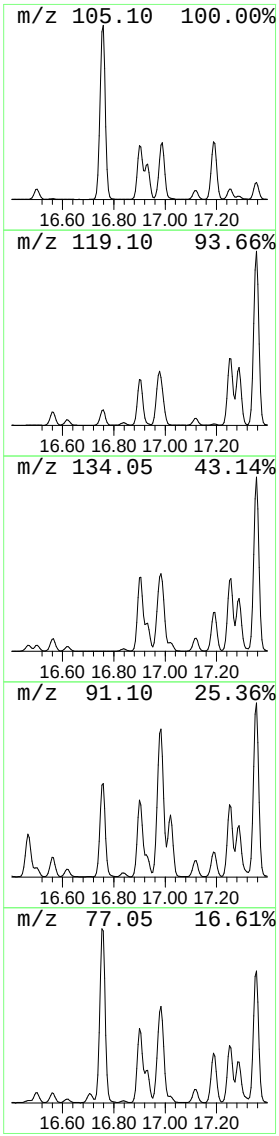
Peak Number 8 C4 alkyl benzene Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.900	90.32 ug/L	1739790	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	95
2	Benzene, 1,2-diethyl-	134	C10H14	000135-01-3	95
3	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	94
4	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	93
5	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	91





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Acq On : 8 Nov 2016 12:55 pm
Operator : XimenaC
Sample : jc30522-5
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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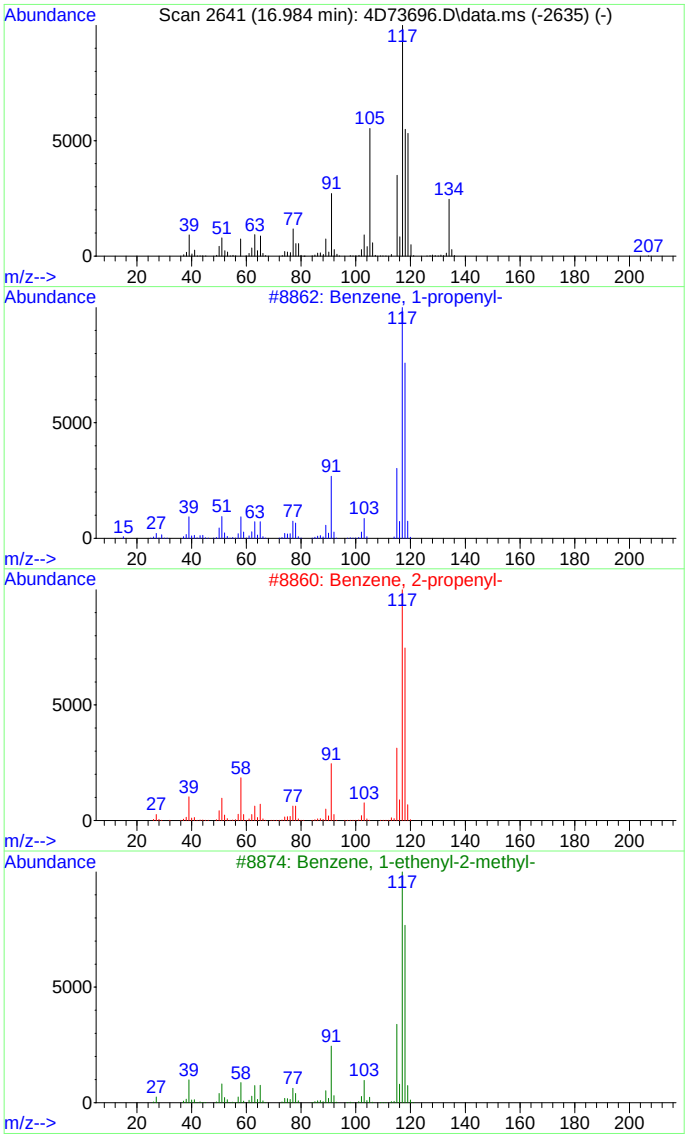
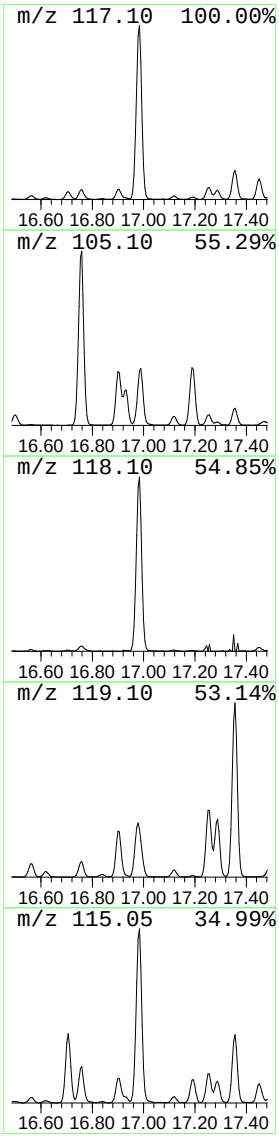
Peak Number 9 C3 alkyl benzene Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.984	204.69 ug/L	3942670	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-propenyl-	118	C9H10	000637-50-3	90
2	Benzene, 2-propenyl-	118	C9H10	000300-57-2	60
3	Benzene, 1-ethenyl-2-methyl-	118	C9H10	000611-15-4	60
4	Benzene, 2-propenyl-	118	C9H10	000300-57-2	60
5	Benzene, cyclopropyl-	118	C9H10	000873-49-4	60





Library Search Compound Report

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Acq On : 8 Nov 2016 12:55 pm
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Sample : jc30522-5
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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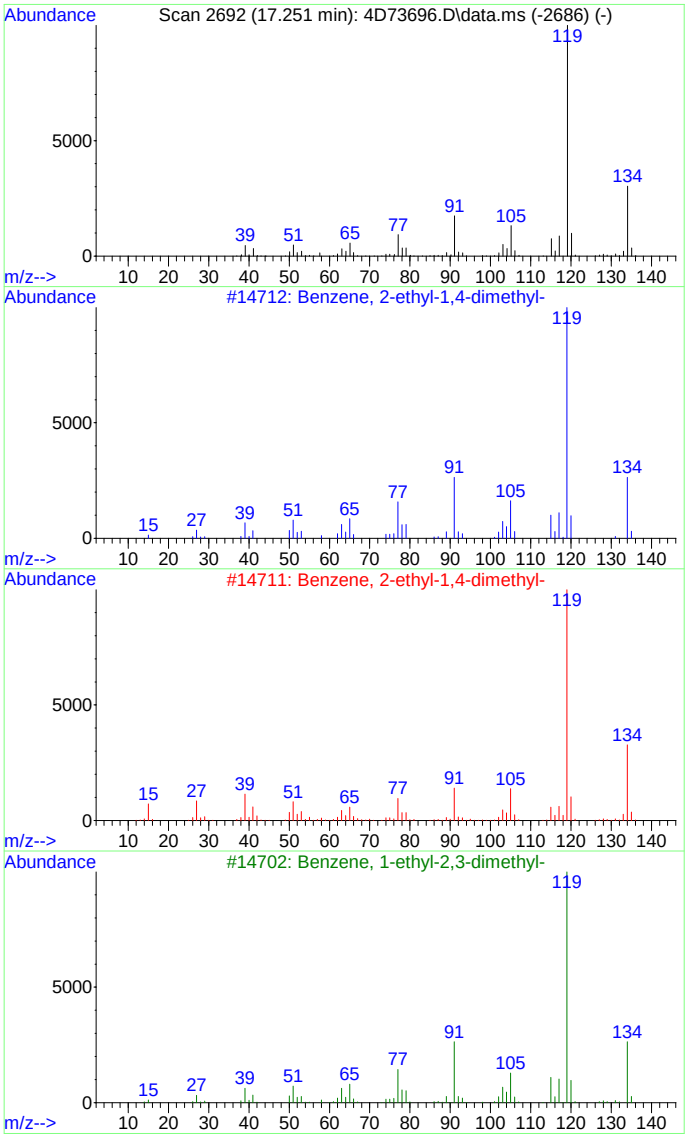
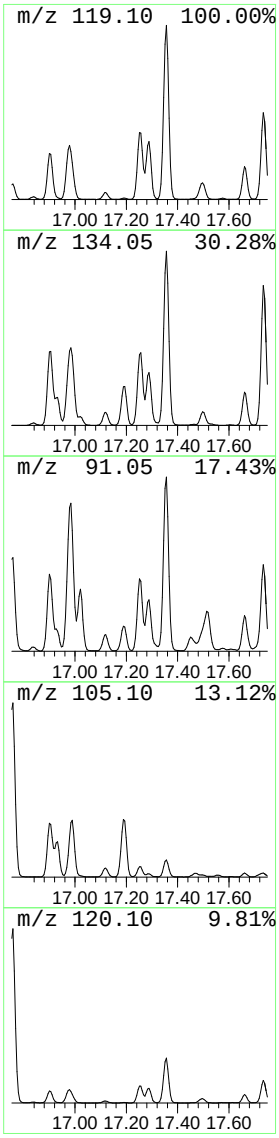
Peak Number 10 C4 alkyl benzene Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.251	78.92 ug/L	1520060	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	96
2	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	95
3	Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	95
4	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	95
5	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	94





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Acq On : 8 Nov 2016 12:55 pm
Operator : XimenaC
Sample : jc30522-5
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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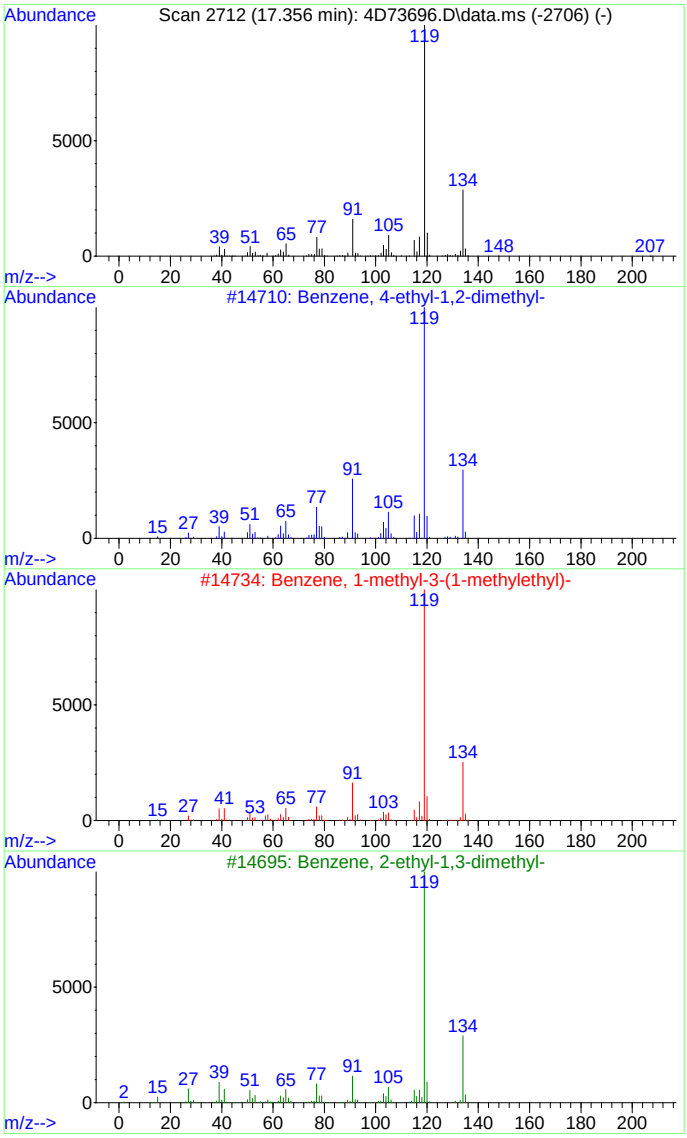
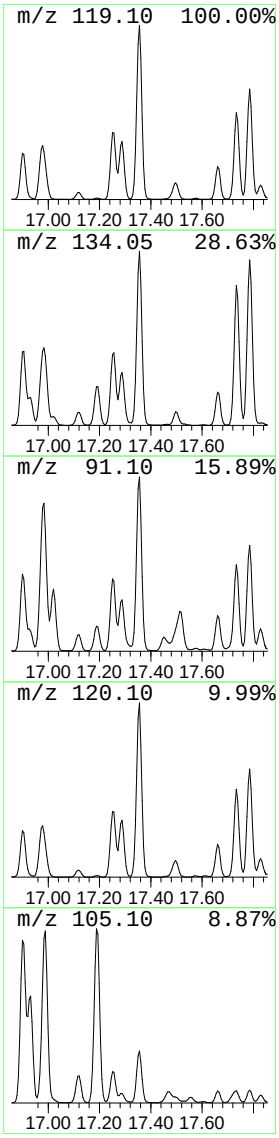
Peak Number 11 C4 alkyl benzene Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.356	173.95 ug/L	3350470	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	95
2	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	94
3	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14	002870-04-4	94
4	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14	002870-04-4	94
5	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	94





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Sample : jc30522-5
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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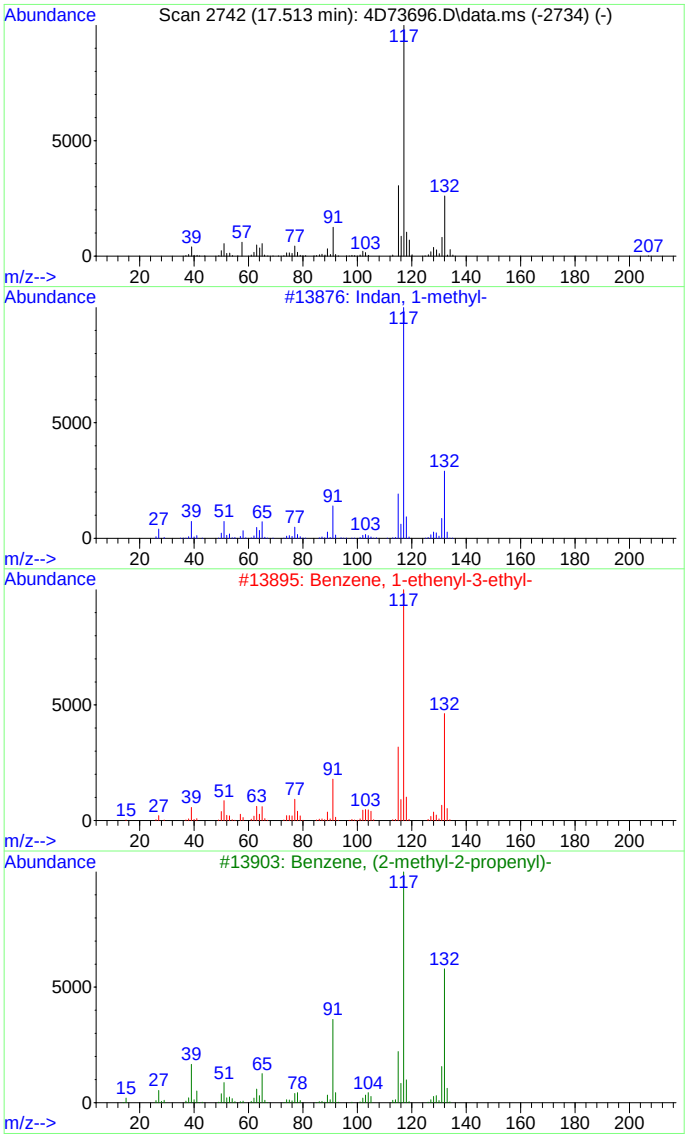
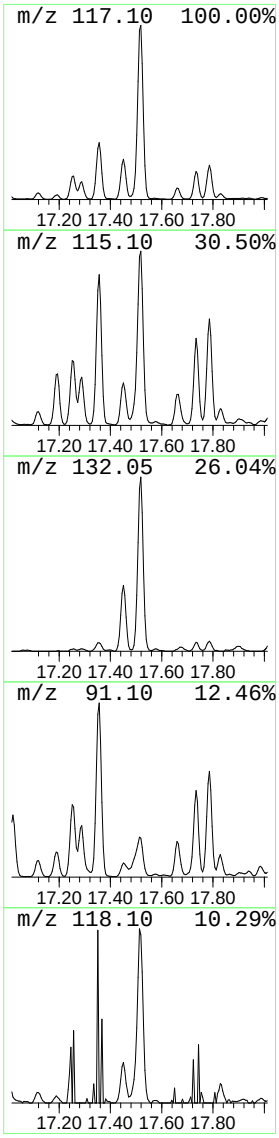
Peak Number 12 1H-Indene-dihydro-methyl- i... Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.513	73.56 ug/L	1416950	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indan, 1-methyl-	132	C10H12	000767-58-8	87
2	Benzene, 1-ethenyl-3-ethyl-	132	C10H12	007525-62-4	86
3	Benzene, (2-methyl-2-propenyl)-	132	C10H12	003290-53-7	83
4	1-Phenyl-1-butene	132	C10H12	000824-90-8	80
5	Benzene, 2-butenyl-	132	C10H12	001560-06-1	80





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Sample : jc30522-5
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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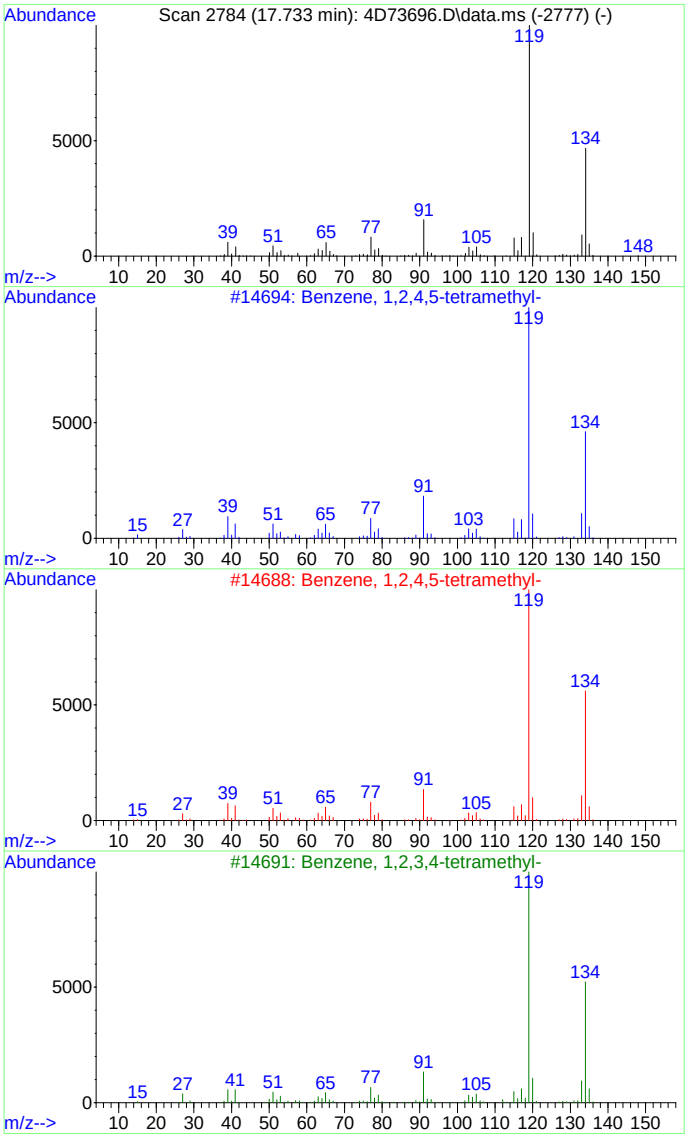
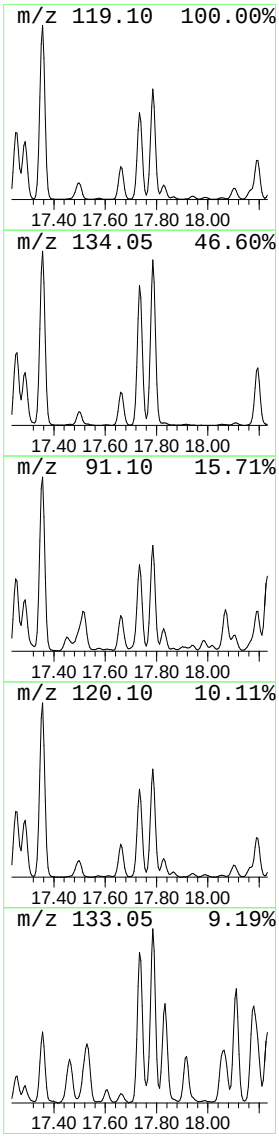
Peak Number 13 C4 alkyl benzene Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.733	96.94 ug/L	1867220	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	96
2	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	95
3	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	95
4	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	95
5	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	95





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Sample : jc30522-5
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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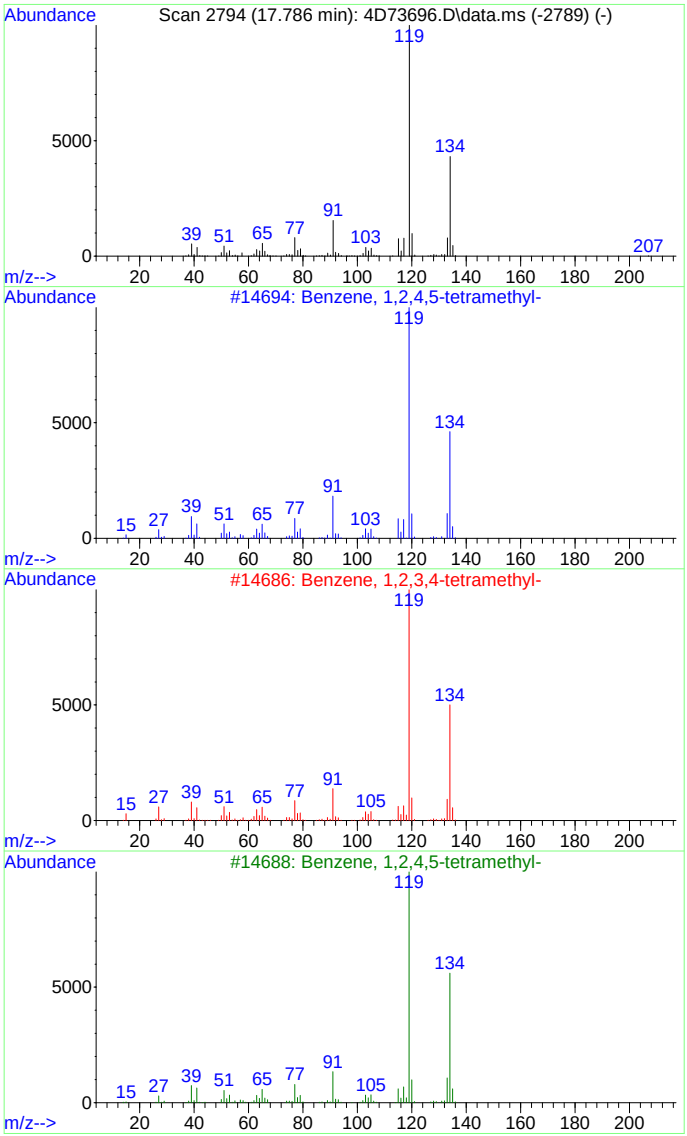
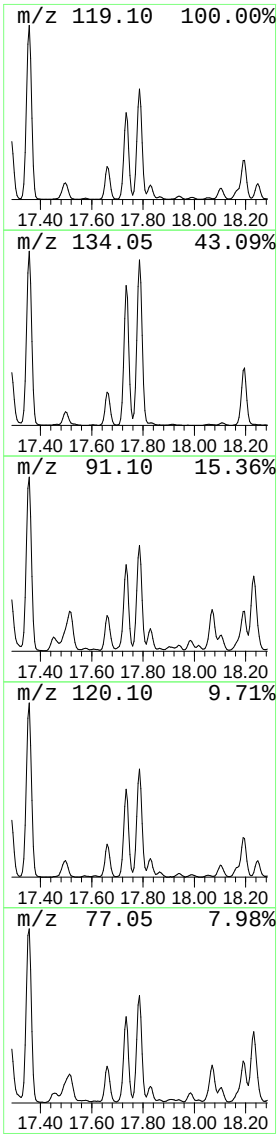
Peak Number 14 C4 alkyl benzene Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.786	117.50 ug/L	2263180	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	97
2	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	95
3	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	94
4	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	94
5	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	94





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Sample : jc30522-5
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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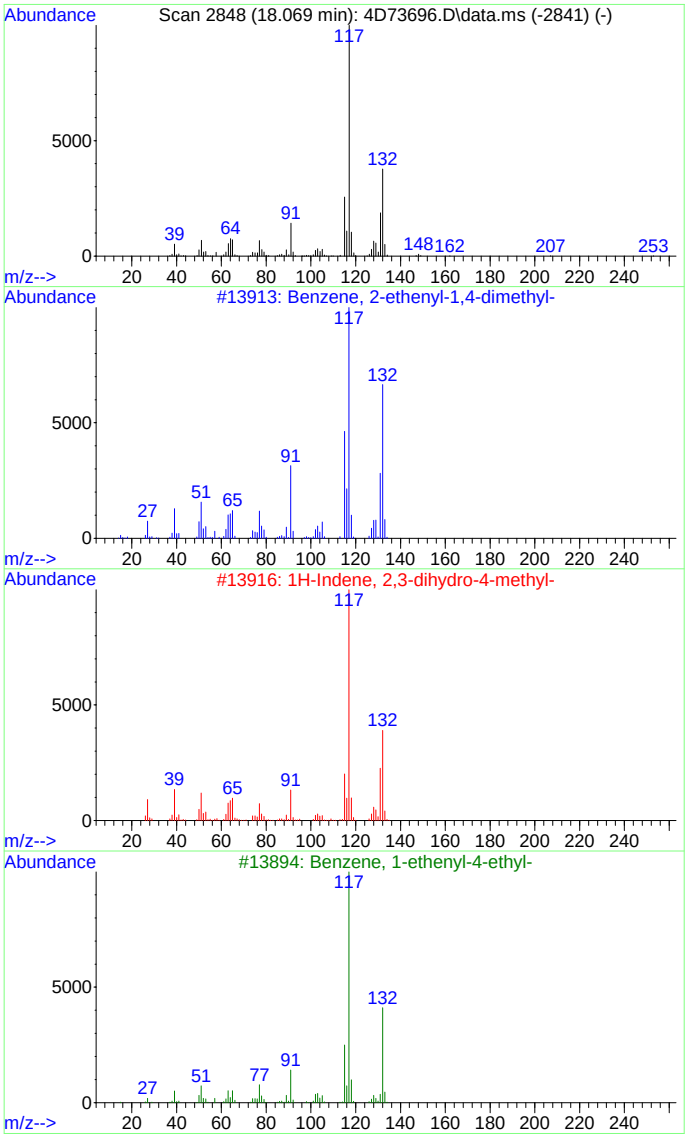
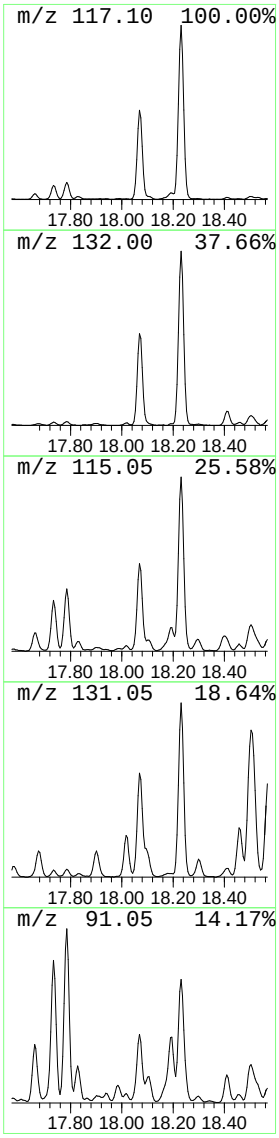
Peak Number 15 1H-Indene-dihydro-methyl- i... Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.069	64.42 ug/L	1240880	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 2-ethenyl-1,4-dimethyl-	132	C10H12	002039-89-6	96
2	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	95
3	Benzene, 1-ethenyl-4-ethyl-	132	C10H12	003454-07-7	90
4	Indan, 1-methyl-	132	C10H12	000767-58-8	90
5	Benzene, 1-ethenyl-3-ethyl-	132	C10H12	007525-62-4	90





Library Search Compound Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73696.D
Acq On : 8 Nov 2016 12:55 pm
Operator : XimenaC
Sample : jc30522-5
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

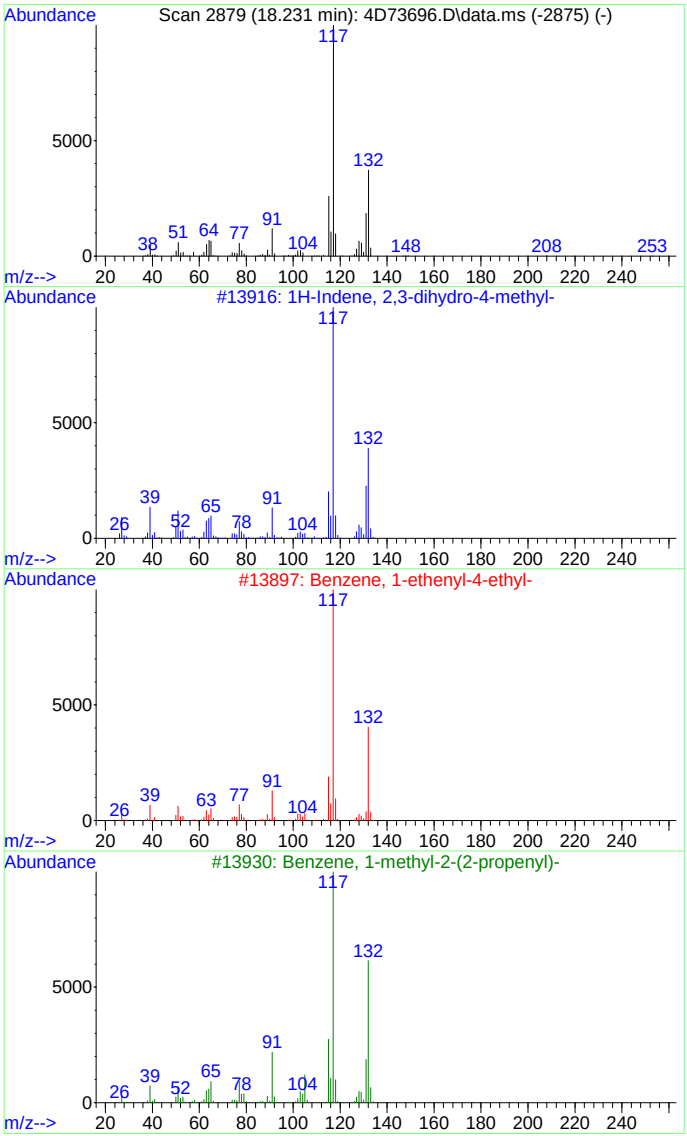
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

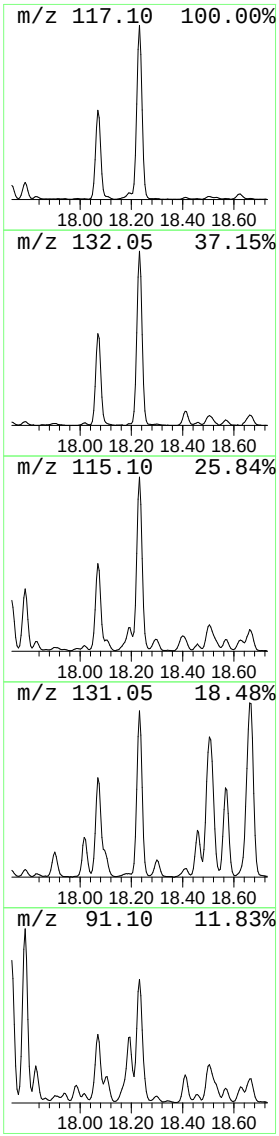
****

Peak Number 16 1H-Indene-dihydro-methyl- i... Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.232	121.01 ug/L	2330860	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	94
2	Benzene, 1-ethenyl-4-ethyl-	132	C10H12	003454-07-7	87
3	Benzene, 1-methyl-2-(2-propenyl)-	132	C10H12	001587-04-8	87
4	Indan, 1-methyl-	132	C10H12	000767-58-8	87
5	1H-Indene, 2,3-dihydro-2-methyl-	132	C10H12	000824-63-5	86





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73696.D
Acq On : 8 Nov 2016 12:55 pm
Operator : XimenaC
Sample : jc30522-5
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
system artifact	3.268	555.9	ug/L	10133600	2	10.005	911481	50.0
C3 alkyl benzene	15.846	72.6	ug/L	1398500	5	16.706	963075	50.0
C3 alkyl benzene	15.877	90.4	ug/L	1741780	5	16.706	963075	50.0
Benzene, 1,3,5-...	15.930	104.6	ug/L	2014450	5	16.706	963075	50.0
C3 alkyl benzene	16.160	168.6	ug/L	3247210	5	16.706	963075	50.0
Benzene, 1,2,4-...	16.323	452.1	ug/L	8708620	5	16.706	963075	50.0
C3 alkyl benzene	16.758	176.9	ug/L	3406590	5	16.706	963075	50.0
C4 alkyl benzene	16.900	90.3	ug/L	1739790	5	16.706	963075	50.0
C3 alkyl benzene	16.984	204.7	ug/L	3942670	5	16.706	963075	50.0
C4 alkyl benzene	17.251	78.9	ug/L	1520060	5	16.706	963075	50.0
C4 alkyl benzene	17.356	173.9	ug/L	3350470	5	16.706	963075	50.0
1H-Indene-dihyd...	17.513	73.6	ug/L	1416950	5	16.706	963075	50.0
C4 alkyl benzene	17.733	96.9	ug/L	1867220	5	16.706	963075	50.0
C4 alkyl benzene	17.786	117.5	ug/L	2263180	5	16.706	963075	50.0
1H-Indene-dihyd...	18.069	64.4	ug/L	1240880	5	16.706	963075	50.0
1H-Indene-dihyd...	18.232	121.0	ug/L	2330860	5	16.706	963075	50.0

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73695.D
Acq On : 8 Nov 2016 12:28 pm
Operator : XimenaC
Sample : jc30522-6
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Time: Nov 09 15:24:42 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um
QLast Update : Wed Sep 14 10:25:10 2016
Response via : Initial Calibration

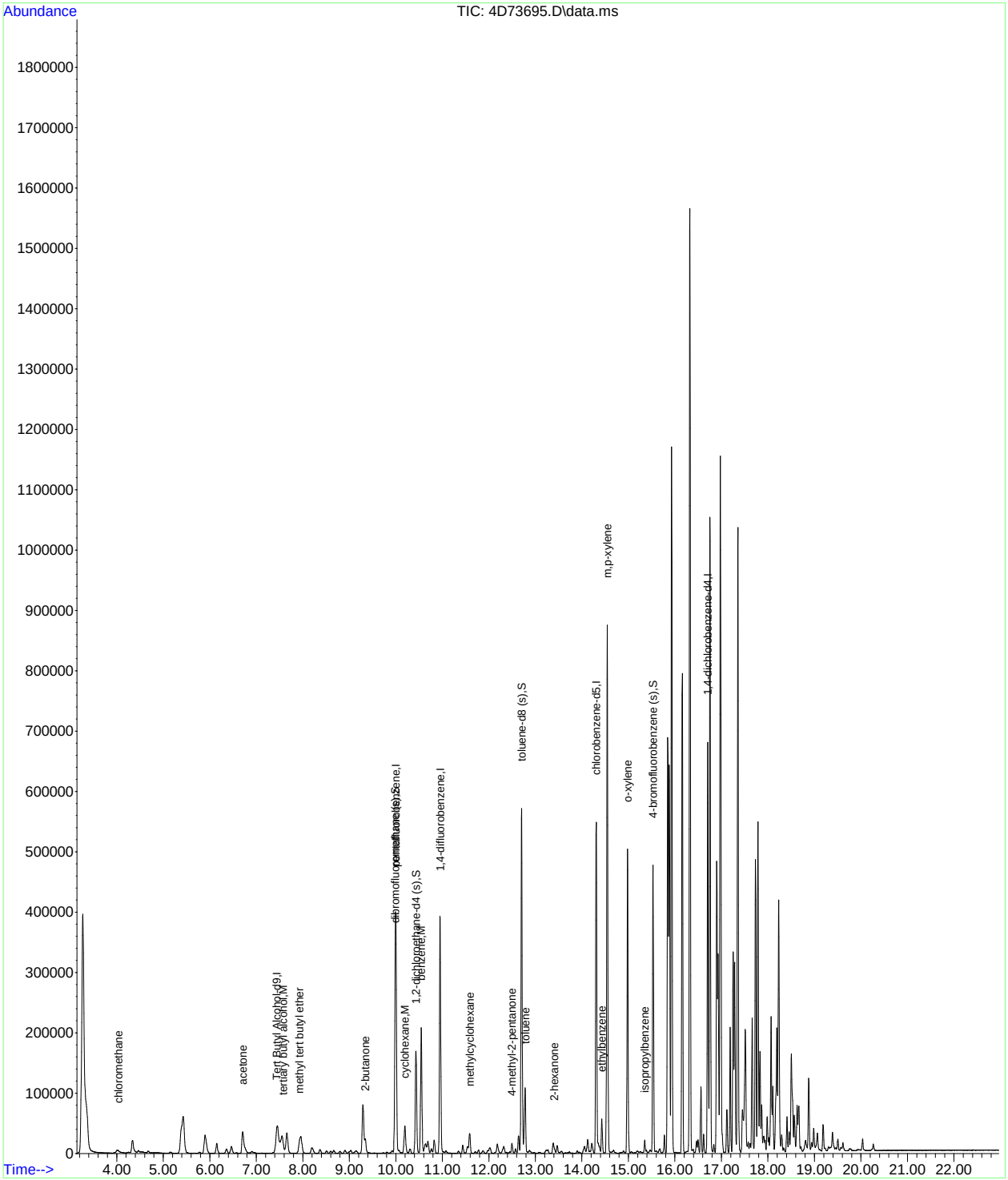
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.441	65	98765	500.00	ug/L	-0.01
4) pentafluorobenzene	10.000	168	221848	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.954	114	326149	50.00	ug/L	0.00
86) chlorobenzene-d5	14.310	117	301376	50.00	ug/L	0.00
101) 1,4-dichlorobenzene-d4	16.706	152	161446	50.00	ug/L	0.00
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.984	113	111999	49.08	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 98.16%			
49) 1,2-dichloroethane-d4 (s)	10.435	65	116619	50.11	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 100.22%			
78) toluene-d8 (s)	12.705	98	382874	49.64	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.28%			
103) 4-bromofluorobenzene (s)	15.531	95	150859	50.02	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 100.04%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.578	59	4554	15.70	ug/L #	1
9) chloromethane	4.033	50	1553	0.36	ug/L	86
22) acetone	6.707	58	21918	90.45	ug/L	95
31) methyl tert butyl ether	7.929	73	28733	3.94	ug/L	83
35) 2-butanone	9.345	72	7782	24.78	ug/L	89
57) cyclohexane	10.194	84	17117	4.69	ug/L #	38
62) benzene	10.545	78	192962	18.82	ug/L	99
73) methylcyclohexane	11.589	83	13611	3.14	ug/L	99
79) 4-methyl-2-pentanone	12.496	58	4695	4.34	ug/L #	57
80) toluene	12.784	92	41142	6.47	ug/L	97
85) 2-hexanone	13.408	58	2337	2.33	ug/L #	73
95) ethylbenzene	14.430	91	39253	3.21	ug/L	100
96) m,p-xylene	14.546	106	250321	54.68	ug/L	97
97) o-xylene	14.981	91	287670	28.85	ug/L	100
102) isopropylbenzene	15.353	105	13446	1.09	ug/L	99

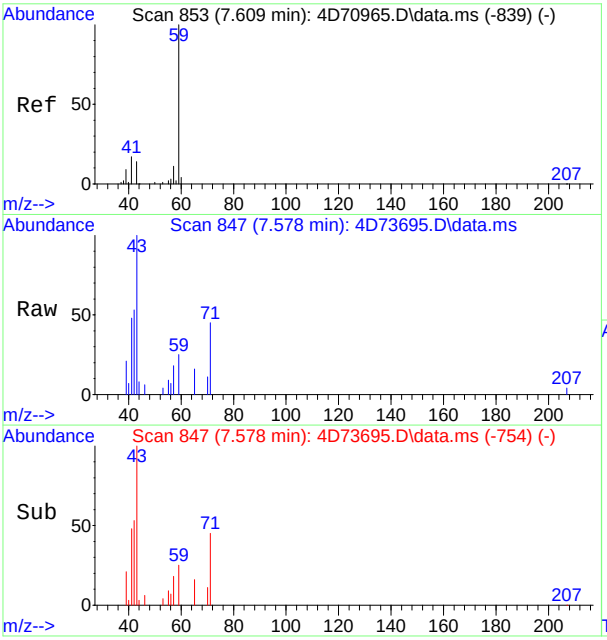
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73695.D
Acq On : 8 Nov 2016 12:28 pm
Operator : XimenaC
Sample : jc30522-6
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Time: Nov 09 15:24:42 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um
QLast Update : Wed Sep 14 10:25:10 2016
Response via : Initial Calibration

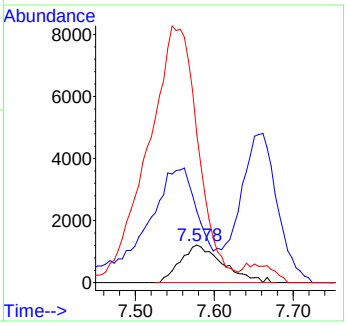


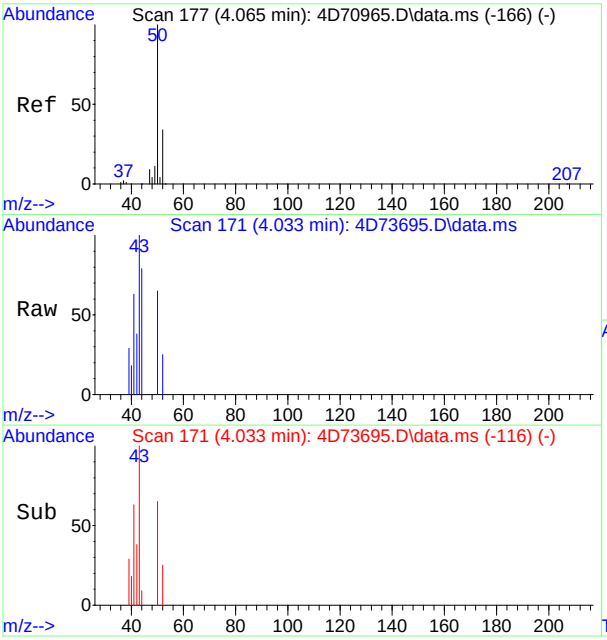


#3
tertiary butyl alcohol
Concen: 15.70 ug/L
RT: 7.578 min Scan# 847
Delta R.T. -0.011 min
Lab File: 4D73695.D
Acq: 8 Nov 2016 12:28 pm

Tgt Ion: 59 Resp: 4554

Ion	Ratio	Lower	Upper
59	100		
41	3.5	0.0	53.7
43	363.3	0.0	45.8#

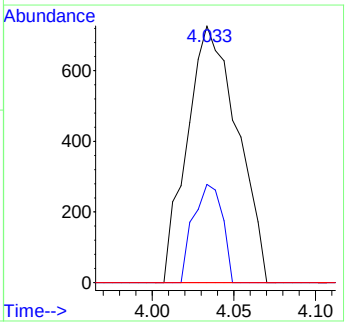


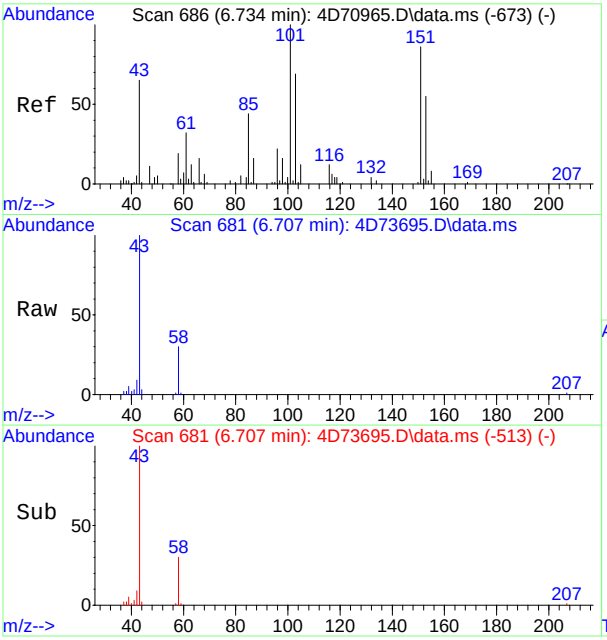


#9
chloromethane
Concen: 0.36 ug/L
RT: 4.033 min Scan# 171
Delta R.T. -0.014 min
Lab File: 4D73695.D
Acq: 8 Nov 2016 12:28 pm

Tgt Ion: 50 Resp: 1553

Ion	Ratio	Lower	Upper
50	100		
52	38.2	2.8	62.8
49	0.0	0.0	40.2

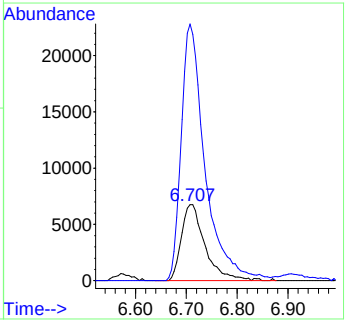


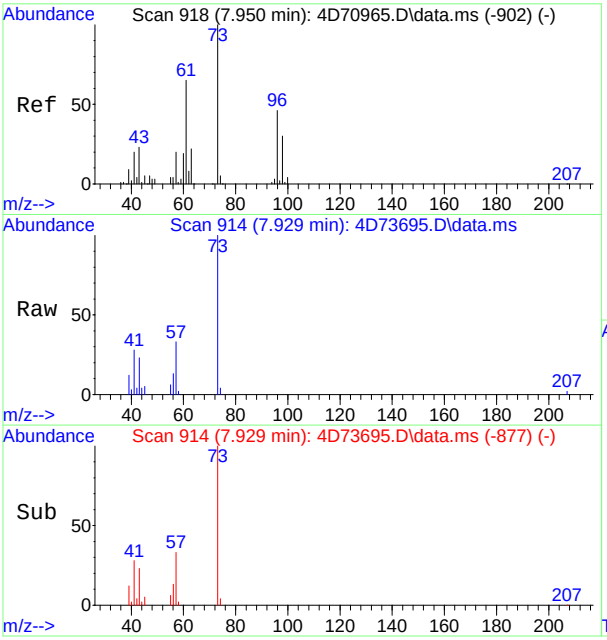


#22
acetone
Concen: 90.45 ug/L
RT: 6.707 min Scan# 681
Delta R.T. -0.020 min
Lab File: 4D73695.D
Acq: 8 Nov 2016 12:28 pm

Tgt Ion: 58 Resp: 21918

Ion	Ratio	Lower	Upper
58	100		
43	337.9	297.2	357.2

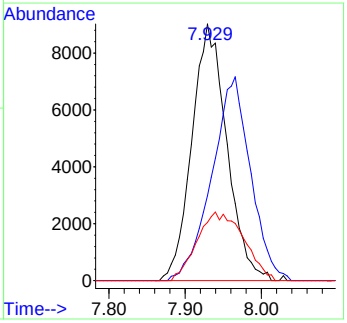


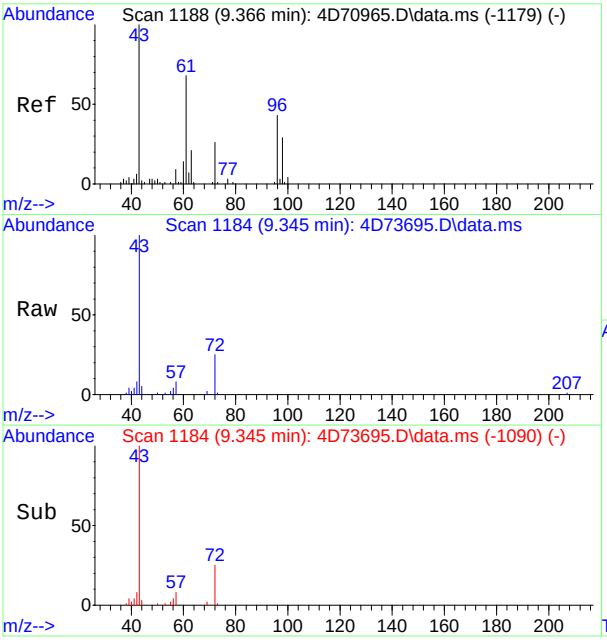


#31
methyl tert butyl ether
Concen: 3.94 ug/L
RT: 7.929 min Scan# 914
Delta R.T. -0.008 min
Lab File: 4D73695.D
Acq: 8 Nov 2016 12:28 pm

Tgt Ion: 73 Resp: 28733

Ion	Ratio	Lower	Upper
73	100		
57	33.0	0.0	51.4
43	22.7	0.0	49.3

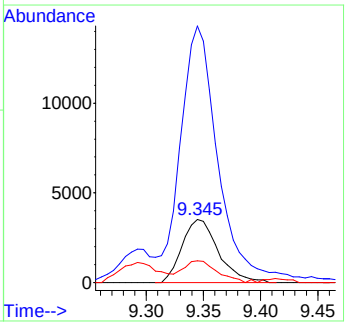


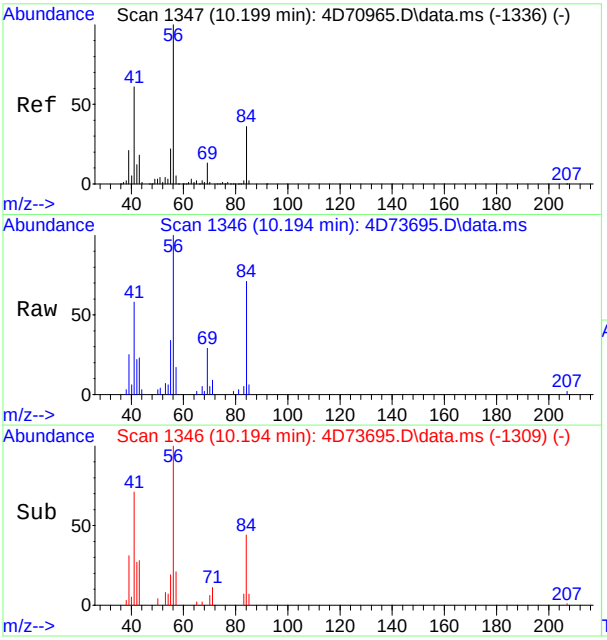


#35
2-butanone
Concen: 24.78 ug/L
RT: 9.345 min Scan# 1184
Delta R.T. -0.006 min
Lab File: 4D73695.D
Acq: 8 Nov 2016 12:28 pm

Tgt Ion: 72 Resp: 7782

Ion	Ratio	Lower	Upper
72	100		
43	390.0	388.1	448.1
57	28.0	2.1	62.1

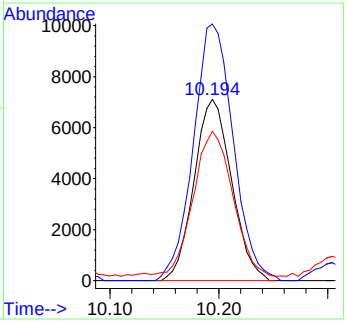


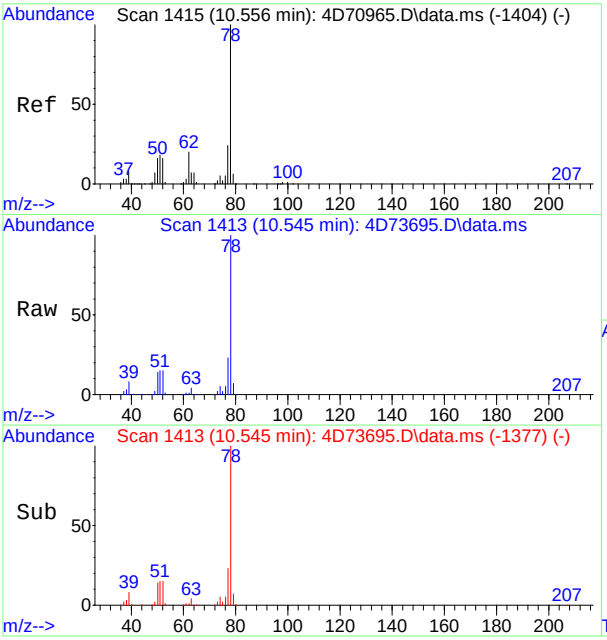


#57
cyclohexane
Concen: 4.69 ug/L
RT: 10.194 min Scan# 1346
Delta R.T. -0.006 min
Lab File: 4D73695.D
Acq: 8 Nov 2016 12:28 pm

Tgt Ion: 84 Resp: 17117

Ion	Ratio	Lower	Upper
84	100		
56	141.8	230.1	290.1#
41	80.1	118.6	178.6#

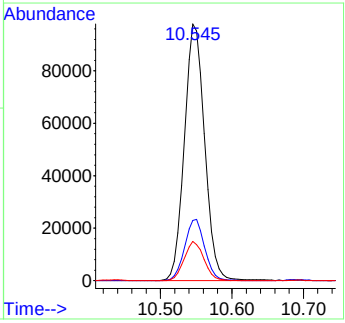


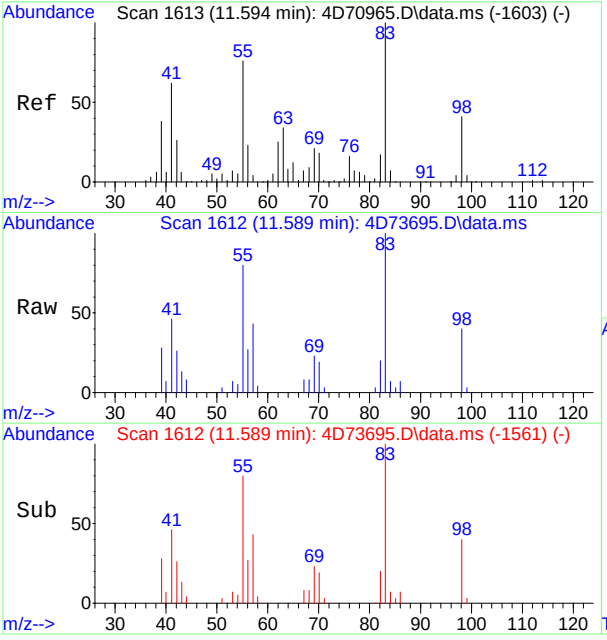


#62
benzene
Concen: 18.82 ug/L
RT: 10.545 min Scan# 1413
Delta R.T. -0.010 min
Lab File: 4D73695.D
Acq: 8 Nov 2016 12:28 pm

Tgt Ion: 78 Resp: 192962

Ion	Ratio	Lower	Upper
78	100		
77	23.5	0.0	53.6
52	15.3	0.0	45.7

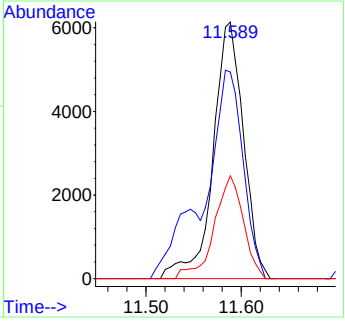


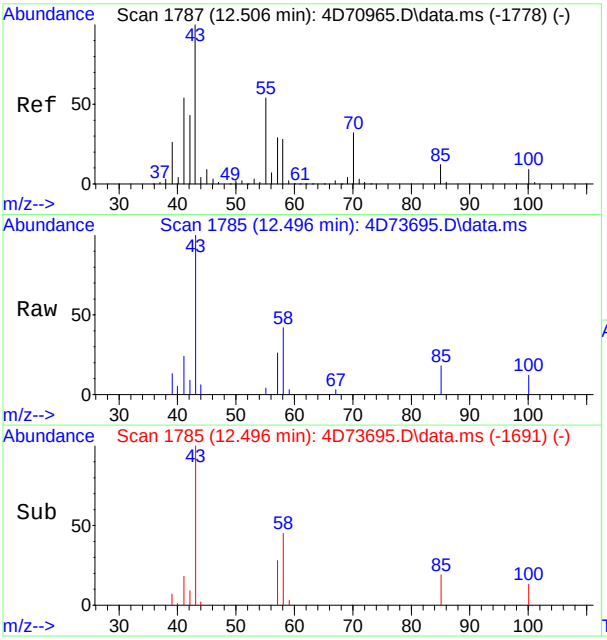


#73
methylcyclohexane
Concen: 3.14 ug/L
RT: 11.589 min Scan# 1612
Delta R.T. -0.034 min
Lab File: 4D73695.D
Acq: 8 Nov 2016 12:28 pm

Tgt Ion: 83 Resp: 13611

Ion	Ratio	Lower	Upper
83	100		
55	80.5	51.3	111.3
98	40.0	10.1	70.1

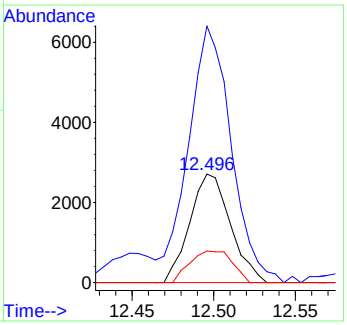


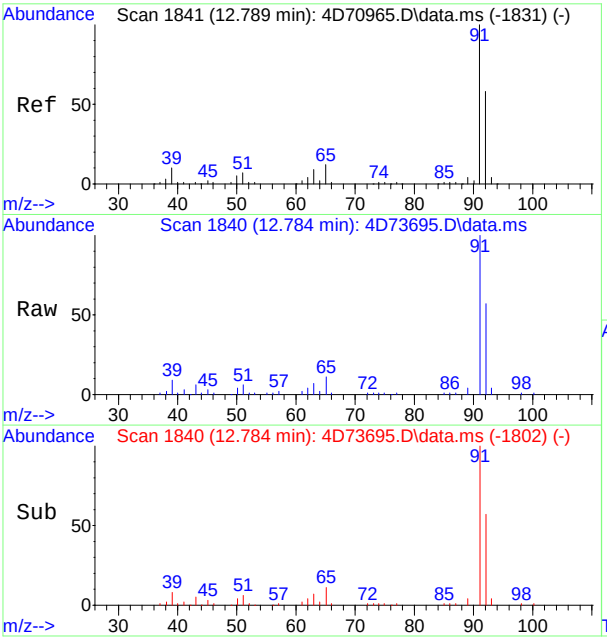


#79
4-methyl-2-pentanone
Concen: 4.34 ug/L
RT: 12.496 min Scan# 1785
Delta R.T. -0.006 min
Lab File: 4D73695.D
Acq: 8 Nov 2016 12:28 pm

Tgt Ion: 58 Resp: 4695

Ion	Ratio	Lower	Upper
58	100		
43	228.3	294.6	354.6#
100	29.0	0.0	60.0

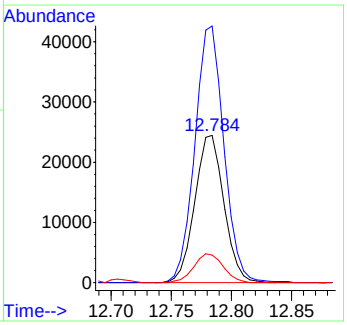


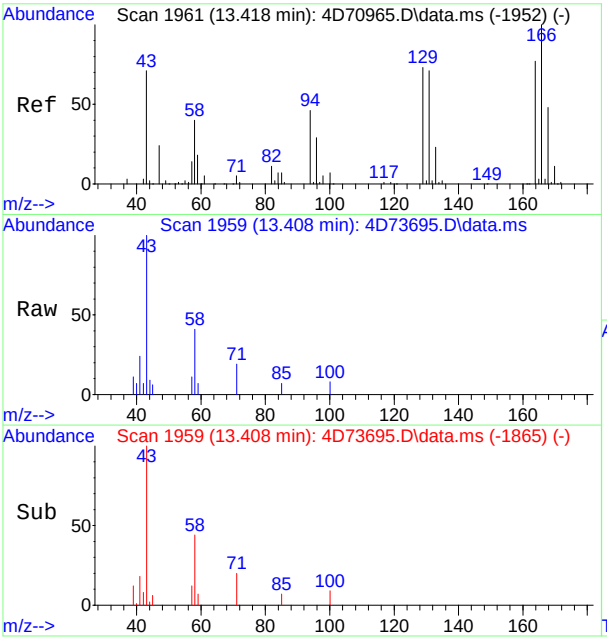


#80
toluene
Concen: 6.47 ug/L
RT: 12.784 min Scan# 1840
Delta R.T. -0.001 min
Lab File: 4D73695.D
Acq: 8 Nov 2016 12:28 pm

Tgt Ion: 92 Resp: 41142

Ion	Ratio	Lower	Upper
92	100		
91	174.4	140.6	200.6
65	18.8	0.0	49.1

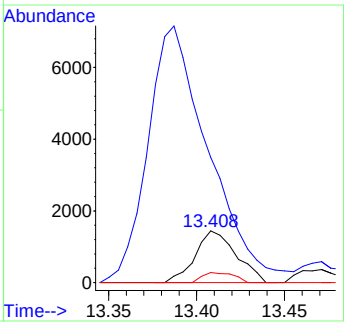


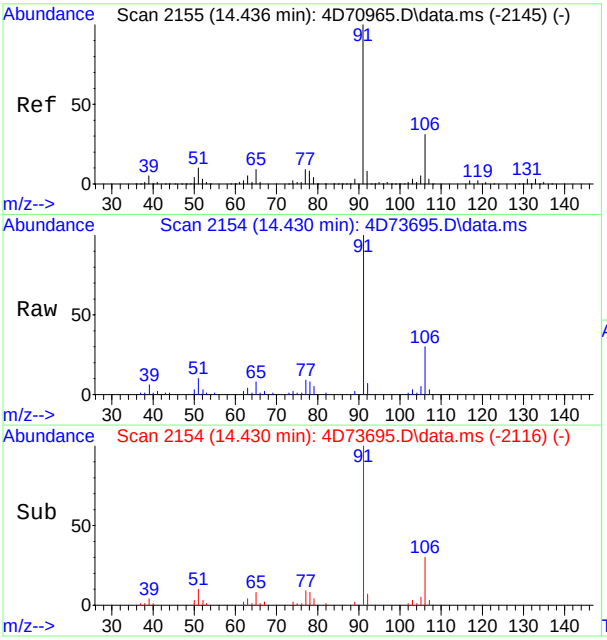


#85
2-hexanone
Concen: 2.33 ug/L
RT: 13.408 min Scan# 1959
Delta R.T. -0.006 min
Lab File: 4D73695.D
Acq: 8 Nov 2016 12:28 pm

Tgt Ion: 58 Resp: 2337

Ion	Ratio	Lower	Upper
58	100		
43	217.5	147.0	207.0#
100	19.5	0.0	47.0

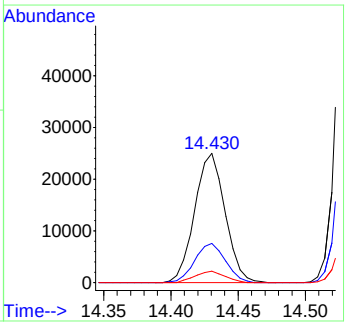


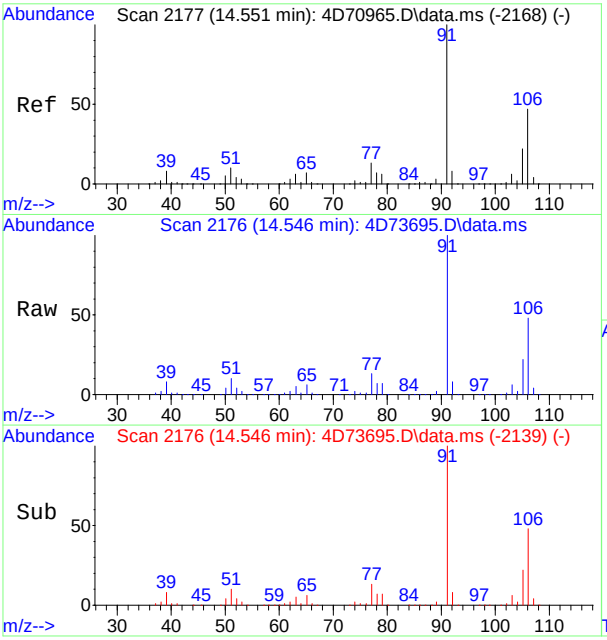


#95
ethylbenzene
Concen: 3.21 ug/L
RT: 14.430 min Scan# 2154
Delta R.T. -0.002 min
Lab File: 4D73695.D
Acq: 8 Nov 2016 12:28 pm

Tgt Ion: 91 Resp: 39253

Ion	Ratio	Lower	Upper
91	100		
106	30.4	0.5	60.5
77	8.8	0.0	38.4

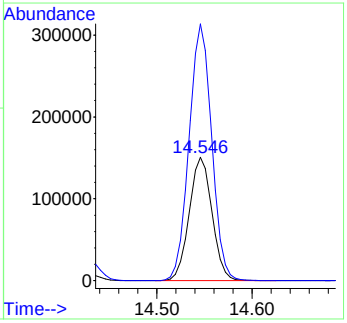


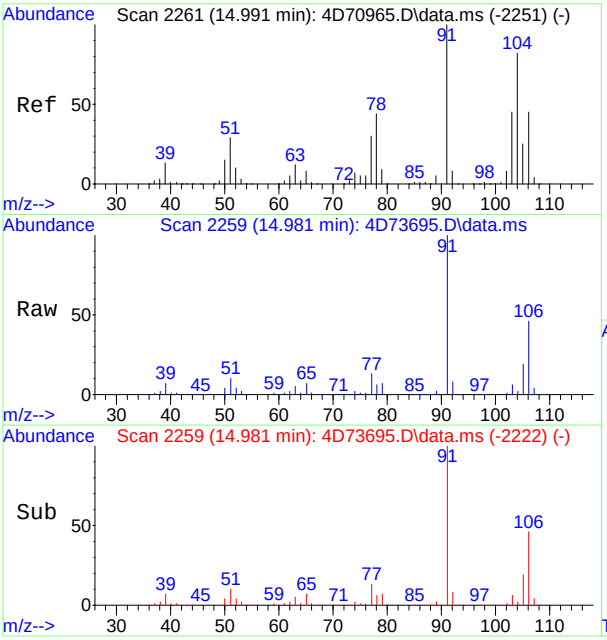


#96
m,p-xylene
Concen: 54.68 ug/L
RT: 14.546 min Scan# 2176
Delta R.T. -0.005 min
Lab File: 4D73695.D
Acq: 8 Nov 2016 12:28 pm

Tgt Ion:106 Resp: 250321

Ion	Ratio	Lower	Upper
106	100		
91	208.0	173.4	233.4

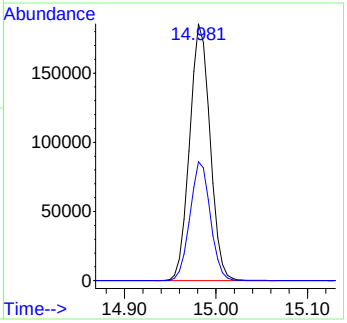


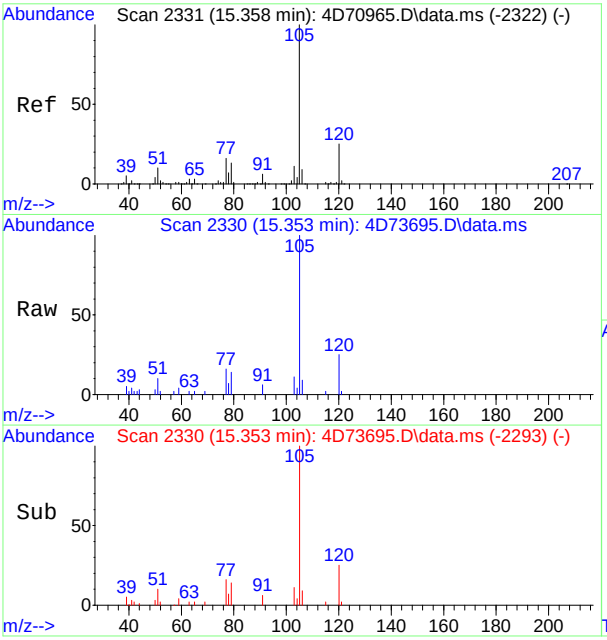


#97
o-xylene
Concen: 28.85 ug/L
RT: 14.981 min Scan# 2259
Delta R.T. -0.005 min
Lab File: 4D73695.D
Acq: 8 Nov 2016 12:28 pm

Tgt Ion: 91 Resp: 287670

Ion	Ratio	Lower	Upper
91	100		
106	46.3	16.4	76.4

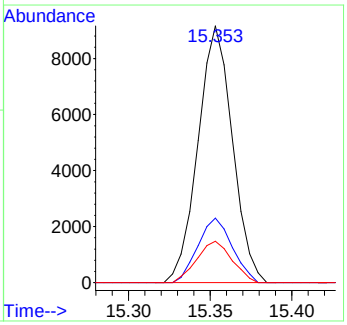




#102
isopropylbenzene
Concen: 1.09 ug/L
RT: 15.353 min Scan# 2330
Delta R.T. -0.005 min
Lab File: 4D73695.D
Acq: 8 Nov 2016 12:28 pm

Tgt Ion:105 Resp: 13446

Ion	Ratio	Lower	Upper
105	100		
120	25.2	0.0	55.5
77	16.1	0.0	45.2



LSC Area Percent Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73695.D
Acq On : 8 Nov 2016 12:28 pm
Operator : XimenaC
Sample : jc30522-6
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 37 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.5 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

Signal : TIC: 4D73695.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.273	3	26	67	rBV	395965	1695430	73.71%	5.072%
2	4.338	219	229	244	rVV	20130	57309	2.49%	0.171%
3	5.428	417	437	453	rBV	60831	295362	12.84%	0.884%
4	5.900	516	527	544	rBV4	30180	103166	4.49%	0.309%
5	6.152	566	575	584	rBV2	16356	38652	1.68%	0.116%
6	6.361	606	615	624	rBV	6984	16808	0.73%	0.050%
7	6.466	626	635	648	rVB2	11393	29034	1.26%	0.087%
8	6.707	671	681	704	rBV	35612	120294	5.23%	0.360%
9	7.452	808	823	833	rVV2	45353	191550	8.33%	0.573%
10	7.552	835	842	853	rVV4	28384	106262	4.62%	0.318%
11	7.656	853	862	875	rVB2	33404	101251	4.40%	0.303%
12	7.955	901	919	935	rBV4	28021	121698	5.29%	0.364%
13	8.191	955	964	979	rVB6	8727	30788	1.34%	0.092%
14	9.292	1162	1174	1181	rBV	80444	204124	8.87%	0.611%
15	9.345	1181	1184	1194	rVV	23690	45061	1.96%	0.135%
16	9.995	1298	1308	1320	rVV2	399554	950263	41.32%	2.843%
17	10.194	1336	1346	1358	rVB2	44548	110861	4.82%	0.332%
18	10.435	1380	1392	1404	rBV	169046	358100	15.57%	1.071%
19	10.545	1404	1413	1423	rVV	207697	405911	17.65%	1.214%
20	10.640	1423	1431	1436	rVV3	15172	46366	2.02%	0.139%
21	10.692	1436	1441	1449	rVV3	19636	42850	1.86%	0.128%
22	10.823	1460	1466	1475	rVB	21461	44510	1.94%	0.133%
23	10.949	1482	1490	1503	rBV	392817	726758	31.60%	2.174%
24	11.442	1576	1584	1591	rBV	13287	25668	1.12%	0.077%
25	11.542	1594	1603	1606	rVV5	10993	24313	1.06%	0.073%
26	11.589	1606	1612	1623	rVB2	32867	69952	3.04%	0.209%
27	12.024	1688	1695	1704	rVB4	8921	24925	1.08%	0.075%
28	12.181	1710	1725	1737	rBV2	15249	39733	1.73%	0.119%
29	12.323	1740	1752	1759	rVV3	11258	30228	1.31%	0.090%
30	12.496	1780	1785	1794	rVB	16496	29717	1.29%	0.089%
31	12.637	1806	1812	1817	rVV	28101	48335	2.10%	0.145%
32	12.705	1817	1825	1832	rVV	570561	988062	42.96%	2.956%
33	12.779	1832	1839	1848	rVV2	107561	213857	9.30%	0.640%
34	13.387	1946	1955	1965	rBV3	16861	42954	1.87%	0.129%
35	13.471	1965	1971	1980	rVV2	12628	25358	1.10%	0.076%
36	14.058	2073	2083	2088	rBV2	11630	29673	1.29%	0.089%
37	14.126	2088	2096	2101	rVB2	20572	38234	1.66%	0.114%
38	14.215	2107	2113	2123	rVB2	16275	36463	1.59%	0.109%
39	14.310	2123	2131	2143	rBV	548417	916880	39.86%	2.743%
40	14.430	2148	2154	2163	rVB	56945	92578	4.03%	0.277%
41	14.546	2167	2176	2188	rBV	874435	1445185	62.83%	4.324%
42	14.981	2251	2259	2271	rVV	503868	782965	34.04%	2.342%
43	15.353	2324	2330	2335	rBV	20810	31098	1.35%	0.093%
44	15.531	2357	2364	2372	rVV	476587	712986	31.00%	2.133%
45	15.773	2399	2410	2416	rBV	29820	47533	2.07%	0.142%

LSC Area Percent Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73695.D
Acq On : 8 Nov 2016 12:28 pm
Operator : XimenaC
Sample : jc30522-6
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 37 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.5 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

46	15.846	2416	2424	2427	rVV	688503	1030178	44.79%	3.082%
47	15.877	2427	2430	2435	rVV	643032	944413	41.06%	2.825%
48	15.930	2435	2440	2451	rVV	1170008	1689188	73.44%	5.054%
49	16.161	2476	2484	2493	rVB	794934	1180311	51.32%	3.531%
50	16.323	2507	2515	2525	rVV	1565108	2300042	100.00%	6.881%
51	16.465	2533	2542	2545	rVV	19553	30448	1.32%	0.091%
52	16.501	2545	2549	2554	rVV	21431	32306	1.40%	0.097%
53	16.559	2554	2560	2566	rVV	109378	159489	6.93%	0.477%
54	16.617	2566	2571	2581	rVB	31178	45279	1.97%	0.135%
55	16.706	2581	2588	2593	rBV	680478	988121	42.96%	2.956%
56	16.753	2593	2597	2608	rVV	1053116	1520690	66.12%	4.550%
57	16.837	2608	2613	2618	rVV	13473	19532	0.85%	0.058%
58	16.900	2618	2625	2628	rVV	482871	703704	30.60%	2.105%
59	16.926	2628	2630	2635	rVV	329989	449816	19.56%	1.346%
60	16.979	2635	2640	2654	rVB3	1154480	1882439	81.84%	5.632%
61	17.115	2660	2666	2674	rBV	70498	104680	4.55%	0.313%
62	17.188	2674	2680	2686	rBV	207355	287870	12.52%	0.861%
63	17.251	2686	2692	2695	rVV	331868	468376	20.36%	1.401%
64	17.288	2695	2699	2705	rVV	314494	471432	20.50%	1.410%
65	17.356	2705	2712	2724	rVB	1035513	1475759	64.16%	4.415%
66	17.450	2724	2730	2735	rBV3	70659	155248	6.75%	0.464%
67	17.513	2735	2742	2750	rVV2	203033	432129	18.79%	1.293%
68	17.576	2750	2754	2757	rVV2	16080	24945	1.08%	0.075%
69	17.618	2757	2762	2765	rVV4	13797	25136	1.09%	0.075%
70	17.660	2765	2770	2777	rVV	221329	316985	13.78%	0.948%
71	17.734	2777	2784	2789	rVV	484115	687914	29.91%	2.058%
72	17.786	2789	2794	2799	rVV	546419	768468	33.41%	2.299%
73	17.828	2799	2802	2806	rVV2	165685	229704	9.99%	0.687%
74	17.865	2806	2809	2813	rVV	77347	105124	4.57%	0.315%
75	17.912	2813	2818	2821	rVV4	25146	51305	2.23%	0.153%
76	17.938	2821	2823	2827	rVV	18495	23116	1.01%	0.069%
77	17.985	2827	2832	2836	rVV2	57123	86362	3.75%	0.258%
78	18.017	2836	2838	2841	rVV	22945	26710	1.16%	0.080%
79	18.069	2841	2848	2852	rVV2	223212	373508	16.24%	1.117%
80	18.106	2852	2855	2861	rVV2	107578	149795	6.51%	0.448%
81	18.190	2861	2871	2875	rVV2	204237	437916	19.04%	1.310%
82	18.232	2875	2879	2887	rVV2	415700	686726	29.86%	2.055%
83	18.295	2887	2891	2897	rVV2	26515	41010	1.78%	0.123%
84	18.410	2907	2913	2918	rBV2	58033	86878	3.78%	0.260%
85	18.457	2918	2922	2925	rVV2	31258	46693	2.03%	0.140%
86	18.504	2925	2931	2940	rVV2	160481	385087	16.74%	1.152%
87	18.567	2940	2943	2949	rVV	58543	88714	3.86%	0.265%
88	18.625	2949	2954	2958	rVV2	74890	131272	5.71%	0.393%
89	18.662	2958	2961	2967	rVV	73433	121748	5.29%	0.364%
90	18.814	2977	2990	2996	rBV5	18075	51208	2.23%	0.153%
91	18.877	2996	3002	3009	rVV	119102	181547	7.89%	0.543%
92	18.939	3009	3014	3018	rVV3	12403	22364	0.97%	0.067%
93	18.981	3018	3022	3028	rVV	35880	60572	2.63%	0.181%

LSC Area Percent Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73695.D
Acq On : 8 Nov 2016 12:28 pm
Operator : XimenaC
Sample : jc30522-6
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 37 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.5 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

94	19.060	3028	3037	3045	rVB2	27834	58173	2.53%	0.174%
95	19.186	3055	3061	3067	rBV	44208	72085	3.13%	0.216%
96	19.390	3093	3100	3109	rVV	30826	67109	2.92%	0.201%
97	19.506	3116	3122	3127	rVV2	19385	32697	1.42%	0.098%
98	19.611	3138	3142	3154	rVB2	13542	24579	1.07%	0.074%
99	20.035	3217	3223	3230	rBV	19152	29402	1.28%	0.088%
100	20.266	3259	3267	3275	rVB2	10869	19534	0.85%	0.058%

Sum of corrected areas: 33424941

LSC Report - Integrated Chromatogram

```
Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73695.D
Acq On    :  8 Nov 2016  12:28 pm
Operator  : XimenaC
Sample    : jc30522-6
Misc      : MS8838,V4D3202,5,,,,1
ALS Vial  : 37   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title  : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library   : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p
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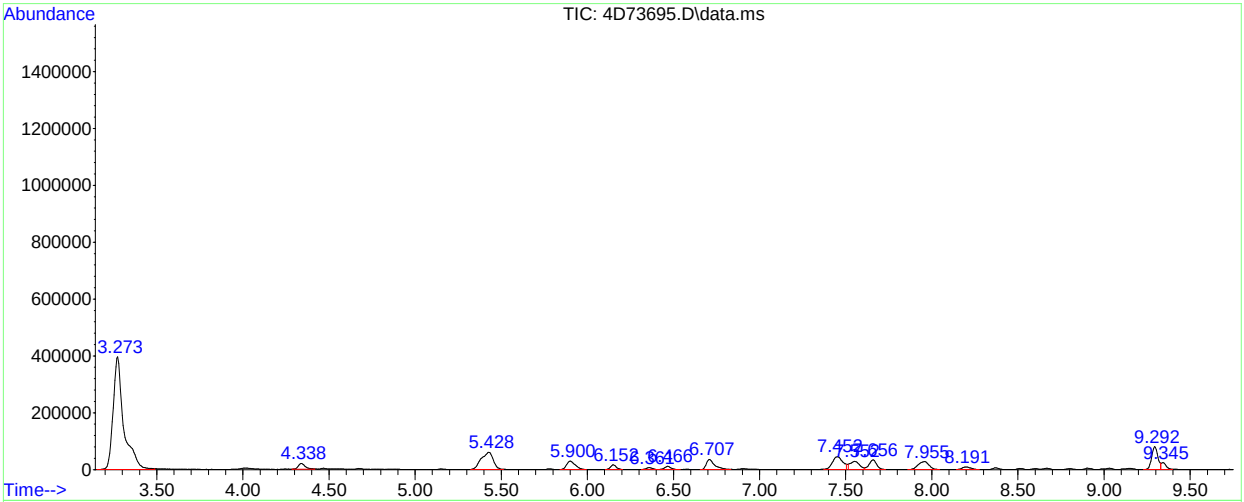
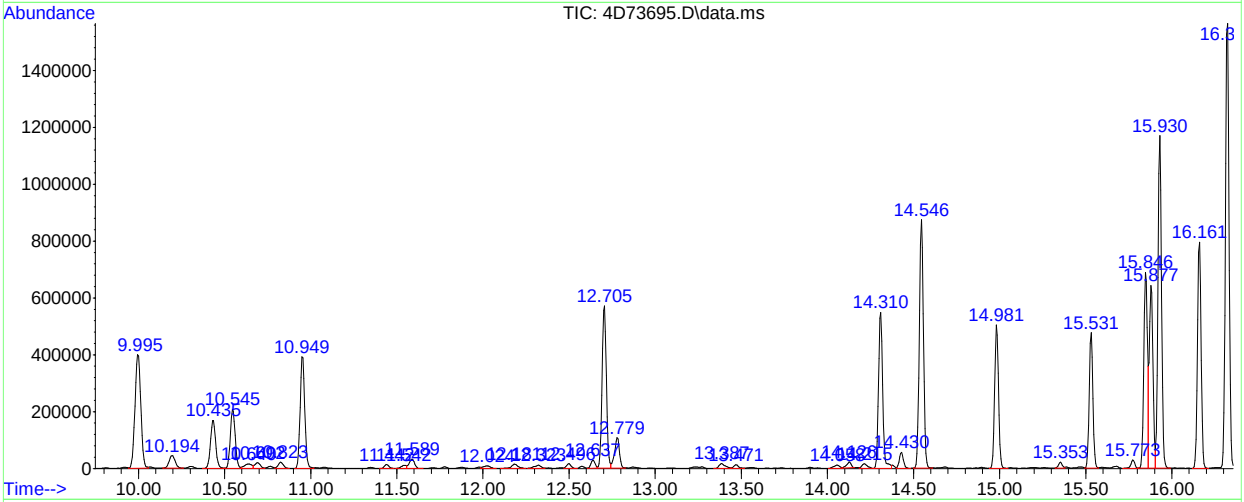
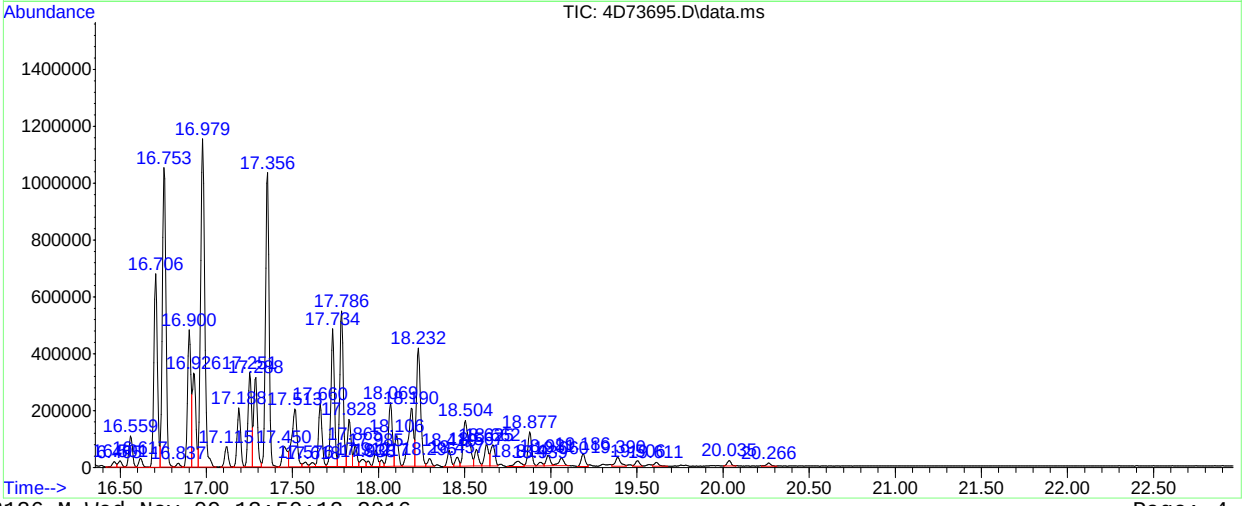






SGS ACCUTEST JC30522

Library Search Compound Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73695.D
Acq On : 8 Nov 2016 12:28 pm
Operator : XimenaC
Sample : jc30522-6
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

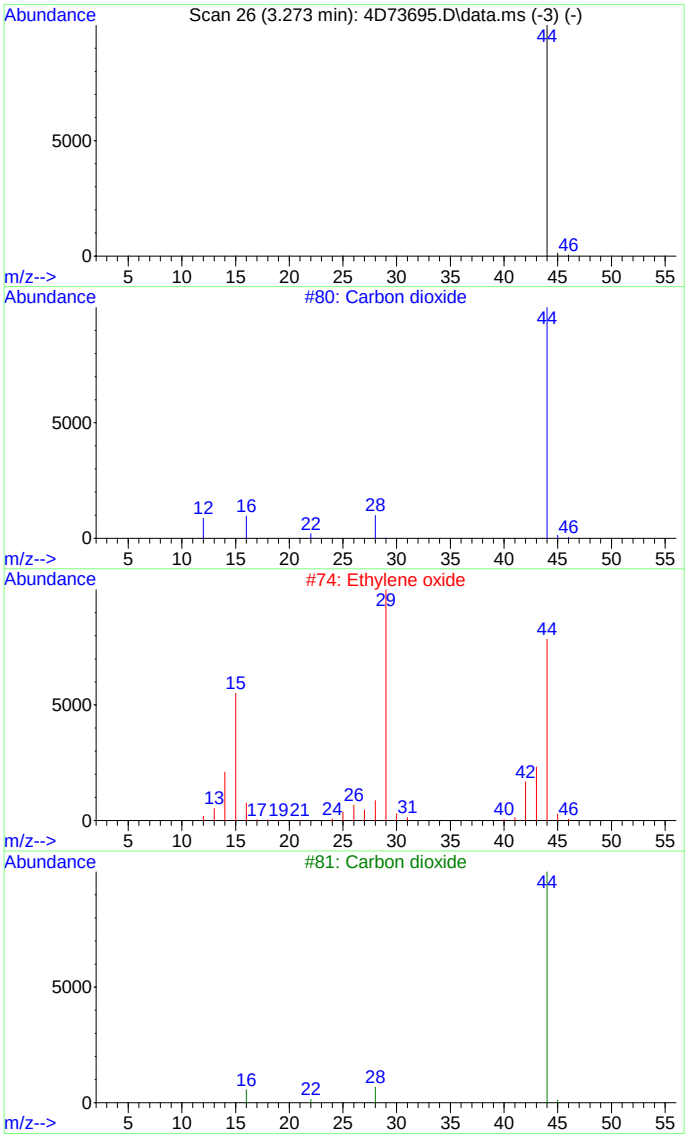
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

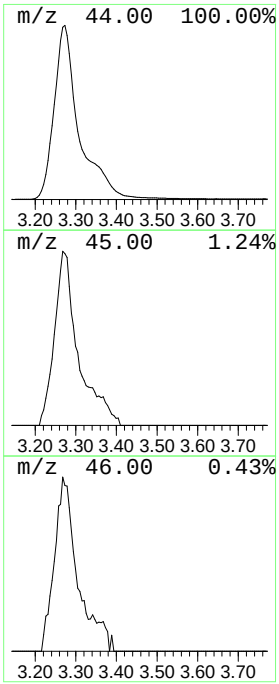
****

Peak Number 1 system artifact Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.273	89.21 ug/L	1695430	pentafluorobenzene	10.000

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Ethylene oxide	44	C2H4O	000075-21-8	3
3	Carbon dioxide	44	CO2	000124-38-9	3
4	Nitrous Oxide	44	N2O	010024-97-2	3
5	Nitrous Oxide	44	N2O	010024-97-2	3





SGS ACCUTEST JC30522

Library Search Compound Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73695.D
Acq On : 8 Nov 2016 12:28 pm
Operator : XimenaC
Sample : jc30522-6
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

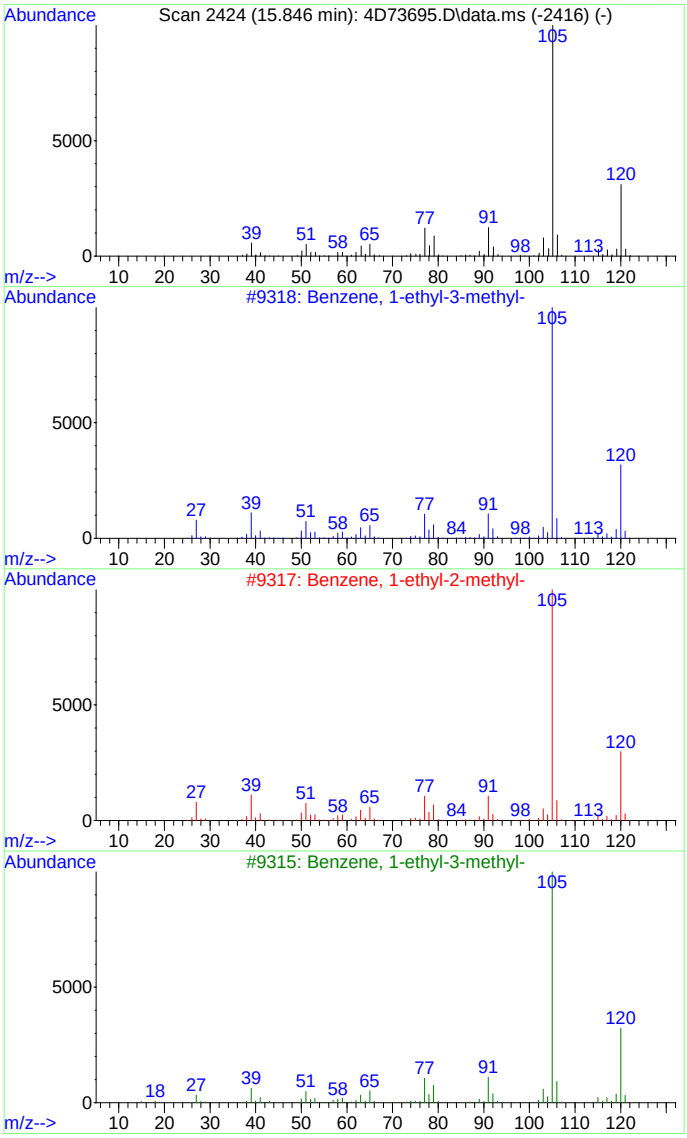
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

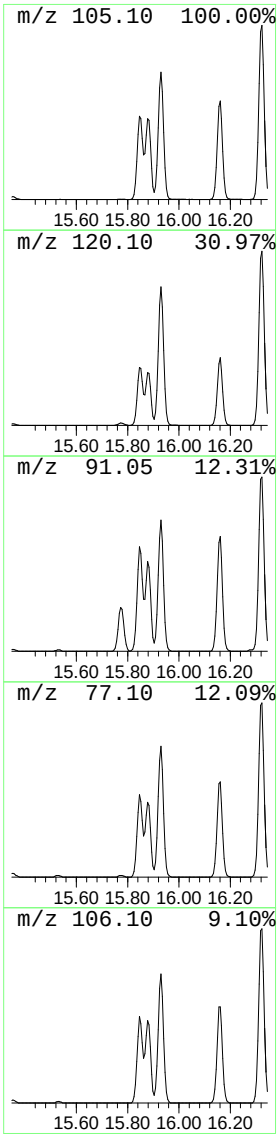
****

Peak Number 2 C3 alkyl benzene Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.846	52.13 ug/L	1030180	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
3	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	95
4	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91





ACCUTEST JC30522

Library Search Compound Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73695.D
Acq On : 8 Nov 2016 12:28 pm
Operator : XimenaC
Sample : jc30522-6
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

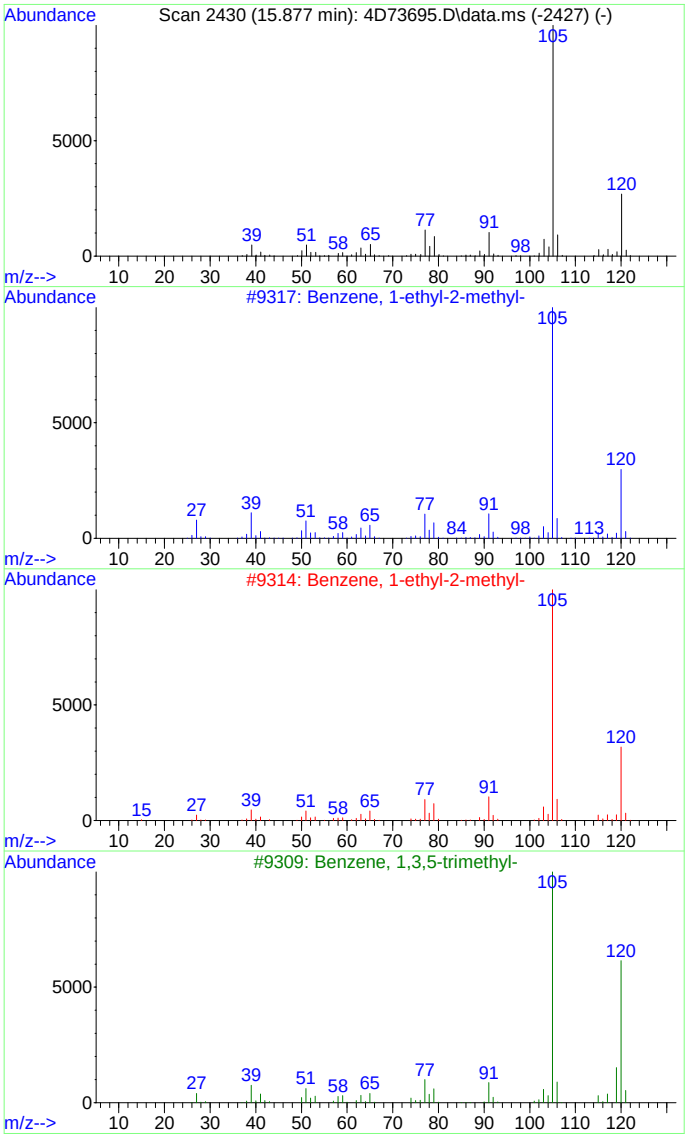
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

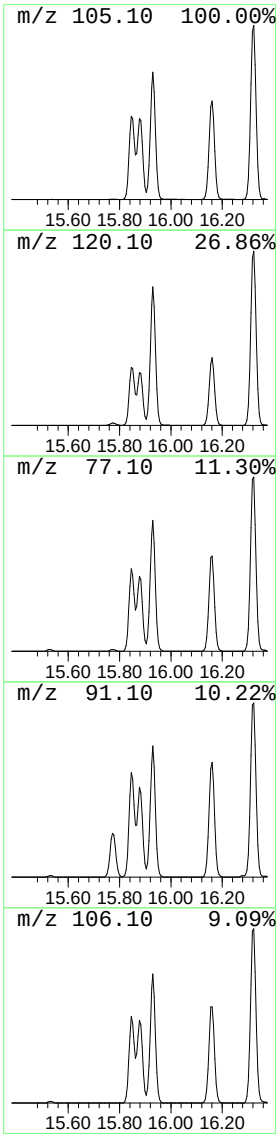
****

Peak Number 3 C3 alkyl benzene Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.878	47.79 ug/L	944413	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
4	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91
5	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	91





Library Search Compound Report

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Acq On : 8 Nov 2016 12:28 pm
Operator : XimenaC
Sample : jc30522-6
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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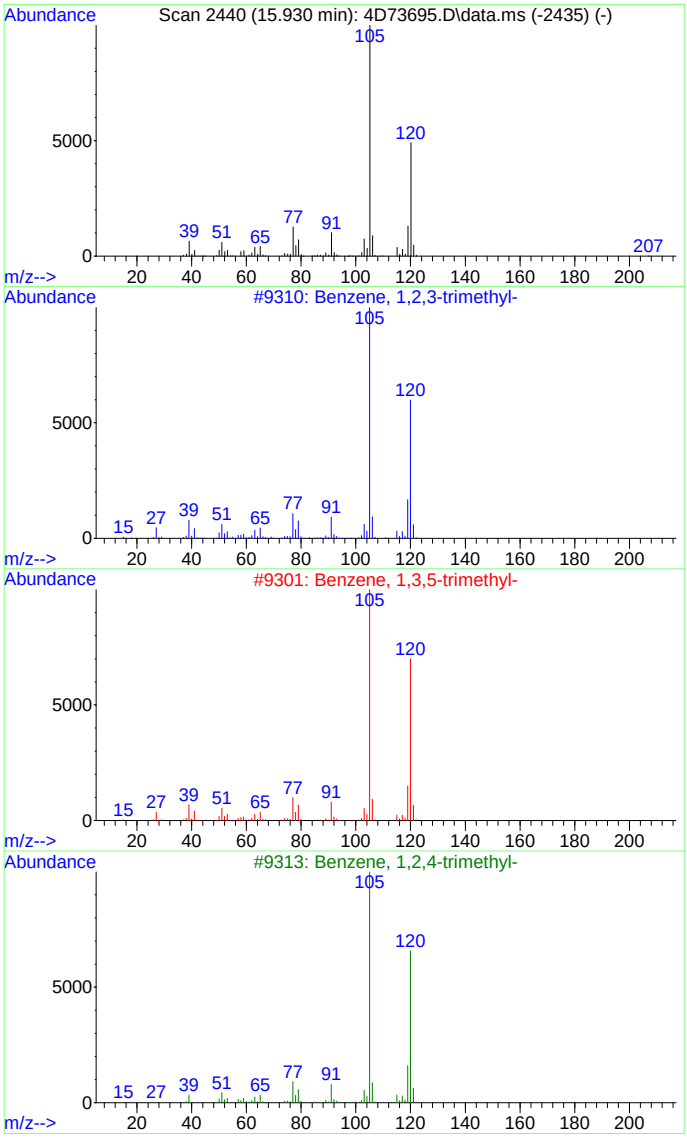
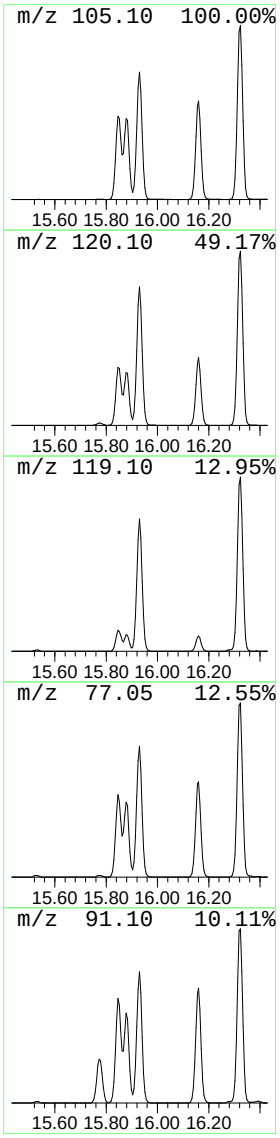
Peak Number 4 Benzene, 1,3,5-trimethyl- Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.930	85.47 ug/L	1689190	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	97
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
5	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	94





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Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

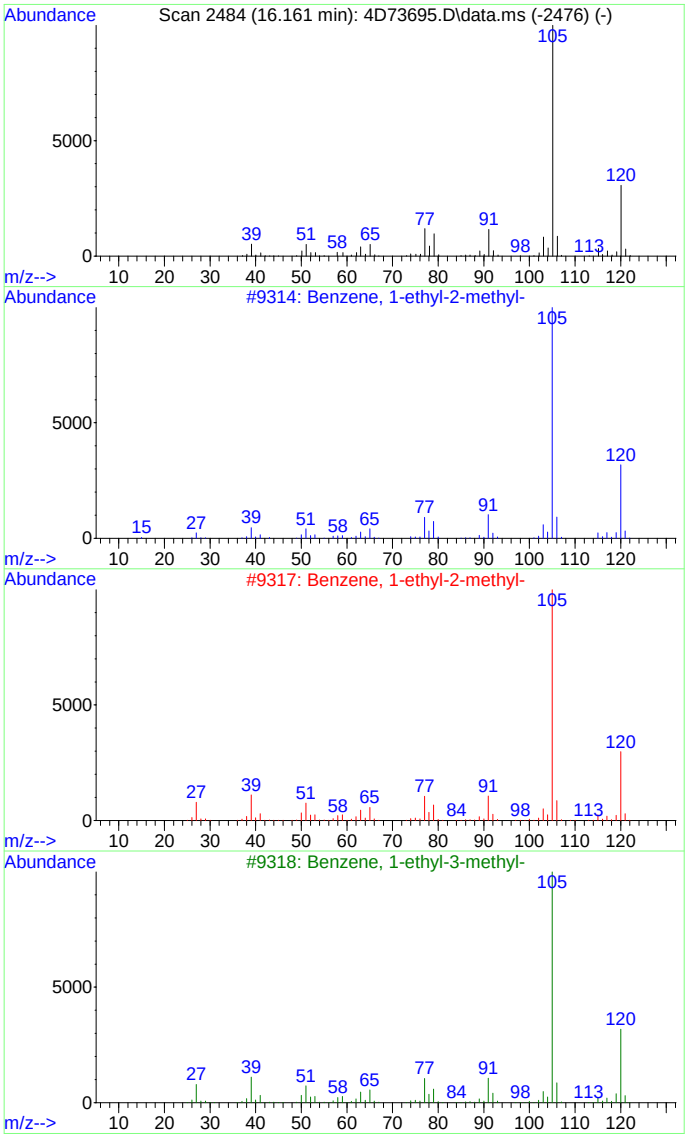
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

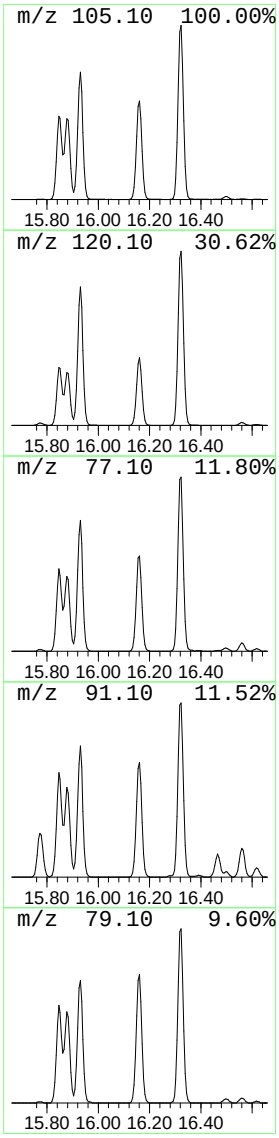
****

Peak Number 5 C3 alkyl benzene Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.161	59.73 ug/L	1180310	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
3	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	91





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Sample : jc30522-6
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

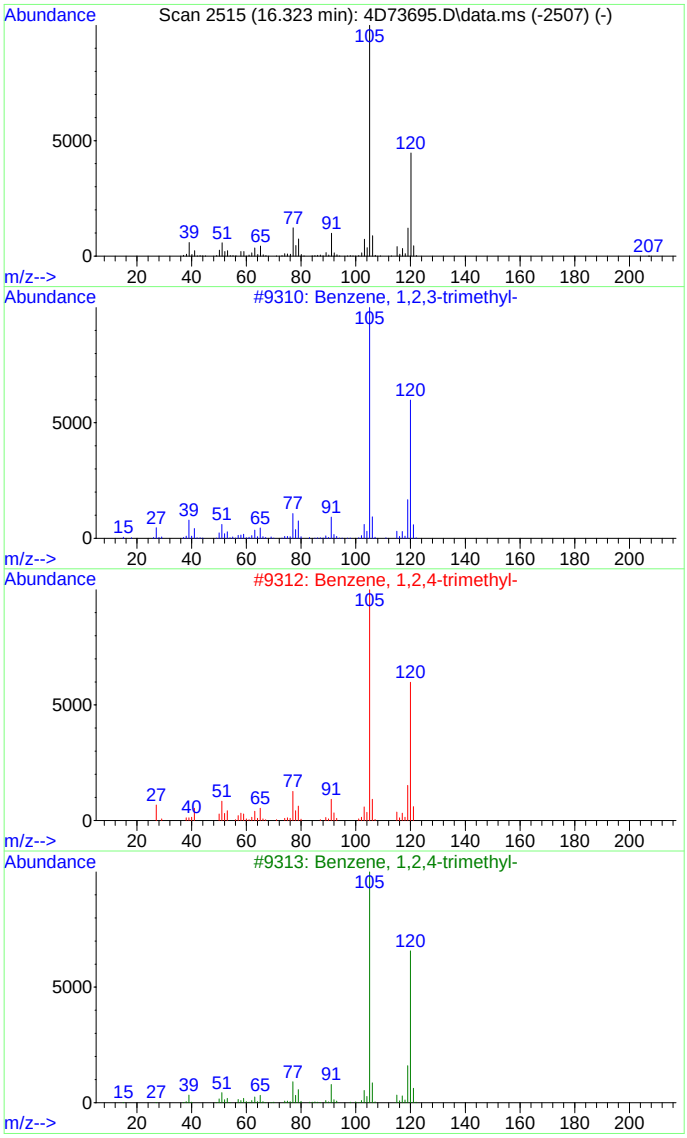
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

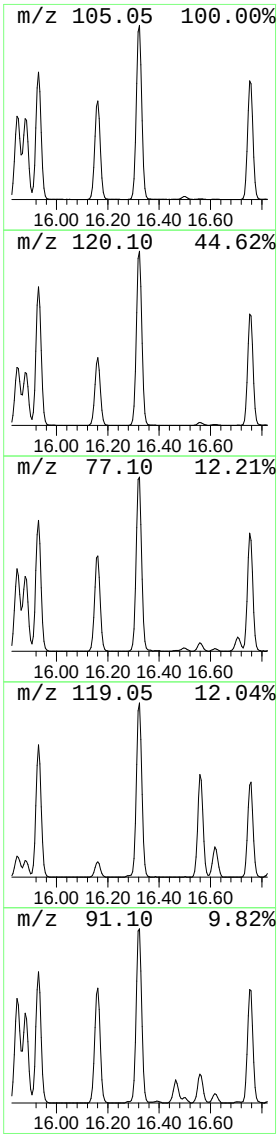
****

Peak Number 6 Benzene, 1,2,4-trimethyl- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.323	116.39 ug/L	2300040	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
4	Benzene, 1-ethyl-3-methyl-	120	C9H12	000620-14-4	91
5	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	91





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Sample : jc30522-6
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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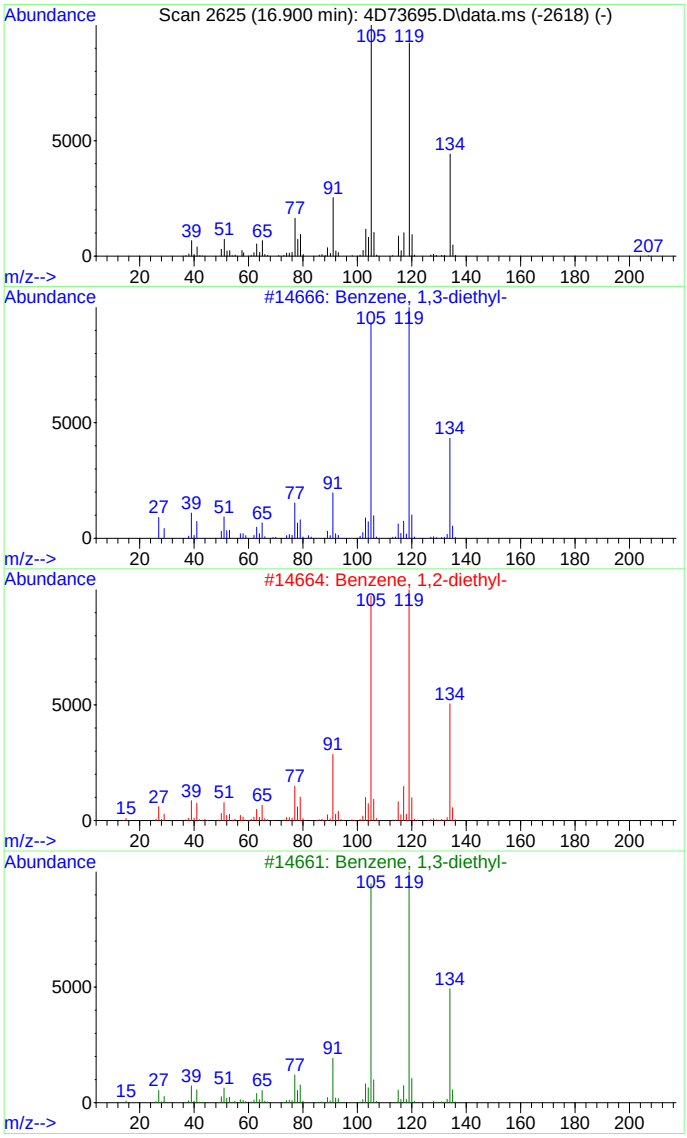
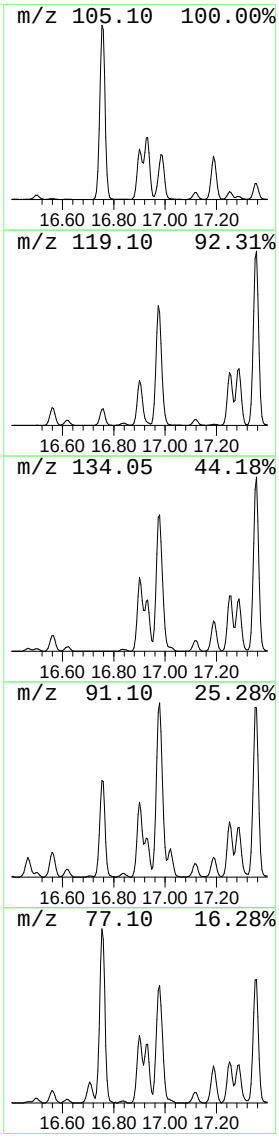
Peak Number 7 C4 alkyl benzene Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.900	35.61 ug/L	703704	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	95
2	Benzene, 1,2-diethyl-	134	C10H14	000135-01-3	95
3	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	94
4	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	93
5	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	91





Library Search Compound Report

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Sample : jc30522-6
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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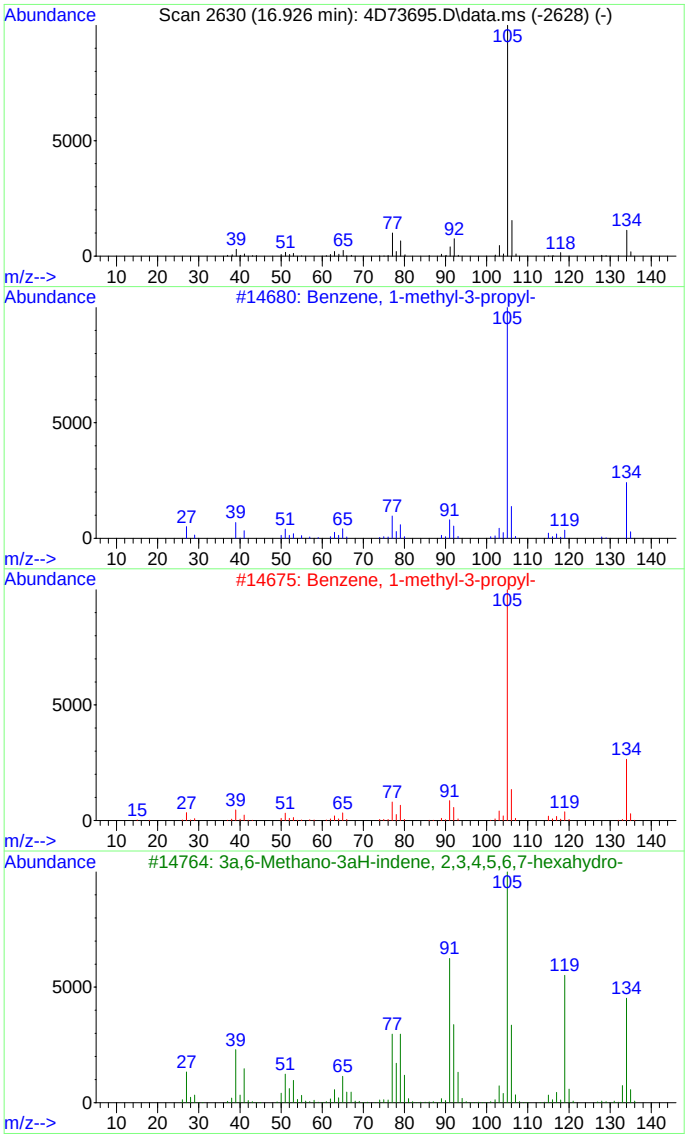
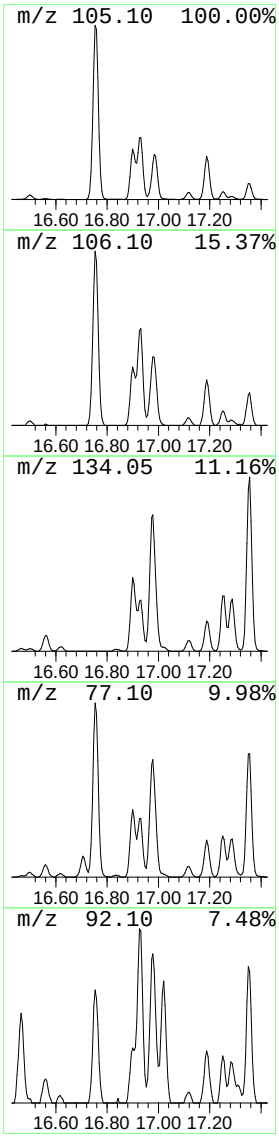
Peak Number 8 C4 alkyl benzene Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.926	22.76 ug/L	449816	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-3-propyl-	134	C10H14	001074-43-7	78
2	Benzene, 1-methyl-3-propyl-	134	C10H14	001074-43-7	78
3	3a,6-Methano-3aH-indene, 2,3,4,5...	134	C10H14	098640-10-9	72
4	Benzene, 1-methyl-4-propyl-	134	C10H14	001074-55-1	72
5	Benzene, 1-methyl-4-propyl-	134	C10H14	001074-55-1	72





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Sample : jc30522-6
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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Peak Number 9 C4 alkyl benzene Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.979	95.25 ug/L	1882440	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-3,5-dimethyl-	134	C10H14	000934-74-7	64
2	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	64
3	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	64
4	Benzene, 1-ethyl-3,5-dimethyl-	134	C10H14	000934-74-7	60
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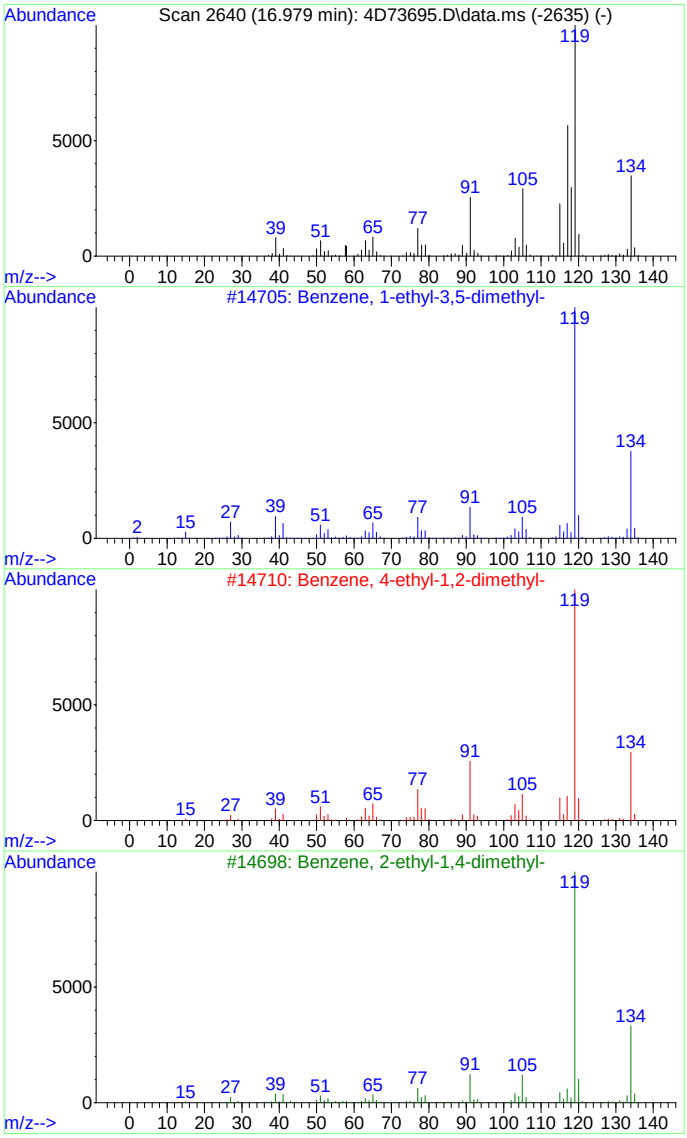

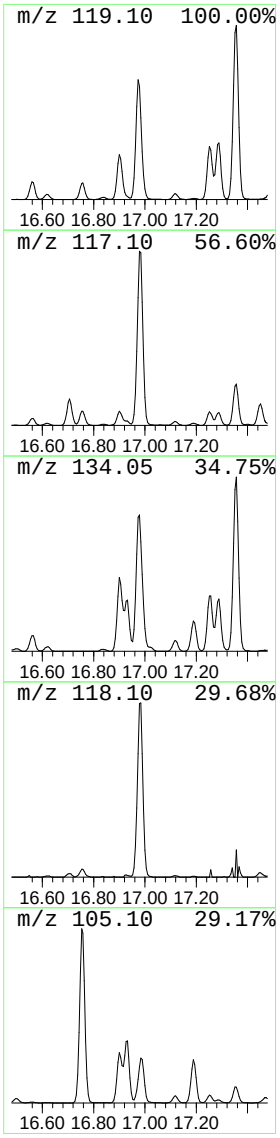

SGS ACCUTEST JC30522

Library Search Compound Report

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Operator : XimenaC
Sample : jc30522-6
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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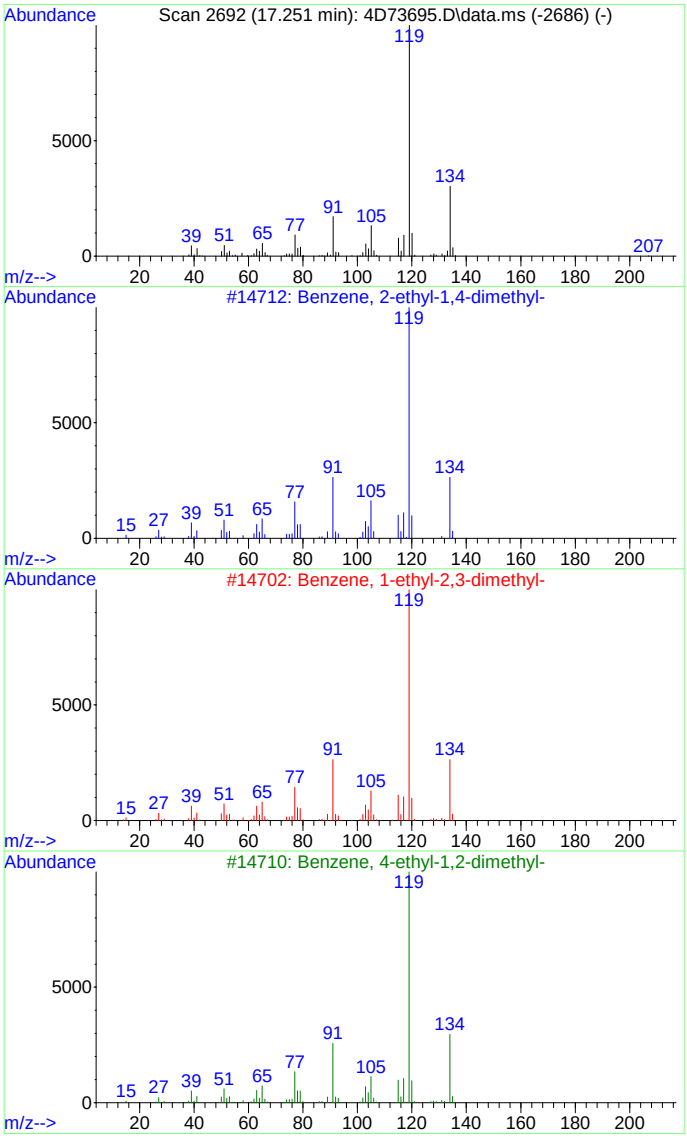
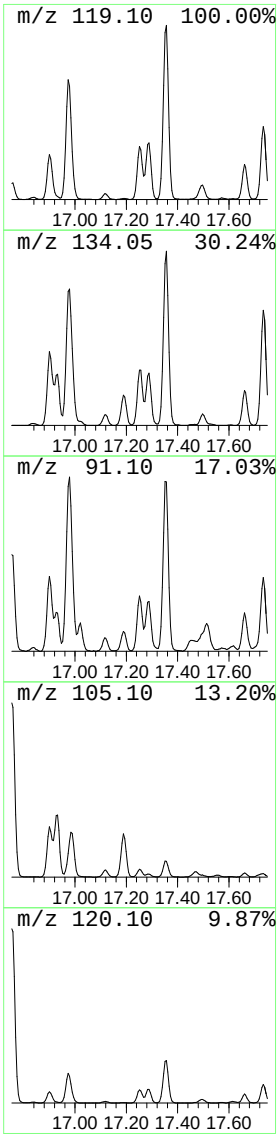
Peak Number 10 C4 alkyl benzene Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.251	23.70 ug/L	468376	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	96
2	Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	95
3	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	95
4	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	94
5	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	94





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Sample : jc30522-6
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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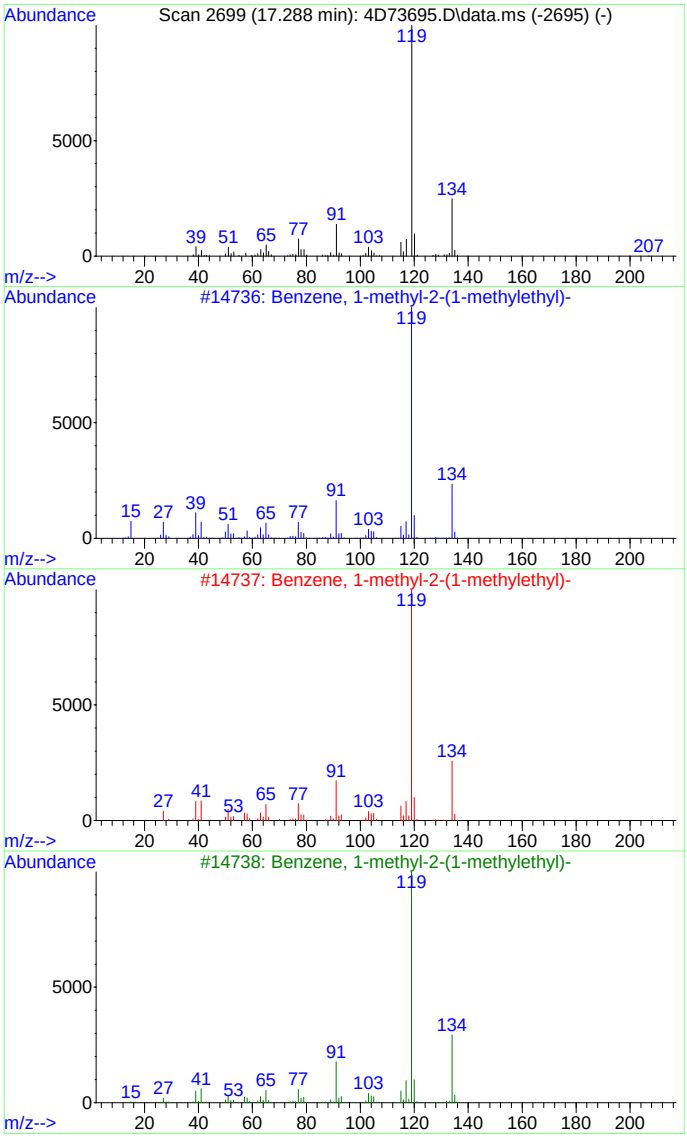
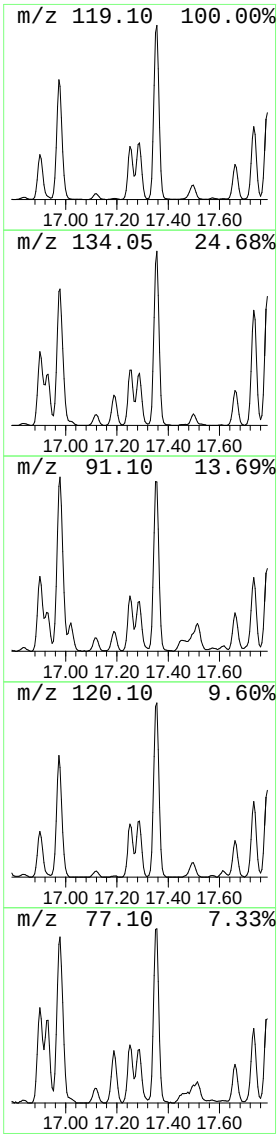
Peak Number 11 C4 alkyl benzene Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.288	23.86 ug/L	471432	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	95
2	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	95
3	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	95
4	Benzene, 1-methyl-4-(1-methyleth...	134	C10H14	000099-87-6	94
5	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	91





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Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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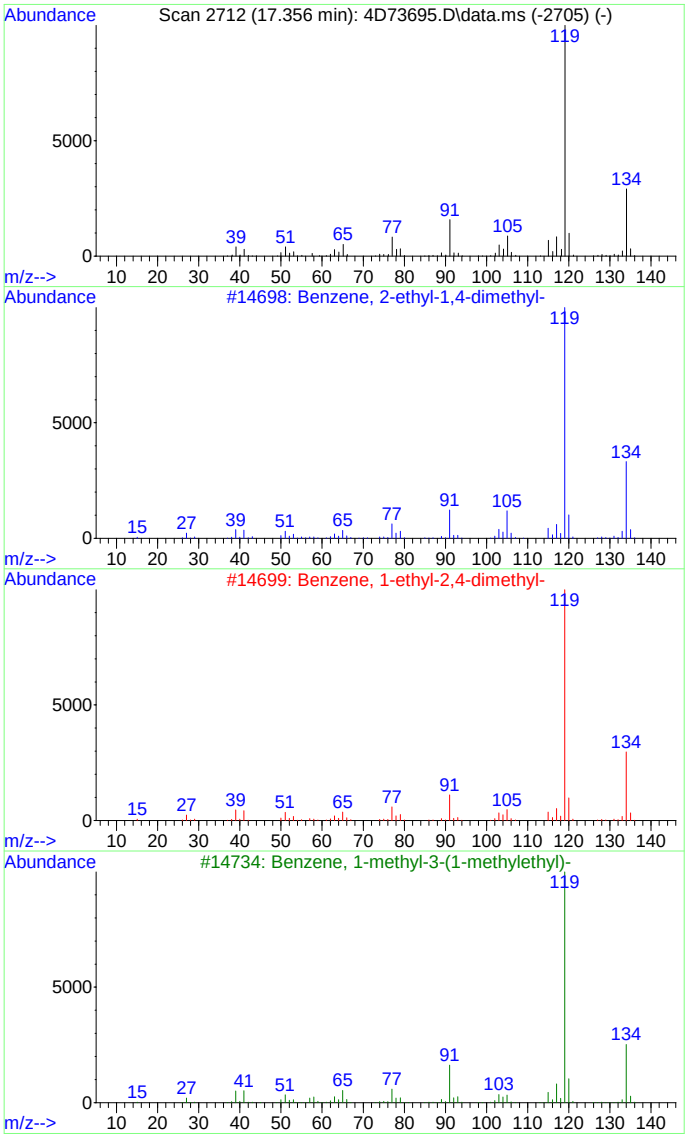
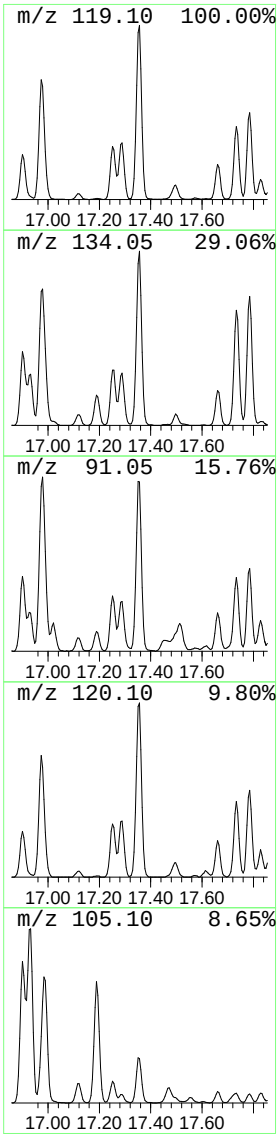
Peak Number 12 C4 alkyl benzene Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.356	74.67 ug/L	1475760	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	95
2	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	95
3	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	95
4	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14	002870-04-4	95
5	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	95





SGS ACCUTEST JC30522

Library Search Compound Report

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ALS Vial : 37 Sample Multiplier: 1

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Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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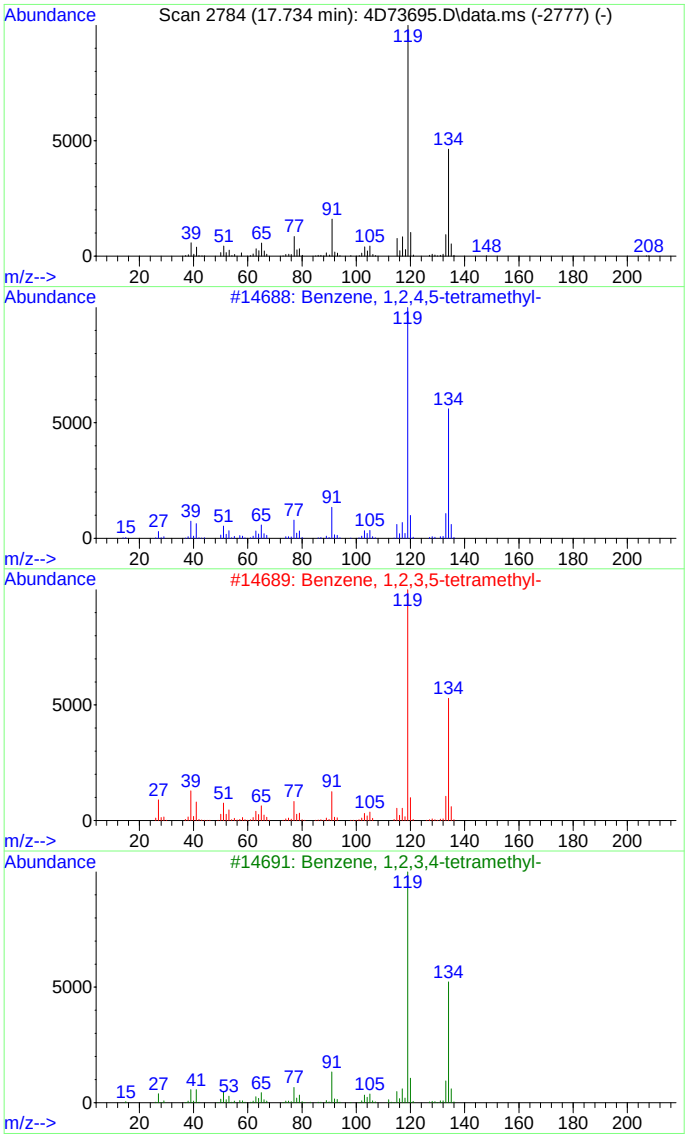
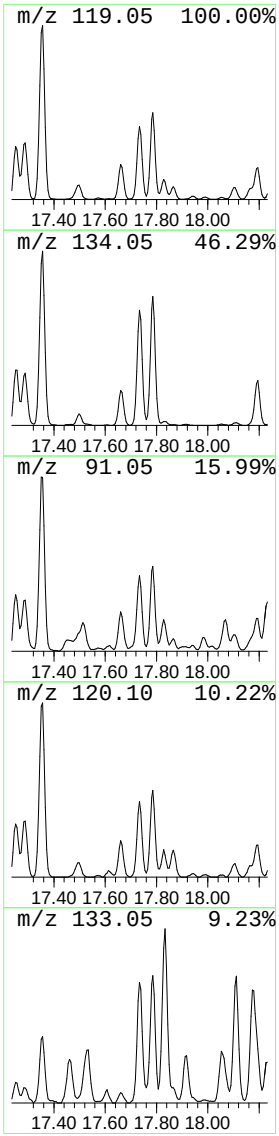
Peak Number 13 C4 alkyl benzene Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.733	34.81 ug/L	687914	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	97
2	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	97
3	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	97
4	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	97
5	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	96





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Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 37 Sample Multiplier: 1

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Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

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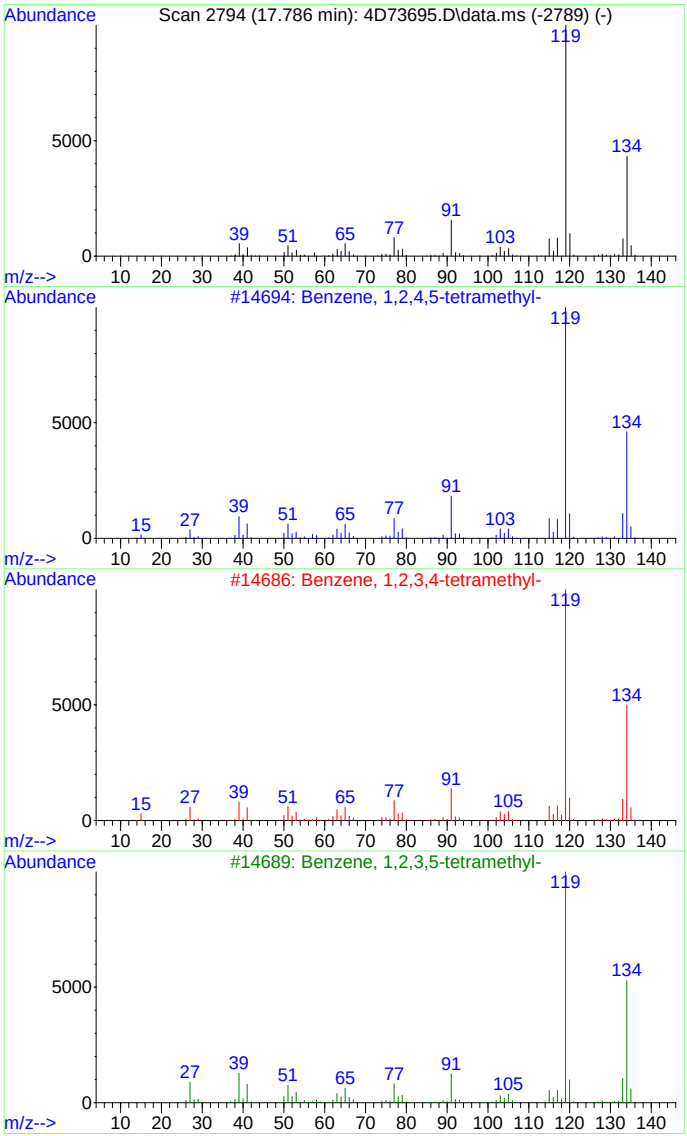
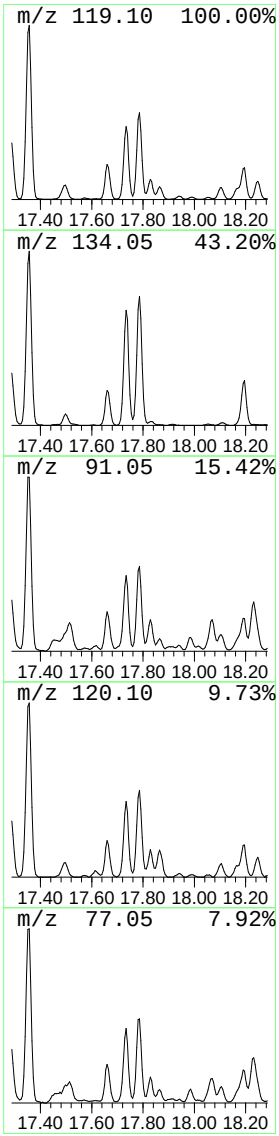
Peak Number 14 C4 alkyl benzene Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.786	38.89 ug/L	768468	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	97
2	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	95
3	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	95
4	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	94
5	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	94





SGS ACCUTEST JC30522

Library Search Compound Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73695.D
Acq On : 8 Nov 2016 12:28 pm
Operator : XimenaC
Sample : jc30522-6
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

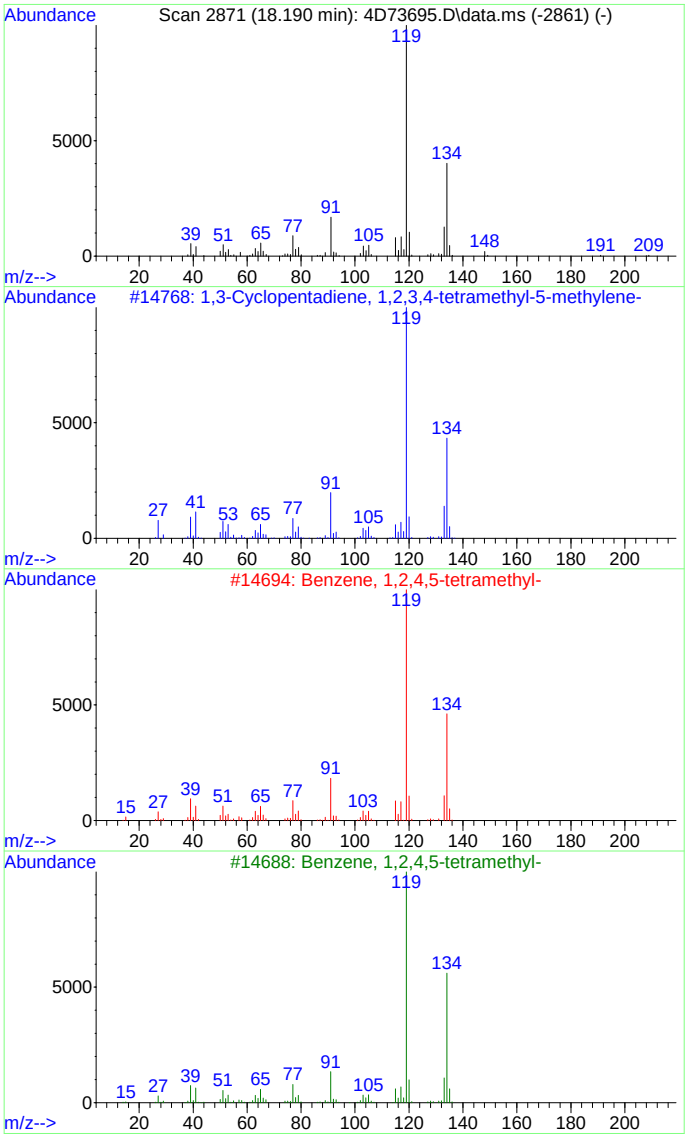
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

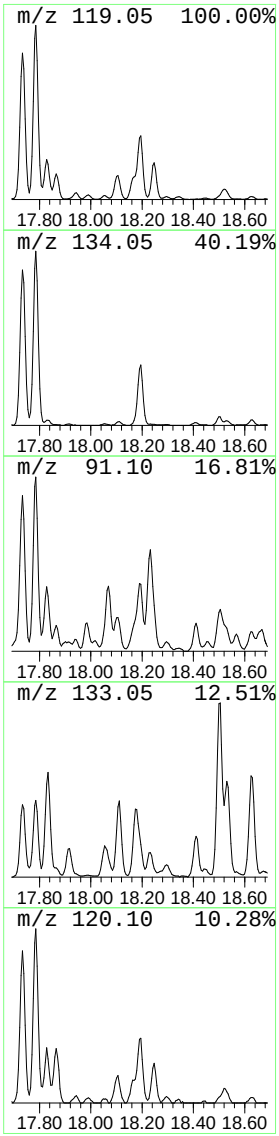
****

Peak Number 15 C4 alkyl benzene Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.190	22.16 ug/L	437916	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1,3-Cyclopentadiene, 1,2,3,4-tet...	134	C10H14	076089-59-3	97
2	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	96
3	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	95
4	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	95
5	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	95





Library Search Compound Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73695.D
Acq On : 8 Nov 2016 12:28 pm
Operator : XimenaC
Sample : jc30522-6
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

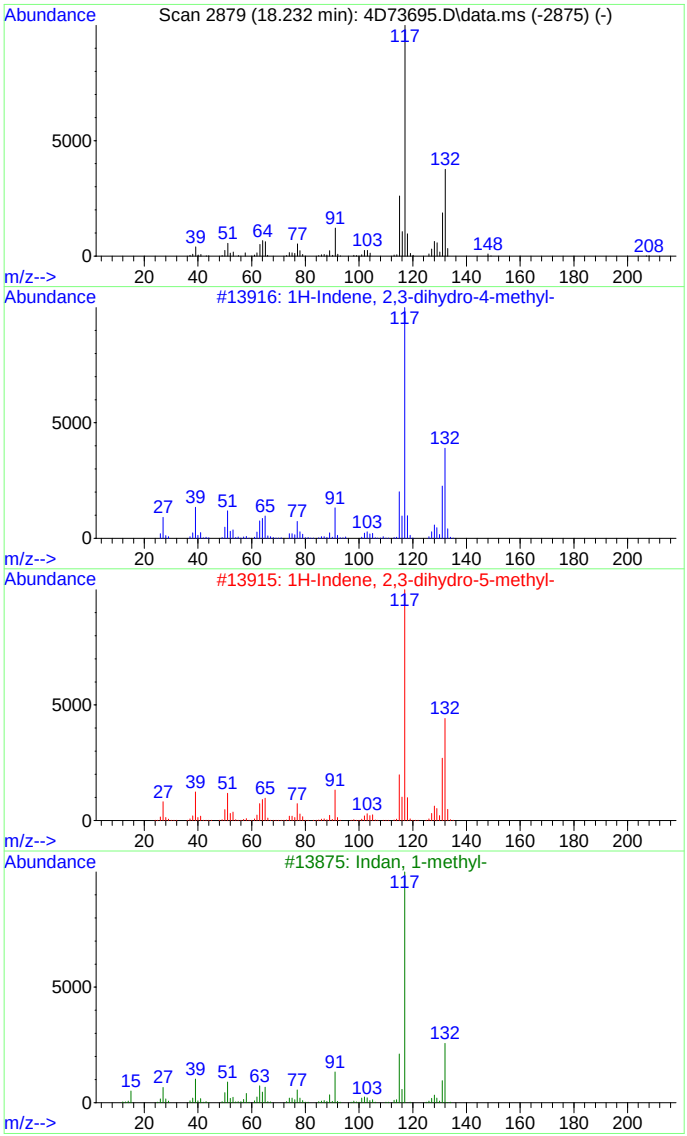
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

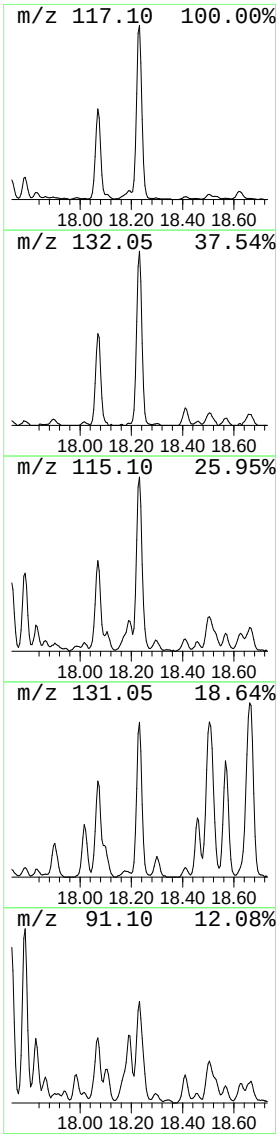
****

Peak Number 16 1H-Indene-dihydro-methyl- i... Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.232	34.75 ug/L	686726	1,4-dichlorobenzene-d4	16.706

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	95
2	1H-Indene, 2,3-dihydro-5-methyl-	132	C10H12	000874-35-1	90
3	Indan, 1-methyl-	132	C10H12	000767-58-8	87
4	Benzene, 2-butenyl-	132	C10H12	001560-06-1	86
5	Indan, 1-methyl-	132	C10H12	000767-58-8	83





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73695.D
Acq On : 8 Nov 2016 12:28 pm
Operator : XimenaC
Sample : jc30522-6
Misc : MS8838,V4D3202,5,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
system artifact	3.273	89.2	ug/L	1695430	2	10.000	950263	50.0
C3 alkyl benzene	15.846	52.1	ug/L	1030180	5	16.706	988121	50.0
C3 alkyl benzene	15.878	47.8	ug/L	944413	5	16.706	988121	50.0
Benzene, 1,3,5-...	15.930	85.5	ug/L	1689190	5	16.706	988121	50.0
C3 alkyl benzene	16.161	59.7	ug/L	1180310	5	16.706	988121	50.0
Benzene, 1,2,4-...	16.323	116.4	ug/L	2300040	5	16.706	988121	50.0
C4 alkyl benzene	16.900	35.6	ug/L	703704	5	16.706	988121	50.0
C4 alkyl benzene	16.926	22.8	ug/L	449816	5	16.706	988121	50.0
C4 alkyl benzene	16.979	95.3	ug/L	1882440	5	16.706	988121	50.0
C4 alkyl benzene	17.251	23.7	ug/L	468376	5	16.706	988121	50.0
C4 alkyl benzene	17.288	23.9	ug/L	471432	5	16.706	988121	50.0
C4 alkyl benzene	17.356	74.7	ug/L	1475760	5	16.706	988121	50.0
C4 alkyl benzene	17.733	34.8	ug/L	687914	5	16.706	988121	50.0
C4 alkyl benzene	17.786	38.9	ug/L	768468	5	16.706	988121	50.0
C4 alkyl benzene	18.190	22.2	ug/L	437916	5	16.706	988121	50.0
1H-Indene-dihyd...	18.232	34.8	ug/L	686726	5	16.706	988121	50.0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\
Data File : 3D123771a.D
Acq On : 8 Nov 2016 2:39 pm
Operator : ximenac
Sample : jc30522-7
Misc : MS8838,V3D5253,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Nov 09 11:00:41 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3D5245.M
Quant Title : Method SW846 8260C, RXI 624 60m x 0.25mm x 1.4 um
QLast Update : Wed Nov 02 10:51:49 2016
Response via : Initial Calibration

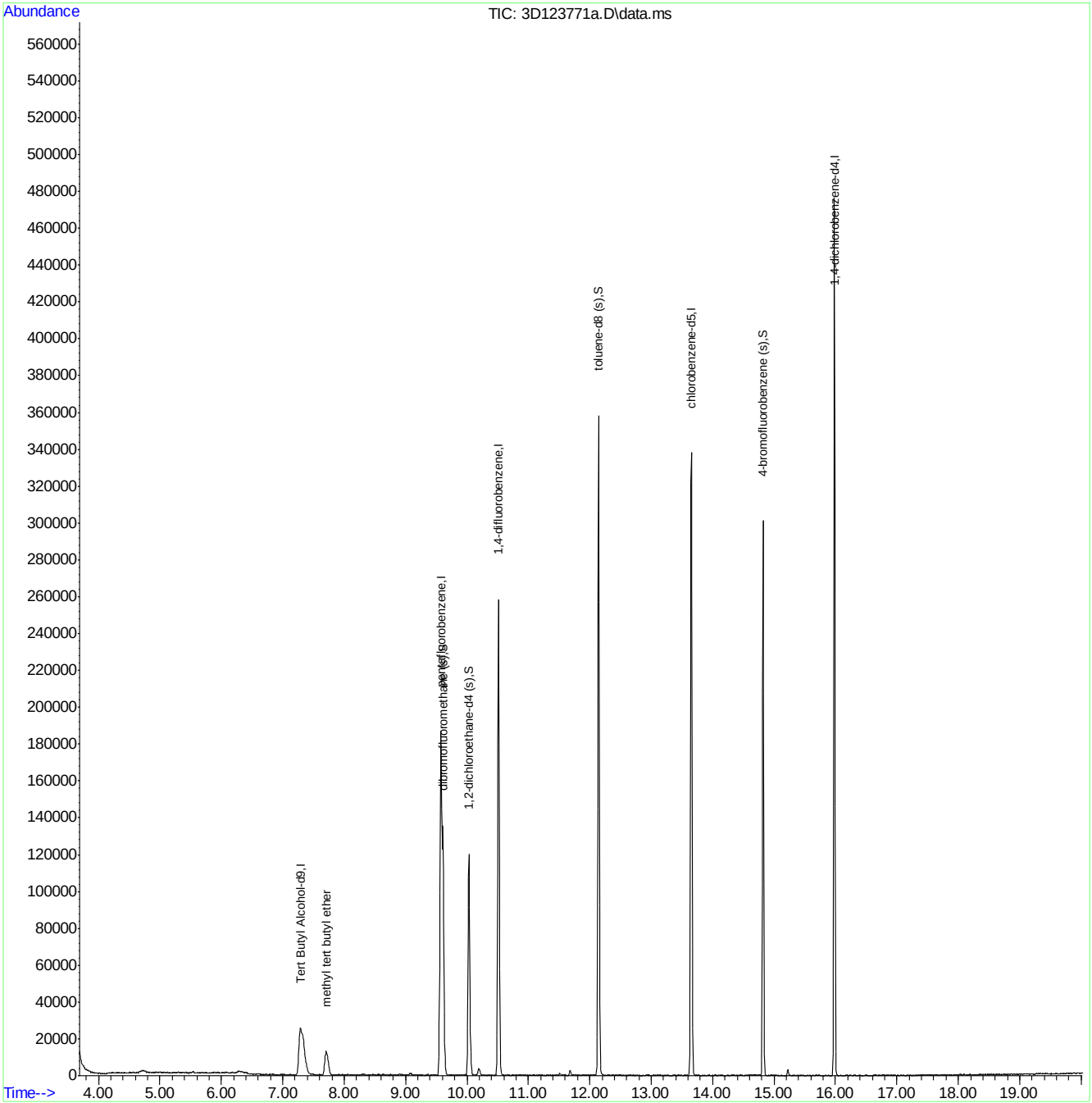
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.289	65	83455	500.00	ug/L	0.00
4) pentafluorobenzene	9.575	168	137084	50.00	ug/L	0.00
62) 1,4-difluorobenzene	10.513	114	199912	50.00	ug/L	0.00
92) chlorobenzene-d5	13.654	117	163574	50.00	ug/L	0.00
108) 1,4-dichlorobenzene-d4	15.982	152	107660	50.00	ug/L	0.00
System Monitoring Compounds						
54) dibromofluoromethane (s)	9.611	113	78587	54.69	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 109.38%			
55) 1,2-dichloroethane-d4 (s)	10.031	65	86619	51.17	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 102.34%			
84) toluene-d8 (s)	12.144	98	216800	50.21	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 100.42%			
110) 4-bromofluorobenzene (s)	14.818	95	83535	48.14	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 96.28%			
Target Compounds						Qvalue
36) methyl tert butyl ether	7.708	73	21976	3.95	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

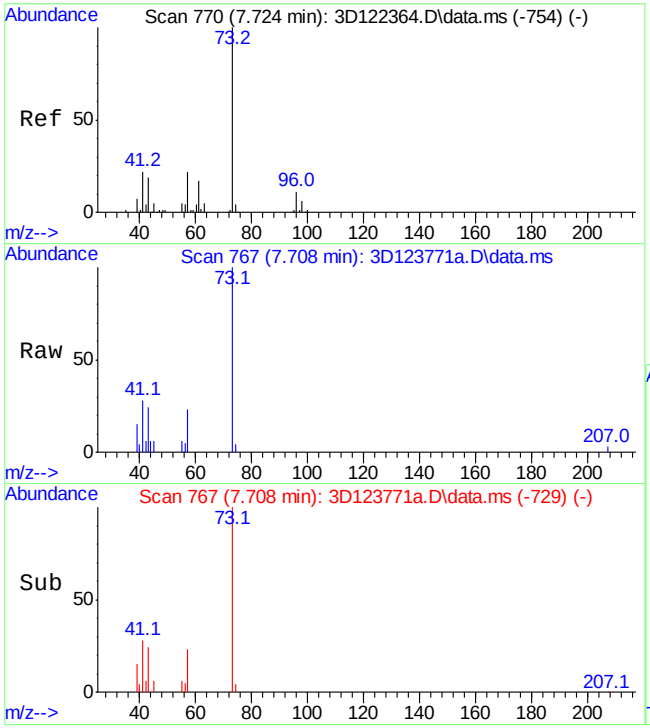
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\
Data File : 3D123771a.D
Acq On : 8 Nov 2016 2:39 pm
Operator : ximenac
Sample : jc30522-7
Misc : MS8838,V3D5253,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Nov 09 11:00:41 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3D5245.M
Quant Title : Method SW846 8260C, RXI 624 60m x 0.25mm x 1.4 um
QLast Update : Wed Nov 02 10:51:49 2016
Response via : Initial Calibration



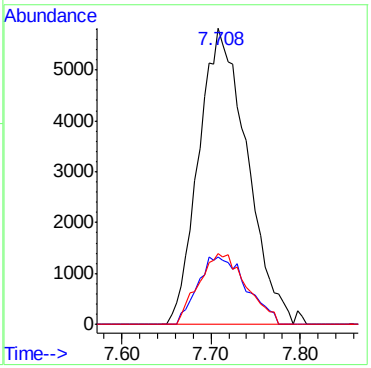
SGS ACCUTEST JC30522



#36
methyl tert butyl ether
Concen: 3.95 ug/L
RT: 7.708 min Scan# 767
Delta R.T. 0.000 min
Lab File: 3D123771a.D
Acq: 8 Nov 2016 2:39 pm

Tgt Ion: 73 Resp: 21976

Ion	Ratio	Lower	Upper
73	100		
57	22.9	0.0	53.4
43	23.9	0.0	55.5



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3D\
Data File : 3D123771a.D
Acq On : 8 Nov 2016 2:39 pm
Operator : ximenac
Sample : jc30522-7
Misc : MS8838,V3D5253,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1000 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\METHODS\M3D5245.M
Title : Method SW846 8260C, RXI 624 60m x 0.25mm x 1.4 um

Signal : TIC: 3D123771a.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.321	119	121	130	rVB	504	1139	0.18%	0.030%
2	4.421	130	140	146	rVB2	658	1399	0.22%	0.037%
3	4.672	183	188	189	rBV2	905	1030	0.16%	0.028%
4	4.735	194	200	209	rVV4	1697	5320	0.83%	0.142%
5	4.809	209	214	223	rVB	588	1575	0.24%	0.042%
6	5.244	284	297	301	rVB2	719	1817	0.28%	0.049%
7	5.543	348	354	360	rVV2	949	1489	0.23%	0.040%
8	5.936	428	429	439	rVB2	758	1313	0.20%	0.035%
9	6.188	474	477	486	rVV2	534	1223	0.19%	0.033%
10	6.282	486	495	512	rVV5	1323	7980	1.24%	0.213%
11	6.376	512	513	541	rVB2	1310	5123	0.80%	0.137%
12	6.623	548	560	564	rVB2	495	1126	0.17%	0.030%
13	7.000	629	632	639	rVB2	647	1167	0.18%	0.031%
14	7.289	674	687	720	rBV	25640	152657	23.72%	4.083%
15	7.488	720	725	730	rVB3	594	1058	0.16%	0.028%
16	7.708	752	767	790	rBV2	13002	50160	7.79%	1.341%
17	8.306	875	881	891	rVB2	960	2323	0.36%	0.062%
18	9.092	1022	1031	1037	rVB4	1214	2836	0.44%	0.076%
19	9.575	1113	1123	1145	rVB2	186652	625455	97.20%	16.727%
20	10.031	1197	1210	1225	rVB	120262	239371	37.20%	6.402%
21	10.193	1233	1241	1251	rVB4	4010	9358	1.45%	0.250%
22	10.513	1288	1302	1320	rBV	258477	467905	72.71%	12.514%
23	11.509	1488	1492	1498	rBV2	1211	1717	0.27%	0.046%
24	11.677	1517	1524	1530	rBV4	2673	4381	0.68%	0.117%
25	12.144	1604	1613	1629	rVB	358232	574483	89.28%	15.364%
26	13.654	1891	1901	1913	rBV	338048	499805	77.67%	13.367%
27	14.823	2116	2124	2138	rVB	301405	420858	65.40%	11.255%
28	15.227	2194	2201	2210	rBB2	3484	4760	0.74%	0.127%
29	15.982	2336	2345	2356	rBV	476356	643496	100.00%	17.210%
30	17.544	2634	2643	2645	rVB3	502	1098	0.17%	0.029%
31	19.274	2965	2973	2980	rBV3	723	1721	0.27%	0.046%
32	19.463	3008	3009	3018	rVB2	538	1256	0.20%	0.034%
33	19.668	3041	3048	3052	rBV2	642	1064	0.17%	0.028%
34	19.930	3096	3098	3106	rBV4	711	1680	0.26%	0.045%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3D\
Data File : 3D123771a.D
Acq On : 8 Nov 2016 2:39 pm
Operator : ximenac
Sample : jc30522-7
Misc : MS8838,V3D5253,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1000 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\METHODS\M3D5245.M
Title : Method SW846 8260C, RXI 624 60m x 0.25mm x 1.4 um

Sum of corrected areas: 3739143

LSC Report - Integrated Chromatogram

```
Data Path : C:\msdchem\1\DATA\3D\
Data File : 3D123771a.D
Acq On    :  8 Nov 2016    2:39 pm
Operator  : ximenac
Sample    : jc30522-7
Misc      : MS8838,V3D5253,5,,,,1
ALS Vial  : 14   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3D5245.M
Quant Title  : Method SW846 8260C, RXI 624 60m x 0.25mm x 1.4 um

TIC Library   : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p
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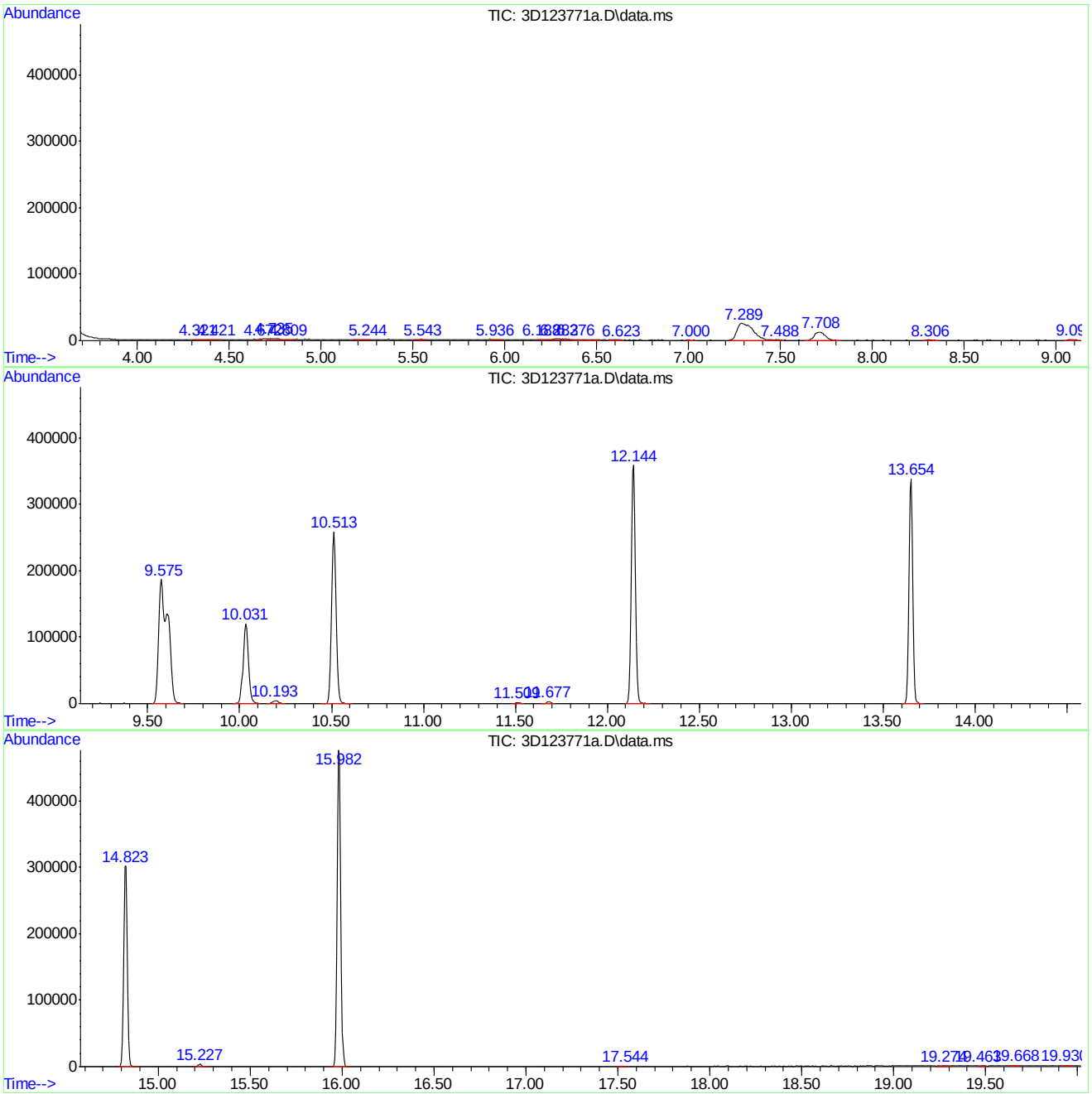


SGS ACCUTEST JC30522

Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\3D\
Data File : 3D123771a.D
Acq On : 8 Nov 2016 2:39 pm
Operator : ximenac
Sample : jc30522-7
Misc : MS8838,V3D5253,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3D5245.M
Quant Title : Method SW846 8260C, RXI 624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	Internal Standard RT	Internal Standard Resp	Internal Standard Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D123763.D
Acq On : 8 Nov 2016 10:10 am
Operator : ximenac
Sample : mb
Misc : MS8787,V3D5253,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 08 14:37:27 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3D5245.M
Quant Title : Method SW846 8260C, RXI 624 60m x 0.25mm x 1.4 um
QLast Update : Wed Nov 02 10:51:49 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.294	65	79282	500.00	ug/L	0.00
4) pentafluorobenzene	9.575	168	141039	50.00	ug/L	0.00
62) 1,4-difluorobenzene	10.513	114	199310	50.00	ug/L	0.00
92) chlorobenzene-d5	13.654	117	170471	50.00	ug/L	0.00
108) 1,4-dichlorobenzene-d4	15.987	152	113229	50.00	ug/L	0.00
System Monitoring Compounds						
54) dibromofluoromethane (s)	9.606	113	76727	51.89	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 103.78%			
55) 1,2-dichloroethane-d4 (s)	10.031	65	84910	48.75	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 97.50%			
84) toluene-d8 (s)	12.144	98	218508	50.76	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 101.52%			
110) 4-bromofluorobenzene (s)	14.818	95	87758	48.09	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 96.18%			

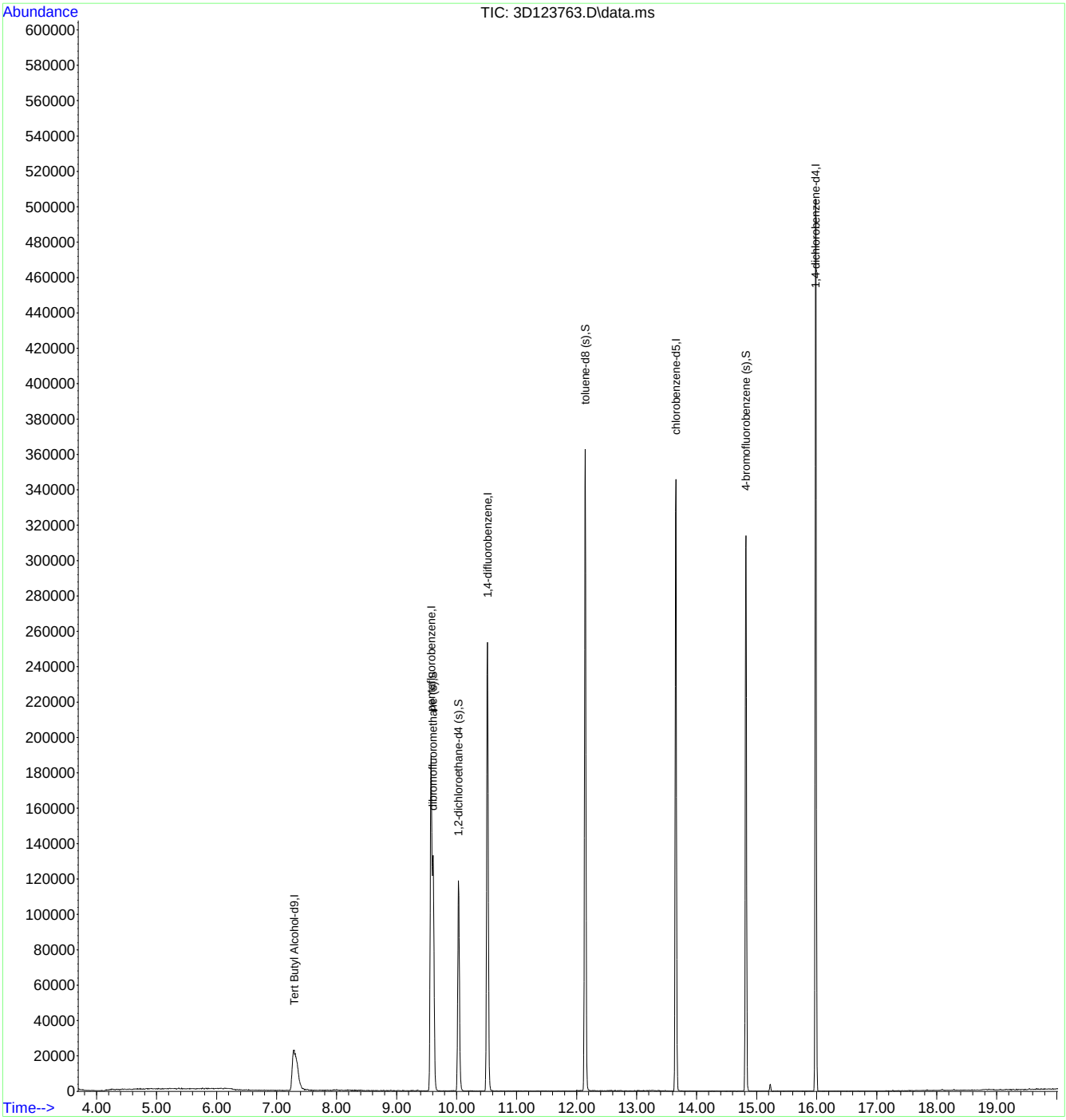
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D123763.D
Acq On : 8 Nov 2016 10:10 am
Operator : ximenac
Sample : mb
Misc : MS8787,V3D5253,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 08 14:37:27 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3D5245.M
Quant Title : Method SW846 8260C, RXI 624 60m x 0.25mm x 1.4 um
QLast Update : Wed Nov 02 10:51:49 2016
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : 3D123763.D
Acq On : 8 Nov 2016 10:10 am
Operator : ximenac
Sample : mb
Misc : MS8787,V3D5253,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1000 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3D5245.M
Title : Method SW846 8260C, RXI 624 60m x 0.25mm x 1.4 um

Signal : TIC: 3D123763.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.919	228	235	248	rVB2	547	1577	0.23%	0.043%
2	5.433	332	333	346	rBV2	457	1132	0.17%	0.031%
3	5.857	412	414	424	rBV2	560	1185	0.17%	0.032%
4	6.062	447	453	464	rVB2	417	1094	0.16%	0.030%
5	6.193	474	478	494	rVB2	773	3261	0.48%	0.088%
6	6.597	549	555	564	rBV2	397	1175	0.17%	0.032%
7	7.284	671	686	720	rBV	22905	141118	20.76%	3.818%
8	8.075	833	837	843	rBV3	555	1076	0.16%	0.029%
9	9.575	1110	1123	1147	rVB2	189204	622837	91.62%	16.853%
10	10.031	1200	1210	1227	rBV	118874	231913	34.11%	6.275%
11	10.513	1290	1302	1327	rVB	253607	465928	68.54%	12.607%
12	12.144	1603	1613	1625	rBV	362836	577579	84.96%	15.628%
13	12.731	1723	1725	1737	rVB2	539	1388	0.20%	0.038%
14	13.654	1892	1901	1916	rBV	346016	514395	75.67%	13.919%
15	14.823	2114	2124	2137	rBV	314027	439696	64.68%	11.897%
16	15.227	2192	2201	2209	rVB2	4143	5720	0.84%	0.155%
17	15.982	2336	2345	2354	rBV	504289	679820	100.00%	18.395%
18	16.779	2485	2497	2502	rBV	256	1098	0.16%	0.030%
19	19.274	2967	2973	2980	rBV2	597	1361	0.20%	0.037%
20	19.662	3045	3047	3059	rBV3	712	1267	0.19%	0.034%
21	19.731	3059	3060	3071	rBV3	533	1132	0.17%	0.031%

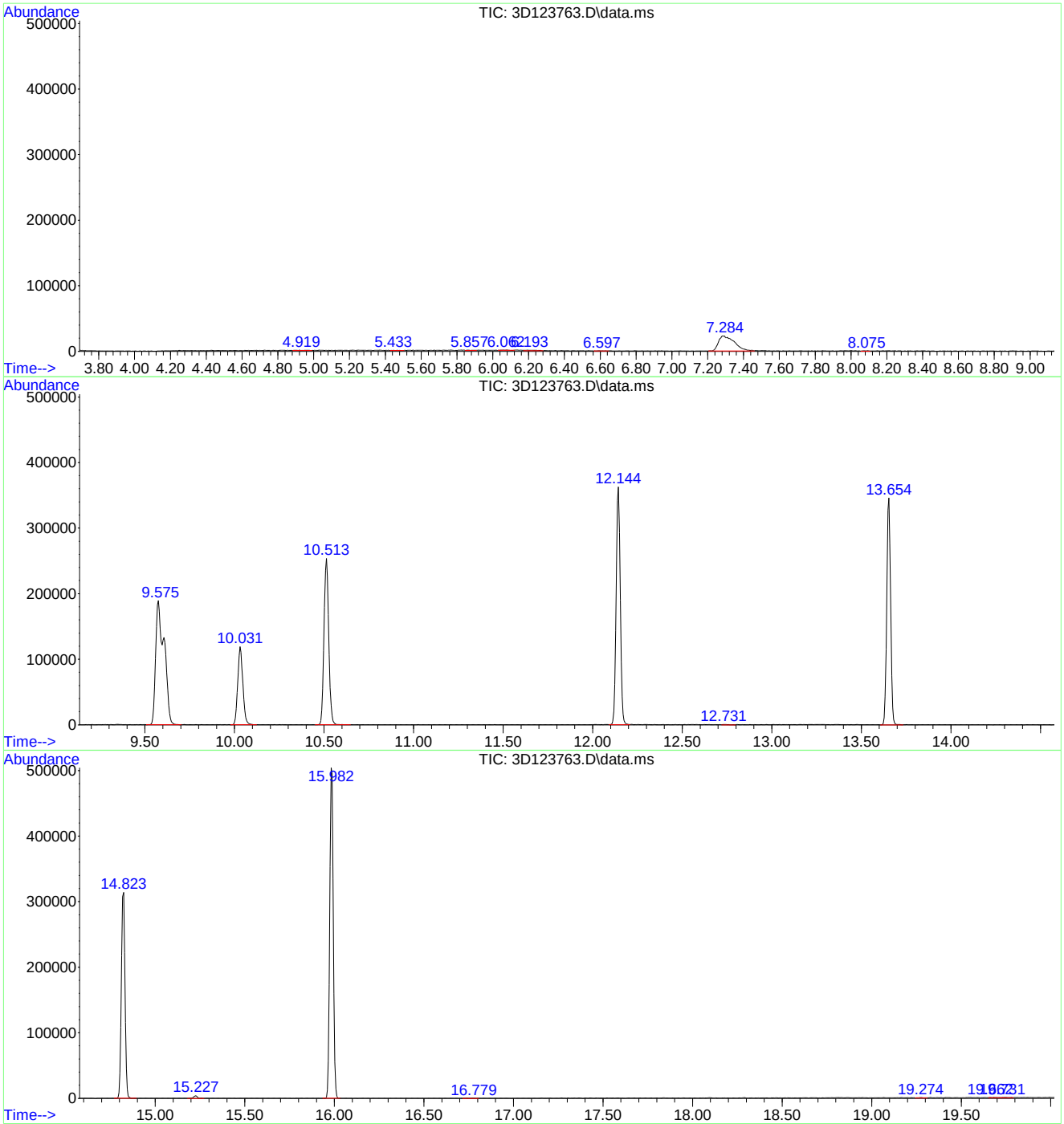
Sum of corrected areas: 3695752

LSC Report - Integrated Chromatogram

```
Data Path : C:\msdchem\1\DATA\
Data File : 3D123763.D
Acq On    :  8 Nov 2016  10:10 am
Operator  : ximenac
Sample    : mb
Misc      : MS8787,V3D5253,5,,,,1
ALS Vial  : 5   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3D5245.M
Quant Title  : Method SW846 8260C, RXI 624 60m x 0.25mm x 1.4 um

TIC Library   : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p
```



Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\
Data File : 3D123763.D
Acq On : 8 Nov 2016 10:10 am
Operator : ximenac
Sample : mb
Misc : MS8787,V3D5253,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3D5245.M
Quant Title : Method SW846 8260C, RXI 624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	Internal Standard RT	Internal Standard Resp	Internal Standard Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\data\4D\v4d3199-3200\
Data File : 4D73602.D
Acq On : 4 Nov 2016 8:05 pm
Operator : XimenaC
Sample : mb2
Misc : MS3,V4D3199,5,,,,1
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Nov 07 14:46:17 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um
QLast Update : Wed Sep 14 10:25:10 2016
Response via : Initial Calibration

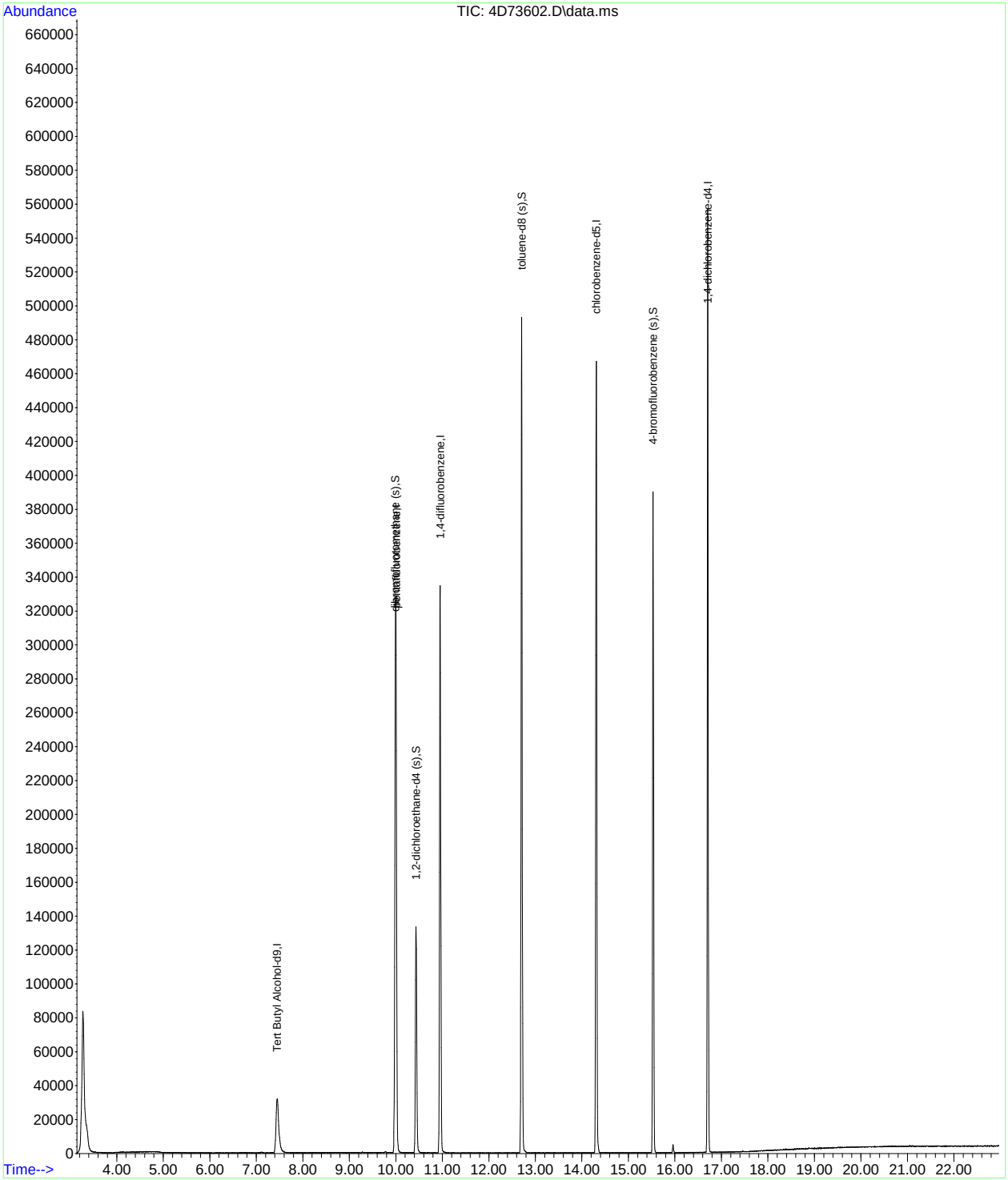
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.446	65	81957	500.00	ug/L	0.00
4) pentafluorobenzene	10.005	168	182215	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.954	114	281494	50.00	ug/L	0.00
86) chlorobenzene-d5	14.310	117	257378	50.00	ug/L	0.00
101) 1,4-dichlorobenzene-d4	16.706	152	130210	50.00	ug/L	0.00
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.989	113	95923	51.18	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 102.36%			
49) 1,2-dichloroethane-d4 (s)	10.435	65	96292	50.37	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 100.74%			
78) toluene-d8 (s)	12.705	98	328677	49.37	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 98.74%			
103) 4-bromofluorobenzene (s)	15.531	95	128408	52.79	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 105.58%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\data\4D\v4d3199-3200\
Data File : 4D73602.D
Acq On : 4 Nov 2016 8:05 pm
Operator : XimenaC
Sample : mb2
Misc : MS3,V4D3199,5,,,,1
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Nov 07 14:46:17 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um
QLast Update : Wed Sep 14 10:25:10 2016
Response via : Initial Calibration



ACCUTEST
JC30522

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73690.D
Acq On : 8 Nov 2016 10:02 am
Operator : XimenaC
Sample : mb
Misc : MS3,V4D3202,5,,,,1
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 09 13:43:01 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um
QLast Update : Fri Sep 23 08:47:12 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.446	65	92583	500.00	ug/L	0.00
4) pentafluorobenzene	10.005	168	220557	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.954	114	326279	50.00	ug/L	0.00
86) chlorobenzene-d5	14.310	117	305148	50.00	ug/L	0.00
101) 1,4-dichlorobenzene-d4	16.706	152	155412	50.00	ug/L	0.00
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.989	113	112884	49.76	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 99.52%			
49) 1,2-dichloroethane-d4 (s)	10.435	65	119092	51.47	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 102.94%			
78) toluene-d8 (s)	12.705	98	384273	49.80	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.60%			
103) 4-bromofluorobenzene (s)	15.531	95	150497	51.84	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 103.68%			

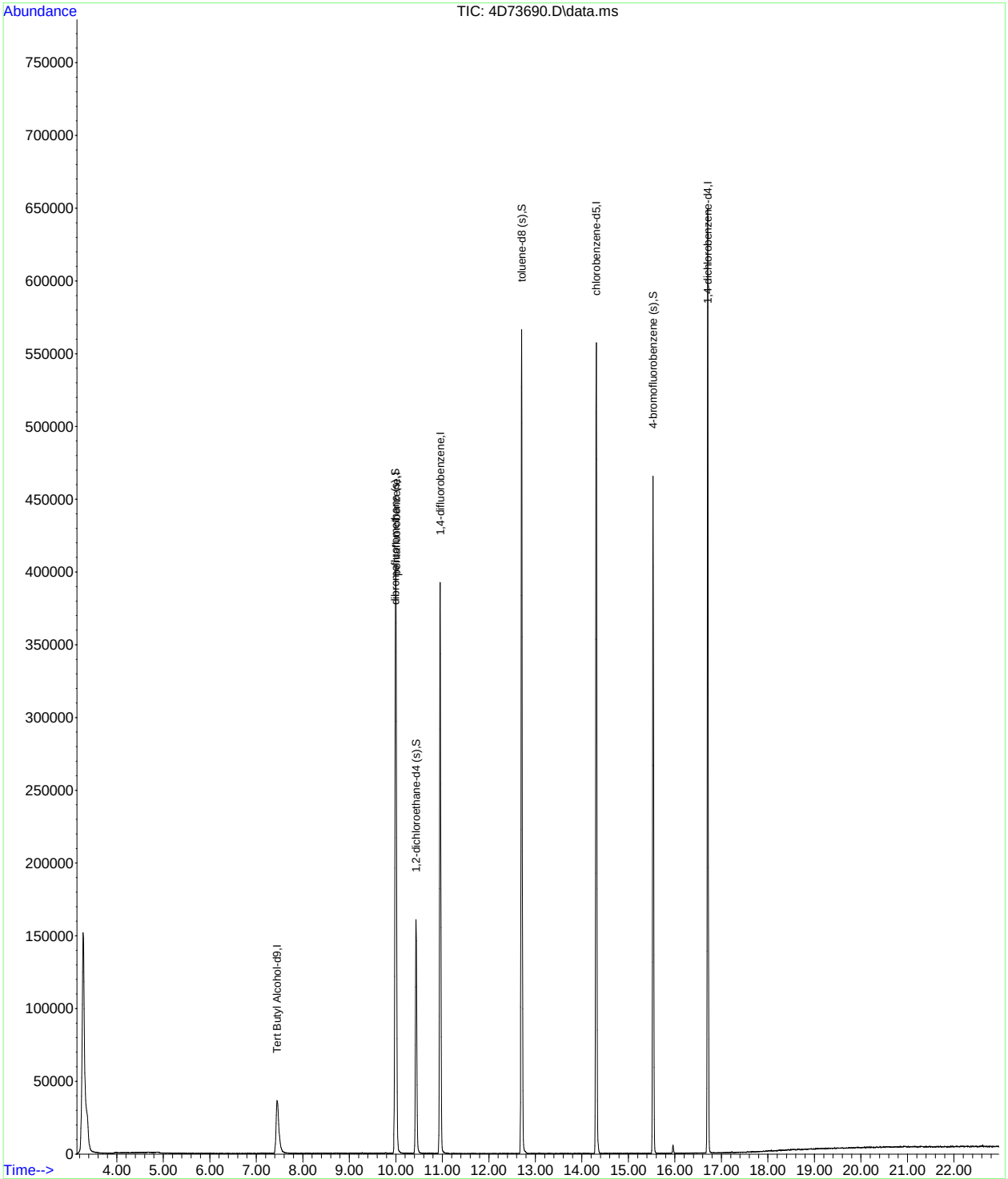
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73690.D
Acq On : 8 Nov 2016 10:02 am
Operator : XimenaC
Sample : mb
Misc : MS3,V4D3202,5,,,,1
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 09 13:43:01 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um
QLast Update : Fri Sep 23 08:47:12 2016
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73690.D
Acq On : 8 Nov 2016 10:02 am
Operator : XimenaC
Sample : mb
Misc : MS3,V4D3202,5,,,,1
ALS Vial : 32 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.5 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

Signal : TIC: 4D73690.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.278	3	27	64	rBV	151576	637094	65.18%	10.081%
2	7.446	810	822	844	rBV	36463	155172	15.87%	2.455%
3	10.000	1295	1309	1327	rBV2	403528	955214	97.72%	15.115%
4	10.435	1384	1392	1406	rBV	160447	316430	32.37%	5.007%
5	10.954	1481	1491	1507	rBV	392501	724414	74.11%	11.463%
6	12.705	1815	1825	1849	rVB	566260	977507	100.00%	15.468%
7	14.310	2123	2131	2145	rBV	557144	904025	92.48%	14.305%
8	15.531	2357	2364	2376	rBV	465393	704869	72.11%	11.154%
9	15.961	2440	2446	2453	rVB	5722	8635	0.88%	0.137%
10	16.706	2581	2588	2604	rBV	648919	935122	95.66%	14.797%
11	21.246	3449	3454	3455	rBV4	838	1096	0.11%	0.017%

Sum of corrected areas: 6319578

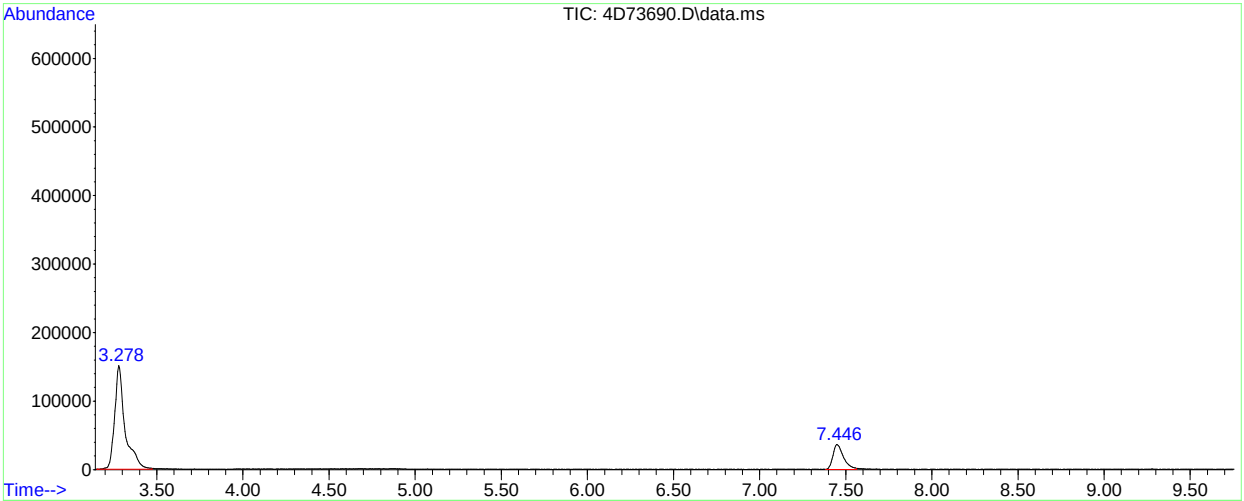
SGS ACCUTEST JC30522

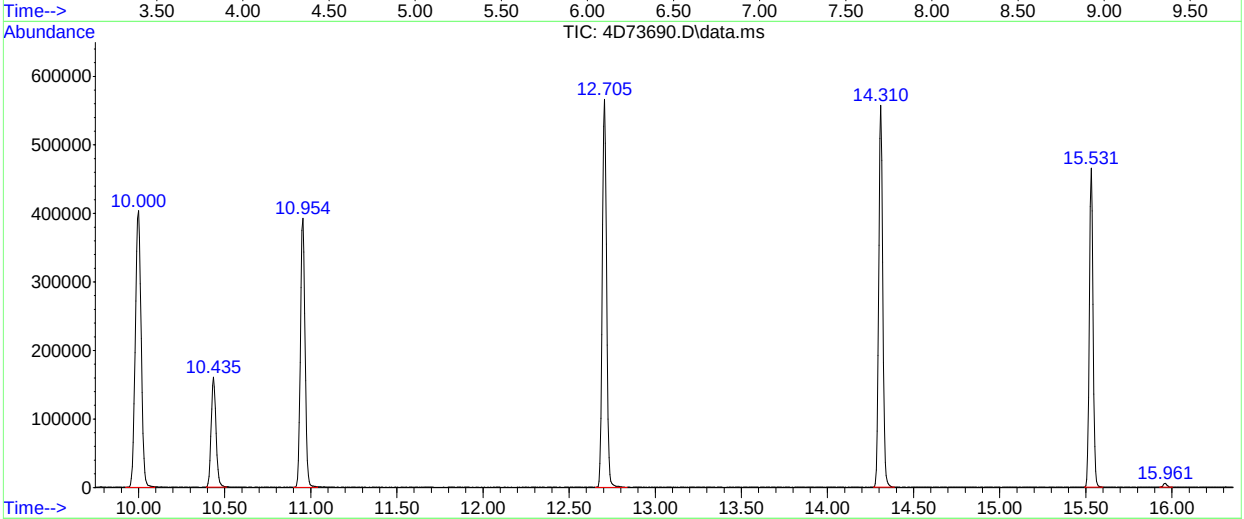
LSC Report - Integrated Chromatogram

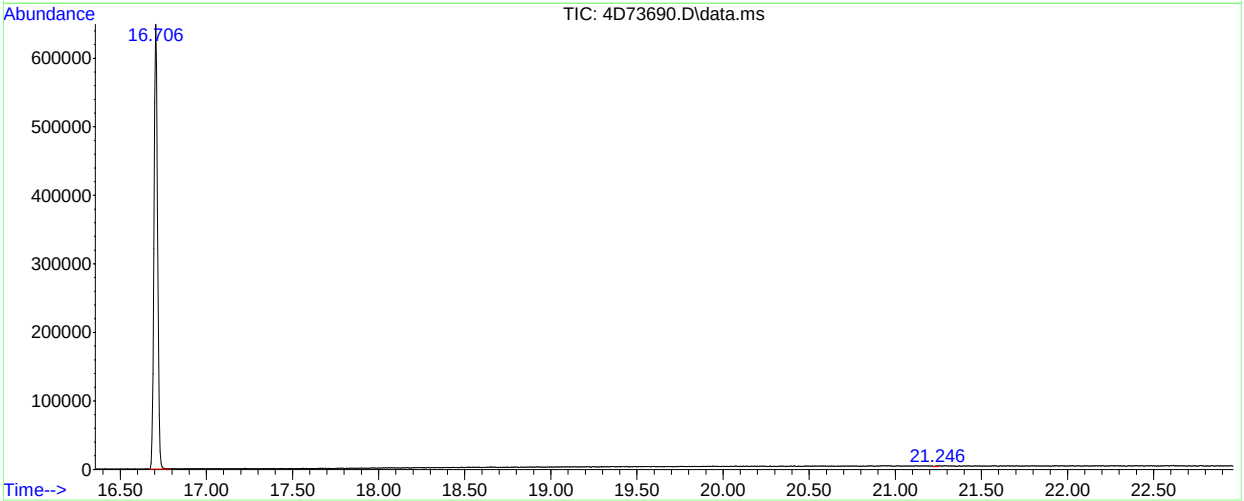
Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73690.D
Acq On : 8 Nov 2016 10:02 am
Operator : XimenaC
Sample : mb
Misc : MS3,V4D3202,5,,,,1
ALS Vial : 32 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p







M4D3126.M Wed Nov 09 13:43:14 2016 Page: 2

Library Search Compound Report

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73690.D
Acq On : 8 Nov 2016 10:02 am
Operator : XimenaC
Sample : mb
Misc : MS3,V4D3202,5,,,,1
ALS Vial : 32 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

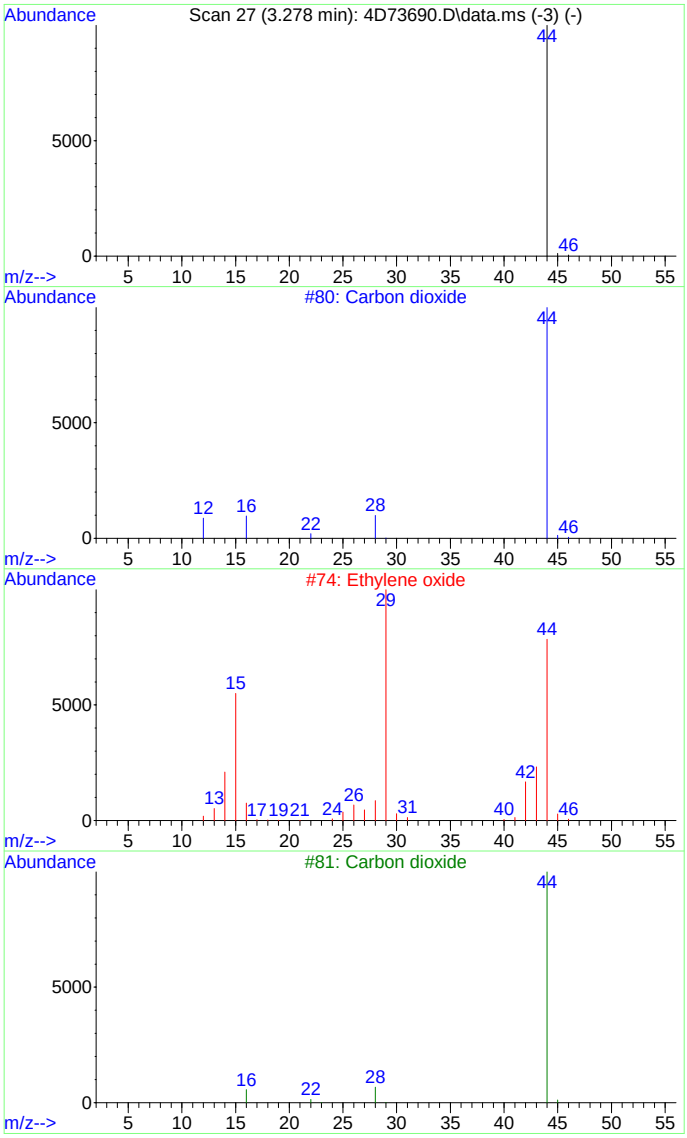
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

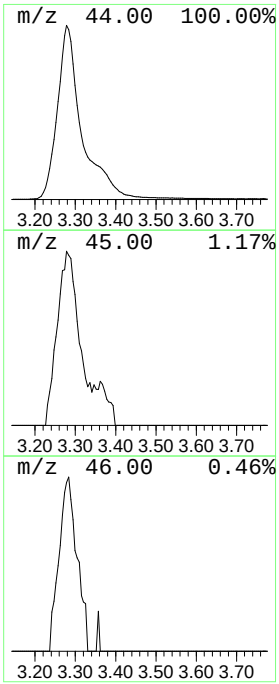
****

Peak Number 1 system artifact Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.278	33.35 ug/L	637094	pentafluorobenzene	10.005

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Ethylene oxide	44	C2H4O	000075-21-8	3
3	Carbon dioxide	44	CO2	000124-38-9	3
4	Nitrous Oxide	44	N2O	010024-97-2	3
5	Nitrous Oxide	44	N2O	010024-97-2	3





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\data\4D\v4d3201-3203\
Data File : 4D73690.D
Acq On : 8 Nov 2016 10:02 am
Operator : XimenaC
Sample : mb
Misc : MS3,V4D3202,5,,,,1
ALS Vial : 32 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4D3126.M
Quant Title : METHOD SW-846 8260C , DB-624 60m x 0.25mm x 1.4 um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lcsint.p

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
system artifact	3.278	33.4	ug/L	637094	2	10.005	955214	50.0

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
Analyst: AB Run ID: MA40671
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:15	MA40671-STD1	1		STDA
10:21	MA40671-STD2	1		STDB
10:27	ZZZZZZ	1		
10:33	ZZZZZZ	1		
10:40	MA40671-ICV1	1		
10:55	MA40671-ICB1	1		
11:02	MA40671-ICCV1	1		
11:14	MA40671-CCB1	1		
11:19	MA40671-CRI1	1		
11:25	MA40671-CRID1	1		
11:31	MA40671-CRIA1	1		
11:37	MA40671-ICSA1	1		
11:43	MA40671-ICSAB1	1		
11:49	MA40671-HSTD1	1		
11:55	MA40671-HSTD2	1		
12:01	ZZZZZZ	1		
12:07	ZZZZZZ	1		
12:13	ZZZZZZ	1		
12:19	MA40671-CCV1	1		
12:25	MA40671-CCB2	1		
12:31	MA40671-CRID2	1		
12:37	ZZZZZZ	1		
12:43	ZZZZZZ	1		
12:49	ZZZZZZ	1		
12:55	ZZZZZZ	1		
13:01	ZZZZZZ	1		
13:07	ZZZZZZ	1		
13:13	ZZZZZZ	3		
13:19	ZZZZZZ	20		
13:25	MA40671-CCV2	1		
13:31	MA40671-CCB3	1		
13:37	ZZZZZZ	10		
13:43	ZZZZZZ	20		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
Analyst: AB Run ID: MA40671
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:49	ZZZZZZ	1		
13:54	ZZZZZZ	1		
14:01	ZZZZZZ	3		
14:06	ZZZZZZ	10		
14:12	ZZZZZZ	1		
14:18	ZZZZZZ	1		
14:24	MP96877-B1	1		
14:30	MA40671-CCV3	1		
14:36	MA40671-CCB4	1		
14:46	MP96759-B1	1		
14:52	MP96759-MB1	1		
14:58	MP96759-S1	1		
15:04	MP96759-S2	1		
15:09	JC30052-2A	1		(sample used for QC only; not part of login JC30522)
15:15	MP96759-SD1	1		
15:21	ZZZZZZ	1		
15:27	ZZZZZZ	1		
15:33	ZZZZZZ	1		
15:39	MA40671-CCV4	1		
15:45	MA40671-CCB5	1		
15:51	ZZZZZZ	1		
15:57	ZZZZZZ	1		
16:03	ZZZZZZ	1		
16:09	ZZZZZZ	1		
16:15	ZZZZZZ	1		
16:21	ZZZZZZ	1		
16:27	ZZZZZZ	1		
16:33	ZZZZZZ	1		
16:39	ZZZZZZ	1		
16:45	MA40671-CCV5	1		
16:51	MA40671-CCB6	1		
16:57	ZZZZZZ	1		
17:03	MP96877-MB1	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
Analyst: AB Run ID: MA40671
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:09	MP96877-B2	1		
17:15	MP96877-S1	1		
17:21	MP96877-S2	1		
17:26	MP96877-S3	1		
17:32	MP96877-S4	1		
17:38	JC30628-1	1		(sample used for QC only; not part of login JC30522)
17:44	MP96877-SD1	5		
17:50	MA40671-CCV6	1		
17:56	MA40671-CCB7	1		
18:02	ZZZZZZ	1		
18:08	ZZZZZZ	1		
18:14	ZZZZZZ	1		
18:20	ZZZZZZ	1		
18:26	ZZZZZZ	1		
18:32	ZZZZZZ	1		
18:38	ZZZZZZ	1		
18:44	ZZZZZZ	1		
18:50	MA40671-CCV7	1		
18:56	MA40671-CCB8	1		
19:02	MA40671-CRI2	1		
19:08	MA40671-CRID3	1		
19:14	MA40671-CRIA2	1		
19:20	MA40671-ICSA2	1		
19:26	MA40671-ICSAB2	1		
19:32	MA40671-CCV8	1		
19:38	MA40671-CCB9	1		
19:44	MP96697-B1	1		
20:14	MP96697-MB1	1		
20:20	MP96697-S1	1		
20:26	MP96697-S2	1		
20:32	JC30140-3A	1		(sample used for QC only; not part of login JC30522)
20:38	MP96697-SD1	5		
20:44	MP96789-MB1	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
Analyst: AB Run ID: MA40671
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
20:50	MP96789-B1	1		
20:55	MP96789-S1	1		
21:01	MA40671-CCV9	1		
21:07	MA40671-CCB10	1		
21:13	MP96789-S2	1		
21:19	JC30151-5F	1		(sample used for QC only; not part of login JC30522)
21:25	MP96789-SD1	5		
21:31	ZZZZZZ	1		
21:37	ZZZZZZ	1		
21:43	ZZZZZZ	1		
21:49	ZZZZZZ	1		
21:55	ZZZZZZ	1		
22:01	ZZZZZZ	1		
22:07	MA40671-CCV10	1		
22:13	MA40671-CCB11	1		
22:19	ZZZZZZ	1		
22:25	ZZZZZZ	1		
22:31	ZZZZZZ	1		
22:37	ZZZZZZ	1		
22:43	ZZZZZZ	1		
22:49	ZZZZZZ	1		
22:55	ZZZZZZ	1		
23:01	ZZZZZZ	1		
23:07	ZZZZZZ	1		
23:13	MA40671-CCV11	1		
23:18	MA40671-CCB12	1		
23:25	ZZZZZZ	1		
23:31	ZZZZZZ	1		
23:37	ZZZZZZ	1		
23:43	ZZZZZZ	1		
23:49	MP96863-MB2	1		
23:55	MP96863-B2	1		
00:01	ZZZZZZ	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
Analyst: AB Run ID: MA40671
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
00:07	ZZZZZZ	1		
00:13	ZZZZZZ	1		
00:19	MA40671-CCV12	1		
00:24	MA40671-CCB13	1		
00:30	ZZZZZZ	1		
00:37	MP96845A-B1	1		
00:42	MP96845A-MB1	1		
00:48	MP96845A-S1	1		
00:54	MP96845A-S2	1		
01:00	JC30229-5	1		(sample used for QC only; not part of login JC30522)
01:06	MP96845A-SD1	5		
01:12	ZZZZZZ	1		
01:18	ZZZZZZ	1		
01:24	MA40671-CCV13	1		
01:30	MA40671-CCB14	1		
01:36	ZZZZZZ	1		
01:42	ZZZZZZ	1		
01:48	ZZZZZZ	1		
01:54	ZZZZZZ	1		
02:00	ZZZZZZ	1		
02:06	ZZZZZZ	1		
02:12	ZZZZZZ	1		
02:18	ZZZZZZ	1		
02:24	ZZZZZZ	1		
02:30	MA40671-CCV14	1		
02:36	MA40671-CCB15	1		
02:42	MA40671-CRI3	1		
02:48	MA40671-CRID4	1		
02:54	MA40671-CRIA3	1		
03:00	MA40671-ICSA3	1		
03:07	MA40671-ICSAB3	1		
03:13	MA40671-CCV15	1		
03:18	MA40671-CCB16	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
Analyst: AB Run ID: MA40671
Parameters: Fe

Time	Sample Description	Dilution Factor	PS Recov	Comments
03:24	ZZZZZZ	1		
03:31	ZZZZZZ	1		
03:37	ZZZZZZ	1		
03:43	ZZZZZZ	1		
03:49	ZZZZZZ	1		
03:55	ZZZZZZ	1		
04:01	ZZZZZZ	1		
04:07	ZZZZZZ	1		
04:13	ZZZZZZ	1		
04:19	ZZZZZZ	1		
04:25	ZZZZZZ	1		
04:32	ZZZZZZ	1		
04:38	MA40671-CCV16	1		
04:43	MA40671-CCB17	1		
04:50	ZZZZZZ	1		
04:55	ZZZZZZ	1		
05:01	MP96803-SD1	5		
05:07	ZZZZZZ	1		
05:13	ZZZZZZ	1		
05:19	ZZZZZZ	1		
05:25	ZZZZZZ	1		
05:31	ZZZZZZ	1		
05:37	ZZZZZZ	1		
05:43	MA40671-CCV17	1		
05:49	MA40671-CCB18	1		
05:55	ZZZZZZ	1		
06:01	ZZZZZZ	1		
06:07	ZZZZZZ	1		
06:13	MP96853-B1	1		
06:19	MP96853-MB1	1		
06:25	MP96853-S1	1		
06:31	MP96853-S2	1		
06:37	JC30522-4	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
Analyst: AB Run ID: MA40671
Parameters: Fe

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	06:43	MP96853-SD1	5		
	06:49	MA40671-CCV18	1		
	06:54	MA40671-CCB19	1		
	07:01	JC30522-1	1		
	07:07	JC30522-2	1		
	07:13	JC30522-3	1		
	07:19	JC30522-5	1		
	07:24	JC30522-6	1		
	07:31	JC30522-7	1		
---------->		Last reportable sample/prep for job JC30522			
	07:36	ZZZZZZ	1		
	07:42	ZZZZZZ	1		
	07:49	ZZZZZZ	1		
	07:55	MA40671-CCV19	1		
	08:00	MA40671-CCB20	1		
	08:07	MA40671-ICSA4	1		
	08:13	MA40671-ICSAB4	1		
	08:19	MA40671-CCV20	1		
	08:24	MA40671-CCB21	1		
---------->		Last reportable CCB for job JC30522			
		Refer to raw data for calibration curve and standards.			

INTERNAL STANDARD SUMMARY

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
Analyst: AB Run ID: MA40671
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
10:15	MA40671-STD1	3048 R	36841 R	10309 R	9453 R
10:21	MA40671-STD2	2818	33698	10108	8175
10:27	ZZZZZZ	2877	34612	10210	8384
10:33	ZZZZZZ	3020	36920	10403	9359
10:40	MA40671-ICV1	2864	34589	10282	8355
10:55	MA40671-ICB1	3038	36896	10439	9379
11:02	MA40671-ICCV1	2884	34772	10276	8367
11:14	MA40671-CCB1	3039	37051	10481	9363
11:19	MA40671-CRI1	2981	36370	10493	9059
11:25	MA40671-CRID1	No results reported for the elements associated with this internal standard.			
11:31	MA40671-CRIA1	3008	36824	10659	9229
11:37	MA40671-ICSA1	2656	31478	10089	7521
11:43	MA40671-ICSAB1	2651	31602	10151	7514
11:49	MA40671-HSTD1	2947	36045	10628	8968
11:55	MA40671-HSTD2	2698	32231	10173	7536
12:01	ZZZZZZ	2932	36020	10660	9180
12:07	ZZZZZZ	2918	36662	10705	9113
12:13	ZZZZZZ	3014	36951	10743	9227
12:19	MA40671-CCV1	2885	34947	10654	8304
12:25	MA40671-CCB2	2998	36967	10719	9178
12:31	MA40671-CRID2	2987	36793	10780	9109
12:37	ZZZZZZ	2924	35917	11045	8714
12:43	ZZZZZZ	2982	36637	11242	8865
12:49	ZZZZZZ	2983	36969	10972	9241
12:55	ZZZZZZ	2941	36280	10997	8848
13:01	ZZZZZZ	2865	35228	10916	8364
13:07	ZZZZZZ	2953	36792	10924	9034
13:13	ZZZZZZ	2809	34326	10940	8202
13:19	ZZZZZZ	2885	35071	10777	8455
13:25	MA40671-CCV2	2849	34662	10739	8163
13:31	MA40671-CCB3	2995	36828	10938	9124
13:37	ZZZZZZ	2877	34992	10922	8326
13:43	ZZZZZZ	2911	35544	10909	8523

INTERNAL STANDARD SUMMARY

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
Analyst: AB Run ID: MA40671
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
13:49	ZZZZZZ	2871	35212	10816	8361
13:54	ZZZZZZ	2991	37158	11133	9096
14:01	ZZZZZZ	2894	33743	10970	8204
14:06	ZZZZZZ	2814	34446	10772	8197
14:12	ZZZZZZ	2904	36150	11132	8711
14:18	ZZZZZZ	2916	35861	11386	8343
14:24	MP96877-B1	2916	35968	11180	8489
14:30	MA40671-CCV3	2864	34591	10681	8184
14:36	MA40671-CCB4	2988	36719	11144	9056
14:46	MP96759-B1	2875	35433	10977	8326
14:52	MP96759-MB1	2983	37028	11103	9058
14:58	MP96759-S1	2815	34685	10962	8093
15:04	MP96759-S2	2823	34923	11046	8118
15:09	JC30052-2A	2887	35757	11108	8505
15:15	MP96759-SD1	2973	36790	11121	8940
15:21	ZZZZZZ	2887	35801	11110	8450
15:27	ZZZZZZ	2892	35781	11120	8483
15:33	ZZZZZZ	2718	33390	10699	7805
15:39	MA40671-CCV4	2867	35119	10640	8225
15:45	MA40671-CCB5	3026	37294	10917	9253
15:51	ZZZZZZ	2913	35874	10969	8602
15:57	ZZZZZZ	2846	35272	10988	8341
16:03	ZZZZZZ	3048	38045	11277	9331
16:09	ZZZZZZ	3042	37936	11247	9324
16:15	ZZZZZZ	3040	37934	11303	9273
16:21	ZZZZZZ	2953	36657	11255	8723
16:27	ZZZZZZ	2998	37205	11244	8931
16:33	ZZZZZZ	3012	37291	11363	8865
16:39	ZZZZZZ	3000	37416	11411	8942
16:45	MA40671-CCV5	2902	35524	11106	8291
16:51	MA40671-CCB6	3066	37763	11283	9269
16:57	ZZZZZZ	3012	37726	11253	9142
17:03	MP96877-MB1	3052	38035	11552	9331

INTERNAL STANDARD SUMMARY

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
Analyst: AB Run ID: MA40671
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
17:09	MP96877-B2	3059	38018	11547	9348
17:15	MP96877-S1	2777	34180	10966	7797
17:21	MP96877-S2	2788	34262	11174	7819
17:26	MP96877-S3	2816	34642	11213	8005
17:32	MP96877-S4	2809	34546	11214	7982
17:38	JC30628-1	2818	34527	11265	7989
17:44	MP96877-SD1	2963	36505	11356	8695
17:50	MA40671-CCV6	2897	35463	11083	8267
17:56	MA40671-CCB7	3054	37827	11290	9210
18:02	ZZZZZZ	3012	37049	11642	8691
18:08	ZZZZZZ	2876	35433	11430	8376
18:14	ZZZZZZ	2751	33952	11326	7757
18:20	ZZZZZZ	2738	34069	11330	7737
18:26	ZZZZZZ	2890	35994	11310	8463
18:32	ZZZZZZ	2896	36024	11344	8458
18:38	ZZZZZZ	2875	35515	11540	8255
18:44	ZZZZZZ	2694	32330	11238	7309
18:50	MA40671-CCV7	2879	35498	11160	8244
18:56	MA40671-CCB8	3058	38018	11343	9285
19:02	MA40671-CRI2	3013	37211	11277	9029
19:08	MA40671-CRID3	3039	37847	11320	9205
19:14	MA40671-CRIA2	3040	37670	11334	9236
19:20	MA40671-ICSA2	2684	31625	10783	7504
19:26	MA40671-ICSAB2	2701	32713	10839	7542
19:32	MA40671-CCV8	2935	36043	11256	8400
19:38	MA40671-CCB9	3072	38228	11336	9356
19:44	MP96697-B1	2932	36206	11155	8565
20:14	MP96697-MB1	3064	38219	11405	9311
20:20	MP96697-S1	2962	36849	11574	8366
20:26	MP96697-S2	2972	36733	11571	8323
20:32	JC30140-3A	3037	37906	11666	8759
20:38	MP96697-SD1	3068	38312	11315	9138
20:44	MP96789-MB1	3092	38586	11362	9464

INTERNAL STANDARD SUMMARY

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
Analyst: AB Run ID: MA40671
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
20:50	MP96789-B1	2986	36868	11293	8729
20:55	MP96789-S1	2794	34380	11108	7948
21:01	MA40671-CCV9	2945	35883	11057	8487
21:07	MA40671-CCB10	3061	38360	11247	9394
21:13	MP96789-S2	2808	34503	11068	7995
21:19	JC30151-5F	2821	34545	11138	8078
21:25	MP96789-SD1	2995	36803	11224	8858
21:31	ZZZZZZ	3060	37827	11418	8996
21:37	ZZZZZZ	No results reported for the elements associated with this internal standard.			
21:43	ZZZZZZ	No results reported for the elements associated with this internal standard.			
21:49	ZZZZZZ	2781	33488	11014	7743
21:55	ZZZZZZ	2780	33746	10953	7901
22:01	ZZZZZZ	2768	33320	10897	7702
22:07	MA40671-CCV10	2973	36337	11069	8578
22:13	MA40671-CCB11	3083	38351	11176	9473
22:19	ZZZZZZ	3122	38592	11356	9600
22:25	ZZZZZZ	2934	36772	11487	8755
22:31	ZZZZZZ	2954	36205	11353	8566
22:37	ZZZZZZ	3018	37051	11288	8927
22:43	ZZZZZZ	2829	34556	11101	8133
22:49	ZZZZZZ	2852	35038	11064	8235
22:55	ZZZZZZ	2935	36357	11363	8789
23:01	ZZZZZZ	2918	35696	11191	8475
23:07	ZZZZZZ	3023	36975	11252	8935
23:13	MA40671-CCV11	2975	36034	11198	8602
23:18	MA40671-CCB12	3105	38689	11220	9561
23:25	ZZZZZZ	2867	35262	11099	8274
23:31	ZZZZZZ	2562	30606	10573	7032
23:37	ZZZZZZ	2585	30930	10601	7088
23:43	ZZZZZZ	2564	30878	10681	7019
23:49	MP96863-MB2	3121	39276	11427	9591
23:55	MP96863-B2	2981	36989	11191	8731
00:01	ZZZZZZ	3015	37381	11301	8996

INTERNAL STANDARD SUMMARY

Login Number: JC30522
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Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
Analyst: AB Run ID: MA40671
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
00:07	ZZZZZZ	3016	37303	11257	8950
00:13	ZZZZZZ	2955	36502	11129	8733
00:19	MA40671-CCV12	3001	36597	11155	8663
00:24	MA40671-CCB13	3119	38856	11239	9574
00:30	ZZZZZZ	2901	35683	11100	8479
00:37	MP96845A-B1	3011	37325	11279	8834
00:42	MP96845A-MB1	3114	38759	11388	9591
00:48	MP96845A-S1	3008	37009	11373	8796
00:54	MP96845A-S2	2992	36838	11221	8763
01:00	JC30229-5	3103	38567	11472	9466
01:06	MP96845A-SD1	3130	38857	11303	9615
01:12	ZZZZZZ	3110	38826	11256	9574
01:18	ZZZZZZ	3387	41450	13872 !a	9167
01:24	MA40671-CCV13	2886	35225	10754	8354
01:30	MA40671-CCB14	3016	37280	10750	9283
01:36	ZZZZZZ	3002	36751	11739	8310
01:42	ZZZZZZ	2496	31151	10806	8995
01:48	ZZZZZZ	2909	36128	10918	8657
01:54	ZZZZZZ	2543	31195	10536	7755
02:00	ZZZZZZ	2146	26420	10870	9790
02:06	ZZZZZZ	3002	37590	10917	9261
02:12	ZZZZZZ	3037	38042	11078	9349
02:18	ZZZZZZ	3011	37778	11110	9276
02:24	ZZZZZZ	2928	36272	10974	8673
02:30	MA40671-CCV14	2903	35750	10852	8392
02:36	MA40671-CCB15	3053	37587	10922	9382
02:42	MA40671-CRI3	3022	36211	11157	9149
02:48	MA40671-CRID4	3063	37770	10965	9377
02:54	MA40671-CRIA3	3047	37908	10858	9358
03:00	MA40671-ICSA3	2690	32417	10480	7582
03:07	MA40671-ICSAB3	2680	32329	10539	7563
03:13	MA40671-CCV15	2887	35597	10740	8357
03:18	MA40671-CCB16	3029	37800	10976	9328

INTERNAL STANDARD SUMMARY

Login Number: JC30522
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Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
Analyst: AB Run ID: MA40671
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
03:24	ZZZZZZ	3049	38103	11137	9458
03:31	ZZZZZZ	3025	37779	11031	9367
03:37	ZZZZZZ	3038	37854	11076	9314
03:43	ZZZZZZ	3021	38116	11027	9306
03:49	ZZZZZZ	3053	38087	11106	9390
03:55	ZZZZZZ	2785	34173	10732	8047
04:01	ZZZZZZ	3090	35624	11448	8445
04:07	ZZZZZZ	2768	34128	10743	8038
04:13	ZZZZZZ	3086	38660	11189	9487
04:19	ZZZZZZ	3063	38590	11137	9451
04:25	ZZZZZZ	3053	38123	11133	9404
04:32	ZZZZZZ	3060	38301	11058	9454
04:38	MA40671-CCV16	2931	36032	10900	8520
04:43	MA40671-CCB17	3032	38385	11079	9368
04:50	ZZZZZZ	2973	37040	11075	8811
04:55	ZZZZZZ	3045	38383	11298	9502
05:01	MP96803-SD1	2977	36895	10921	9007
05:07	ZZZZZZ	2839	35505	11104	8311
05:13	ZZZZZZ	2872	35665	11032	8527
05:19	ZZZZZZ	3016	38427	11312	9394
05:25	ZZZZZZ	2883	36116	11158	8521
05:31	ZZZZZZ	3043	39479	11210	9478
05:37	ZZZZZZ	2843	35003	10870	8298
05:43	MA40671-CCV17	2880	35278	10453	8370
05:49	MA40671-CCB18	3014	37816	10943	9326
05:55	ZZZZZZ	2857	35162	10872	8350
06:01	ZZZZZZ	2876	36096	11135	8540
06:07	ZZZZZZ	2864	35771	11333	8405
06:13	MP96853-B1	2953	36645	11137	8734
06:19	MP96853-MB1	3042	38337	11230	9495
06:25	MP96853-S1	2873	35727	11005	8387
06:31	MP96853-S2	2892	36079	11210	8439
06:37	JC30522-4	2961	36843	11218	8895

INTERNAL STANDARD SUMMARY

Login Number: JC30522
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Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
Analyst: AB Run ID: MA40671
Parameters: Fe

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
06:43	MP96853-SD1	3018	37836	11194	9249
06:49	MA40671-CCV18	2893	35406	10829	8391
06:54	MA40671-CCB19	3045	38065	11055	9384
07:01	JC30522-1	2927	36533	11211	8520
07:07	JC30522-2	2899	36682	11371	8479
07:13	JC30522-3	2934	36640	11226	8763
07:19	JC30522-5	2880	35770	11186	8339
07:24	JC30522-6	2808	34710	11122	7815
07:31	JC30522-7	2955	37089	11357	8714
07:36	ZZZZZZ	2692	32675	10933	7489
07:42	ZZZZZZ	2653	31874	10822	7352
07:49	ZZZZZZ	2705	32918	10985	7554
07:55	MA40671-CCV19	2918	35971	11098	8431
08:00	MA40671-CCB20	3048	37985	10989	9392
08:07	MA40671-ICSA4	2681	32606	10557	7583
08:13	MA40671-ICSAB4	2684	32482	10500	7604
08:19	MA40671-CCV20	2918	35955	10943	8480
08:24	MA40671-CCB21	3043	38248	11013	9413

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

(a) No samples reported for the elements associated with this internal standard.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA40671 Units: ug/l

Time:			10:55		11:14		12:25		13:31	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	17	anr							
Antimony	6.0	1.2	anr							
Arsenic	3.0	1.1	anr							
Barium	200	.6	anr							
Beryllium	1.0	.1								
Bismuth	20	1.7								
Boron	100	.9	anr							
Cadmium	3.0	.2	anr							
Calcium	2000	44	anr							
Chromium	10	.5	anr							
Cobalt	50	.4	anr							
Copper	10	1.2	anr							
Iron	100	5.7	1.3	<100	1.6	<100	4.9	<100	3.1	<100
Lead	3.0	1.3	anr							
Lithium	20	2.9								
Magnesium	2000	30	anr							
Manganese	15	.2	anr							
Molybdenum	20	.4								
Nickel	10	.3	anr							
Palladium	50	1.9								
Potassium	2000	65								
Selenium	10	3	anr							
Silicon	200	5.8								
Silver	10	.8	anr							
Sodium	2000	21	anr							
Sulfur	50	4.3								
Strontium	10	.1								
Thallium	2.0	1.8	anr							
Tin	10	.9	anr							
Titanium	10	1.2	anr							
Tungsten	50	2								
Vanadium	50	.4	anr							
Zinc	20	.8	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA40671 Units: ug/l

Time:			10:55		11:14		12:25		13:31	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA40671 Units: ug/l

Time:			14:36		15:45		16:51		17:56	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	17	anr							
Antimony	6.0	1.2	anr							
Arsenic	3.0	1.1	anr							
Barium	200	.6	anr							
Beryllium	1.0	.1								
Bismuth	20	1.7								
Boron	100	.9	anr							
Cadmium	3.0	.2	anr							
Calcium	2000	44	anr							
Chromium	10	.5	anr							
Cobalt	50	.4	anr							
Copper	10	1.2	anr							
Iron	100	5.7	4.0	<100	5.3	<100	10.6	<100	5.5	<100
Lead	3.0	1.3	anr							
Lithium	20	2.9								
Magnesium	2000	30	anr							
Manganese	15	.2	anr							
Molybdenum	20	.4								
Nickel	10	.3	anr							
Palladium	50	1.9								
Potassium	2000	65								
Selenium	10	3	anr							
Silicon	200	5.8								
Silver	10	.8	anr							
Sodium	2000	21	anr							
Sulfur	50	4.3								
Strontium	10	.1								
Thallium	2.0	1.8	anr							
Tin	10	.9	anr							
Titanium	10	1.2	anr							
Tungsten	50	2								
Vanadium	50	.4	anr							
Zinc	20	.8	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA40671 Units: ug/l

Time:			14:36		15:45		16:51		17:56	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA40671 Units: ug/l

Time:			18:56		19:38		21:07		22:13	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	17	anr							
Antimony	6.0	1.2	anr							
Arsenic	3.0	1.1	anr							
Barium	200	.6	anr							
Beryllium	1.0	.1								
Bismuth	20	1.7								
Boron	100	.9	anr							
Cadmium	3.0	.2	anr							
Calcium	2000	44	anr							
Chromium	10	.5	anr							
Cobalt	50	.4	anr							
Copper	10	1.2	anr							
Iron	100	5.7	7.8	<100	7.4	<100	4.3	<100	2.5	<100
Lead	3.0	1.3	anr							
Lithium	20	2.9								
Magnesium	2000	30	anr							
Manganese	15	.2	anr							
Molybdenum	20	.4								
Nickel	10	.3	anr							
Palladium	50	1.9								
Potassium	2000	65								
Selenium	10	3	anr							
Silicon	200	5.8								
Silver	10	.8	anr							
Sodium	2000	21	anr							
Sulfur	50	4.3								
Strontium	10	.1								
Thallium	2.0	1.8	anr							
Tin	10	.9	anr							
Titanium	10	1.2	anr							
Tungsten	50	2								
Vanadium	50	.4	anr							
Zinc	20	.8	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA40671 Units: ug/l

Time:			18:56		19:38		21:07		22:13	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA40671 Units: ug/l

Time:			23:18		00:24		01:30		02:36	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	17	anr							
Antimony	6.0	1.2	anr							
Arsenic	3.0	1.1	anr							
Barium	200	.6	anr							
Beryllium	1.0	.1								
Bismuth	20	1.7								
Boron	100	.9	anr							
Cadmium	3.0	.2	anr							
Calcium	2000	44	anr							
Chromium	10	.5	anr							
Cobalt	50	.4	anr							
Copper	10	1.2	anr							
Iron	100	5.7	3.9	<100	3.7	<100	5.3	<100	7.7	<100
Lead	3.0	1.3	anr							
Lithium	20	2.9								
Magnesium	2000	30	anr							
Manganese	15	.2	anr							
Molybdenum	20	.4								
Nickel	10	.3	anr							
Palladium	50	1.9								
Potassium	2000	65								
Selenium	10	3	anr							
Silicon	200	5.8								
Silver	10	.8	anr							
Sodium	2000	21	anr							
Sulfur	50	4.3								
Strontium	10	.1								
Thallium	2.0	1.8	anr							
Tin	10	.9	anr							
Titanium	10	1.2	anr							
Tungsten	50	2								
Vanadium	50	.4	anr							
Zinc	20	.8	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA40671 Units: ug/l

Time:			23:18		00:24		01:30		02:36	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA40671 Units: ug/l

Time:			03:18		04:43		05:49		06:54	
Sample ID:			CCB16		CCB17		CCB18		CCB19	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	17	anr							
Antimony	6.0	1.2	anr							
Arsenic	3.0	1.1	anr							
Barium	200	.6	anr							
Beryllium	1.0	.1								
Bismuth	20	1.7								
Boron	100	.9	anr							
Cadmium	3.0	.2	anr							
Calcium	2000	44	anr							
Chromium	10	.5	anr							
Cobalt	50	.4	anr							
Copper	10	1.2	anr							
Iron	100	5.7	0.70	<100	5.1	<100	0.50	<100	5.8	<100
Lead	3.0	1.3	anr							
Lithium	20	2.9								
Magnesium	2000	30	anr							
Manganese	15	.2	anr							
Molybdenum	20	.4								
Nickel	10	.3	anr							
Palladium	50	1.9								
Potassium	2000	65								
Selenium	10	3	anr							
Silicon	200	5.8								
Silver	10	.8	anr							
Sodium	2000	21	anr							
Sulfur	50	4.3								
Strontium	10	.1								
Thallium	2.0	1.8	anr							
Tin	10	.9	anr							
Titanium	10	1.2	anr							
Tungsten	50	2								
Vanadium	50	.4	anr							
Zinc	20	.8	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA40671 Units: ug/l

Time:			03:18		04:43		05:49		06:54	
Sample ID:			CCB16		CCB17		CCB18		CCB19	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA40671 Units: ug/l

Time:			08:00		08:24	
Sample ID:			CCB20		CCB21	
Metal	RL	IDL	raw	final	raw	final
Aluminum	200	17	anr			
Antimony	6.0	1.2	anr			
Arsenic	3.0	1.1	anr			
Barium	200	.6	anr			
Beryllium	1.0	.1				
Bismuth	20	1.7				
Boron	100	.9	anr			
Cadmium	3.0	.2	anr			
Calcium	2000	44	anr			
Chromium	10	.5	anr			
Cobalt	50	.4	anr			
Copper	10	1.2	anr			
Iron	100	5.7	1.4	<100	9.5	<100
Lead	3.0	1.3	anr			
Lithium	20	2.9				
Magnesium	2000	30	anr			
Manganese	15	.2	anr			
Molybdenum	20	.4				
Nickel	10	.3	anr			
Palladium	50	1.9				
Potassium	2000	65				
Selenium	10	3	anr			
Silicon	200	5.8				
Silver	10	.8	anr			
Sodium	2000	21	anr			
Sulfur	50	4.3				
Strontium	10	.1				
Thallium	2.0	1.8	anr			
Tin	10	.9	anr			
Titanium	10	1.2	anr			
Tungsten	50	2				
Vanadium	50	.4	anr			
Zinc	20	.8	anr			

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA40671 Units: ug/l

Time:			08:00		08:24	
Sample ID:			CCB20		CCB21	
Metal	RL	IDL	raw	final	raw	final
Zirconium	10	.3				

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA40671 Units: ug/l

Time:		11:02	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	anr		
Beryllium			
Bismuth			
Boron	anr		
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	40000	41000	102.5
Lead	anr		
Lithium			
Magnesium	anr		
Manganese	anr		
Molybdenum			
Nickel	anr		
Palladium			
Potassium			
Selenium	anr		
Silicon			
Silver	anr		
Sodium	anr		
Sulfur			
Strontium			
Thallium	anr		
Tin	anr		
Titanium	anr		
Tungsten			
Vanadium	anr		
Zinc	anr		

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA40671 Units: ug/l

Time:		11:02	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA40671 Units: ug/l

Time:		10:40			12:19			13:25	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium									
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	39600	99.0	40000	39900	99.8	40000	39900	99.8
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium									
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium	anr								
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA40671 Units: ug/l

Time:		10:40			12:19			13:25	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA40671 Units: ug/l

Time:		14:30			15:39			16:45	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium									
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40600	101.5	40000	39800	99.5	40000	39000	97.5
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium									
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium	anr								
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA40671 Units: ug/l

Time:		14:30			15:39			16:45	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA40671 Units: ug/l

Time:		17:50			18:50			19:32	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium									
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	38700	96.8	40000	38500	96.3	40000	37900	94.8
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium									
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium	anr								
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA40671 Units: ug/l

Time:		17:50			18:50			19:32	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA40671 Units: ug/l

Time:		21:01			22:07			23:13	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium									
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	38400	96.0	40000	38300	95.8	40000	38100	95.3
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium									
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium	anr								
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA40671 Units: ug/l

Time:		21:01			22:07			23:13	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA40671 Units: ug/l

Time:		00:19			01:24			02:30	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium									
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	38100	95.3	40000	39700	99.3	40000	38900	97.3
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium									
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium	anr								
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA40671 Units: ug/l

Time:		00:19			01:24			02:30	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA40671 Units: ug/l

Time:		03:13			04:38			05:43	
Sample ID:	CCV	CCV15		CCV	CCV16		CCV	CCV17	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium									
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	39400	98.5	40000	38800	97.0	40000	40800	102.0
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium									
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium	anr								
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA40671 Units: ug/l

Time:		03:13			04:38			05:43	
Sample ID:	CCV	CCV15		CCV	CCV16		CCV	CCV17	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA40671 Units: ug/l

Time:		06:49			07:55			08:19	
Sample ID:	CCV	CCV18		CCV	CCV19		CCV	CCV20	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium									
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	39500	98.8	40000	38400	96.0	40000	38800	97.0
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium									
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium	anr								
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA40671 Units: ug/l

Time:		06:49			07:55			08:19	
Sample ID:	CCV	CCV18		CCV	CCV19		CCV	CCV20	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA40671 Units: ug/l

Time:		11:49			11:55	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum						
Antimony	anr					
Arsenic	anr					
Barium	anr					
Beryllium						
Bismuth						
Boron	anr					
Cadmium	anr					
Calcium						
Chromium	anr					
Cobalt	anr					
Copper						
Iron				150000	150000	100.0
Lead	anr					
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel	anr					
Palladium						
Potassium						
Selenium	anr					
Silicon						
Silver	anr					
Sodium						
Sulfur						
Strontium						
Thallium	anr					
Tin	anr					
Titanium	anr					
Tungsten						
Vanadium	anr					
Zinc	anr					

HIGH STANDARD CHECK SUMMARY

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA40671 Units: ug/l

Time:		11:49			11:55	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Zirconium						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA40671 Units: ug/l

Time:				11:19		11:31		12:31	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0						
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		102	102.0	503	100.6		
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	anr					
Molybdenum	20								
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000						
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		2.0	anr					
Sodium	5000		1000	anr					
Sulfur	50								
Strontium	10								
Thallium	10		2.0	anr					
Tin	10			anr					
Titanium	10			anr					
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA40671 Units: ug/l

Time:				11:19		11:31		12:31	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10								

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA40671 Units: ug/l

Time:				19:02		19:08		19:14	
Sample ID:	CRI	CRIA	CRID	CRI2		CRID3		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0						
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		100	100.0			486	97.2
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	anr					
Molybdenum	20								
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000						
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		2.0	anr					
Sodium	5000		1000	anr					
Sulfur	50								
Strontium	10								
Thallium	10		2.0	anr					
Tin	10			anr					
Titanium	10			anr					
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA40671 Units: ug/l

Time:				19:02		19:08		19:14	
Sample ID:	CRI	CRIA	CRID	CRI2		CRID3		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10								

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA40671 Units: ug/l

Time:				02:42		02:48		02:54	
Sample ID:	CRI	CRIA	CRID	CRI3		CRID4		CRIA3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0						
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		98.1	98.1			492	98.4
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	anr					
Molybdenum	20								
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000						
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		2.0	anr					
Sodium	5000		1000	anr					
Sulfur	50								
Strontium	10								
Thallium	10		2.0	anr					
Tin	10			anr					
Titanium	10			anr					
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA40671 Units: ug/l

Time:				02:42		02:48		02:54	
Sample ID:	CRI	CRIA	CRID	CRI3		CRID4		CRIA3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10								

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA40671 Units: ug/l

Time:			11:37		11:43		19:20		19:26	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	478000	95.6	476000	95.2	461000	92.2	454000	90.8
Antimony		1000	7.4		1040	104.0	9.8		1010	101.0
Arsenic		1000	2.5		1020	102.0	0.10		977	97.7
Barium		500	-0.10		498	99.6	-0.20		470	94.0
Beryllium		500	0.10		482	96.4	0.20		458	91.6
Bismuth		500	-1.3		511	102.2	-0.30		497	99.4
Boron		500	-5.3		486	97.2	-5.9		461	92.2
Cadmium		1000	0.60		1030	103.0	0.70		995	99.5
Calcium	400000	400000	372000	93.0	371000	92.8	350000	87.5	350000	87.5
Chromium		500	-0.30		496	99.2	-0.10		461	92.2
Cobalt		500	4.1		488	97.6	4.0		472	94.4
Copper		500	-4.1		552	110.4	0.90		557	111.4
Iron	200000	200000	195000	97.5	190000	95.0	185000	92.5	179000	89.5
Lead		1000	0.20		945	94.5	3.2		909	90.9
Lithium		500	-3.3		618	123.6*	-4.4		599	119.8
Magnesium	500000	500000	482000	96.4	483000	96.6	454000	90.8	452000	90.4
Manganese		500	0.0		509	101.8	0.50		486	97.2
Molybdenum		500	2.8		477	95.4	2.5		458	91.6
Nickel		1000	2.7		982	98.2	4.8		944	94.4
Palladium		500	0.70		535	107.0	1.7		529	105.8
Potassium			57.1		50.4		59.3		56.9	
Selenium		1000	3.8		996	99.6	4.1		950	95.0
Silicon		500	8.1		522	104.4	10.0		500	100.0
Silver		1000	1.1		1040	104.0	0.80		1010	101.0
Sodium			77.3		69.5		160		132	
Sulfur		500	-30		447	89.4	-30		417	83.4
Strontium		500	0.90		522	104.4	1.8		499	99.8
Thallium		1000	-1.1		989	98.9	-2.7		956	95.6
Tin		500	2.9		484	96.8	0.80		455	91.0
Titanium		500	3.8		474	94.8	3.4		448	89.6
Tungsten		500	22.4		484	96.8	20.4		459	91.8
Vanadium		500	0.20		486	97.2	0.20		459	91.8
Zinc		1000	-3.4		952	95.2	-3.6		886	88.6

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA40671 Units: ug/l

Time:			11:37		11:43		19:20		19:26	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	-5.5		482	96.4	-6.0		466	93.2

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA40671 Units: ug/l

Time: / Sample ID: / Metal	ICSA True	ICSAB True	03:00 ICSA3 Results	% Rec	03:07 ICSAB3 Results	% Rec	08:07 ICSA4 Results	% Rec	08:13 ICSAB4 Results	% Rec
Aluminum	500000	500000	471000	94.2	462000	92.4	465000	93.0	458000	91.6
Antimony		1000	9.4		1020	102.0	7.8		1020	102.0
Arsenic		1000	2.7		994	99.4	0.60		990	99.0
Barium		500	-0.10		488	97.6	-0.20		483	96.6
Beryllium		500	0.10		468	93.6	0.10		468	93.6
Bismuth		500	-1.6		504	100.8	1.0		503	100.6
Boron		500	-5.0		480	96.0	-4.0		477	95.4
Cadmium		1000	0.70		1020	102.0	0.50		1010	101.0
Calcium	400000	400000	360000	90.0	354000	88.5	355000	88.8	361000	90.3
Chromium		500	-0.60		476	95.2	0.40		474	94.8
Cobalt		500	4.0		478	95.6	4.0		473	94.6
Copper		500	-0.80		547	109.4	-3.1		538	107.6
Iron	200000	200000	189000	94.5	184000	92.0	188000	94.0	183000	91.5
Lead		1000	3.6		921	92.1	2.6		912	91.2
Lithium		500	-2.8		613	122.6*	-1.4		615	123.0*
Magnesium	500000	500000	466000	93.2	465000	93.0	462000	92.4	465000	93.0
Manganese		500	0.40		495	99.0	0.10		490	98.0
Molybdenum		500	2.6		467	93.4	2.8		465	93.0
Nickel		1000	2.9		958	95.8	2.7		951	95.1
Palladium		500	3.6		527	105.4	1.2		522	104.4
Potassium			135		146		309		193	
Selenium		1000	3.4		971	97.1	2.5		966	96.6
Silicon		500	8.6		510	102.0	12.0		512	102.4
Silver		1000	2.6		1020	102.0	1.7		1010	101.0
Sodium			117		138		389		318	
Sulfur		500	-25		435	87.0	-29		432	86.4
Strontium		500	1.4		510	102.0	1.6		506	101.2
Thallium		1000	-1.9		971	97.1	0.10		961	96.1
Tin		500	0.90		468	93.6	2.6		463	92.6
Titanium		500	4.5		462	92.4	4.0		459	91.8
Tungsten		500	22.3		469	93.8	23.4		469	93.8
Vanadium		500	0.40		472	94.4	-0.20		470	94.0
Zinc		1000	-3.7		913	91.3	-3.5		906	90.6

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

File ID: SB110116M1.ICP Date Analyzed: 11/01/16 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA40671 Units: ug/l

Time:			03:00		03:07		08:07		08:13	
Sample ID:	ICSA	ICSAB	ICSA3		ICSAB3		ICSA4		ICSAB4	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	-5.7		474	94.8	-5.4		470	94.0

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP96853
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 10/29/16

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	17	22		
Antimony	6.0	1.2	3.1		
Arsenic	3.0	1.1	2.8		
Barium	200	.6	.54		
Beryllium	1.0	.1	.31		
Bismuth	20	1.7	2.8		
Boron	100	.9	2.4		
Cadmium	3.0	.2	.43		
Calcium	5000	44	14		
Chromium	10	.5	1.1		
Cobalt	50	.4	.41		
Copper	10	1.2	2.6		
Iron	100	5.7	18	6.7	<100
Lead	3.0	1.3	2.5		
Lithium	20	2.9	3.5		
Magnesium	5000	30	90		
Manganese	15	.2	.48		
Molybdenum	20	.4	1.4		
Nickel	10	.3	.64		
Palladium	50	1.9	2.8		
Potassium	10000	65	99		
Selenium	10	3	3.6		
Silicon	200	5.8	15		
Silver	10	.8	.97		
Sodium	10000	21	25		
Sulfur	50	4.3	6.9		
Strontium	10	.1	.22		
Thallium	2.0	1.8	1.8		
Tin	10	.9	1.6		
Titanium	10	1.2	1.4		
Tungsten	50	2	2.1		
Vanadium	50	.4	.72		
Zinc	20	.8	1.2		

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP96853 Methods: EPA 200.7
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/29/16

Metal	RL	IDL	MDL	MB raw	final
Zirconium	10	.3	1		

Associated samples MP96853: JC30522-1, JC30522-2, JC30522-3, JC30522-4, JC30522-5, JC30522-6, JC30522-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP96853
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 10/29/16

Metal	JC30522-4 Original MS		Spikelot MPSPK1	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Bismuth					
Boron					
Cadmium					
Calcium					
Chromium					
Cobalt					
Copper	anr				
Iron	244	24900	25000	98.6	70-130
Lead	anr				
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Palladium					
Potassium					
Selenium					
Silicon					
Silver					
Sodium					
Sulfur					
Strontium					
Thallium					
Tin					
Titanium					
Tungsten					
Vanadium					
Zinc					

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP96853 Methods: EPA 200.7
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/29/16

Metal	JC30522-4 Original MS	Spikelot MPSPK1	% Rec	QC Limits
Zirconium				

Associated samples MP96853: JC30522-1, JC30522-2, JC30522-3, JC30522-4, JC30522-5, JC30522-6, JC30522-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP96853 Methods: EPA 200.7
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/29/16

Metal	JC30522-4 Original	MSD	Spikelot MPSPK1	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Bismuth						
Boron						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper	anr					
Iron	244	24800	25000	98.2	0.4	10
Lead	anr					
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Palladium						
Potassium						
Selenium						
Silicon						
Silver						
Sodium						
Sulfur						
Strontium						
Thallium						
Tin						
Titanium						
Tungsten						
Vanadium						
Zinc						

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP96853 Methods: EPA 200.7
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/29/16

Metal	JC30522-4 Original MSD	Spikelot MPSPK1	% Rec	MSD RPD	QC Limit
Zirconium					

Associated samples MP96853: JC30522-1, JC30522-2, JC30522-3, JC30522-4, JC30522-5, JC30522-6, JC30522-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP96853
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 10/29/16

Metal	BSP Result	Spikelot MPSPK1	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Bismuth				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper	anr			
Iron	24100	25000	96.4	85-115
Lead	anr			
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Palladium				
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Sulfur				
Strontium				
Thallium				
Tin				
Titanium				
Tungsten				
Vanadium				
Zinc				

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP96853 Methods: EPA 200.7
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/29/16

Metal	BSP Result	Spikelot MPSPK1	% Rec	QC Limits
Zirconium				

Associated samples MP96853: JC30522-1, JC30522-2, JC30522-3, JC30522-4, JC30522-5, JC30522-6, JC30522-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP96853
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 10/29/16

Metal	JC30522-4 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Bismuth				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper	anr			
Iron	244	265	8.5	0-10
Lead	anr			
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Palladium				
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Sulfur				
Strontium				
Thallium				
Tin				
Titanium				
Tungsten				
Vanadium				
Zinc				

SERIAL DILUTION RESULTS SUMMARY

Login Number: JC30522
Account: BPAMSS - Atlantic Richfield Company
Project: ENVNJSP: S/S 84849, 945 Pleasant Valley Way, West Orange, NJ

QC Batch ID: MP96853 Methods: EPA 200.7
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/29/16

Metal	JC30522-4 Original SDL 1:5	%DIF	QC Limits
Zirconium			

Associated samples MP96853: JC30522-1, JC30522-2, JC30522-3, JC30522-4, JC30522-5, JC30522-6, JC30522-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

eurofins | Lancaster Laboratories Environmental

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

Report Date: May 02, 2017

Project: BP 84849

Submittal Date: 04/19/2017
Group Number: 1790964
SDG: KEA65
PO Number: 009WH-0002
Release Number: MILLER
State of Sample Origin: NJ

Client Sample Description	Lancaster Labs (LL) #
MW-1-04172017 Water	8947418
MW-2-04172017 Water	8947419
MW-3-04172017 Water	8947420
MW-11-04182017 Water	8947421
MW-12-04182017 Water	8947422
MW-16R-04182017 Water	8947423
TB-04182017 Water	8947424

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To	Atlantic Richfield(Parsons)	Attn: Dennis Miller
Electronic Copy To	Parsons	Attn: Allyson Kriney

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Respectfully Submitted,

(717) 556-7366

Project Name: BP 84849
LL Group #: 1790964

General Comments:

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client. The compliance signature is located on the cover page of the Analysis Reports.

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below. Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

SW-846 8260B, GC/MS Volatiles

Batch #: N171152AA (Sample number(s): 8947418-8947424 UNSPK: P950591)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Cyclohexane, Methylcyclohexane, Chloroform, m+p-Xylene, o-Xylene, Xylene (Total)

Sample Description: MW-1-04172017 Water
BP 84849 COC: R224999
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8947418
LL Group # 1790964
Account # 12453

Project Name: BP 84849

Collected: 04/17/2017 11:40 by DM

Submitted: 04/19/2017 09:30
Reported: 05/02/2017 17:02

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

84901 SDG#: KEA65-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10335	Acetone	67-64-1	N.D.	6.0	20	1
10335	Benzene	71-43-2	N.D.	0.50	1.0	1
10335	Bromochloromethane	74-97-5	N.D.	1.0	5.0	1
10335	Bromodichloromethane	75-27-4	N.D.	0.50	1.0	1
10335	Bromoform	75-25-2	N.D.	0.50	4.0	1
10335	Bromomethane	74-83-9	N.D.	0.50	1.0	1
10335	2-Butanone	78-93-3	N.D.	3.0	10	1
10335	t-Butyl alcohol	75-65-0	N.D.	5.0	20	1
10335	Carbon Disulfide	75-15-0	N.D.	1.0	5.0	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.50	1.0	1
10335	Chlorobenzene	108-90-7	N.D.	0.50	1.0	1
10335	Chloroethane	75-00-3	N.D.	0.50	1.0	1
10335	Chloroform	67-66-3	N.D.	0.50	1.0	1
10335	Chloromethane	74-87-3	N.D.	0.50	1.0	1
10335	Cyclohexane	110-82-7	N.D.	2.0	5.0	1
10335	Dibromochloromethane	124-48-1	N.D.	0.50	1.0	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1.0	5.0	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1.0	5.0	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1.0	5.0	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.50	1.0	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.50	1.0	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.50	1.0	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.50	1.0	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.50	1.0	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.50	1.0	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.50	1.0	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.50	1.0	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.50	1.0	1
10335	Ethylbenzene	100-41-4	N.D.	0.50	1.0	1
10335	Freon 113	76-13-1	N.D.	2.0	10	1
10335	2-Hexanone	591-78-6	N.D.	3.0	10	1
10335	Isopropylbenzene	98-82-8	N.D.	1.0	5.0	1
10335	Methyl Acetate	79-20-9	N.D.	1.0	5.0	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.50	1.0	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3.0	10	1
10335	Methylcyclohexane	108-87-2	N.D.	1.0	5.0	1
10335	Methylene Chloride	75-09-2	N.D.	2.0	4.0	1
10335	Styrene	100-42-5	N.D.	1.0	5.0	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.50	1.0	1
10335	Tetrachloroethene	127-18-4	N.D.	0.50	1.0	1
10335	Toluene	108-88-3	N.D.	0.50	1.0	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1.0	5.0	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1.0	5.0	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.50	1.0	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.50	1.0	1
10335	Trichloroethene	79-01-6	N.D.	0.50	1.0	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.50	1.0	1
10335	Vinyl Chloride	75-01-4	N.D.	0.50	1.0	1

*=This limit was used in the evaluation of the final result

Sample Description: MW-1-04172017 Water
BP 84849 COC: R224999
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8947418
LL Group # 1790964
Account # 12453

Project Name: BP 84849

Collected: 04/17/2017 11:40 by DM

Submitted: 04/19/2017 09:30
Reported: 05/02/2017 17:02

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

84901 SDG#: KEA65-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10335	m+p-Xylene	179601-23-1	N.D.	0.50	1.0	1
10335	o-Xylene	95-47-6	N.D.	0.50	1.0	1
10335	Xylene (Total)	1330-20-7	N.D.	0.50	1.0	1

00880 VOA GC/MS Library Search (15)

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.

Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	NJ SOM01.2 Unleaded + TBA	SW-846 8260B	1	N171152AA	04/26/2017 01:09	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N171152AA	04/26/2017 01:09	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

84901

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 8947418
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP07159.i/17apr25b.b/na25s41.d
Level: (low/med) LOW Date Received: 04/19/17
% Moisture: not dec. Date Analyzed: 04/26/17
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
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27.					
28.					
29.					
30.					

page 1 of 1

FORM I VOA-TIC

Sample Description: MW-2-04172017 Water
BP 84849 COC: R224999
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8947419
LL Group # 1790964
Account # 12453

Project Name: BP 84849

Collected: 04/17/2017 12:45 by DM

Submitted: 04/19/2017 09:30
Reported: 05/02/2017 17:02

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

84902 SDG#: KEA65-02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10335	Acetone	67-64-1	N.D.	6.0	20	1
10335	Benzene	71-43-2	N.D.	0.50	1.0	1
10335	Bromochloromethane	74-97-5	N.D.	1.0	5.0	1
10335	Bromodichloromethane	75-27-4	N.D.	0.50	1.0	1
10335	Bromoform	75-25-2	N.D.	0.50	4.0	1
10335	Bromomethane	74-83-9	N.D.	0.50	1.0	1
10335	2-Butanone	78-93-3	N.D.	3.0	10	1
10335	t-Butyl alcohol	75-65-0	N.D.	5.0	20	1
10335	Carbon Disulfide	75-15-0	N.D.	1.0	5.0	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.50	1.0	1
10335	Chlorobenzene	108-90-7	N.D.	0.50	1.0	1
10335	Chloroethane	75-00-3	N.D.	0.50	1.0	1
10335	Chloroform	67-66-3	N.D.	0.50	1.0	1
10335	Chloromethane	74-87-3	N.D.	0.50	1.0	1
10335	Cyclohexane	110-82-7	N.D.	2.0	5.0	1
10335	Dibromochloromethane	124-48-1	N.D.	0.50	1.0	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1.0	5.0	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1.0	5.0	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1.0	5.0	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.50	1.0	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.50	1.0	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.50	1.0	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.50	1.0	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.50	1.0	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.50	1.0	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.50	1.0	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.50	1.0	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.50	1.0	1
10335	Ethylbenzene	100-41-4	N.D.	0.50	1.0	1
10335	Freon 113	76-13-1	N.D.	2.0	10	1
10335	2-Hexanone	591-78-6	N.D.	3.0	10	1
10335	Isopropylbenzene	98-82-8	N.D.	1.0	5.0	1
10335	Methyl Acetate	79-20-9	N.D.	1.0	5.0	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.50	1.0	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3.0	10	1
10335	Methylcyclohexane	108-87-2	N.D.	1.0	5.0	1
10335	Methylene Chloride	75-09-2	N.D.	2.0	4.0	1
10335	Styrene	100-42-5	N.D.	1.0	5.0	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.50	1.0	1
10335	Tetrachloroethene	127-18-4	N.D.	0.50	1.0	1
10335	Toluene	108-88-3	N.D.	0.50	1.0	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1.0	5.0	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1.0	5.0	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.50	1.0	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.50	1.0	1
10335	Trichloroethene	79-01-6	N.D.	0.50	1.0	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.50	1.0	1
10335	Vinyl Chloride	75-01-4	N.D.	0.50	1.0	1

*=This limit was used in the evaluation of the final result

Sample Description: MW-2-04172017 Water
BP 84849 COC: R224999
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8947419
LL Group # 1790964
Account # 12453

Project Name: BP 84849

Collected: 04/17/2017 12:45 by DM

Submitted: 04/19/2017 09:30
Reported: 05/02/2017 17:02

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

84902 SDG#: KEA65-02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10335	m+p-Xylene	179601-23-1	N.D.	0.50	1.0	1
10335	o-Xylene	95-47-6	N.D.	0.50	1.0	1
10335	Xylene (Total)	1330-20-7	N.D.	0.50	1.0	1

00880 VOA GC/MS Library Search (15)

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.

Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	NJ SOM01.2 Unleaded + TBA	SW-846 8260B	1	N171152AA	04/26/2017 03:30	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N171152AA	04/26/2017 03:30	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

84902

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 8947419
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP07159.i/17apr25b.b/na25s47.d
Level: (low/med) LOW Date Received: 04/19/17
% Moisture: not dec. Date Analyzed: 04/26/17
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC

Sample Description: MW-3-04172017 Water
BP 84849 COC: R224999
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8947420
LL Group # 1790964
Account # 12453

Project Name: BP 84849

Collected: 04/17/2017 13:45 by DM

Submitted: 04/19/2017 09:30
Reported: 05/02/2017 17:02

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

84903 SDG#: KEA65-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10335	Acetone	67-64-1	N.D.	6.0	20	1
10335	Benzene	71-43-2	N.D.	0.50	1.0	1
10335	Bromochloromethane	74-97-5	N.D.	1.0	5.0	1
10335	Bromodichloromethane	75-27-4	N.D.	0.50	1.0	1
10335	Bromoform	75-25-2	N.D.	0.50	4.0	1
10335	Bromomethane	74-83-9	N.D.	0.50	1.0	1
10335	2-Butanone	78-93-3	N.D.	3.0	10	1
10335	t-Butyl alcohol	75-65-0	N.D.	5.0	20	1
10335	Carbon Disulfide	75-15-0	N.D.	1.0	5.0	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.50	1.0	1
10335	Chlorobenzene	108-90-7	N.D.	0.50	1.0	1
10335	Chloroethane	75-00-3	N.D.	0.50	1.0	1
10335	Chloroform	67-66-3	N.D.	0.50	1.0	1
10335	Chloromethane	74-87-3	N.D.	0.50	1.0	1
10335	Cyclohexane	110-82-7	N.D.	2.0	5.0	1
10335	Dibromochloromethane	124-48-1	N.D.	0.50	1.0	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1.0	5.0	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1.0	5.0	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1.0	5.0	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.50	1.0	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.50	1.0	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.50	1.0	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.50	1.0	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.50	1.0	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.50	1.0	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.50	1.0	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.50	1.0	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.50	1.0	1
10335	Ethylbenzene	100-41-4	N.D.	0.50	1.0	1
10335	Freon 113	76-13-1	N.D.	2.0	10	1
10335	2-Hexanone	591-78-6	N.D.	3.0	10	1
10335	Isopropylbenzene	98-82-8	N.D.	1.0	5.0	1
10335	Methyl Acetate	79-20-9	N.D.	1.0	5.0	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.50	1.0	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3.0	10	1
10335	Methylcyclohexane	108-87-2	N.D.	1.0	5.0	1
10335	Methylene Chloride	75-09-2	N.D.	2.0	4.0	1
10335	Styrene	100-42-5	N.D.	1.0	5.0	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.50	1.0	1
10335	Tetrachloroethene	127-18-4	N.D.	0.50	1.0	1
10335	Toluene	108-88-3	N.D.	0.50	1.0	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1.0	5.0	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1.0	5.0	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.50	1.0	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.50	1.0	1
10335	Trichloroethene	79-01-6	N.D.	0.50	1.0	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.50	1.0	1
10335	Vinyl Chloride	75-01-4	N.D.	0.50	1.0	1

*=This limit was used in the evaluation of the final result

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2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: MW-3-04172017 Water
BP 84849 COC: R224999
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8947420
LL Group # 1790964
Account # 12453

Project Name: BP 84849

Collected: 04/17/2017 13:45 by DM

Submitted: 04/19/2017 09:30
Reported: 05/02/2017 17:02

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

84903 SDG#: KEA65-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10335	m+p-Xylene	179601-23-1	N.D.	0.50	1.0	1
10335	o-Xylene	95-47-6	N.D.	0.50	1.0	1
10335	Xylene (Total)	1330-20-7	N.D.	0.50	1.0	1

00880 VOA GC/MS Library Search (15)

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.

Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	NJ SOM01.2 Unleaded + TBA	SW-846 8260B	1	N171152AA	04/26/2017 01:33	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N171152AA	04/26/2017 01:33	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

84903

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 8947420
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP07159.i/17apr25b.b/na25s42.d
Level: (low/med) LOW Date Received: 04/19/17
% Moisture: not dec. Date Analyzed: 04/26/17
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
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FORM I VOA-TIC

Sample Description: MW-11-04182017 Water
BP 84849 COC: R224999
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8947421
LL Group # 1790964
Account # 12453

Project Name: BP 84849

Collected: 04/18/2017 11:45 by DM

Submitted: 04/19/2017 09:30
Reported: 05/02/2017 17:02

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

84911 SDG#: KEA65-04

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10335	Acetone	67-64-1	N.D.	6.0	20	1
10335	Benzene	71-43-2	N.D.	0.50	1.0	1
10335	Bromochloromethane	74-97-5	N.D.	1.0	5.0	1
10335	Bromodichloromethane	75-27-4	N.D.	0.50	1.0	1
10335	Bromoform	75-25-2	N.D.	0.50	4.0	1
10335	Bromomethane	74-83-9	N.D.	0.50	1.0	1
10335	2-Butanone	78-93-3	N.D.	3.0	10	1
10335	t-Butyl alcohol	75-65-0	N.D.	5.0	20	1
10335	Carbon Disulfide	75-15-0	N.D.	1.0	5.0	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.50	1.0	1
10335	Chlorobenzene	108-90-7	N.D.	0.50	1.0	1
10335	Chloroethane	75-00-3	N.D.	0.50	1.0	1
10335	Chloroform	67-66-3	N.D.	0.50	1.0	1
10335	Chloromethane	74-87-3	N.D.	0.50	1.0	1
10335	Cyclohexane	110-82-7	N.D.	2.0	5.0	1
10335	Dibromochloromethane	124-48-1	N.D.	0.50	1.0	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1.0	5.0	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1.0	5.0	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1.0	5.0	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.50	1.0	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.50	1.0	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.50	1.0	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.50	1.0	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.50	1.0	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.50	1.0	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.50	1.0	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.50	1.0	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.50	1.0	1
10335	Ethylbenzene	100-41-4	N.D.	0.50	1.0	1
10335	Freon 113	76-13-1	N.D.	2.0	10	1
10335	2-Hexanone	591-78-6	N.D.	3.0	10	1
10335	Isopropylbenzene	98-82-8	N.D.	1.0	5.0	1
10335	Methyl Acetate	79-20-9	N.D.	1.0	5.0	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.50	1.0	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3.0	10	1
10335	Methylcyclohexane	108-87-2	N.D.	1.0	5.0	1
10335	Methylene Chloride	75-09-2	N.D.	2.0	4.0	1
10335	Styrene	100-42-5	N.D.	1.0	5.0	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.50	1.0	1
10335	Tetrachloroethene	127-18-4	N.D.	0.50	1.0	1
10335	Toluene	108-88-3	N.D.	0.50	1.0	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1.0	5.0	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1.0	5.0	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.50	1.0	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.50	1.0	1
10335	Trichloroethene	79-01-6	N.D.	0.50	1.0	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.50	1.0	1
10335	Vinyl Chloride	75-01-4	N.D.	0.50	1.0	1

*=This limit was used in the evaluation of the final result

Sample Description: MW-11-04182017 Water
BP 84849 COC: R224999
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8947421
LL Group # 1790964
Account # 12453

Project Name: BP 84849

Collected: 04/18/2017 11:45 by DM

Submitted: 04/19/2017 09:30
Reported: 05/02/2017 17:02

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

84911 SDG#: KEA65-04

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10335	m+p-Xylene	179601-23-1	N.D.	0.50	1.0	1
10335	o-Xylene	95-47-6	N.D.	0.50	1.0	1
10335	Xylene (Total)	1330-20-7	N.D.	0.50	1.0	1

00880 VOA GC/MS Library Search (15)

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.

Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	NJ SOM01.2 Unleaded + TBA	SW-846 8260B	1	N171152AA	04/26/2017 04:17	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N171152AA	04/26/2017 04:17	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

84911

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 8947421
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP07159.i/17apr25b.b/na25s49.d
Level: (low/med) LOW Date Received: 04/19/17
% Moisture: not dec. Date Analyzed: 04/26/17
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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FORM I VOA-TIC

Sample Description: MW-12-04182017 Water
BP 84849 COC: R224999
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8947422
LL Group # 1790964
Account # 12453

Project Name: BP 84849

Collected: 04/18/2017 13:00 by DM

Submitted: 04/19/2017 09:30
Reported: 05/02/2017 17:02

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

84912 SDG#: KEA65-05

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10335	Acetone	67-64-1	N.D.	6.0	20	1
10335	Benzene	71-43-2	N.D.	0.50	1.0	1
10335	Bromochloromethane	74-97-5	N.D.	1.0	5.0	1
10335	Bromodichloromethane	75-27-4	N.D.	0.50	1.0	1
10335	Bromoform	75-25-2	N.D.	0.50	4.0	1
10335	Bromomethane	74-83-9	N.D.	0.50	1.0	1
10335	2-Butanone	78-93-3	N.D.	3.0	10	1
10335	t-Butyl alcohol	75-65-0	N.D.	5.0	20	1
10335	Carbon Disulfide	75-15-0	N.D.	1.0	5.0	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.50	1.0	1
10335	Chlorobenzene	108-90-7	N.D.	0.50	1.0	1
10335	Chloroethane	75-00-3	N.D.	0.50	1.0	1
10335	Chloroform	67-66-3	N.D.	0.50	1.0	1
10335	Chloromethane	74-87-3	N.D.	0.50	1.0	1
10335	Cyclohexane	110-82-7	N.D.	2.0	5.0	1
10335	Dibromochloromethane	124-48-1	N.D.	0.50	1.0	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1.0	5.0	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1.0	5.0	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1.0	5.0	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.50	1.0	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.50	1.0	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.50	1.0	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.50	1.0	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.50	1.0	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.50	1.0	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.50	1.0	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.50	1.0	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.50	1.0	1
10335	Ethylbenzene	100-41-4	N.D.	0.50	1.0	1
10335	Freon 113	76-13-1	N.D.	2.0	10	1
10335	2-Hexanone	591-78-6	N.D.	3.0	10	1
10335	Isopropylbenzene	98-82-8	N.D.	1.0	5.0	1
10335	Methyl Acetate	79-20-9	N.D.	1.0	5.0	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.50	1.0	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3.0	10	1
10335	Methylcyclohexane	108-87-2	N.D.	1.0	5.0	1
10335	Methylene Chloride	75-09-2	N.D.	2.0	4.0	1
10335	Styrene	100-42-5	N.D.	1.0	5.0	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.50	1.0	1
10335	Tetrachloroethene	127-18-4	N.D.	0.50	1.0	1
10335	Toluene	108-88-3	N.D.	0.50	1.0	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1.0	5.0	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1.0	5.0	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.50	1.0	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.50	1.0	1
10335	Trichloroethene	79-01-6	N.D.	0.50	1.0	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.50	1.0	1
10335	Vinyl Chloride	75-01-4	N.D.	0.50	1.0	1

*=This limit was used in the evaluation of the final result

Sample Description: MW-12-04182017 Water
BP 84849 COC: R224999
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8947422
LL Group # 1790964
Account # 12453

Project Name: BP 84849

Collected: 04/18/2017 13:00 by DM

Submitted: 04/19/2017 09:30
Reported: 05/02/2017 17:02

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

84912 SDG#: KEA65-05

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10335	m+p-Xylene	179601-23-1	N.D.	0.50	1.0	1
10335	o-Xylene	95-47-6	N.D.	0.50	1.0	1
10335	Xylene (Total)	1330-20-7	N.D.	0.50	1.0	1

00880 VOA GC/MS Library Search (15)

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.

Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	NJ SOM01.2 Unleaded + TBA	SW-846 8260B	1	N171152AA	04/26/2017 01:56	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N171152AA	04/26/2017 01:56	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

84912

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 8947422
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP07159.i/17apr25b.b/na25s43.d
Level: (low/med) LOW Date Received: 04/19/17
% Moisture: not dec. Date Analyzed: 04/26/17
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC

Sample Description: MW-16R-04182017 Water
BP 84849 COC: R224999
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8947423
LL Group # 1790964
Account # 12453

Project Name: BP 84849

Collected: 04/18/2017 14:00 by DM

Submitted: 04/19/2017 09:30
Reported: 05/02/2017 17:02

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

84916 SDG#: KEA65-06

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10335	Acetone	67-64-1	N.D.	6.0	20	1
10335	Benzene	71-43-2	N.D.	0.50	1.0	1
10335	Bromochloromethane	74-97-5	N.D.	1.0	5.0	1
10335	Bromodichloromethane	75-27-4	N.D.	0.50	1.0	1
10335	Bromoform	75-25-2	N.D.	0.50	4.0	1
10335	Bromomethane	74-83-9	N.D.	0.50	1.0	1
10335	2-Butanone	78-93-3	N.D.	3.0	10	1
10335	t-Butyl alcohol	75-65-0	N.D.	5.0	20	1
10335	Carbon Disulfide	75-15-0	N.D.	1.0	5.0	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.50	1.0	1
10335	Chlorobenzene	108-90-7	N.D.	0.50	1.0	1
10335	Chloroethane	75-00-3	N.D.	0.50	1.0	1
10335	Chloroform	67-66-3	N.D.	0.50	1.0	1
10335	Chloromethane	74-87-3	N.D.	0.50	1.0	1
10335	Cyclohexane	110-82-7	N.D.	2.0	5.0	1
10335	Dibromochloromethane	124-48-1	N.D.	0.50	1.0	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1.0	5.0	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1.0	5.0	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1.0	5.0	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.50	1.0	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.50	1.0	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.50	1.0	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.50	1.0	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.50	1.0	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.50	1.0	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.50	1.0	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.50	1.0	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.50	1.0	1
10335	Ethylbenzene	100-41-4	N.D.	0.50	1.0	1
10335	Freon 113	76-13-1	N.D.	2.0	10	1
10335	2-Hexanone	591-78-6	N.D.	3.0	10	1
10335	Isopropylbenzene	98-82-8	N.D.	1.0	5.0	1
10335	Methyl Acetate	79-20-9	N.D.	1.0	5.0	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.50	1.0	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3.0	10	1
10335	Methylcyclohexane	108-87-2	N.D.	1.0	5.0	1
10335	Methylene Chloride	75-09-2	N.D.	2.0	4.0	1
10335	Styrene	100-42-5	N.D.	1.0	5.0	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.50	1.0	1
10335	Tetrachloroethene	127-18-4	N.D.	0.50	1.0	1
10335	Toluene	108-88-3	N.D.	0.50	1.0	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1.0	5.0	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1.0	5.0	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.50	1.0	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.50	1.0	1
10335	Trichloroethene	79-01-6	N.D.	0.50	1.0	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.50	1.0	1
10335	Vinyl Chloride	75-01-4	N.D.	0.50	1.0	1

*=This limit was used in the evaluation of the final result

Sample Description: MW-16R-04182017 Water
BP 84849 COC: R224999
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8947423
LL Group # 1790964
Account # 12453

Project Name: BP 84849

Collected: 04/18/2017 14:00 by DM

Submitted: 04/19/2017 09:30
Reported: 05/02/2017 17:02

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

84916 SDG#: KEA65-06

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10335	m+p-Xylene	179601-23-1	N.D.	0.50	1.0	1
10335	o-Xylene	95-47-6	N.D.	0.50	1.0	1
10335	Xylene (Total)	1330-20-7	N.D.	0.50	1.0	1

00880 VOA GC/MS Library Search (15)

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.

Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	NJ SOM01.2 Unleaded + TBA	SW-846 8260B	1	N171152AA	04/26/2017 02:20	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N171152AA	04/26/2017 02:20	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

84916

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 8947423
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP07159.i/17apr25b.b/na25s44.d
Level: (low/med) LOW Date Received: 04/19/17
% Moisture: not dec. Date Analyzed: 04/26/17
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
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FORM I VOA-TIC

Sample Description: TB-04182017 Water
BP 84849 COC: R224999
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8947424
LL Group # 1790964
Account # 12453

Project Name: BP 84849

Collected: 04/18/2017

Submitted: 04/19/2017 09:30
Reported: 05/02/2017 17:02

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

849TB SDG#: KEA65-07TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10335	Acetone	67-64-1	N.D.	6.0	20	1
10335	Benzene	71-43-2	N.D.	0.50	1.0	1
10335	Bromochloromethane	74-97-5	N.D.	1.0	5.0	1
10335	Bromodichloromethane	75-27-4	N.D.	0.50	1.0	1
10335	Bromoform	75-25-2	N.D.	0.50	4.0	1
10335	Bromomethane	74-83-9	N.D.	0.50	1.0	1
10335	2-Butanone	78-93-3	N.D.	3.0	10	1
10335	t-Butyl alcohol	75-65-0	N.D.	5.0	20	1
10335	Carbon Disulfide	75-15-0	N.D.	1.0	5.0	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.50	1.0	1
10335	Chlorobenzene	108-90-7	N.D.	0.50	1.0	1
10335	Chloroethane	75-00-3	N.D.	0.50	1.0	1
10335	Chloroform	67-66-3	N.D.	0.50	1.0	1
10335	Chloromethane	74-87-3	N.D.	0.50	1.0	1
10335	Cyclohexane	110-82-7	N.D.	2.0	5.0	1
10335	Dibromochloromethane	124-48-1	N.D.	0.50	1.0	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1.0	5.0	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1.0	5.0	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1.0	5.0	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.50	1.0	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.50	1.0	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.50	1.0	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.50	1.0	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.50	1.0	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.50	1.0	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.50	1.0	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.50	1.0	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.50	1.0	1
10335	Ethylbenzene	100-41-4	N.D.	0.50	1.0	1
10335	Freon 113	76-13-1	N.D.	2.0	10	1
10335	2-Hexanone	591-78-6	N.D.	3.0	10	1
10335	Isopropylbenzene	98-82-8	N.D.	1.0	5.0	1
10335	Methyl Acetate	79-20-9	N.D.	1.0	5.0	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.50	1.0	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3.0	10	1
10335	Methylcyclohexane	108-87-2	N.D.	1.0	5.0	1
10335	Methylene Chloride	75-09-2	N.D.	2.0	4.0	1
10335	Styrene	100-42-5	N.D.	1.0	5.0	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.50	1.0	1
10335	Tetrachloroethene	127-18-4	N.D.	0.50	1.0	1
10335	Toluene	108-88-3	N.D.	0.50	1.0	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1.0	5.0	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1.0	5.0	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.50	1.0	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.50	1.0	1
10335	Trichloroethene	79-01-6	N.D.	0.50	1.0	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.50	1.0	1
10335	Vinyl Chloride	75-01-4	N.D.	0.50	1.0	1

*=This limit was used in the evaluation of the final result

Sample Description: TB-04182017 Water
BP 84849 COC: R224999
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8947424
LL Group # 1790964
Account # 12453

Project Name: BP 84849

Collected: 04/18/2017

Submitted: 04/19/2017 09:30
Reported: 05/02/2017 17:02

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

849TB SDG#: KEA65-07TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10335	m+p-Xylene	179601-23-1	N.D.	0.50	1.0	1
10335	o-Xylene	95-47-6	N.D.	0.50	1.0	1
10335	Xylene (Total)	1330-20-7	N.D.	0.50	1.0	1

00880 VOA GC/MS Library Search (15)

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.

Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	NJ SOM01.2 Unleaded + TBA	SW-846 8260B	1	N171152AA	04/25/2017 22:25	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N171152AA	04/25/2017 22:25	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

849TB

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 8947424
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP07159.i/17apr25b.b/na25s34.d
Level: (low/med) LOW Date Received: 04/19/17
% Moisture: not dec. Date Analyzed: 04/25/17
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
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FORM I VOA-TIC

Quality Control Summary

Client Name: Atlantic Richfield(Parsons) Group Number: 1790964
Reported: 05/02/2017 17:02

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: N171152AA	Sample number(s): 8947418-8947424		
Acetone	N.D.	6.0	20
Benzene	N.D.	0.50	1.0
Bromochloromethane	N.D.	1.0	5.0
Bromodichloromethane	N.D.	0.50	1.0
Bromoform	N.D.	0.50	4.0
Bromomethane	N.D.	0.50	1.0
2-Butanone	N.D.	3.0	10
t-Butyl alcohol	N.D.	5.0	20
Carbon Disulfide	N.D.	1.0	5.0
Carbon Tetrachloride	N.D.	0.50	1.0
Chlorobenzene	N.D.	0.50	1.0
Chloroethane	N.D.	0.50	1.0
Chloroform	N.D.	0.50	1.0
Chloromethane	N.D.	0.50	1.0
Cyclohexane	N.D.	2.0	5.0
Dibromochloromethane	N.D.	0.50	1.0
1,2-Dichlorobenzene	N.D.	1.0	5.0
1,3-Dichlorobenzene	N.D.	1.0	5.0
1,4-Dichlorobenzene	N.D.	1.0	5.0
Dichlorodifluoromethane	N.D.	0.50	1.0
1,1-Dichloroethane	N.D.	0.50	1.0
1,2-Dichloroethane	N.D.	0.50	1.0
1,1-Dichloroethene	N.D.	0.50	1.0
cis-1,2-Dichloroethene	N.D.	0.50	1.0
trans-1,2-Dichloroethene	N.D.	0.50	1.0
1,2-Dichloropropane	N.D.	0.50	1.0
cis-1,3-Dichloropropene	N.D.	0.50	1.0
trans-1,3-Dichloropropene	N.D.	0.50	1.0
Ethylbenzene	N.D.	0.50	1.0
Freon 113	N.D.	2.0	10
2-Hexanone	N.D.	3.0	10
Isopropylbenzene	N.D.	1.0	5.0
Methyl Acetate	N.D.	1.0	5.0
Methyl Tertiary Butyl Ether	N.D.	0.50	1.0
4-Methyl-2-pentanone	N.D.	3.0	10
Methylcyclohexane	N.D.	1.0	5.0
Methylene Chloride	N.D.	2.0	4.0
Styrene	N.D.	1.0	5.0
1,1,2,2-Tetrachloroethane	N.D.	0.50	1.0
Tetrachloroethene	N.D.	0.50	1.0

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Atlantic Richfield(Parsons) Group Number: 1790964
Reported: 05/02/2017 17:02

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Toluene	N.D.	0.50	1.0
1,2,3-Trichlorobenzene	N.D.	1.0	5.0
1,2,4-Trichlorobenzene	N.D.	1.0	5.0
1,1,1-Trichloroethane	N.D.	0.50	1.0
1,1,2-Trichloroethane	N.D.	0.50	1.0
Trichloroethene	N.D.	0.50	1.0
Trichlorofluoromethane	N.D.	0.50	1.0
Vinyl Chloride	N.D.	0.50	1.0
m+p-Xylene	N.D.	0.50	1.0
o-Xylene	N.D.	0.50	1.0
Xylene (Total)	N.D.	0.50	1.0

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: N171152AA	Sample number(s): 8947418-8947424								
Acetone	150	143.27			96		50-168		
Benzene	20	20.67			103		78-120		
Bromochloromethane	20	20.33			102		80-125		
Bromodichloromethane	20	20.6			103		80-120		
Bromoform	20	18.69			93		64-120		
Bromomethane	20	19.42			97		49-121		
2-Butanone	150	175.94			117		53-140		
t-Butyl alcohol	200	194.36			97		68-122		
Carbon Disulfide	20	19.75			99		63-122		
Carbon Tetrachloride	20	20.51			103		76-123		
Chlorobenzene	20	20.43			102		80-120		
Chloroethane	20	18.82			94		51-121		
Chloroform	20	21.35			107		80-120		
Chloromethane	20	19.52			98		57-120		
Cyclohexane	20	17.44			87		67-121		
Dibromochloromethane	20	20.02			100		78-120		
1,2-Dichlorobenzene	20	19.59			98		80-120		
1,3-Dichlorobenzene	20	19.52			98		80-120		
1,4-Dichlorobenzene	20	19.57			98		80-120		
Dichlorodifluoromethane	20	16.52			83		54-122		
1,1-Dichloroethane	20	21.2			106		80-120		
1,2-Dichloroethane	20	22.3			112		66-128		
1,1-Dichloroethene	20	20.04			100		76-124		
cis-1,2-Dichloroethene	20	20.8			104		80-120		
trans-1,2-Dichloroethene	20	20.83			104		80-120		
1,2-Dichloropropane	20	21.13			106		80-120		
cis-1,3-Dichloropropene	20	19.74			99		75-120		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Atlantic Richfield(Parsons) Group Number: 1790964
Reported: 05/02/2017 17:02

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
trans-1,3-Dichloropropene	20	19.66			98		76-120		
Ethylbenzene	20	21.16			106		78-120		
Freon 113	20	18.63			93		68-129		
2-Hexanone	100	116.53			117		49-137		
Isopropylbenzene	20	21.11			106		80-120		
Methyl Acetate	20	21.37			107		61-137		
Methyl Tertiary Butyl Ether	20	20.56			103		75-120		
4-Methyl-2-pentanone	100	118.32			118		56-131		
Methylcyclohexane	20	17.9			89		66-126		
Methylene Chloride	20	20.35			102		80-120		
Styrene	20	20.24			101		80-120		
1,1,2,2-Tetrachloroethane	20	21			105		72-120		
Tetrachloroethene	20	18.97			95		80-129		
Toluene	20	20.71			104		80-120		
1,2,3-Trichlorobenzene	20	17.25			86		51-120		
1,2,4-Trichlorobenzene	20	17.24			86		58-120		
1,1,1-Trichloroethane	20	18.19			91		67-120		
1,1,2-Trichloroethane	20	20.68			103		80-120		
Trichloroethene	20	20.11			101		80-120		
Trichlorofluoromethane	20	19.37			97		57-134		
Vinyl Chloride	20	19.97			100		63-121		
m+p-Xylene	40	42.42			106		80-120		
o-Xylene	20	20.4			102		80-120		
Xylene (Total)	60	62.82			105		80-120		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: N171152AA	Sample number(s): 8947418-8947424 UNSPK: P950591									
Acetone	16	150	142.48	150	138.95	84	82	50-168	3	30
Benzene	9.28	20	30.96	20	32.83	108	118	78-120	6	30
Bromochloromethane	N.D.	20	19.77	20	21.03	99	105	80-125	6	30
Bromodichloromethane	N.D.	20	22.11	20	21.7	111	109	80-120	2	30
Bromoform	N.D.	20	18.66	20	18.86	93	94	64-120	1	30
Bromomethane	N.D.	20	19.25	20	20.09	96	100	49-121	4	30
2-Butanone	N.D.	150	168.68	150	174.55	112	116	53-140	3	30
t-Butyl alcohol	N.D.	200	180.51	200	179.88	90	90	68-122	0	30
Carbon Disulfide	N.D.	20	20.64	20	21.33	103	107	63-122	3	30
Carbon Tetrachloride	N.D.	20	22.67	20	22.91	113	115	76-123	1	30
Chlorobenzene	N.D.	20	20.97	20	20.77	105	104	80-120	1	30
Chloroethane	N.D.	20	18.99	20	20.29	95	101	51-121	7	30

*- Outside of specification
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P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Atlantic Richfield(Parsons) Group Number: 1790964
Reported: 05/02/2017 17:02

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Chloroform	N.D.	20	23.89	20	24.12	119	121*	80-120	1	30
Chloromethane	N.D.	20	20.49	20	20.65	102	103	57-120	1	30
Cyclohexane	35.6	20	72.46	20	75.01	184*	197*	67-121	3	30
Dibromochloromethane	N.D.	20	20.12	20	20.16	101	101	78-120	0	30
1,2-Dichlorobenzene	N.D.	20	19.65	20	19.87	98	99	80-120	1	30
1,3-Dichlorobenzene	N.D.	20	19.91	20	20.16	100	101	80-120	1	30
1,4-Dichlorobenzene	N.D.	20	19.93	20	20.22	100	101	80-120	1	30
Dichlorodifluoromethane	N.D.	20	19.9	20	19.96	99	100	54-122	0	30
1,1-Dichloroethane	N.D.	20	22.4	20	23.08	112	115	80-120	3	30
1,2-Dichloroethane	N.D.	20	22.64	20	22.62	113	113	66-128	0	30
1,1-Dichloroethene	N.D.	20	21.16	20	22.21	106	111	76-124	5	30
cis-1,2-Dichloroethene	N.D.	20	21.68	20	22.57	108	113	80-120	4	30
trans-1,2-Dichloroethene	N.D.	20	20.97	20	22.64	105	113	80-120	8	30
1,2-Dichloropropane	N.D.	20	22.61	20	22.52	113	113	80-120	0	30
cis-1,3-Dichloropropene	N.D.	20	20.37	20	21.21	102	106	75-120	4	30
trans-1,3-Dichloropropene	N.D.	20	20.23	20	20.06	101	100	76-120	1	30
Ethylbenzene	1.87	20	24.73	20	24.72	114	114	78-120	0	30
Freon 113	N.D.	20	22.22	20	23.46	111	117	68-129	5	30
2-Hexanone	N.D.	100	118.49	100	114.48	118	114	49-137	3	30
Isopropylbenzene	N.D.	20	23.52	20	23.26	118	116	80-120	1	30
Methyl Acetate	N.D.	20	23.25	20	22.54	116	113	61-137	3	30
Methyl Tertiary Butyl Ether	1.50	20	21.92	20	23.1	102	108	75-120	5	30
4-Methyl-2-pentanone	N.D.	100	118.48	100	117.52	118	118	56-131	1	30
Methylcyclohexane	23.69	20	47.52	20	49.5	119	129*	66-126	4	30
Methylene Chloride	N.D.	20	21.87	20	22.34	109	112	80-120	2	30
Styrene	N.D.	20	22.14	20	22.11	111	111	80-120	0	30
1,1,2,2-Tetrachloroethane	N.D.	20	19.59	20	20.03	98	100	72-120	2	30
Tetrachloroethene	N.D.	20	20.97	20	21.25	105	106	80-129	1	30
Toluene	8.24	20	30.99	20	31.95	114	119	80-120	3	30
1,2,3-Trichlorobenzene	N.D.	20	16.78	20	17.34	84	87	51-120	3	30
1,2,4-Trichlorobenzene	N.D.	20	18.87	20	19.21	94	96	58-120	2	30
1,1,1-Trichloroethane	N.D.	20	19.49	20	20.01	97	100	67-120	3	30
1,1,2-Trichloroethane	N.D.	20	23.42	20	23.48	117	117	80-120	0	30
Trichloroethene	N.D.	20	21.94	20	22.88	110	114	80-120	4	30
Trichlorofluoromethane	N.D.	20	22.64	20	23.2	113	116	57-134	2	30
Vinyl Chloride	N.D.	20	20.8	20	21.39	104	107	63-121	3	30
m+p-Xylene	24.96	40	74.83	40	79.67	125*	137*	80-120	6	30
o-Xylene	26.21	20	52.23	20	54.59	130*	142*	80-120	4	30
Xylene (Total)	51.17	60	127.06	60	134.26	126*	138*	80-120	6	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Atlantic Richfield(Parsons) Group Number: 1790964
Reported: 05/02/2017 17:02

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NJ SOM01.2 Unleaded + TBA
Batch number: N171152AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8947418	106	105	98	92
8947419	110	104	100	95
8947420	108	104	98	92
8947421	111	105	99	93
8947422	108	107	101	95
8947423	110	106	99	93
8947424	109	103	100	94
Blank	107	106	100	95
LCS	103	107	104	102
MS	100	104	103	102
MSD	103	107	102	100
Limits:	80-116	77-113	80-113	78-113

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

12453 / 1790964 / 8947418-24

bp rm

Laboratory Management Program LaMP Chain of Custody Record R224999

Page 1 of 1

BP Site Node Path: _____ Req Due Date (mm/dd/yy): _____ Rush TAT: Yes ___ No X

BP Facility No: 84849 - West Orange Lab Work Order Number: _____

Lab Name: Eurofins Lancaster labs	Facility Address: 945 Pleasant Valley WAY	Consultant/Contractor: Parsons
Lab Address: 2425 New Holland Pike, Lancaster PA	City, State, ZIP Code: WEST ORANGE, NJ 07052	Consultant/Contractor Project No:
Lab PM: Alison Bainbridge	Lead Regulatory Agency: NJDEP	Address: 200 Cottontail Lane, Somerset, NJ
Lab Phone:	California Global ID No.:	Consultant/Contractor PM: Allyson Kriney
Lab Shipping Accnt:	Enfos Proposal No:	Phone: 609-713-3222 Email: Allyson.Kriney@Parsons.com
Lab Bottle Order No:	Accounting Mode: Provision ___ OOC-BU ___ OOC-RM ___	Email EDD To: Dennis.Miller@Parsons.com and to lab.enfosdoc@bp.com
Other Info:	Stage: Activity:	Invoice To: BP ___ Contractor X

BP Project Manager (PM): Greg Miller
BP PM Phone: 410-825-7964
BP PM Email: Gregory.miller2@BP.com

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Matrix: Is this location a well?	No. Containers / Preservative: Total Number of Containers	Unpreserved	H2SO4	HNO3	HCl	Methanol	Requested Analyses: MTBE	TBA	VOC TICs
	MW-1-04172017	04/17/17	1140		X			3				X		X	X	X
	MW-2-04172017	04/17/17	1245		X			3				X		X	X	X
	MW-3-04172017	04/17/17	1345		X			3				X		X	X	X
	MW-11-04182017	4/18/17	1145		X			3				X		X	X	X
	MW-12-04182017	4/18/17	1300		X			3				X		X	X	X
	MW-16R-04182017	4/18/17	1400		X			3				X		X	X	X
	TB-04182017	4/18/17	—		X			3				X		X	X	X

Report Type & QC Level: Standard ___ Full Data Package ___

Comments: Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

Sampler's Name: Dennis Miller/Chris Watson	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: Parsons		4/18/17				
Shipment Method: FedEx Ship Date: 4/18/17						
Shipment Tracking No:					4/19/17	9:30

Special Instructions:

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: 0.0 °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 181213

Group Number(s): 1790964

Client: BP

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	04/19/2017 9:30
Number of Packages:	1	Number of Projects:	1

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCL
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	Yes		

Unpacked by Wendy Wakeley (1669) at 12:50 on 04/19/2017

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	2.6	DT	Wet	Y	Bagged	N

Container Quantity Discrepancy Details

Sample ID on COC	Container Qty. Received	Container Qty. on COC	Comments
TB-04182017	1	3	

2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mg**	milligram(s)
C	degrees Celsius	**mL**	milliliter(s)
cfu	colony forming units	**MPN**	Most Probable Number
CP Units	cobalt-chloroplatinate units	**N.D.**	none detected
F	degrees Fahrenheit	**ng**	nanogram(s)
g	gram(s)	**NTU**	nephelometric turbidity units
IU	International Units	**pg/L**	picogram/liter
kg	kilogram(s)	**RL**	Reporting Limit
L	liter(s)	**TNTC**	Too Numerous To Count
lb.	pound(s)	**µg**	microgram(s)
m3	cubic meter(s)	**µL**	microliter(s)
meq	milliequivalents	**umhos/cm**	micromhos/cm

< less than

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Laboratory Data Qualifiers:

C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U - Analyte was not detected at the value indicated
V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference…
W - The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

Report Date: May 02, 2017

Project: BP 84849

Submittal Date: 04/20/2017
Group Number: 1791648
SDG: KEA66
PO Number: 009WH-0002
Release Number: MILLER
State of Sample Origin: NJ

Client Sample Description	Lancaster Labs (LL) #
MW-14-04192017 Water	8950590
MW-18R-04192017 Water	8950591
MW-18R-04192017-MS Water	8950592
MW-18R-04192017-MSD Water	8950593
MW-17R-04192017 Water	8950594
BD-04192017 Water	8950595
EB-04192017 Water	8950596
TB-04192017 Water	8950597

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To	Atlantic Richfield(Parsons)	Attn: Dennis Miller
Electronic Copy To	Parsons	Attn: Allyson Kriney

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Respectfully Submitted,

(717) 556-7366

Project Name: BP 84849
LL Group #: 1791648

General Comments:

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client. The compliance signature is located on the cover page of the Analysis Reports.

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below. Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

The temperature of the sample bottle(s) upon receipt at the lab was 4.2 - 11.7 C using an IR thermometer.

Analysis Specific Comments:

SW-846 8260B, GC/MS Volatiles

Batch #: N171152AA (Sample number(s): 8950590-8950597 UNSPK: 8950591)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Cyclohexane, Methylcyclohexane, Chloroform, m+p-Xylene, o-Xylene, Xylene (Total)

Sample Description: MW-14-04192017 Water
BP 84849 COC: R224998
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8950590
LL Group # 1791648
Account # 12453

Project Name: BP 84849

Collected: 04/19/2017 09:25 by CW

Submitted: 04/20/2017 09:40
Reported: 05/02/2017 17:03

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

K6601 SDG#: KEA66-01

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	N.D.		6.0	20	1
10335	Benzene	71-43-2	1.6		0.50	1.0	1
10335	Bromochloromethane	74-97-5	N.D.		1.0	5.0	1
10335	Bromodichloromethane	75-27-4	N.D.		0.50	1.0	1
10335	Bromoform	75-25-2	N.D.		0.50	4.0	1
10335	Bromomethane	74-83-9	N.D.		0.50	1.0	1
10335	2-Butanone	78-93-3	N.D.		3.0	10	1
10335	t-Butyl alcohol	75-65-0	N.D.		5.0	20	1
10335	Carbon Disulfide	75-15-0	N.D.		1.0	5.0	1
10335	Carbon Tetrachloride	56-23-5	N.D.		0.50	1.0	1
10335	Chlorobenzene	108-90-7	N.D.		0.50	1.0	1
10335	Chloroethane	75-00-3	N.D.		0.50	1.0	1
10335	Chloroform	67-66-3	N.D.		0.50	1.0	1
10335	Chloromethane	74-87-3	N.D.		0.50	1.0	1
10335	Cyclohexane	110-82-7	2.3	J	2.0	5.0	1
10335	Dibromochloromethane	124-48-1	N.D.		0.50	1.0	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.		1.0	5.0	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.		1.0	5.0	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.		1.0	5.0	1
10335	Dichlorodifluoromethane	75-71-8	N.D.		0.50	1.0	1
10335	1,1-Dichloroethane	75-34-3	N.D.		0.50	1.0	1
10335	1,2-Dichloroethane	107-06-2	N.D.		0.50	1.0	1
10335	1,1-Dichloroethene	75-35-4	N.D.		0.50	1.0	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.		0.50	1.0	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.		0.50	1.0	1
10335	1,2-Dichloropropane	78-87-5	N.D.		0.50	1.0	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.50	1.0	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.50	1.0	1
10335	Ethylbenzene	100-41-4	N.D.		0.50	1.0	1
10335	Freon 113	76-13-1	N.D.		2.0	10	1
10335	2-Hexanone	591-78-6	N.D.		3.0	10	1
10335	Isopropylbenzene	98-82-8	N.D.		1.0	5.0	1
10335	Methyl Acetate	79-20-9	N.D.		1.0	5.0	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.50	1.0	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.		3.0	10	1
10335	Methylcyclohexane	108-87-2	N.D.		1.0	5.0	1
10335	Methylene Chloride	75-09-2	N.D.		2.0	4.0	1
10335	Styrene	100-42-5	N.D.		1.0	5.0	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.50	1.0	1
10335	Tetrachloroethene	127-18-4	N.D.		0.50	1.0	1
10335	Toluene	108-88-3	N.D.		0.50	1.0	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.		1.0	5.0	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.		1.0	5.0	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.		0.50	1.0	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.		0.50	1.0	1
10335	Trichloroethene	79-01-6	N.D.		0.50	1.0	1
10335	Trichlorofluoromethane	75-69-4	N.D.		0.50	1.0	1
10335	Vinyl Chloride	75-01-4	N.D.		0.50	1.0	1

*=This limit was used in the evaluation of the final result

Sample Description: MW-14-04192017 Water
BP 84849 COC: R224998
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8950590
LL Group # 1791648
Account # 12453

Project Name: BP 84849

Collected: 04/19/2017 09:25 by CW

Submitted: 04/20/2017 09:40
Reported: 05/02/2017 17:03

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

K6601 SDG#: KEA66-01

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**		**ug/l**	**ug/l**	
10335	m+p-Xylene	179601-23-1	0.62	J	0.50	1.0	1
10335	o-Xylene	95-47-6	N.D.		0.50	1.0	1
10335	Xylene (Total)	1330-20-7	0.62	J	0.50	1.0	1

00880 VOA GC/MS Library Search (15)

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.

Sample Comments

State of New Jersey Lab Certification No. PA011
The temperature of the sample bottle(s) upon receipt at the lab was 4.2 - 11.7 C using an IR thermometer.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	NJ SOM01.2 Unleaded + TBA	SW-846 8260B	1	N171152AA	04/26/2017 02:43	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N171152AA	04/26/2017 02:43	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
K6601

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 8950590
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP07159.i/17apr25b.b/na25s45.d
Level: (low/med) LOW Date Received: 04/20/17
% Moisture: not dec. Date Analyzed: 04/26/17
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.47	10	J
2.					
3.	VOCTIC	Total VOC TICs		10	J
4.					
5.					
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FORM I VOA-TIC

Sample Description: MW-18R-04192017 Water
BP 84849 COC: R224998
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8950591
LL Group # 1791648
Account # 12453

Project Name: BP 84849

Collected: 04/19/2017 10:40 by CW

Submitted: 04/20/2017 09:40
Reported: 05/02/2017 17:03

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

K6602 SDG#: KEA66-02BKG

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l		ug/l	ug/l	
10335	Acetone	67-64-1	16	J	6.0	20	1
10335	Benzene	71-43-2	9.3		0.50	1.0	1
10335	Bromochloromethane	74-97-5	N.D.		1.0	5.0	1
10335	Bromodichloromethane	75-27-4	N.D.		0.50	1.0	1
10335	Bromoform	75-25-2	N.D.		0.50	4.0	1
10335	Bromomethane	74-83-9	N.D.		0.50	1.0	1
10335	2-Butanone	78-93-3	N.D.		3.0	10	1
10335	t-Butyl alcohol	75-65-0	N.D.		5.0	20	1
10335	Carbon Disulfide	75-15-0	N.D.		1.0	5.0	1
10335	Carbon Tetrachloride	56-23-5	N.D.		0.50	1.0	1
10335	Chlorobenzene	108-90-7	N.D.		0.50	1.0	1
10335	Chloroethane	75-00-3	N.D.		0.50	1.0	1
10335	Chloroform	67-66-3	N.D.		0.50	1.0	1
10335	Chloromethane	74-87-3	N.D.		0.50	1.0	1
10335	Cyclohexane	110-82-7	36		2.0	5.0	1
10335	Dibromochloromethane	124-48-1	N.D.		0.50	1.0	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.		1.0	5.0	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.		1.0	5.0	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.		1.0	5.0	1
10335	Dichlorodifluoromethane	75-71-8	N.D.		0.50	1.0	1
10335	1,1-Dichloroethane	75-34-3	N.D.		0.50	1.0	1
10335	1,2-Dichloroethane	107-06-2	N.D.		0.50	1.0	1
10335	1,1-Dichloroethene	75-35-4	N.D.		0.50	1.0	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.		0.50	1.0	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.		0.50	1.0	1
10335	1,2-Dichloropropane	78-87-5	N.D.		0.50	1.0	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.50	1.0	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.50	1.0	1
10335	Ethylbenzene	100-41-4	1.9		0.50	1.0	1
10335	Freon 113	76-13-1	N.D.		2.0	10	1
10335	2-Hexanone	591-78-6	N.D.		3.0	10	1
10335	Isopropylbenzene	98-82-8	N.D.		1.0	5.0	1
10335	Methyl Acetate	79-20-9	N.D.		1.0	5.0	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	1.5		0.50	1.0	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.		3.0	10	1
10335	Methylcyclohexane	108-87-2	24		1.0	5.0	1
10335	Methylene Chloride	75-09-2	N.D.		2.0	4.0	1
10335	Styrene	100-42-5	N.D.		1.0	5.0	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.50	1.0	1
10335	Tetrachloroethene	127-18-4	N.D.		0.50	1.0	1
10335	Toluene	108-88-3	8.2		0.50	1.0	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.		1.0	5.0	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.		1.0	5.0	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.		0.50	1.0	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.		0.50	1.0	1
10335	Trichloroethene	79-01-6	N.D.		0.50	1.0	1
10335	Trichlorofluoromethane	75-69-4	N.D.		0.50	1.0	1
10335	Vinyl Chloride	75-01-4	N.D.		0.50	1.0	1

*=This limit was used in the evaluation of the final result

Sample Description: MW-18R-04192017 Water
BP 84849 COC: R224998
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8950591
LL Group # 1791648
Account # 12453

Project Name: BP 84849

Collected: 04/19/2017 10:40 by CW

Submitted: 04/20/2017 09:40
Reported: 05/02/2017 17:03

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

K6602 SDG#: KEA66-02BKG

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10335	m+p-Xylene	179601-23-1	25	0.50	1.0	1
10335	o-Xylene	95-47-6	26	0.50	1.0	1
10335	Xylene (Total)	1330-20-7	51	0.50	1.0	1

00880 VOA GC/MS Library Search (15)

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.

Sample Comments

State of New Jersey Lab Certification No. PA011
The temperature of the sample bottle(s) upon receipt at the lab was 4.2 - 11.7 C using an IR thermometer.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	NJ SOM01.2 Unleaded + TBA	SW-846 8260B	1	N171152AA	04/25/2017 23:35	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N171152AA	04/25/2017 23:35	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
K6602

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 8950591
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP07159.i/17apr25b.b/na25s37.d
Level: (low/med) LOW Date Received: 04/20/17
% Moisture: not dec. Date Analyzed: 04/25/17
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 15 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.03	50	J
2.		Unknown	2.47	170	J
3.		Unknown	2.67	50	J
4.		Unknown	2.79	39	J
5.		Unknown	2.97	54	J
6.		Unknown	3.74	86	J
7.		Unknown	3.76	74	J
8.		Unknown	4.06	45	J
9.		Unknown	5.39	120	J
10.		Unknown	12.15	37	J
11.		Unknown	12.30	30	J
12.		Unknown	12.74	43	J
13.		Unknown	12.89	32	J
14.		Unknown	13.21	36	J
15.		Unknown	13.82	30	J
16.					
17.	VOCTIC	Total VOC TICs		900	J
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FORM I VOA-TIC

Sample Description: MW-18R-04192017-MS Water
BP 84849 COC: R224998
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8950592
LL Group # 1791648
Account # 12453

Project Name: BP 84849

Collected: 04/19/2017 10:40 by CW

Submitted: 04/20/2017 09:40
Reported: 05/02/2017 17:03

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

K6602 SDG#: KEA66-02MS

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10335	Acetone	67-64-1	140	6.0	20	1
10335	Benzene	71-43-2	31	0.50	1.0	1
10335	Bromochloromethane	74-97-5	20	1.0	5.0	1
10335	Bromodichloromethane	75-27-4	22	0.50	1.0	1
10335	Bromoform	75-25-2	19	0.50	4.0	1
10335	Bromomethane	74-83-9	19	0.50	1.0	1
10335	2-Butanone	78-93-3	170	3.0	10	1
10335	t-Butyl alcohol	75-65-0	180	5.0	20	1
10335	Carbon Disulfide	75-15-0	21	1.0	5.0	1
10335	Carbon Tetrachloride	56-23-5	23	0.50	1.0	1
10335	Chlorobenzene	108-90-7	21	0.50	1.0	1
10335	Chloroethane	75-00-3	19	0.50	1.0	1
10335	Chloroform	67-66-3	24	0.50	1.0	1
10335	Chloromethane	74-87-3	20	0.50	1.0	1
10335	Cyclohexane	110-82-7	72	2.0	5.0	1
10335	Dibromochloromethane	124-48-1	20	0.50	1.0	1
10335	1,2-Dichlorobenzene	95-50-1	20	1.0	5.0	1
10335	1,3-Dichlorobenzene	541-73-1	20	1.0	5.0	1
10335	1,4-Dichlorobenzene	106-46-7	20	1.0	5.0	1
10335	Dichlorodifluoromethane	75-71-8	20	0.50	1.0	1
10335	1,1-Dichloroethane	75-34-3	22	0.50	1.0	1
10335	1,2-Dichloroethane	107-06-2	23	0.50	1.0	1
10335	1,1-Dichloroethene	75-35-4	21	0.50	1.0	1
10335	cis-1,2-Dichloroethene	156-59-2	22	0.50	1.0	1
10335	trans-1,2-Dichloroethene	156-60-5	21	0.50	1.0	1
10335	1,2-Dichloropropane	78-87-5	23	0.50	1.0	1
10335	cis-1,3-Dichloropropene	10061-01-5	20	0.50	1.0	1
10335	trans-1,3-Dichloropropene	10061-02-6	20	0.50	1.0	1
10335	Ethylbenzene	100-41-4	25	0.50	1.0	1
10335	Freon 113	76-13-1	22	2.0	10	1
10335	2-Hexanone	591-78-6	120	3.0	10	1
10335	Isopropylbenzene	98-82-8	24	1.0	5.0	1
10335	Methyl Acetate	79-20-9	23	1.0	5.0	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	22	0.50	1.0	1
10335	4-Methyl-2-pentanone	108-10-1	120	3.0	10	1
10335	Methylcyclohexane	108-87-2	48	1.0	5.0	1
10335	Methylene Chloride	75-09-2	22	2.0	4.0	1
10335	Styrene	100-42-5	22	1.0	5.0	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	20	0.50	1.0	1
10335	Tetrachloroethene	127-18-4	21	0.50	1.0	1
10335	Toluene	108-88-3	31	0.50	1.0	1
10335	1,2,3-Trichlorobenzene	87-61-6	17	1.0	5.0	1
10335	1,2,4-Trichlorobenzene	120-82-1	19	1.0	5.0	1
10335	1,1,1-Trichloroethane	71-55-6	19	0.50	1.0	1
10335	1,1,2-Trichloroethane	79-00-5	23	0.50	1.0	1
10335	Trichloroethene	79-01-6	22	0.50	1.0	1
10335	Trichlorofluoromethane	75-69-4	23	0.50	1.0	1
10335	Vinyl Chloride	75-01-4	21	0.50	1.0	1

*=This limit was used in the evaluation of the final result

Sample Description: MW-18R-04192017-MS Water
BP 84849 COC: R224998
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8950592
LL Group # 1791648
Account # 12453

Project Name: BP 84849

Collected: 04/19/2017 10:40 by CW

Submitted: 04/20/2017 09:40
Reported: 05/02/2017 17:03

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

K6602 SDG#: KEA66-02MS

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10335	m+p-Xylene	179601-23-1	75	0.50	1.0	1
10335	o-Xylene	95-47-6	52	0.50	1.0	1
10335	Xylene (Total)	1330-20-7	130	0.50	1.0	1

Sample Comments

State of New Jersey Lab Certification No. PA011
The temperature of the sample bottle(s) upon receipt at the lab was 4.2 - 11.7 C using an IR thermometer.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	NJ SOM01.2 Unleaded + TBA	SW-846 8260B	1	N171152AA	04/25/2017 23:59	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N171152AA	04/25/2017 23:59	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

Sample Description: MW-18R-04192017-MSD Water
BP 84849 COC: R224998
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8950593
LL Group # 1791648
Account # 12453

Project Name: BP 84849

Collected: 04/19/2017 10:40 by CW

Submitted: 04/20/2017 09:40
Reported: 05/02/2017 17:03

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

K6602 SDG#: KEA66-02MSD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10335	Acetone	67-64-1	140	6.0	20	1
10335	Benzene	71-43-2	33	0.50	1.0	1
10335	Bromochloromethane	74-97-5	21	1.0	5.0	1
10335	Bromodichloromethane	75-27-4	22	0.50	1.0	1
10335	Bromoform	75-25-2	19	0.50	4.0	1
10335	Bromomethane	74-83-9	20	0.50	1.0	1
10335	2-Butanone	78-93-3	170	3.0	10	1
10335	t-Butyl alcohol	75-65-0	180	5.0	20	1
10335	Carbon Disulfide	75-15-0	21	1.0	5.0	1
10335	Carbon Tetrachloride	56-23-5	23	0.50	1.0	1
10335	Chlorobenzene	108-90-7	21	0.50	1.0	1
10335	Chloroethane	75-00-3	20	0.50	1.0	1
10335	Chloroform	67-66-3	24	0.50	1.0	1
10335	Chloromethane	74-87-3	21	0.50	1.0	1
10335	Cyclohexane	110-82-7	75	2.0	5.0	1
10335	Dibromochloromethane	124-48-1	20	0.50	1.0	1
10335	1,2-Dichlorobenzene	95-50-1	20	1.0	5.0	1
10335	1,3-Dichlorobenzene	541-73-1	20	1.0	5.0	1
10335	1,4-Dichlorobenzene	106-46-7	20	1.0	5.0	1
10335	Dichlorodifluoromethane	75-71-8	20	0.50	1.0	1
10335	1,1-Dichloroethane	75-34-3	23	0.50	1.0	1
10335	1,2-Dichloroethane	107-06-2	23	0.50	1.0	1
10335	1,1-Dichloroethene	75-35-4	22	0.50	1.0	1
10335	cis-1,2-Dichloroethene	156-59-2	23	0.50	1.0	1
10335	trans-1,2-Dichloroethene	156-60-5	23	0.50	1.0	1
10335	1,2-Dichloropropane	78-87-5	23	0.50	1.0	1
10335	cis-1,3-Dichloropropene	10061-01-5	21	0.50	1.0	1
10335	trans-1,3-Dichloropropene	10061-02-6	20	0.50	1.0	1
10335	Ethylbenzene	100-41-4	25	0.50	1.0	1
10335	Freon 113	76-13-1	23	2.0	10	1
10335	2-Hexanone	591-78-6	110	3.0	10	1
10335	Isopropylbenzene	98-82-8	23	1.0	5.0	1
10335	Methyl Acetate	79-20-9	23	1.0	5.0	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	23	0.50	1.0	1
10335	4-Methyl-2-pentanone	108-10-1	120	3.0	10	1
10335	Methylcyclohexane	108-87-2	49	1.0	5.0	1
10335	Methylene Chloride	75-09-2	22	2.0	4.0	1
10335	Styrene	100-42-5	22	1.0	5.0	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	20	0.50	1.0	1
10335	Tetrachloroethene	127-18-4	21	0.50	1.0	1
10335	Toluene	108-88-3	32	0.50	1.0	1
10335	1,2,3-Trichlorobenzene	87-61-6	17	1.0	5.0	1
10335	1,2,4-Trichlorobenzene	120-82-1	19	1.0	5.0	1
10335	1,1,1-Trichloroethane	71-55-6	20	0.50	1.0	1
10335	1,1,2-Trichloroethane	79-00-5	23	0.50	1.0	1
10335	Trichloroethene	79-01-6	23	0.50	1.0	1
10335	Trichlorofluoromethane	75-69-4	23	0.50	1.0	1
10335	Vinyl Chloride	75-01-4	21	0.50	1.0	1

*=This limit was used in the evaluation of the final result

Sample Description: MW-18R-04192017-MSD Water
BP 84849 COC: R224998
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8950593
LL Group # 1791648
Account # 12453

Project Name: BP 84849

Collected: 04/19/2017 10:40 by CW

Submitted: 04/20/2017 09:40
Reported: 05/02/2017 17:03

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

K6602 SDG#: KEA66-02MSD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10335	m+p-Xylene	179601-23-1	80	0.50	1.0	1
10335	o-Xylene	95-47-6	55	0.50	1.0	1
10335	Xylene (Total)	1330-20-7	130	0.50	1.0	1

Sample Comments

State of New Jersey Lab Certification No. PA011
The temperature of the sample bottle(s) upon receipt at the lab was 4.2 - 11.7 C using an IR thermometer.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	NJ SOM01.2 Unleaded + TBA	SW-846 8260B	1	N171152AA	04/26/2017 00:22	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N171152AA	04/26/2017 00:22	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

Sample Description: MW-17R-04192017 Water
BP 84849 COC: R224998
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8950594
LL Group # 1791648
Account # 12453

Project Name: BP 84849

Collected: 04/19/2017 11:55 by CW

Submitted: 04/20/2017 09:40
Reported: 05/02/2017 17:03

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

K6603 SDG#: KEA66-03

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	N.D.		6.0	20	1
10335	Benzene	71-43-2	2.7		0.50	1.0	1
10335	Bromochloromethane	74-97-5	N.D.		1.0	5.0	1
10335	Bromodichloromethane	75-27-4	N.D.		0.50	1.0	1
10335	Bromoform	75-25-2	N.D.		0.50	4.0	1
10335	Bromomethane	74-83-9	N.D.		0.50	1.0	1
10335	2-Butanone	78-93-3	N.D.		3.0	10	1
10335	t-Butyl alcohol	75-65-0	N.D.		5.0	20	1
10335	Carbon Disulfide	75-15-0	N.D.		1.0	5.0	1
10335	Carbon Tetrachloride	56-23-5	N.D.		0.50	1.0	1
10335	Chlorobenzene	108-90-7	N.D.		0.50	1.0	1
10335	Chloroethane	75-00-3	N.D.		0.50	1.0	1
10335	Chloroform	67-66-3	N.D.		0.50	1.0	1
10335	Chloromethane	74-87-3	N.D.		0.50	1.0	1
10335	Cyclohexane	110-82-7	4.7	J	2.0	5.0	1
10335	Dibromochloromethane	124-48-1	N.D.		0.50	1.0	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.		1.0	5.0	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.		1.0	5.0	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.		1.0	5.0	1
10335	Dichlorodifluoromethane	75-71-8	N.D.		0.50	1.0	1
10335	1,1-Dichloroethane	75-34-3	N.D.		0.50	1.0	1
10335	1,2-Dichloroethane	107-06-2	N.D.		0.50	1.0	1
10335	1,1-Dichloroethene	75-35-4	N.D.		0.50	1.0	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.		0.50	1.0	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.		0.50	1.0	1
10335	1,2-Dichloropropane	78-87-5	N.D.		0.50	1.0	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.50	1.0	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.50	1.0	1
10335	Ethylbenzene	100-41-4	34		0.50	1.0	1
10335	Freon 113	76-13-1	N.D.		2.0	10	1
10335	2-Hexanone	591-78-6	N.D.		3.0	10	1
10335	Isopropylbenzene	98-82-8	8.5		1.0	5.0	1
10335	Methyl Acetate	79-20-9	N.D.		1.0	5.0	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.50	1.0	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.		3.0	10	1
10335	Methylcyclohexane	108-87-2	5.3		1.0	5.0	1
10335	Methylene Chloride	75-09-2	N.D.		2.0	4.0	1
10335	Styrene	100-42-5	N.D.		1.0	5.0	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.50	1.0	1
10335	Tetrachloroethene	127-18-4	N.D.		0.50	1.0	1
10335	Toluene	108-88-3	0.64	J	0.50	1.0	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.		1.0	5.0	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.		1.0	5.0	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.		0.50	1.0	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.		0.50	1.0	1
10335	Trichloroethene	79-01-6	N.D.		0.50	1.0	1
10335	Trichlorofluoromethane	75-69-4	N.D.		0.50	1.0	1
10335	Vinyl Chloride	75-01-4	N.D.		0.50	1.0	1

*=This limit was used in the evaluation of the final result

Sample Description: MW-17R-04192017 Water
BP 84849 COC: R224998
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8950594
LL Group # 1791648
Account # 12453

Project Name: BP 84849

Collected: 04/19/2017 11:55 by CW

Submitted: 04/20/2017 09:40
Reported: 05/02/2017 17:03

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

K6603 SDG#: KEA66-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10335	m+p-Xylene	179601-23-1	60	0.50	1.0	1
10335	o-Xylene	95-47-6	16	0.50	1.0	1
10335	Xylene (Total)	1330-20-7	76	0.50	1.0	1

00880 VOA GC/MS Library Search (15)

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.

Sample Comments

State of New Jersey Lab Certification No. PA011
The temperature of the sample bottle(s) upon receipt at the lab was 4.2 - 11.7 C using an IR thermometer.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	NJ SOM01.2 Unleaded + TBA	SW-846 8260B	1	N171152AA	04/26/2017 03:07	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N171152AA	04/26/2017 03:07	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
K6603

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 8950594
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP07159.i/17apr25b.b/na25s46.d
Level: (low/med) LOW Date Received: 04/20/17
% Moisture: not dec. Date Analyzed: 04/26/17
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 15 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	3.71	25	J
2.		Unknown	12.07	54	J
3.		Unknown	12.11	99	J
4.		Unknown	12.15	62	J
5.		Unknown	12.30	91	J
6.		Unknown	12.44	390	J
7.		Unknown	12.74	200	J
8.		Unknown	12.89	130	J
9.		Unknown	12.94	35	J
10.		Unknown	13.13	24	J
11.		Unknown	13.21	42	J
12.		Unknown	13.30	35	J
13.		Unknown	13.52	30	J
14.		Unknown	13.82	60	J
15.		Unknown	14.27	34	J
16.					
17.	VOCTIC	Total VOC TICs		1300	J
18.					
19.					
20.					
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23.					
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FORM I VOA-TIC

Sample Description: BD-04192017 Water
BP 84849 COC: R224998
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8950595
LL Group # 1791648
Account # 12453

Project Name: BP 84849

Collected: 04/19/2017 12:00 by CW

Submitted: 04/20/2017 09:40
Reported: 05/02/2017 17:03

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

K6604 SDG#: KEA66-04FD

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l		ug/l	ug/l	
10335	Acetone	67-64-1	16	J	6.0	20	1
10335	Benzene	71-43-2	8.9		0.50	1.0	1
10335	Bromochloromethane	74-97-5	N.D.		1.0	5.0	1
10335	Bromodichloromethane	75-27-4	N.D.		0.50	1.0	1
10335	Bromoform	75-25-2	N.D.		0.50	4.0	1
10335	Bromomethane	74-83-9	N.D.		0.50	1.0	1
10335	2-Butanone	78-93-3	N.D.		3.0	10	1
10335	t-Butyl alcohol	75-65-0	N.D.		5.0	20	1
10335	Carbon Disulfide	75-15-0	N.D.		1.0	5.0	1
10335	Carbon Tetrachloride	56-23-5	N.D.		0.50	1.0	1
10335	Chlorobenzene	108-90-7	N.D.		0.50	1.0	1
10335	Chloroethane	75-00-3	N.D.		0.50	1.0	1
10335	Chloroform	67-66-3	N.D.		0.50	1.0	1
10335	Chloromethane	74-87-3	N.D.		0.50	1.0	1
10335	Cyclohexane	110-82-7	35		2.0	5.0	1
10335	Dibromochloromethane	124-48-1	N.D.		0.50	1.0	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.		1.0	5.0	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.		1.0	5.0	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.		1.0	5.0	1
10335	Dichlorodifluoromethane	75-71-8	N.D.		0.50	1.0	1
10335	1,1-Dichloroethane	75-34-3	N.D.		0.50	1.0	1
10335	1,2-Dichloroethane	107-06-2	N.D.		0.50	1.0	1
10335	1,1-Dichloroethene	75-35-4	N.D.		0.50	1.0	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.		0.50	1.0	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.		0.50	1.0	1
10335	1,2-Dichloropropane	78-87-5	N.D.		0.50	1.0	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.50	1.0	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.50	1.0	1
10335	Ethylbenzene	100-41-4	1.8		0.50	1.0	1
10335	Freon 113	76-13-1	N.D.		2.0	10	1
10335	2-Hexanone	591-78-6	N.D.		3.0	10	1
10335	Isopropylbenzene	98-82-8	N.D.		1.0	5.0	1
10335	Methyl Acetate	79-20-9	N.D.		1.0	5.0	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	1.6		0.50	1.0	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.		3.0	10	1
10335	Methylcyclohexane	108-87-2	24		1.0	5.0	1
10335	Methylene Chloride	75-09-2	N.D.		2.0	4.0	1
10335	Styrene	100-42-5	N.D.		1.0	5.0	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.50	1.0	1
10335	Tetrachloroethene	127-18-4	N.D.		0.50	1.0	1
10335	Toluene	108-88-3	8.0		0.50	1.0	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.		1.0	5.0	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.		1.0	5.0	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.		0.50	1.0	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.		0.50	1.0	1
10335	Trichloroethene	79-01-6	N.D.		0.50	1.0	1
10335	Trichlorofluoromethane	75-69-4	N.D.		0.50	1.0	1
10335	Vinyl Chloride	75-01-4	N.D.		0.50	1.0	1

*=This limit was used in the evaluation of the final result

Sample Description: BD-04192017 Water
BP 84849 COC: R224998
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8950595
LL Group # 1791648
Account # 12453

Project Name: BP 84849

Collected: 04/19/2017 12:00 by CW

Submitted: 04/20/2017 09:40
Reported: 05/02/2017 17:03

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

K6604 SDG#: KEA66-04FD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10335	m+p-Xylene	179601-23-1	24	0.50	1.0	1
10335	o-Xylene	95-47-6	25	0.50	1.0	1
10335	Xylene (Total)	1330-20-7	49	0.50	1.0	1

00880 VOA GC/MS Library Search (15)

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.

Sample Comments

State of New Jersey Lab Certification No. PA011
The temperature of the sample bottle(s) upon receipt at the lab was 4.2 - 11.7 C using an IR thermometer.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	NJ SOM01.2 Unleaded + TBA	SW-846 8260B	1	N171152AA	04/26/2017 05:02	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N171152AA	04/26/2017 05:02	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
K6604

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 8950595
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP07159.i/17apr25b.b/na25s51.d
Level: (low/med) LOW Date Received: 04/20/17
% Moisture: not dec. Date Analyzed: 04/26/17
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 15 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.03	51	J
2.		Unknown	2.47	180	J
3.		Unknown	2.67	49	J
4.		Unknown	2.79	38	J
5.		Unknown	2.97	49	J
6.		Unknown	3.76	150	J
7.		Unknown	4.06	45	J
8.		Unknown	5.39	120	J
9.		Unknown	6.89	25	J
10.		Unknown	12.15	35	J
11.		Unknown	12.30	30	J
12.		Unknown	12.74	42	J
13.		Unknown	12.89	31	J
14.		Unknown	13.21	35	J
15.		Unknown	13.82	30	J
16.					
17.	VOCTIC	Total VOC TICs		900	J
18.					
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FORM I VOA-TIC

Sample Description: EB-04192017 Water
BP 84849 COC: R224998
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8950596
LL Group # 1791648
Account # 12453

Project Name: BP 84849

Collected: 04/19/2017 12:30 by CW

Submitted: 04/20/2017 09:40
Reported: 05/02/2017 17:03

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

K6605 SDG#: KEA66-05EB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10335	Acetone	67-64-1	N.D.	6.0	20	1
10335	Benzene	71-43-2	N.D.	0.50	1.0	1
10335	Bromochloromethane	74-97-5	N.D.	1.0	5.0	1
10335	Bromodichloromethane	75-27-4	N.D.	0.50	1.0	1
10335	Bromoform	75-25-2	N.D.	0.50	4.0	1
10335	Bromomethane	74-83-9	N.D.	0.50	1.0	1
10335	2-Butanone	78-93-3	N.D.	3.0	10	1
10335	t-Butyl alcohol	75-65-0	N.D.	5.0	20	1
10335	Carbon Disulfide	75-15-0	N.D.	1.0	5.0	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.50	1.0	1
10335	Chlorobenzene	108-90-7	N.D.	0.50	1.0	1
10335	Chloroethane	75-00-3	N.D.	0.50	1.0	1
10335	Chloroform	67-66-3	N.D.	0.50	1.0	1
10335	Chloromethane	74-87-3	N.D.	0.50	1.0	1
10335	Cyclohexane	110-82-7	N.D.	2.0	5.0	1
10335	Dibromochloromethane	124-48-1	N.D.	0.50	1.0	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1.0	5.0	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1.0	5.0	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1.0	5.0	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.50	1.0	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.50	1.0	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.50	1.0	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.50	1.0	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.50	1.0	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.50	1.0	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.50	1.0	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.50	1.0	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.50	1.0	1
10335	Ethylbenzene	100-41-4	N.D.	0.50	1.0	1
10335	Freon 113	76-13-1	N.D.	2.0	10	1
10335	2-Hexanone	591-78-6	N.D.	3.0	10	1
10335	Isopropylbenzene	98-82-8	N.D.	1.0	5.0	1
10335	Methyl Acetate	79-20-9	N.D.	1.0	5.0	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.50	1.0	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3.0	10	1
10335	Methylcyclohexane	108-87-2	N.D.	1.0	5.0	1
10335	Methylene Chloride	75-09-2	N.D.	2.0	4.0	1
10335	Styrene	100-42-5	N.D.	1.0	5.0	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.50	1.0	1
10335	Tetrachloroethene	127-18-4	N.D.	0.50	1.0	1
10335	Toluene	108-88-3	N.D.	0.50	1.0	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1.0	5.0	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1.0	5.0	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.50	1.0	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.50	1.0	1
10335	Trichloroethene	79-01-6	N.D.	0.50	1.0	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.50	1.0	1
10335	Vinyl Chloride	75-01-4	N.D.	0.50	1.0	1

*=This limit was used in the evaluation of the final result

Sample Description: EB-04192017 Water
BP 84849 COC: R224998
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8950596
LL Group # 1791648
Account # 12453

Project Name: BP 84849

Collected: 04/19/2017 12:30 by CW

Submitted: 04/20/2017 09:40
Reported: 05/02/2017 17:03

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

K6605 SDG#: KEA66-05EB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10335	m+p-Xylene	179601-23-1	N.D.	0.50	1.0	1
10335	o-Xylene	95-47-6	N.D.	0.50	1.0	1
10335	Xylene (Total)	1330-20-7	N.D.	0.50	1.0	1

00880 VOA GC/MS Library Search (15)

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.

Sample Comments

State of New Jersey Lab Certification No. PA011
The temperature of the sample bottle(s) upon receipt at the lab was 4.2 - 11.7 C using an IR thermometer.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	NJ SOM01.2 Unleaded + TBA	SW-846 8260B	1	N171152AA	04/25/2017 22:49	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N171152AA	04/25/2017 22:49	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

K6605

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 8950596
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP07159.i/17apr25b.b/na25s35.d
Level: (low/med) LOW Date Received: 04/20/17
% Moisture: not dec. Date Analyzed: 04/25/17
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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FORM I VOA-TIC

Sample Description: TB-04192017 Water
BP 84849 COC: R224998
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8950597
LL Group # 1791648
Account # 12453

Project Name: BP 84849

Collected: 04/19/2017

Submitted: 04/20/2017 09:40
Reported: 05/02/2017 17:03

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

K6606 SDG#: KEA66-06TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10335	Acetone	67-64-1	N.D.	6.0	20	1
10335	Benzene	71-43-2	N.D.	0.50	1.0	1
10335	Bromochloromethane	74-97-5	N.D.	1.0	5.0	1
10335	Bromodichloromethane	75-27-4	N.D.	0.50	1.0	1
10335	Bromoform	75-25-2	N.D.	0.50	4.0	1
10335	Bromomethane	74-83-9	N.D.	0.50	1.0	1
10335	2-Butanone	78-93-3	N.D.	3.0	10	1
10335	t-Butyl alcohol	75-65-0	N.D.	5.0	20	1
10335	Carbon Disulfide	75-15-0	N.D.	1.0	5.0	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.50	1.0	1
10335	Chlorobenzene	108-90-7	N.D.	0.50	1.0	1
10335	Chloroethane	75-00-3	N.D.	0.50	1.0	1
10335	Chloroform	67-66-3	N.D.	0.50	1.0	1
10335	Chloromethane	74-87-3	N.D.	0.50	1.0	1
10335	Cyclohexane	110-82-7	N.D.	2.0	5.0	1
10335	Dibromochloromethane	124-48-1	N.D.	0.50	1.0	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1.0	5.0	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1.0	5.0	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1.0	5.0	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.50	1.0	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.50	1.0	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.50	1.0	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.50	1.0	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.50	1.0	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.50	1.0	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.50	1.0	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.50	1.0	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.50	1.0	1
10335	Ethylbenzene	100-41-4	N.D.	0.50	1.0	1
10335	Freon 113	76-13-1	N.D.	2.0	10	1
10335	2-Hexanone	591-78-6	N.D.	3.0	10	1
10335	Isopropylbenzene	98-82-8	N.D.	1.0	5.0	1
10335	Methyl Acetate	79-20-9	N.D.	1.0	5.0	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.50	1.0	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3.0	10	1
10335	Methylcyclohexane	108-87-2	N.D.	1.0	5.0	1
10335	Methylene Chloride	75-09-2	N.D.	2.0	4.0	1
10335	Styrene	100-42-5	N.D.	1.0	5.0	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.50	1.0	1
10335	Tetrachloroethene	127-18-4	N.D.	0.50	1.0	1
10335	Toluene	108-88-3	N.D.	0.50	1.0	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1.0	5.0	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1.0	5.0	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.50	1.0	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.50	1.0	1
10335	Trichloroethene	79-01-6	N.D.	0.50	1.0	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.50	1.0	1
10335	Vinyl Chloride	75-01-4	N.D.	0.50	1.0	1

*=This limit was used in the evaluation of the final result

Sample Description: TB-04192017 Water
BP 84849 COC: R224998
945 Pleasant Valley Way - West Orange, NJ

LL Sample # WW 8950597
LL Group # 1791648
Account # 12453

Project Name: BP 84849

Collected: 04/19/2017

Submitted: 04/20/2017 09:40
Reported: 05/02/2017 17:03

Atlantic Richfield(Parsons)
BP Corporation
501 Westlake Park Blvd.
Houston TX 77079

K6606 SDG#: KEA66-06TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10335	m+p-Xylene	179601-23-1	N.D.	0.50	1.0	1
10335	o-Xylene	95-47-6	N.D.	0.50	1.0	1
10335	Xylene (Total)	1330-20-7	N.D.	0.50	1.0	1

00880 VOA GC/MS Library Search (15)

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.

Sample Comments

State of New Jersey Lab Certification No. PA011
The temperature of the sample bottle(s) upon receipt at the lab was 4.2 - 11.7 C using an IR thermometer.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	NJ SOM01.2 Unleaded + TBA	SW-846 8260B	1	N171152AA	04/25/2017 23:12	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N171152AA	04/25/2017 23:12	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

K6606

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 8950597
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP07159.i/17apr25b.b/na25s36.d
Level: (low/med) LOW Date Received: 04/20/17
% Moisture: not dec. Date Analyzed: 04/25/17
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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FORM I VOA-TIC

Quality Control Summary

Client Name: Atlantic Richfield(Parsons) Group Number: 1791648
Reported: 05/02/2017 17:03

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: N171152AA	Sample number(s): 8950590-8950597		
Acetone	N.D.	6.0	20
Benzene	N.D.	0.50	1.0
Bromochloromethane	N.D.	1.0	5.0
Bromodichloromethane	N.D.	0.50	1.0
Bromoform	N.D.	0.50	4.0
Bromomethane	N.D.	0.50	1.0
2-Butanone	N.D.	3.0	10
t-Butyl alcohol	N.D.	5.0	20
Carbon Disulfide	N.D.	1.0	5.0
Carbon Tetrachloride	N.D.	0.50	1.0
Chlorobenzene	N.D.	0.50	1.0
Chloroethane	N.D.	0.50	1.0
Chloroform	N.D.	0.50	1.0
Chloromethane	N.D.	0.50	1.0
Cyclohexane	N.D.	2.0	5.0
Dibromochloromethane	N.D.	0.50	1.0
1,2-Dichlorobenzene	N.D.	1.0	5.0
1,3-Dichlorobenzene	N.D.	1.0	5.0
1,4-Dichlorobenzene	N.D.	1.0	5.0
Dichlorodifluoromethane	N.D.	0.50	1.0
1,1-Dichloroethane	N.D.	0.50	1.0
1,2-Dichloroethane	N.D.	0.50	1.0
1,1-Dichloroethene	N.D.	0.50	1.0
cis-1,2-Dichloroethene	N.D.	0.50	1.0
trans-1,2-Dichloroethene	N.D.	0.50	1.0
1,2-Dichloropropane	N.D.	0.50	1.0
cis-1,3-Dichloropropene	N.D.	0.50	1.0
trans-1,3-Dichloropropene	N.D.	0.50	1.0
Ethylbenzene	N.D.	0.50	1.0
Freon 113	N.D.	2.0	10
2-Hexanone	N.D.	3.0	10
Isopropylbenzene	N.D.	1.0	5.0
Methyl Acetate	N.D.	1.0	5.0
Methyl Tertiary Butyl Ether	N.D.	0.50	1.0
4-Methyl-2-pentanone	N.D.	3.0	10
Methylcyclohexane	N.D.	1.0	5.0
Methylene Chloride	N.D.	2.0	4.0
Styrene	N.D.	1.0	5.0
1,1,2,2-Tetrachloroethane	N.D.	0.50	1.0
Tetrachloroethene	N.D.	0.50	1.0

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Atlantic Richfield(Parsons) Group Number: 1791648
Reported: 05/02/2017 17:03

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Toluene	N.D.	0.50	1.0
1,2,3-Trichlorobenzene	N.D.	1.0	5.0
1,2,4-Trichlorobenzene	N.D.	1.0	5.0
1,1,1-Trichloroethane	N.D.	0.50	1.0
1,1,2-Trichloroethane	N.D.	0.50	1.0
Trichloroethene	N.D.	0.50	1.0
Trichlorofluoromethane	N.D.	0.50	1.0
Vinyl Chloride	N.D.	0.50	1.0
m+p-Xylene	N.D.	0.50	1.0
o-Xylene	N.D.	0.50	1.0
Xylene (Total)	N.D.	0.50	1.0

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: N171152AA	Sample number(s): 8950590-8950597								
Acetone	150	143.27			96		50-168		
Benzene	20	20.67			103		78-120		
Bromochloromethane	20	20.33			102		80-125		
Bromodichloromethane	20	20.6			103		80-120		
Bromoform	20	18.69			93		64-120		
Bromomethane	20	19.42			97		49-121		
2-Butanone	150	175.94			117		53-140		
t-Butyl alcohol	200	194.36			97		68-122		
Carbon Disulfide	20	19.75			99		63-122		
Carbon Tetrachloride	20	20.51			103		76-123		
Chlorobenzene	20	20.43			102		80-120		
Chloroethane	20	18.82			94		51-121		
Chloroform	20	21.35			107		80-120		
Chloromethane	20	19.52			98		57-120		
Cyclohexane	20	17.44			87		67-121		
Dibromochloromethane	20	20.02			100		78-120		
1,2-Dichlorobenzene	20	19.59			98		80-120		
1,3-Dichlorobenzene	20	19.52			98		80-120		
1,4-Dichlorobenzene	20	19.57			98		80-120		
Dichlorodifluoromethane	20	16.52			83		54-122		
1,1-Dichloroethane	20	21.2			106		80-120		
1,2-Dichloroethane	20	22.3			112		66-128		
1,1-Dichloroethene	20	20.04			100		76-124		
cis-1,2-Dichloroethene	20	20.8			104		80-120		
trans-1,2-Dichloroethene	20	20.83			104		80-120		
1,2-Dichloropropane	20	21.13			106		80-120		
cis-1,3-Dichloropropene	20	19.74			99		75-120		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Atlantic Richfield(Parsons) Group Number: 1791648
Reported: 05/02/2017 17:03

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
trans-1,3-Dichloropropene	20	19.66			98		76-120		
Ethylbenzene	20	21.16			106		78-120		
Freon 113	20	18.63			93		68-129		
2-Hexanone	100	116.53			117		49-137		
Isopropylbenzene	20	21.11			106		80-120		
Methyl Acetate	20	21.37			107		61-137		
Methyl Tertiary Butyl Ether	20	20.56			103		75-120		
4-Methyl-2-pentanone	100	118.32			118		56-131		
Methylcyclohexane	20	17.9			89		66-126		
Methylene Chloride	20	20.35			102		80-120		
Styrene	20	20.24			101		80-120		
1,1,2,2-Tetrachloroethane	20	21			105		72-120		
Tetrachloroethene	20	18.97			95		80-129		
Toluene	20	20.71			104		80-120		
1,2,3-Trichlorobenzene	20	17.25			86		51-120		
1,2,4-Trichlorobenzene	20	17.24			86		58-120		
1,1,1-Trichloroethane	20	18.19			91		67-120		
1,1,2-Trichloroethane	20	20.68			103		80-120		
Trichloroethene	20	20.11			101		80-120		
Trichlorofluoromethane	20	19.37			97		57-134		
Vinyl Chloride	20	19.97			100		63-121		
m+p-Xylene	40	42.42			106		80-120		
o-Xylene	20	20.4			102		80-120		
Xylene (Total)	60	62.82			105		80-120		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: N171152AA	Sample number(s): 8950590-8950597 UNSPK: 8950591									
Acetone	16	150	142.48	150	138.95	84	82	50-168	3	30
Benzene	9.28	20	30.96	20	32.83	108	118	78-120	6	30
Bromochloromethane	N.D.	20	19.77	20	21.03	99	105	80-125	6	30
Bromodichloromethane	N.D.	20	22.11	20	21.7	111	109	80-120	2	30
Bromoform	N.D.	20	18.66	20	18.86	93	94	64-120	1	30
Bromomethane	N.D.	20	19.25	20	20.09	96	100	49-121	4	30
2-Butanone	N.D.	150	168.68	150	174.55	112	116	53-140	3	30
t-Butyl alcohol	N.D.	200	180.51	200	179.88	90	90	68-122	0	30
Carbon Disulfide	N.D.	20	20.64	20	21.33	103	107	63-122	3	30
Carbon Tetrachloride	N.D.	20	22.67	20	22.91	113	115	76-123	1	30
Chlorobenzene	N.D.	20	20.97	20	20.77	105	104	80-120	1	30
Chloroethane	N.D.	20	18.99	20	20.29	95	101	51-121	7	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Atlantic Richfield(Parsons) Group Number: 1791648
Reported: 05/02/2017 17:03

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Chloroform	N.D.	20	23.89	20	24.12	119	121*	80-120	1	30
Chloromethane	N.D.	20	20.49	20	20.65	102	103	57-120	1	30
Cyclohexane	35.6	20	72.46	20	75.01	184*	197*	67-121	3	30
Dibromochloromethane	N.D.	20	20.12	20	20.16	101	101	78-120	0	30
1,2-Dichlorobenzene	N.D.	20	19.65	20	19.87	98	99	80-120	1	30
1,3-Dichlorobenzene	N.D.	20	19.91	20	20.16	100	101	80-120	1	30
1,4-Dichlorobenzene	N.D.	20	19.93	20	20.22	100	101	80-120	1	30
Dichlorodifluoromethane	N.D.	20	19.9	20	19.96	99	100	54-122	0	30
1,1-Dichloroethane	N.D.	20	22.4	20	23.08	112	115	80-120	3	30
1,2-Dichloroethane	N.D.	20	22.64	20	22.62	113	113	66-128	0	30
1,1-Dichloroethene	N.D.	20	21.16	20	22.21	106	111	76-124	5	30
cis-1,2-Dichloroethene	N.D.	20	21.68	20	22.57	108	113	80-120	4	30
trans-1,2-Dichloroethene	N.D.	20	20.97	20	22.64	105	113	80-120	8	30
1,2-Dichloropropane	N.D.	20	22.61	20	22.52	113	113	80-120	0	30
cis-1,3-Dichloropropene	N.D.	20	20.37	20	21.21	102	106	75-120	4	30
trans-1,3-Dichloropropene	N.D.	20	20.23	20	20.06	101	100	76-120	1	30
Ethylbenzene	1.87	20	24.73	20	24.72	114	114	78-120	0	30
Freon 113	N.D.	20	22.22	20	23.46	111	117	68-129	5	30
2-Hexanone	N.D.	100	118.49	100	114.48	118	114	49-137	3	30
Isopropylbenzene	N.D.	20	23.52	20	23.26	118	116	80-120	1	30
Methyl Acetate	N.D.	20	23.25	20	22.54	116	113	61-137	3	30
Methyl Tertiary Butyl Ether	1.50	20	21.92	20	23.1	102	108	75-120	5	30
4-Methyl-2-pentanone	N.D.	100	118.48	100	117.52	118	118	56-131	1	30
Methylcyclohexane	23.69	20	47.52	20	49.5	119	129*	66-126	4	30
Methylene Chloride	N.D.	20	21.87	20	22.34	109	112	80-120	2	30
Styrene	N.D.	20	22.14	20	22.11	111	111	80-120	0	30
1,1,2,2-Tetrachloroethane	N.D.	20	19.59	20	20.03	98	100	72-120	2	30
Tetrachloroethene	N.D.	20	20.97	20	21.25	105	106	80-129	1	30
Toluene	8.24	20	30.99	20	31.95	114	119	80-120	3	30
1,2,3-Trichlorobenzene	N.D.	20	16.78	20	17.34	84	87	51-120	3	30
1,2,4-Trichlorobenzene	N.D.	20	18.87	20	19.21	94	96	58-120	2	30
1,1,1-Trichloroethane	N.D.	20	19.49	20	20.01	97	100	67-120	3	30
1,1,2-Trichloroethane	N.D.	20	23.42	20	23.48	117	117	80-120	0	30
Trichloroethene	N.D.	20	21.94	20	22.88	110	114	80-120	4	30
Trichlorofluoromethane	N.D.	20	22.64	20	23.2	113	116	57-134	2	30
Vinyl Chloride	N.D.	20	20.8	20	21.39	104	107	63-121	3	30
m+p-Xylene	24.96	40	74.83	40	79.67	125*	137*	80-120	6	30
o-Xylene	26.21	20	52.23	20	54.59	130*	142*	80-120	4	30
Xylene (Total)	51.17	60	127.06	60	134.26	126*	138*	80-120	6	30

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Atlantic Richfield(Parsons) Group Number: 1791648
Reported: 05/02/2017 17:03

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NJ SOM01.2 Unleaded + TBA
Batch number: N171152AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8950590	110	107	100	95
8950591	105	102	101	99
8950592	100	104	103	102
8950593	103	107	102	100
8950594	109	103	102	103
8950595	106	103	101	99
8950596	112	107	98	93
8950597	109	108	100	94
Blank	107	106	100	95
LCS	103	107	104	102
MS	100	104	103	102
MSD	103	107	102	100
Limits:	80-116	77-113	80-113	78-113

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

12453 | 1791648 | 8950590-97

bp rm Laboratory Management Program LaMP Chain of Custody Record

R224998

Page 1 of 1

BP Site Node Path: _____ Req Due Date (mm/dd/yy): _____ Rush TAT: Yes ___ No X

BP Facility No: 84849 Lab Work Order Number: _____

Lab Name: Eurofins Lancaster Labs	Facility Address: 945 Pleasant Valley Way	Consultant/Contractor: Parsons
Lab Address: 2425 New Holland Pike, Lancaster PA	City, State, ZIP Code: West Orange, NJ 07052	Consultant/Contractor Project No:
Lab PM: Alison Bainbridge	Lead Regulatory Agency: NJDEP	Address: 200 Cottontail Lane, Somerset, NJ
Lab Phone:	California Global ID No.:	Consultant/Contractor PM: Allyson Kinney
Lab Shipping Accnt:	Enfos Proposal No:	Phone: 609 713 3222 Email: akinney@parsons
Lab Bottle Order No: 2096859	Accounting Mode: Provision ___ OOC-BU ___ OOC-RM ___	Email EDD To: [illegible] and to lab.enfosdoc@bp.com
Other Info:	Stage: Activity:	Invoice To: BP ___ Contractor X

BP Project Manager (PM): Gregory Miller

BP PM Phone: 410 825-7964

BP PM Email: gregory.miller20@bp.com

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Matrix: Is this location a well?	No. Containers / Preservative: Total Number of Container:	Unpreserved	H2SO4	HNO3	HCl	Methanol	Requested Analyses: MTBE	PCB's	VOC TCL	Report Type & QC Level
	MW-1R-04192017	4/19/17	0955		X							X		X	X	X	
	MW-18R-04192017		1040		X							X		X	X	X	
	MW-18R-04192017-MS		1040		X							X		X	X	X	
	MW-18R-04192017-MSD		1040		X							X		X	X	X	
	MW-17R-04192017		1155		X							X		X	X	X	
	BD-04192017		1200		X							X		X	X	X	
	EB-04192017		1230		X							X		X	X	X	
	TB-04192017		—		X							X		X	X	X	

Comments

Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

Sampler's Name: T. Watson	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: Parsons		4/19/17	1650			
Shipment Method: FedEx Ship Date:		4/19/17				
Shipment Tracking No:				Nia Smith	4/20/17	9:40

Special Instructions:

THIS LINE - LAB USE ONLY: Custody Seals In Place: (Yes) No | Temp Blank: (Yes) No | Cooler Temp on Receipt: 10.9 °F (C) | Trip Blank: (Yes) No | MS/MSD Sample Submitted: (Yes) / No

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 181343

Group Number(s): 1791648

Client: BP RM

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	04/20/2017 9:40
Number of Packages:	1	Number of Projects:	1

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nia Smith (12375) at 13:06 on 04/20/2017

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?	Samples Collected Same Day as Receipt?
1	32170023	10.9	IR	Wet	Y	Bagged	Y	N

Elevated Temperature Details

All Temperatures in °C

Cooler #	Thermometer ID	Top Left Temp	Top Right Temp	Bottom Left Temp	Bottom Right Temp	Center Temp	Factors Contributing to Elevated Temp	Comments
1	32170023	4.2	7.1	10.1	11.7	8.5		2 vials were within temp. Both are marked with silver sharpie.

Samples In Elevated-Temperature Coolers

Cooler #	Sample ID
1	MW-18R-04192017 (1)
1	TB-04192017

2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mg**	milligram(s)
C	degrees Celsius	**mL**	milliliter(s)
cfu	colony forming units	**MPN**	Most Probable Number
CP Units	cobalt-chloroplatinate units	**N.D.**	none detected
F	degrees Fahrenheit	**ng**	nanogram(s)
g	gram(s)	**NTU**	nephelometric turbidity units
IU	International Units	**pg/L**	picogram/liter
kg	kilogram(s)	**RL**	Reporting Limit
L	liter(s)	**TNTC**	Too Numerous To Count
lb.	pound(s)	**µg**	microgram(s)
m3	cubic meter(s)	**µL**	microliter(s)
meq	milliequivalents	**umhos/cm**	micromhos/cm

< less than

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Laboratory Data Qualifiers:

C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U - Analyte was not detected at the value indicated
V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference…
W - The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

October 20, 2017

Allyson Kriney
Parsons
200 Cottontail Lane
Somerset, NJ 08873

RE: Project: 84849 - 10/5
Pace Project No.: 7032272

Dear Allyson Kriney:
Enclosed are the analytical results for sample(s) received by the laboratory on October 06, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Paige Doherty
paige.doherty@pacelabs.com
(631)694-3040
Project Manager

Enclosures

cc: Paige Doherty, Pace Analytical
Dennis Miller, Parsons

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Melville, NY 11747
(631)694-3040

CERTIFICATIONS

Project: 84849 - 10/5
Pace Project No.: 7032272

Long Island Certification IDs

575 Broad Hollow Rd, Melville, NY 11747
New York Certification #: 10478 Primary Accrediting Body
New Jersey Certification #: NY158
Pennsylvania Certification #: 68-00350
Connecticut Certification #: PH-0435
Maryland Certification #: 208
Rhode Island Certification #: LAO00340
Massachusetts Certification #: M-NY026
New Hampshire Certification #: 2987

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Melville, NY 11747
(631)694-3040

SAMPLE SUMMARY

Project: 84849 - 10/5
Pace Project No.: 7032272

Lab ID	Sample ID	Matrix	Date Collected	Date Received
7032272001	**MW-3-10052017**	Water	10/05/17 13:05	10/06/17 09:20
7032272002	**MW-12-10052017**	Water	10/05/17 10:35	10/06/17 09:20
7032272003	**MW-14-10052017**	Water	10/05/17 12:00	10/06/17 09:20
7032272004	**MW-16R-10042017**	Water	10/04/17 15:05	10/06/17 09:20
7032272005	**MW-17R-10042017**	Water	10/04/17 10:25	10/06/17 09:20
7032272006	**MW-18R-10052017**	Water	10/05/17 09:15	10/06/17 09:20
7032272007	**BD-10052017**	Water	10/05/17 00:00	10/06/17 09:20
7032272008	**FB-10052017**	Water	10/05/17 13:30	10/06/17 09:20
7032272009	**TB-10052017**	Water	10/05/17 13:35	10/06/17 09:20

REPORT OF LABORATORY ANALYSIS

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Melville, NY 11747
(631)694-3040

SAMPLE ANALYTE COUNT

Project: 84849 - 10/5
Pace Project No.: 7032272

Lab ID	Sample ID	Method	Analysts	Analytes Reported
7032272001	**MW-3-10052017**	EPA 8260C/5030C	KGG	4
7032272002	**MW-12-10052017**	EPA 8260C/5030C	KGG	15
7032272003	**MW-14-10052017**	EPA 8260C/5030C	KGG	4
7032272004	**MW-16R-10042017**	EPA 8260C/5030C	KGG	15
7032272005	**MW-17R-10042017**	EPA 8260C/5030C	KGG	21
7032272006	**MW-18R-10052017**	EPA 8260C/5030C	BBL	16
7032272007	**BD-10052017**	EPA 8260C/5030C	BBL	16
7032272008	**FB-10052017**	EPA 8260C/5030C	BBL	9
		EPA 8260	BBL	1
7032272009	**TB-10052017**	EPA 8260C/5030C	KGG	9
		EPA 8260	BBL	1

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575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

SUMMARY OF DETECTION

Project: 84849 - 10/5
Pace Project No.: 7032272

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
7032272001	**MW-3-10052017**					
EPA 8260C/5030C	Benzene	25.4	ug/L	1.0	10/13/17 15:17	
7032272002	**MW-12-10052017**					
EPA 8260C/5030C	Benzene	15.2	ug/L	1.0	10/13/17 15:35	
EPA 8260C/5030C	1.770:Unknown Petroleum Alkane	63.5J	ug/L		10/13/17 15:35	
EPA 8260C/5030C	2.440:Unknown Petroleum Alkane	42.6J	ug/L		10/13/17 15:35	
EPA 8260C/5030C	4.452:Unknown Petroleum Alkane	86.9J	ug/L		10/13/17 15:35	
EPA 8260C/5030C	5.970:p-Xylene	124J	ug/L		10/13/17 15:35	N
EPA 8260C/5030C	6.263:o-Xylene	47.3J	ug/L		10/13/17 15:35	N
EPA 8260C/5030C	6.909:Unknown Aromatic Hydroca	25.4J	ug/L		10/13/17 15:35	
EPA 8260C/5030C	6.964:Unknown Aromatic Hydroca	20.2J	ug/L		10/13/17 15:35	
EPA 8260C/5030C	7.116:Unknown Aromatic Hydroca	28.2J	ug/L		10/13/17 15:35	
EPA 8260C/5030C	7.250:Unknown Aromatic Hydroca	44.1J	ug/L		10/13/17 15:35	
EPA 8260C/5030C	7.738:Unknown Aromatic Hydroca	19.5J	ug/L		10/13/17 15:35	
EPA 8260C/5030C	8.079:Unknown Aromatic Hydroca	13.4J	ug/L		10/13/17 15:35	
7032272003	**MW-14-10052017**					
EPA 8260C/5030C	Benzene	15.2	ug/L	1.0	10/13/17 15:58	
7032272004	**MW-16R-10042017**					
EPA 8260C/5030C	Benzene	50.0	ug/L	1.0	10/13/17 16:16	
EPA 8260C/5030C	1.459:Unknown Petroleum Alkane	35.6J	ug/L		10/13/17 16:16	
EPA 8260C/5030C	1.770:Unknown Petroleum Alkane	101J	ug/L		10/13/17 16:16	
EPA 8260C/5030C	3.080:Unknown Petroleum Alkane	35.5J	ug/L		10/13/17 16:16	
EPA 8260C/5030C	7.250:Unknown Aromatic Hydroca	45.1J	ug/L		10/13/17 16:16	
EPA 8260C/5030C	7.580:Unknown Aromatic Hydroca	72.0J	ug/L		10/13/17 16:16	
EPA 8260C/5030C	7.708:Unknown Aromatic Hydroca	44.2J	ug/L		10/13/17 16:16	
EPA 8260C/5030C	7.738:Unknown Aromatic Hydroca	52.1J	ug/L		10/13/17 16:16	
EPA 8260C/5030C	8.177:Unknown Aromatic Hydroca	45.9J	ug/L		10/13/17 16:16	
EPA 8260C/5030C	8.396:Unknown Aromatic Hydroca	47.5J	ug/L		10/13/17 16:16	
EPA 8260C/5030C	8.439:Unknown Aromatic Hydroca	68.4J	ug/L		10/13/17 16:16	
EPA 8260C/5030C	8.787:Unknown Aromatic Hydroca	79.8J	ug/L		10/13/17 16:16	
7032272005	**MW-17R-10042017**					
EPA 8260C/5030C	Benzene	488	ug/L	20.0	10/13/17 16:59	
EPA 8260C/5030C	Ethylbenzene	1920	ug/L	20.0	10/13/17 16:59	
EPA 8260C/5030C	1.459:Unknown Petroleum Alkane	75.9J	ug/L		10/13/17 16:34	
EPA 8260C/5030C	1.763:Unknown Petroleum Alkane	191J	ug/L		10/13/17 16:34	
EPA 8260C/5030C	2.434:Unknown Petroleum Alkane	85.1J	ug/L		10/13/17 16:34	
EPA 8260C/5030C	3.080:Unknown Petroleum Alkane	95.4J	ug/L		10/13/17 16:34	
EPA 8260C/5030C	6.823:Benzene, propyl-	19.7J	ug/L		10/13/17 16:34	N
EPA 8260C/5030C	6.897:Unknown Aromatic Hydroca	126J	ug/L		10/13/17 16:34	
EPA 8260C/5030C	6.970:Unknown Aromatic Hydroca	56.9J	ug/L		10/13/17 16:34	
EPA 8260C/5030C	7.122:Unknown Aromatic Hydroca	46.5J	ug/L		10/13/17 16:34	
EPA 8260C/5030C	7.262:Unknown Aromatic Hydroca	124J	ug/L		10/13/17 16:34	
EPA 8260C/5030C	7.738:Unknown Aromatic Hydroca	55.2J	ug/L		10/13/17 16:34	
EPA 8260C/5030C	7.781:Unknown Aromatic Hydroca	24.4J	ug/L		10/13/17 16:34	
EPA 8260C/5030C	8.079:Unknown Aromatic Hydroca	19.4J	ug/L		10/13/17 16:34	
EPA 8260C/5030C	Toluene	279	ug/L	20.0	10/13/17 16:59	

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(631)694-3040

SUMMARY OF DETECTION

Project: 84849 - 10/5
Pace Project No.: 7032272

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
7032272005	**MW-17R-10042017**					
EPA 8260C/5030C	Xylene (Total)	9160	ug/L	40.0	10/13/17 16:59	
EPA 8260C/5030C	m&p-Xylene	7200	ug/L	40.0	10/13/17 16:59	
EPA 8260C/5030C	o-Xylene	1970	ug/L	20.0	10/13/17 16:59	
7032272006	**MW-18R-10052017**					
EPA 8260C/5030C	Benzene	59.0	ug/L	1.0	10/16/17 18:43	M1
EPA 8260C/5030C	1.187:Unknown Petroleum Alkane	81.1J	ug/L		10/16/17 18:43	
EPA 8260C/5030C	1.286:Unknown Petroleum Alkane	61.1J	ug/L		10/16/17 18:43	
EPA 8260C/5030C	1.646:Unknown Petroleum Alkane	218J	ug/L		10/16/17 18:43	
EPA 8260C/5030C	2.480:Unknown Petroleum Alkane	67.5J	ug/L		10/16/17 18:43	
EPA 8260C/5030C	2.563:Unknown Petroleum Alkane	44.5J	ug/L		10/16/17 18:43	
EPA 8260C/5030C	2.698:Unknown Petroleum Alkane	24.8J	ug/L		10/16/17 18:43	
EPA 8260C/5030C	3.426:Unknown Petroleum Alkane	49.5J	ug/L		10/16/17 18:43	
EPA 8260C/5030C	4.010:Unknown Petroleum Alkane	36.8J	ug/L		10/16/17 18:43	
EPA 8260C/5030C	5.537:Unknown Petroleum Alkane	22.4J	ug/L		10/16/17 18:43	
EPA 8260C/5030C	9.983:Unknown Aromatic Hydroca	37.6J	ug/L		10/16/17 18:43	
EPA 8260C/5030C	10.554:Unknown Aromatic Hydroc	16.1J	ug/L		10/16/17 18:43	
EPA 8260C/5030C	10.845:Unknown Aromatic Hydroc	15.4J	ug/L		10/16/17 18:43	
7032272007	**BD-10052017**					
EPA 8260C/5030C	Benzene	19.8	ug/L	1.0	10/16/17 18:20	
EPA 8260C/5030C	1.649:Unknown Petroleum Alkane	87.4J	ug/L		10/16/17 18:20	
EPA 8260C/5030C	2.508:Unknown Petroleum Alkane	64.9J	ug/L		10/16/17 18:20	
EPA 8260C/5030C	5.421:Unknown Petroleum Alkane	71.9J	ug/L		10/16/17 18:20	
EPA 8260C/5030C	5.537:Unknown Petroleum Alkane	110J	ug/L		10/16/17 18:20	
EPA 8260C/5030C	7.679:p-Xylene	135J	ug/L		10/16/17 18:20	N
EPA 8260C/5030C	8.064:o-Xylene	52.6J	ug/L		10/16/17 18:20	N
EPA 8260C/5030C	8.934:Unknown Aromatic Hydroca	58.0J	ug/L		10/16/17 18:20	
EPA 8260C/5030C	9.001:Unknown Aromatic Hydroca	82.9J	ug/L		10/16/17 18:20	
EPA 8260C/5030C	9.197:Unknown Aromatic Hydroca	113J	ug/L		10/16/17 18:20	
EPA 8260C/5030C	9.373:Unknown Aromatic Hydroca	173J	ug/L		10/16/17 18:20	
EPA 8260C/5030C	9.790:Unknown Aromatic Hydroca	137J	ug/L		10/16/17 18:20	
EPA 8260C/5030C	9.982:Unknown Aromatic Hydroca	77.7J	ug/L		10/16/17 18:20	
7032272008	**FB-10052017**					
EPA 8260	TIC Search	No TIC's Found			10/19/17 17:41	
7032272009	**TB-10052017**					
EPA 8260	TIC Search	No TIC's Found			10/16/17 23:25	

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(631)694-3040

PROJECT NARRATIVE

Project: 84849 - 10/5
Pace Project No.: 7032272

Method: **EPA 8260C/5030C**
Description: 8260C Volatile Organics
Client: BP-Parsons (Somerset NJ)
Date: October 20, 2017

General Information:
9 samples were analyzed for EPA 8260C/5030C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: 42887

S0: Surrogate recovery outside laboratory control limits.

- MW-17R-10042017 (Lab ID: 7032272005)
  - 1,2-Dichloroethane-d4 (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 43152

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 7032272006

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 202089)
  - Benzene
  - Ethylbenzene
  - Toluene
  - m&p-Xylene
  - o-Xylene
- MSD (Lab ID: 202090)
  - Benzene

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PROJECT NARRATIVE

Project: 84849 - 10/5
Pace Project No.: 7032272

Method: **EPA 8260C/5030C**
Description: 8260C Volatile Organics
Client: BP-Parsons (Somerset NJ)
Date: October 20, 2017

QC Batch: 43152

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 7032272006

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- Ethylbenzene
- Toluene
- m&p-Xylene
- o-Xylene

Additional Comments:

Analyte Comments:

QC Batch: 42887

C0: Result confirmed by second analysis.

- MW-17R-10042017 (Lab ID: 7032272005)
  - 1,2-Dichloroethane-d4 (S)

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- MS (Lab ID: 200267)
  - Ethylbenzene
  - m&p-Xylene
  - o-Xylene
- MSD (Lab ID: 200268)
  - Ethylbenzene
  - m&p-Xylene
  - o-Xylene

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PROJECT NARRATIVE

Project: 84849 - 10/5
Pace Project No.: 7032272

Method: **EPA 8260**
Description: TIC MSV Water
Client: BP-Parsons (Somerset NJ)
Date: October 20, 2017

General Information:
2 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: 84849 - 10/5
Pace Project No.: 7032272

Sample: MW-3-10052017 **Lab ID: 7032272001** Collected: 10/05/17 13:05 Received: 10/06/17 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**25.4**	ug/L	1.0	0.11	1		10/13/17 15:17	71-43-2	
Surrogates									
1,2-Dichloroethane-d4 (S)	121	%.	68-153		1		10/13/17 15:17	17060-07-0	
4-Bromofluorobenzene (S)	111	%.	79-124		1		10/13/17 15:17	460-00-4	
Toluene-d8 (S)	109	%.	69-124		1		10/13/17 15:17	2037-26-5	

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ANALYTICAL RESULTS

Project: 84849 - 10/5
Pace Project No.: 7032272

Sample: MW-12-10052017 **Lab ID: 7032272002** Collected: 10/05/17 10:35 Received: 10/06/17 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**15.2**	ug/L	1.0	0.11	1		10/13/17 15:35	71-43-2	
Surrogates									
1,2-Dichloroethane-d4 (S)	123	%.	68-153		1		10/13/17 15:35	17060-07-0	
4-Bromofluorobenzene (S)	109	%.	79-124		1		10/13/17 15:35	460-00-4	
Toluene-d8 (S)	108	%.	69-124		1		10/13/17 15:35	2037-26-5	
Tentatively Identified Compounds									
Unknown Petroleum Alkane	**63.5J**	ug/L			1		10/13/17 15:35		
Unknown Petroleum Alkane	**42.6J**	ug/L			1		10/13/17 15:35		
Unknown Petroleum Alkane	**86.9J**	ug/L			1		10/13/17 15:35		
p-Xylene	**124J**	ug/L			1		10/13/17 15:35	106-42-3	N
o-Xylene	**47.3J**	ug/L			1		10/13/17 15:35	95-47-6	N
Unknown Aromatic Hydroca	**25.4J**	ug/L			1		10/13/17 15:35		
Unknown Aromatic Hydroca	**20.2J**	ug/L			1		10/13/17 15:35		
Unknown Aromatic Hydroca	**28.2J**	ug/L			1		10/13/17 15:35		
Unknown Aromatic Hydroca	**44.1J**	ug/L			1		10/13/17 15:35		
Unknown Aromatic Hydroca	**19.5J**	ug/L			1		10/13/17 15:35		
Unknown Aromatic Hydroca	**13.4J**	ug/L			1		10/13/17 15:35		

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ANALYTICAL RESULTS

Project: 84849 - 10/5
Pace Project No.: 7032272

Sample: MW-14-10052017 **Lab ID: 7032272003** Collected: 10/05/17 12:00 Received: 10/06/17 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**15.2**	ug/L	1.0	0.11	1		10/13/17 15:58	71-43-2	
Surrogates									
1,2-Dichloroethane-d4 (S)	117	%.	68-153		1		10/13/17 15:58	17060-07-0	
4-Bromofluorobenzene (S)	111	%.	79-124		1		10/13/17 15:58	460-00-4	
Toluene-d8 (S)	109	%.	69-124		1		10/13/17 15:58	2037-26-5	

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ANALYTICAL RESULTS

Project: 84849 - 10/5
Pace Project No.: 7032272

Sample: MW-16R-10042017 **Lab ID: 7032272004** Collected: 10/04/17 15:05 Received: 10/06/17 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**50.0**	ug/L	1.0	0.11	1		10/13/17 16:16	71-43-2	
Surrogates									
1,2-Dichloroethane-d4 (S)	123	%.	68-153		1		10/13/17 16:16	17060-07-0	
4-Bromofluorobenzene (S)	111	%.	79-124		1		10/13/17 16:16	460-00-4	
Toluene-d8 (S)	110	%.	69-124		1		10/13/17 16:16	2037-26-5	
Tentatively Identified Compounds									
Unknown Petroleum Alkane	**35.6J**	ug/L			1		10/13/17 16:16		
Unknown Petroleum Alkane	**101J**	ug/L			1		10/13/17 16:16		
Unknown Petroleum Alkane	**35.5J**	ug/L			1		10/13/17 16:16		
Unknown Aromatic Hydroca	**45.1J**	ug/L			1		10/13/17 16:16		
Unknown Aromatic Hydroca	**72.0J**	ug/L			1		10/13/17 16:16		
Unknown Aromatic Hydroca	**44.2J**	ug/L			1		10/13/17 16:16		
Unknown Aromatic Hydroca	**52.1J**	ug/L			1		10/13/17 16:16		
Unknown Aromatic Hydroca	**45.9J**	ug/L			1		10/13/17 16:16		
Unknown Aromatic Hydroca	**47.5J**	ug/L			1		10/13/17 16:16		
Unknown Aromatic Hydroca	**68.4J**	ug/L			1		10/13/17 16:16		
Unknown Aromatic Hydroca	**79.8J**	ug/L			1		10/13/17 16:16		

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ANALYTICAL RESULTS

Project: 84849 - 10/5
Pace Project No.: 7032272

Sample: MW-17R-10042017 **Lab ID: 7032272005** Collected: 10/04/17 10:25 Received: 10/06/17 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**488**	ug/L	20.0	2.3	20		10/13/17 16:59	71-43-2	
Ethylbenzene	**1920**	ug/L	20.0	2.7	20		10/13/17 16:59	100-41-4	
Toluene	**279**	ug/L	20.0	3.4	20		10/13/17 16:59	108-88-3	
Xylene (Total)	**9160**	ug/L	40.0	5.5	20		10/13/17 16:59	1330-20-7	
m&p-Xylene	**7200**	ug/L	40.0	5.5	20		10/13/17 16:59	179601-23-1	
o-Xylene	**1970**	ug/L	20.0	4.4	20		10/13/17 16:59	95-47-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	165	%.	68-153		1		10/13/17 16:34	17060-07-0	C0,S0
4-Bromofluorobenzene (S)	102	%.	79-124		1		10/13/17 16:34	460-00-4	
Toluene-d8 (S)	100	%.	69-124		1		10/13/17 16:34	2037-26-5	
Tentatively Identified Compounds									
Unknown Petroleum Alkane	**75.9J**	ug/L			1		10/13/17 16:34		
Unknown Petroleum Alkane	**191J**	ug/L			1		10/13/17 16:34		
Unknown Petroleum Alkane	**85.1J**	ug/L			1		10/13/17 16:34		
Unknown Petroleum Alkane	**95.4J**	ug/L			1		10/13/17 16:34		
Benzene, propyl-	**19.7J**	ug/L			1		10/13/17 16:34	103-65-1	N
Unknown Aromatic Hydroca	**126J**	ug/L			1		10/13/17 16:34		
Unknown Aromatic Hydroca	**56.9J**	ug/L			1		10/13/17 16:34		
Unknown Aromatic Hydroca	**46.5J**	ug/L			1		10/13/17 16:34		
Unknown Aromatic Hydroca	**124J**	ug/L			1		10/13/17 16:34		
Unknown Aromatic Hydroca	**55.2J**	ug/L			1		10/13/17 16:34		
Unknown Aromatic Hydroca	**24.4J**	ug/L			1		10/13/17 16:34		
Unknown Aromatic Hydroca	**19.4J**	ug/L			1		10/13/17 16:34		

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ANALYTICAL RESULTS

Project: 84849 - 10/5
Pace Project No.: 7032272

Sample: MW-18R-10052017 **Lab ID: 7032272006** Collected: 10/05/17 09:15 Received: 10/06/17 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**59.0**	ug/L	1.0	0.11	1		10/16/17 18:43	71-43-2	M1
Surrogates									
1,2-Dichloroethane-d4 (S)	110	%.	68-153		1		10/16/17 18:43	17060-07-0	
4-Bromofluorobenzene (S)	102	%.	79-124		1		10/16/17 18:43	460-00-4	
Toluene-d8 (S)	96	%.	69-124		1		10/16/17 18:43	2037-26-5	
Tentatively Identified Compounds									
Unknown Petroleum Alkane	**81.1J**	ug/L			1		10/16/17 18:43		
Unknown Petroleum Alkane	**61.1J**	ug/L			1		10/16/17 18:43		
Unknown Petroleum Alkane	**218J**	ug/L			1		10/16/17 18:43		
Unknown Petroleum Alkane	**67.5J**	ug/L			1		10/16/17 18:43		
Unknown Petroleum Alkane	**44.5J**	ug/L			1		10/16/17 18:43		
Unknown Petroleum Alkane	**24.8J**	ug/L			1		10/16/17 18:43		
Unknown Petroleum Alkane	**49.5J**	ug/L			1		10/16/17 18:43		
Unknown Petroleum Alkane	**36.8J**	ug/L			1		10/16/17 18:43		
Unknown Petroleum Alkane	**22.4J**	ug/L			1		10/16/17 18:43		
Unknown Aromatic Hydroca	**37.6J**	ug/L			1		10/16/17 18:43		
Unknown Aromatic Hydroc	**16.1J**	ug/L			1		10/16/17 18:43		
Unknown Aromatic Hydroc	**15.4J**	ug/L			1		10/16/17 18:43		

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ANALYTICAL RESULTS

Project: 84849 - 10/5
Pace Project No.: 7032272

Sample: BD-10052017 **Lab ID: 7032272007** Collected: 10/05/17 00:00 Received: 10/06/17 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**19.8**	ug/L	1.0	0.11	1		10/16/17 18:20	71-43-2	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%.	68-153		1		10/16/17 18:20	17060-07-0	
4-Bromofluorobenzene (S)	105	%.	79-124		1		10/16/17 18:20	460-00-4	
Toluene-d8 (S)	97	%.	69-124		1		10/16/17 18:20	2037-26-5	
Tentatively Identified Compounds									
Unknown Petroleum Alkane	**87.4J**	ug/L			1		10/16/17 18:20		
Unknown Petroleum Alkane	**64.9J**	ug/L			1		10/16/17 18:20		
Unknown Petroleum Alkane	**71.9J**	ug/L			1		10/16/17 18:20		
Unknown Petroleum Alkane	**110J**	ug/L			1		10/16/17 18:20		
p-Xylene	**135J**	ug/L			1		10/16/17 18:20	106-42-3	N
o-Xylene	**52.6J**	ug/L			1		10/16/17 18:20	95-47-6	N
Unknown Aromatic Hydroca	**58.0J**	ug/L			1		10/16/17 18:20		
Unknown Aromatic Hydroca	**82.9J**	ug/L			1		10/16/17 18:20		
Unknown Aromatic Hydroca	**113J**	ug/L			1		10/16/17 18:20		
Unknown Aromatic Hydroca	**173J**	ug/L			1		10/16/17 18:20		
Unknown Aromatic Hydroca	**137J**	ug/L			1		10/16/17 18:20		
Unknown Aromatic Hydroca	**77.7J**	ug/L			1		10/16/17 18:20		

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ANALYTICAL RESULTS

Project: 84849 - 10/5
Pace Project No.: 7032272

Sample: FB-10052017 **Lab ID: 7032272008** Collected: 10/05/17 13:30 Received: 10/06/17 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**<1.0**	ug/L	1.0	0.11	1		10/16/17 17:58	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	0.13	1		10/16/17 17:58	100-41-4	
Toluene	**<1.0**	ug/L	1.0	0.17	1		10/16/17 17:58	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	0.28	1		10/16/17 17:58	1330-20-7	
m&p-Xylene	**<2.0**	ug/L	2.0	0.28	1		10/16/17 17:58	179601-23-1	
o-Xylene	**<1.0**	ug/L	1.0	0.22	1		10/16/17 17:58	95-47-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	111	%.	68-153		1		10/16/17 17:58	17060-07-0	
4-Bromofluorobenzene (S)	103	%.	79-124		1		10/16/17 17:58	460-00-4	
Toluene-d8 (S)	96	%.	69-124		1		10/16/17 17:58	2037-26-5	
TIC MSV Water	Analytical Method: EPA 8260								
TIC Search	**No TIC's Found**				1		10/19/17 17:41		

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: 84849 - 10/5
Pace Project No.: 7032272

Sample: TB-10052017 **Lab ID: 7032272009** Collected: 10/05/17 13:35 Received: 10/06/17 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**<1.0**	ug/L	1.0	0.11	1		10/13/17 09:51	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	0.13	1		10/13/17 09:51	100-41-4	
Toluene	**<1.0**	ug/L	1.0	0.17	1		10/13/17 09:51	108-88-3	
Xylene (Total)	**<2.0**	ug/L	2.0	0.28	1		10/13/17 09:51	1330-20-7	
m&p-Xylene	**<2.0**	ug/L	2.0	0.28	1		10/13/17 09:51	179601-23-1	
o-Xylene	**<1.0**	ug/L	1.0	0.22	1		10/13/17 09:51	95-47-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	118	%.	68-153		1		10/13/17 09:51	17060-07-0	
4-Bromofluorobenzene (S)	109	%.	79-124		1		10/13/17 09:51	460-00-4	
Toluene-d8 (S)	111	%.	69-124		1		10/13/17 09:51	2037-26-5	
TIC MSV Water	Analytical Method: EPA 8260								
TIC Search	**No TIC's Found**				1		10/16/17 23:25		

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(631)694-3040

QUALITY CONTROL DATA

Project: 84849 - 10/5
Pace Project No.: 7032272

QC Batch: 42887 Analysis Method: EPA 8260C/5030C
QC Batch Method: EPA 8260C/5030C Analysis Description: 8260 MSV
Associated Lab Samples: 7032272001, 7032272002, 7032272003, 7032272004, 7032272005, 7032272009

METHOD BLANK: 200265 Matrix: Water
Associated Lab Samples: 7032272001, 7032272002, 7032272003, 7032272004, 7032272005, 7032272009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Benzene	ug/L	<1.0	1.0	0.11	10/13/17 08:40	
Ethylbenzene	ug/L	<1.0	1.0	0.13	10/13/17 08:40	
m&p-Xylene	ug/L	<2.0	2.0	0.28	10/13/17 08:40	
o-Xylene	ug/L	<1.0	1.0	0.22	10/13/17 08:40	
Toluene	ug/L	<1.0	1.0	0.17	10/13/17 08:40	
Xylene (Total)	ug/L	<2.0	2.0	0.28	10/13/17 08:40	
1,2-Dichloroethane-d4 (S)	%.	115	68-153		10/13/17 08:40	
4-Bromofluorobenzene (S)	%.	113	79-124		10/13/17 08:40	
Toluene-d8 (S)	%.	111	69-124		10/13/17 08:40	

LABORATORY CONTROL SAMPLE: 200266

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	52.5	105	73-119	
Ethylbenzene	ug/L	50	54.0	108	70-113	
m&p-Xylene	ug/L	100	109	109	72-115	
o-Xylene	ug/L	50	54.7	109	73-117	
Toluene	ug/L	50	54.2	108	72-119	
Xylene (Total)	ug/L	150	164	109	71-109	
1,2-Dichloroethane-d4 (S)	%.			118	68-153	
4-Bromofluorobenzene (S)	%.			112	79-124	
Toluene-d8 (S)	%.			113	69-124	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 200267 200268

Parameter	Units	7031972001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	1.3	50	50	57.9	59.4	113	116	73-119	3	20	
Ethylbenzene	ug/L	447	50	50	409	412	-74	-69	70-113	1	20	E
m&p-Xylene	ug/L	1190	100	100	1060	1060	-132	-126	72-115	1	20	E
o-Xylene	ug/L	172	50	50	226	226	108	107	73-117	0	20	E
Toluene	ug/L	15.0	50	50	72.5	73.7	115	117	72-119	2	20	
Xylene (Total)	ug/L	1360	150	150	1280	1290	-52	-48	71-109	0	20	ES
1,2-Dichloroethane-d4 (S)	%.						130	130	68-153		20	
4-Bromofluorobenzene (S)	%.						101	101	79-124		20	
Toluene-d8 (S)	%.						100	99	69-124		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: 84849 - 10/5
Pace Project No.: 7032272

QC Batch: 43152 Analysis Method: EPA 8260C/5030C
QC Batch Method: EPA 8260C/5030C Analysis Description: 8260 MSV
Associated Lab Samples: 7032272006, 7032272007, 7032272008

METHOD BLANK: 202087 Matrix: Water
Associated Lab Samples: 7032272006, 7032272007, 7032272008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Benzene	ug/L	<1.0	1.0	0.11	10/16/17 16:26	
Ethylbenzene	ug/L	<1.0	1.0	0.13	10/16/17 16:26	
m&p-Xylene	ug/L	<2.0	2.0	0.28	10/16/17 16:26	
o-Xylene	ug/L	<1.0	1.0	0.22	10/16/17 16:26	
Toluene	ug/L	<1.0	1.0	0.17	10/16/17 16:26	
Xylene (Total)	ug/L	<2.0	2.0	0.28	10/16/17 16:26	
1,2-Dichloroethane-d4 (S)	%.	106	68-153		10/16/17 16:26	
4-Bromofluorobenzene (S)	%.	100	79-124		10/16/17 16:26	
Toluene-d8 (S)	%.	98	69-124		10/16/17 16:26	

LABORATORY CONTROL SAMPLE: 202088

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	45.1	90	73-119	
Ethylbenzene	ug/L	50	41.2	82	70-113	
m&p-Xylene	ug/L	100	83.5	84	72-115	
o-Xylene	ug/L	50	42.7	85	73-117	
Toluene	ug/L	50	42.4	85	72-119	
Xylene (Total)	ug/L	150	126	84	71-109	
1,2-Dichloroethane-d4 (S)	%.			100	68-153	
4-Bromofluorobenzene (S)	%.			105	79-124	
Toluene-d8 (S)	%.			99	69-124	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 202089 202090

Parameter	Units	7032272006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	59.0	50	50	123	122	127	126	73-119	1	20	M1
Ethylbenzene	ug/L		50	50	60.2	59.8	120	120	70-113	1	20	M1
m&p-Xylene	ug/L		100	100	119	120	119	120	72-115	1	20	M1
o-Xylene	ug/L		50	50	59.0	59.6	118	119	73-117	1	20	M1
Toluene	ug/L		50	50	60.6	61.4	121	123	72-119	1	20	M1
Xylene (Total)	ug/L		150	150	178	180	119	120	71-109	1	20	MS
1,2-Dichloroethane-d4 (S)	%.						102	103	68-153		20	
4-Bromofluorobenzene (S)	%.						106	103	79-124		20	
Toluene-d8 (S)	%.						97	96	69-124		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALIFIERS

Project: 84849 - 10/5
Pace Project No.: 7032272

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

C0	Result confirmed by second analysis.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
ES	The reported result is estimated because one or more of the constituent results are qualified as such.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
MS	Analyte recovery in the matrix spike was outside QC limits for one or more of the constituent analytes used in the calculated result.
N	The reported TIC has an 85% or higher match on a mass spectral library search.
S0	Surrogate recovery outside laboratory control limits.

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Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 84849 - 10/5
Pace Project No.: 7032272

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
7032272001	**MW-3-10052017**	EPA 8260C/5030C	42887		
7032272002	**MW-12-10052017**	EPA 8260C/5030C	42887		
7032272003	**MW-14-10052017**	EPA 8260C/5030C	42887		
7032272004	**MW-16R-10042017**	EPA 8260C/5030C	42887		
7032272005	**MW-17R-10042017**	EPA 8260C/5030C	42887		
7032272006	**MW-18R-10052017**	EPA 8260C/5030C	43152		
7032272007	**BD-10052017**	EPA 8260C/5030C	43152		
7032272008	**FB-10052017**	EPA 8260C/5030C	43152		
7032272009	**TB-10052017**	EPA 8260C/5030C	42887		
7032272002	**MW-12-10052017**	EPA 8260	41188		
7032272004	**MW-16R-10042017**	EPA 8260	41188		
7032272005	**MW-17R-10042017**	EPA 8260	41188		
7032272006	**MW-18R-10052017**	EPA 8260	41188		
7032272007	**BD-10052017**	EPA 8260	41188		
7032272008	**FB-10052017**	EPA 8260			
7032272009	**TB-10052017**	EPA 8260			

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WO#:7032272

7032272

ry Management Program LaMP Chain of Custody Record

ode Path: BP > USA > NJ > ESSEX > 84849 > PMPv4 > 1994 R

acility No: 84849

Req Due Date (mm/dd/yy): STD Rush TAT: Yes ___ No X

Lab Work Order Number:

Lab Name: PACE Analytical Services LLC	Facility Address: 84849 – West Orange	Consultant/Contractor: Parsons	
Lab Address: 575 Broad Hollow Road, Melville NY 11747	City, State, ZIP Code:	Consultant/Contractor Project No: 450472-84849	
Lab PM: Paige Doherty	Lead Regulatory Agency: NJDEP	Address: 200 Cottontail Lane Somerset, NJ	
Lab Phone: 516-370-6041	California Global ID No.: N/A	Consultant/Contractor PM: Dennis Miller/Allyson Kriney	
Lab Shipping Accnt: 522658367	Enfos Proposal No: 009WH-0002	Phone: 732-537-3549	Email: Allyson.Kriney@parsons.c
Lab Bottle Order No:	Accounting Mode: Provision X OOC-BU ___ OOC-RM ___	Email EDD To: dennis.miller@parso and to lab.enfosdoc@bp.com	
Other Info: Profile	Stage: 40 Activity: 146	Invoice To: BP X Contractor ___	

BP Project Manager (PM): Bruno Mancini

BP PM Phone:

BP PM Email:

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Matrix: Is this location a well?	No. Containers / Preservative: Total Number of Containers	Unpreserved	H2SO4	HNO3	HCl	Methanol	Requested Analyses: VOCs + TICs, Benzene	VOCs + TICs, BTEX	VOCs + TICs, TBA	Benzene	Report Type & QC Level
	MW-3-10052017	10-5-17	13:05		X			3				X					X	001
	MW-12-10052017	↓	10:35		X			3				X		X			X	MS/MSD (KW) 002
	MW-14-10052017	↓	12:00		X			3				X		X			X	003
	MW-16R-10052017	10-4-17	15:05		X			3				X		X	X			004
	MW-17R-10042017	↓	10:25		X			3				X			X			005
	MW-18R-10052017	10-5-17	09:15		X			3				X		X				MS/MSD 006
	BP-10052017	↓	—		X			3				X		X				007
	FB-10052017	↓	13:30		X			3				X			X			008
	TB-10052017	↓	13:35		X			3				X			X			009

NJ reduced deliverable

Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

Sampler's Name: Kevin McMullen	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: Parsons	[illegible] / Parsons	10-5-17	15:00	[illegible]	10/6/17	09:20
Shipment Method: Fed Ex Ship Date: 10-5-17						
Shipment Tracking No: 4085 6356 3644						

Special Instructions:

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No	Temp Blank: Yes / No	Cooler Temp on Receipt: 5.3 °F/C	Trip Blank: Yes / No	MS/MSD Sample Submitted: Yes / No

BP Remediation Management COC - Effective Date: starting August 16, 2011.

BP LaMP COC Rev. 8, 24 June 2012

Sample Condition Upon Receipt

Pace Analytical

Client Name:

Pr

WO#:7032272

PM: PD Due Date: 10/20/17

CLIENT: BP_PAR(SONJ)

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #: 4085 6356 3844

Custody Seal on Cooler/Box Present: ☐ Yes ☐ No

Seals intact: ☑ Yes ☐ No

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ Ziploc ☐ None ☐ Other

Type of Ice: Wet Blue None

Thermometer Used: TH09

Correction Factor: +0.1

☑ Samples on ice, cooling process has begun

Cooler Temperature (°C): 3.3

Cooler Temperature Corrected (°C): 3.4

Date/Time 5035A kits placed in freezer _____

Temp should be above freezing to 6.0°C

Date and Initials of person examining contents: KB 10/9/17

USDA Regulated Soil (☑ N/A, water sample)

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ YES ☐ NO

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present:	☑ Yes	☐ No		1.
Chain of Custody Filled Out:	☑ Yes	☐ No		2.
Chain of Custody Relinquished:	☑ Yes	☐ No		3.
Sampler Name & Signature on COC:	☑ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time:	☑ Yes	☐ No		5.
Short Hold Time Analysis (<72hr):	☐ Yes	☑ No		6.
Rush Turn Around Time Requested:	☐ Yes	☑ No		7.
Sufficient Volume: (Triple volume provided for MS/MSD)	☑ Yes	☐ No		8.
Correct Containers Used:	☑ Yes	☐ No		9.
-Pace Containers Used:	☑ Yes	☐ No		10.
Containers Intact:	☑ Yes	☐ No		11. Note if sediment is visible in the dissolved container.
Filtered volume received for Dissolved tests	☐ Yes	☐ No	☑ N/A	12.
Sample Labels match COC:	☑ Yes	☐ No		
-Includes date/time/ID/Analysis Matrix: SL WT OIL				13 ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
All containers needing preservation have been checked	☑ Yes	☐ No	☑ N/A	Sample #
pH paper Lot #				
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl, NaOH>9 Sulfide, NaOH>12 Cyanide) Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis	☐ Yes	☐ No	☑ N/A	Initial when completed: / Lot # of added preservative: / Date/Time preservative added
Samples checked for dechlorination:	☐ Yes	☐ No	☑ N/A	14. Positive for Res. Chlorine? Y N
Residual chlorine strips Lot #				
Headspace in VOA Vials (>6mm):	☐ Yes	☑ No	☐ N/A	15.
Trip Blank Present:	☑ Yes	☐ No	☐ N/A	16.
Trip Blank Custody Seals Present	☑ Yes	☐ No	☐ N/A	
Pace Trip Blank Lot # (if applicable): _____				

Field Data Required? Y / N

Client Notification/ Resolution: Date/Time: _____

Person Contacted: _____

Comments/ Resolution: Labels match COC

* PM (Project Manager) review is documented electronically in LIMS.

F-LI-C-002-rev.0

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

April 18, 2018

Allyson Kriney
Parsons
200 Cottontail Lane
Somerset, NJ 08873

RE: Project: 84849 - 4/2
Pace Project No.: 7047139

Dear Allyson Kriney:
Enclosed are the analytical results for sample(s) received by the laboratory on April 04, 2018. The results relate only to the samples included in this report. Results contained within this report conform to the most current version of the TNI standards, BP LaMP Technical Requirements Revision 12.1, and any applicable Quality Assurance Project Plan (QAPP), or Work Plan unless otherwise narrated in the body of this report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Paige Doherty
paige.doherty@pacelabs.com
(631)694-3040
Project Manager

Enclosures

cc: ENFOS BP, ENFOS BP
Paige Doherty, Pace Analytical
Dennis Miller, Parsons
Christopher Watson, Parsons

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575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

CERTIFICATIONS

Project: 84849 - 4/2
Pace Project No.: 7047139

Long Island Certification IDs

575 Broad Hollow Rd, Melville, NY 11747
New York Certification #: 10478 Primary Accrediting Body
New Jersey Certification #: NY158
Pennsylvania Certification #: 68-00350
Connecticut Certification #: PH-0435
Maryland Certification #: 208
Rhode Island Certification #: LAO00340
Massachusetts Certification #: M-NY026
New Hampshire Certification #: 2987

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SAMPLE SUMMARY

Project: 84849 - 4/2
Pace Project No.: 7047139

Lab ID	Sample ID	Matrix	Date Collected	Date Received
7047139001	**MW-14-04022018**	Water	04/02/18 12:10	04/04/18 10:15
7047139002	**MW-11-04022018**	Water	04/02/18 13:20	04/04/18 10:15
7047139003	**MW-17R-04022018**	Water	04/02/18 14:50	04/04/18 10:15
7047139004	**MW-12-04032018**	Water	04/03/18 07:25	04/04/18 10:15
7047139005	**MW-16R-04032018**	Water	04/03/18 08:25	04/04/18 10:15
7047139006	**MW-18R-04032018**	Water	04/03/18 09:40	04/04/18 10:15
7047139007	**MW-3-04032018**	Water	04/03/18 10:35	04/04/18 10:15
7047139008	**BP-04032018**	Water	04/03/18 00:00	04/04/18 10:15
7047139009	**FB-04032018**	Water	04/03/18 10:40	04/04/18 10:15
7047139010	**TB-04032018**	Water	04/03/18 00:00	04/04/18 10:15

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Melville, NY 11747
(631)694-3040

SAMPLE ANALYTE COUNT

Project: 84849 - 4/2
Pace Project No.: 7047139

Lab ID	Sample ID	Method	Analysts	Analytes Reported
7047139001	**MW-14-04022018**	EPA 8260C/5030C	KGG	4
7047139002	**MW-11-04022018**	EPA 8260C/5030C	KGG	15
7047139003	**MW-17R-04022018**	EPA 8260C/5030C	KGG	21
7047139004	**MW-12-04032018**	EPA 8260C/5030C	KGG	4
		EPA 8260	BBL	1
7047139005	**MW-16R-04032018**	EPA 8260C/5030C	KGG	4
		EPA 8260	BBL	1
7047139006	**MW-18R-04032018**	EPA 8260C/5030C	KGG	15
7047139007	**MW-3-04032018**	EPA 8260C/5030C	KGG	4
7047139008	**BP-04032018**	EPA 8260C/5030C	KGG	15
7047139009	**FB-04032018**	EPA 8260C/5030C	KGG	10
		EPA 8260	BBL	1
7047139010	**TB-04032018**	EPA 8260C/5030C	KGG	10
		EPA 8260	BBL	1

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575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

SUMMARY OF DETECTION

Project: 84849 - 4/2
Pace Project No.: 7047139

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
7047139001	**MW-14-04022018**					
EPA 8260C/5030C	Benzene	13.6	ug/L	1.0	04/05/18 10:47	
7047139002	**MW-11-04022018**					
EPA 8260C/5030C	1.063:Unknown Petroleum Alkane	29.5J	ug/L		04/05/18 11:12	
EPA 8260C/5030C	1.154:Unknown Petroleum Alkane	49.3J	ug/L		04/05/18 11:12	
EPA 8260C/5030C	1.471:Unknown Petroleum Alkane	107J	ug/L		04/05/18 11:12	
EPA 8260C/5030C	1.636:Unknown Petroleum Alkane	29.3J	ug/L		04/05/18 11:12	
EPA 8260C/5030C	1.843:Unknown Petroleum Alkane	6.4J	ug/L		04/05/18 11:12	
EPA 8260C/5030C	2.239:Unknown Petroleum Alkane	23.1J	ug/L		04/05/18 11:12	
EPA 8260C/5030C	2.288:Unknown	5.5J	ug/L		04/05/18 11:12	
EPA 8260C/5030C	2.410:Unknown Petroleum Alkane	10.8J	ug/L		04/05/18 11:12	
EPA 8260C/5030C	2.605:Unknown Petroleum Alkane	5.2J	ug/L		04/05/18 11:12	
EPA 8260C/5030C	3.068:Unknown Petroleum Alkane	8.1J	ug/L		04/05/18 11:12	
EPA 8260C/5030C	3.617:Unknown	5.2J	ug/L		04/05/18 11:12	
7047139003	**MW-17R-04022018**					
EPA 8260C/5030C	Benzene	8.3	ug/L	1.0	04/05/18 11:37	
EPA 8260C/5030C	Ethylbenzene	56.9	ug/L	1.0	04/05/18 11:37	
EPA 8260C/5030C	9.365:Unknown Aromatic Hydroca	1080J	ug/L		04/05/18 11:37	
EPA 8260C/5030C	9.457:Benzene, 1,3,5-trimethyl	533J	ug/L		04/05/18 11:37	N
EPA 8260C/5030C	9.628:Unknown Aromatic Hydroca	433J	ug/L		04/05/18 11:37	
EPA 8260C/5030C	9.792:1,2,4-Trimethylbenzene	1290J	ug/L		04/05/18 11:37	N
EPA 8260C/5030C	10.134:Benzene, 1,2,3-trimethy	745J	ug/L		04/05/18 11:37	N
EPA 8260C/5030C	10.292:Unknown Aromatic Hydroc	852J	ug/L		04/05/18 11:37	
EPA 8260C/5030C	10.390:Unknown Aromatic Hydroc	648J	ug/L		04/05/18 11:37	
EPA 8260C/5030C	10.627:Unknown Aromatic Hydroc	275J	ug/L		04/05/18 11:37	
EPA 8260C/5030C	10.725:Unknown Aromatic Hydroc	641J	ug/L		04/05/18 11:37	
EPA 8260C/5030C	11.127:Benzene, 1,2,4,5-tetram	274J	ug/L		04/05/18 11:37	N
EPA 8260C/5030C	11.188:Unknown Aromatic Hydroc	336J	ug/L		04/05/18 11:37	
EPA 8260C/5030C	11.676:Unknown Aromatic Hydroc	480J	ug/L		04/05/18 11:37	
EPA 8260C/5030C	Toluene	3.2	ug/L	1.0	04/05/18 11:37	
EPA 8260C/5030C	Xylene (Total)	961	ug/L	30.0	04/05/18 15:38	
EPA 8260C/5030C	m&p-Xylene	808	ug/L	20.0	04/05/18 15:38	
EPA 8260C/5030C	o-Xylene	153	ug/L	1.0	04/05/18 11:37	
7047139004	**MW-12-04032018**					
EPA 8260	TIC Search	No TIC's Found			04/06/18 16:37	
7047139005	**MW-16R-04032018**					
EPA 8260	TIC Search	No TIC's Found			04/06/18 16:38	
7047139006	**MW-18R-04032018**					
EPA 8260C/5030C	Benzene	16.8	ug/L	1.0	04/05/18 13:42	
EPA 8260C/5030C	1.062:Unknown Petroleum Alkane	11.9J	ug/L		04/05/18 13:42	
EPA 8260C/5030C	1.154:Unknown Petroleum Alkane	15.2J	ug/L		04/05/18 13:42	
EPA 8260C/5030C	1.471:Unknown Petroleum Alkane	60.3J	ug/L		04/05/18 13:42	
EPA 8260C/5030C	1.635:Unknown Petroleum Alkane	11.2J	ug/L		04/05/18 13:42	
EPA 8260C/5030C	2.239:Unknown Petroleum Alkane	23.4J	ug/L		04/05/18 13:42	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 84849 - 4/2
Pace Project No.: 7047139

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
7047139006	**MW-18R-04032018**					
EPA 8260C/5030C	2.288:Unknown Petroleum Alkane	10.7J	ug/L		04/05/18 13:42	
EPA 8260C/5030C	3.068:Unknown Petroleum Alkane	15.8J	ug/L		04/05/18 13:42	
EPA 8260C/5030C	3.617:Unknown Petroleum Alkane	13.2J	ug/L		04/05/18 13:42	
EPA 8260C/5030C	5.019:Unknown Petroleum Alkane	8.7J	ug/L		04/05/18 13:42	
EPA 8260C/5030C	5.135:Unknown Petroleum Alkane	12.5J	ug/L		04/05/18 13:42	
EPA 8260C/5030C	10.292:Unknown Aromatic Hydroc	8.2J	ug/L		04/05/18 13:42	
7047139008	**BP-04032018**					
EPA 8260C/5030C	Benzene	16.7	ug/L	1.0	04/05/18 13:17	
EPA 8260C/5030C	1.062:Unknown Petroleum Alkane	12.6J	ug/L		04/05/18 13:17	
EPA 8260C/5030C	1.154:Unknown Petroleum Alkane	14.9J	ug/L		04/05/18 13:17	
EPA 8260C/5030C	1.471:Unknown Petroleum Alkane	58.2J	ug/L		04/05/18 13:17	
EPA 8260C/5030C	1.636:Unknown Petroleum Alkane	10.4J	ug/L		04/05/18 13:17	
EPA 8260C/5030C	2.239:Unknown Petroleum Alkane	22.3J	ug/L		04/05/18 13:17	
EPA 8260C/5030C	2.410:Unknown Petroleum Alkane	10.2J	ug/L		04/05/18 13:17	
EPA 8260C/5030C	3.068:Unknown Petroleum Alkane	15.2J	ug/L		04/05/18 13:17	
EPA 8260C/5030C	3.617:Unknown Petroleum Alkane	13.2J	ug/L		04/05/18 13:17	
EPA 8260C/5030C	5.019:Unknown Petroleum Alkane	8.5J	ug/L		04/05/18 13:17	
EPA 8260C/5030C	5.135:Unknown Petroleum Alkane	12.3J	ug/L		04/05/18 13:17	
EPA 8260C/5030C	10.292:Unknown Aromatic Hydroc	8.0J	ug/L		04/05/18 13:17	
7047139009	**FB-04032018**					
EPA 8260	TIC Search	No TIC's Found			04/11/18 15:11	
7047139010	**TB-04032018**					
EPA 8260	TIC Search	No TIC's Found			04/11/18 15:12	

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PROJECT NARRATIVE

Project: 84849 - 4/2
Pace Project No.: 7047139

Method: **EPA 8260C/5030C**
Description: 8260C Volatile Organics
Client: BP-Parsons (Somerset NJ)
Date: April 18, 2018

General Information:
10 samples were analyzed for EPA 8260C/5030C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 84849 - 4/2
Pace Project No.: 7047139

Method: **EPA 8260**
Description: TIC MSV Water
Client: BP-Parsons (Somerset NJ)
Date: April 18, 2018

General Information:
4 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: 84849 - 4/2
Pace Project No.: 7047139

Sample: MW-14-04022018 **Lab ID: 7047139001** Collected: 04/02/18 12:10 Received: 04/04/18 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**13.6**	ug/L	1.0	0.11	1		04/05/18 10:47	71-43-2	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%	68-153		1		04/05/18 10:47	17060-07-0	
4-Bromofluorobenzene (S)	101	%	79-124		1		04/05/18 10:47	460-00-4	
Toluene-d8 (S)	97	%	69-124		1		04/05/18 10:47	2037-26-5	

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ANALYTICAL RESULTS

Project: 84849 - 4/2
Pace Project No.: 7047139

Sample: MW-11-04022018 **Lab ID: 7047139002** Collected: 04/02/18 13:20 Received: 04/04/18 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
tert-Butyl Alcohol	**<50.0**	ug/L	50.0	1.0	1		04/05/18 11:12	75-65-0	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%	68-153		1		04/05/18 11:12	17060-07-0	
4-Bromofluorobenzene (S)	100	%	79-124		1		04/05/18 11:12	460-00-4	
Toluene-d8 (S)	95	%	69-124		1		04/05/18 11:12	2037-26-5	
Tentatively Identified Compounds									
Unknown Petroleum Alkane	**29.5J**	ug/L			1		04/05/18 11:12		
Unknown Petroleum Alkane	**49.3J**	ug/L			1		04/05/18 11:12		
Unknown Petroleum Alkane	**107J**	ug/L			1		04/05/18 11:12		
Unknown Petroleum Alkane	**29.3J**	ug/L			1		04/05/18 11:12		
Unknown Petroleum Alkane	**6.4J**	ug/L			1		04/05/18 11:12		
Unknown Petroleum Alkane	**23.1J**	ug/L			1		04/05/18 11:12		
Unknown	**5.5J**	ug/L			1		04/05/18 11:12		
Unknown Petroleum Alkane	**10.8J**	ug/L			1		04/05/18 11:12		
Unknown Petroleum Alkane	**5.2J**	ug/L			1		04/05/18 11:12		
Unknown Petroleum Alkane	**8.1J**	ug/L			1		04/05/18 11:12		
Unknown	**5.2J**	ug/L			1		04/05/18 11:12		

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ANALYTICAL RESULTS

Project: 84849 - 4/2
Pace Project No.: 7047139

Sample: MW-17R-04022018 **Lab ID: 7047139003** Collected: 04/02/18 14:50 Received: 04/04/18 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**8.3**	ug/L	1.0	0.11	1		04/05/18 11:37	71-43-2	
Ethylbenzene	**56.9**	ug/L	1.0	0.13	1		04/05/18 11:37	100-41-4	
Toluene	**3.2**	ug/L	1.0	0.17	1		04/05/18 11:37	108-88-3	
Xylene (Total)	**961**	ug/L	30.0	2.8	10		04/05/18 15:38	1330-20-7	
m&p-Xylene	**808**	ug/L	20.0	2.8	10		04/05/18 15:38	179601-23-1	
o-Xylene	**153**	ug/L	1.0	0.22	1		04/05/18 11:37	95-47-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%	68-153		1		04/05/18 11:37	17060-07-0	
4-Bromofluorobenzene (S)	94	%	79-124		1		04/05/18 11:37	460-00-4	
Toluene-d8 (S)	92	%	69-124		1		04/05/18 11:37	2037-26-5	
Tentatively Identified Compounds									
Unknown Aromatic Hydroca	**1080J**	ug/L			1		04/05/18 11:37		
Benzene, 1,3,5-trimethyl	**533J**	ug/L			1		04/05/18 11:37	108-67-8	N
Unknown Aromatic Hydroca	**433J**	ug/L			1		04/05/18 11:37		
1,2,4-Trimethylbenzene	**1290J**	ug/L			1		04/05/18 11:37	95-36-3	N
Benzene, 1,2,3-trimethy	**745J**	ug/L			1		04/05/18 11:37	526-73-8	N
Unknown Aromatic Hydroc	**852J**	ug/L			1		04/05/18 11:37		
Unknown Aromatic Hydroc	**648J**	ug/L			1		04/05/18 11:37		
Unknown Aromatic Hydroc	**275J**	ug/L			1		04/05/18 11:37		
Unknown Aromatic Hydroc	**641J**	ug/L			1		04/05/18 11:37		
Benzene, 1,2,4,5-tetram	**274J**	ug/L			1		04/05/18 11:37	95-93-2	N
Unknown Aromatic Hydroc	**336J**	ug/L			1		04/05/18 11:37		
Unknown Aromatic Hydroc	**480J**	ug/L			1		04/05/18 11:37		

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ANALYTICAL RESULTS

Project: 84849 - 4/2
Pace Project No.: 7047139

Sample: MW-12-04032018 **Lab ID: 7047139004** Collected: 04/03/18 07:25 Received: 04/04/18 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**<1.0**	ug/L	1.0	0.11	1		04/05/18 15:13	71-43-2	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%	68-153		1		04/05/18 15:13	17060-07-0	
4-Bromofluorobenzene (S)	98	%	79-124		1		04/05/18 15:13	460-00-4	
Toluene-d8 (S)	96	%	69-124		1		04/05/18 15:13	2037-26-5	
TIC MSV Water	Analytical Method: EPA 8260								
TIC Search	**No TIC's Found**				1		04/06/18 16:37		

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ANALYTICAL RESULTS

Project: 84849 - 4/2
Pace Project No.: 7047139

Sample: MW-16R-04032018 **Lab ID: 7047139005** Collected: 04/03/18 08:25 Received: 04/04/18 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**<1.0**	ug/L	1.0	0.11	1		04/05/18 12:27	71-43-2	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%	68-153		1		04/05/18 12:27	17060-07-0	
4-Bromofluorobenzene (S)	101	%	79-124		1		04/05/18 12:27	460-00-4	
Toluene-d8 (S)	96	%	69-124		1		04/05/18 12:27	2037-26-5	
TIC MSV Water	Analytical Method: EPA 8260								
TIC Search	**No TIC's Found**				1		04/06/18 16:38		

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ANALYTICAL RESULTS

Project: 84849 - 4/2
Pace Project No.: 7047139

Sample: MW-18R-04032018 **Lab ID: 7047139006** Collected: 04/03/18 09:40 Received: 04/04/18 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**16.8**	ug/L	1.0	0.11	1		04/05/18 13:42	71-43-2	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%	68-153		1		04/05/18 13:42	17060-07-0	
4-Bromofluorobenzene (S)	101	%	79-124		1		04/05/18 13:42	460-00-4	
Toluene-d8 (S)	96	%	69-124		1		04/05/18 13:42	2037-26-5	
Tentatively Identified Compounds									
Unknown Petroleum Alkane	**11.9J**	ug/L			1		04/05/18 13:42		
Unknown Petroleum Alkane	**15.2J**	ug/L			1		04/05/18 13:42		
Unknown Petroleum Alkane	**60.3J**	ug/L			1		04/05/18 13:42		
Unknown Petroleum Alkane	**11.2J**	ug/L			1		04/05/18 13:42		
Unknown Petroleum Alkane	**23.4J**	ug/L			1		04/05/18 13:42		
Unknown Petroleum Alkane	**10.7J**	ug/L			1		04/05/18 13:42		
Unknown Petroleum Alkane	**15.8J**	ug/L			1		04/05/18 13:42		
Unknown Petroleum Alkane	**13.2J**	ug/L			1		04/05/18 13:42		
Unknown Petroleum Alkane	**8.7J**	ug/L			1		04/05/18 13:42		
Unknown Petroleum Alkane	**12.5J**	ug/L			1		04/05/18 13:42		
Unknown Aromatic Hydroc	**8.2J**	ug/L			1		04/05/18 13:42		

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ANALYTICAL RESULTS

Project: 84849 - 4/2
Pace Project No.: 7047139

Sample: MW-3-04032018 **Lab ID: 7047139007** Collected: 04/03/18 10:35 Received: 04/04/18 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**<1.0**	ug/L	1.0	0.11	1		04/05/18 12:52	71-43-2	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%	68-153		1		04/05/18 12:52	17060-07-0	
4-Bromofluorobenzene (S)	99	%	79-124		1		04/05/18 12:52	460-00-4	
Toluene-d8 (S)	96	%	69-124		1		04/05/18 12:52	2037-26-5	

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ANALYTICAL RESULTS

Project: 84849 - 4/2
Pace Project No.: 7047139

Sample: BP-04032018 **Lab ID: 7047139008** Collected: 04/03/18 00:00 Received: 04/04/18 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**16.7**	ug/L	1.0	0.11	1		04/05/18 13:17	71-43-2	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%	68-153		1		04/05/18 13:17	17060-07-0	
4-Bromofluorobenzene (S)	100	%	79-124		1		04/05/18 13:17	460-00-4	
Toluene-d8 (S)	96	%	69-124		1		04/05/18 13:17	2037-26-5	
Tentatively Identified Compounds									
Unknown Petroleum Alkane	**12.6J**	ug/L			1		04/05/18 13:17		
Unknown Petroleum Alkane	**14.9J**	ug/L			1		04/05/18 13:17		
Unknown Petroleum Alkane	**58.2J**	ug/L			1		04/05/18 13:17		
Unknown Petroleum Alkane	**10.4J**	ug/L			1		04/05/18 13:17		
Unknown Petroleum Alkane	**22.3J**	ug/L			1		04/05/18 13:17		
Unknown Petroleum Alkane	**10.2J**	ug/L			1		04/05/18 13:17		
Unknown Petroleum Alkane	**15.2J**	ug/L			1		04/05/18 13:17		
Unknown Petroleum Alkane	**13.2J**	ug/L			1		04/05/18 13:17		
Unknown Petroleum Alkane	**8.5J**	ug/L			1		04/05/18 13:17		
Unknown Petroleum Alkane	**12.3J**	ug/L			1		04/05/18 13:17		
Unknown Aromatic Hydroc	**8.0J**	ug/L			1		04/05/18 13:17		

REPORT OF LABORATORY ANALYSIS

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575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: 84849 - 4/2
Pace Project No.: 7047139

Sample: FB-04032018 **Lab ID: 7047139009** Collected: 04/03/18 10:40 Received: 04/04/18 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**<1.0**	ug/L	1.0	0.11	1		04/09/18 18:37	71-43-2	
tert-Butyl Alcohol	**<50.0**	ug/L	50.0	1.0	1		04/09/18 18:37	75-65-0	
Ethylbenzene	**<1.0**	ug/L	1.0	0.13	1		04/09/18 18:37	100-41-4	
Toluene	**<1.0**	ug/L	1.0	0.17	1		04/09/18 18:37	108-88-3	
Xylene (Total)	**<3.0**	ug/L	3.0	0.28	1		04/09/18 18:37	1330-20-7	
m&p-Xylene	**<2.0**	ug/L	2.0	0.28	1		04/09/18 18:37	179601-23-1	
o-Xylene	**<1.0**	ug/L	1.0	0.22	1		04/09/18 18:37	95-47-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	111	%	68-153		1		04/09/18 18:37	17060-07-0	
4-Bromofluorobenzene (S)	98	%	79-124		1		04/09/18 18:37	460-00-4	
Toluene-d8 (S)	96	%	69-124		1		04/09/18 18:37	2037-26-5	
TIC MSV Water	Analytical Method: EPA 8260								
TIC Search	**No TIC's Found**				1		04/11/18 15:11		

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(631)694-3040

ANALYTICAL RESULTS

Project: 84849 - 4/2
Pace Project No.: 7047139

Sample: TB-04032018 **Lab ID: 7047139010** Collected: 04/03/18 00:00 Received: 04/04/18 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**<1.0**	ug/L	1.0	0.11	1		04/09/18 18:56	71-43-2	
tert-Butyl Alcohol	**<50.0**	ug/L	50.0	1.0	1		04/09/18 18:56	75-65-0	
Ethylbenzene	**<1.0**	ug/L	1.0	0.13	1		04/09/18 18:56	100-41-4	
Toluene	**<1.0**	ug/L	1.0	0.17	1		04/09/18 18:56	108-88-3	
Xylene (Total)	**<3.0**	ug/L	3.0	0.28	1		04/09/18 18:56	1330-20-7	
m&p-Xylene	**<2.0**	ug/L	2.0	0.28	1		04/09/18 18:56	179601-23-1	
o-Xylene	**<1.0**	ug/L	1.0	0.22	1		04/09/18 18:56	95-47-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	112	%	68-153		1		04/09/18 18:56	17060-07-0	
4-Bromofluorobenzene (S)	98	%	79-124		1		04/09/18 18:56	460-00-4	
Toluene-d8 (S)	95	%	69-124		1		04/09/18 18:56	2037-26-5	
TIC MSV Water	Analytical Method: EPA 8260								
TIC Search	**No TIC's Found**				1		04/11/18 15:12		

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(631)694-3040

QUALITY CONTROL DATA

Project: 84849 - 4/2
Pace Project No.: 7047139

QC Batch: 62093 Analysis Method: EPA 8260C/5030C
QC Batch Method: EPA 8260C/5030C Analysis Description: 8260 MSV
Associated Lab Samples: 7047139001, 7047139002, 7047139003, 7047139004, 7047139005, 7047139006, 7047139007, 7047139008

METHOD BLANK: 284851 Matrix: Water
Associated Lab Samples: 7047139001, 7047139002, 7047139003, 7047139004, 7047139005, 7047139006, 7047139007, 7047139008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Benzene	ug/L	<1.0	1.0	0.11	04/05/18 08:16	
Ethylbenzene	ug/L	<1.0	1.0	0.13	04/05/18 08:16	
m&p-Xylene	ug/L	<2.0	2.0	0.28	04/05/18 08:16	
o-Xylene	ug/L	<1.0	1.0	0.22	04/05/18 08:16	
tert-Butyl Alcohol	ug/L	<50.0	50.0	1.0	04/05/18 08:16	
Toluene	ug/L	<1.0	1.0	0.17	04/05/18 08:16	
Xylene (Total)	ug/L	<3.0	3.0	0.28	04/05/18 08:16	
1,2-Dichloroethane-d4 (S)	%	104	68-153		04/05/18 08:16	
4-Bromofluorobenzene (S)	%	101	79-124		04/05/18 08:16	
Toluene-d8 (S)	%	97	69-124		04/05/18 08:16	

LABORATORY CONTROL SAMPLE: 284852

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	48.4	97	73-119	
Ethylbenzene	ug/L	50	46.7	93	70-113	
m&p-Xylene	ug/L	100	96.3	96	72-115	
o-Xylene	ug/L	50	47.7	95	73-117	
tert-Butyl Alcohol	ug/L	250	211	84	60-140	
Toluene	ug/L	50	49.0	98	72-119	
Xylene (Total)	ug/L	150	144	96	71-109	
1,2-Dichloroethane-d4 (S)	%			102	68-153	
4-Bromofluorobenzene (S)	%			100	79-124	
Toluene-d8 (S)	%			98	69-124	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 285377 285378

Parameter	Units	7047139006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	16.8	50	50	66.6	67.9	100	102	73-119	2	20	
Ethylbenzene	ug/L	<1.0	50	50	48.7	50.4	97	101	70-113	3	20	
m&p-Xylene	ug/L	3.0	100	100	99.3	104	96	101	72-115	5	20	
o-Xylene	ug/L	1.1	50	50	48.8	51.2	95	100	73-117	5	20	
tert-Butyl Alcohol	ug/L	<50.0	250	250	191	203	76	81	60-140	6	20	
Toluene	ug/L	<1.0	50	50	51.0	52.5	102	105	72-119	3	20	
Xylene (Total)	ug/L	4.1	150	150	148	155	96	101	71-109	5	20	
1,2-Dichloroethane-d4 (S)	%						103	101	68-153		20	
4-Bromofluorobenzene (S)	%						99	101	79-124		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: 84849 - 4/2
Pace Project No.: 7047139

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 285377 285378

Parameter	Units	7047139006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Toluene-d8 (S)	%						97	96	69-124		20	

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REPORT OF LABORATORY ANALYSIS

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WO#:7047139

7047139

ry Management Program LaMP Chain of Custody Record

ode Path: BP > USA > NJ > ESSEX > 84849 > PMPv4 > 1994 R

Req Due Date (mm/dd/yy): STD Rush TAT: Yes ___ No X

acility No: 84849

Lab Work Order Number:

Lab Name: PACE Analytical Services LLC	Facility Address: 84849 – West Orange	Consultant/Contractor: Parsons	
Lab Address: 575 Broad Hollow Road, Melville NY 11747	City, State, ZIP Code:	Consultant/Contractor Project No: 450931-84849	
Lab PM: Paige Doherty	Lead Regulatory Agency: NJDEP	Address: 200 Cottontail Lane Somerset, NJ	
Lab Phone: 516-370-6041	California Global ID No.: N/A	Consultant/Contractor PM: Dennis Miller/Allyson Kriney	
Lab Shipping Accnt: 522658367	Enfos Proposal No: 009WH-0004	Phone: 732-537-3549	Email: Allyson.Kriney@parsons.c
Lab Bottle Order No:	Accounting Mode: Provision X OOC-BU ___ OOC-RM ___	Email EDD To: dennis.miller@parso and to lab.enfosdoc@bp.com	
Other Info: Profile	Stage: 40 Activity: 146	Invoice To: BP X Contractor ___	

BP Project Manager (PM): Bruno Mancini

BP PM Phone:

BP PM Email:

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Matrix: Is this location a well?	No. Containers / Preservative: Total Number of Container:	Unpreserved	H2SO4	HNO3	HCl	Methanol	Requested Analyses: Benzene	Benzene+VOC TICs	TBA, VOC TICs	BTEX, VOC TICs	VOC 8260	Report Type & QC Level
	MW-14-04022018	4-2-18	12:10		X		Y	3				X		X					001
	MW-11-04022018	↓	13:20		X		X	3				X				X			002
	MW-17R-04022018	↓	1450		X		X	3				X					X		003
	MW-12-04032018	4-3-18	0725		X		Y	3				X			X				004
	MW-16R-04032018	↓	0825		X		Y	3				X			X				005
	MW-19R-04032018	↓	0940		X		Y	3				X			X				MS/MSD 006
	MW-3-04032018	↓	1035		X		Y	3				X		X					007
	BD-04032018	↓	—		X		Y	3				X			X				008
	FB-04032018	↓	1040		X		N	3				X						X	009
	TB-04032018	↓	—		X		N	3				X						X	010

Report Type & QC Level: Standard; Full Data Package x

NJ reduced deliverable

Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name: Kevin McMullk						
Sampler's Company: Parsons	Parsons	4-3-18	1400	Danielle Williams	4/4/18	1015
Shipment Method: Fed Ex Ship Date: 4-3-18						
Shipment Tracking No: 7908 0003 0377						

Special Instructions:

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: _____ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: 84849 - 4/2
Pace Project No.: 7047139

QC Batch: 62638 Analysis Method: EPA 8260C/5030C
QC Batch Method: EPA 8260C/5030C Analysis Description: 8260 MSV
Associated Lab Samples: 7047139009, 7047139010

METHOD BLANK: 287658 Matrix: Water
Associated Lab Samples: 7047139009, 7047139010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Benzene	ug/L	<1.0	1.0	0.11	04/09/18 17:32	
Ethylbenzene	ug/L	<1.0	1.0	0.13	04/09/18 17:32	
m&p-Xylene	ug/L	<2.0	2.0	0.28	04/09/18 17:32	
o-Xylene	ug/L	<1.0	1.0	0.22	04/09/18 17:32	
tert-Butyl Alcohol	ug/L	<50.0	50.0	1.0	04/09/18 17:32	
Toluene	ug/L	<1.0	1.0	0.17	04/09/18 17:32	
Xylene (Total)	ug/L	<3.0	3.0	0.28	04/09/18 17:32	
1,2-Dichloroethane-d4 (S)	%	112	68-153		04/09/18 17:32	
4-Bromofluorobenzene (S)	%	97	79-124		04/09/18 17:32	
Toluene-d8 (S)	%	94	69-124		04/09/18 17:32	

LABORATORY CONTROL SAMPLE: 287659

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	51.5	103	73-119	
Ethylbenzene	ug/L	50	42.6	85	70-113	
m&p-Xylene	ug/L	100	85.0	85	72-115	
o-Xylene	ug/L	50	43.3	87	73-117	
tert-Butyl Alcohol	ug/L	250	215	86	60-140	
Toluene	ug/L	50	47.6	95	72-119	
Xylene (Total)	ug/L	150	128	86	71-109	
1,2-Dichloroethane-d4 (S)	%			118	68-153	
4-Bromofluorobenzene (S)	%			99	79-124	
Toluene-d8 (S)	%			95	69-124	

MATRIX SPIKE SAMPLE: 288415

Parameter	Units	50193993011 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	ND	50	57.4	115	73-119	
Ethylbenzene	ug/L	ND	50	47.3	95	70-113	
m&p-Xylene	ug/L	ND	100	94.8	95	72-115	
o-Xylene	ug/L	ND	50	47.4	95	73-117	
tert-Butyl Alcohol	ug/L	ND	250	204	82	60-140	
Toluene	ug/L	ND	50	53.4	107	72-119	
Xylene (Total)	ug/L	ND	150	142	95	71-109	
1,2-Dichloroethane-d4 (S)	%				109	68-153	
4-Bromofluorobenzene (S)	%				99	79-124	
Toluene-d8 (S)	%				95	69-124	

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(631)694-3040

QUALITY CONTROL DATA

Project: 84849 - 4/2
Pace Project No.: 7047139

SAMPLE DUPLICATE: 288421

Parameter	Units	7046247021 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	ug/L	<1.0	<1.0		20	
Ethylbenzene	ug/L	<1.0	<1.0		20	
m&p-Xylene	ug/L	<2.0	<2.0		20	
o-Xylene	ug/L	<1.0	<1.0		20	
tert-Butyl Alcohol	ug/L	<50.0	<50.0		20	
Toluene	ug/L	<1.0	<1.0		20	
Xylene (Total)	ug/L	<3.0	<3.0		20	
1,2-Dichloroethane-d4 (S)	%	113	112	1	20	
4-Bromofluorobenzene (S)	%	97	98	1	20	
Toluene-d8 (S)	%	95	95	1	20	

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QUALIFIERS

Project: 84849 - 4/2
Pace Project No.: 7047139

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

N The reported TIC has an 85% or higher match on a mass spectral library search.

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575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 84849 - 4/2
Pace Project No.: 7047139

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
7047139001	**MW-14-04022018**	EPA 8260C/5030C	62093		
7047139002	**MW-11-04022018**	EPA 8260C/5030C	62093		
7047139003	**MW-17R-04022018**	EPA 8260C/5030C	62093		
7047139004	**MW-12-04032018**	EPA 8260C/5030C	62093		
7047139005	**MW-16R-04032018**	EPA 8260C/5030C	62093		
7047139006	**MW-18R-04032018**	EPA 8260C/5030C	62093		
7047139007	**MW-3-04032018**	EPA 8260C/5030C	62093		
7047139008	**BP-04032018**	EPA 8260C/5030C	62093		
7047139009	**FB-04032018**	EPA 8260C/5030C	62638		
7047139010	**TB-04032018**	EPA 8260C/5030C	62638		
7047139002	**MW-11-04022018**	EPA 8260	55090		
7047139003	**MW-17R-04022018**	EPA 8260	55090		
7047139004	**MW-12-04032018**	EPA 8260			
7047139005	**MW-16R-04032018**	EPA 8260			
7047139006	**MW-18R-04032018**	EPA 8260	55090		
7047139008	**BP-04032018**	EPA 8260	55090		
7047139009	**FB-04032018**	EPA 8260			
7047139010	**TB-04032018**	EPA 8260			

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Sample Condition Upon Receipt

Pace Analytical

Client Name: BP Parson's

Project WO#:7047139

PM: PD Due Date: 04/18/18

CLIENT: BP_PAR(SONJ)

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #: 7908 0003 0377

Custody Seal on Cooler/Box Present: ☑ Yes ☐ No Seals intact: ☑ Yes ☐ No

Temperature Blank Present: ☑ Yes ☐ No

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ Ziploc ☐ None ☐ Other

Type of Ice: (Wet) Blue None

Thermometer Used: TH091 Correction Factor: 0.0

☐ Samples on ice, cooling process has begun

Cooler Temperature (°C): 4.3 Cooler Temperature Corrected (°C): 4.3

Date/Time 5035A kits placed in freezer _____

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☑ N/A, water sample)

Date and Initials of person examining contents: DW 4/4/18

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ YES ☐ NO

Did samples orignate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☑ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present:	☑Yes	☐No		1.
Chain of Custody Filled Out:	☑Yes	☐No		2.
Chain of Custody Relinquished:	☑Yes	☐No		3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No		5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No		6.
Rush Turn Around Time Requested:	☐Yes	☑No		7.
Sufficient Volume: (Triple volume provided for MS/MSD)	☑Yes	☐No		8.
Correct Containers Used:	☑Yes	☐No		9.
-Pace Containers Used:	☑Yes	☐No		
Containers Intact:	☑Yes	☐No		10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix SL WT OIL	☑Yes	☐No		12.
All containers needing preservation have been checked pH paper Lot #	☐Yes	☐No	☑N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl, NaOH>9 Sulfide, NAOH>12 Cyanide) Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis	☐Yes	☐No	☑N/A	Sample #
				Initial when completed: / Lot # of added preservative: / Date/Time preservative added
Samples checked for dechlorination: KI starch test strips Lot # Residual chlorine strips Lot #	☐Yes	☐No	☑N/A	14. Positive for Res. Chlorine? Y N
Headspace in VOA Vials (>6mm):	☐Yes	☑No	☐N/A	15.
Trip Blank Present:	☐Yes	☐No	☑N/A	16.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if applicable):				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

* PM (Project Manager) review is documented electronically in LIMS.

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

October 12, 2018

Allyson Kriney
Parsons
200 Cottontail Lane
Somerset, NJ 08873

RE: Project: 84849 - 10/2
Pace Project No.: 7066682

Dear Allyson Kriney:
Enclosed are the analytical results for sample(s) received by the laboratory on October 03, 2018. The results relate only to the samples included in this report. Results contained within this report conform to the most current version of the TNI standards, BP LaMP Technical Requirements Revision 12.1, and any applicable Quality Assurance Project Plan (QAPP), or Work Plan unless otherwise narrated in the body of this report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Danielle Williams
danielle.williams@pacelabs.com
(631)694-3040
Project Manager

Enclosures

cc: ENFOS BP, ENFOS BP
Dennis Miller, Parsons
Andrea Nyegaard, Parsons
Christopher Watson, Parsons
Danielle Williams, Pace Analytical Melville

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CERTIFICATIONS

Project: 84849 - 10/2
Pace Project No.: 7066682

Long Island Certification IDs

575 Broad Hollow Rd, Melville, NY 11747
New York Certification #: 10478 Primary Accrediting Body
New Jersey Certification #: NY158
Pennsylvania Certification #: 68-00350
Connecticut Certification #: PH-0435
Maryland Certification #: 208
Rhode Island Certification #: LAO00340
Massachusetts Certification #: M-NY026
New Hampshire Certification #: 2987

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SAMPLE SUMMARY

Project: 84849 - 10/2
Pace Project No.: 7066682

Lab ID	Sample ID	Matrix	Date Collected	Date Received
7066682001	**MW-3-10012018**	Water	10/01/18 10:00	10/03/18 10:45
7066682002	**BD-10012018**	Water	10/01/18 12:00	10/03/18 10:45
7066682003	**MW-10-10012018**	Water	10/01/18 12:05	10/03/18 10:45
7066682004	**MW-11-10012018**	Water	10/01/18 13:20	10/03/18 10:45
7066682005	**MW-12-10012018**	Water	10/01/18 14:15	10/03/18 10:45
7066682006	**FB-10012018**	Water	10/01/18 14:35	10/03/18 10:45
7066682007	**TB-10012018**	Water	10/01/18 00:00	10/03/18 10:45
7066682008	**MW-14-10022018**	Water	10/02/18 09:40	10/03/18 10:45
7066682009	**MW-18R-10022018**	Water	10/02/18 11:25	10/03/18 10:45
7066682010	**MW-16R-10022018**	Water	10/02/18 12:40	10/03/18 10:45
7066682011	**MW-17R-10022018**	Water	10/02/18 13:55	10/03/18 10:45

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SAMPLE ANALYTE COUNT

Project: 84849 - 10/2
Pace Project No.: 7066682

Lab ID	Sample ID	Method	Analysts	Analytes Reported
7066682001	**MW-3-10012018**	EPA 8260C/5030C	MJF	4
7066682002	**BD-10012018**	EPA 8260C/5030C	MJF	4
7066682003	**MW-10-10012018**	EPA 8260	MJF	1
7066682004	**MW-11-10012018**	EPA 8260C/5030C	MJF	4
		EPA 8260	MJF	1
7066682005	**MW-12-10012018**	EPA 8260C/5030C	MJF	7
7066682006	**FB-10012018**	EPA 8260C/5030C	MJF	11
		EPA 8260	MJF	1
7066682007	**TB-10012018**	EPA 8260C/5030C	MJF	11
		EPA 8260	MJF	1
7066682008	**MW-14-10022018**	EPA 8260C/5030C	MJF	4
7066682009	**MW-18R-10022018**	EPA 8260C/5030C	MJF	15
7066682010	**MW-16R-10022018**	EPA 8260C/5030C	MJF	15
7066682011	**MW-17R-10022018**	EPA 8260C/5030C	MJF	21

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SUMMARY OF DETECTION

Project: 84849 - 10/2
Pace Project No.: 7066682

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
7066682003	**MW-10-10012018**					
EPA 8260	TIC Search	No TICs Found			10/11/18 13:40	
7066682004	**MW-11-10012018**					
EPA 8260	TIC Search	No TICs Found			10/11/18 13:40	
7066682005	**MW-12-10012018**					
EPA 8260C/5030C	3.631:Unknown Petroleum Alkane	11.6J	ug/L		10/10/18 18:34	
EPA 8260C/5030C	4.381:Unknown Petroleum Alkane	5.1J	ug/L		10/10/18 18:34	
EPA 8260C/5030C	4.471:Unknown Petroleum Alkane	7.7J	ug/L		10/10/18 18:34	
7066682006	**FB-10012018**					
EPA 8260	TIC Search	No TICs Found			10/11/18 13:39	
7066682007	**TB-10012018**					
EPA 8260	TIC Search	No TICs Found			10/11/18 13:39	
7066682008	**MW-14-10022018**					
EPA 8260C/5030C	Benzene	3.4	ug/L	1.0	10/10/18 18:55	
7066682009	**MW-18R-10022018**					
EPA 8260C/5030C	Benzene	82.3	ug/L	1.0	10/10/18 19:15	
EPA 8260C/5030C	1.295:Unknown Petroleum Alkane	48.2J	ug/L		10/10/18 19:15	
EPA 8260C/5030C	1.385:Unknown Petroleum Alkane	45.7J	ug/L		10/10/18 19:15	
EPA 8260C/5030C	1.685:Unknown Petroleum Alkane	157J	ug/L		10/10/18 19:15	
EPA 8260C/5030C	1.836:Unknown Petroleum Alkane	11.0J	ug/L		10/10/18 19:15	
EPA 8260C/5030C	2.346:Unknown Petroleum Alkane	26.4J	ug/L		10/10/18 19:15	
EPA 8260C/5030C	2.412:Unknown Petroleum Alkane	22.2J	ug/L		10/10/18 19:15	
EPA 8260C/5030C	2.502:Unknown Petroleum Alkane	12.9J	ug/L		10/10/18 19:15	CL
EPA 8260C/5030C	3.031:Unknown Petroleum Alkane	25.2J	ug/L		10/10/18 19:15	
EPA 8260C/5030C	6.070:p-Xylene	13.7J	ug/L		10/10/18 19:15	N
EPA 8260C/5030C	7.410:Unknown Aromatic Hydroca	8.7J	ug/L		10/10/18 19:15	
EPA 8260C/5030C	7.926:Unknown Aromatic Hydroca	28.6J	ug/L		10/10/18 19:15	
7066682010	**MW-16R-10022018**					
EPA 8260C/5030C	Benzene	3.9	ug/L	1.0	10/10/18 19:35	
EPA 8260C/5030C	7.036:Unknown Aromatic Hydroca	20.0J	ug/L		10/10/18 19:35	
EPA 8260C/5030C	7.102:Unknown Aromatic Hydroca	22.8J	ug/L		10/10/18 19:35	
EPA 8260C/5030C	7.270:Unknown Aromatic Hydroca	17.1J	ug/L		10/10/18 19:35	
EPA 8260C/5030C	7.408:Unknown Aromatic Hydroca	79.1J	ug/L		10/10/18 19:35	
EPA 8260C/5030C	7.750:Unknown Aromatic Hydroca	63.4J	ug/L		10/10/18 19:35	
EPA 8260C/5030C	7.913:Unknown Aromatic Hydroca	17.9J	ug/L		10/10/18 19:35	
EPA 8260C/5030C	7.961:Unknown Aromatic Hydroca	21.9J	ug/L		10/10/18 19:35	
EPA 8260C/5030C	8.273:Unknown Aromatic Hydroca	29.1J	ug/L		10/10/18 19:35	
EPA 8260C/5030C	8.609:Unknown Aromatic Hydroca	19.2J	ug/L		10/10/18 19:35	
EPA 8260C/5030C	8.651:Unknown Aromatic Hydroca	25.7J	ug/L		10/10/18 19:35	
EPA 8260C/5030C	9.018:Unknown Aromatic Hydroca	28.4J	ug/L		10/10/18 19:35	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 84849 - 10/2
Pace Project No.: 7066682

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
7066682011	**MW-17R-10022018**					
EPA 8260C/5030C	Ethylbenzene	5.8	ug/L	1.0	10/10/18 19:56	
EPA 8260C/5030C	7.037:Unknown Aromatic Hydroca	40.9J	ug/L		10/10/18 19:56	
EPA 8260C/5030C	7.103:Unknown Aromatic Hydroca	27.8J	ug/L		10/10/18 19:56	
EPA 8260C/5030C	7.271:Unknown Aromatic Hydroca	23.7J	ug/L		10/10/18 19:56	
EPA 8260C/5030C	7.409:Unknown Aromatic Hydroca	66.6J	ug/L		10/10/18 19:56	
EPA 8260C/5030C	7.914:Unknown Aromatic Hydroca	20.1J	ug/L		10/10/18 19:56	
EPA 8260C/5030C	7.962:Unknown Aromatic Hydroca	21.0J	ug/L		10/10/18 19:56	
EPA 8260C/5030C	8.274:Unknown Aromatic Hydroca	21.0J	ug/L		10/10/18 19:56	
EPA 8260C/5030C	8.382:Unknown Aromatic Hydroca	10.0J	ug/L		10/10/18 19:56	
EPA 8260C/5030C	8.604:Unknown Aromatic Hydroca	10.8J	ug/L		10/10/18 19:56	
EPA 8260C/5030C	8.652:Unknown Aromatic Hydroca	11.4J	ug/L		10/10/18 19:56	
EPA 8260C/5030C	9.019:Unknown Aromatic Hydroca	16.8J	ug/L		10/10/18 19:56	
EPA 8260C/5030C	TOTAL BTEX	27.6	ug/L	5.0	10/10/18 19:56	
EPA 8260C/5030C	Xylene (Total)	21.7	ug/L	3.0	10/10/18 19:56	
EPA 8260C/5030C	m&p-Xylene	13.6	ug/L	2.0	10/10/18 19:56	
EPA 8260C/5030C	o-Xylene	8.1	ug/L	1.0	10/10/18 19:56	

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PROJECT NARRATIVE

Project: 84849 - 10/2
Pace Project No.: 7066682

Method: **EPA 8260C/5030C**
Description: 8260C Volatile Organics
Client: BP-Parsons (Somerset NJ)
Date: October 12, 2018

General Information:
10 samples were analyzed for EPA 8260C/5030C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

QC Batch: 86581

CL: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.

- BD-10012018 (Lab ID: 7066682002)
  - 1,2-Dichloroethane-d4 (S)
- BLANK (Lab ID: 398443)
  - 1,2-Dichloroethane-d4 (S)
- FB-10012018 (Lab ID: 7066682006)
  - 1,2-Dichloroethane-d4 (S)
- LCS (Lab ID: 398444)
  - 1,2-Dichloroethane-d4 (S)
- MS (Lab ID: 398445)
  - 1,2-Dichloroethane-d4 (S)
- MSD (Lab ID: 398446)
  - 1,2-Dichloroethane-d4 (S)
- MW-11-10012018 (Lab ID: 7066682004)
  - 1,2-Dichloroethane-d4 (S)
- MW-12-10012018 (Lab ID: 7066682005)
  - 1,2-Dichloroethane-d4 (S)
- MW-16R-10022018 (Lab ID: 7066682010)
  - 1,2-Dichloroethane-d4 (S)
- MW-17R-10022018 (Lab ID: 7066682011)
  - 1,2-Dichloroethane-d4 (S)
- MW-18R-10022018 (Lab ID: 7066682009)
  - 2.502:Unknown Petroleum Alkane
- MW-3-10012018 (Lab ID: 7066682001)
  - 1,2-Dichloroethane-d4 (S)
- TB-10012018 (Lab ID: 7066682007)
  - 1,2-Dichloroethane-d4 (S)

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

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PROJECT NARRATIVE

Project: 84849 - 10/2
Pace Project No.: 7066682

Method: **EPA 8260C/5030C**
Description: 8260C Volatile Organics
Client: BP-Parsons (Somerset NJ)
Date: October 12, 2018

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 86581

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 7066682001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 398445)
  - Benzene
  - Toluene
- MSD (Lab ID: 398446)
  - Toluene

MS: Analyte recovery in the matrix spike was outside QC limits for one or more of the constituent analytes used in the calculated result.

- MS (Lab ID: 398445)
  - TOTAL BTEX
- MSD (Lab ID: 398446)
  - TOTAL BTEX

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 84849 - 10/2
Pace Project No.: 7066682

Method: **EPA 8260**
Description: TIC MSV Water
Client: BP-Parsons (Somerset NJ)
Date: October 12, 2018

General Information:
4 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: 84849 - 10/2
Pace Project No.: 7066682

Sample: MW-3-10012018 **Lab ID: 7066682001** Collected: 10/01/18 10:00 Received: 10/03/18 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**<1.0**	ug/L	1.0	0.11	1		10/10/18 20:37	71-43-2	M1
Surrogates									
1,2-Dichloroethane-d4 (S)	71	%	68-153		1		10/10/18 20:37	17060-07-0	CL
4-Bromofluorobenzene (S)	98	%	79-124		1		10/10/18 20:37	460-00-4	
Toluene-d8 (S)	108	%	69-124		1		10/10/18 20:37	2037-26-5	

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ANALYTICAL RESULTS

Project: 84849 - 10/2
Pace Project No.: 7066682

Sample: BD-10012018 **Lab ID: 7066682002** Collected: 10/01/18 12:00 Received: 10/03/18 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**<1.0**	ug/L	1.0	0.11	1		10/10/18 17:30	71-43-2	
Surrogates									
1,2-Dichloroethane-d4 (S)	71	%	68-153		1		10/10/18 17:30	17060-07-0	CL
4-Bromofluorobenzene (S)	97	%	79-124		1		10/10/18 17:30	460-00-4	
Toluene-d8 (S)	112	%	69-124		1		10/10/18 17:30	2037-26-5	

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ANALYTICAL RESULTS

Project: 84849 - 10/2
Pace Project No.: 7066682

Sample: MW-10-10012018 **Lab ID: 7066682003** Collected: 10/01/18 12:05 Received: 10/03/18 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TIC MSV Water	Analytical Method: EPA 8260								
TIC Search	**No TICs Found**				1		10/11/18 13:40		

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ANALYTICAL RESULTS

Project: 84849 - 10/2
Pace Project No.: 7066682

Sample: MW-11-10012018 **Lab ID: 7066682004** Collected: 10/01/18 13:20 Received: 10/03/18 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
tert-Butyl Alcohol	**<50.0**	ug/L	50.0	1.0	1		10/10/18 18:14	75-65-0	
Surrogates									
1,2-Dichloroethane-d4 (S)	69	%	68-153		1		10/10/18 18:14	17060-07-0	CL
4-Bromofluorobenzene (S)	92	%	79-124		1		10/10/18 18:14	460-00-4	
Toluene-d8 (S)	107	%	69-124		1		10/10/18 18:14	2037-26-5	
TIC MSV Water	Analytical Method: EPA 8260								
TIC Search	**No TICs Found**				1		10/11/18 13:40		

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ANALYTICAL RESULTS

Project: 84849 - 10/2
Pace Project No.: 7066682

Sample: MW-12-10012018 **Lab ID: 7066682005** Collected: 10/01/18 14:15 Received: 10/03/18 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**<1.0**	ug/L	1.0	0.11	1		10/10/18 18:34	71-43-2	
Surrogates									
1,2-Dichloroethane-d4 (S)	75	%	68-153		1		10/10/18 18:34	17060-07-0	CL
4-Bromofluorobenzene (S)	96	%	79-124		1		10/10/18 18:34	460-00-4	
Toluene-d8 (S)	108	%	69-124		1		10/10/18 18:34	2037-26-5	
Tentatively Identified Compounds									
Unknown Petroleum Alkane	**11.6J**	ug/L			1		10/10/18 18:34		
Unknown Petroleum Alkane	**5.1J**	ug/L			1		10/10/18 18:34		
Unknown Petroleum Alkane	**7.7J**	ug/L			1		10/10/18 18:34		

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ANALYTICAL RESULTS

Project: 84849 - 10/2
Pace Project No.: 7066682

Sample: FB-10012018 **Lab ID: 7066682006** Collected: 10/01/18 14:35 Received: 10/03/18 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**<1.0**	ug/L	1.0	0.11	1		10/10/18 16:49	71-43-2	
TOTAL BTEX	**<5.0**	ug/L	5.0	0.28	1		10/10/18 16:49		
tert-Butyl Alcohol	**<50.0**	ug/L	50.0	1.0	1		10/10/18 16:49	75-65-0	
Ethylbenzene	**<1.0**	ug/L	1.0	0.13	1		10/10/18 16:49	100-41-4	
Toluene	**<1.0**	ug/L	1.0	0.17	1		10/10/18 16:49	108-88-3	
Xylene (Total)	**<3.0**	ug/L	3.0	0.28	1		10/10/18 16:49	1330-20-7	
m&p-Xylene	**<2.0**	ug/L	2.0	0.28	1		10/10/18 16:49	179601-23-1	
o-Xylene	**<1.0**	ug/L	1.0	0.22	1		10/10/18 16:49	95-47-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	70	%	68-153		1		10/10/18 16:49	17060-07-0	CL
4-Bromofluorobenzene (S)	96	%	79-124		1		10/10/18 16:49	460-00-4	
Toluene-d8 (S)	110	%	69-124		1		10/10/18 16:49	2037-26-5	
TIC MSV Water	Analytical Method: EPA 8260								
TIC Search	**No TICs Found**				1		10/11/18 13:39		

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ANALYTICAL RESULTS

Project: 84849 - 10/2
Pace Project No.: 7066682

Sample: TB-10012018 **Lab ID: 7066682007** Collected: 10/01/18 00:00 Received: 10/03/18 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**<1.0**	ug/L	1.0	0.11	1		10/10/18 17:09	71-43-2	
TOTAL BTEX	**<5.0**	ug/L	5.0	0.28	1		10/10/18 17:09		
tert-Butyl Alcohol	**<50.0**	ug/L	50.0	1.0	1		10/10/18 17:09	75-65-0	
Ethylbenzene	**<1.0**	ug/L	1.0	0.13	1		10/10/18 17:09	100-41-4	
Toluene	**<1.0**	ug/L	1.0	0.17	1		10/10/18 17:09	108-88-3	
Xylene (Total)	**<3.0**	ug/L	3.0	0.28	1		10/10/18 17:09	1330-20-7	
m&p-Xylene	**<2.0**	ug/L	2.0	0.28	1		10/10/18 17:09	179601-23-1	
o-Xylene	**<1.0**	ug/L	1.0	0.22	1		10/10/18 17:09	95-47-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	73	%	68-153		1		10/10/18 17:09	17060-07-0	CL
4-Bromofluorobenzene (S)	97	%	79-124		1		10/10/18 17:09	460-00-4	
Toluene-d8 (S)	112	%	69-124		1		10/10/18 17:09	2037-26-5	
TIC MSV Water	Analytical Method: EPA 8260								
TIC Search	**No TICs Found**				1		10/11/18 13:39		

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: 84849 - 10/2
Pace Project No.: 7066682

Sample: MW-14-10022018 **Lab ID: 7066682008** Collected: 10/02/18 09:40 Received: 10/03/18 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**3.4**	ug/L	1.0	0.11	1		10/10/18 18:55	71-43-2	
Surrogates									
1,2-Dichloroethane-d4 (S)	70	%	68-153		1		10/10/18 18:55	17060-07-0	
4-Bromofluorobenzene (S)	100	%	79-124		1		10/10/18 18:55	460-00-4	
Toluene-d8 (S)	113	%	69-124		1		10/10/18 18:55	2037-26-5	

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(631)694-3040

ANALYTICAL RESULTS

Project: 84849 - 10/2
Pace Project No.: 7066682

Sample: MW-18R-10022018 **Lab ID: 7066682009** Collected: 10/02/18 11:25 Received: 10/03/18 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**82.3**	ug/L	1.0	0.11	1		10/10/18 19:15	71-43-2	
Surrogates									
1,2-Dichloroethane-d4 (S)	70	%	68-153		1		10/10/18 19:15	17060-07-0	
4-Bromofluorobenzene (S)	98	%	79-124		1		10/10/18 19:15	460-00-4	
Toluene-d8 (S)	112	%	69-124		1		10/10/18 19:15	2037-26-5	
Tentatively Identified Compounds									
Unknown Petroleum Alkane	**48.2J**	ug/L			1		10/10/18 19:15		
Unknown Petroleum Alkane	**45.7J**	ug/L			1		10/10/18 19:15		
Unknown Petroleum Alkane	**157J**	ug/L			1		10/10/18 19:15		
Unknown Petroleum Alkane	**11.0J**	ug/L			1		10/10/18 19:15		
Unknown Petroleum Alkane	**26.4J**	ug/L			1		10/10/18 19:15		
Unknown Petroleum Alkane	**22.2J**	ug/L			1		10/10/18 19:15		
Unknown Petroleum Alkane	**12.9J**	ug/L			1		10/10/18 19:15		CL
Unknown Petroleum Alkane	**25.2J**	ug/L			1		10/10/18 19:15		
p-Xylene	**13.7J**	ug/L			1		10/10/18 19:15	106-42-3	N
Unknown Aromatic Hydroca	**8.7J**	ug/L			1		10/10/18 19:15		
Unknown Aromatic Hydroca	**28.6J**	ug/L			1		10/10/18 19:15		

REPORT OF LABORATORY ANALYSIS

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Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: 84849 - 10/2
Pace Project No.: 7066682

Sample: MW-16R-10022018 **Lab ID: 7066682010** Collected: 10/02/18 12:40 Received: 10/03/18 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**3.9**	ug/L	1.0	0.11	1		10/10/18 19:35	71-43-2	
Surrogates									
1,2-Dichloroethane-d4 (S)	69	%	68-153		1		10/10/18 19:35	17060-07-0	CL
4-Bromofluorobenzene (S)	94	%	79-124		1		10/10/18 19:35	460-00-4	
Toluene-d8 (S)	109	%	69-124		1		10/10/18 19:35	2037-26-5	
Tentatively Identified Compounds									
Unknown Aromatic Hydroca	**20.0J**	ug/L			1		10/10/18 19:35		
Unknown Aromatic Hydroca	**22.8J**	ug/L			1		10/10/18 19:35		
Unknown Aromatic Hydroca	**17.1J**	ug/L			1		10/10/18 19:35		
Unknown Aromatic Hydroca	**79.1J**	ug/L			1		10/10/18 19:35		
Unknown Aromatic Hydroca	**63.4J**	ug/L			1		10/10/18 19:35		
Unknown Aromatic Hydroca	**17.9J**	ug/L			1		10/10/18 19:35		
Unknown Aromatic Hydroca	**21.9J**	ug/L			1		10/10/18 19:35		
Unknown Aromatic Hydroca	**29.1J**	ug/L			1		10/10/18 19:35		
Unknown Aromatic Hydroca	**19.2J**	ug/L			1		10/10/18 19:35		
Unknown Aromatic Hydroca	**25.7J**	ug/L			1		10/10/18 19:35		
Unknown Aromatic Hydroca	**28.4J**	ug/L			1		10/10/18 19:35		

REPORT OF LABORATORY ANALYSIS

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(631)694-3040

ANALYTICAL RESULTS

Project: 84849 - 10/2
Pace Project No.: 7066682

Sample: MW-17R-10022018 **Lab ID: 7066682011** Collected: 10/02/18 13:55 Received: 10/03/18 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**<1.0**	ug/L	1.0	0.11	1		10/10/18 19:56	71-43-2	
Ethylbenzene	**5.8**	ug/L	1.0	0.13	1		10/10/18 19:56	100-41-4	
TOTAL BTEX	**27.6**	ug/L	5.0	0.28	1		10/10/18 19:56		
Toluene	**<1.0**	ug/L	1.0	0.17	1		10/10/18 19:56	108-88-3	
Xylene (Total)	**21.7**	ug/L	3.0	0.28	1		10/10/18 19:56	1330-20-7	
m&p-Xylene	**13.6**	ug/L	2.0	0.28	1		10/10/18 19:56	179601-23-1	
o-Xylene	**8.1**	ug/L	1.0	0.22	1		10/10/18 19:56	95-47-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	70	%	68-153		1		10/10/18 19:56	17060-07-0	CL
4-Bromofluorobenzene (S)	97	%	79-124		1		10/10/18 19:56	460-00-4	
Toluene-d8 (S)	107	%	69-124		1		10/10/18 19:56	2037-26-5	
Tentatively Identified Compounds									
Unknown Aromatic Hydroca	**40.9J**	ug/L			1		10/10/18 19:56		
Unknown Aromatic Hydroca	**27.8J**	ug/L			1		10/10/18 19:56		
Unknown Aromatic Hydroca	**23.7J**	ug/L			1		10/10/18 19:56		
Unknown Aromatic Hydroca	**66.6J**	ug/L			1		10/10/18 19:56		
Unknown Aromatic Hydroca	**20.1J**	ug/L			1		10/10/18 19:56		
Unknown Aromatic Hydroca	**21.0J**	ug/L			1		10/10/18 19:56		
Unknown Aromatic Hydroca	**21.0J**	ug/L			1		10/10/18 19:56		
Unknown Aromatic Hydroca	**10.0J**	ug/L			1		10/10/18 19:56		
Unknown Aromatic Hydroca	**10.8J**	ug/L			1		10/10/18 19:56		
Unknown Aromatic Hydroca	**11.4J**	ug/L			1		10/10/18 19:56		
Unknown Aromatic Hydroca	**16.8J**	ug/L			1		10/10/18 19:56		

REPORT OF LABORATORY ANALYSIS

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(631)694-3040

QUALITY CONTROL DATA

Project: 84849 - 10/2
Pace Project No.: 7066682

QC Batch: 86581 Analysis Method: EPA 8260C/5030C
QC Batch Method: EPA 8260C/5030C Analysis Description: 8260 MSV
Associated Lab Samples: 7066682001, 7066682002, 7066682004, 7066682005, 7066682006, 7066682007, 7066682008, 7066682009, 7066682010, 7066682011

METHOD BLANK: 398443 Matrix: Water
Associated Lab Samples: 7066682001, 7066682002, 7066682003, 7066682004, 7066682005, 7066682006, 7066682007, 7066682008, 7066682009, 7066682010, 7066682011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Benzene	ug/L	<1.0	1.0	0.11	10/10/18 13:29	
Ethylbenzene	ug/L	<1.0	1.0	0.13	10/10/18 13:29	
m&p-Xylene	ug/L	<2.0	2.0	0.28	10/10/18 13:29	
o-Xylene	ug/L	<1.0	1.0	0.22	10/10/18 13:29	
tert-Butyl Alcohol	ug/L	<50.0	50.0	1.0	10/10/18 13:29	
Toluene	ug/L	<1.0	1.0	0.17	10/10/18 13:29	
TOTAL BTEX	ug/L	<5.0	5.0	0.28	10/10/18 13:29	
Xylene (Total)	ug/L	<3.0	3.0	0.28	10/10/18 13:29	
1,2-Dichloroethane-d4 (S)	%	74	68-153		10/10/18 13:29	CL
4-Bromofluorobenzene (S)	%	99	79-124		10/10/18 13:29	
Toluene-d8 (S)	%	109	69-124		10/10/18 13:29	

LABORATORY CONTROL SAMPLE: 398444

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	52.4	105	73-119	
Ethylbenzene	ug/L	50	44.8	90	70-113	
m&p-Xylene	ug/L	100	87.8	88	72-115	
o-Xylene	ug/L	50	44.1	88	73-117	
tert-Butyl Alcohol	ug/L	250	228	91	60-140	
Toluene	ug/L	50	53.7	107	72-119	
TOTAL BTEX	ug/L		283			
Xylene (Total)	ug/L	150	132	88	71-109	
1,2-Dichloroethane-d4 (S)	%			80	68-153	CL
4-Bromofluorobenzene (S)	%			98	79-124	
Toluene-d8 (S)	%			107	69-124	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 398445 398446

Parameter	Units	7066682001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	<1.0	50	50	63.5	59.2	127	118	73-119	7	20	M1
Ethylbenzene	ug/L	<1.0	50	50	52.3	52.1	105	104	70-113	0	20	
m&p-Xylene	ug/L	<2.0	100	100	103	99.8	103	100	72-115	3	20	
o-Xylene	ug/L	<1.0	50	50	51.1	50.6	102	101	73-117	1	20	
tert-Butyl Alcohol	ug/L	<50.0	250	250	224	268	90	107	60-140	18	20	
Toluene	ug/L	<1.0	50	50	64.0	62.6	128	125	72-119	2	20	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: 84849 - 10/2
Pace Project No.: 7066682

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 398445 398446

Parameter	Units	7066682001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
TOTAL BTEX	ug/L	<5.0			334	324				3		MS
Xylene (Total)	ug/L	<3.0	150	150	154	150	103	100	71-109	3	20	
1,2-Dichloroethane-d4 (S)	%						76	76	68-153		20	CL
4-Bromofluorobenzene (S)	%						96	98	79-124		20	
Toluene-d8 (S)	%						108	108	69-124		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALIFIERS

Project: 84849 - 10/2
Pace Project No.: 7066682

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

CL	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
MS	Analyte recovery in the matrix spike was outside QC limits for one or more of the constituent analytes used in the calculated result.
N	The reported TIC has an 85% or higher match on a mass spectral library search.

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575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 84849 - 10/2
Pace Project No.: 7066682

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
7066682001	**MW-3-10012018**	EPA 8260C/5030C	86581		
7066682002	**BD-10012018**	EPA 8260C/5030C	86581		
7066682004	**MW-11-10012018**	EPA 8260C/5030C	86581		
7066682005	**MW-12-10012018**	EPA 8260C/5030C	86581		
7066682006	**FB-10012018**	EPA 8260C/5030C	86581		
7066682007	**TB-10012018**	EPA 8260C/5030C	86581		
7066682008	**MW-14-10022018**	EPA 8260C/5030C	86581		
7066682009	**MW-18R-10022018**	EPA 8260C/5030C	86581		
7066682010	**MW-16R-10022018**	EPA 8260C/5030C	86581		
7066682011	**MW-17R-10022018**	EPA 8260C/5030C	86581		
7066682003	**MW-10-10012018**	EPA 8260			
7066682004	**MW-11-10012018**	EPA 8260			
7066682006	**FB-10012018**	EPA 8260			
7066682007	**TB-10012018**	EPA 8260			

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WO#:7066682

7066682

anagement Program LaMP Chain of Custody Record

ath: BP > USA > NJ > ESSEX > 84849 > PMPv4 > 1994 R

No: 84849

Req Due Date (mm/dd/yy): STD Rush TAT: Yes ___ No X

Lab Work Order Number:

Lab Name:	PACE Analytical Services LLC	Facility Address:	84849 – West Orange	Consultant/Contractor:	Parsons
Lab Address:	575 Broad Hollow Road, Melville NY 11747	City, State, ZIP Code:		Consultant/Contractor Project No:	450472-84849
Lab PM:	Danielle Williams	Lead Regulatory Agency:	NJDEP	Address:	200 Cottontail Lane Somerset, NJ
Lab Phone:	516-370-6041	California Global ID No.:	N/A	Consultant/Contractor PM:	Dennis Miller/Allyson Kriney
Lab Shipping Accnt:	522658367	Enfos Proposal No:	009WH-0004	Phone: 732-537-3549	Email: Allyson.Kriney@parsons.c
Lab Bottle Order No:		Accounting Mode:	Provision X OOC-BU ___ OOC-RM ___	Email EDD To:	dennis.miller@parso and to lab.enfosdoc@bp.com
Other Info:	Profile	Stage: 40	Activity: 146	Invoice To:	BP X Contractor ___

BP Project Manager (PM):

BP PM Phone:

BP PM Email:

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Matrix: Is this location a well?	No. Containers / Preservative: Total Number of Containers	Unpreserved	H2SO4	HNO3	HCl	Methanol	Requested Analyses: TCL VOCs + TICs, Benzene only	TCL VOCs + TICs, BTEX only	TCL VOCs + TICs, TBA only	Benzene	TCL VOC TICs only	BTEX	TBA	Report Type & QC Level
	MW-3-10012018	10/1/18	1000		X		Y	3				X					X				001
	MW-3-10012018-MS		1000		X		Y	3				X					X				↓
	MW-3-10012018-MSD		1000		X		Y	3				X					X				
	BD-10012018		1200		X		Y	3				X					X				002
	MW-10-10012018		1205		X		Y	3				X						X				003
	MW-11-10012018		1320		X		Y	3				X				X						004
	MW-12-10012018		1415		X		Y	3				X		X								005
	FB-10012018		1435		X		N	3				X					X	X	X	X		006
	TB-10012018	↓	—		X		N	3				X					X	X	X	X		007
	MW-14-10022018	10/2/18	0940		X		Y	3				X					X					008

Sampler's Name: Aaron Fershbach-Mesimy

Sampler's Company: Parsons

Shipment Method: Fed Ex Ship Date: 10/2/18

Shipment Tracking No:

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
/Parsons	10/2/18	1630	Bina Kirk	10/3/18	10:45

Special Instructions:

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: _____ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

BP Remediation Management COC - Effective Date: starting August 16, 2011.

BP LaMP COC Rev. 8, 24 June 2012

Laboratory Management Program LaMP Chain of Custody Record

BP Site Node Path: BP > USA > NJ > ESSEX > 84849 > PMPv4 > 1994 F **Req Due Date (mm/dd/yy):** STD **Rush TAT:** Yes ___ No X

BP Facility No: 84849 **Lab Work Order Number:**

Lab Name: PACE Analytical Services LLC	Facility Address: 84849 – West Orange	Consultant/Contractor: Parsons
Lab Address: 575 Broad Hollow Road, Melville NY 11747	City, State, ZIP Code:	Consultant/Contractor Project No: 450472-84849
Lab PM: Danielle Williams	Lead Regulatory Agency: NJDEP	Address: 200 Cottontail Lane Somerset, NJ
Lab Phone: 516-370-6041	California Global ID No.: N/A	Consultant/Contractor PM: Dennis Miller/Allyson Kriney
Lab Shipping Accnt: 522658367	Enfos Proposal No: 009WH-0004	Phone: 732-537-3549 Email: Allyson.Kriney@parsons.c
Lab Bottle Order No:	Accounting Mode: Provision X OOC-BU ___ OOC-RM ___	Email EDD To: dennis.miller@parso and to lab.enfosdoc@bp.com
Other Info: Profile	Stage: 40 Activity: 146	Invoice To: BP X Contractor ___

BP Project Manager (PM):
BP PM Phone:
BP PM Email:

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Is this location a well?	No. Containers / Preservative: Total Number of Containe	Unpreserved	H2SO4	HNO3	HCl	Methanol	Requested Analyses: VOCs + TICs, Benzene only	Requested Analyses: VOCs + TICs, BTEX only	Requested Analyses: VOCs + TICs, TBA	Requested Analyses: Benzene	Report Type & QC Level
	MW-18R-10022018	10/2/18	1125		X		Y	3				X		X				009
	MW-16R-10022018	↓	1240		X		Y	3				X		X				010
	MW-17R-10022018	↓	1355		X		Y	3				X			X			011

Standard
Full Data Package —x—

NJ reduced deliverable
Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

Sampler's Name	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Aaron Feshbach-Marimy						
Sampler's Company: ~~Fed Ex~~ Parsons	Parsons	10/2/18	1638			
Shipment Method: Fed Ex Ship Date: 10/2/18						
Shipment Tracking No:						

Special Instructions:

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: ___ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

BP Remediation Management COC - Effective Date: starting August 16, 2011.

BP LaMP COC Rev. 8, 24 June 2012

Sample Condition Upon Receipt

Pace Analytical® Long Island Laboratory

WO#: 7066682

PM: DW1 Due Date: 10/17/18

CLIENT: BP_PAR(SONJ)

Client Name: RQ **Pro**

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #: 4621 5568 8378

Custody Seal on Cooler/Box Present: ☐ Yes ☐ No **Seals intact:** ☑ Yes ☐ No

Temperature Blank Present: ☐ Yes ☐ No

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ Ziploc ☐ None ☐ Other

Type of Ice: Wet Blue None

Thermometer Used: TH091 **Correction Factor:** 0.0

☐ Samples on ice, cooling process has begun

Cooler Temperature (°C): 4.7 **Cooler Temperature Corrected (°C):** 4.7

Date/Time 5035A kits placed in freezer _____

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☐ N/A, water sample) **Date and Initials of person examining contents:** SK 10/13/18

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ YES ☐ NO

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present:	☑Yes	☐No		1.
Chain of Custody Filled Out:	☑Yes	☐No		2.
Chain of Custody Relinquished:	☑Yes	☐No		3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No		5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No		6.
Rush Turn Around Time Requested:	☐Yes	☑No		7.
Sufficient Volume: (Triple volume provided for MS/MSD	☑Yes	☐No		8.
Correct Containers Used:	☑Yes	☐No		9.
-Pace Containers Used:	☑Yes	☐No		
Containers Intact:	☑Yes	☐No		10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC:	☑Yes	☐No		12.
-Includes date/time/ID/Analysis Matrix SL WT OIL				
All containers needing preservation have been checked	☐Yes	☐No	☑N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
pH paper Lot #				
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl, NaOH>9 Sulfide, NAOH>12 Cyanide) Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis	☐Yes	☐No	☑N/A	Sample #
				Initial when completed: / Lot # of added preservative: / Date/Time preservative added:
Samples checked for dechlorination:	☐Yes	☐No	☑N/A	14.
KI starch test strips Lot #				
Residual chlorine strips Lot #				Positive for Res. Chlorine? Y N
Headspace in VOA Vials (>6mm):	☐Yes	☑No	☐N/A	15.
Trip Blank Present:	☑Yes	☐No	☐N/A	16.
Trip Blank Custody Seals Present	☐Yes	☑No	☐N/A	
Pace Trip Blank Lot # (if applicable): _____				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

* **PM (Project Manager) review is documented electronically in LIMS.**

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

January 24, 2019

Allyson Kriney
Parsons
200 Cottontail Lane
Somerset, NJ 08873

RE: Project: 84849 - 1/15
Pace Project No.: 7076897

Dear Allyson Kriney:
Enclosed are the analytical results for sample(s) received by the laboratory on January 17, 2019. The results relate only to the samples included in this report. Results contained within this report conform to the most current version of the TNI standards, BP LaMP Technical Requirements Revision 12.1, and any applicable Quality Assurance Project Plan (QAPP), or Work Plan unless otherwise narrated in the body of this report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Danielle Williams

Danielle Williams
danielle.williams@pacelabs.com
(631)694-3040
Project Manager

Enclosures

cc: ENFOS BP, ENFOS BP
Attn Scanning Dept, BP
Dennis Miller, Parsons
Andrea Nyegaard, Parsons
Christopher Watson, Parsons
Danielle Williams, Pace Analytical Melville

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CERTIFICATIONS

Project: 84849 - 1/15
Pace Project No.: 7076897

Long Island Certification IDs

575 Broad Hollow Rd, Melville, NY 11747
New York Certification #: 10478 Primary Accrediting Body
New Jersey Certification #: NY158
Pennsylvania Certification #: 68-00350
Connecticut Certification #: PH-0435
Maryland Certification #: 208
Rhode Island Certification #: LAO00340
Massachusetts Certification #: M-NY026
New Hampshire Certification #: 2987

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 84849 - 1/15
Pace Project No.: 7076897

Lab ID	Sample ID	Matrix	Date Collected	Date Received
7076897001	**MW-11-01152019**	Water	01/15/19 10:25	01/17/19 10:00
7076897002	**MW-14-01152019**	Water	01/15/19 11:25	01/17/19 10:00
7076897003	**BD-01152019**	Water	01/15/19 12:00	01/17/19 10:00
7076897004	**MW-18R-01162019**	Water	01/16/19 09:50	01/17/19 10:00
7076897005	**MW-16R-01162019**	Water	01/16/19 11:10	01/17/19 10:00
7076897006	**MW-17R-01162019**	Water	01/16/19 12:15	01/17/19 10:00
7076897007	**MW-20-01162019**	Water	01/16/19 13:20	01/17/19 10:00
7076897008	**EB-01162019**	Water	01/16/19 14:00	01/17/19 10:00
7076897009	**TB-01162019**	Water	01/16/19 00:00	01/17/19 10:00

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SAMPLE ANALYTE COUNT

Project: 84849 - 1/15
Pace Project No.: 7076897

Lab ID	Sample ID	Method	Analysts	Analytes Reported
7076897001	**MW-11-01152019**	EPA 8260C/5030C	BBL	6
7076897002	**MW-14-01152019**	EPA 8260C/5030C	BBL	4
		EPA 8260	BBL	1
7076897003	**BD-01152019**	EPA 8260C/5030C	BBL	4
		EPA 8260	BBL	1
7076897004	**MW-18R-01162019**	EPA 8260C/5030C	BBL	16
7076897005	**MW-16R-01162019**	EPA 8260C/5030C	BBL	4
7076897006	**MW-17R-01162019**	EPA 8260C/5030C	BBL	15
7076897007	**MW-20-01162019**	EPA 8260C/5030C	BBL	5
		EPA 8260	BBL	1
7076897008	**EB-01162019**	EPA 8260C/5030C	BBL	5
		EPA 8260	BBL	1
7076897009	**TB-01162019**	EPA 8260C/5030C	BBL	5
		EPA 8260	BBL	1

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SUMMARY OF DETECTION

Project: 84849 - 1/15
Pace Project No.: 7076897

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
7076897001	**MW-11-01152019**					
EPA 8260C/5030C	1.190:Unknown Petroleum Alkane	7.9J	ug/L		01/18/19 22:46	
EPA 8260C/5030C	1.293:Unknown	8.1J	ug/L		01/18/19 22:46	
EPA 8260C/5030C	1.656:Unknown Petroleum Alkane	22.6J	ug/L		01/18/19 22:46	
7076897002	**MW-14-01152019**					
EPA 8260	TIC Search	No TIC's Found			01/21/19 15:32	
7076897003	**BD-01152019**					
EPA 8260	TIC Search	No TIC's Found			01/21/19 15:30	
7076897004	**MW-18R-01162019**					
EPA 8260C/5030C	Benzene	19.7	ug/L	1.0	01/18/19 22:07	
EPA 8260C/5030C	1.653:Unknown Petroleum Alkane	499J	ug/L		01/18/19 22:07	
EPA 8260C/5030C	1.839:Unknown Petroleum Alkane	174J	ug/L		01/18/19 22:07	
EPA 8260C/5030C	2.520:Unknown Petroleum Alkane	288J	ug/L		01/18/19 22:07	
EPA 8260C/5030C	2.577:Unknown	117J	ug/L		01/18/19 22:07	
EPA 8260C/5030C	2.712:Unknown Petroleum Alkane	158J	ug/L		01/18/19 22:07	
EPA 8260C/5030C	3.444:Unknown Cycloalkane	294J	ug/L		01/18/19 22:07	
EPA 8260C/5030C	4.025:Cyclohexane	133J	ug/L		01/18/19 22:07	N
EPA 8260C/5030C	7.692:p-Xylene	226J	ug/L		01/18/19 22:07	N
EPA 8260C/5030C	9.017:Benzene, 1,3,5-trimethyl	290J	ug/L		01/18/19 22:07	N
EPA 8260C/5030C	9.386:Benzene, 1,2,4-trimethyl	302J	ug/L		01/18/19 22:07	N
EPA 8260C/5030C	9.804:Benzene, 1,2,3-trimethyl	218J	ug/L		01/18/19 22:07	N
EPA 8260C/5030C	9.993:Unknown Aromatic Hydroca	194J	ug/L		01/18/19 22:07	
7076897006	**MW-17R-01162019**					
EPA 8260C/5030C	Benzene	3.6	ug/L	1.0	01/18/19 21:29	
EPA 8260C/5030C	8.923:Unknown Aromatic Hydroca	47.8J	ug/L		01/18/19 21:29	
EPA 8260C/5030C	9.016:Benzene, 1,3,5-trimethyl	41.6J	ug/L		01/18/19 21:29	N
EPA 8260C/5030C	9.212:Unknown Aromatic Hydroca	51.5J	ug/L		01/18/19 21:29	
EPA 8260C/5030C	9.385:Benzene, 1,2,4-trimethyl	121J	ug/L		01/18/19 21:29	N
EPA 8260C/5030C	9.806:Benzene, 1,2,3-trimethyl	183J	ug/L		01/18/19 21:29	N
EPA 8260C/5030C	9.995:Unknown Aromatic Hydroca	103J	ug/L		01/18/19 21:29	
EPA 8260C/5030C	10.082:Unknown Aromatic Hydroc	65.9J	ug/L		01/18/19 21:29	
EPA 8260C/5030C	10.457:Unknown Aromatic Hydroc	91.0J	ug/L		01/18/19 21:29	
EPA 8260C/5030C	10.566:Unknown Aromatic Hydroc	72.6J	ug/L		01/18/19 21:29	
EPA 8260C/5030C	10.855:Benzene, 1,2,4,5-tetram	60.6J	ug/L		01/18/19 21:29	N
EPA 8260C/5030C	11.333:Unknown Aromatic Hydroc	75.4J	ug/L		01/18/19 21:29	
7076897007	**MW-20-01162019**					
EPA 8260	TIC Search	No TIC's Found			01/21/19 15:31	
7076897008	**EB-01162019**					
EPA 8260	TIC Search	No TIC's Found			01/21/19 15:31	

REPORT OF LABORATORY ANALYSIS

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(631)694-3040

SUMMARY OF DETECTION

Project: 84849 - 1/15
Pace Project No.: 7076897

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
7076897009	**TB-01162019**					
EPA 8260	TIC Search	No TIC's Found			01/21/19 15:31	

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PROJECT NARRATIVE

Project: 84849 - 1/15
Pace Project No.: 7076897

Method: **EPA 8260C/5030C**
Description: 8260C Volatile Organics
Client: BP-Parsons (Somerset NJ)
Date: January 24, 2019

General Information:
9 samples were analyzed for EPA 8260C/5030C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 84849 - 1/15
Pace Project No.: 7076897

Method: **EPA 8260**
Description: TIC MSV Water
Client: BP-Parsons (Somerset NJ)
Date: January 24, 2019

General Information:
5 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: 84849 - 1/15
Pace Project No.: 7076897

Sample: MW-11-01152019 **Lab ID: 7076897001** Collected: 01/15/19 10:25 Received: 01/17/19 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Surrogates									
1,2-Dichloroethane-d4 (S)	112	%	68-153		1		01/18/19 22:46	17060-07-0	
4-Bromofluorobenzene (S)	100	%	79-124		1		01/18/19 22:46	460-00-4	
Toluene-d8 (S)	95	%	69-124		1		01/18/19 22:46	2037-26-5	
Tentatively Identified Compounds									
Unknown Petroleum Alkane	**7.9J**	ug/L			1		01/18/19 22:46		
Unknown	**8.1J**	ug/L			1		01/18/19 22:46		
Unknown Petroleum Alkane	**22.6J**	ug/L			1		01/18/19 22:46		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 84849 - 1/15
Pace Project No.: 7076897

Sample: MW-14-01152019 **Lab ID: 7076897002** Collected: 01/15/19 11:25 Received: 01/17/19 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**<1.0**	ug/L	1.0	0.11	1		01/18/19 23:05	71-43-2	
Surrogates									
1,2-Dichloroethane-d4 (S)	114	%	68-153		1		01/18/19 23:05	17060-07-0	
4-Bromofluorobenzene (S)	100	%	79-124		1		01/18/19 23:05	460-00-4	
Toluene-d8 (S)	99	%	69-124		1		01/18/19 23:05	2037-26-5	
TIC MSV Water	Analytical Method: EPA 8260								
TIC Search	**No TIC's Found**				1		01/21/19 15:32		

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ANALYTICAL RESULTS

Project: 84849 - 1/15
Pace Project No.: 7076897

Sample: BD-01152019 **Lab ID: 7076897003** Collected: 01/15/19 12:00 Received: 01/17/19 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**<1.0**	ug/L	1.0	0.11	1		01/18/19 22:27	71-43-2	
Surrogates									
1,2-Dichloroethane-d4 (S)	111	%	68-153		1		01/18/19 22:27	17060-07-0	
4-Bromofluorobenzene (S)	100	%	79-124		1		01/18/19 22:27	460-00-4	
Toluene-d8 (S)	97	%	69-124		1		01/18/19 22:27	2037-26-5	
TIC MSV Water	Analytical Method: EPA 8260								
TIC Search	**No TIC's Found**				1		01/21/19 15:30		

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ANALYTICAL RESULTS

Project: 84849 - 1/15
Pace Project No.: 7076897

Sample: MW-18R-01162019 **Lab ID: 7076897004** Collected: 01/16/19 09:50 Received: 01/17/19 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**19.7**	ug/L	1.0	0.11	1		01/18/19 22:07	71-43-2	
Surrogates									
1,2-Dichloroethane-d4 (S)	109	%	68-153		1		01/18/19 22:07	17060-07-0	
4-Bromofluorobenzene (S)	99	%	79-124		1		01/18/19 22:07	460-00-4	
Toluene-d8 (S)	94	%	69-124		1		01/18/19 22:07	2037-26-5	
Tentatively Identified Compounds									
Unknown Petroleum Alkane	**499J**	ug/L			1		01/18/19 22:07		
Unknown Petroleum Alkane	**174J**	ug/L			1		01/18/19 22:07		
Unknown Petroleum Alkane	**288J**	ug/L			1		01/18/19 22:07		
Unknown	**117J**	ug/L			1		01/18/19 22:07		
Unknown Petroleum Alkane	**158J**	ug/L			1		01/18/19 22:07		
Unknown Cycloalkane	**294J**	ug/L			1		01/18/19 22:07		
Cyclohexane	**133J**	ug/L			1		01/18/19 22:07	110-82-7	N
p-Xylene	**226J**	ug/L			1		01/18/19 22:07	106-42-3	N
Benzene, 1,3,5-trimethyl	**290J**	ug/L			1		01/18/19 22:07	108-67-8	N
Benzene, 1,2,4-trimethyl	**302J**	ug/L			1		01/18/19 22:07	95-63-6	N
Benzene, 1,2,3-trimethyl	**218J**	ug/L			1		01/18/19 22:07	526-73-8	N
Unknown Aromatic Hydroca	**194J**	ug/L			1		01/18/19 22:07		

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ANALYTICAL RESULTS

Project: 84849 - 1/15
Pace Project No.: 7076897

Sample: MW-16R-01162019 **Lab ID: 7076897005** Collected: 01/16/19 11:10 Received: 01/17/19 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**<1.0**	ug/L	1.0	0.11	1		01/18/19 21:48	71-43-2	
Surrogates									
1,2-Dichloroethane-d4 (S)	110	%	68-153		1		01/18/19 21:48	17060-07-0	
4-Bromofluorobenzene (S)	101	%	79-124		1		01/18/19 21:48	460-00-4	
Toluene-d8 (S)	95	%	69-124		1		01/18/19 21:48	2037-26-5	

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ANALYTICAL RESULTS

Project: 84849 - 1/15
Pace Project No.: 7076897

Sample: MW-17R-01162019 **Lab ID: 7076897006** Collected: 01/16/19 12:15 Received: 01/17/19 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**3.6**	ug/L	1.0	0.11	1		01/18/19 21:29	71-43-2	
Surrogates									
1,2-Dichloroethane-d4 (S)	113	%	68-153		1		01/18/19 21:29	17060-07-0	
4-Bromofluorobenzene (S)	101	%	79-124		1		01/18/19 21:29	460-00-4	
Toluene-d8 (S)	94	%	69-124		1		01/18/19 21:29	2037-26-5	
Tentatively Identified Compounds									
Unknown Aromatic Hydroca	**47.8J**	ug/L			1		01/18/19 21:29		
Benzene, 1,3,5-trimethyl	**41.6J**	ug/L			1		01/18/19 21:29	108-67-8	N
Unknown Aromatic Hydroca	**51.5J**	ug/L			1		01/18/19 21:29		
Benzene, 1,2,4-trimethyl	**121J**	ug/L			1		01/18/19 21:29	95-63-6	N
Benzene, 1,2,3-trimethyl	**183J**	ug/L			1		01/18/19 21:29	526-73-8	N
Unknown Aromatic Hydroca	**103J**	ug/L			1		01/18/19 21:29		
Unknown Aromatic Hydroc	**65.9J**	ug/L			1		01/18/19 21:29		
Unknown Aromatic Hydroc	**91.0J**	ug/L			1		01/18/19 21:29		
Unknown Aromatic Hydroc	**72.6J**	ug/L			1		01/18/19 21:29		
Benzene, 1,2,4,5-tetram	**60.6J**	ug/L			1		01/18/19 21:29	95-93-2	N
Unknown Aromatic Hydroc	**75.4J**	ug/L			1		01/18/19 21:29		

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: 84849 - 1/15
Pace Project No.: 7076897

Sample: MW-20-01162019 **Lab ID: 7076897007** Collected: 01/16/19 13:20 Received: 01/17/19 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**<1.0**	ug/L	1.0	0.11	1		01/18/19 21:10	71-43-2	
tert-Butyl Alcohol	**<50.0**	ug/L	50.0	1.0	1		01/18/19 21:10	75-65-0	
Surrogates									
1,2-Dichloroethane-d4 (S)	109	%	68-153		1		01/18/19 21:10	17060-07-0	
4-Bromofluorobenzene (S)	101	%	79-124		1		01/18/19 21:10	460-00-4	
Toluene-d8 (S)	95	%	69-124		1		01/18/19 21:10	2037-26-5	
TIC MSV Water	Analytical Method: EPA 8260								
TIC Search	**No TIC's Found**				1		01/21/19 15:31		

REPORT OF LABORATORY ANALYSIS

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Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: 84849 - 1/15
Pace Project No.: 7076897

Sample: EB-01162019 **Lab ID: 7076897008** Collected: 01/16/19 14:00 Received: 01/17/19 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**<1.0**	ug/L	1.0	0.11	1		01/18/19 18:17	71-43-2	
tert-Butyl Alcohol	**<50.0**	ug/L	50.0	1.0	1		01/18/19 18:17	75-65-0	
Surrogates									
1,2-Dichloroethane-d4 (S)	111	%	68-153		1		01/18/19 18:17	17060-07-0	
4-Bromofluorobenzene (S)	102	%	79-124		1		01/18/19 18:17	460-00-4	
Toluene-d8 (S)	97	%	69-124		1		01/18/19 18:17	2037-26-5	
TIC MSV Water	Analytical Method: EPA 8260								
TIC Search	**No TIC's Found**				1		01/21/19 15:31		

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Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: 84849 - 1/15
Pace Project No.: 7076897

Sample: TB-01162019 **Lab ID: 7076897009** Collected: 01/16/19 00:00 Received: 01/17/19 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Method: EPA 8260C/5030C								
Benzene	**<1.0**	ug/L	1.0	0.11	1		01/18/19 17:58	71-43-2	
tert-Butyl Alcohol	**<50.0**	ug/L	50.0	1.0	1		01/18/19 17:58	75-65-0	
Surrogates									
1,2-Dichloroethane-d4 (S)	112	%	68-153		1		01/18/19 17:58	17060-07-0	
4-Bromofluorobenzene (S)	101	%	79-124		1		01/18/19 17:58	460-00-4	
Toluene-d8 (S)	98	%	69-124		1		01/18/19 17:58	2037-26-5	
TIC MSV Water	Analytical Method: EPA 8260								
TIC Search	**No TIC's Found**				1		01/21/19 15:31		

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575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: 84849 - 1/15
Pace Project No.: 7076897

QC Batch: 98824 Analysis Method: EPA 8260C/5030C
QC Batch Method: EPA 8260C/5030C Analysis Description: 8260 MSV
Associated Lab Samples: 7076897001, 7076897002, 7076897003, 7076897004, 7076897005, 7076897006, 7076897007, 7076897008, 7076897009

METHOD BLANK: 456882 Matrix: Water
Associated Lab Samples: 7076897001, 7076897002, 7076897003, 7076897004, 7076897005, 7076897006, 7076897007, 7076897008, 7076897009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Benzene	ug/L	<1.0	1.0	0.11	01/18/19 15:50	
tert-Butyl Alcohol	ug/L	<50.0	50.0	1.0	01/18/19 15:50	
1,2-Dichloroethane-d4 (S)	%	112	68-153		01/18/19 15:50	
4-Bromofluorobenzene (S)	%	99	79-124		01/18/19 15:50	
Toluene-d8 (S)	%	97	69-124		01/18/19 15:50	

LABORATORY CONTROL SAMPLE: 456883

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	43.4	87	73-119	
tert-Butyl Alcohol	ug/L	250	213	85	60-140	
1,2-Dichloroethane-d4 (S)	%			109	68-153	
4-Bromofluorobenzene (S)	%			105	79-124	
Toluene-d8 (S)	%			98	69-124	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 457082 457083

Parameter	Units	7076751001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	11.0	50	50	56.2	57.6	90	93	73-119	3	20	
tert-Butyl Alcohol	ug/L	<50.0	250	250	269	268	108	107	60-140	1	20	
1,2-Dichloroethane-d4 (S)	%						112	111	68-153		20	
4-Bromofluorobenzene (S)	%						94	92	79-124		20	
Toluene-d8 (S)	%						85	84	69-124		20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 457107 457108

Parameter	Units	7076897002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	<1.0	50	50	45.9	48.5	91	96	73-119	6	20	
tert-Butyl Alcohol	ug/L	<50.0	250	250	243	262	97	105	60-140	8	20	
1,2-Dichloroethane-d4 (S)	%						112	109	68-153		20	
4-Bromofluorobenzene (S)	%						104	105	79-124		20	
Toluene-d8 (S)	%						97	98	69-124		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALIFIERS

Project: 84849 - 1/15
Pace Project No.: 7076897

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

N	The reported TIC has an 85% or higher match on a mass spectral library search.

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Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 84849 - 1/15
Pace Project No.: 7076897

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
7076897001	**MW-11-01152019**	EPA 8260C/5030C	98824		
7076897002	**MW-14-01152019**	EPA 8260C/5030C	98824		
7076897003	**BD-01152019**	EPA 8260C/5030C	98824		
7076897004	**MW-18R-01162019**	EPA 8260C/5030C	98824		
7076897005	**MW-16R-01162019**	EPA 8260C/5030C	98824		
7076897006	**MW-17R-01162019**	EPA 8260C/5030C	98824		
7076897007	**MW-20-01162019**	EPA 8260C/5030C	98824		
7076897008	**EB-01162019**	EPA 8260C/5030C	98824		
7076897009	**TB-01162019**	EPA 8260C/5030C	98824		
7076897002	**MW-14-01152019**	EPA 8260			
7076897003	**BD-01152019**	EPA 8260			
7076897007	**MW-20-01162019**	EPA 8260			
7076897008	**EB-01162019**	EPA 8260			
7076897009	**TB-01162019**	EPA 8260			

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Laboratory Management Program LaMP Chain of Custody Record

BP Site Node Path: BP > USA > NJ > ESSEX > 84849 > PMPv4 > 1994 R

Req Due Date (mm/dd/yy): STD

Rush TAT: Yes ____ No X

BP Facility No: 84849

Lab Work Order Number:

Lab Name:	PACE Analytical Services LLC	Facility Address:	84849 – West Orange	Consultant/Contractor:	Parsons
Lab Address:	575 Broad Hollow Road, Melville NY 11747	City, State, ZIP Code:		Consultant/Contractor Project No:	450472-84849
Lab PM:	Danielle Williams	Lead Regulatory Agency:	NJDEP	Address:	200 Cottontail Lane Somerset, NJ
Lab Phone:	516-370-6041	California Global ID No.:	N/A	Consultant/Contractor PM:	Allyson Kriney
Lab Shipping Accnt:	522658367	Enfos Proposal No:	009WH-0004	Phone: 732-537-3549	Email: Allyson.Kriney@parsons.c
Lab Bottle Order No:		Accounting Mode:	Provision X OOC-BU ____ OOC-RM ____	Email EDD To:	dennis.miller@parso and to lab.enfosdoc@bp.com
Other Info:	Profile	Stage: 40	Activity: 146	Invoice To:	BP X Contractor ____

BP Project Manager (PM): John Frankenthal

BP PM Phone:

BP PM Email:

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Matrix: Is this location a well?	No. Containers / Preservative: Total Number of Containers	Unpreserved	H2SO4	HNO3	HCl	Methanol	Requested Analyses: Benzene	Requested Analyses: TCL VOC TICs only	Requested Analyses: TBA	Report Type & QC Level
	MW-11-01152019	1/15	1025		X		Y	3							X		001
	MW-14-01152019	1/15	1125		X		Y	3						X	X		002
	MW-14-01152019 MS	1/15	1125		X		Y	3						X	X		↓
	MW-14-01152019 MSD	1/15	1125		X		Y	3						X	X		
	BD-01152019	1/15	1200		X		Y	3						X	X		003
	MW-18R-01162019	1/16	0950		X		Y	3						X	X		004
	MW-16R-01162019	1/16	1110		X		Y	3						X			005
	MW-17R-01162019	1/16	1215		X		Y	3						X	X		006
	MW-20-01162019	1/16	1320		X		Y	3						X	X	X	007
	EB-01162019	1/16	1400		X		N	7						X	X	X	008

Report Type & QC Level: Standard; Full Data Package x

NJ reduced deliverable

Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

WO#:7076897

7076897

Sampler's Name:	C. Watson	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:	PARSONS	C. Watson	1/16	1650		1/17/19	10:00
Shipment Method:	FedEx Ship Date: 1/16/19						
Shipment Tracking No:							

Special Instructions:

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: 3.0 °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

Laboratory Management Program LaMP Chain of Custody Record

BP Site Node Path: BP > USA > NJ > ESSEX > 84849 > PMPv4 > 1994 R

Req Due Date (mm/dd/yy): STD

Rush TAT: Yes ___ No X

BP Facility No: 84849

Lab Work Order Number:

Lab Name:	PACE Analytical Services LLC	Facility Address:	84849 – West Orange	Consultant/Contractor:	Parsons
Lab Address:	575 Broad Hollow Road, Melville NY 11747	City, State, ZIP Code:		Consultant/Contractor Project No:	450472-84849
Lab PM:	Danielle Williams	Lead Regulatory Agency:	NJDEP	Address:	200 Cottontail Lane Somerset, NJ
Lab Phone:	516-370-6041	California Global ID No.:	N/A	Consultant/Contractor PM:	Allyson Kriney
Lab Shipping Accnt:	522658367	Enfos Proposal No:	009WH-0004	Phone: 732-537-3549	Email: Allyson.Kriney@parsons.c
Lab Bottle Order No:		Accounting Mode:	Provision X OOC-BU ___ OOC-RM ___	Email EDD To:	dennis.miller@parso and to lab.enfosdoc@bp.com
Other Info:	Profile	Stage:	40 Activity: 146	Invoice To:	BP X Contractor ___

BP Project Manager (PM):

BP PM Phone:

BP PM Email:

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Matrix: Is this location a well?	No. Containers / Preservative: Total Number of Container:	Unpreserved	H2SO4	HNO3	HCl	Methanol	Requested Analyses: Benzene	TBA	Full VOC TICs only	Report Type & QC Level
	TB-01162019	1/16/19	—		X		N	3				X		X	X	X	009

Standard

Full Data Package X

NJ reduced deliverable

Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

WO#: 7076897
PM: DW1 Due Date: 01/31/19
CLIENT: BP_PAR(SONJ)

Sampler's Name:	C Watson	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:	PARSONS	C Wat	1/16	1500			
Shipment Method:	FedEx Ship Date: 1/16						
Shipment Tracking No:							

Special Instructions:

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: 3.0 °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

Pace Analytical
Long Island Laboratory

Sample Condition Upon F

WO#: 7076897
PM: DW1 Due Date: 01/31/19
CLIENT: BP_PAR(SONJ)

Client Name: BP

Courier: (X) Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #: 4808 2745 0469

Custody Seal on Cooler/Box Present: ☐ Yes ☒ No **Seals intact:** ☒ Yes ☐ No SK 1/17/19

Temperature Blank Present: ☒ Yes ☐ No

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ Ziploc ☐ None ☐ Other

Type of Ice: (Wet) Blue None

Thermometer Used: TH091 **Correction Factor:** 0.0

☐ Samples on ice, cooling process has begun

Cooler Temperature (°C): 3.0 **Cooler Temperature Corrected (°C):** 3.0

Date/Time 5035A kits placed in freezer _____

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☒ N/A, water sample) **Date and Initials of person examining contents:** SK 1/17/19

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ YES ☐ NO

Did samples orignate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present:	☒Yes	☐No		1.
Chain of Custody Filled Out:	☒Yes	☐No		2.
Chain of Custody Relinquished:	☒Yes	☐No		3.
Sampler Name & Signature on COC:	☒Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☒Yes	☐No		5.
Short Hold Time Analysis (<72hr):	☐Yes	☒No		6.
Rush Turn Around Time Requested:	☐Yes	☒No		7.
Sufficient Volume: (Triple volume provided for MS/MSD	☒Yes	☐No		8.
Correct Containers Used:	☒Yes	☐No		9.
-Pace Containers Used:	☒Yes	☐No		
Containers Intact:	☒Yes	☐No		10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☒N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC:	☒Yes	☐No		12.
-Includes date/time/ID/Analysis Matrix SL (WT) OIL				
All containers needing preservation have been checked	☐Yes	☐No	☒N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
pH paper Lot #				
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl, NaOH>9 Sulfide, NAOH>12 Cyanide) Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis	☐Yes	☐No	☒N/A	Sample #
				Initial when completed: / Lot # of added preservative: / Date/Time preservative added:
Samples checked for dechlorination:	☐Yes	☐No	☒N/A	14.
KI starch test strips Lot #				
Residual chlorine strips Lot #				Positive for Res. Chlorine? Y N
Headspace in VOA Vials (>6mm):	☐Yes	☒No	☐N/A	15.
Trip Blank Present:	☒Yes	☐No	☐N/A	16.
Trip Blank Custody Seals Present	☐Yes	☒No	☐N/A	
Pace Trip Blank Lot # (if applicable): _____				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

* PM (Project Manager) review is documented electronically in LIMS.

Appendix E

EDD Approval Emails

From:	DEP SRPEDD
To:	Lynch, Jayme
Subject:	016006, LSR110001, 016006, HB241816, (Directory: *missing*) - Passed
Date:	Wednesday, May 29, 2019 5:22:54 PM
Attachments:	DTST.TXT EDSA_Error_Log.html erdtst-7-1-8.txt erresult-7-1-8.txt ersample-7-1-8.txt HZRESULT.TXT HZSAMPLE.TXT rstp-7-1-8.txt SampleLoc-7-1-8.KML

The EDD submission via email from (Jayme.Lynch@parsons.com) on (5/28/2019 2:51:44 PM) with the subjectline "[EXTERNAL] PI#016006, LSR110001, 95-03-15-1156-05 - Soil EDDs"

The following identifiers were in the DTST file:

- Directory: *missing*
- DESC: BP 84849
- SRPID: PI # 016006
- Submit Date: 5/28/2019

This submission has been issued an SRP Catalog ID: HB241816

Submission status: Passed.

Please do **not** resubmit.

EDD data deliverable must be submitted only once.
- To fulfill Key Document requirements attach only a copy of this email as an appendix to the document.
- Do **not** resubmit any approved EDD deliverable as part of a portal submission.

Email ID: OEM_31912
Sub ID:SUB_336222

From:	DEP SRPEDD
To:	Lynch, Jayme
Subject:	016006, LSR110001, 016006, HB241820, (Directory: *missing*) - Passed
Date:	Wednesday, May 29, 2019 5:24:32 PM
Attachments:	DTST.TXT EDSA_Error_Log.html erdtst-7-1-8.txt erresult-7-1-8.txt ersample-7-1-8.txt HZRESULT.TXT HZSAMPLE.TXT rstp-7-1-8.txt SampleLoc-7-1-8.KML

The EDD submission via email from (Jayme.Lynch@parsons.com) on (5/28/2019 2:51:13 PM) with the subjectline "[EXTERNAL] PI#016006, LSR110001, 95-03-15-1156-05 - Groundwater EDDs"

The following identifiers were in the DTST file:

- Directory: *missing*
- DESC: BP 84849
- SRPID: PI # 016006
- Submit Date: 5/21/2019

This submission has been issued an SRP Catalog ID: HB241820

Submission status: Passed.

Please do **not** resubmit.

EDD data deliverable must be submitted only once.
- To fulfill Key Document requirements attach only a copy of this email as an appendix to the document.
- Do **not** resubmit any approved EDD deliverable as part of a portal submission.

Email ID: OEM_31916
Sub ID:SUB_336232

From:	DEP SRPEDD
To:	Lynch, Jayme
Subject:	016006, LSR110001, 016006, HB241821, (Directory: *missing*) - Passed
Date:	Wednesday, May 29, 2019 5:25:04 PM
Attachments:	DTST.TXT EDSA_Error_Log.html erdtst-7-1-8.txt erresult-7-1-8.txt ersample-7-1-8.txt HZRESULT.TXT HZSAMPLE.TXT rstp-7-1-8.txt SampleLoc-7-1-8.KML

The EDD submission via email from (Jayme.Lynch@parsons.com) on (5/28/2019 2:50:25 PM) with the subjectline "[EXTERNAL] PI#016006, LSR110001, 95-03-15-1156-05 - Groundwater EDDs"

The following identifiers were in the DTST file:

- Directory: *missing*
- DESC: BP 84849
- SRPID: PI # 016006
- Submit Date: 5/21/2019

This submission has been issued an SRP Catalog ID: HB241821

Submission status: Passed.

Please do **not** resubmit.

EDD data deliverable must be submitted only once.
- To fulfill Key Document requirements attach only a copy of this email as an appendix to the document.
- Do **not** resubmit any approved EDD deliverable as part of a portal submission.

Email ID: OEM_31917
Sub ID:SUB_336242

From:	DEP SRPEDD
To:	Lynch, Jayme
Subject:	016006, LSR110001, 016006, HB241824, (Directory: *missing*) - Passed
Date:	Wednesday, May 29, 2019 5:26:02 PM
Attachments:	DTST.TXT EDSA_Error_Log.html erdtst-7-1-8.txt erresult-7-1-8.txt ersample-7-1-8.txt HZRESULT.TXT HZSAMPLE.TXT rstp-7-1-8.txt SampleLoc-7-1-8.KML

The EDD submission via email from (Jayme.Lynch@parsons.com) on (5/28/2019 2:51:30 PM) with the subjectline "[EXTERNAL] PI#016006, LSR110001, 95-03-15-1156-05 - Groundwater EDDs"

The following identifiers were in the DTST file:

- Directory: *missing*
- DESC: BP 84849
- SRPID: PI # 016006
- Submit Date: 5/21/2019

This submission has been issued an SRP Catalog ID: HB241824

Submission status: Passed.

Please do **not** resubmit.

EDD data deliverable must be submitted only once.
- To fulfill Key Document requirements attach only a copy of this email as an appendix to the document.
- Do **not** resubmit any approved EDD deliverable as part of a portal submission.

Email ID: OEM_31920
Sub ID:SUB_336227

From:	DEP SRPEDD
To:	Lynch, Jayme
Subject:	016006, LSR110001, 016006, HB241825, (Directory: *missing*) - Passed
Date:	Wednesday, May 29, 2019 5:26:35 PM
Attachments:	DTST.TXT EDSA_Error_Log.html erdtst-7-1-8.txt erresult-7-1-8.txt ersample-7-1-8.txt HZRESULT.TXT HZSAMPLE.TXT rstp-7-1-8.txt SampleLoc-7-1-8.KML

The EDD submission via email from (Jayme.Lynch@parsons.com) on (5/28/2019 2:50:57 PM) with the subjectline "[EXTERNAL] PI#016006, LSR110001, 95-03-15-1156-05 - Groundwater EDDs"

The following identifiers were in the DTST file:

- Directory: *missing*
- DESC: BP 84849
- SRPID: PI # 016006
- Submit Date: 5/21/2019

This submission has been issued an SRP Catalog ID: HB241825

Submission status: Passed.

Please do **not** resubmit.

EDD data deliverable must be submitted only once.
- To fulfill Key Document requirements attach only a copy of this email as an appendix to the document.
- Do **not** resubmit any approved EDD deliverable as part of a portal submission.

Email ID: OEM_31921
Sub ID:SUB_336237

From:	DEP SRPEDD
To:	Lynch, Jayme
Subject:	016006, LSR110001, 016006, HB241826, (Directory: *missing*) - Passed
Date:	Wednesday, May 29, 2019 5:27:08 PM
Attachments:	DTST.TXT EDSA_Error_Log.html erdtst-7-1-8.txt erresult-7-1-8.txt ersample-7-1-8.txt HZRESULT.TXT HZSAMPLE.TXT rstp-7-1-8.txt SampleLoc-7-1-8.KML

The EDD submission via email from (Jayme.Lynch@parsons.com) on (5/28/2019 2:50:04 PM) with the subjectline "[EXTERNAL] PI#016006, LSR110001, 95-03-15-1156-05 - Groundwater EDDs"

The following identifiers were in the DTST file:

- Directory: *missing*
- DESC: BP 84849
- SRPID: PI # 016006
- Submit Date: 5/28/2019

This submission has been issued an SRP Catalog ID: HB241826

Submission status: Passed.

Please do **not** resubmit.

EDD data deliverable must be submitted only once.
- To fulfill Key Document requirements attach only a copy of this email as an appendix to the document.
- Do **not** resubmit any approved EDD deliverable as part of a portal submission.

Email ID: OEM_31922
Sub ID:SUB_336247

From:	DEP SRPEDD
To:	Lynch, Jayme
Subject:	016006, LSR110001, 016006, HB241828, (Directory: *missing*) - Passed
Date:	Wednesday, May 29, 2019 5:28:19 PM
Attachments:	DTST.TXT EDSA_Error_Log.html erdtst-7-1-8.txt erresult-7-1-8.txt ersample-7-1-8.txt HZRESULT.TXT HZSAMPLE.TXT rstp-7-1-8.txt SampleLoc-7-1-8.KML

The EDD submission via email from (Jayme.Lynch@parsons.com) on (5/28/2019 2:49:47 PM) with the subjectline "[EXTERNAL] PI#016006, LSR110001, 95-03-15-1156-05 - Groundwater EDDs"

The following identifiers were in the DTST file:

- Directory: *missing*
- DESC: BP 84849
- SRPID: PI # 016006
- Submit Date: 5/28/2019

This submission has been issued an SRP Catalog ID: HB241828

Submission status: Passed.

Please do **not** resubmit.

EDD data deliverable must be submitted only once.
- To fulfill Key Document requirements attach only a copy of this email as an appendix to the document.
- Do **not** resubmit any approved EDD deliverable as part of a portal submission.

Email ID: OEM_31924
Sub ID:SUB_336252

From:	DEP SRPEDD
To:	Lynch, Jayme
Subject:	016006, LSR110001, 016006, HB241832, (Directory: *missing*) - Passed
Date:	Wednesday, May 29, 2019 5:30:30 PM
Attachments:	DTST.TXT EDSA_Error_Log.html erdtst-7-1-8.txt erresult-7-1-8.txt ersample-7-1-8.txt HZRESULT.TXT HZSAMPLE.TXT rstp-7-1-8.txt SampleLoc-7-1-8.KML

The EDD submission via email from (Jayme.Lynch@parsons.com) on (5/28/2019 2:49:21 PM) with the subjectline "[EXTERNAL] PI#016006, LSR110001, 95-03-15-1156-05 - Groundwater EDDs"

The following identifiers were in the DTST file:

- Directory: *missing*
- DESC: BP 84849
- SRPID: PI # 016006
- Submit Date: 5/21/2019

This submission has been issued an SRP Catalog ID: HB241832

Submission status: Passed.

Please do **not** resubmit.

EDD data deliverable must be submitted only once.
- To fulfill Key Document requirements attach only a copy of this email as an appendix to the document.
- Do **not** resubmit any approved EDD deliverable as part of a portal submission.

Email ID: OEM_31928
Sub ID:SUB_336257

From:	DEP SRPEDD
To:	Lynch, Jayme
Subject:	016006, LSR110001, 016006, HB241835, (Directory: *missing*) - Passed
Date:	Wednesday, May 29, 2019 5:32:25 PM
Attachments:	DTST.TXT EDSA_Error_Log.html erdtst-7-1-8.txt erresult-7-1-8.txt ersample-7-1-8.txt HZRESULT.TXT HZSAMPLE.TXT rstp-7-1-8.txt SampleLoc-7-1-8.KML

The EDD submission via email from (Jayme.Lynch@parsons.com) on (5/28/2019 2:49:32 PM) with the subjectline "[EXTERNAL] PI#016006, LSR110001, 95-03-15-1156-05 - Groundwater EDDs"

The following identifiers were in the DTST file:

- Directory: *missing*
- DESC: BP 84849
- SRPID: PI # 016006
- Submit Date: 5/28/2019

This submission has been issued an SRP Catalog ID: HB241835

Submission status: Passed.

Please do **not** resubmit.

EDD data deliverable must be submitted only once.
- To fulfill Key Document requirements attach only a copy of this email as an appendix to the document.
- Do **not** resubmit any approved EDD deliverable as part of a portal submission.

Email ID: OEM_31931
Sub ID:SUB_336262

From:	DEP SRPEDD
To:	Lynch, Jayme
Subject:	016006, LSR110001, 016006, HB241836, (Directory: *missing*) - Passed
Date:	Wednesday, May 29, 2019 5:33:19 PM
Attachments:	DTST.TXT EDSA_Error_Log.html erdtst-7-1-8.txt erresult-7-1-8.txt ersample-7-1-8.txt HZRESULT.TXT HZSAMPLE.TXT rstp-7-1-8.txt SampleLoc-7-1-8.KML

The EDD submission via email from (Jayme.Lynch@parsons.com) on (5/28/2019 2:49:09 PM) with the subjectline "[EXTERNAL] PI#016006, LSR110001, 95-03-15-1156-05 - Groundwater EDDs"

The following identifiers were in the DTST file:

- Directory: *missing*
- DESC: BP 84849
- SRPID: PI # 016006
- Submit Date: 5/28/2019

This submission has been issued an SRP Catalog ID: HB241836

Submission status: Passed.

Please do **not** resubmit.

EDD data deliverable must be submitted only once.
- To fulfill Key Document requirements attach only a copy of this email as an appendix to the document.
- Do **not** resubmit any approved EDD deliverable as part of a portal submission.

Email ID: OEM_31932
Sub ID:SUB_336267

From:	DEP SRPEDD
To:	Lynch, Jayme
Subject:	016006, LSR110001, 016006, HB241839, (Directory: *missing*) - Passed
Date:	Wednesday, May 29, 2019 5:35:05 PM
Attachments:	DTST.TXT EDSA_Error_Log.html erdtst-7-1-8.txt erresult-7-1-8.txt ersample-7-1-8.txt HZRESULT.TXT HZSAMPLE.TXT rstp-7-1-8.txt SampleLoc-7-1-8.KML

The EDD submission via email from (Jayme.Lynch@parsons.com) on (5/28/2019 2:48:53 PM) with the subjectline "[EXTERNAL] PI#016006, LSR110001, 95-03-15-1156-05 - Groundwater EDDs"

The following identifiers were in the DTST file:

- Directory: *missing*
- DESC: BP 84849
- SRPID: PI # 016006
- Submit Date: 5/21/2019

This submission has been issued an SRP Catalog ID: HB241839

Submission status: Passed.

Please do **not** resubmit.

EDD data deliverable must be submitted only once.
- To fulfill Key Document requirements attach only a copy of this email as an appendix to the document.
- Do **not** resubmit any approved EDD deliverable as part of a portal submission.

Email ID: OEM_31935
Sub ID:SUB_336272

From:	DEP SRPEDD
To:	Lynch, Jayme
Subject:	016006, LSR110001, 016006, HB241843, (Directory: *missing*) - Passed
Date:	Wednesday, May 29, 2019 5:37:05 PM
Attachments:	DTST.TXT EDSA_Error_Log.html erdtst-7-1-8.txt erresult-7-1-8.txt ersample-7-1-8.txt HZRESULT.TXT HZSAMPLE.TXT rstp-7-1-8.txt SampleLoc-7-1-8.KML

The EDD submission via email from (Jayme.Lynch@parsons.com) on (5/28/2019 2:48:45 PM) with the subjectline "[EXTERNAL] PI#016006, LSR110001, 95-03-15-1156-05 - Groundwater EDDs"

The following identifiers were in the DTST file:

- Directory: *missing*
- DESC: BP 84849
- SRPID: PI # 016006
- Submit Date: 5/21/2019

This submission has been issued an SRP Catalog ID: HB241843

Submission status: Passed.

Please do **not** resubmit.

EDD data deliverable must be submitted only once.
- To fulfill Key Document requirements attach only a copy of this email as an appendix to the document.
- Do **not** resubmit any approved EDD deliverable as part of a portal submission.

Email ID: OEM_31939
Sub ID:SUB_336277

From:	DEP SRPEDD
To:	Lynch, Jayme
Subject:	016006, LSR110001, 016006, HB241844, (Directory: *missing*) - Passed
Date:	Wednesday, May 29, 2019 5:37:23 PM
Attachments:	DTST.TXT EDSA_Error_Log.html erdtst-7-1-8.txt erresult-7-1-8.txt ersample-7-1-8.txt HZRESULT.TXT HZSAMPLE.TXT SampleLoc-7-1-8.KML

The EDD submission via email from (Jayme.Lynch@parsons.com) on (5/28/2019 2:48:33 PM) with the subjectline "[EXTERNAL] PI#016006, LSR110001, 95-03-15-1156-05 - Groundwater EDDs"

The following identifiers were in the DTST file:

- Directory: *missing*
- DESC: BP 84849
- SRPID: PI # 016006
- Submit Date: 5/21/2019

This submission has been issued an SRP Catalog ID: HB241844

Submission status: Passed.

Please do **not** resubmit.

EDD data deliverable must be submitted only once.
- To fulfill Key Document requirements attach only a copy of this email as an appendix to the document.
- Do **not** resubmit any approved EDD deliverable as part of a portal submission.

Email ID: OEM_31940
Sub ID:SUB_336282

From:	DEP SRPEDD
To:	Lynch, Jayme
Subject:	016006, LSR110001, 016006, HB241911, (Directory: *missing*) - Passed
Date:	Thursday, May 30, 2019 5:53:15 PM
Attachments:	DTST.TXT EDSA_Error_Log.html erdtst-7-1-8.txt erresult-7-1-8.txt ersample-7-1-8.txt HZRESULT.TXT HZSAMPLE.TXT SampleLoc-7-1-8.KML

The EDD submission via email from (Jayme.Lynch@parsons.com) on (5/30/2019 7:41:27 AM) with the subjectline "[EXTERNAL] PI#016006, LSR110001, 95-03-15-1156-05 - Groundwater EDDs"

The following identifiers were in the DTST file:

- Directory: *missing*
- DESC: BP 84849
- SRPID: PI # 016006
- Submit Date: 5/28/2019

This submission has been issued an SRP Catalog ID: HB241911

Submission status: Passed.

Please do **not** resubmit.

EDD data deliverable must be submitted only once.
- To fulfill Key Document requirements attach only a copy of this email as an appendix to the document.
- Do **not** resubmit any approved EDD deliverable as part of a portal submission.

Email ID: OEM_32013
Sub ID:SUB_336588

From:	DEP SRPEDD
To:	Lynch, Jayme
Subject:	016006, LSR110001, 016006, HB241912, (Directory: *missing*) - Passed
Date:	Thursday, May 30, 2019 5:53:21 PM
Attachments:	DTST.TXT EDSA_Error_Log.html erdtst-7-1-8.txt erresult-7-1-8.txt ersample-7-1-8.txt HZRESULT.TXT HZSAMPLE.TXT SampleLoc-7-1-8.KML

The EDD submission via email from (Jayme.Lynch@parsons.com) on (5/30/2019 7:46:05 AM) with the subjectline "[EXTERNAL] PI#016006, LSR110001, 95-03-15-1156-05 - Groundwater EDDs"

The following identifiers were in the DTST file:

- Directory: *missing*
- DESC: BP 84849
- SRPID: PI # 016006
- Submit Date: 5/29/2019

This submission has been issued an SRP Catalog ID: HB241912

Submission status: Passed.

Please do **not** resubmit.

EDD data deliverable must be submitted only once.
- To fulfill Key Document requirements attach only a copy of this email as an appendix to the document.
- Do **not** resubmit any approved EDD deliverable as part of a portal submission.

Email ID: OEM_32014
Sub ID:SUB_336593

From:	DEP SRPEDD
To:	Lynch, Jayme
Subject:	016006, LSR110001, 016006, HB242030, (Directory: *missing*) - Passed
Date:	Tuesday, June 4, 2019 3:52:02 PM
Attachments:	DTST.TXT EDSA_Error_Log.html erdtst-7-1-8.txt erresult-7-1-8.txt ersample-7-1-8.txt HZRESULT.TXT HZSAMPLE.TXT rstp-7-1-8.txt SampleLoc-7-1-8.KML

The EDD submission via email from (Jayme.Lynch@parsons.com) on (5/31/2019 9:31:26 AM) with the subjectline "[EXTERNAL] PI#016006, LSR110001, 95-03-15-1156-05 - Groundwater EDDs"

The following identifiers were in the DTST file:

- Directory: *missing*
- DESC: BP 84849
- SRPID: PI # 016006
- Submit Date: 5/31/2019

This submission has been issued an SRP Catalog ID: HB242030

Submission status: Passed.

Please do **not** resubmit.

EDD data deliverable must be submitted only once.
- To fulfill Key Document requirements attach only a copy of this email as an appendix to the document.
- Do **not** resubmit any approved EDD deliverable as part of a portal submission.

Email ID: OEM_32142
Sub ID:SUB_337264

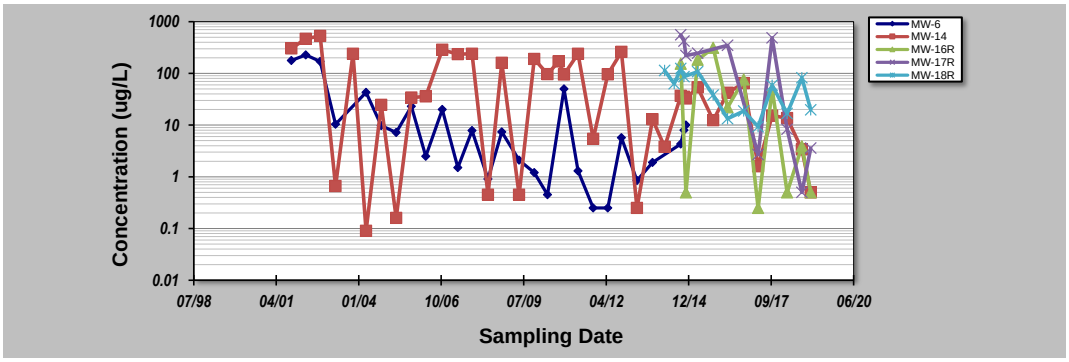
Appendix F

Mann-Kendal Analysis

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	3-Jul-19	Job ID:	84849
Facility Name:	BP Site 84849	Constituent:	Benzene
Conducted By:	J. Lynch	Concentration Units:	ug/L

Sampling Point ID:		MW-6	MW-14	MW-16R	MW-17R	MW-18R		
Sampling Event	Sampling Date	BENZENE CONCENTRATION (ug/L)						
1	10/19/2001	177	305					
2	4/12/2002	228	466					
3	10/4/2002	170	532					
4	4/9/2003	10.4	0.66					
5	11/6/2003		240					
6	4/13/2004	42.9	0.09					
7	10/13/2004	9.8	24.6					
8	4/13/2005	7.2	0.16					
9	10/14/2005	23	34					
10	4/7/2006	2.5	36					
11	10/24/2006	20.1	287					
12	4/30/2007	1.5	235					
13	10/18/2007	7.8	240					
14	4/28/2008	0.91	0.45					
15	10/13/2008	7.4	160					
16	5/11/2009	2.1	0.45					
17	11/11/2009	1.2	190					
18	4/20/2010	0.45	97					
19	9/3/2010		170					
20	11/8/2010	50	95					
21	4/26/2011	1.3	240					
22	10/27/2011	0.25	5.4					
23	4/20/2012	0.25	96					
24	10/2/2012	5.7	260					
25	4/9/2013	0.85	0.25					
26	10/16/2013	1.9	13					
27	3/10/2014		3.8			114		
28	7/4/2014					63		
29	9/23/2014	4.3	36.7	153	557	124		
30	10/31/2014	8	35.4		421	86.9		
31	11/24/2014	10	32.6	0.5	222			
32	4/16/2015		53.5	183	245	108		
33	10/20/2015		12.4	311		38.2		
34	4/12/2016		42.1	22.1	348	13.3		
35	10/25/2016		64.9	76.3		18.8		
36	4/17/2017		1.6	0.25	2.7	9.3		
37	10/4/2017		15.2	50	488	59		
38	4/3/2018		13.6	0.5	8.3	16.8		
39	10/1/2018		3.4	3.9	0.5	82.3		
40	1/15/2019		0.5	0.5	3.6	19.7		
Coefficient of Variation:		2.05	1.30	1.40	0.95	0.72		
Mann-Kendall Statistic (S):		-148	-187	-20	-23	-32		
Confidence Factor:		99.9%	98.8%	92.9%	97.7%	97.1%		
Concentration Trend:		Decreasing	Decreasing	Prob. Decreasing	Decreasing	Decreasing		



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

Appendix G

Classification Exception Area

New Jersey Department of Environmental Protection
Site Remediation and Waste Management Program

CLASSIFICATION EXCEPTION AREA / WELL RESTRICTION AREA (CEA/WRA) FACT SHEET FORM

Date Stamp
(For Department use only)

SECTION A. SITE INFORMATION

Site Name: BP Service Station #84849

Program Interest (PI) Number(s): 016006

Case Tracking Number(s) for this submission: 95-03-15-1156-05

This form must be attached to the Cover / Certification Form if not submitted through the Remedial Phase Report Online Service

1. Indicate the reason for submission of this form *(see instructions)*:

☐ New CEA ☒ Revise CEA ☐ Reestablish CEA ☐ Existing CEA with no changes
☐ CEA for historic fill ☐ CEA for Historically Applied Pesticides (HAP) ☐ CEA lift/removal

If you are submitting this form for an existing CEA provide the CEA Subject Item ID: 1155652

2. Indicate the type of ground water Remedial Action (RA):

☒ Natural ☐ Active ☐ Final RA not yet selected

3. Is this form being submitted with a Remedial Action Permit (RAP) Form (for Soil or Ground Water)? .... ☒ Yes ☐ No

SECTION B. CEA COMPONENT AND VAPOR INTRUSION INFORMATION

Name of document that includes the CEA Fate and Transport Description: CEA Determination

Date of document: 04/16/2019

1. Ground Water Classification: What is the ground water classification within the CEA as per N.J.A.C. 7:9C?

(Check all that apply)

☐ Class I-A
☐ Class I-PL Pinelands Protection Area
☐ Class I-PL Pinelands Preservation Area
☒ Class II-A
☐ Class III-A
☐ Class III-B

2. Contaminant Data: This CEA/WRA applies only to the contaminants listed below with concentrations above, or assumed to be above, numeric values established for the applicable classification area via the Ground Water Quality Standards (GWQS), N.J.A.C. 7:9C. Except for historic fill CEAs based on assumed ground water contamination, list the maximum contaminant value for all ground water data that could be representative of **current** conditions for any well or sampling point used to establish the CEA. See form instructions before entering data into the below table.

Contaminant	Concentration (1)	GWQS (2)	SWQS(3)	GWSL(4)
Benzene	1,700	1		

Notes:
(1) Maximum concentration in Micrograms Per Liter
(2) New Jersey Ground Water Quality Standards, N.J.A.C. 7:9C-1.7 and 1.9(c)
(3) Surface Water Quality Standards, N.J.A.C. 7:9B - Applicable only where contaminants in the CEA may discharge to a surface water body.
(4) Current NJDEP Vapor Intrusion (VI) Ground Water Screening Levels (GWSL) available at http://www.nj.gov/dep/srp/guidance/vaporintrusion/

☐ Check if attaching the form Addendum to list additional contaminants and associated information.

3. CEA Boundaries and VI Pathway Status: Year of tax map used: 1986

Are there volatile contaminants in the CEA? ☒ Yes ☐ No

Is there LNAPL currently found in the CEA? ☐ Yes ☒ No

For CEA revisions only:

☐ Check if CEA Boundary has changed (*See instructions*)

☐ Check if Block and Lot numbers have changed (*See instructions*)

List the block(s) and lot(s) included in the areal extent of the CEA and check the appropriate boxes:

Block	Lot(s)	Check if off-site	Check if VI pathway was evaluated*	Check if VI pathway status is indeterminate*
172.02	8.01	☐	☒	☐
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐

☐ Check if attaching an Addendum to list additional Blocks/Lots and associated information. *(see instructions)*

*Follow instructions for parcels where the vapor intrusion (VI) pathway was evaluated and the status is indeterminate.

Direction of ground water flow: southeast (*If multiple water bearing zones exist within the CEA and/or there is no predominant flow direction, see instructions.*)

Vertical depth of CEA: 25 (ft bgs) **and** 347.48 (msl).

Horizontal extent of CEA: 17,250 Indicate units: ☐ acres or ☒ square feet

Name(s) of the affected Geologic Formation(s)/Unit(s) (*see instructions if multiple formations/units affected)*:

Feltville Formation

Narrative description of proposed CEA boundaries:

The CEA area is approximately 215 feet in length by approximately 100 feet at the widest point. It is also estimated that the groundwater plume will achieve the GWQS by 2035.

4. Projected Term of CEA: *(Based on modeling/calculations in the fate and transport description)*

Proposed Duration in Years: 16 Anticipated Expiration Date: 04/01/2035

or ☐ Indeterminate (*Review instructions before selecting* "Indeterminate" *for the CEA duration.*)

5. ATTACH AND/OR SUBMIT THE FOLLOWING: (*see instructions for additional information/requirements*)

Exhibit A: Site Location Maps – Based on USGS Quadrangle Map;

Exhibit B: CEA Map and Cross Section Figure – See N.J.A.C 7:26C- 7.3(c)1 and 2 and instructions regarding what is required to be included on the map and the cross-section figure.

Exhibit C: GIS Deliverables – CEA Boundary Extent Map. The CEA Boundary Extent Map shall be submitted via email to srpgis_cea@dep.nj.gov. (*See the instructions for detailed GIS deliverable requirements.)*

Identify format of CEA Boundary Extent Map being submitted: ..... ☒ Shape File ☐ CAD File ☐ N/A

If there is a CEA map already on NJ-GeoWeb, does it need to be revised? ..... ☒ Yes ☐ No ☐ N/A

SECTION C. CURRENT GROUND WATER USE DOCUMENTATION

1. Indicate the year of the most recent well search completed per N.J.A.C. 7:26E-1.14: 2019

2. If this Fact Sheet form is for a revised CEA or an existing CEA with no changes, have new wells been installed since the CEA was established? ☒ Yes ☐ No ☐ N/A

3. Are there any pumping wells (e.g., potable, industrial, irrigation or recovery wells) within the foot print of the CEA? ☐ Yes ☒ No

   If "Yes" list/attach list of the type and status of any pumping well(s) within CEA:

SECTION D. WELL RESTRICTION INFORMATION

Certain well restrictions relevant to potable ground water use, such as "Double Case Wells", "Sample Potable Wells", and "Evaluate Production Wells", are consistently set within the boundaries of all CEAs established by the NJDEP in Class I and II-A areas (*see instructions*).

1. Are there any other site-specific well restrictions relevant to potable ground water use that should be set within or near the boundaries of the proposed CEA? ☐ Yes ☒ No

   If "Yes", describe below any such site-specific well restrictions proposed for this CEA:

SECTION E. PUBLIC NOTIFICATION REQUIREMENTS

1. Indicate which of the following entities have been notified pursuant to N.J.A.C. 7:26C-7.3(d) and the dates each notification was sent. (*check all that apply*)

   ☐ Municipal and county clerk(s) ..... Dated mailed: _____

   ☐ Local, county or regional health department(s) ..... Dated mailed: _____

   ☐ Designated County Environmental Health Act agency (if applicable) ..... Dated mailed: _____

   ☐ County Planning Board ..... Dated mailed: _____

   ☐ Pinelands Commission (if applicable) ..... Dated mailed: _____

   ☐ Owners of real property overlying CEA foot print ..... Dated mailed: _____

2. **List of Names and Addresses** – List below and/or in an attachment, the names/addresses of all persons notified pursuant to N.J.A.C. 7:26C-7.3(d) based on the proposed CEA boundaries. If the site property owner differs from the person responsible for conducting the remediation, check here ☒ and enter the site owner's name and address first in the table below. *See instructions for more information regarding the address list.*

Entity or Owner Name	**Notification Address Used** If owner address differs from property address overlying CEA, add an " * " after the address.	**Blocks/Lots overlying CEA owned by this person** Block	Lot(s)
Joan Kram	16 Beverly Road, West Orange NJ*	172.02	8.01

ADDENDUM
Classification Exception Area / Well Restriction Area
Fact Sheet Form

Section B. CEA Component and Vapor Intrusion Information

1. **Contaminant Data** (continued)**:** This CEA/WRA applies only to the contaminants listed on page 1 and in the table below with concentrations above, or assumed to be above, numeric values established for the applicable classification area via the GWQS, N.J.A.C. 7:9C. Except for historic fill CEAs based on assumed ground water contamination, list below the maximum contaminant value for all ground water data that could be representative of **current** conditions for any well or sampling point used to establish the CEA. See form Instructions before entering data into the tables below.

Contaminant	Concentration (1)	GWQS (2)	SWQS(3)	VI GWSL(4)

Notes: (1) Maximum concentration in Micrograms Per Liter
(2) New Jersey Ground Water Quality Standards, N.J.A.C. 7:9C-1.7 and 1.9(c)
(3) Surface Water Quality Standards, N.J.A.C. 7:9B - Applicable only where contaminants in the CEA may discharge to a surface water body.
(4) Current NJDEP Vapor Intrusion (VI) Ground Water Screening Levels (GWSL)

2. **CEA Boundaries and VI Pathway Status** (continued)**:** List additional parcels included in the CEA. Attach additional Addendum sheets if necessary to list all blocks and lots within the CEA.

For CEA revisions, check here if block and lot numbers have changed: ☐

Block	Lot(s)	Check if off-site	Check if VI pathway was evaluated*	Check if VI pathway status is indeterminate*
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐

* Follow instructions for parcels where the vapor intrusion (VI) pathway was evaluated and status is indeterminate.

Classification Exception Area Determination
BP- Service Station # 84849
945 Pleasant Valley Way
West Orange, New Jersey 07052

The groundwater classification exception area (CEA) for benzene and tentatively identified compounds (TICs) was determined based on first-order decay degradation, existing/historical groundwater concentrations, potentiometric maps, and a regression analysis per New Jersey Environmental Protection Department (NJDEP) regulations.

Site Description and History

The Site historically consisted of five 4,000-gallon gasoline USTs and associated piping (removed in 1987), one 550-gallon used oil UST and associated piping (removed March 1994), and three 10,000-gallon gasoline USTs, three pump islands, and associated piping (removed in June 2001).

A total of three AOCs have been identified at the Site.

- AOC-1: Former UST system consisting of five 4,000-gallon gasoline USTs and associated piping (removed in 1987)
- AOC-2: Former 550-gallon used oil UST and associated piping (removed March 1994)
- AOC-3: Former UST system consisting of three 10,000-gallon gasoline USTs, three pump islands, and associated piping (removed June 2001)

A review of historical site groundwater level data and potentiometric surface maps indicate that the groundwater flow is generally to the southeast. The average hydraulic gradient of 0.065 feet/foot to the southeast.

In 1987 five 4,000-gallon USTs and associated piping was excavated from the northern portion of the Site. In March 1994 one 550-gallon used oil UST was excavated and removed from the Site. In April 2001 three 10,000-gallon single-walled steel gasoline USTs, three pump islands, and associated piping were excavated and removed from the Site. In May 2007 one 550-gallon fuel oil UST and two hydraulic lifts were excavated and removed from the Site.

Historically, BTEX, TBA, MTBE, and volatile organic compounds, (VOC) tentatively identified compounds (TICs) have been observed in select monitoring wells at the Site at concentrations exceeding their respective NJDEP GWQS.

Groundwater analytical results from monitoring wells MW-1, MW-2, MW-3, MW-7, MW-8, MW-10, MW-11, MW-12, MW-15D, and MW-20 demonstrate delineation of the dissolved-phase plume has been achieved. The off-site plume delineation wells (MW-20 and MW-7) have had several years of consecutive non-detect results for the target compounds referenced above.

The source area with remaining impacts is assumed to be the former tank field located north east of the former station building, which held 5, 4,000 GAL gas USTs. This source area is approximately 38 feet from southwest to northeast, and 20 feet from southeast to northwest. This concept is supported by the observed data, mainly that downgradient monitoring well MW-16 had the highest recorded benzene concentration (9,560 ug/L) in 2001, and MW-18 had the highest recorded TICs concentration (22,800 ug/L) in 2006. These monitoring wells were abandoned in 2013 during a source removal excavation of approximately 321 tons of soil. The replacement wells (MW-16R, MW-17R, and MW-18R) continue to

contain benzene and TICs concentrations that are greater than the NJDEP Ground Water Quality Standard (NJDEP GWQS) of 1 µg/L and 100/500 ug/L, respectively.

CEA Boundary-Approach and Results

A CEA is determined by: 1) the estimated decay time for the contaminant concentration to meet the GWQS; and 2) the estimated distance the plume will migrate at concentrations above the GWQS (NJDEP, 1998). For this Site, the CEA boundaries were developed using existing and historical groundwater concentrations, potentiometric maps and a regression analysis following NJDEP Guidance Documents (1998 and 2012).

To estimate plume length, the concentrations versus distance were plotted along an approximated plume centerline and graphically forecasted to intersect with the value of the GWQS. This analysis is presented on Attachments A and B for benzene and TICs, respectively. Benzene and TICs were used as the surrogates for other compounds at the site, due to the lower degradation rate and farther plume extent.

For this analysis the concentration for benzene at wells MW-19, MW-18R, MW-6 and MW-3, were used. Additional monitoring wells that are side-gradient to MW-18R and within the source area (MW-14, MW-16R and MW-17R) were omitted because they would bias the plume boundary too narrow.

For the analysis of TIC concentration, wells MW-18R, MW-17R, MW-6 and MW-3 were analyzed. Downgradient well MW-19 was not included for TICs because concentrations have been below the GWQS since 2003.

Additional monitoring wells to the south of the source area (MW-1, MW-2, MW-8, and MW-15D), north of the source area (MW-10, MW-11, and MW-12) and southeast of the source area (MW-7 and MW-20) were omitted from the CEA distance analysis because COCs were below the GWQS and/or below the laboratory detection limit for at least the last two rounds of groundwater sampling.

The distance calculations suggest an approximate plume length of 135 feet from source area for benzene (Attachment A) and 117 feet for TICs (Attachment B). Plume width was determined by including the former UST system, former tank field, former station footprint, existing wells, and groundwater flow direction. These include wells MW-14, MW-16R, MW-17R, MW-18R, which all had concentrations above the NJDEP GWQS for benzene within the past two sampling events, as well as other downgradient wells (MW-19, MW-6, MW-3, MW-2, and MW-1) that had concentrations below the GWQS. The maximum width of the plume was measured at approximately 100 feet.

CEA Duration- Approach and Results

Plume duration was estimated using methods similar to those provided in the NJDEP CEA Guidance Document (NJDEP 1998), see Attachment C. Concentrations of benzene versus time at well MW-18R were used since this is highest impacted well where concentrations will likely have the most longevity.

MW-17R and MW-18R were the only wells with TIC concentrations above the GWQS. However, the concentrations at these locations are variable and follow no discernable trend. As such, TIC concentrations were not analyzed for duration, and benzene concentrations were used as a surrogate for the overall plume duration.

Summary of Results

Estimate Source Area	Maximum Length (ft)	Maximum Width (ft)
North of former UST System	215	100

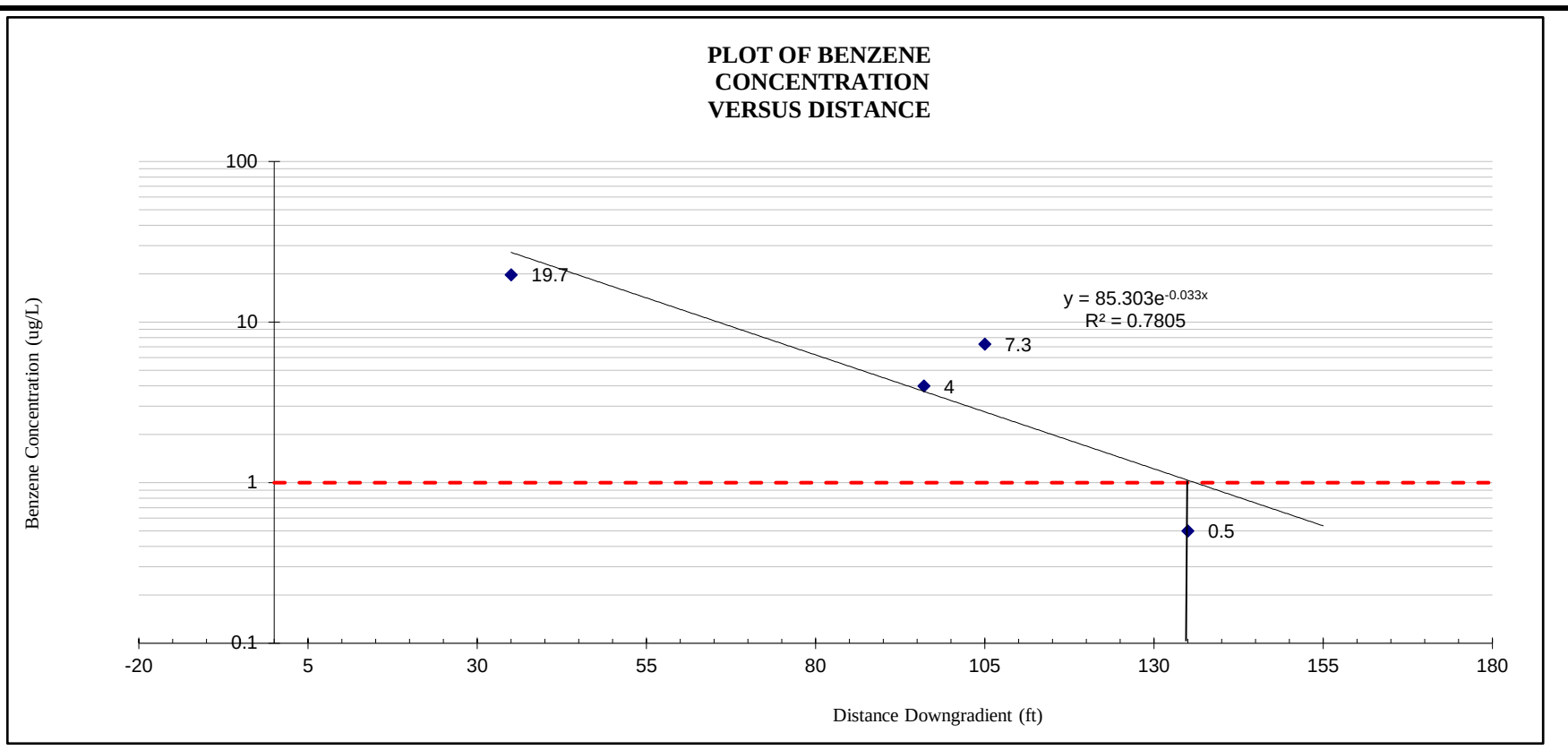
The CEA area is approximately 215 feet in length by approximately 100 feet at the widest point (Figure B). The distance includes the plume, former tank field, and to the upgradient property line. It is estimated that the entirety of the groundwater plume will achieve the GWQS by 2035.

This CEA is expected to be reviewed and re-evaluated as part of the next biennial recertification using additional groundwater data. The duration and length of plume may be adjusted accordingly.

Attachments/Figures

Figure 1 – Site Area of Concern Map
Figure 2 – Proposed CEA Map
Attachment A- Estimation of CEA Downgradient Boundary- Benzene
Attachment B- Estimation of CEA Downgradient Boundary- TICs
Attachment C- Calculation of Half Life and Time to Reach Groundwater Standard- Well MW-18R- Benzene

References: NJDEP, 1998. Final Guidance on Classification Exception Areas.
NJDEP, 2012 Monitored Natural Attenuation Technical Guidance, Site Remediation Program.

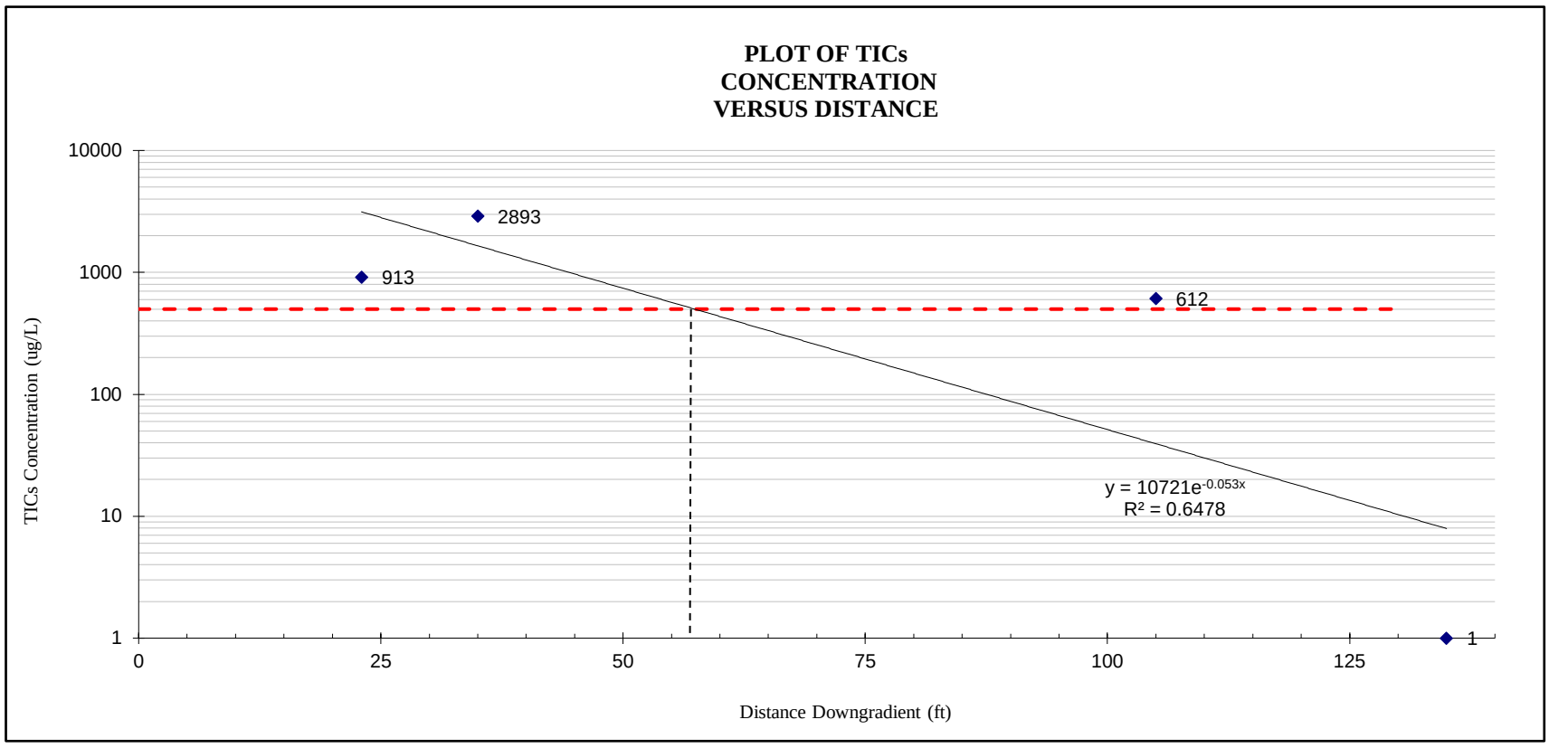


Point	Distance (ft) Downgradient	Benzene (µg/L) 1-15-2019	
MW-18R	35	19.7	
MW-19*	96	4	Extrapolated from previous results from 2014 to 2016.
MW-6*	105	7.3	Average of last three samples collected in 2014.
MW-3*	135	0.5	Not detected below 1.0 ug/L. Collected in 2018-10-01.

Estmated CEA Boundary	135

Notes:
Estimated source area is the former tank field at the north of the Site, north of MW-16R.
To be conservative, the benzene concentration of downgradient well MW-19 was extrapolated using an exponential regression of data from 2014 to 2016.
MW-18R was used as the plume centre datapoint because it has the highest concentration during the most recent sampling event on 2019-01-15.
Data from downgradient well MW-3 is from the latest sampling event on 2018-10-01.
NJDEP Groundwater Quality Criteria for Benzene is 1 ug/L.

PARSONS	**BP Service Station #84849**	ESTIMATION OF CEA DOWNGRADIENT
		Attachment A



Point	Distance (ft) Downgradient	TICs (µg/L) 1-15-2019
MW-3*	135	1
MW-6*	105	612
MW-18R	35	2893
MW-17R	23	913

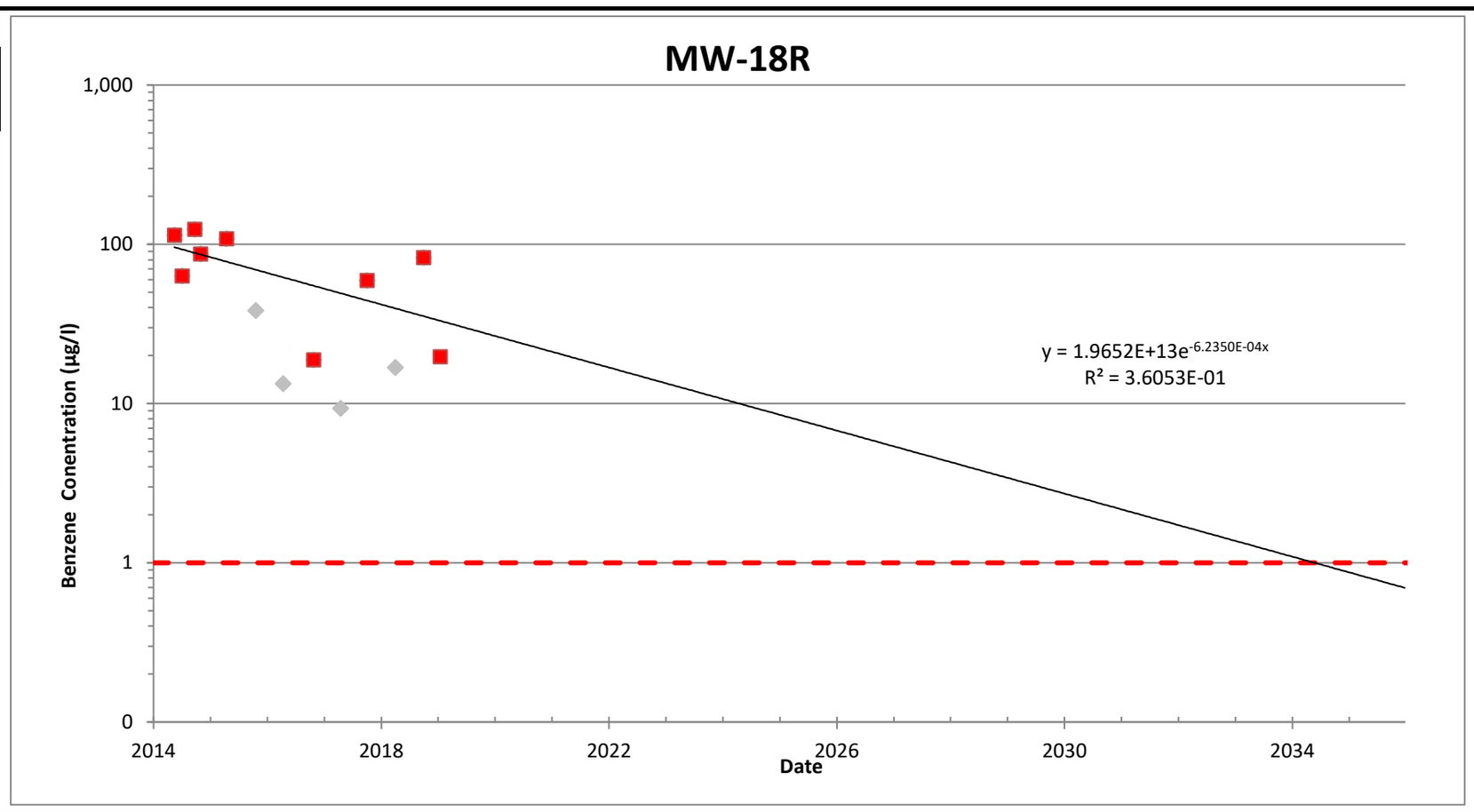
Not detected below 1.0 ug/L. Collected in 2018-10-01.
Average of last three samples collected in 2014.

Estmated CEA Boundary	57

Notes:
Estimated source area is the former tank field at the north of the Site, north of MW-16R.
Data from downgradient well MW-3 is from the latest sampling event on 2018-10-01.
Data has not been collected in MW-6 since 2014, so data is an average of the last three sampling events.
Data collected on 2019-01-15 was used for locations MW-17R and MW-18R because it is the most recent data for downgradient datapoints.
NJDEP Groundwater Quality Criteria for TICs is 500 ug/L.

PARSONS	**BP Service Station #84849**	ESTIMATION OF CEA DOWNGRADIENT
		Attachment B

Concentration Data	
Date	Benzene
	conc. (µg/L)
2014-05-15	**114**
2014-07-04	**63**
2014-09-23	**124**
2014-10-31	**86.9**
2015-04-16	**108**
2016-10-25	**18.8**
2017-10-04	**59.0**
2018-10-01	**82.3**
2019-01-15	**19.7**



Equation of the line: $y = be^{-kx}$

Decay constant:	*k* =	6.2E-04	per day
Half life:		1111	day
Initial Concentration	C_o	114.00	µg/L
Groundwater Standard	*std*	1	µg/L

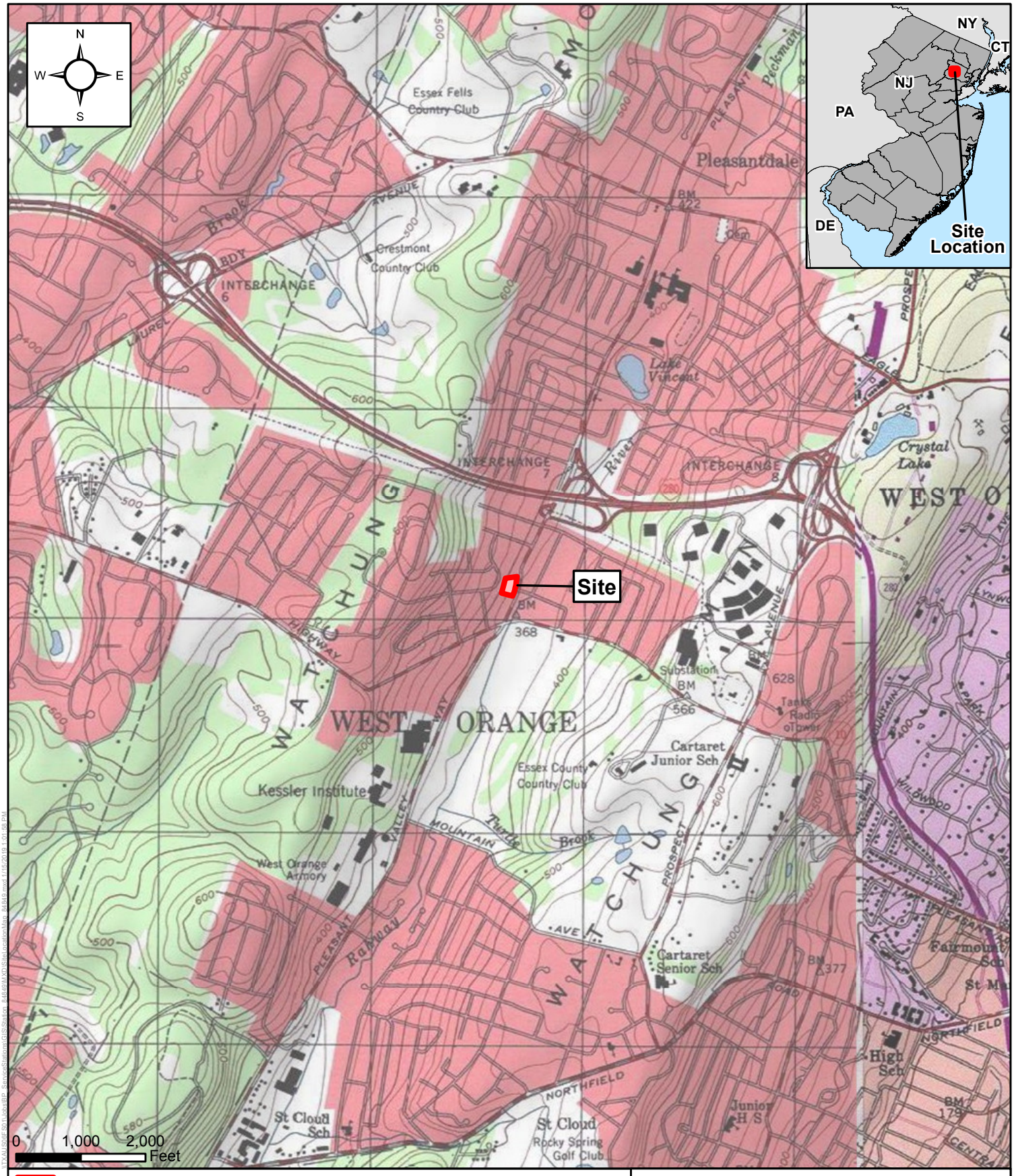
Time to reach standard (from Time of C_o)

$$T = -\frac{Ln\left[\frac{std}{b}\right]}{\frac{0.693}{\lambda}}$$

T =	7596	days
	20.81	years from C_o
year	2035	

Notes: Data from May 2014 to present analyzed to determine decay rate of Benzene.
Initial Concentraion (Co) is the concentration of benzene at MW-18R from the May 2014 sampling event.
MW-18R data used as the well is downgradient of the AOC, and has the most recent benzene concentrations above the GWQS.
Anomalously low data (gray data points) were not used in the duration calculation.

PARSONS	**BP Service Station #84849** **945 Pleasant Valley Way** **West Orange, New Jersey**	CALCULATION OF HALF LIFE AND TIME TO REACH GROUNDWATER STANDARD WELL MW-18R Benzene
		Attachment C



Site Location

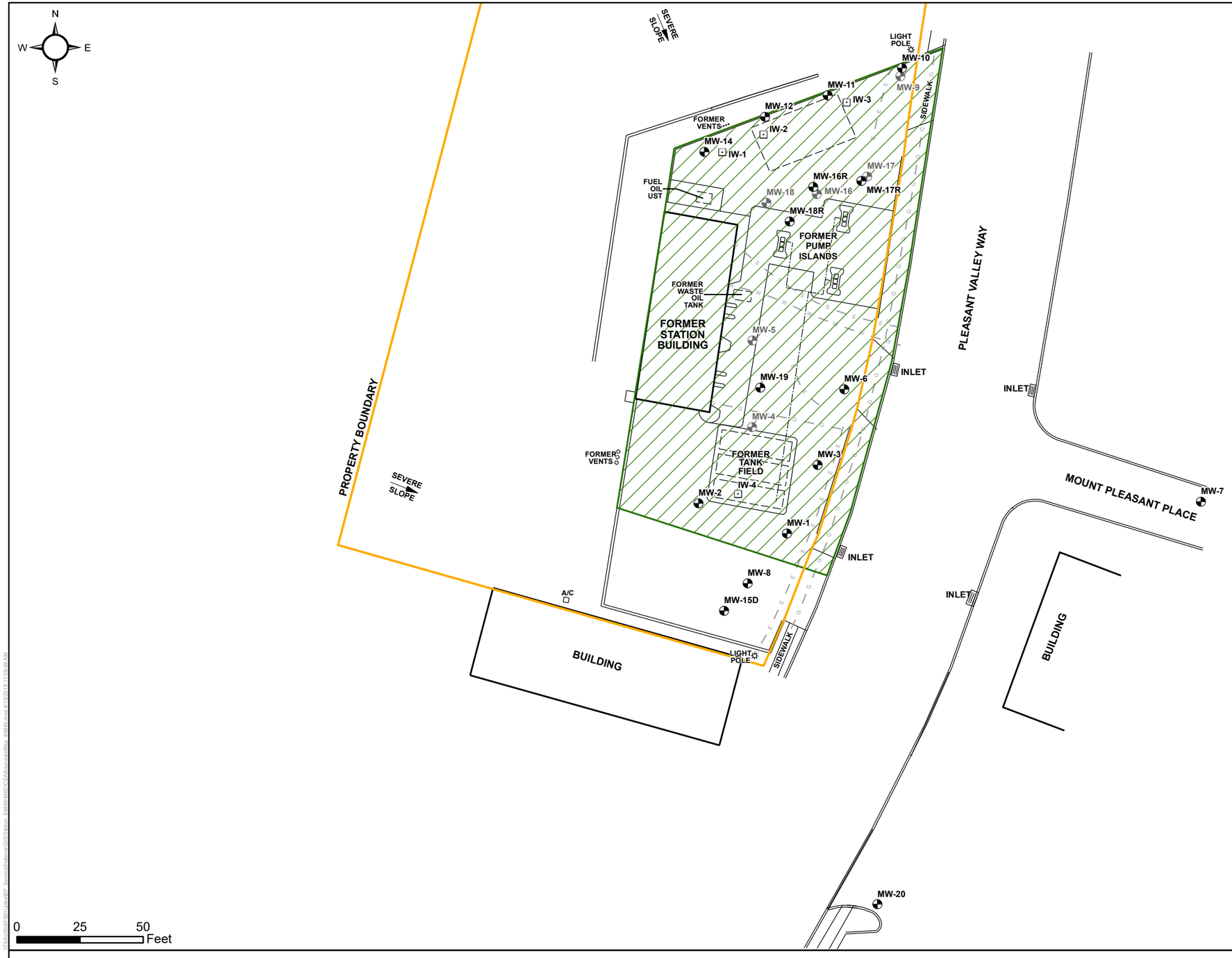
Exhibit A
Site Location Map

Service Station #84849
945 Pleasant Valley Way
West Orange, New Jersey
PI #: 016006

PARSONS

200 Cottontail Lane
Somerset, NJ 08873

Drawn By:	Revision Date:	
PDS	1/15/2019	SiteLocationMap_84849.mxd



- Monitoring Well
- Abandoned Monitoring Well
- Injection Well
- CEA Boundary
- Property Boundary
- Utility - Electric
- Utility - Gas
- Utility - Sewer
- Utility - Water

Figure B-1
CEA Boundary Map

Service Station #84849
945 Pleasant Valley Way
West Orange, New Jersey
PI #: 016006

PARSONS
200 Cottontail Lane
Somerset, NJ 08873

Drawn By:	Revision Date:	
PDS	4/15/2019	CEABoundaryMap_84849.mxd

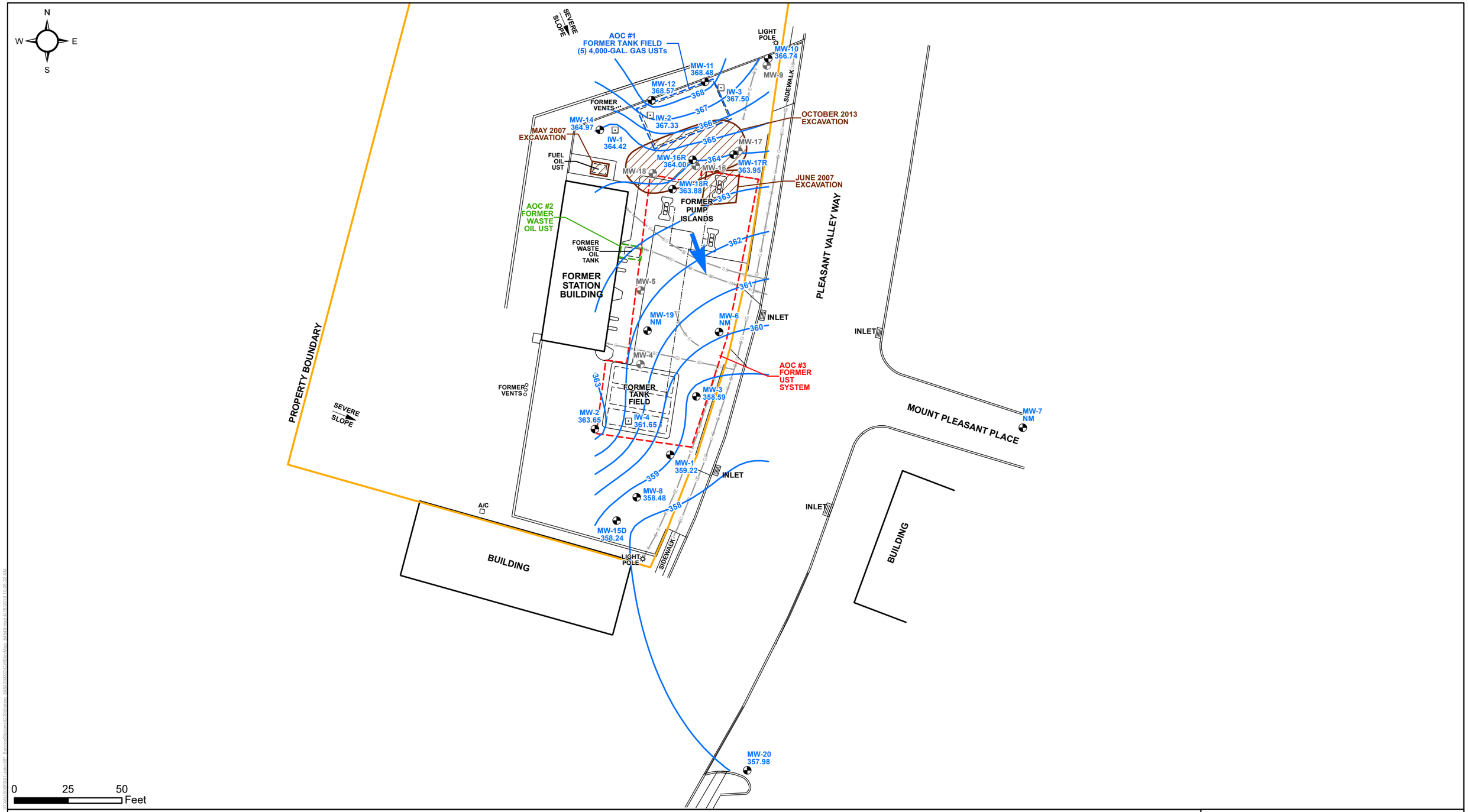


Figure 2
Groundwater Elevation Map
January 2019

Service Station #84849
945 Pleasant Valley Way
West Orange, New Jersey
PI #: 016006

PARSONS
200 Cottontail Lane
Somerset, NJ 08873

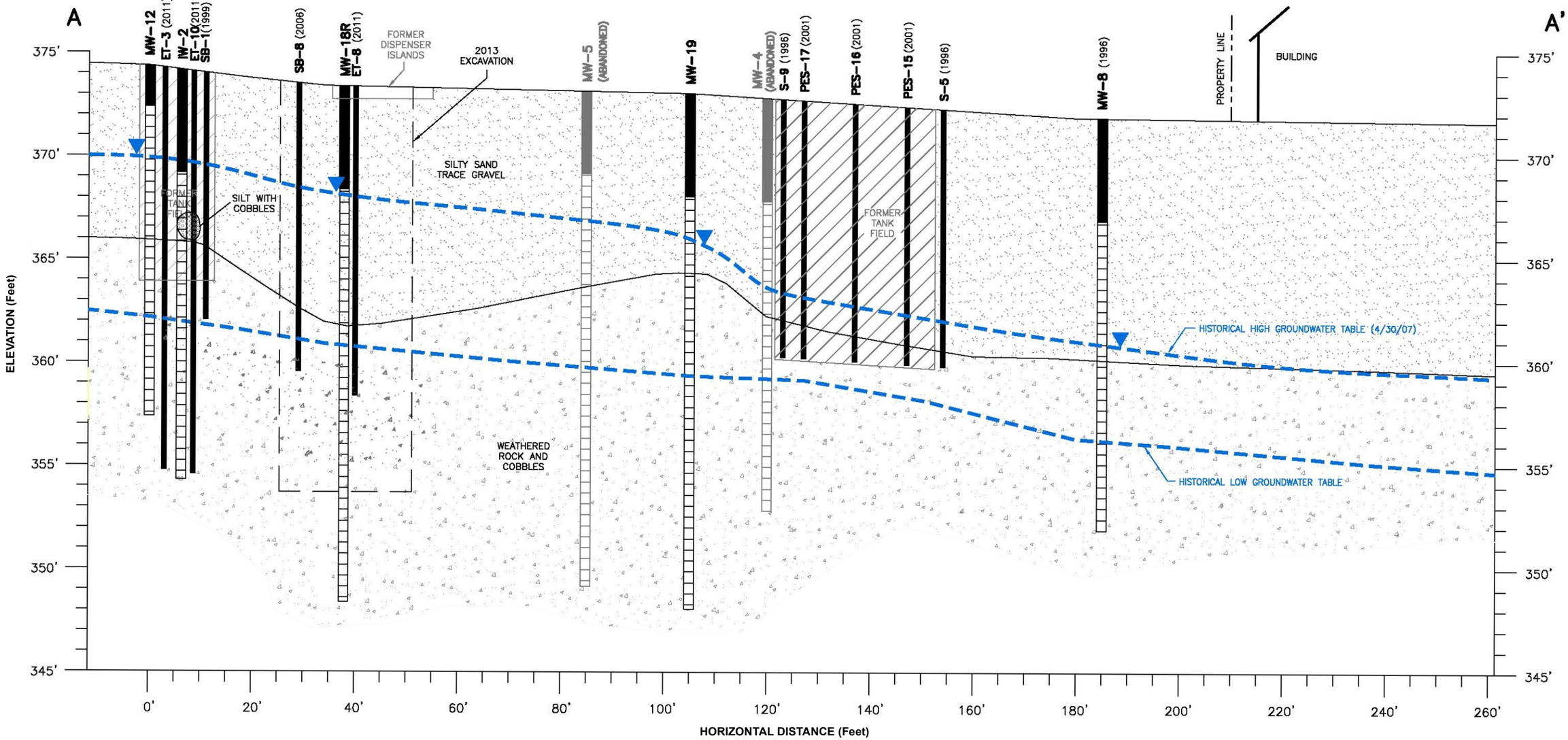
Drawn By:	Revision Date:	
PDS	4/15/2019	GWElevMap_84849.mxd

Figure B-3
Cross-Section Location Map

Service Station #84849
945 Pleasant Valley Way
West Orange, New Jersey
PI #: 016006

PARSONS
200 Cottontail Lane
Somerset, NJ 08873

Drawn By:	Revision Date:	
PDS	4/17/2019	CrossSectionLocation_84849.mxd



= WELL CASING

= SCREENED INTERVAL

= SOIL BORING

= SOIL SAMPLE (BENZENE BELOW STANDARD)
= NOT DETECTED

= SOIL SAMPLE (BENZENE ABOVE STANDARD)
= BENZENE CONCENTRATION (ppm)

SILTY SAND TRACE OF GRAVEL

SAND WITH COBBLES

WEATHERED ROCK AND COBBLES

GROUNDWATER FLOW DIRECTION
IS TO THE SOUTHEAST

GROUNDWATER TABLE

Figure B-4
Geologic Cross-Secction A-A'

Service Station #84849
945 Pleasant Valley Way
West Orange, New Jersey
PI #: 016006

PARSONS

200 Cottontail Lane
Somerset, NJ 08873

Drawn By:	Revision Date:	
PDS	4/22/2019	CrossSectionGeologicMap_84849.mxd

Appendix H

Remedial Action Permit for Groundwater

New Jersey Department of Environmental Protection
Site Remediation and Waste Management Program

REMEDIAL ACTION PERMIT INITIAL APPLICATION – GROUND WATER

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: BP Service Station #84849

List All AKAs: Former Amoco Service Station #84849

Street Address: 955 Pleasant Valley Way

Municipality: West Orange (Township, Borough, or City)

County: Essex Zip Code: 07052

Program Interest (PI) Number(s): 016006

Case Tracking Number(s): 95-03-15-1156-05

Municipal Block(s) and Lot(s) of the site/property: Block 172.02, Lot 8.01

Is this site a Federal case?..... ☐ Yes ☒ No

If "**Yes**", indicate the Federal Case Type:

☐ **RCRA GPRA 2020** ☐ **CERCLA/NPL** ☐ **USDOD** ☐ **USDOE**

☐ Other (explain):_____

SECTION B. INITIAL GROUND WATER REMEDIAL ACTION PERMIT APPLICATION

1. Reason for Initial Ground Water Remedial Action Permit (RAP) Application: (*check one*)

☒ **To support a Response Action Outcome (RAO)**

☐ **To support a Post-No Further Action (NFA)**

Note: This permit application will not be processed until all past RAP annual fees and the Remedial Action Protectiveness/Biennial-Certification fee have been paid in full.

☐ **Subdivision of an existing Ground Water RAP**

Has the Ground Water RAP Modification or Termination Application also been submitted for the original parcel(s)?..... ☐ Yes ☐ No

If "**No**", please explain why in Section K below.

☐ **Other (*provide reason - see instructions*):** _____

2. The appropriate Initial Ground Water RAP Application fee must be enclosed with this application.

	Effective on or Before June 30, 2019	**Effective July 1, 2019**
Ground Water Natural Attenuation RAP Fee – Initial	$2,100.00	$990.00
Ground Water Active System RAP Fee – Initial	$3,055.00	$550.00

SECTION C. FEE BILLING CONTACT PERSON

Business Name: BP Products North America Inc.

First Name of Contact: John Last Name of Contact: Frankenthal

Title: BP Project Manager

Phone Number: (312) 809-4117 Ext.: Fax:

Mailing Address: 1 West Pennsylvania Avenue, Suite 925

Municipality: Towson State: Maryland Zip Code: 21204

Email Address: John.Frankenthal@BP.com

SECTION D. PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION – CO-PERMITTEE

☐ Addendum for additional Person Responsible for Conducting the Remediation has been completed.

Affiliation/Name of Organization: BP Products North America Inc.

First Name of Contact: John Last Name of Contact: Frankenthal

Title: BP Project Manager

Phone Number: (312) 809-4117 Ext.: Fax:

Mailing Address: 1 West Pennsylvania Avenue, Suite 925

Municipality: Towson State: Maryland Zip Code: 21204

Email Address: John.Frankenthal@BP.com

☒ Check if the Person Responsible for Conducting the Remediation has Primary Responsibility for Permit Compliance

SECTION E. CURRENT OWNER OF THE SITE – CO-PERMITTEE

☐ Addendum for additional Owner of the Site has been completed.

Affiliation/Name of Organization: 955 Pleasant Valley Way Associates

First Name of Contact: Joan Last Name of Contact: Kram

Title:

Phone Number: (973) 325-0103 Ext.: Fax:

Mailing Address: 16 Beverley Road

Municipality: West Orange State: NJ Zip Code: 07052

Email Address: Jdkram@comcast.net

☐ Check if the owner has Primary Responsibility for Permit Compliance

SECTION F. ATTACHED DOCUMENTS

Attach the following documents:

Note: All electronic copies should be provided in Adobe PDF file format on a compact disc (CD) except the Ground Water Monitoring Plan which should be provided in MS Excel file format on a CD.

☒ Hard copy ***and*** electronic copy of the completed Initial Ground Water RAP Application using the current form on the NJDEP Website.

☐ Remedial Action Report (RAR) submitted through the online portal unless this application is related to a Post-NFA Case. For Post-NFA Cases, submit an electronic copy of the RAR and any other pertinent reports/letters (e.g., Remedial Action Workplan (RAW) Approval Letters).

Provide the Licensed Site Document (LSD) Activity Number for the RAR online submission:

☒ Electronic copy of a map or the location in the RAR (*Section #s/Figure #s)* of the map(s) showing area of concern/source and showing and/or explaining horizontal and vertical delineation of the ground water contamination.

Location in the RAR (*Section #s/Figure #s)*: Section 3.3

☒ Electronic copy of ground water contour maps for at least the last four ground water sampling events or the location in the RAR with these maps.

Location in the RAR (*Figure #s)*: FIgures B-2, B-3, B-4, B-5

☒ Electronic copy of a table summarizing the monitoring well construction details (below ground surface (bgs)) for all the monitoring wells at the site or the location in the RAR with this table.

Location in the RAR (*Table #)*: Table 2

☒ Electronic copy of the Classification Exception Area/Well Restriction Area (CEA/WRA) Fact Sheet Form.

☒ Electronic copy of the Ground Water Monitoring Plan (in MS Excel file format).

☐ Electronic copy of the NFA Letter (*Post-NFA Cases only*), if applicable.

☐ Electronic copy of the Vapor Intrusion Long-Term Monitoring Plan, if applicable.

☐ Electronic copy of the Operation, Maintenance, and Monitoring (OMM) Plan for the vapor intrusion engineering control(s)/mitigation system(s) that are currently in place, if applicable.

☐ Electronic copy of the OMM Plan for the Point of Entry Treatment (POET) water system(s) that are currently in place, if applicable.

☐ Electronic copy of the completed Remediation Cost Review and RFS/FA Form with a detailed cost estimate, if applicable, including:

Only Check One:

☐ **Original** Financial Assurance mechanism (*hard copy*), including any Amendments, is attached.

☐ Date the original Financial Assurance mechanism was submitted to the NJDEP:

☐ An electronic copy of the Remediation Funding Source (RFS) mechanism, is included if using an existing RFS mechanism as the Financial Assurance, and an amendment to conform to the Financial Assurance format.

☐ Electronic copy of the homeowner or condominium association's annual budget that includes funds for the operation, maintenance, and monitoring of the engineering control(s) at the site, if applicable.

SECTION G. MONITORING, MAINTENANCE AND EVALUATION INFORMATION

1. Has the ground water contamination been horizontally delineated in all directions at the site? ..... ☒ Yes ☐ No

   If "**No**", provide the location in the RAR (*Section #*) that supports the variance from N.J.A.C. 7.26E-4.3(a)4: .....

2. Has the ground water contamination been vertically delineated at the site? ..... ☒ Yes ☐ No

   If "**No**", provide the location in the RAR (*Section #*) that supports the variance from N.J.A.C. 7.26E-4.3(a)4: .....

3. Type of Ground Water Remediation

   a. ☒ **Monitored Natural Attenuation (MNA)**

      i) Is there a decreasing trend of contaminant concentrations in the ground water? ..... ☒ Yes ☐ No

      If "**Yes**", provide the location in the RAR (*Section #*) that documents this issue.: ..... Section 4.3

      If "**No**", provide the location in the RAR (*Section #*) that justifies the protectiveness of the remedy.

      ii) Is the ***behavior*** of the ground water contaminant plume considered to be shrinking or stable? ..... ☒ Yes ☐ No

      If "**Yes**", check off only one of the following: ☒ Shrinking ☐ Stable and provide the location in the RAR (*Section #*) that documents this issue.: ..... Section 4.3

If "**No**", provide the location in the RAR (*Section #*) that justifies the protectiveness of the remedy: ..... _____

iii) Have secondary lines of evidence been collected to support the MNA proposal? ..... ☐ Yes ☒ No

If "**Yes**", provide the location in the RAR (*Section #*) that documents this issue.: ..... _____

iv) Have tertiary lines of evidence been collected to support the MNA proposal? ..... ☐ Yes ☒ No

If "**Yes**", provide the location in the RAR (*Section #*) that documents this issue.: ..... _____

v) Is the ground water plume reaching the sentinel wells? ..... ☐ Yes ☒ No

If "**Yes**", provide the location in the RAR (*Section #*) that justifies the protectiveness of the remedy since the sentinel well(s) should be below the Ground Water Quality Standards (GWQS) or if you are using an alternate method that is not a sentinel monitoring well:..... _____

vi) Has all soil contamination in the unsaturated zone been remediated to the applicable numeric Soil Remediation Standard for all area(s) of concern associated with this CEA? ..... ☒ Yes ☐ No ☐ N/A

If "**No**", provide the location in the RAR (*Section #*) that justifies the protectiveness of the remedy: ..... _____

vii) Has all free and/or residual product in the unsaturated and saturated zones, as determined pursuant to N.J.A.C. 7:26E-5.1(e), been treated or removed for all area(s) of concern associated with this CEA? ..... ☒ Yes ☐ No ☐ N/A

If "**No**", provide the location in the RAR (*Section #*) that justifies the protectiveness of the remedy: ..... _____

b. ☐ **Active Remediation**

Provide the type of remediation: _____

i) Is there a decreasing trend of contaminant concentrations in the ground water? ..... ☐ Yes ☐ No

If "**Yes**", provide the location in the RAR (*Section #*) that documents this issue.: ..... _____

If "**No**", is the ground water plume considered stable? ..... ☐ Yes ☐ No

Provide the location in the RAR (*Section #*) that justifies the protectiveness of the remedy: ..... _____

ii) Is the ground water plume reaching the sentinel wells? ..... ☐ Yes ☒ No

If "**Yes**", provide the location in the RAR (*Section #*) that justifies the protectiveness of the remedy since the sentinel well(s) should be below the GWQS or if you are using an alternate method that is not a sentinel monitoring well:..... _____

iii) Is the ground water remedial action performing as designed? ..... ☐ Yes ☐ No

If "**No**", provide the location in the RAR (*Section #*) that justifies the protectiveness of the remedy: ..... _____

iv) Indicate the expected duration of the active remediation:..... _____ (years)

4. Has a Technical Impracticability (TI) Determination been submitted? ..... ☐ Yes ☒ No

If "**Yes**", provide the location in the RAR (*Section #*) that documents this issue.: ..... _____

5. Has any ground water contamination migrated onto the site/property from an off-site source and that is not being included in the Ground Water RAP?..... ☐ Yes ☒ No

If "**Yes**", provide the communication center number that was received when called into the Hotline and the location in the RAR (Section #) that documents this issue:..... _____

6. Is any ground water contamination being attributed to natural background conditions and that is not being included in the Ground Water RAP? ☐ Yes ☒ No

If "**Yes**", provide the location in the RAR (*Section #*) that documents this issue: _____

7. Check the **Monitoring Schedule** you plan to apply:

☐ Monthly ☐ Annual
☐ Quarterly ☒ Biennial
☐ Semi Annual ☐ Other: _____

SECTION H. FINANCIAL ASSURANCE

1. Does the remedial action include a ground water or vapor intrusion engineering control? ☐ Yes ☒ No

If "**No**", proceed to the next section.

2. Are any of the entities identified in Section D or E exempt from establishing Financial Assurance pursuant to N.J.A.C. 7:26C-7.10(c)? ☐ Yes ☐ No

If "**Yes**", check the exemption(s) that applies.

Person Responsible for Conducting the Remediation – Co-Permittee	Current Owner of the Site – Co-Permittee	
☐	☐	Government entity
☐	☐	A person not liable pursuant to the Spill Act that purchased contaminated property before May 7, 2009
☐	☐	A person that conducted remediation at their primary or secondary residence
☐	☐	Owner or operator of a child care center
☐	☐	Public school or private school
☐	☐	Owner or operator of a small business responsible for conducting remediation at the location of the business

If all of the entities identified in Section D or E are exempt, proceed to the next section.

3. Is the current owner of the site either a homeowner association or a condominium association pursuant to the New Jersey Common Interest Association Act, N.J.S.A. 46:8A-1 et seq.? ☐ Yes ☐ No

*If "**Yes**", and the association is identified in Section E of this RAP Application, an electronic copy of the association's annual budget that includes funds for the operation, maintenance, and monitoring of the engineering control(s) at the site should be attached as indicated in Section F above.*

4. Identify the estimated cost of the operation, maintenance, and monitoring of the engineering control(s) at the site: $ _____

5. Are you using an existing RFS mechanism for the site as the Financial Assurance? ☐ Yes ☐ No

If "**Yes**", have all the following criteria been met? ☐ Yes ☐ No

a. The amount of funds needed to operate, maintain, and monitor the engineering control(s) at the site for the duration of the CEA or for 30 years (minimum of $30,000 for a 30-year time frame) if the duration of the CEA is indeterminant;

b. The amount of funds in the RFS equals the amount of funds required to be posted for RFS and Financial Assurance; and

c. The RFS is not in the form of a self-guarantee.

Identify the full amount of the current RFS: $ _____

6. Identify the full amount established as a Financial Assurance: ..... $ _____

As indicated in Section F above, an electronic copy of the completed Remediation Cost Review and RFS/FA Form with a detailed cost estimate should be attached. Also, please be sure to provide one of the following as indicated in Section F above: the *original* Financial Assurance mechanism (attach hard copy), including any Amendments, to the Ground Water RAP Application; the date the original Financial Assurance mechanism was submitted to the NJDEP; or an electronic copy of the existing RFS mechanism that is being used as the Financial Assurance and the amendment to conform to the Financial Assurance format.

7. What is the Financial Assurance Mechanism? *(check all that apply)*

☐ Remediation Trust Fund ☐ Line of Credit
☐ Environmental Insurance Policy ☐ Letter of Credit

8. Contact information at the financial institution for the Financial Assurance:

Financial Institution: _____

First Name of Contact: _____ Last Name of Contact: _____

Title: _____

Phone Number: _____ Ext.: _____ Fax: _____

Mailing Address: _____

Municipality: _____ State: _____ Zip Code: _____

Email Address: _____

SECTION I. LAND USE *(for overlying CEA)*

1. **Current Site Land Use** *(check all that apply)*

☐ Industrial ☐ Park or Recreational Use ☐ Child Care Facility
☐ Residential ☐ Agricultural ☐ Hospital
☐ Commercial ☐ Road/Right of Way ☒ Vacant
☐ Governmental Facility ☐ School ☐ Other _____

2. **Off-site Land Use** *(check all that apply for Blocks/Lots included in the areal extent of the CEA)*

☐ Industrial ☐ Park or Recreational Use ☐ Child Care Facility
☒ Residential ☐ Agricultural ☐ Hospital
☐ Commercial ☐ Road/Right of Way ☐ Vacant
☐ Governmental Facility ☐ School ☐ Other _____

SECTION J. AFFECTED RECEPTOR SUMMARY

1. Are there any buildings with an Indeterminate Vapor Intrusion Pathway status? ..... ☐ Yes ☒ No

If "**Yes**", provide the location in the RAR (*Section # and Figure #*) that documents this issue: ..... _____

2. Is there soil gas contamination above the Soil Gas Screening Levels beneath any buildings that require long-term monitoring? ..... ☐ Yes ☒ No

If "**Yes**", provide the location in the RAR (*Section # and Figure #*) that documents this issue: ..... _____

As indicated in Section F above, an electronic copy of the Vapor Intrusion Long-Term Monitoring Plan should be attached.

3. Are any vapor intrusion engineering controls/mitigation systems currently installed at any buildings as a result of this ground water contamination? ☐ Yes ☒ No

If "**Yes**", indicate the type of engineering control that was implemented: *(check all that apply)*

- ☐ Subsurface Depressurization System
- ☐ Subsurface Ventilation System
- ☐ Soil Vapor Extraction System
- ☐ HVAC Positive Pressure
- ☐ Other (specify): _____

As indicated in Section F above, an electronic copy of the OMM Plan for the vapor intrusion engineering control(s)/mitigation system(s) should be attached. The OMM Plan should clearly identify the building(s) and/or structure(s) and vapor intrusion engineering control(s)/mitigation system(s) that are in place (e.g., active or passive), including the address and block and lot of each impacted property.

4. Are any Point of Entry Treatment (POET) water systems currently installed at any buildings as a result of this ground water contamination? ☐ Yes ☒ No

If "**Yes**", an electronic copy of the OMM Plan for the POET water system(s) should be attached as indicated in Section F above. The OMM Plan should provide the address and lot and block of each property with a POET water system in place. The sampling of the POET water system(s) should be included in the Ground Water Monitoring Plan for the site.

5. Are any potable wells that do not have a POET water system currently being sampled regularly as a result of this ground water contamination? ☐ Yes ☒ No

If "**Yes**", include these potable wells in the Ground Water Monitoring Plan for the site.

SECTION K. OTHER INFORMATION PROVIDED

List any other pertinent information to support the Initial Ground Water RAP Application

SECTION L. PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION INFORMATION AND CERTIFICATION

Full Legal Name of the Person Responsible for Conducting the Remediation:

BP Products North America Inc.

Representative First Name: John Representative Last Name: Frankenthal

Title: BP Project Manager

Phone Number: (312) 809-4117 Ext.: Fax:

Mailing Address: 1 West Pennsylvania Avenue, Suite 925

City/Town: Towson State: Maryland Zip Code: 21204

Email Address: John.Frankenthal@BP.com

This certification shall be signed by the person responsible for conducting the remediation who is submitting this notification in accordance with Administrative Requirements for the Remediation of Contaminated Sites rule at N.J.A.C. 7:26C-1.5(a).

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

Signature: Date: 7/18/19

Name/Title: John Frankenthal/Project Manager

SECTION M. CURRENT OWNER OF THE SITE INFORMATION AND CERTIFICATION

Full Legal Name of the Person Responsible who owns the site:

955 Pleasant Valley Way Associates

Representative First Name: Joan Representative Last Name: Kram

Title:

Phone Number: (973) 325-0103 Ext.: Fax:

Mailing Address: 16 Beverley Road

City/Town: West Orange State: NJ Zip Code: 07052

Email Address: jdkram@comcast.net

This certification shall be signed by the person who owns the site and is submitting this notification in accordance with Administrative Requirements for the Remediation of Contaminated Sites rule at N.J.A.C. 7:26C-1.5(a).

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

Signature: Joan Kram Date: 7/25/2019

Name/Title: Joan Kram

Completed forms should be sent to:

Bureau of Case Assignment & Initial Notice
Site Remediation Program
NJ Department of Environmental Protection
401-05H
PO Box 420
Trenton, NJ 08625-0420

SECTION N. LICENSED SITE REMEDIATION PROFESSIONAL INFORMATION AND STATEMENT

LSRP ID Number: 590510

First Name: Richard Last Name: Simun

Phone Numbers: (732) 537-3569 Ext.: Fax:

Mailing Address: 200 Cottontail Lane

Municipality: Somerset State: NJ Zip Code: 08873

Email Address: Richard.Simun@parsons.com

This statement shall be signed by the LSRP who is submitting this notification in accordance with N.J.S.A. 58:10C-14, and N.J.S.A. 58:10B-1.3b(1) and (2).

(1) I certify, as a Licensed Site Remediation Professional authorized pursuant to N.J.S.A. 58:10C-1 et seq. to conduct business in New Jersey, that for the remediation described in this submission, and all attachments included in this submission, I personally: Managed, supervised, or performed the remediation conducted at this site that is described in this submission, and all attachments included in this submission; and/or periodically reviewed and evaluated the work performed by other persons that forms the basis for the information in this submission; and/or completed the work of another site remediation professional, licensed or not, after having: (1) reviewed all available documentation on which I relied; (2) conducted a site visit and observed the then-current conditions and verified the status of as much of the work as was reasonably observable; and (3)concluded, in the exercise of my independent professional judgment, that there was sufficient information upon which to complete any additional phase of remediation and prepare workplans and reports related thereto.

(2) I certify:

- *That I have read this submission and all attachments to this submission;*
- *That in performing the professional services as the licensed site remediation professional for the entire site or each area of concern, I adhered to the professional conduct standards and requirements governing licensed site remediation professionals provided in N.J.S.A. 58:10C-16;*
- *That the remediation conducted at the entire site or each area of concern, that is described in this submission and all attachments to this submission, was conducted pursuant to and in compliance with the remediation requirements in N.J.S.A. 58:10C-14.c;*
- *That the remediation described in this submission, and all attachments to this submission, was conducted pursuant to and in compliance with the regulations of the Site Remediation Professional Licensing Board at N.J.A.C. 7:26I; and*
- *That the information contained in this submission and all attachments to this submission is true, accurate, and complete.*

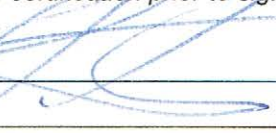
(3) I certify, when this submission includes a response action outcome, that the entire site or each area of concern has been remediated in compliance with all applicable statutes, rules, and regulations and is protective of public health and safety and the environment.

(4) I certify that no other person is authorized or able to use any password, encryption method, or electronic signature that the Board or the Department have provided to me.

(5) I certify that I understand and acknowledge that:

- *If I knowingly make a false statement, representation, or certification in any document or information I submit to the Department I may be subject to civil and administrative enforcement pursuant to N.J.S.A. 58:10C-17.a.1(a)through (f) by the Board, including but not limited to license suspension, revocation, or denial of renewal; and*
- *If I purposely, knowingly, or recklessly make a false statement, representation, or certification in any application, form, record, document or other information submitted to the Department or required to be maintained pursuant to the Site Remediation Reform Act, I shall be guilty, upon conviction, of a crime of the third degree and shall, notwithstanding the provisions of subsection b. of N.J.S.2C:43-3, be subject to a fine of not less than $5,000 nor more than $75,000 per day of violation, or by imprisonment, or both.*

(6) I certify that I have read this certification prior to signing, certifying, and making this submission.

LSRP Signature:  Date: 7/15/2019

LSRP Name: Richard Simun

Company Name: Parsons

ADDENDUM A

Additional Persons Responsible For Conducting Remediation

ADDENDUM TO SECTION D. PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION – CO-PERMITTEE

Affiliation/Name of Organization: _____

First Name of Contact: _____ Last Name of Contact: _____

Title: _____

Phone Number: _____ Ext.: _____ Fax: _____

Mailing Address: _____

Municipality: _____ State: _____ Zip Code: _____

Email Address: _____

☐ Check box if the Additional Person Responsible for Conducting the Remediation has Primary Responsibility for Permit Compliance

1. Does the remedial action include a ground water or vapor intrusion engineering control? ..... ☐ Yes ☐ No

   If "**No**", proceed to next section.

2. Are you exempt from establishing financial assurance pursuant to N.J.A.C. 7:26C-7.10(c)? ..... ☐ Yes ☐ No

   If "**Yes**", check the exemption(s) that applies:

   - ☐ Government entity
   - ☐ A person not liable pursuant to the Spill Act that purchased contaminated property before May 7, 2009
   - ☐ A person that conducted remediation at their primary or secondary residence
   - ☐ Owner or operator of a child care center
   - ☐ Public school or private school
   - ☐ Owner or operator of a small business responsible for conducting remediation at the location of the business

3. Identify the estimated cost of the operation, maintenance, and monitoring of the engineering control(s) at the site: ..... $ _____

4. Are you using an existing RFS mechanism for the site as the Financial Assurance? ..... ☐ Yes ☐ No

   If "**Yes**", have <u>all</u> of the following criteria been met? ..... ☐ Yes ☐ No

   a. The amount of funds needed to operate, maintain, and monitor the engineering control(s) at the site for the duration of the CEA or for 30 years (minimum of $30,000 for a 30-year time frame) if the duration of the CEA is indeterminant;

   b. The amount of funds in the RFS equals the amount of funds required to be posted for RFS and Financial Assurance; and

   c. The RFS is not in the form of a self-guarantee.

   Identify the full amount of the current RFS..... $ _____

5. Identify the full amount established as a Financial Assurance: ..... $ _____

   As indicated in Section F above, *an electronic copy of the completed Remediation Cost Review and RFS/FA Form with a detailed cost estimate should be attached.* Also, please be sure to provide one of the following as indicated in Section F above: attach the original Financial Assurance mechanism (hard copy), including any Amendments, to the Ground Water RAP Application; the date the original Financial Assurance mechanism was submitted to the NJDEP; or an electronic copy of the existing RFS mechanism that is being used as the Financial Assurance and the amendment to conform to the Financial Assurance format.

6. What is the Financial Assurance Mechanism? *(check all that apply)*

   ☐ Remediation Trust Fund ☐ Line of Credit

   ☐ Environmental Insurance Policy ☐ Letter of Credit

ADDENDUM A

7. Contact information at the financial institution for the Financial Assurance:

Financial Institution: _____

First Name of Contact: _____ Last Name of Contact: _____

Phone Number: _____ Ext: _____ Fax: _____

Mailing Address: _____

City/Town: _____ State: _____ Zip Code: _____

Email Address: _____

ADDENDUM TO SECTION L. PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION INFORMATION AND CERTIFICATION

Full Legal Name of the Person Responsible for Conducting the Remediation:

_____

Representative First Name: _____ Representative Last Name: _____

Title: _____

Phone Number: _____ Ext.: _____ Fax: _____

Mailing Address: _____

City/Town: _____ State: _____ Zip Code: _____

Email Address: _____

This certification shall be signed by the person responsible for conducting the remediation who is submitting this notification in accordance with Administrative Requirements for the Remediation of Contaminated Sites rule at N.J.A.C. 7:26C-1.5(a).

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

Signature: _____ Date: _____

Name/Title: _____

ADDENDUM B

Additional Property Owners

ADDENDUM TO SECTION E. CURRENT OWNER OF THE SITE – CO-PERMITTEE

Affiliation/Name of Organization: _____

First Name of Contact: _____ Last Name of Contact: _____

Title: _____

Phone Number: _____ Ext.: _____ Fax: _____

Mailing Address: _____

Municipality: _____ State: _____ Zip Code: _____

Email Address: _____

☐ Check box if the owner has Primary Responsibility for Permit Compliance

1. Does the remedial action include a ground water or vapor intrusion engineering control? ..... ☐ Yes ☐ No

   If "**No**", proceed to next section.

2. Are you exempt from establishing financial assurance pursuant to N.J.A.C. 7:26C-7.10(c)? ..... ☐ Yes ☐ No

   If "**Yes**", check the exemption that applies, and then proceed to the next section:

   - ☐ Government entity
   - ☐ A person not liable pursuant to the Spill Act that purchased contaminated property before May 7, 2009
   - ☐ A person that conducted remediation at their primary or secondary residence
   - ☐ Owner or operator of a child care center
   - ☐ Public school or private school
   - ☐ Owner or operator of a small business responsible for conducting remediation at the location of the business

3. Do you represent a homeowner association or a condominium association pursuant to the New Jersey Common Interest Association Act, N.J.S.A. 46:8A-1 et seq.? ..... ☐ Yes ☐ No

   If "**Yes**", an electronic copy of the association's annual budget that includes funds for the operation, maintenance, and monitoring of the engineering control(s) at the site should be attached as indicated in Section F above.

4. Identify the estimated cost of the operation, maintenance, and monitoring of the engineering control(s) at the site: ..... $ _____

5. Are you using an existing RFS mechanism for the site as the Financial Assurance? ..... ☐ Yes ☐ No

   If "**Yes**", have <u>all</u> the following criteria been met? ..... ☐ Yes ☐ No

   a. The amount of funds needed to operate, maintain, and monitor the engineering control(s) at the site for the duration of the CEA or for 30 years (minimum of $30,000 for a 30-year time frame) if the duration of the CEA is indeterminant;

   b. The amount of funds in the RFS equals the amount of funds required to be posted for RFS and Financial Assurance; and

   c. The RFS is not in the form of a self-guarantee.

   Identify the full amount of the current RFS ..... $ _____

6. Identify the full amount established as a Financial Assurance: ..... $ _____

   As indicated in Section F above, *an electronic copy of the completed Remediation Cost Review and RFS/FA Form with a detailed cost estimate should be attached*. Also, please be sure to provide one of the following as indicated in Section F above: the *original* Financial Assurance mechanism (attach hard copy), including any Amendments, to the Ground Water RAP Application; the date the original Financial Assurance mechanism was submitted to the NJDEP; or an electronic copy of the existing RFS mechanism that is being used as the Financial Assurance and the amendment to conform to the Financial Assurance format.

ADDENDUM B

7. What is the Financial Assurance Mechanism? *(check all that apply)*

☐ Remediation Trust Fund ☐ Line of Credit
☐ Environmental Insurance Policy ☐ Letter of Credit

8. Contact information at the financial institution for the Financial Assurance:

Financial Institution: _____

First Name of Contact: _____ Last Name of Contact: _____

Phone Number: _____ Ext: _____ Fax: _____

Mailing Address: _____

City/Town: _____ State: _____ Zip Code: _____

Email Address: _____

ADDENDUM TO SECTION M. CURRENT OWNER OF THE SITE INFORMATION AND CERTIFICATION

Full Legal Name of the Person who owns the site:

_____

Representative First Name: _____ Representative Last Name: _____

Title: _____

Phone Number: _____ Ext. _____ Fax: _____

Mailing Address: _____

City/Town: _____ State: _____ Zip Code: _____

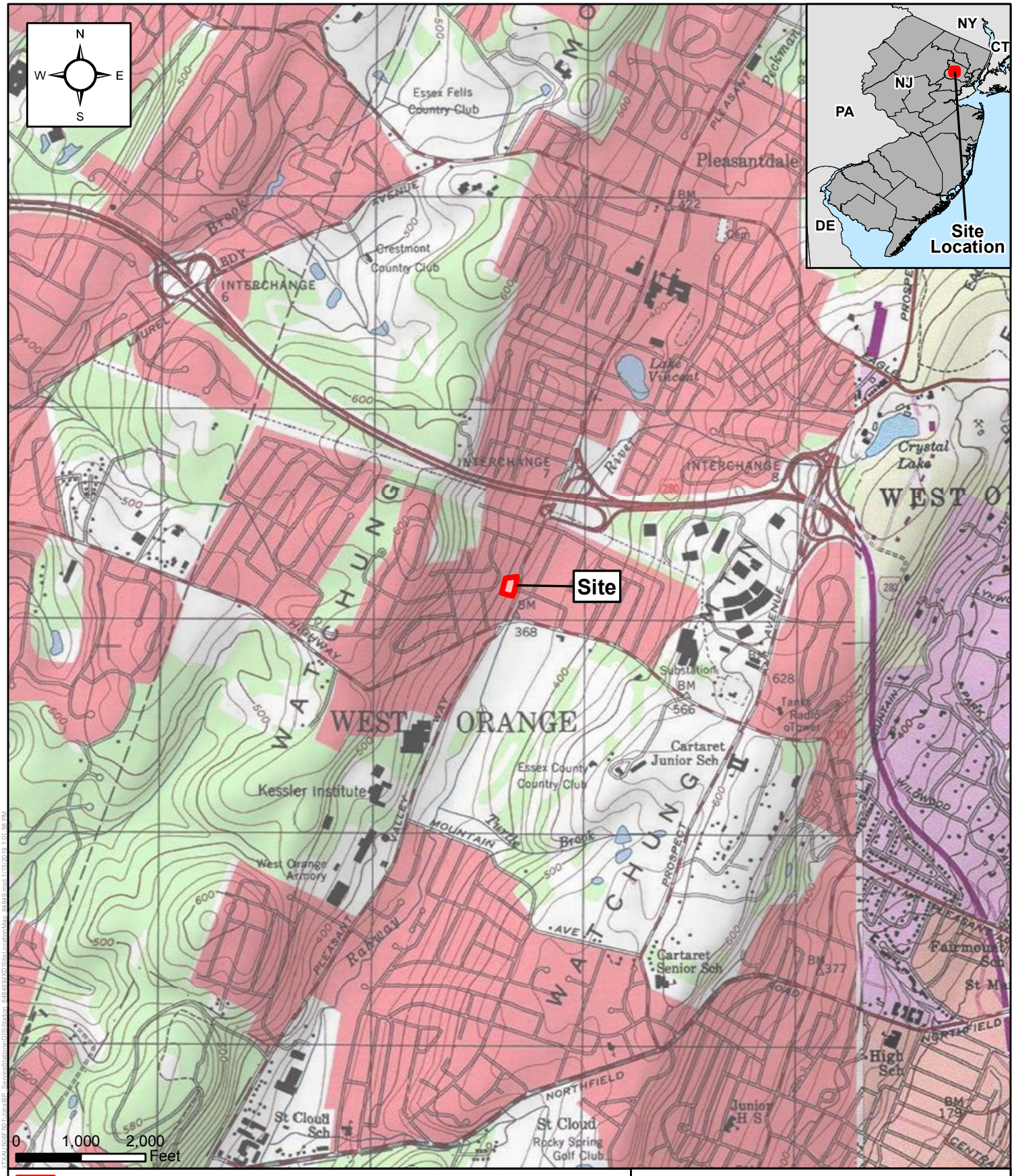
Email Address: _____

This certification shall be signed by the person who owns the site and is submitting this notification in accordance with Administrative Requirements for the Remediation of Contaminated Sites rule at N.J.A.C. 7:26C-1.5(a).

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

Signature: _____ Date: _____

Name/Title: _____



Site Location

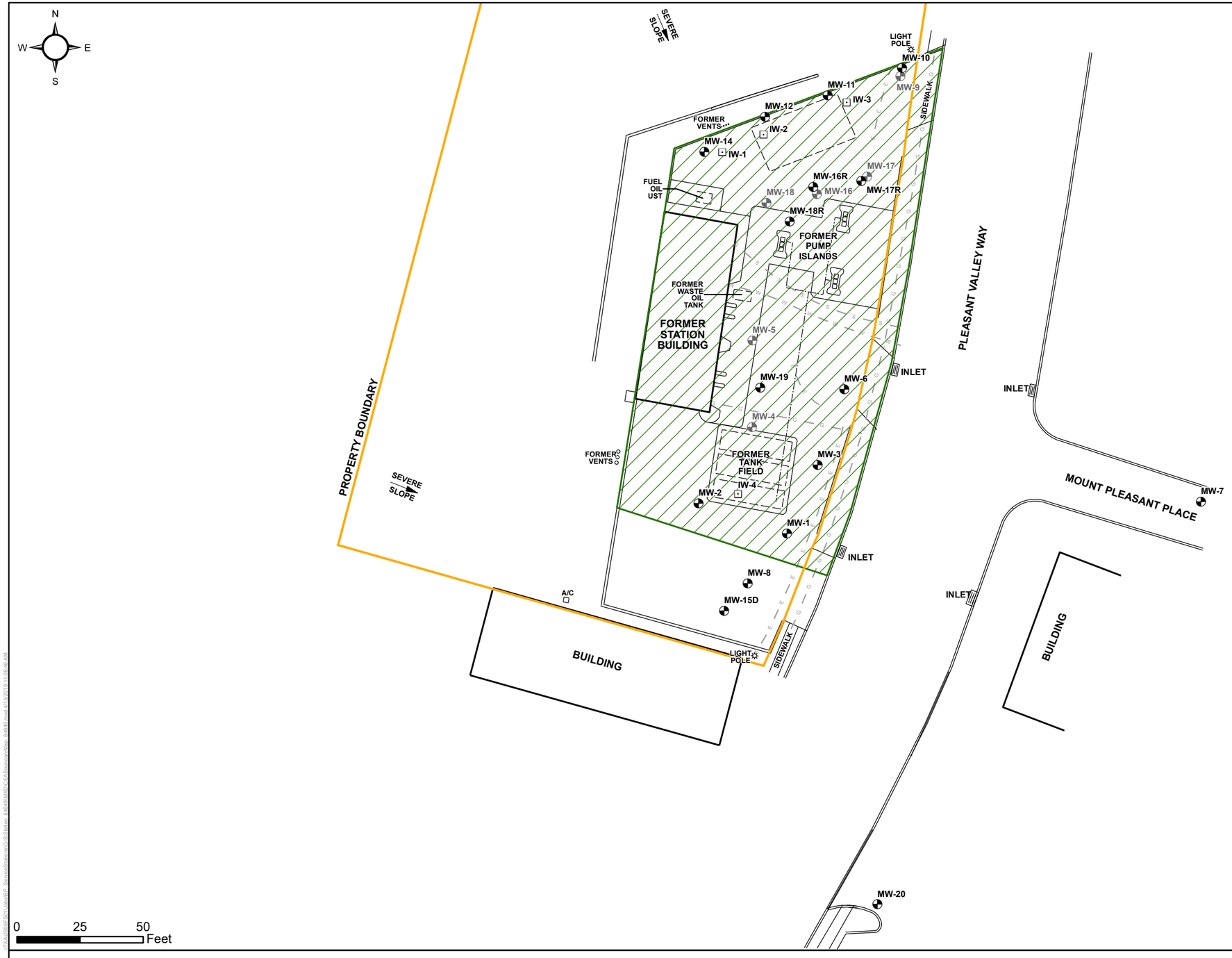
Figure 1
Site Location Map

Service Station #84849
945 Pleasant Valley Way
West Orange, New Jersey
PI #: 016006

PARSONS

200 Cottontail Lane
Somerset, NJ 08873

Drawn By:	Revision Date:	
PDS	1/15/2019	SiteLocationMap_84849.mxd



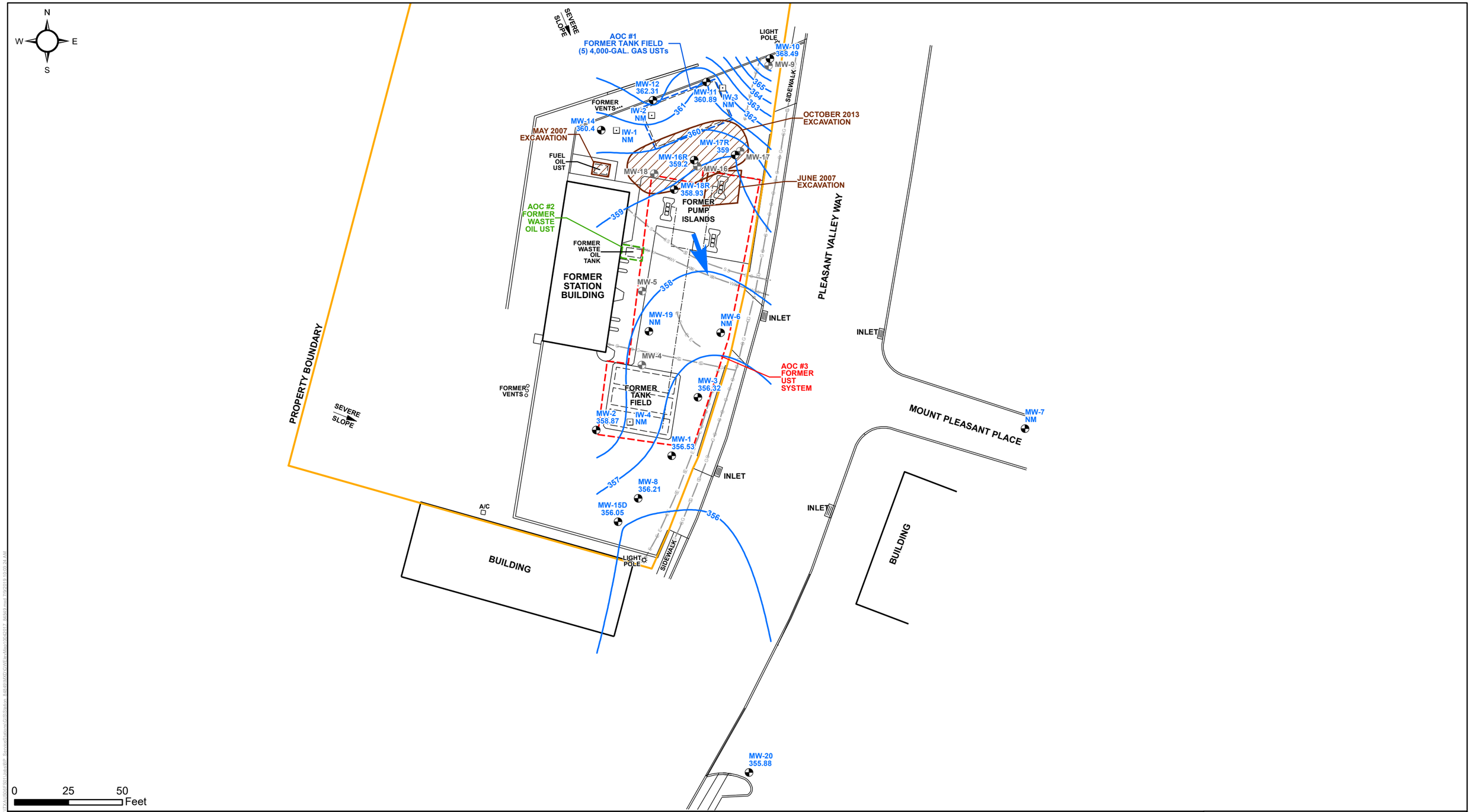
- Monitoring Well
- Abandoned Monitoring Well
- Injection Well
- CEA Boundary
- Property Boundary
- Utility - Electric
- Utility - Gas
- Utility - Sewer
- Utility - Water

Figure B-1
CEA Boundary Map

Service Station #84849
945 Pleasant Valley Way
West Orange, New Jersey
PI #: 016006

PARSONS
200 Cottontail Lane
Somerset, NJ 08873

Drawn By:	Revision Date:	
PDS	4/15/2019	CEABoundaryMap_84849.mxd



- Monitoring Well
- Abandoned Monitoring Well
- Injection Well
- AOC #1 Former Tank Field
- AOC #2 Former Waste Oil UST
- AOC #3 Former UST System
- Soil Excavation
- Utility - Electric
- Utility - Gas
- Utility - Sewer
- Utility - Water
- Property Boundary
- Groundwater Contour Line (Feet)
- Groundwater Flow Direction

MW-1 = Well ID
356.53 = Groundwater Elevation
NM = Not Measured

Figure B-2
Groundwater Elevation Map
10/04/2017

Service Station #84849
945 Pleasant Valley Way
West Orange, New Jersey
PI #: 016006

PARSONS
200 Cottontail Lane
Somerset, NJ 08873

Drawn By:	Revision Date:	
PDS	7/9/2019	GWElevMap10042017_84849.mxd

N
W
E
S

AOC #1
FORMER TANK FIELD
(5) 4,000-GAL. GAS USTs

SEVERE SLOPE

LIGHT POLE

MW-10
365.85

MW-9

SIDEWALK

MW-11
368.12

MW-12
368.42

IW-3
NM

FORMER VENTS

IW-2
NM

MW-14
364.1

IW-1
NM

OCTOBER 2013
EXCAVATION

MAY 2007
EXCAVATION

MW-16R
363.1

MW-17

MW-17R
363.06

FUEL OIL UST

MW-18

MW-16

JUNE 2007
EXCAVATION

MW-18R
362.73

FORMER PUMP ISLANDS

AOC #2
FORMER WASTE OIL UST

FORMER WASTE OIL TANK

FORMER STATION BUILDING

MW-5

PLEASANT VALLEY WAY

INLET

MW-6
NM

MW-19
NM

MW-4

AOC #3
FORMER UST SYSTEM

FORMER VENTS

FORMER TANK FIELD

MW-3
358.27

MW-2
363.1

IW-4
NM

MW-1
358.87

INLET

MW-8
358.31

A/C

MW-15D
358.09

BUILDING

LIGHT POLE

SIDEWALK

PROPERTY BOUNDARY

SEVERE SLOPE

INLET

MOUNT PLEASANT PLACE

MW-7
NM

BUILDING

MW-20
357.85

0 25 50 Feet

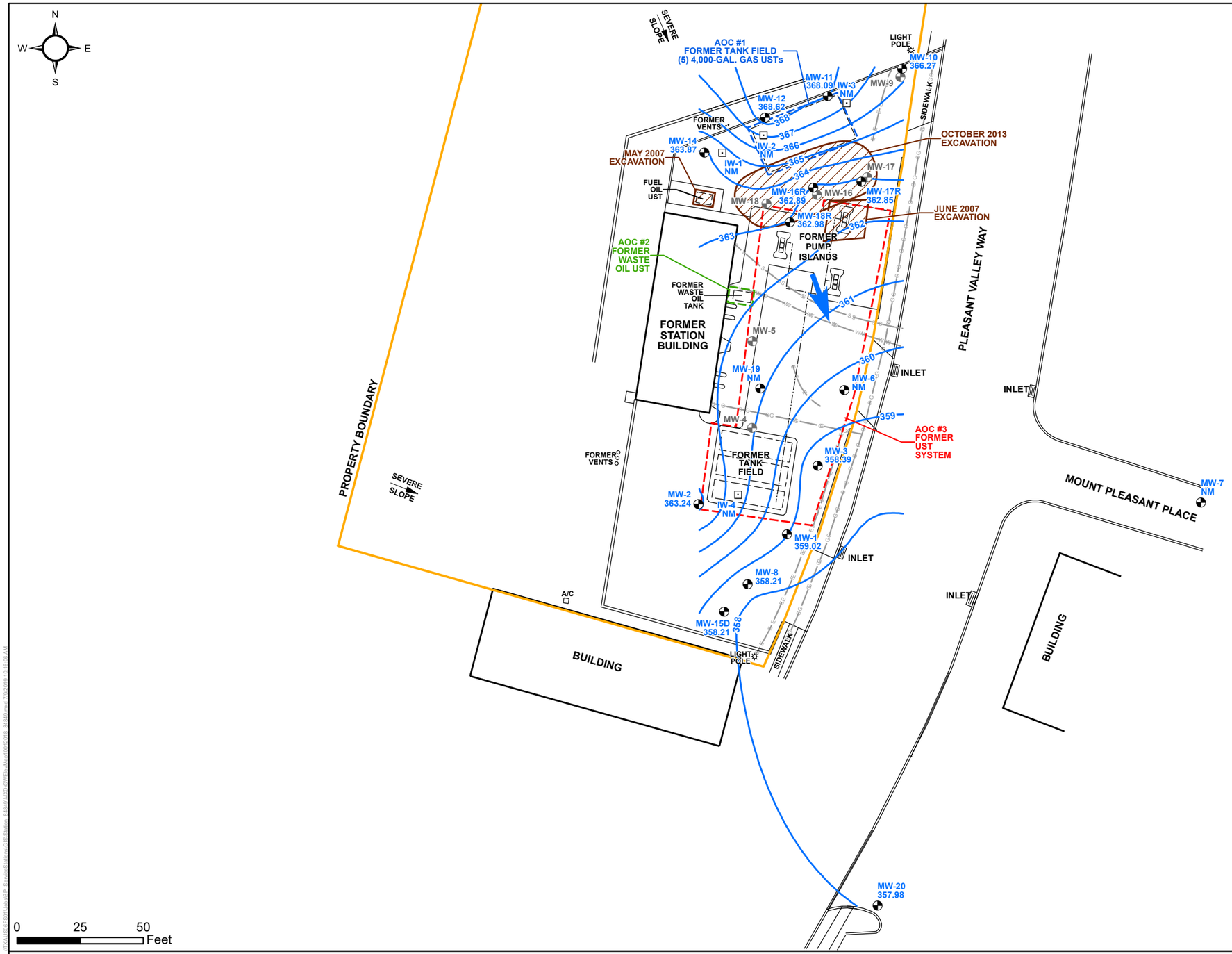
- Monitoring Well
- Abandoned Monitoring Well
- Injection Well
- AOC #1 Former Tank Field
- AOC #2 Former Waste Oil UST
- AOC #3 Former UST System
- Soil Excavation
- Utility - Electric
- Utility - Gas
- Utility - Sewer
- Utility - Water
- Property Boundary
- Groundwater Contour Line (Feet)
- Groundwater Flow Direction
- MW-1 = Well ID
- 358.87 = Groundwater Elevation
- NM = Not Measured

Figure B-3
Groundwater Elevation Map
04/03/2018

Service Station #84849
945 Pleasant Valley Way
West Orange, New Jersey
PI #: 016006

PARSONS
200 Cottontail Lane
Somerset, NJ 08873

Drawn By:	Revision Date:	
PDS	7/9/2019	GWElevMap04032018_84849.mxd



- Monitoring Well
- Abandoned Monitoring Well
- Injection Well
- AOC #1 Former Tank Field
- AOC #2 Former Waste Oil UST
- AOC #3 Former UST System
- Soil Excavation
- Utility - Electric
- Utility - Gas
- Utility - Sewer
- Utility - Water
- Property Boundary
- Groundwater Contour Line (Feet)
- Groundwater Flow Direction

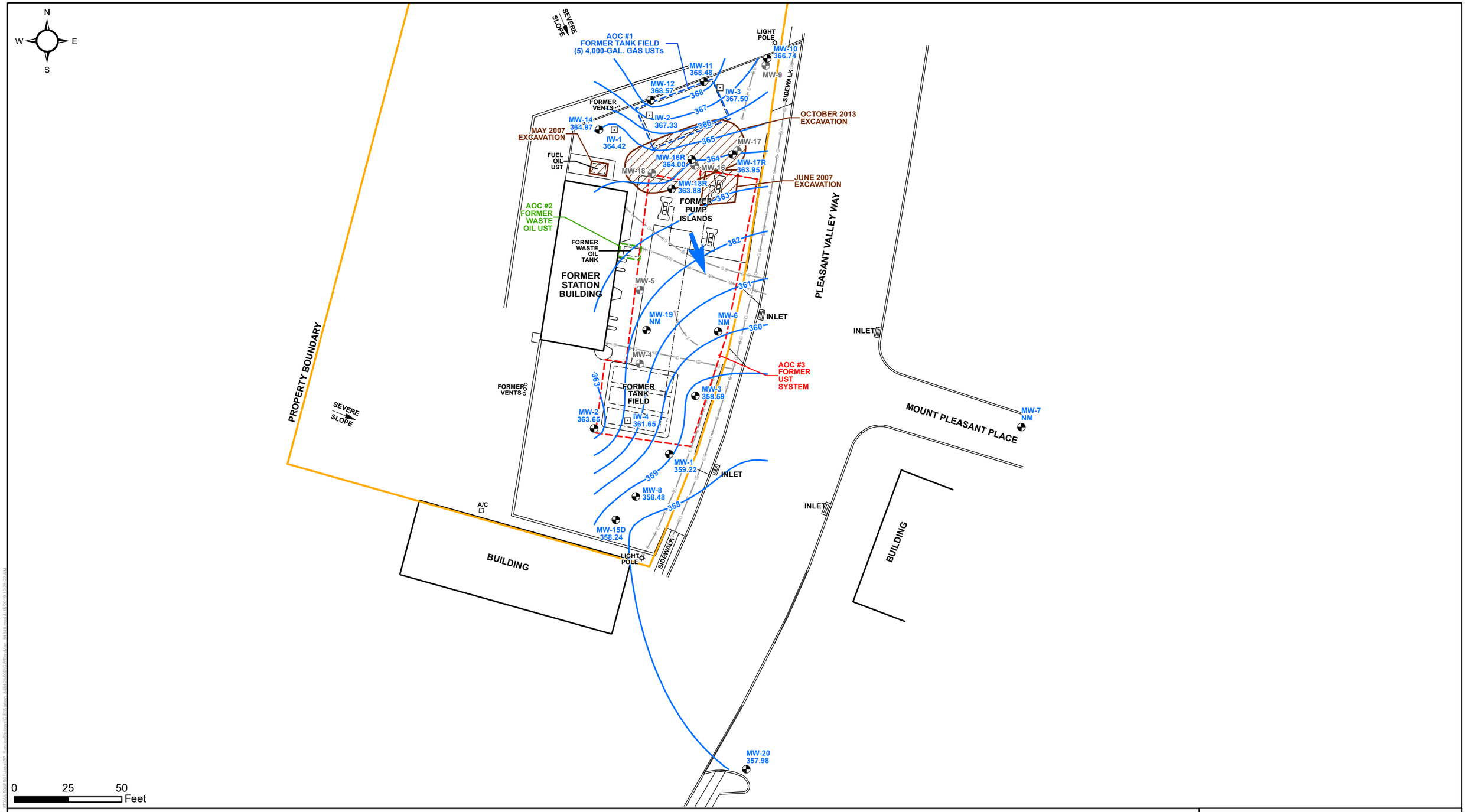
MW-1 = Well ID
359.02 = Groundwater Elevation
NM = Not Measured

Figure B-4
Groundwater Elevation Map
10/01/2018

Service Station #84849
945 Pleasant Valley Way
West Orange, New Jersey
PI #: 016006

PARSONS
200 Cottontail Lane
Somerset, NJ 08873

Drawn By:	Revision Date:	
PDS	7/9/2019	GWElevMap10012018_84849.mxd



Monitoring Well
Abandoned Monitoring Well
Injection Well
AOC #1 Former Tank Field
AOC #2 Former Waste Oil UST
AOC #3 Former UST System
Soil Excavation

Utility - Electric
Utility - Gas
Utility - Sewer
Utility - Water
Property Boundary

Groundwater Contour Line (Feet)
Groundwater Flow Direction
MW-1 = Well ID
359.22 = Groundwater Elevation
NM = Not Measured

Figure B-4
Groundwater Elevation Map
01/15/2019

Service Station #84849
945 Pleasant Valley Way
West Orange, New Jersey
PI #: 016006

PARSONS
200 Cottontail Lane
Somerset, NJ 08873

Drawn By:	Revision Date:	
PDS	4/15/2019	GWElevMap_84849.mxd

Ground Water Monitoring Plan for Ground Water Remedial Action Permit (version 1.0; May 17, 2012)

INSTRUCTIONS

RESET DATA

PRINT

Case Name: BP Site 84849
Program Interest (PI) ID #: 016006
Spreadsheet Submission Date: 6/18/2019

Wells to Be Sampled	Type of Well	Easting	Northing	Sampling Schedule	Reporting Schedule	Parameters for Each Well	CASRN
MW-20	Sentinel	556077.5	713994.5	Biennially	Biennially	Benzene	71-43-2
MW-20	Sentinel	556077.5	713994.5	Biennially	Biennially	VOC TICs	75-01-4
MW-3	Plume sampling point	556077.2	714201.7	Biennially	Biennially	Benzene	71-43-2
MW-3	Plume sampling point	556077.2	714201.7	Biennially	Biennially	VOC TICs	75-01-4
MW-6	Plume sampling point	556091	714223.6	Biennially	Biennially	Benzene	71-43-2
MW-6	Plume sampling point	556091	714223.6	Biennially	Biennially	VOC TICs	75-01-4
MW-14	Area of Concern	556032.2	714327.4	Biennially	Biennially	Benzene	71-43-2
MW-14	Area of	556032.2	714327.4	Biennially	Biennially	VOC TICs	75-01-4
MW-16R	Area of Concern	556069.1	714305	Biennially	Biennially	Benzene	71-43-2
MW-16R	Area of Concern	556069.1	714305	Biennially	Biennially	VOC TICs	75-01-4
MW-17R	Area of Concern	556090	714306.6	Biennially	Biennially	Benzene	71-43-2
MW-17R	Area of Concern	556090	714306.6	Biennially	Biennially	VOC TICs	75-01-4
MW-18R	Area of Concern	556059.6	714292.3	Biennially	Biennially	Benzene	71-43-2
MW-18R	Area of Concern	556059.6	714292.3	Biennially	Biennially	VOC TICs	75-01-4