



Groundwater & Environmental Services, Inc.
16 Mt. Ebo Road South
Brewster, NY 10509
T. 866.839.5195

January 30, 2018

Mr. Amen Omorogbe
New York State Department of Environmental Conservation
625 Broadway, 11th Floor
Albany, New York 12233-7014

**Re: Soil Vapor Intrusion Summary
1-45 Orangetown Shopping Center
Orangeburg, New York
Site #C344066**

Dear Mr. Omorogbe:

Enclosed is the *Soil Vapor Intrusion Summary Report* for the above referenced site prepared by Groundwater & Environmental Services, Inc. (GES) on behalf of UB Orangeburg, LLC. The report summarizes the results of the soil vapor investigation performed at the site during the 4th Quarter of 2017.

If you have any questions or comments regarding this submittal, please contact Michael DeGloria of GES at (866) 839-5195 at extension 3839.

Sincerely,

Groundwater & Environmental Services, Inc.

A handwritten signature in black ink that reads 'Dan Konchan'.

Digitally signed by Dan Konchan
DN: cn=Dan Konchan, o=GES, ou=LHV,
email=dkonchan@gesonline.com, c=US
Date: 2018.01.30 14:00:31 -05'00'

Dan Konchan
Associate Geologist

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Michael DeGloria, P.G.
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UB Orangeburg, LLC

Soil Vapor Intrusion Summary

UB Orangeburg

1-45 Orangeburg Shopping Center

NYSDEC Site Number C344066

January 2018

Version 1





Soil Vapor Intrusion Summary

UB Orangeburg
1-45 Orangeburg Shopping Center

Prepared for:
UB Orangeburg, LLC
321 Railroad Avenue
Greenwich, CT 06830

Prepared by:
Groundwater & Environmental Services, Inc.
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TEL: 866-839-5195
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GES Project:
1102613

Date:
January 2018

Regulatory Contact: Amen Omorogbe

A handwritten signature in black ink, appearing to read 'Dan Konchan', with a red checkmark to its right.

Digitally signed by Dan Konchan
DN: cn=Dan Konchan, o=GES,
ou=LHV,
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Dan Konchan
Associate Geologist

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Michael DeGloria, P.G.
Senior Project Manager



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Acronyms

GES	Groundwater & Environmental Services, Inc.
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
EPA	Environmental Protection Agency
SVI	Soil Vapor Intrusion
SSD	Sub-slab depressurization system



1 Objective

The objective of this report is to summarize the soil vapor intrusion investigation completed on December 5, 2017. The investigation was completed at three of the tenant spaces (the New China House Restaurant, TZ Liquors which was formerly occupied by The Deli Spot, and a vacant space which was formerly occupied by Sparkle Cleaners) located within building #2 of the Orangetown Shopping Center (the “site”). All work was completed in accordance with the NYSDEC approved Work Plan submitted to the Department on October 3, 2017. Work was also completed in accordance with correspondences with the NYSDEC from March 4, 2016 and January 25, 2017. All correspondences with the NYSDEC are included as **Appendix A**.

This investigation was conducted for the purpose of evaluating current sub-slab and ambient air quality at the site as well as evaluating the potential of soil vapor intrusion in the tenant spaces located within Building #2 in support of permanent removal of the remaining SSD systems and cessation of additional sub-slab or ambient air testing. A site location map and a site map indicating pertinent site features are presented as **Figures 1 and 2**.

1.1 Background Information

The subject site is a 1.2-acre portion of the shopping plaza, located near the southeast corner of the parcel. The shopping plaza is located at the southeast corner of Orangeburg and Dutch Hill Roads in Orangeburg, New York, and is comprised of an 11-acre parcel that contains several commercial buildings. The site has been utilized as farmland, a camp, an amphitheater, and the current retail shopping center. The plaza is situated in a suburban area of mixed land use, and is surrounded predominantly by commercial and residential properties. It is served by a public water supply system. There had previously been a dry cleaner operating at the shopping center since approximately 1966. The Sparkle Cleaners, which operated as a dry cleaning facility within building #2, is currently inactive and the tenant space remains vacant to date. Investigations performed to date have confirmed the presence of contamination caused by the release of dry cleaning fluids.

In January 2007, JLJ Management Company entered into Brownfield Cleanup Agreement #A3-0563-0906BCA with the NYSDEC to remediate a 1.2-acre portion of the 11-acre property. This BCA required the Remedial Party, JLJ Management Group, to investigate and remediate contaminated media at the site.

An environmental easement for the site was executed by the NYSDEC on September 16, 2011. The site is being managed by GES with the approved Site Management Plan, Remedial Action Work Plan and Final Engineering Report completed by Kleinfelder, Inc. and approved by the NYSDEC in December of 2011.

A property transfer of the shopping center was completed on March 28, 2012. UB Orangeburg, LLC acquired the property from JLJ Management Company, Inc.

2 Scope of Work

All activities described in this report were completed in accordance with published NYSDOH guidance for indoor air and vapor intrusion evaluation of the site. Field activities included a pre-sampling inspection, a chemical inventory, and collection of samples over an 8-hour period from

sub-slab vapor points. Laboratory analysis and reporting followed these field activities.

3 Pre-Sampling Requirements

3.1 Pre-sampling Inspection and Preparation of Property

On December 4, 2017, GES conducted a pre-sampling inspection within the three tenant spaces to confirm the type of structure, floor layout and physical conditions of the building being studied and to identify conditions that may affect or interfere with the planned testing. This information along with information on sources of potential indoor contamination are identified on the NYSDOH *Indoor Air Quality Questionnaire and Building Inventory Forms*, which are provided as **Appendix B**. In all three tenant spaces all windows were closed during the time of the sample. However, rear entrance doors were propped open slightly to allow continuous access to all three spaces throughout the sampling event. GES also utilized a photo-ionization detector (PID) to evaluate and determine any potential interference. Items that were evaluated during the building inventory included but were not limited to the use or storage of chemical products. Potential interferences are noted on the NYSDOH *Indoor Air Quality Questionnaire and Building Inventory Forms*.

3.2 Product Inventories

Because some consumer products contain ingredients which can contribute to levels of VOCs in the air, a product inventory was completed prior to completion of the air sampling activities on December 4, 2017 to provide an accurate assessment of the potential contribution of noted products. Each room in the three tenant spaces was inspected and the products containing or potentially containing VOCs were listed on the *Products Inventory Form* (attached) along with PID readings obtained near such products. In addition, the known volatile ingredients were also recorded for each product. Several items were observed that did not register a PID reading. The product inventory is included on the attached NYSDOH *Indoor Air Quality Questionnaire and Building Inventory Forms* (**Appendix B**).

4 Soil Vapor Intrusion Investigation

In a letter dated January 25, 2017, the NYSDEC requested that two additional SVI investigations be completed during the 2017-2018 and the 2018-2019 heating seasons. All work was completed in accordance with the Work Plan submitted to the NYSDEC on October 3, 2017. This investigation represents one of two required by the NYSDEC with the second to be completed during the 2018-2019 heating season.

4.1 Quality Assurance/Quality Control

Care was taken during all aspects of the sample collection to ensure that high quality data was obtained. Sub-slab samples were collected from the sub-slab vapor points at the approximate locations shown on **Figure 3**. To verify the integrity of the sample vapor points, a tracer gas was used to test the seal. On December 5, 2017, prior to sampling, the sub-slab vapor points were first purged of three times the volume of the sampling point using a GILIAN personal air sampling system and a flow module (vacuum pump) set at a maximum flow rate of 0.2 liters per minute. Helium tracer gas was then used to confirm an adequate seal was in place at all locations prior to collection of the soil gas samples.

4.2 Sub-Slab and Ambient Air Sample Collection

Once the helium tracer tests were complete and it was confirmed that each point was adequately sealed, sub-slab vapor and ambient air samples were collected using SUMMA canisters equipped with 8-hour regulators. A total of thirteen (13) air samples were collected on December 5, 2017. Upon completion of the 8-hour sampling period, each sample collection apparatus was stored according to the sample collection method protocol and delivered to SGS-Accutest Laboratories of Dayton, New Jersey under proper chain of custody for analysis of VOCs via EPA Methods VTO15NYLL and/or VTO15NYSVLL.

To characterize contaminant concentration trends and potential exposures, ambient air and sub-slab vapor samples were collected from the approximate locations shown on the attached **Figure 3** and as summarized below in text and table format:

TZ Liquors (Former Deli Spot): Vapor extraction well VP-1 and sub-slab monitoring point SSD-MP-2.

Former Sparkle Cleaners: Vapor extraction wells VP-5 and VP-6.

New China House (Restaurant): Sub-slab monitoring point SSD-MP-5 and vapor extraction well VP-9.

Ambient Outdoor Sample: Sample taken outside the building to the east of the three tenant spaces.

Sample Location	Sample Identification	Sample Description
Former Deli Spot	Deli VP-1	Sub-slab
Former Deli Spot	Deli VP-1 Ambient	Ambient
Former Deli Spot	Deli SSD-MP-2	Sub-slab
Former Deli Spot	Deli SSD-MP-2 Ambient	Ambient
Former Sparkle Cleaners	Sparkle VP-5	Sub-slab
Former Sparkle Cleaners	Sparkle VP-5 Ambient	Ambient
Former Sparkle Cleaners	Sparkle VP-6	Sub-slab
Former Sparkle Cleaners	Sparkle VP-6 Ambient	Ambient
New China House	China SSD-MP-5	Sub-slab
New China House	China SSD-MP-5 Ambient	Ambient
New China House	China VP-9	Sub-slab
New China House	China VP-9 Ambient	Ambient
Outside (East of Building)	Outside Ambient	Ambient

4.3 Sample Analysis

The analytical data is summarized on **Tables 1** and **2** and the laboratory analytical report is included as **Appendix C**. In addition, a data usability summary report (DUSR) for all samples was completed by RemVer of Colchester, Connecticut and is provided as **Appendix D**.



Laboratory analytical results for the constituents of concern (COCs), carbon tetrachloride, 1,1-DCE, c12-DCE, tetrachloroethene (PCE), 1,1,1-trichloroethane (1,1,1-TCA), methyl chloride, vinyl chloride, and trichloroethene (TCE), were then compared to the NYSDOH *Guidance for Evaluating Soil Vapor Intrusion in the State of New York*, section 3.4.2, Indoor Air Matrices A, B, and C (attached as **Appendix E**). Based on the comparison, GES determined that no further action was required at all three tenant spaces as detailed in **Table 3**.

5 Conclusions/Recommendations

On December 5, 2017 a soil vapor intrusion investigation was completed at three of the tenant spaces (the New China House Restaurant, TZ Liquors which was formerly occupied by The Deli Spot, and a vacant space which was formerly occupied by Sparkle Cleaners located within building #2 of the Orangetown Shopping Center (the “site”). This investigation was conducted for the purpose of evaluating current soil vapor and ambient air quality and the potential of soil vapor intrusion in the tenant spaces located within Building #2 at the site in advance of a new

Based on the NYSDOH *Guidance for Evaluating Soil Vapor Intrusion in the State of New York*, section 3.4.2, Indoor Air Matrices A, B, and C GES determined that no further action was required at all three of the tenant spaces. However, in compliance with a letter dated January 25, 2017 from the NYSDEC GES will resample the sub-slab space and ambient air at all three tenant spaces next winter (2018-2019) to evaluate air quality during cold weather conditions. Should results be consistent with previous data sets, the NYSDEC and NYSDOH have indicated they will consider sub-slab and ambient air quality testing complete and allow the cessation of additional monitoring and removal of the remaining SSD systems.



Figures

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LEGEND

- PROPERTY BOUNDARY
- CHAIN LINK FENCE
- CATCH BASIN
- UTILITY MANHOLE
- UTILITY POLE
- LIGHT POLE
- FIRE HYDRANT
- MONITORING WELL
- INJECTION WELL
- DESTROYED MONITORING WELL
- PIEZOMETER
- SOIL VAPOR EXTRACTION WELL
- UNDERGROUND SANITARY SEWER LINE
- OVERHEAD UTILITIES

Site Map

UB Orangeburg, LLC
1-45 Orangetown Shopping Center
Orangeburg, New York

Drawn
W.G.S.
Designed
Approved

Date
1-23-18
Figure

Scale In Feet

0 50

DRAFTED BY: W.G.S. (N.J.)	Sub-Slab and Ambient Air Sampling Locations		
CHECKED BY: CA	UB ORANGEBURG, LLC 1-45 ORANGETOWN SHOPPING CENTER ORANGEBURG, NEW YORK		
REVIEWED BY: KB	Groundwater & Environmental Services, Inc. 16 MT. EBO ROAD SOUTH, SUITE 21, BREWSTER, NEW YORK 10509		
	NOT TO SCALE	DATE 10-24-14	FIGURE 3



Tables

Table 1
GC/MS Volatiles (TO-15) - ug/m3

UB Orangeburg
1-45 Orangetown Shopping Center
Orangeburg, New York

Client Sample ID:	OUTSIDE	SSD-MP-2	SSD-MP-2	VP-1	VP-1	VP-6	VP-6	VP-5	VP-5	VP-9	VP-9	SSD-MP-5	SSD-MP-5	REGULATORY GUIDANCE		
Lab Sample ID:	JC56815-1	JC56815-2	JC56815-3	JC56815-4	JC56815-5	JC56815-6	JC56815-7	JC56815-8	JC56815-9	JC56815-10	JC56815-11	JC56815-12	JC56815-13	NYSDOH 2003 Soil Vapor Indoor 95th Percentile (1)	NYSDOH 2003 Soil Vapor Intrusion Air Guidance Value (2)	EPA 2001 BASE 90th Percentile (3)
Date Sampled:	12/5/2017	12/5/2017	12/5/2017	12/5/2017	12/5/2017	12/5/2017	12/5/2017	12/5/2017	12/5/2017	12/5/2017	12/5/2017	12/5/2017	12/5/2017			
Matrix:	Ambient Air Comp.	Soil Vapor Comp.	Ambient Air Comp.	Soil Vapor Comp.	Ambient Air Comp.	Soil Vapor Comp.	Ambient Air Comp.	Soil Vapor Comp.	Ambient Air Comp.	Soil Vapor Comp.	Ambient Air Comp.	Soil Vapor Comp.	Ambient Air Comp.			
Acetone	5.2	50.1	153	99.3	171	62.9	73.9	61.5	74.4	191	637	242	829	140	NS	98.9
1,3-Butadiene	ND (0.22)	ND (0.44)	ND (0.38)	ND (0.44)	ND (0.38)	ND (0.44)	ND (0.22)	ND (0.44)	ND (0.22)	ND (0.44)	ND (0.22)	ND (0.44)	ND (0.22)	NS	NS	<3.0
Benzene	0.77	1	1.5	1.4	1.4	0.96	0.73	0.99	0.86	1.2	1.3	1.4	1.1	29	NS	9.4
Bromodichloromethane	ND (0.33)	ND (0.67)	ND (0.56)	ND (0.67)	ND (0.57)	ND (0.67)	ND (0.33)	ND (0.67)	ND (0.33)	ND (0.67)	0.45	ND (0.67)	ND (0.33)	NS	NS	NS
Bromoform	ND (0.21)	ND (0.41)	ND (0.34)	ND (0.41)	ND (0.35)	ND (0.41)	ND (0.21)	ND (0.41)	ND (0.21)	ND (0.41)	ND (0.21)	ND (0.41)	ND (0.21)	NS	NS	NS
Bromomethane	ND (0.39)	ND (0.78)	ND (0.66)	ND (0.78)	ND (0.66)	ND (0.78)	ND (0.39)	ND (0.78)	ND (0.39)	ND (0.78)	ND (0.39)	ND (0.78)	ND (0.39)	0.9	NS	<1.7
Bromoethene	ND (0.44)	ND (0.87)	ND (0.74)	ND (0.87)	ND (0.74)	ND (0.87)	ND (0.44)	ND (0.87)	ND (0.44)	ND (0.87)	ND (0.44)	ND (0.87)	ND (0.44)	NS	NS	NS
Benzyl Chloride	ND (0.52)	ND (1.0)	ND (0.88)	ND (1.0)	ND (0.88)	ND (1.0)	ND (0.52)	ND (1.0)	ND (0.52)	ND (1.0)	ND (0.52)	ND (1.0)	ND (0.52)	NS	NS	<6.8
Carbon disulfide	ND (0.31)	ND (0.62)	ND (0.53)	ND (0.62)	ND (0.53)	ND (0.62)	ND (0.31)	ND (0.62)	ND (0.31)	3	0.72	ND (0.62)	ND (0.31)	NS	NS	4.2
Chlorobenzene	ND (0.46)	ND (0.92)	ND (0.78)	ND (0.92)	ND (0.78)	ND (0.92)	ND (0.46)	ND (0.92)	ND (0.46)	ND (0.92)	ND (0.46)	ND (0.92)	ND (0.46)	<0.25	NS	<0.9
Chloroethane	ND (0.26)	ND (0.53)	ND (0.45)	ND (0.53)	ND (0.45)	ND (0.53)	ND (0.26)	ND (0.53)	ND (0.26)	ND (0.53)	ND (0.26)	ND (0.53)	ND (0.26)	0.6	NS	<1.1
Chloroform	ND (0.49)	1.4	ND (0.83)	ND (0.98)	1.2	2.2	ND (0.49)	ND (0.98)	ND (0.49)	1.9	2	ND (0.98)	ND (0.49)	4.6	NS	1.1
Chloromethane	0.7	1.9	1.5	2.3	1.4	0.52	0.85	0.43	0.83	ND (0.41)	1.3	0.58	1	5.2	NS	3.7
3-Chloropropene	ND (0.31)	ND (0.63)	ND (0.53)	ND (0.63)	ND (0.53)	ND (0.63)	ND (0.31)	ND (0.63)	ND (0.31)	ND (0.63)	ND (0.31)	ND (0.63)	ND (0.31)	NS	NS	NS
2-Chlorotoluene	ND (0.52)	ND (1.0)	ND (0.88)	ND (1.0)	ND (0.88)	ND (1.0)	ND (0.52)	ND (1.0)	ND (0.52)	ND (1.0)	ND (0.52)	ND (1.0)	ND (0.52)	NS	NS	NS
Carbon tetrachloride	0.29	0.63	0.63	0.47	0.42	ND (0.25)	0.32	0.48	0.31	0.51	0.48	0.55	0.32	1.1	NS	<1.3
Cyclohexane	ND (0.34)	ND (0.69)	ND (0.59)	ND (0.69)	ND (0.59)	ND (0.69)	ND (0.34)	ND (0.69)	ND (0.34)	ND (0.69)	ND (0.34)	ND (0.69)	ND (0.34)	19	NS	NS
1,1-Dichloroethane	ND (0.40)	ND (0.81)	ND (0.69)	ND (0.81)	ND (0.69)	ND (0.81)	ND (0.40)	ND (0.81)	ND (0.40)	ND (0.81)	ND (0.40)	ND (0.81)	ND (0.40)	<0.25	NS	<0.7
1,1-Dichloroethylene	ND (0.080)	ND (0.16)	ND (0.13)	ND (0.16)	ND (0.13)	ND (0.16)	ND (0.080)	ND (0.16)	ND (0.080)	ND (0.16)	ND (0.080)	ND (0.16)	ND (0.080)	<0.25	NS	<1.4
1,2-Dibromoethane	ND (0.38)	ND (0.77)	ND (0.64)	ND (0.77)	ND (0.65)	ND (0.77)	ND (0.38)	ND (0.77)	ND (0.38)	ND (0.77)	ND (0.38)	ND (0.77)	ND (0.38)	<0.25	NS	<1.5
1,2-Dichloroethane	ND (0.40)	ND (0.81)	ND (0.69)	ND (0.81)	ND (0.69)	ND (0.81)	ND (0.40)	ND (0.81)	ND (0.40)	ND (0.81)	ND (0.40)	ND (0.81)	ND (0.40)	<0.25	NS	<0.9
1,2-Dichloropropane	ND (0.46)	ND (0.92)	ND (0.79)	ND (0.92)	ND (0.79)	ND (0.92)	ND (0.46)	ND (0.92)	ND (0.46)	ND (0.92)	ND (0.46)	ND (0.92)	ND (0.46)	<0.25	NS	<1.6
1,4-Dioxane	ND (0.36)	ND (0.72)	ND (0.61)	ND (0.72)	ND (0.61)	ND (0.72)	ND (0.36)	ND (0.72)	ND (0.36)	ND (0.72)	ND (0.36)	ND (0.72)	ND (0.36)	NS	NS	NS
Dichlorodifluoromethane	1.3	3	3	1.3	2.3	2.4	1.5	2.4	1.5	2.4	2	2.5	1.5	26	NS	16.5
Dibromochloromethane	ND (0.43)	ND (0.85)	ND (0.71)	ND (0.85)	ND (0.72)	ND (0.85)	ND (0.43)	ND (0.85)	ND (0.43)	ND (0.85)	ND (0.43)	ND (0.85)	ND (0.43)	NS	NS	NS
trans-1,2-Dichloroethylene	ND (0.40)	ND (0.79)	ND (0.67)	ND (0.79)	ND (0.67)	ND (0.79)	ND (0.40)	ND (0.79)	ND (0.40)	ND (0.79)	ND (0.40)	ND (0.79)	ND (0.40)	NS	NS	NS
cis-1,2-Dichloroethylene	ND (0.080)	ND (0.16)	ND (0.13)	ND (0.16)	ND (0.13)	4.4	ND (0.080)	3.5	ND (0.080)	ND (0.16)	ND (0.080)	ND (0.16)	ND (0.080)	1.2	NS	<1.9
cis-1,3-Dichloropropene	ND (0.45)	ND (0.91)	ND (0.77)	ND (0.91)	ND (0.77)	ND (0.91)	ND (0.45)	ND (0.91)	ND (0.45)	ND (0.91)	ND (0.45)	ND (0.91)	ND (0.45)	<0.25	NS	<2.3
m-Dichlorobenzene	ND (0.30)	ND (0.60)	ND (0.50)	ND (0.60)	ND (0.51)	ND (0.60)	ND (0.30)	ND (0.60)	ND (0.30)	ND (0.60)	ND (0.30)	ND (0.60)	ND (0.30)	1	NS	<2.4
o-Dichlorobenzene	ND (0.12)	ND (0.24)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.24)	ND (0.12)	ND (0.24)	ND (0.12)	ND (0.24)	ND (0.12)	ND (0.24)	ND (0.12)	0.9	NS	<1.2
p-Dichlorobenzene	ND (0.30)	ND (0.60)	ND (0.50)	ND (0.60)	ND (0.51)	ND (0.60)	ND (0.30)	ND (0.60)	ND (0.30)	ND (0.60)	ND (0.30)	ND (0.60)	ND (0.30)	2.6	NS	5.5
trans-1,3-Dichloropropene	ND (0.45)	ND (0.91)	ND (0.77)	ND (0.91)	ND (0.77)	ND (0.91)	ND (0.45)	ND (0.91)	ND (0.45)	ND (0.91)	ND (0.45)	ND (0.91)	ND (0.45)	<0.25	NS	<1.3
Ethanol	7.9	95.5 E	529 E	115	652 E	125 E	57.8	149 E	63.5	186	232	202	281	NS	NS	210
Ethylbenzene	ND (0.43)	ND (0.87)	ND (0.74)	ND (0.87)	ND (0.74)	ND (0.87)	ND (0.43)	ND (0.87)	ND (0.43)	ND (0.87)	ND (0.43)	ND (0.87)	ND (0.43)	13.0	NS	5.7
Ethyl Acetate	4.7	2.3	5	4	10	ND (0.72)	4.3	5.8	3.4	16	32	23	31	NS	NS	5.4
4-Ethyltoluene	ND (0.49)	ND (0.98)	ND (0.84)	ND (0.98)	ND (0.84)	ND (0.98)	ND (0.49)	ND (0.98)	ND (0.49)	ND (0.98)	ND (0.49)	ND (0.98)	ND (0.49)	NS	NS	NS
Freon 113	ND (0.38)	ND (0.77)	0.67	ND (0.77)	ND (0.65)	ND (0.77)	ND (0.38)	ND (0.77)	ND (0.38)	ND (0.77)	0.54	ND (0.77)	ND (0.38)	NS	NS	3.5
Freon 114	ND (0.35)	ND (0.70)	ND (0.58)	ND (0.70)	ND (0.59)	ND (0.70)	ND (0.35)	ND (0.70)	ND (0.35)	ND (0.70)	ND (0.35)	ND (0.70)	ND (0.35)	NS	NS	NS
Heptane	ND (0.41)	ND (0.82)	ND (0.70)	ND (0.82)	ND (0.70)	ND (0.82)	ND (0.41)	ND (0.82)	ND (0.41)	1.1	0.78	1.3	0.74	NS	NS	NS
Hexachlorobutadiene	ND (0.48)	ND (0.96)	ND (0.79)	ND (0.96)	ND (0.82)	ND (0.96)	ND (0.48)	ND (0.96)	ND (0.48)	ND (0.96)	ND (0.48)	ND (0.96)	ND (0.48)	11.0	NS	<6.8
Hexane	2.3	3.2	2.3	0.81	1.1	ND (0.70)	0.49	ND (0.70)	0.67	ND (0.70)	1.5	0.95	0.49	NS	NS	NS
2-Hexanone	ND (0.41)	ND (0.82)	ND (0.70)	ND (0.82)	ND (0.70)	ND (0.82)	ND (0.41)	ND (0.82)	ND (0.41)	ND (0.82)	ND (0.41)	ND (0.82)	ND (0.41)	NS	NS	NS
Isopropyl Alcohol	0.88	2.9	8.8	3.9	16	5.2	4.4	6.1	4.4	12	47.9	14	59.5	NS	NS	250
Methylene chloride	3.4	19	5.6	ND (0.69)	0.87	ND (0.69)	0.59	ND (0.69)	0.56	ND (0.69)	3.5	0.69	0.56	45.0	60	10
Methyl ethyl ketone	0.65	18	1.6	29.8	2.8	3.2	1.3	2.7	0.86	4.4	1.9	4.7	2.4	39.0	NS	NS



Table 1
GC/MS Volatiles (TO-15) - ug/m3

UB Orangeburg
1-45 Orangetown Shopping Center
Orangeburg, New York

Client Sample ID:	OUTSIDE	SSD-MP-2	SSD-MP-2	VP-1	VP-1	VP-6	VP-6	VP-5	VP-5	VP-9	VP-9	SSD-MP-5	SSD-MP-5	REGULATORY GUIDANCE		
Lab Sample ID:	JC56815-1	JC56815-2	JC56815-3	JC56815-4	JC56815-5	JC56815-6	JC56815-7	JC56815-8	JC56815-9	JC56815-10	JC56815-11	JC56815-12	JC56815-13	NYSDOH 2003 Soil Vapor Indoor 95th Percentile (1)	NYSDOH 2003 Soil Vapor Intrusion Air Guidance Value (2)	EPA 2001 BASE 90th Percentile (3)
Date Sampled:	12/5/2017	12/5/2017	12/5/2017	12/5/2017	12/5/2017	12/5/2017	12/5/2017	12/5/2017	12/5/2017	12/5/2017	12/5/2017	12/5/2017	12/5/2017			
Matrix:	Ambient Air Comp.	Soil Vapor Comp.	Ambient Air Comp.	Soil Vapor Comp.	Ambient Air Comp.	Soil Vapor Comp.	Ambient Air Comp.	Soil Vapor Comp.	Ambient Air Comp.	Soil Vapor Comp.	Ambient Air Comp.	Soil Vapor Comp.	Ambient Air Comp.			
Methyl Isobutyl Ketone	ND (0.41)	ND (0.82)	ND (0.70)	0.86	ND (0.70)	ND (0.82)	ND (0.41)	ND (0.82)	ND (0.41)	ND (0.82)	ND (0.41)	ND (0.82)	ND (0.41)	5.3	NS	NS
Methyl Tert Butyl Ether	ND (0.36)	ND (0.72)	ND (0.61)	ND (0.72)	ND (0.61)	ND (0.72)	ND (0.36)	ND (0.72)	ND (0.36)	ND (0.72)	ND (0.36)	ND (0.72)	ND (0.36)	71.0	NS	11.5
Methylmethacrylate	ND (0.41)	ND (0.82)	ND (0.70)	ND (0.82)	ND (0.70)	ND (0.82)	ND (0.41)	ND (0.82)	ND (0.41)	ND (0.82)	ND (0.41)	ND (0.82)	ND (0.41)	1.1	NS	NS
Propylene	0.88	ND (0.86)	2.4	1.6	2.1	ND (0.86)	0.84	ND (0.86)	0.86	ND (0.86)	1.6	1.1	1.1	NS	NS	NS
Styrene	ND (0.43)	ND (0.85)	ND (0.72)	ND (0.85)	ND (0.72)	ND (0.85)	ND (0.43)	ND (0.85)	ND (0.43)	ND (0.85)	ND (0.43)	ND (0.85)	ND (0.43)	2.3	NS	1.9
1,1,1-Trichloroethane	ND (0.27)	ND (0.55)	ND (0.45)	0.71	ND (0.46)	ND (0.55)	ND (0.27)	ND (0.55)	ND (0.27)	ND (0.55)	ND (0.27)	ND (0.55)	ND (0.27)	6.9	NS	20.6
1,1,2,2-Tetrachloroethane	ND (0.34)	ND (0.69)	ND (0.57)	ND (0.69)	ND (0.58)	ND (0.69)	ND (0.34)	ND (0.69)	ND (0.34)	ND (0.69)	ND (0.34)	ND (0.69)	ND (0.34)	<0.25	NS	NS
1,1,2-Trichloroethane	ND (0.27)	ND (0.55)	ND (0.45)	ND (0.55)	ND (0.46)	ND (0.55)	ND (0.27)	ND (0.55)	ND (0.27)	ND (0.55)	ND (0.27)	ND (0.55)	ND (0.27)	<0.25	NS	<1.5
1,2,4-Trichlorobenzene	ND (0.37)	ND (0.74)	ND (0.62)	ND (0.74)	ND (0.63)	ND (0.74)	ND (0.37)	ND (0.74)	ND (0.37)	ND (0.74)	ND (0.37)	ND (0.74)	ND (0.37)	6.3	NS	<6.8
1,2,4-Trimethylbenzene	ND (0.49)	3.6	0.84	3.9	ND (0.84)	ND (0.98)	0.54	ND (0.98)	ND (0.49)	3.9	0.98	1.8	1.1	18	NS	9.5
1,3,5-Trimethylbenzene	ND (0.49)	1.1	ND (0.84)	1.1	ND (0.84)	ND (0.98)	ND (0.49)	ND (0.98)	ND (0.49)	1.2	ND (0.49)	ND (0.98)	ND (0.49)	6.5	NS	NS
2,2,4-Trimethylpentane	ND (0.47)	ND (0.93)	ND (0.79)	ND (0.93)	ND (0.79)	ND (0.93)	ND (0.47)	ND (0.93)	ND (0.47)	ND (0.93)	0.51	ND (0.93)	ND (0.47)	NS	NS	NS
Tertiary Butyl Alcohol	ND (0.30)	ND (0.61)	ND (0.52)	1.3	0.55	ND (0.61)	ND (0.30)	ND (0.61)	ND (0.30)	0.91	0.49	ND (0.61)	0.39	NS	NS	NS
Tetrachloroethylene	0.33	0.39	0.62	4.9	1.1	46	0.43	24	0.5	6.6	3.7	4.7	0.88	4.1	30	15.9
Tetrahydrofuran	ND (0.29)	10	ND (0.50)	22	ND (0.50)	ND (0.59)	ND (0.29)	ND (0.59)	ND (0.29)	1.3	ND (0.29)	1.2	ND (0.29)	9.4	NS	NS
Toluene	1.5	2.1	3.6	3.4	2.5	2.6	1.8	2.6	1.7	6.8	7.2	8.3	7.5	110	NS	43
Trichloroethylene	ND (0.11)	ND (0.21)	ND (0.18)	1.2	0.26	3.5	ND (0.11)	2.5	ND (0.11)	0.75	0.16	ND (0.21)	ND (0.11)	0.8	2	4.2
Trichlorofluoromethane	0.79	2.1	2.1	1.2	1.3	1.3	0.9	1.3	0.9	1.3	1.5	1.5	0.9	30	NS	18.1
Vinyl chloride	ND (0.051)	ND (0.10)	ND (0.084)	ND (0.10)	ND (0.087)	ND (0.10)	ND (0.051)	ND (0.10)	ND (0.051)	0.66	ND (0.051)	ND (0.10)	ND (0.051)	<0.25	NS	<1.9
Vinyl Acetate	ND (0.35)	ND (0.70)	ND (0.60)	ND (0.70)	ND (0.60)	ND (0.70)	ND (0.35)	ND (0.70)	ND (0.35)	ND (0.70)	ND (0.35)	ND (0.70)	ND (0.35)	NS	NS	NS
m,p-Xylene	0.83	1.5	1.8	1.7	ND (0.74)	1.1	0.83	1	0.87	1.7	1.3	1.7	1.1	21.0	NS	22.2
o-Xylene	ND (0.43)	ND (0.87)	ND (0.74)	ND (0.87)	ND (0.74)	ND (0.87)	ND (0.43)	ND (0.87)	ND (0.43)	ND (0.87)	0.56	ND (0.87)	0.43	13.0	NS	7.9
Xylenes (total)	0.83	1.5	1.8	1.7	ND (0.74)	1.1	0.83	1	0.87	1.7	1.9	1.7	1.5	NS	NS	NS

Results and Standards expressed in micrograms per cubic meter (µg/m3)

NS = No Standard

ND = Not detected above laboratory reporting limits

E = The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.

B = Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants. Data users should consider anything <10x the blank value as artifact.

(1) 95th percentile indoor air values from "Table C1. NYSDOH 2003: Study of Volatile Organic Chemicals in Air of Fuel Oil Heated Homes", published in the NYSDOH Soil Vapor Intrusion Guidance Document, Appendix C" (October 2006)

(2) NYSDOH Air Guidance Values (AGVs) presented in the Final Guidance for evaluating Soil Vapor Intrusion in the State of New York, dated October

2006 ("NYSDOH Vapor Intrusion Guidance Document"); however, Tetrachloroethene (PCE) guidance was revised to 30 ug/m3 in September of 2013 and the trichloroethylene (TCE) Air Guideline Value was reduced to 2 ug/m3 in August of 2015

(3) 90th percentile indoor air values from "Table C-2. EPA 2001: Building Assessment and Survey Evaluation (BASE) Database, SUMMA canister method"

published in the NYSDOH Soil Vapor Intrusion Guidance Document, Appendix C" (October 2006)



Table 2
Constituents of Concern Summary Comparison

UB Orangeburg
1-45 Orangetown Shopping Center
Orangeburg, New York

Samples			Chemical Compound								Action Required		
Sample Date	Sample Location	Sample Type	TCE	c12-DCE	11 - DCE	Carbon Tetrachloride	PCE	1,1,1-TCA	Methylene Chloride	Vinyl Chloride	Matrix A (TCE, c12-DCE, 11-DCE, Carbon Tetrachloride)	Matrix B (PCE, 111-TCA, Methylene Chloride)	Matrix C (Vinyl Chloride)
12/5/2017	Deli VP-1	Ambient	0.26	ND<0.13	ND<0.13	0.42	1.1	ND<0.46	0.87	ND<0.087	No further action	No further action	No further action
		Sub-slab	1.2	ND<0.16	ND<0.16	0.47	4.9	0.71	ND<0.69	ND<0.10			
12/5/2017	Deli SSD-MP-2	Ambient	ND<0.18	ND<0.13	ND<0.13	0.63	0.62	ND<0.45	5.6	ND<0.084	No further action	No further action	No further action
		Sub-slab	ND<0.21	ND<0.16	ND<0.16	0.63	0.39	ND<0.55	19	ND<0.10			
12/5/2017	China SSD-MP-5	Ambient	ND<0.11	ND<0.080	ND<0.080	0.32	0.88	ND<0.27	0.56	ND<0.051	No further action	No further action	No further action
		Sub-slab	ND<0.21	ND<0.16	ND<0.16	0.55	4.7	ND<0.55	0.69	ND<0.10			
12/5/2017	China VP-9	Ambient	0.16	ND<0.080	ND<0.080	0.48	3.7	ND<0.27	3.5	ND<0.051	No further action	No further action	No further action
		Sub-slab	0.75	ND<0.16	ND<0.16	0.51	6.6	ND<0.55	ND<0.69	0.66			
12/5/2017	Sparkle VP-6	Ambient	ND<0.11	ND<0.080	ND<0.080	0.32	0.43	ND<0.27	0.59	ND<0.051	No further action	No further action	No further action
		Sub-slab	3.5	4.4	ND<0.16	ND<0.25	46	ND<0.55	ND<0.69	ND<0.10			
12/5/2017	Sparkle VP-5	Ambient	ND<0.11	ND<0.080	ND<0.080	0.31	0.50	ND<0.27	0.56	ND<0.051	No further action	No further action	No further action
		Sub-slab	2.5	3.5	ND<0.16	0.48	24	ND<0.55	ND<0.69	ND<0.10			

Note:

Results and Standards expressed in micrograms per cubic meter (µg/m3)

ND = Not detected above laboratory detection limits

Constituents of concern were determined by the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated May 2017



Appendix A – NYSDEC Correspondences

From: [Herb Woike](#)
To: [Daniel Konchan](#)
Subject: FW: UB - Orangeburg - SSDS Decommissioning Request
Date: Friday, February 10, 2017 2:06:33 PM
Attachments: [image001.png](#)
[image002.png](#)

Dan,

I don't think we received a letter just the 2 emails below outlining what DEC is requiring at Orangeburg. Please use this information to update the SVI Report. Thanks.

Herbert E. Woike, LEP, LSP
Senior Project Manager
Groundwater & Environmental Services, Inc.
425E Hayden Station Road
Windsor, CT 06095
(800) 220-6119 Ext. 3534
Cell - 860-466-0369
hwoike@gesonline.com

From: Verrigni, Jamie L (DEC) [<mailto:jamie.verrigni@dec.ny.gov>]
Sent: Wednesday, January 25, 2017 9:02 AM
To: Herb Woike
Cc: Monica Roth <mroth@ubproperties.com> (mroth@ubproperties.com); Omorogbe, Amen (DEC); Ockerby, Renata E (HEALTH); Schuck, Maureen E (HEALTH)
Subject: RE: UB - Orangeburg - SSDS Decommissioning Request

Herb,

This area will still need to be sampled over the next two years. New sampling ports would need to be installed once the existing ones are destroyed by the concrete fill.

Thanks,
Jamie

Jamie Verrigni, P.E.

Environmental Engineer, Division of Environmental Remediation

New York State Department of Environmental Conservation

625 Broadway, 11th Floor, Albany, NY 12233-7014

P: (518) 402-9662 | F: (518) 402-9679 | jamie.verrigni@dec.ny.gov

www.dec.ny.gov |  | 

From: Herb Woike [<mailto:HWoike@gesonline.com>]

Sent: Friday, January 20, 2017 3:01 PM
To: Verrigni, Jamie L (DEC) <jamie.verrigni@dec.ny.gov>
Cc: Monica Roth <mroth@ubproperties.com> (mroth@ubproperties.com)
<mroth@ubproperties.com>
Subject: RE: UB - Orangeburg - SSDS Decommissioning Request

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Jamie,

Thanks for getting back to us so quickly. I do have a question that I hope you can clarify. It looks like you're requesting sampling at all three (3) of the tenant spaces. However, the new tenant at the former Deli Spot will be retrofitting the space and is requiring additional support for the floor which will require Urstadt Biddle to pump concrete fill below the floor. We expect this work will seal and/or destroy the existing sampling ports. Given the lack of CVOC concentrations under the former Deli Spot, will this area still need to be sampled over the next two years?

Let us know or if you'd prefer I can call and talk live. Thanks and have a good weekend.

Herb

Herbert E. Woike, LEP, LSP
Senior Project Manager
Groundwater & Environmental Services, Inc.
425E Hayden Station Road
Windsor, CT 06095
(800) 220-6119 Ext. 3534
Cell - 860-466-0369
hwoike@gesonline.com

From: Verrigni, Jamie L (DEC) [<mailto:jamie.verrigni@dec.ny.gov>]
Sent: Friday, January 20, 2017 2:23 PM
To: Herb Woike
Cc: Monica Roth <mroth@ubproperties.com> (mroth@ubproperties.com); rapaglia@ubproperties.com; msung@ubproperties.com; Ockerby, Renata E (HEALTH); Omorogbe, Amen (DEC); soniker@kamso.com; Schuck, Maureen E (HEALTH)
Subject: RE: UB - Orangeburg - SSDS Decommissioning Request

Herb,

The Department and NYSDOH have reviewed the request dated January 3, 2017 to decommission the sub-slab depressurization systems (SSDSs) at two of the three tenant spaces, which were formerly occupied by Sparkle Cleaners and the Deli Spot and are currently vacant, at the Orangetown Shopping Center Site. Based on the information provided, this request is hereby approved with the following contingency:

- Sub-slab and indoor air samples should be collected yearly at the three tenant spaces for at least two more heating seasons (i.e., 2017-2018 and 2018-2019). If potential impacts are not observed during the sampling events then

the sampling can be discontinued and no further action is needed. However, if any potential impacts are identified then monitoring must continue and/or the SSDSs must be re-installed at the former Sparkle Cleaners and former Deli Spot.

If you have any questions or comments please feel free to contact me.

Jamie

Jamie Verrigni, P.E.

Environmental Engineer, Division of Environmental Remediation

New York State Department of Environmental Conservation

625 Broadway, 11th Floor, Albany, NY 12233-7014

P: (518) 402-9662 | F: (518) 402-9679 | jamie.verrigni@dec.ny.gov

www.dec.ny.gov |  | 

From: Herb Woike [<mailto:HWoike@gesonline.com>]

Sent: Tuesday, January 03, 2017 4:16 PM

To: Verrigni, Jamie L (DEC) <jamie.verrigni@dec.ny.gov>

Cc: Monica Roth <mroth@ubproperties.com> (mroth@ubproperties.com)

<mroth@ubproperties.com>; srapaglia@ubproperties.com; msung@ubproperties.com; Ockerby,

Renata E (HEALTH) <renata.ockerby@health.ny.gov>; Omorogbe, Amen (DEC)

<amen.omorogbe@dec.ny.gov>; soniker@kamsco.com

Subject: UB - Orangeburg - SSDS Decommissioning Request

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Jamie,

Attached please find a letter requesting that the NYSDEC and NYSDOH allow Urstadt Biddle to decommission the SSDS components and monitoring points within the currently vacant spaces of building #2 at the Orangeburg Shopping Center, specifically the former Sparkle Cleaners and former Deli Spot. As requested in your letter dated March 4, 2016, additional sub-slab and indoor air sampling was conducted to evaluate potential soil vapor intrusion during the winter months.

Given current site data and the desire to allow a new tenant into the former Deli Spot space, we are hoping you could provide a timely review and response. If you have any questions please feel free to give me a call. Thanks for your assistance in the matter.

Herbert E. Woike, LEP, LSP

Senior Project Manager

Groundwater & Environmental Services, Inc.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Remedial Bureau C
625 Broadway, 11th Floor, Albany, NY 12233-7014
P: (518) 402-9662 | F: (518) 402-9679
www.dec.ny.gov

March 04, 2016

Karen Bourque
Groundwater & Environmental Services, Inc.
16 Mr. Ebo South, Suite 21
Brewster, NY 10509

Re: Orangetown Shopping Center
Site ID No. C344066
Orangetown, Rockland County
Soil Vapor Intrusion Investigation Summary

Dear Ms. Bourque:

The New York State Department of Environmental Conservation and the New York State Department of Health (Departments) have reviewed the revised Soil Vapor Intrusion (SVI) Investigation Summary, dated February 2016, which recommends permanently decommissioning the sub-slab depressurization systems (SSDs) at the site. Based on review of the April and December 2015 SVI sampling results and the remaining contamination at the site, the Departments do not feel it is appropriate to permanently decommission the SSDs at this time. All three SSDs should remain in place. However, the SSDs may remain shut down for the majority of the 2016 Calendar year.

Before re-evaluating for permanent shut-down, at least two additional rounds of SVI sampling should be conducted. The next round of SVI sampling should be performed in conjunction with the 2016 Fourth Quarter groundwater monitoring event (i.e., November 2016) in order to provide data from both media. The second round of SVI sampling (post-2016 event) shall be determined/scheduled based on a review of the data.

Also, notification is requested prior to the two vacant tenant units becoming re-occupied. Indoor air sampling may be warranted prior to occupancy.



Department of
Environmental
Conservation



Appendix B – NYSDOH Indoor Air Quality Questionnaire and Building Inventory Form

**NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH**

This form must be completed for each residence involved in indoor air testing.

Preparer's Name R. H. Brown Date/Time Prepared 12.4/5.17
Preparer's Affiliation GBS Phone No. 846 839 5155
Purpose of Investigation SUI

1. OCCUPANT:**Interviewed:** Y/NLast Name: Liz Stone Attwood First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

Number of Occupants/persons at this location _____ Age of Occupants _____

2. OWNER OR LANDLORD: (Check if same as occupant ____)**Interviewed:** Y/Y

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

3. BUILDING CHARACTERISTICS**Type of Building:** (Circle appropriate response)Residential
IndustrialSchool
ChurchCommercial/Multi-use
Other: _____

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other: _____

If multiple units, how many? 3

If the property is commercial, type?

Business Type(s) Chinese take out / Empty / Lig. Store

Does it include residences (i.e., multi-use)? Y / N If yes, how many? _____

Other characteristics:

Number of floors 1

Building age _____

Is the building insulated? Y / N

How air tight? Tight / Average / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

N/A

Airflow near source

up into Ceiling vents.

Outdoor air infiltration

In when front door opens

Infiltration into air ducts

up into returns.

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

- a. Above grade construction: wood frame concrete stone brick
- b. Basement type: full crawlspace slab other N/A
- c. Basement floor: concrete dirt stone other N/A
- d. Basement floor: uncovered covered covered with N/A
- e. Concrete floor: unsealed sealed sealed with paint (lin stone)
- f. Foundation walls: poured block stone other concrete
- g. Foundation walls: unsealed sealed sealed with paint
- h. The basement is: wet damp dry moldy
- i. The basement is: finished unfinished partially finished
- j. Sump present? Y N
- k. Water in sump? Y / N not applicable

 Basement/Lowest level depth below grade: 0 (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

None
6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation
 Space Heaters
 Electric baseboard

 Heat pump
 Stream radiation
 Wood stove

 Hot water baseboard
 Radiant floor
 Outdoor wood boiler Other _____

The primary type of fuel used is:

Natural Gas
 Electric
 Wood

 Fuel Oil
 Propane
 Coal

 Kerosene
 Solar

 Domestic hot water tank fueled by: Electric

 Boiler/furnace located in: Basement Outdoors Main Floor Other roof

 Air conditioning: Central Air Window units Open Windows None

Are there air distribution ducts present? Y/N

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

AC is off

7. OCCUPANCY

Is basement/lowest level occupied? Full-time Occasionally Seldom Almost Never

Level General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)

Basement

N/A

1st Floor

Dining room, living room, kitchen

2nd Floor

N/A

3rd Floor

4th Floor



8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage?

Y/N

b. Does the garage have a separate heating unit?

Y / N / NA

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car)

Y / N / NA

Please specify _____

d. Has the building ever had a fire?

Y/N

When? _____

e. Is a kerosene or unvented gas space heater present?

Y / N

Where? _____

f. Is there a workshop or hobby/craft area?

Y / N

Where & Type? _____

g. Is there smoking in the building?

Y / N

How frequently? _____

h. Have cleaning products been used recently?

Y / N

When & Type? Bathrooms / daily

i. Have cosmetic products been used recently?

Y / N

When & Type? _____

j. Has painting/staining been done in the last 6 months? Y / N Where & When? Living Room Floor has been sealed w/ epoxy paint since when.

k. Is there new carpet, drapes or other textiles? Y / N Where & When? _____

l. Have air fresheners been used recently? Y / N When & Type? Daily Bathrooms

m. Is there a kitchen exhaust fan? Y / N If yes, where vented? roof

n. Is there a bathroom exhaust fan? Y / N If yes, where vented? roof

o. Is there a clothes dryer? Y / N If yes, is it vented outside? Y / N

p. Has there been a pesticide application? Y / N When & Type? _____

Are there odors in the building?

If yes, please describe: _____

Do any of the building occupants use solvents at work? Y / N

(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist)

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work? Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly)

Yes, use dry-cleaning infrequently (monthly or less)

Yes, work at a dry-cleaning service

No

Unknown

Is there a radon mitigation system for the building/structure? Y / N Date of Installation: _____

Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply: Public Water Drilled Well Driven Well Dug Well Other: _____

Sewage Disposal: Public Sewer Septic Tank Leach Field Dry Well Other: _____

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: N/A

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

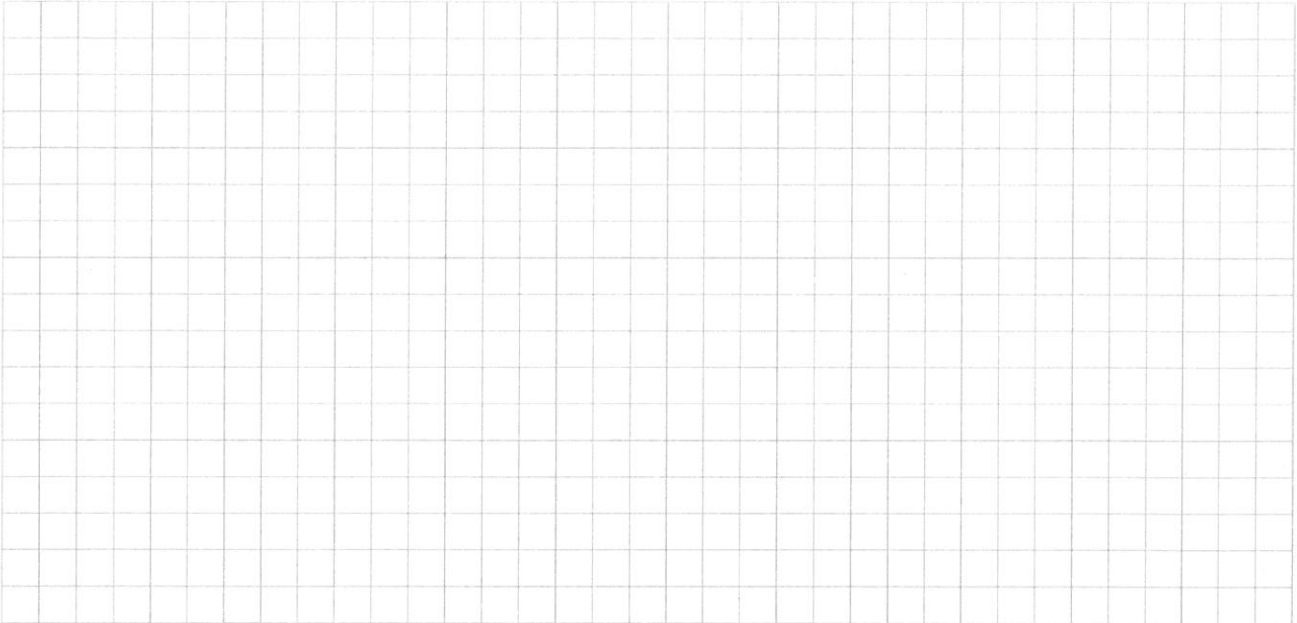
c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

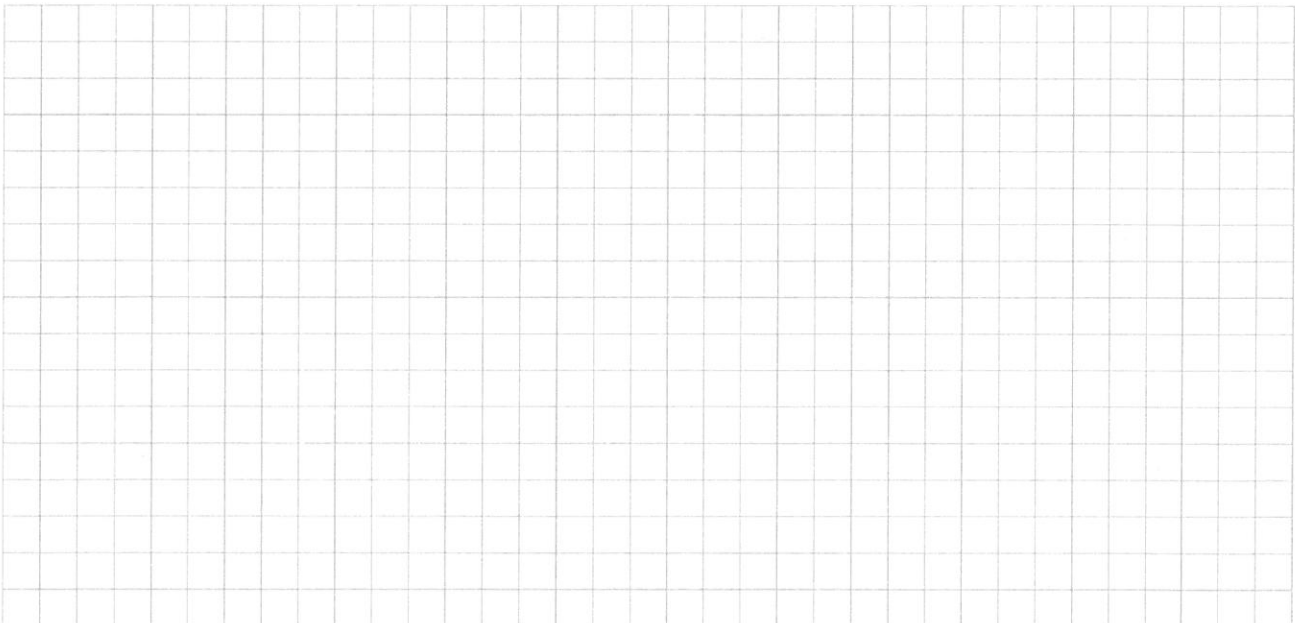
11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:



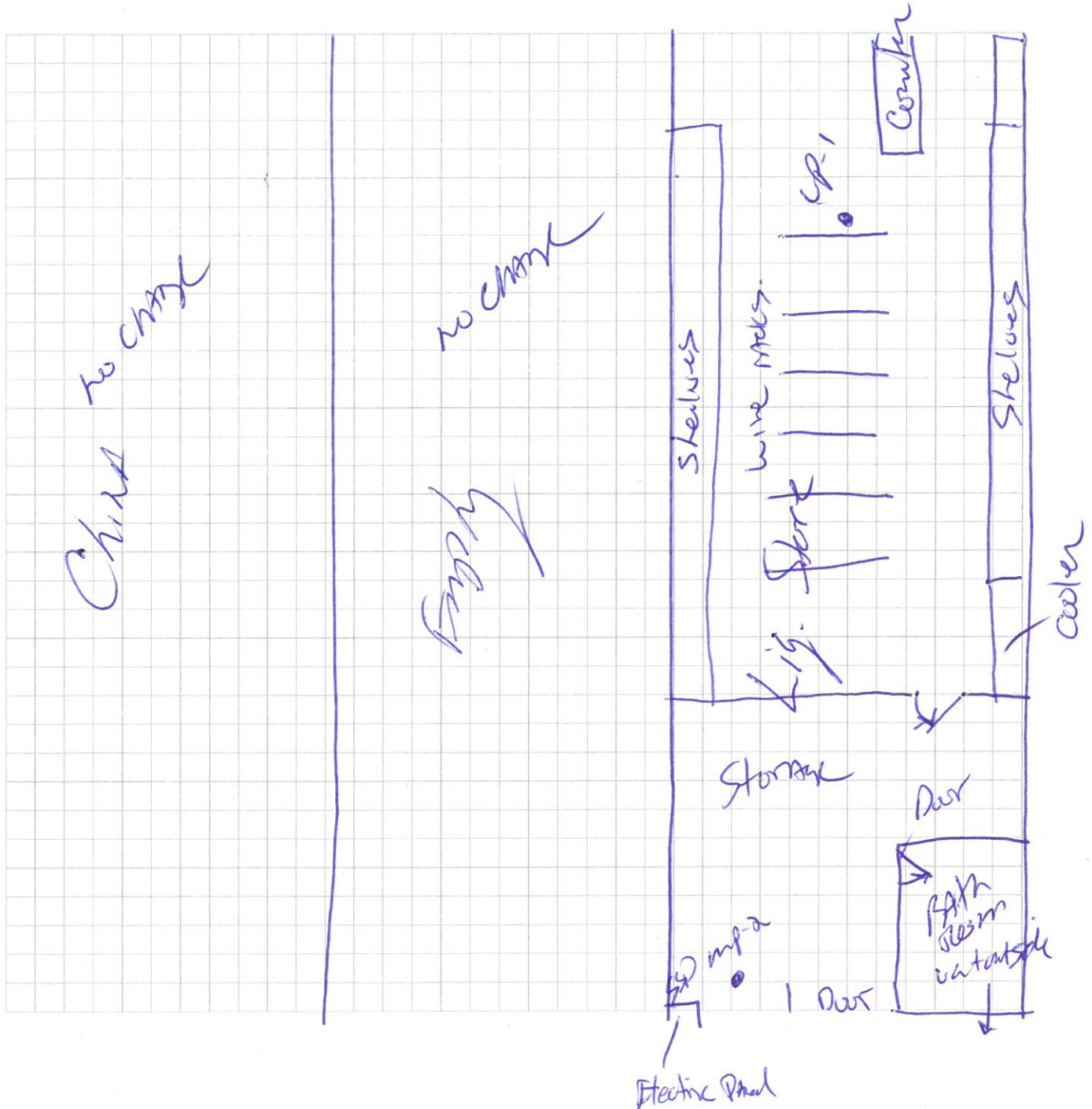
First Floor:



12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: *mini MATE PID*

List specific products found in the residence that have the potential to affect indoor air quality.

[illegible]

* Describe the condition of the product containers as **Unopened (UO)**, **Used (U)**, or **Deteriorated (D)**

**** Photographs of the front and back of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.**



Appendix C – Laboratory Analytical Results

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Groundwater & Environmental Services

Orangeburg UB, Orangeburg, NY

1102613-02-210 ORG 1111 / 11905-00

SGS Job Number: JC56815

Sampling Date: 12/05/17

Report to:

Groundwater & Environmental Services
16 Mount Ebo Road South Suite 21
Brewster, NY 10509
MDeGloria@gesonline.com; matthew.cordova@sgs.com

ATTN: Michael DeGloria

Total number of pages in report: **808**



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.

A handwritten signature in black ink that reads 'Nancy F. Cole'.

Nancy Cole
Laboratory Director

Client Service contact: Matt Cordova 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)

This report shall not be reproduced, except in its entirety, without the written approval of SGS.
Test results relate only to samples analyzed.

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Sample Summary

Groundwater & Environmental Services

Job No: JC56815

Orangeburg UB, Orangeburg, NY
Project No: 1102613-02-210 ORG 1111 / 11905-00

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
JC56815-1	12/05/17	17:58 LM	12/07/17	AIR	Ambient Air Comp.	OUTSIDE
JC56815-2	12/05/17	19:17 LM	12/07/17	AIR	Soil Vapor Comp.	SSD-MP-2
JC56815-3	12/05/17	19:15 LM	12/07/17	AIR	Ambient Air Comp.	SSD-MP-2
JC56815-4	12/05/17	19:12 LM	12/07/17	AIR	Soil Vapor Comp.	VP-1
JC56815-5	12/05/17	19:10 LM	12/07/17	AIR	Ambient Air Comp.	VP-1
JC56815-6	12/05/17	18:00 LM	12/07/17	AIR	Soil Vapor Comp.	VP-6
JC56815-7	12/05/17	17:59 LM	12/07/17	AIR	Ambient Air Comp.	VP-6
JC56815-8	12/05/17	17:57 LM	12/07/17	AIR	Soil Vapor Comp.	VP-5
JC56815-9	12/05/17	17:53 LM	12/07/17	AIR	Ambient Air Comp.	VP-5
JC56815-10	12/05/17	18:29 LM	12/07/17	AIR	Soil Vapor Comp.	VP-9
JC56815-11	12/05/17	18:30 LM	12/07/17	AIR	Ambient Air Comp.	VP-9
JC56815-12	12/05/17	18:24 LM	12/07/17	AIR	Soil Vapor Comp.	SSD-MP-5
JC56815-13	12/05/17	18:26 LM	12/07/17	AIR	Ambient Air Comp.	SSD-MP-5

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Groundwater & Environmental Services

Job No JC56815

Site: Orangeburg UB, Orangeburg, NY

Report Date 12/29/2017 11:38:28 A

On 12/07/2017, 13 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. A SGS North America Inc. Job Number of JC56815 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.

MS Volatiles By Method TO-15

Matrix: AIR

Batch ID: V6W105

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC56815-2DUP were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC56815-2, JC56815-6, JC56815-8 have compounds reported with "E" qualifiers indicating estimated value exceeding calibration range.
- RPD(s) for Duplicate for Methylene chloride are outside control limits. Analytical precision exceeds in-house control limits.

Matrix: AIR

Batch ID: V6W106

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC57421-1DUP were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC56815-3, JC56815-5 have compounds reported with "E" qualifiers indicating estimated value exceeding calibration range.

Matrix: AIR

Batch ID: V6W107

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC57579-2DUP were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

SGS North America Inc. 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 North America Inc. 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 North America Inc indicated via signature on the report cover

Friday, December 29, 2017

Page 1 of 1

Summary of Hits

Job Number: JC56815
Account: Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY
Collected: 12/05/17



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method

JC56815-1 OUTSIDE

Acetone	2.2	0.10	ppbv	TO-15
Benzene	0.24	0.10	ppbv	TO-15
Chloromethane	0.34	0.10	ppbv	TO-15
Carbon tetrachloride	0.046	0.020	ppbv	TO-15
Dichlorodifluoromethane	0.26	0.10	ppbv	TO-15
Ethanol	4.2	0.25	ppbv	TO-15
Ethyl Acetate	1.3	0.10	ppbv	TO-15
Hexane	0.64	0.10	ppbv	TO-15
Isopropyl Alcohol	0.36	0.10	ppbv	TO-15
Methylene chloride	0.98	0.10	ppbv	TO-15
Methyl ethyl ketone	0.22	0.10	ppbv	TO-15
Propylene	0.51	0.25	ppbv	TO-15
Tetrachloroethylene	0.049	0.020	ppbv	TO-15
Toluene	0.39	0.10	ppbv	TO-15
Trichlorofluoromethane	0.14	0.050	ppbv	TO-15
m,p-Xylene	0.19	0.10	ppbv	TO-15
Xylenes (total)	0.19	0.10	ppbv	TO-15
Acetone	5.2	0.24	ug/m3	TO-15
Benzene	0.77	0.32	ug/m3	TO-15
Chloromethane	0.70	0.21	ug/m3	TO-15
Carbon tetrachloride	0.29	0.13	ug/m3	TO-15
Dichlorodifluoromethane	1.3	0.49	ug/m3	TO-15
Ethanol	7.9	0.47	ug/m3	TO-15
Ethyl Acetate	4.7	0.36	ug/m3	TO-15
Hexane	2.3	0.35	ug/m3	TO-15
Isopropyl Alcohol	0.88	0.25	ug/m3	TO-15
Methylene chloride	3.4	0.35	ug/m3	TO-15
Methyl ethyl ketone	0.65	0.29	ug/m3	TO-15
Propylene	0.88	0.43	ug/m3	TO-15
Tetrachloroethylene	0.33	0.14	ug/m3	TO-15
Toluene	1.5	0.38	ug/m3	TO-15
Trichlorofluoromethane	0.79	0.28	ug/m3	TO-15
m,p-Xylene	0.83	0.43	ug/m3	TO-15
Xylenes (total)	0.83	0.43	ug/m3	TO-15

JC56815-2 SSD-MP-2

Acetone	21.1	0.20	ppbv	TO-15
Benzene	0.32	0.20	ppbv	TO-15
Chloroform	0.29	0.20	ppbv	TO-15
Chloromethane	0.90	0.20	ppbv	TO-15
Carbon tetrachloride	0.10	0.040	ppbv	TO-15
Dichlorodifluoromethane	0.60	0.20	ppbv	TO-15

Summary of Hits

Job Number: JC56815
Account: Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY
Collected: 12/05/17



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Ethanol		50.7 E	0.50		ppbv	TO-15
Ethyl Acetate		0.64	0.20		ppbv	TO-15
Hexane		0.90	0.20		ppbv	TO-15
Isopropyl Alcohol		1.2	0.20		ppbv	TO-15
Methylene chloride		5.4	0.20		ppbv	TO-15
Methyl ethyl ketone		6.0	0.20		ppbv	TO-15
1,2,4-Trimethylbenzene		0.74	0.20		ppbv	TO-15
1,3,5-Trimethylbenzene		0.22	0.20		ppbv	TO-15
Tetrachloroethylene		0.058	0.040		ppbv	TO-15
Tetrahydrofuran		3.4	0.20		ppbv	TO-15
Toluene		0.55	0.20		ppbv	TO-15
Trichlorofluoromethane		0.37	0.10		ppbv	TO-15
m,p-Xylene		0.34	0.20		ppbv	TO-15
Xylenes (total)		0.34	0.20		ppbv	TO-15
Acetone		50.1	0.48		ug/m3	TO-15
Benzene		1.0	0.64		ug/m3	TO-15
Chloroform		1.4	0.98		ug/m3	TO-15
Chloromethane		1.9	0.41		ug/m3	TO-15
Carbon tetrachloride		0.63	0.25		ug/m3	TO-15
Dichlorodifluoromethane		3.0	0.99		ug/m3	TO-15
Ethanol		95.5 E	0.94		ug/m3	TO-15
Ethyl Acetate		2.3	0.72		ug/m3	TO-15
Hexane		3.2	0.70		ug/m3	TO-15
Isopropyl Alcohol		2.9	0.49		ug/m3	TO-15
Methylene chloride		19	0.69		ug/m3	TO-15
Methyl ethyl ketone		18	0.59		ug/m3	TO-15
1,2,4-Trimethylbenzene		3.6	0.98		ug/m3	TO-15
1,3,5-Trimethylbenzene		1.1	0.98		ug/m3	TO-15
Tetrachloroethylene		0.39	0.27		ug/m3	TO-15
Tetrahydrofuran		10	0.59		ug/m3	TO-15
Toluene		2.1	0.75		ug/m3	TO-15
Trichlorofluoromethane		2.1	0.56		ug/m3	TO-15
m,p-Xylene		1.5	0.87		ug/m3	TO-15
Xylenes (total)		1.5	0.87		ug/m3	TO-15

JC56815-3 SSD-MP-2

Acetone	64.4	1.3	ppbv	TO-15
Benzene	0.46	0.17	ppbv	TO-15
Chloromethane	0.72	0.17	ppbv	TO-15
Carbon tetrachloride	0.10	0.033	ppbv	TO-15
Dichlorodifluoromethane	0.60	0.17	ppbv	TO-15
Ethanol	281 E	3.3	ppbv	TO-15
Ethyl Acetate	1.4	0.17	ppbv	TO-15
Freon 113	0.088	0.083	ppbv	TO-15

Summary of Hits

Job Number: JC56815
Account: Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY
Collected: 12/05/17



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Hexane		0.65	0.17		ppbv	TO-15
Isopropyl Alcohol		3.6	0.17		ppbv	TO-15
Methylene chloride		1.6	0.17		ppbv	TO-15
Methyl ethyl ketone		0.55	0.17		ppbv	TO-15
Propylene		1.4	0.41		ppbv	TO-15
1,2,4-Trimethylbenzene		0.17	0.17		ppbv	TO-15
Tetrachloroethylene		0.092	0.033		ppbv	TO-15
Toluene		0.96	0.17		ppbv	TO-15
Trichlorofluoromethane		0.38	0.083		ppbv	TO-15
m,p-Xylene		0.41	0.17		ppbv	TO-15
Xylenes (total)		0.41	0.17		ppbv	TO-15
Acetone		153	3.1		ug/m3	TO-15
Benzene		1.5	0.54		ug/m3	TO-15
Chloromethane		1.5	0.35		ug/m3	TO-15
Carbon tetrachloride		0.63	0.21		ug/m3	TO-15
Dichlorodifluoromethane		3.0	0.84		ug/m3	TO-15
Ethanol		529 E	6.2		ug/m3	TO-15
Ethyl Acetate		5.0	0.61		ug/m3	TO-15
Freon 113		0.67	0.64		ug/m3	TO-15
Hexane		2.3	0.60		ug/m3	TO-15
Isopropyl Alcohol		8.8	0.42		ug/m3	TO-15
Methylene chloride		5.6	0.59		ug/m3	TO-15
Methyl ethyl ketone		1.6	0.50		ug/m3	TO-15
Propylene		2.4	0.70		ug/m3	TO-15
1,2,4-Trimethylbenzene		0.84	0.84		ug/m3	TO-15
Tetrachloroethylene		0.62	0.22		ug/m3	TO-15
Toluene		3.6	0.64		ug/m3	TO-15
Trichlorofluoromethane		2.1	0.47		ug/m3	TO-15
m,p-Xylene		1.8	0.74		ug/m3	TO-15
Xylenes (total)		1.8	0.74		ug/m3	TO-15

JC56815-4 VP-1

Acetone	41.8	1.4	ppbv	TO-15
Benzene	0.43	0.20	ppbv	TO-15
Chloromethane	1.1	0.20	ppbv	TO-15
Carbon tetrachloride	0.074	0.040	ppbv	TO-15
Dichlorodifluoromethane	0.27	0.20	ppbv	TO-15
Ethanol	61.0	3.4	ppbv	TO-15
Ethyl Acetate	1.1	0.20	ppbv	TO-15
Hexane	0.23	0.20	ppbv	TO-15
Isopropyl Alcohol	1.6	0.20	ppbv	TO-15
Methyl ethyl ketone	10.1	0.20	ppbv	TO-15
Methyl Isobutyl Ketone	0.21	0.20	ppbv	TO-15
Propylene	0.92	0.50	ppbv	TO-15

Summary of Hits

Job Number: JC56815
Account: Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY
Collected: 12/05/17



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
1,1,1-Trichloroethane		0.13	0.10		ppbv	TO-15
1,2,4-Trimethylbenzene		0.79	0.20		ppbv	TO-15
1,3,5-Trimethylbenzene		0.23	0.20		ppbv	TO-15
Tertiary Butyl Alcohol		0.44	0.20		ppbv	TO-15
Tetrachloroethylene		0.72	0.040		ppbv	TO-15
Tetrahydrofuran		7.4	0.20		ppbv	TO-15
Toluene		0.90	0.20		ppbv	TO-15
Trichloroethylene		0.23	0.040		ppbv	TO-15
Trichlorofluoromethane		0.21	0.10		ppbv	TO-15
m,p-Xylene		0.38	0.20		ppbv	TO-15
Xylenes (total)		0.38	0.20		ppbv	TO-15
Acetone		99.3	3.3		ug/m3	TO-15
Benzene		1.4	0.64		ug/m3	TO-15
Chloromethane		2.3	0.41		ug/m3	TO-15
Carbon tetrachloride		0.47	0.25		ug/m3	TO-15
Dichlorodifluoromethane		1.3	0.99		ug/m3	TO-15
Ethanol		115	6.4		ug/m3	TO-15
Ethyl Acetate		4.0	0.72		ug/m3	TO-15
Hexane		0.81	0.70		ug/m3	TO-15
Isopropyl Alcohol		3.9	0.49		ug/m3	TO-15
Methyl ethyl ketone		29.8	0.59		ug/m3	TO-15
Methyl Isobutyl Ketone		0.86	0.82		ug/m3	TO-15
Propylene		1.6	0.86		ug/m3	TO-15
1,1,1-Trichloroethane		0.71	0.55		ug/m3	TO-15
1,2,4-Trimethylbenzene		3.9	0.98		ug/m3	TO-15
1,3,5-Trimethylbenzene		1.1	0.98		ug/m3	TO-15
Tertiary Butyl Alcohol		1.3	0.61		ug/m3	TO-15
Tetrachloroethylene		4.9	0.27		ug/m3	TO-15
Tetrahydrofuran		22	0.59		ug/m3	TO-15
Toluene		3.4	0.75		ug/m3	TO-15
Trichloroethylene		1.2	0.21		ug/m3	TO-15
Trichlorofluoromethane		1.2	0.56		ug/m3	TO-15
m,p-Xylene		1.7	0.87		ug/m3	TO-15
Xylenes (total)		1.7	0.87		ug/m3	TO-15

JC56815-5 VP-1

Acetone	71.9	1.4	ppbv	TO-15
Benzene	0.43	0.17	ppbv	TO-15
Chloroform	0.25	0.17	ppbv	TO-15
Chloromethane	0.69	0.17	ppbv	TO-15
Carbon tetrachloride	0.067	0.034	ppbv	TO-15
Dichlorodifluoromethane	0.47	0.17	ppbv	TO-15
Ethanol	346 E	3.4	ppbv	TO-15
Ethyl Acetate	2.8	0.17	ppbv	TO-15

Summary of Hits

Job Number: JC56815
Account: Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY
Collected: 12/05/17



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Hexane		0.31	0.17		ppbv	TO-15
Isopropyl Alcohol		6.4	0.17		ppbv	TO-15
Methylene chloride		0.25	0.17		ppbv	TO-15
Methyl ethyl ketone		0.95	0.17		ppbv	TO-15
Propylene		1.2	0.43		ppbv	TO-15
Tertiary Butyl Alcohol		0.18	0.17		ppbv	TO-15
Tetrachloroethylene		0.16	0.034		ppbv	TO-15
Toluene		0.66	0.17		ppbv	TO-15
Trichloroethylene		0.048	0.034		ppbv	TO-15
Trichlorofluoromethane		0.24	0.085		ppbv	TO-15
Acetone		171	3.3		ug/m3	TO-15
Benzene		1.4	0.54		ug/m3	TO-15
Chloroform		1.2	0.83		ug/m3	TO-15
Chloromethane		1.4	0.35		ug/m3	TO-15
Carbon tetrachloride		0.42	0.21		ug/m3	TO-15
Dichlorodifluoromethane		2.3	0.84		ug/m3	TO-15
Ethanol		652 E	6.4		ug/m3	TO-15
Ethyl Acetate		10	0.61		ug/m3	TO-15
Hexane		1.1	0.60		ug/m3	TO-15
Isopropyl Alcohol		16	0.42		ug/m3	TO-15
Methylene chloride		0.87	0.59		ug/m3	TO-15
Methyl ethyl ketone		2.8	0.50		ug/m3	TO-15
Propylene		2.1	0.74		ug/m3	TO-15
Tertiary Butyl Alcohol		0.55	0.52		ug/m3	TO-15
Tetrachloroethylene		1.1	0.23		ug/m3	TO-15
Toluene		2.5	0.64		ug/m3	TO-15
Trichloroethylene		0.26	0.18		ug/m3	TO-15
Trichlorofluoromethane		1.3	0.48		ug/m3	TO-15

JC56815-6 VP-6

Acetone	26.5	0.20		ppbv	TO-15
Benzene	0.30	0.20		ppbv	TO-15
Chloroform	0.45	0.20		ppbv	TO-15
Chloromethane	0.25	0.20		ppbv	TO-15
Dichlorodifluoromethane	0.49	0.20		ppbv	TO-15
cis-1,2-Dichloroethylene	1.1	0.20		ppbv	TO-15
Ethanol	66.6 E	0.50		ppbv	TO-15
Isopropyl Alcohol	2.1	0.20		ppbv	TO-15
Methyl ethyl ketone	1.1	0.20		ppbv	TO-15
Tetrachloroethylene	6.8	0.040		ppbv	TO-15
Toluene	0.69	0.20		ppbv	TO-15
Trichloroethylene	0.65	0.040		ppbv	TO-15
Trichlorofluoromethane	0.23	0.10		ppbv	TO-15
m,p-Xylene	0.25	0.20		ppbv	TO-15

Summary of Hits

Job Number: JC56815
Account: Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY
Collected: 12/05/17



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Xylenes (total)		0.25	0.20		ppbv	TO-15
Acetone		62.9	0.48		ug/m3	TO-15
Benzene		0.96	0.64		ug/m3	TO-15
Chloroform		2.2	0.98		ug/m3	TO-15
Chloromethane		0.52	0.41		ug/m3	TO-15
Dichlorodifluoromethane		2.4	0.99		ug/m3	TO-15
cis-1,2-Dichloroethylene		4.4	0.79		ug/m3	TO-15
Ethanol		125 E	0.94		ug/m3	TO-15
Isopropyl Alcohol		5.2	0.49		ug/m3	TO-15
Methyl ethyl ketone		3.2	0.59		ug/m3	TO-15
Tetrachloroethylene		46	0.27		ug/m3	TO-15
Toluene		2.6	0.75		ug/m3	TO-15
Trichloroethylene		3.5	0.21		ug/m3	TO-15
Trichlorofluoromethane		1.3	0.56		ug/m3	TO-15
m,p-Xylene		1.1	0.87		ug/m3	TO-15
Xylenes (total)		1.1	0.87		ug/m3	TO-15

JC56815-7 VP-6

Acetone	31.1	0.80		ppbv	TO-15
Benzene	0.23	0.10		ppbv	TO-15
Chloromethane	0.41	0.10		ppbv	TO-15
Carbon tetrachloride	0.051	0.020		ppbv	TO-15
Dichlorodifluoromethane	0.31	0.10		ppbv	TO-15
Ethanol	30.7	2.0		ppbv	TO-15
Ethyl Acetate	1.2	0.10		ppbv	TO-15
Hexane	0.14	0.10		ppbv	TO-15
Isopropyl Alcohol	1.8	0.10		ppbv	TO-15
Methylene chloride	0.17	0.10		ppbv	TO-15
Methyl ethyl ketone	0.44	0.10		ppbv	TO-15
Propylene	0.49	0.25		ppbv	TO-15
1,2,4-Trimethylbenzene	0.11	0.10		ppbv	TO-15
Tetrachloroethylene	0.064	0.020		ppbv	TO-15
Toluene	0.48	0.10		ppbv	TO-15
Trichlorofluoromethane	0.16	0.050		ppbv	TO-15
m,p-Xylene	0.19	0.10		ppbv	TO-15
Xylenes (total)	0.19	0.10		ppbv	TO-15
Acetone	73.9	1.9		ug/m3	TO-15
Benzene	0.73	0.32		ug/m3	TO-15
Chloromethane	0.85	0.21		ug/m3	TO-15
Carbon tetrachloride	0.32	0.13		ug/m3	TO-15
Dichlorodifluoromethane	1.5	0.49		ug/m3	TO-15
Ethanol	57.8	3.8		ug/m3	TO-15
Ethyl Acetate	4.3	0.36		ug/m3	TO-15
Hexane	0.49	0.35		ug/m3	TO-15

Summary of Hits

Job Number: JC56815
Account: Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY
Collected: 12/05/17



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Isopropyl Alcohol		4.4	0.25		ug/m3	TO-15
Methylene chloride		0.59	0.35		ug/m3	TO-15
Methyl ethyl ketone		1.3	0.29		ug/m3	TO-15
Propylene		0.84	0.43		ug/m3	TO-15
1,2,4-Trimethylbenzene		0.54	0.49		ug/m3	TO-15
Tetrachloroethylene		0.43	0.14		ug/m3	TO-15
Toluene		1.8	0.38		ug/m3	TO-15
Trichlorofluoromethane		0.90	0.28		ug/m3	TO-15
m,p-Xylene		0.83	0.43		ug/m3	TO-15
Xylenes (total)		0.83	0.43		ug/m3	TO-15
JC56815-8 VP-5						
Acetone		25.9	0.20		ppbv	TO-15
Benzene		0.31	0.20		ppbv	TO-15
Chloromethane		0.21	0.20		ppbv	TO-15
Carbon tetrachloride		0.077	0.040		ppbv	TO-15
Dichlorodifluoromethane		0.49	0.20		ppbv	TO-15
cis-1,2-Dichloroethylene		0.88	0.20		ppbv	TO-15
Ethanol		78.9 E	0.50		ppbv	TO-15
Ethyl Acetate		1.6	0.20		ppbv	TO-15
Isopropyl Alcohol		2.5	0.20		ppbv	TO-15
Methyl ethyl ketone		0.92	0.20		ppbv	TO-15
Tetrachloroethylene		3.5	0.040		ppbv	TO-15
Toluene		0.69	0.20		ppbv	TO-15
Trichloroethylene		0.47	0.040		ppbv	TO-15
Trichlorofluoromethane		0.24	0.10		ppbv	TO-15
m,p-Xylene		0.24	0.20		ppbv	TO-15
Xylenes (total)		0.24	0.20		ppbv	TO-15
Acetone		61.5	0.48		ug/m3	TO-15
Benzene		0.99	0.64		ug/m3	TO-15
Chloromethane		0.43	0.41		ug/m3	TO-15
Carbon tetrachloride		0.48	0.25		ug/m3	TO-15
Dichlorodifluoromethane		2.4	0.99		ug/m3	TO-15
cis-1,2-Dichloroethylene		3.5	0.79		ug/m3	TO-15
Ethanol		149 E	0.94		ug/m3	TO-15
Ethyl Acetate		5.8	0.72		ug/m3	TO-15
Isopropyl Alcohol		6.1	0.49		ug/m3	TO-15
Methyl ethyl ketone		2.7	0.59		ug/m3	TO-15
Tetrachloroethylene		24	0.27		ug/m3	TO-15
Toluene		2.6	0.75		ug/m3	TO-15
Trichloroethylene		2.5	0.21		ug/m3	TO-15
Trichlorofluoromethane		1.3	0.56		ug/m3	TO-15
m,p-Xylene		1.0	0.87		ug/m3	TO-15
Xylenes (total)		1.0	0.87		ug/m3	TO-15

Summary of Hits

Job Number: JC56815
Account: Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY
Collected: 12/05/17



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method

JC56815-9 VP-5

Acetone	31.3	0.80		ppbv	TO-15
Benzene	0.27	0.10		ppbv	TO-15
Chloromethane	0.40	0.10		ppbv	TO-15
Carbon tetrachloride	0.050	0.020		ppbv	TO-15
Dichlorodifluoromethane	0.30	0.10		ppbv	TO-15
Ethanol	33.7	2.0		ppbv	TO-15
Ethyl Acetate	0.95	0.10		ppbv	TO-15
Hexane	0.19	0.10		ppbv	TO-15
Isopropyl Alcohol	1.8	0.10		ppbv	TO-15
Methylene chloride	0.16	0.10		ppbv	TO-15
Methyl ethyl ketone	0.29	0.10		ppbv	TO-15
Propylene	0.50	0.25		ppbv	TO-15
Tetrachloroethylene	0.073	0.020		ppbv	TO-15
Toluene	0.46	0.10		ppbv	TO-15
Trichlorofluoromethane	0.16	0.050		ppbv	TO-15
m,p-Xylene	0.20	0.10		ppbv	TO-15
Xylenes (total)	0.20	0.10		ppbv	TO-15
Acetone	74.4	1.9		ug/m3	TO-15
Benzene	0.86	0.32		ug/m3	TO-15
Chloromethane	0.83	0.21		ug/m3	TO-15
Carbon tetrachloride	0.31	0.13		ug/m3	TO-15
Dichlorodifluoromethane	1.5	0.49		ug/m3	TO-15
Ethanol	63.5	3.8		ug/m3	TO-15
Ethyl Acetate	3.4	0.36		ug/m3	TO-15
Hexane	0.67	0.35		ug/m3	TO-15
Isopropyl Alcohol	4.4	0.25		ug/m3	TO-15
Methylene chloride	0.56	0.35		ug/m3	TO-15
Methyl ethyl ketone	0.86	0.29		ug/m3	TO-15
Propylene	0.86	0.43		ug/m3	TO-15
Tetrachloroethylene	0.50	0.14		ug/m3	TO-15
Toluene	1.7	0.38		ug/m3	TO-15
Trichlorofluoromethane	0.90	0.28		ug/m3	TO-15
m,p-Xylene	0.87	0.43		ug/m3	TO-15
Xylenes (total)	0.87	0.43		ug/m3	TO-15

JC56815-10 VP-9

Acetone	80.2	2.0		ppbv	TO-15
Benzene	0.37	0.20		ppbv	TO-15
Carbon disulfide	0.97	0.20		ppbv	TO-15
Chloroform	0.39	0.20		ppbv	TO-15
Carbon tetrachloride	0.081	0.040		ppbv	TO-15

Summary of Hits

Job Number: JC56815
Account: Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY
Collected: 12/05/17



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Dichlorodifluoromethane		0.49	0.20		ppbv	TO-15
Ethanol		98.5	5.0		ppbv	TO-15
Ethyl Acetate		4.5	0.20		ppbv	TO-15
Heptane		0.26	0.20		ppbv	TO-15
Isopropyl Alcohol		4.9	0.20		ppbv	TO-15
Methyl ethyl ketone		1.5	0.20		ppbv	TO-15
1,2,4-Trimethylbenzene		0.79	0.20		ppbv	TO-15
1,3,5-Trimethylbenzene		0.24	0.20		ppbv	TO-15
Tertiary Butyl Alcohol		0.30	0.20		ppbv	TO-15
Tetrachloroethylene		0.98	0.040		ppbv	TO-15
Tetrahydrofuran		0.44	0.20		ppbv	TO-15
Toluene		1.8	0.20		ppbv	TO-15
Trichloroethylene		0.14	0.040		ppbv	TO-15
Trichlorofluoromethane		0.24	0.10		ppbv	TO-15
Vinyl chloride		0.26	0.040		ppbv	TO-15
m,p-Xylene		0.38	0.20		ppbv	TO-15
Xylenes (total)		0.38	0.20		ppbv	TO-15
Acetone		191	4.8		ug/m3	TO-15
Benzene		1.2	0.64		ug/m3	TO-15
Carbon disulfide		3.0	0.62		ug/m3	TO-15
Chloroform		1.9	0.98		ug/m3	TO-15
Carbon tetrachloride		0.51	0.25		ug/m3	TO-15
Dichlorodifluoromethane		2.4	0.99		ug/m3	TO-15
Ethanol		186	9.4		ug/m3	TO-15
Ethyl Acetate		16	0.72		ug/m3	TO-15
Heptane		1.1	0.82		ug/m3	TO-15
Isopropyl Alcohol		12	0.49		ug/m3	TO-15
Methyl ethyl ketone		4.4	0.59		ug/m3	TO-15
1,2,4-Trimethylbenzene		3.9	0.98		ug/m3	TO-15
1,3,5-Trimethylbenzene		1.2	0.98		ug/m3	TO-15
Tertiary Butyl Alcohol		0.91	0.61		ug/m3	TO-15
Tetrachloroethylene		6.6	0.27		ug/m3	TO-15
Tetrahydrofuran		1.3	0.59		ug/m3	TO-15
Toluene		6.8	0.75		ug/m3	TO-15
Trichloroethylene		0.75	0.21		ug/m3	TO-15
Trichlorofluoromethane		1.3	0.56		ug/m3	TO-15
Vinyl chloride		0.66	0.10		ug/m3	TO-15
m,p-Xylene		1.7	0.87		ug/m3	TO-15
Xylenes (total)		1.7	0.87		ug/m3	TO-15
JC56815-11 VP-9						
Acetone		268	4.0		ppbv	TO-15
Benzene		0.40	0.10		ppbv	TO-15
Bromodichloromethane		0.067	0.050		ppbv	TO-15

Summary of Hits

Job Number: JC56815
Account: Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY
Collected: 12/05/17



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Carbon disulfide		0.23	0.10		ppbv	TO-15
Chloroform		0.40	0.10		ppbv	TO-15
Chloromethane		0.61	0.10		ppbv	TO-15
Carbon tetrachloride		0.077	0.020		ppbv	TO-15
Dichlorodifluoromethane		0.41	0.10		ppbv	TO-15
Ethanol		123	2.0		ppbv	TO-15
Ethyl Acetate		9.0	0.10		ppbv	TO-15
Freon 113		0.071	0.050		ppbv	TO-15
Heptane		0.19	0.10		ppbv	TO-15
Hexane		0.42	0.10		ppbv	TO-15
Isopropyl Alcohol		19.5	0.80		ppbv	TO-15
Methylene chloride		1.0	0.10		ppbv	TO-15
Methyl ethyl ketone		0.63	0.10		ppbv	TO-15
Propylene		0.96	0.25		ppbv	TO-15
1,2,4-Trimethylbenzene		0.20	0.10		ppbv	TO-15
2,2,4-Trimethylpentane		0.11	0.10		ppbv	TO-15
Tertiary Butyl Alcohol		0.16	0.10		ppbv	TO-15
Tetrachloroethylene		0.54	0.020		ppbv	TO-15
Toluene		1.9	0.10		ppbv	TO-15
Trichloroethylene		0.029	0.020		ppbv	TO-15
Trichlorofluoromethane		0.26	0.050		ppbv	TO-15
m,p-Xylene		0.31	0.10		ppbv	TO-15
o-Xylene		0.13	0.10		ppbv	TO-15
Xylenes (total)		0.44	0.10		ppbv	TO-15
Acetone		637	9.5		ug/m3	TO-15
Benzene		1.3	0.32		ug/m3	TO-15
Bromodichloromethane		0.45	0.33		ug/m3	TO-15
Carbon disulfide		0.72	0.31		ug/m3	TO-15
Chloroform		2.0	0.49		ug/m3	TO-15
Chloromethane		1.3	0.21		ug/m3	TO-15
Carbon tetrachloride		0.48	0.13		ug/m3	TO-15
Dichlorodifluoromethane		2.0	0.49		ug/m3	TO-15
Ethanol		232	3.8		ug/m3	TO-15
Ethyl Acetate		32	0.36		ug/m3	TO-15
Freon 113		0.54	0.38		ug/m3	TO-15
Heptane		0.78	0.41		ug/m3	TO-15
Hexane		1.5	0.35		ug/m3	TO-15
Isopropyl Alcohol		47.9	2.0		ug/m3	TO-15
Methylene chloride		3.5	0.35		ug/m3	TO-15
Methyl ethyl ketone		1.9	0.29		ug/m3	TO-15
Propylene		1.6	0.43		ug/m3	TO-15
1,2,4-Trimethylbenzene		0.98	0.49		ug/m3	TO-15
2,2,4-Trimethylpentane		0.51	0.47		ug/m3	TO-15
Tertiary Butyl Alcohol		0.49	0.30		ug/m3	TO-15
Tetrachloroethylene		3.7	0.14		ug/m3	TO-15

Summary of Hits

Job Number: JC56815
Account: Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY
Collected: 12/05/17



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Toluene		7.2	0.38		ug/m3	TO-15
Trichloroethylene		0.16	0.11		ug/m3	TO-15
Trichlorofluoromethane		1.5	0.28		ug/m3	TO-15
m,p-Xylene		1.3	0.43		ug/m3	TO-15
o-Xylene		0.56	0.43		ug/m3	TO-15
Xylenes (total)		1.9	0.43		ug/m3	TO-15

JC56815-12 SSD-MP-5

Acetone	102	3.0		ppbv	TO-15
Benzene	0.43	0.20		ppbv	TO-15
Chloromethane	0.28	0.20		ppbv	TO-15
Carbon tetrachloride	0.087	0.040		ppbv	TO-15
Dichlorodifluoromethane	0.50	0.20		ppbv	TO-15
Ethanol	107	7.4		ppbv	TO-15
Ethyl Acetate	6.5	0.20		ppbv	TO-15
Heptane	0.31	0.20		ppbv	TO-15
Hexane	0.27	0.20		ppbv	TO-15
Isopropyl Alcohol	5.8	0.20		ppbv	TO-15
Methylene chloride	0.20	0.20		ppbv	TO-15
Methyl ethyl ketone	1.6	0.20		ppbv	TO-15
Propylene	0.63	0.50		ppbv	TO-15
1,2,4-Trimethylbenzene	0.37	0.20		ppbv	TO-15
Tetrachloroethylene	0.69	0.040		ppbv	TO-15
Tetrahydrofuran	0.40	0.20		ppbv	TO-15
Toluene	2.2	0.20		ppbv	TO-15
Trichlorofluoromethane	0.26	0.10		ppbv	TO-15
m,p-Xylene	0.40	0.20		ppbv	TO-15
Xylenes (total)	0.40	0.20		ppbv	TO-15
Acetone	242	7.1		ug/m3	TO-15
Benzene	1.4	0.64		ug/m3	TO-15
Chloromethane	0.58	0.41		ug/m3	TO-15
Carbon tetrachloride	0.55	0.25		ug/m3	TO-15
Dichlorodifluoromethane	2.5	0.99		ug/m3	TO-15
Ethanol	202	14		ug/m3	TO-15
Ethyl Acetate	23	0.72		ug/m3	TO-15
Heptane	1.3	0.82		ug/m3	TO-15
Hexane	0.95	0.70		ug/m3	TO-15
Isopropyl Alcohol	14	0.49		ug/m3	TO-15
Methylene chloride	0.69	0.69		ug/m3	TO-15
Methyl ethyl ketone	4.7	0.59		ug/m3	TO-15
Propylene	1.1	0.86		ug/m3	TO-15
1,2,4-Trimethylbenzene	1.8	0.98		ug/m3	TO-15
Tetrachloroethylene	4.7	0.27		ug/m3	TO-15
Tetrahydrofuran	1.2	0.59		ug/m3	TO-15

Summary of Hits

Job Number: JC56815
Account: Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY
Collected: 12/05/17



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method

Toluene		8.3	0.75		ug/m3	TO-15
Trichlorofluoromethane		1.5	0.56		ug/m3	TO-15
m,p-Xylene		1.7	0.87		ug/m3	TO-15
Xylenes (total)		1.7	0.87		ug/m3	TO-15

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Acetone		349	4.0		ppbv	TO-15
Benzene		0.33	0.10		ppbv	TO-15
Chloromethane		0.50	0.10		ppbv	TO-15
Carbon tetrachloride		0.051	0.020		ppbv	TO-15
Dichlorodifluoromethane		0.31	0.10		ppbv	TO-15
Ethanol		149	10		ppbv	TO-15
Ethyl Acetate		8.7	0.10		ppbv	TO-15
Heptane		0.18	0.10		ppbv	TO-15
Hexane		0.14	0.10		ppbv	TO-15
Isopropyl Alcohol		24.2	4.0		ppbv	TO-15
Methylene chloride		0.16	0.10		ppbv	TO-15
Methyl ethyl ketone		0.83	0.10		ppbv	TO-15
Propylene		0.66	0.25		ppbv	TO-15
1,2,4-Trimethylbenzene		0.22	0.10		ppbv	TO-15
Tertiary Butyl Alcohol		0.13	0.10		ppbv	TO-15
Tetrachloroethylene		0.13	0.020		ppbv	TO-15
Toluene		2.0	0.10		ppbv	TO-15
Trichlorofluoromethane		0.16	0.050		ppbv	TO-15
m,p-Xylene		0.25	0.10		ppbv	TO-15
o-Xylene		0.10	0.10		ppbv	TO-15
Xylenes (total)		0.35	0.10		ppbv	TO-15
Acetone		829	9.5		ug/m3	TO-15
Benzene		1.1	0.32		ug/m3	TO-15
Chloromethane		1.0	0.21		ug/m3	TO-15
Carbon tetrachloride		0.32	0.13		ug/m3	TO-15
Dichlorodifluoromethane		1.5	0.49		ug/m3	TO-15
Ethanol		281	19		ug/m3	TO-15
Ethyl Acetate		31	0.36		ug/m3	TO-15
Heptane		0.74	0.41		ug/m3	TO-15
Hexane		0.49	0.35		ug/m3	TO-15
Isopropyl Alcohol		59.5	9.8		ug/m3	TO-15
Methylene chloride		0.56	0.35		ug/m3	TO-15
Methyl ethyl ketone		2.4	0.29		ug/m3	TO-15
Propylene		1.1	0.43		ug/m3	TO-15
1,2,4-Trimethylbenzene		1.1	0.49		ug/m3	TO-15
Tertiary Butyl Alcohol		0.39	0.30		ug/m3	TO-15
Tetrachloroethylene		0.88	0.14		ug/m3	TO-15
Toluene		7.5	0.38		ug/m3	TO-15

Summary of Hits

Job Number: JC56815
Account: Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY
Collected: 12/05/17



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Analyte						
Trichlorofluoromethane		0.90	0.28		ug/m3	TO-15
m,p-Xylene		1.1	0.43		ug/m3	TO-15
o-Xylene		0.43	0.43		ug/m3	TO-15
Xylenes (total)		1.5	0.43		ug/m3	TO-15



Dayton, NJ

Section 4

4

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

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Client Sample ID:	OUTSIDE		
Lab Sample ID:	JC56815-1	Date Sampled:	12/05/17
Matrix:	AIR - Ambient Air Comp. Summa ID: A1100	Date Received:	12/07/17
Method:	TO-15	Percent Solids:	n/a
Project:	Orangeburg UB, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6W03687.D	1	12/22/17 17:36	DFT	n/a	n/a	V6W107
Run #2							

	Initial Volume
Run #1	800 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	2.2	0.10	ppbv		5.2	0.24	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.10	ppbv		ND	0.22	ug/m3
71-43-2	78.11	Benzene	0.24	0.10	ppbv		0.77	0.32	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.050	ppbv		ND	0.33	ug/m3
75-25-2	252.8	Bromoform	ND	0.020	ppbv		ND	0.21	ug/m3
74-83-9	94.94	Bromomethane	ND	0.10	ppbv		ND	0.39	ug/m3
593-60-2	106.9	Bromoethene	ND	0.10	ppbv		ND	0.44	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.10	ppbv		ND	0.52	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.10	ppbv		ND	0.31	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.10	ppbv		ND	0.46	ug/m3
75-00-3	64.52	Chloroethane	ND	0.10	ppbv		ND	0.26	ug/m3
67-66-3	119.4	Chloroform	ND	0.10	ppbv		ND	0.49	ug/m3
74-87-3	50.49	Chloromethane	0.34	0.10	ppbv		0.70	0.21	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.10	ppbv		ND	0.31	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.10	ppbv		ND	0.52	ug/m3
56-23-5	153.8	Carbon tetrachloride	0.046	0.020	ppbv		0.29	0.13	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.10	ppbv		ND	0.34	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.10	ppbv		ND	0.40	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.10	ppbv		ND	0.40	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.050	ppbv		ND	0.38	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.10	ppbv		ND	0.40	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.10	ppbv		ND	0.46	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.10	ppbv		ND	0.36	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.26	0.10	ppbv		1.3	0.49	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.050	ppbv		ND	0.43	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.10	ppbv		ND	0.40	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.10	ppbv		ND	0.40	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.10	ppbv		ND	0.45	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.050	ppbv		ND	0.30	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.020	ppbv		ND	0.12	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.050	ppbv		ND	0.30	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.10	ppbv		ND	0.45	ug/m3

ND = Not detected

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:	OUTSIDE	Date Sampled:	12/05/17
Lab Sample ID:	JC56815-1	Date Received:	12/07/17
Matrix:	AIR - Ambient Air Comp. Summa ID: A1100	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangeburg UB, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46.07	Ethanol	4.2	0.25	ppbv		7.9	0.47	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.10	ppbv		ND	0.43	ug/m3
141-78-6	88	Ethyl Acetate	1.3	0.10	ppbv		4.7	0.36	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.10	ppbv		ND	0.49	ug/m3
76-13-1	187.4	Freon 113	ND	0.050	ppbv		ND	0.38	ug/m3
76-14-2	170.9	Freon 114	ND	0.050	ppbv		ND	0.35	ug/m3
142-82-5	100.2	Heptane	ND	0.10	ppbv		ND	0.41	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.045	ppbv		ND	0.48	ug/m3
110-54-3	86.17	Hexane	0.64	0.10	ppbv		2.3	0.35	ug/m3
591-78-6	100	2-Hexanone	ND	0.10	ppbv		ND	0.41	ug/m3
67-63-0	60.1	Isopropyl Alcohol	0.36	0.10	ppbv		0.88	0.25	ug/m3
75-09-2	84.94	Methylene chloride	0.98	0.10	ppbv		3.4	0.35	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.22	0.10	ppbv		0.65	0.29	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.10	ppbv		ND	0.41	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.10	ppbv		ND	0.36	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.10	ppbv		ND	0.41	ug/m3
115-07-1	42	Propylene	0.51	0.25	ppbv		0.88	0.43	ug/m3
100-42-5	104.1	Styrene	ND	0.10	ppbv		ND	0.43	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.050	ppbv		ND	0.27	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.050	ppbv		ND	0.34	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.050	ppbv		ND	0.27	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.050	ppbv		ND	0.37	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	0.10	ppbv		ND	0.49	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.10	ppbv		ND	0.49	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.10	ppbv		ND	0.47	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.10	ppbv		ND	0.30	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.049	0.020	ppbv		0.33	0.14	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.10	ppbv		ND	0.29	ug/m3
108-88-3	92.14	Toluene	0.39	0.10	ppbv		1.5	0.38	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.020	ppbv		ND	0.11	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.14	0.050	ppbv		0.79	0.28	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.020	ppbv		ND	0.051	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.10	ppbv		ND	0.35	ug/m3
	106.2	m,p-Xylene	0.19	0.10	ppbv		0.83	0.43	ug/m3
95-47-6	106.2	o-Xylene	ND	0.10	ppbv		ND	0.43	ug/m3
1330-20-7	106.2	Xylenes (total)	0.19	0.10	ppbv		0.83	0.43	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	103%		65-128%

ND = Not detected

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 North America Inc.

Report of Analysis

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Client Sample ID:	SSD-MP-2	Date Sampled:	12/05/17
Lab Sample ID:	JC56815-2	Date Received:	12/07/17
Matrix:	AIR - Soil Vapor Comp. Summa ID: A476	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangeburg UB, Orangeburg, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6W03638.D	1.65	12/20/17 17:20	DFT	n/a	n/a	V6W105
Run #2							

Run #	Initial Volume
Run #1	660 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	21.1	0.20	ppbv		50.1	0.48	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	78.11	Benzene	0.32	0.20	ppbv		1.0	0.64	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.10	ppbv		ND	0.67	ug/m3
75-25-2	252.8	Bromoform	ND	0.040	ppbv		ND	0.41	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	0.29	0.20	ppbv		1.4	0.98	ug/m3
74-87-3	50.49	Chloromethane	0.90	0.20	ppbv		1.9	0.41	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	153.8	Carbon tetrachloride	0.10	0.040	ppbv		0.63	0.25	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.10	ppbv		ND	0.77	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.60	0.20	ppbv		3.0	0.99	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.10	ppbv		ND	0.85	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.10	ppbv		ND	0.60	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.040	ppbv		ND	0.24	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.10	ppbv		ND	0.60	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3

ND = Not detected

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:	SSD-MP-2	Date Sampled:	12/05/17
Lab Sample ID:	JC56815-2	Date Received:	12/07/17
Matrix:	AIR - Soil Vapor Comp. Summa ID: A476	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangeburg UB, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46.07	Ethanol	50.7	0.50	ppbv	E	95.5	0.94	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	88	Ethyl Acetate	0.64	0.20	ppbv		2.3	0.72	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3
76-13-1	187.4	Freon 113	ND	0.10	ppbv		ND	0.77	ug/m3
76-14-2	170.9	Freon 114	ND	0.10	ppbv		ND	0.70	ug/m3
142-82-5	100.2	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.090	ppbv		ND	0.96	ug/m3
110-54-3	86.17	Hexane	0.90	0.20	ppbv		3.2	0.70	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	60.1	Isopropyl Alcohol	1.2	0.20	ppbv		2.9	0.49	ug/m3
75-09-2	84.94	Methylene chloride	5.4	0.20	ppbv		19	0.69	ug/m3
78-93-3	72.11	Methyl ethyl ketone	6.0	0.20	ppbv		18	0.59	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	42	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	104.1	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.10	ppbv		ND	0.55	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.10	ppbv		ND	0.69	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.10	ppbv		ND	0.55	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.10	ppbv		ND	0.74	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	0.74	0.20	ppbv		3.6	0.98	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	0.22	0.20	ppbv		1.1	0.98	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.058	0.040	ppbv		0.39	0.27	ug/m3
109-99-9	72.11	Tetrahydrofuran	3.4	0.20	ppbv		10	0.59	ug/m3
108-88-3	92.14	Toluene	0.55	0.20	ppbv		2.1	0.75	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.040	ppbv		ND	0.21	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.37	0.10	ppbv		2.1	0.56	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.040	ppbv		ND	0.10	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	106.2	m,p-Xylene	0.34	0.20	ppbv		1.5	0.87	ug/m3
95-47-6	106.2	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	106.2	Xylenes (total)	0.34	0.20	ppbv		1.5	0.87	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	101%		65-128%

ND = Not detected

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 North America Inc.

Report of Analysis

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Client Sample ID:	SSD-MP-2	Date Sampled:	12/05/17
Lab Sample ID:	JC56815-3	Date Received:	12/07/17
Matrix:	AIR - Ambient Air Comp. Summa ID: A851	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangeburg UB, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6W03646.D	1.65	12/21/17 01:29	DFT	n/a	n/a	V6W105
Run #2	6W03669.D	1.65	12/21/17 23:51	DFT	n/a	n/a	V6W106

	Initial Volume
Run #1	800 ml
Run #2	100 ml

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	64.4 ^a	1.3	ppbv		153 ^a	3.1	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.17	ppbv		ND	0.38	ug/m3
71-43-2	78.11	Benzene	0.46	0.17	ppbv		1.5	0.54	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.083	ppbv		ND	0.56	ug/m3
75-25-2	252.8	Bromoform	ND	0.033	ppbv		ND	0.34	ug/m3
74-83-9	94.94	Bromomethane	ND	0.17	ppbv		ND	0.66	ug/m3
593-60-2	106.9	Bromoethene	ND	0.17	ppbv		ND	0.74	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.17	ppbv		ND	0.88	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.17	ppbv		ND	0.53	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.17	ppbv		ND	0.78	ug/m3
75-00-3	64.52	Chloroethane	ND	0.17	ppbv		ND	0.45	ug/m3
67-66-3	119.4	Chloroform	ND	0.17	ppbv		ND	0.83	ug/m3
74-87-3	50.49	Chloromethane	0.72	0.17	ppbv		1.5	0.35	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.17	ppbv		ND	0.53	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.17	ppbv		ND	0.88	ug/m3
56-23-5	153.8	Carbon tetrachloride	0.10	0.033	ppbv		0.63	0.21	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.17	ppbv		ND	0.59	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.17	ppbv		ND	0.69	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.17	ppbv		ND	0.67	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.083	ppbv		ND	0.64	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.17	ppbv		ND	0.69	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.17	ppbv		ND	0.79	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.17	ppbv		ND	0.61	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.60	0.17	ppbv		3.0	0.84	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.083	ppbv		ND	0.71	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.17	ppbv		ND	0.67	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.17	ppbv		ND	0.67	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.17	ppbv		ND	0.77	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.083	ppbv		ND	0.50	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.033	ppbv		ND	0.20	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.083	ppbv		ND	0.50	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.17	ppbv		ND	0.77	ug/m3

ND = Not detected

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:	SSD-MP-2	Date Sampled:	12/05/17
Lab Sample ID:	JC56815-3	Date Received:	12/07/17
Matrix:	AIR - Ambient Air Comp. Summa ID: A851	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangeburg UB, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46.07	Ethanol	281 ^a	3.3	ppbv	E	529 ^a	6.2	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.17	ppbv		ND	0.74	ug/m3
141-78-6	88	Ethyl Acetate	1.4	0.17	ppbv		5.0	0.61	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.17	ppbv		ND	0.84	ug/m3
76-13-1	187.4	Freon 113	0.088	0.083	ppbv		0.67	0.64	ug/m3
76-14-2	170.9	Freon 114	ND	0.083	ppbv		ND	0.58	ug/m3
142-82-5	100.2	Heptane	ND	0.17	ppbv		ND	0.70	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.074	ppbv		ND	0.79	ug/m3
110-54-3	86.17	Hexane	0.65	0.17	ppbv		2.3	0.60	ug/m3
591-78-6	100	2-Hexanone	ND	0.17	ppbv		ND	0.70	ug/m3
67-63-0	60.1	Isopropyl Alcohol	3.6	0.17	ppbv		8.8	0.42	ug/m3
75-09-2	84.94	Methylene chloride	1.6	0.17	ppbv		5.6	0.59	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.55	0.17	ppbv		1.6	0.50	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.17	ppbv		ND	0.70	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.17	ppbv		ND	0.61	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.17	ppbv		ND	0.70	ug/m3
115-07-1	42	Propylene	1.4	0.41	ppbv		2.4	0.70	ug/m3
100-42-5	104.1	Styrene	ND	0.17	ppbv		ND	0.72	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.083	ppbv		ND	0.45	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.083	ppbv		ND	0.57	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.083	ppbv		ND	0.45	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.083	ppbv		ND	0.62	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	0.17	0.17	ppbv		0.84	0.84	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.17	ppbv		ND	0.84	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.17	ppbv		ND	0.79	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.17	ppbv		ND	0.52	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.092	0.033	ppbv		0.62	0.22	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.17	ppbv		ND	0.50	ug/m3
108-88-3	92.14	Toluene	0.96	0.17	ppbv		3.6	0.64	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.033	ppbv		ND	0.18	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.38	0.083	ppbv		2.1	0.47	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.033	ppbv		ND	0.084	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.17	ppbv		ND	0.60	ug/m3
	106.2	m,p-Xylene	0.41	0.17	ppbv		1.8	0.74	ug/m3
95-47-6	106.2	o-Xylene	ND	0.17	ppbv		ND	0.74	ug/m3
1330-20-7	106.2	Xylenes (total)	0.41	0.17	ppbv		1.8	0.74	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	102%	102%	65-128%

ND = Not detected

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:	SSD-MP-2	Date Sampled:	12/05/17
Lab Sample ID:	JC56815-3	Date Received:	12/07/17
Matrix:	AIR - Ambient Air Comp. Summa ID: A851	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangeburg UB, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units

(a) Result is from Run# 2

ND = Not detected
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 North America Inc.

Report of Analysis

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Client Sample ID:	VP-1		
Lab Sample ID:	JC56815-4	Date Sampled:	12/05/17
Matrix:	AIR - Soil Vapor Comp.	Date Received:	12/07/17
Method:	TO-15	Percent Solids:	n/a
Project:	Orangeburg UB, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6W03640.D	1.7	12/20/17 19:22	DFT	n/a	n/a	V6W105
Run #2	6W03665.D	1.7	12/21/17 20:08	DFT	n/a	n/a	V6W106

	Initial Volume
Run #1	680 ml
Run #2	100 ml

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	41.8 ^a	1.4	ppbv		99.3 ^a	3.3	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	78.11	Benzene	0.43	0.20	ppbv		1.4	0.64	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.10	ppbv		ND	0.67	ug/m3
75-25-2	252.8	Bromoform	ND	0.040	ppbv		ND	0.41	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	50.49	Chloromethane	1.1	0.20	ppbv		2.3	0.41	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	153.8	Carbon tetrachloride	0.074	0.040	ppbv		0.47	0.25	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.10	ppbv		ND	0.77	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.27	0.20	ppbv		1.3	0.99	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.10	ppbv		ND	0.85	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.10	ppbv		ND	0.60	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.040	ppbv		ND	0.24	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.10	ppbv		ND	0.60	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3

ND = Not detected

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:	VP-1	Date Sampled:	12/05/17
Lab Sample ID:	JC56815-4	Date Received:	12/07/17
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1033	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangeburg UB, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46.07	Ethanol	61.0 ^a	3.4	ppbv		115 ^a	6.4	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	88	Ethyl Acetate	1.1	0.20	ppbv		4.0	0.72	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3
76-13-1	187.4	Freon 113	ND	0.10	ppbv		ND	0.77	ug/m3
76-14-2	170.9	Freon 114	ND	0.10	ppbv		ND	0.70	ug/m3
142-82-5	100.2	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.090	ppbv		ND	0.96	ug/m3
110-54-3	86.17	Hexane	0.23	0.20	ppbv		0.81	0.70	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	60.1	Isopropyl Alcohol	1.6	0.20	ppbv		3.9	0.49	ug/m3
75-09-2	84.94	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
78-93-3	72.11	Methyl ethyl ketone	10.1	0.20	ppbv		29.8	0.59	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	0.21	0.20	ppbv		0.86	0.82	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	42	Propylene	0.92	0.50	ppbv		1.6	0.86	ug/m3
100-42-5	104.1	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	0.13	0.10	ppbv		0.71	0.55	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.10	ppbv		ND	0.69	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.10	ppbv		ND	0.55	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.10	ppbv		ND	0.74	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	0.79	0.20	ppbv		3.9	0.98	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	0.23	0.20	ppbv		1.1	0.98	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	0.44	0.20	ppbv		1.3	0.61	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.72	0.040	ppbv		4.9	0.27	ug/m3
109-99-9	72.11	Tetrahydrofuran	7.4	0.20	ppbv		22	0.59	ug/m3
108-88-3	92.14	Toluene	0.90	0.20	ppbv		3.4	0.75	ug/m3
79-01-6	131.4	Trichloroethylene	0.23	0.040	ppbv		1.2	0.21	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.21	0.10	ppbv		1.2	0.56	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.040	ppbv		ND	0.10	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	106.2	m,p-Xylene	0.38	0.20	ppbv		1.7	0.87	ug/m3
95-47-6	106.2	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	106.2	Xylenes (total)	0.38	0.20	ppbv		1.7	0.87	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	103%	101%	65-128%

ND = Not detected

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:	VP-1	Date Sampled:	12/05/17
Lab Sample ID:	JC56815-4	Date Received:	12/07/17
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1033	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangeburg UB, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units

(a) Result is from Run# 2

ND = Not detected
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

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SGS North America Inc.

Report of Analysis

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Client Sample ID:	VP-1		
Lab Sample ID:	JC56815-5	Date Sampled:	12/05/17
Matrix:	AIR - Ambient Air Comp. Summa ID: A1021	Date Received:	12/07/17
Method:	TO-15	Percent Solids:	n/a
Project:	Orangeburg UB, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6W03647.D	1.7	12/21/17 02:33	DFT	n/a	n/a	V6W105
Run #2	6W03670.D	1.7	12/22/17 00:43	DFT	n/a	n/a	V6W106

	Initial Volume
Run #1	800 ml
Run #2	100 ml

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	71.9 ^a	1.4	ppbv		171 ^a	3.3	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.17	ppbv		ND	0.38	ug/m3
71-43-2	78.11	Benzene	0.43	0.17	ppbv		1.4	0.54	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.085	ppbv		ND	0.57	ug/m3
75-25-2	252.8	Bromoform	ND	0.034	ppbv		ND	0.35	ug/m3
74-83-9	94.94	Bromomethane	ND	0.17	ppbv		ND	0.66	ug/m3
593-60-2	106.9	Bromoethene	ND	0.17	ppbv		ND	0.74	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.17	ppbv		ND	0.88	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.17	ppbv		ND	0.53	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.17	ppbv		ND	0.78	ug/m3
75-00-3	64.52	Chloroethane	ND	0.17	ppbv		ND	0.45	ug/m3
67-66-3	119.4	Chloroform	0.25	0.17	ppbv		1.2	0.83	ug/m3
74-87-3	50.49	Chloromethane	0.69	0.17	ppbv		1.4	0.35	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.17	ppbv		ND	0.53	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.17	ppbv		ND	0.88	ug/m3
56-23-5	153.8	Carbon tetrachloride	0.067	0.034	ppbv		0.42	0.21	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.17	ppbv		ND	0.59	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.17	ppbv		ND	0.69	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.17	ppbv		ND	0.67	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.085	ppbv		ND	0.65	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.17	ppbv		ND	0.69	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.17	ppbv		ND	0.79	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.17	ppbv		ND	0.61	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.47	0.17	ppbv		2.3	0.84	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.085	ppbv		ND	0.72	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.17	ppbv		ND	0.67	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.17	ppbv		ND	0.67	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.17	ppbv		ND	0.77	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.085	ppbv		ND	0.51	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.034	ppbv		ND	0.20	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.085	ppbv		ND	0.51	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.17	ppbv		ND	0.77	ug/m3

ND = Not detected

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:	VP-1	Date Sampled:	12/05/17
Lab Sample ID:	JC56815-5	Date Received:	12/07/17
Matrix:	AIR - Ambient Air Comp. Summa ID: A1021	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangeburg UB, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46.07	Ethanol	346 ^a	3.4	ppbv	E	652 ^a	6.4	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.17	ppbv		ND	0.74	ug/m3
141-78-6	88	Ethyl Acetate	2.8	0.17	ppbv		10	0.61	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.17	ppbv		ND	0.84	ug/m3
76-13-1	187.4	Freon 113	ND	0.085	ppbv		ND	0.65	ug/m3
76-14-2	170.9	Freon 114	ND	0.085	ppbv		ND	0.59	ug/m3
142-82-5	100.2	Heptane	ND	0.17	ppbv		ND	0.70	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.077	ppbv		ND	0.82	ug/m3
110-54-3	86.17	Hexane	0.31	0.17	ppbv		1.1	0.60	ug/m3
591-78-6	100	2-Hexanone	ND	0.17	ppbv		ND	0.70	ug/m3
67-63-0	60.1	Isopropyl Alcohol	6.4	0.17	ppbv		16	0.42	ug/m3
75-09-2	84.94	Methylene chloride	0.25	0.17	ppbv		0.87	0.59	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.95	0.17	ppbv		2.8	0.50	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.17	ppbv		ND	0.70	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.17	ppbv		ND	0.61	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.17	ppbv		ND	0.70	ug/m3
115-07-1	42	Propylene	1.2	0.43	ppbv		2.1	0.74	ug/m3
100-42-5	104.1	Styrene	ND	0.17	ppbv		ND	0.72	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.085	ppbv		ND	0.46	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.085	ppbv		ND	0.58	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.085	ppbv		ND	0.46	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.085	ppbv		ND	0.63	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	0.17	ppbv		ND	0.84	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.17	ppbv		ND	0.84	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.17	ppbv		ND	0.79	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	0.18	0.17	ppbv		0.55	0.52	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.16	0.034	ppbv		1.1	0.23	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.17	ppbv		ND	0.50	ug/m3
108-88-3	92.14	Toluene	0.66	0.17	ppbv		2.5	0.64	ug/m3
79-01-6	131.4	Trichloroethylene	0.048	0.034	ppbv		0.26	0.18	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.24	0.085	ppbv		1.3	0.48	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.034	ppbv		ND	0.087	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.17	ppbv		ND	0.60	ug/m3
	106.2	m,p-Xylene	ND	0.17	ppbv		ND	0.74	ug/m3
95-47-6	106.2	o-Xylene	ND	0.17	ppbv		ND	0.74	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	0.17	ppbv		ND	0.74	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	102%	102%	65-128%

ND = Not detected

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:	VP-1	Date Sampled:	12/05/17
Lab Sample ID:	JC56815-5	Date Received:	12/07/17
Matrix:	AIR - Ambient Air Comp. Summa ID: A1021	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangeburg UB, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units

(a) Result is from Run# 2

ND = Not detected
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 North America Inc.

Report of Analysis

Page 1 of 2

Client Sample ID:	VP-6						
Lab Sample ID:	JC56815-6					Date Sampled:	12/05/17
Matrix:	AIR - Soil Vapor Comp.	Summa ID:	A225			Date Received:	12/07/17
Method:	TO-15					Percent Solids:	n/a
Project:	Orangeburg UB, Orangeburg, NY						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6W03641.D	1	12/20/17 20:20	DFT	n/a	n/a	V6W105
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	26.5	0.20	ppbv		62.9	0.48	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	78.11	Benzene	0.30	0.20	ppbv		0.96	0.64	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.10	ppbv		ND	0.67	ug/m3
75-25-2	252.8	Bromoform	ND	0.040	ppbv		ND	0.41	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	0.45	0.20	ppbv		2.2	0.98	ug/m3
74-87-3	50.49	Chloromethane	0.25	0.20	ppbv		0.52	0.41	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.040	ppbv		ND	0.25	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.10	ppbv		ND	0.77	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.49	0.20	ppbv		2.4	0.99	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.10	ppbv		ND	0.85	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	1.1	0.20	ppbv		4.4	0.79	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.10	ppbv		ND	0.60	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.040	ppbv		ND	0.24	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.10	ppbv		ND	0.60	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3

ND = Not detected

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:	VP-6	Date Sampled:	12/05/17
Lab Sample ID:	JC56815-6	Date Received:	12/07/17
Matrix:	AIR - Soil Vapor Comp. Summa ID: A225	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangeburg UB, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46.07	Ethanol	66.6	0.50	ppbv	E	125	0.94	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	88	Ethyl Acetate	ND	0.20	ppbv		ND	0.72	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3
76-13-1	187.4	Freon 113	ND	0.10	ppbv		ND	0.77	ug/m3
76-14-2	170.9	Freon 114	ND	0.10	ppbv		ND	0.70	ug/m3
142-82-5	100.2	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.090	ppbv		ND	0.96	ug/m3
110-54-3	86.17	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	60.1	Isopropyl Alcohol	2.1	0.20	ppbv		5.2	0.49	ug/m3
75-09-2	84.94	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
78-93-3	72.11	Methyl ethyl ketone	1.1	0.20	ppbv		3.2	0.59	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	42	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	104.1	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.10	ppbv		ND	0.55	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.10	ppbv		ND	0.69	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.10	ppbv		ND	0.55	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.10	ppbv		ND	0.74	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	165.8	Tetrachloroethylene	6.8	0.040	ppbv		46	0.27	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	92.14	Toluene	0.69	0.20	ppbv		2.6	0.75	ug/m3
79-01-6	131.4	Trichloroethylene	0.65	0.040	ppbv		3.5	0.21	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.23	0.10	ppbv		1.3	0.56	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.040	ppbv		ND	0.10	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	106.2	m,p-Xylene	0.25	0.20	ppbv		1.1	0.87	ug/m3
95-47-6	106.2	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	106.2	Xylenes (total)	0.25	0.20	ppbv		1.1	0.87	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	100%		65-128%

ND = Not detected

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 North America Inc.

Report of Analysis

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Client Sample ID:	VP-6	Date Sampled:	12/05/17
Lab Sample ID:	JC56815-7	Date Received:	12/07/17
Matrix:	AIR - Ambient Air Comp. Summa ID: A326	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangeburg UB, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6W03671.D	1	12/22/17 01:50	DFT	n/a	n/a	V6W106
Run #2	6W03697.D	1	12/23/17 02:10	DFT	n/a	n/a	V6W107

	Initial Volume
Run #1	800 ml
Run #2	100 ml

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	31.1 ^a	0.80	ppbv		73.9 ^a	1.9	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.10	ppbv		ND	0.22	ug/m3
71-43-2	78.11	Benzene	0.23	0.10	ppbv		0.73	0.32	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.050	ppbv		ND	0.33	ug/m3
75-25-2	252.8	Bromoform	ND	0.020	ppbv		ND	0.21	ug/m3
74-83-9	94.94	Bromomethane	ND	0.10	ppbv		ND	0.39	ug/m3
593-60-2	106.9	Bromoethene	ND	0.10	ppbv		ND	0.44	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.10	ppbv		ND	0.52	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.10	ppbv		ND	0.31	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.10	ppbv		ND	0.46	ug/m3
75-00-3	64.52	Chloroethane	ND	0.10	ppbv		ND	0.26	ug/m3
67-66-3	119.4	Chloroform	ND	0.10	ppbv		ND	0.49	ug/m3
74-87-3	50.49	Chloromethane	0.41	0.10	ppbv		0.85	0.21	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.10	ppbv		ND	0.31	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.10	ppbv		ND	0.52	ug/m3
56-23-5	153.8	Carbon tetrachloride	0.051	0.020	ppbv		0.32	0.13	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.10	ppbv		ND	0.34	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.10	ppbv		ND	0.40	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.10	ppbv		ND	0.40	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.050	ppbv		ND	0.38	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.10	ppbv		ND	0.40	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.10	ppbv		ND	0.46	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.10	ppbv		ND	0.36	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.31	0.10	ppbv		1.5	0.49	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.050	ppbv		ND	0.43	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.10	ppbv		ND	0.40	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.10	ppbv		ND	0.40	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.10	ppbv		ND	0.45	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.050	ppbv		ND	0.30	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.020	ppbv		ND	0.12	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.050	ppbv		ND	0.30	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.10	ppbv		ND	0.45	ug/m3

ND = Not detected

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:	VP-6	Date Sampled:	12/05/17
Lab Sample ID:	JC56815-7	Date Received:	12/07/17
Matrix:	AIR - Ambient Air Comp. Summa ID: A326	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangeburg UB, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46.07	Ethanol	30.7 ^a	2.0	ppbv		57.8 ^a	3.8	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.10	ppbv		ND	0.43	ug/m3
141-78-6	88	Ethyl Acetate	1.2	0.10	ppbv		4.3	0.36	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.10	ppbv		ND	0.49	ug/m3
76-13-1	187.4	Freon 113	ND	0.050	ppbv		ND	0.38	ug/m3
76-14-2	170.9	Freon 114	ND	0.050	ppbv		ND	0.35	ug/m3
142-82-5	100.2	Heptane	ND	0.10	ppbv		ND	0.41	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.045	ppbv		ND	0.48	ug/m3
110-54-3	86.17	Hexane	0.14	0.10	ppbv		0.49	0.35	ug/m3
591-78-6	100	2-Hexanone	ND	0.10	ppbv		ND	0.41	ug/m3
67-63-0	60.1	Isopropyl Alcohol	1.8	0.10	ppbv		4.4	0.25	ug/m3
75-09-2	84.94	Methylene chloride	0.17	0.10	ppbv		0.59	0.35	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.44	0.10	ppbv		1.3	0.29	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.10	ppbv		ND	0.41	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.10	ppbv		ND	0.36	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.10	ppbv		ND	0.41	ug/m3
115-07-1	42	Propylene	0.49	0.25	ppbv		0.84	0.43	ug/m3
100-42-5	104.1	Styrene	ND	0.10	ppbv		ND	0.43	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.050	ppbv		ND	0.27	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.050	ppbv		ND	0.34	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.050	ppbv		ND	0.27	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.050	ppbv		ND	0.37	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	0.11	0.10	ppbv		0.54	0.49	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.10	ppbv		ND	0.49	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.10	ppbv		ND	0.47	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.10	ppbv		ND	0.30	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.064	0.020	ppbv		0.43	0.14	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.10	ppbv		ND	0.29	ug/m3
108-88-3	92.14	Toluene	0.48	0.10	ppbv		1.8	0.38	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.020	ppbv		ND	0.11	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.16	0.050	ppbv		0.90	0.28	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.020	ppbv		ND	0.051	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.10	ppbv		ND	0.35	ug/m3
	106.2	m,p-Xylene	0.19	0.10	ppbv		0.83	0.43	ug/m3
95-47-6	106.2	o-Xylene	ND	0.10	ppbv		ND	0.43	ug/m3
1330-20-7	106.2	Xylenes (total)	0.19	0.10	ppbv		0.83	0.43	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	104%	102%	65-128%

ND = Not detected

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:	VP-6	Date Sampled:	12/05/17
Lab Sample ID:	JC56815-7	Date Received:	12/07/17
Matrix:	AIR - Ambient Air Comp. Summa ID: A326	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangeburg UB, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units

(a) Result is from Run# 2

ND = Not detected
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

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Report of Analysis

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Client Sample ID:	VP-5		
Lab Sample ID:	JC56815-8	Date Sampled:	12/05/17
Matrix:	AIR - Soil Vapor Comp.	Date Received:	12/07/17
Method:	TO-15	Percent Solids:	n/a
Project:	Orangeburg UB, Orangeburg, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6W03642.D	1	12/20/17 21:17	DFT	n/a	n/a	V6W105
Run #2							

Run #	Initial Volume
Run #1	400 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	25.9	0.20	ppbv		61.5	0.48	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	78.11	Benzene	0.31	0.20	ppbv		0.99	0.64	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.10	ppbv		ND	0.67	ug/m3
75-25-2	252.8	Bromoform	ND	0.040	ppbv		ND	0.41	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	50.49	Chloromethane	0.21	0.20	ppbv		0.43	0.41	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	153.8	Carbon tetrachloride	0.077	0.040	ppbv		0.48	0.25	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.10	ppbv		ND	0.77	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.49	0.20	ppbv		2.4	0.99	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.10	ppbv		ND	0.85	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	0.88	0.20	ppbv		3.5	0.79	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.10	ppbv		ND	0.60	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.040	ppbv		ND	0.24	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.10	ppbv		ND	0.60	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3

ND = Not detected

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:	VP-5	Date Sampled:	12/05/17
Lab Sample ID:	JC56815-8	Date Received:	12/07/17
Matrix:	AIR - Soil Vapor Comp. Summa ID: A222	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangeburg UB, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46.07	Ethanol	78.9	0.50	ppbv	E	149	0.94	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	88	Ethyl Acetate	1.6	0.20	ppbv		5.8	0.72	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3
76-13-1	187.4	Freon 113	ND	0.10	ppbv		ND	0.77	ug/m3
76-14-2	170.9	Freon 114	ND	0.10	ppbv		ND	0.70	ug/m3
142-82-5	100.2	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.090	ppbv		ND	0.96	ug/m3
110-54-3	86.17	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	60.1	Isopropyl Alcohol	2.5	0.20	ppbv		6.1	0.49	ug/m3
75-09-2	84.94	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.92	0.20	ppbv		2.7	0.59	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	42	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	104.1	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.10	ppbv		ND	0.55	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.10	ppbv		ND	0.69	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.10	ppbv		ND	0.55	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.10	ppbv		ND	0.74	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	165.8	Tetrachloroethylene	3.5	0.040	ppbv		24	0.27	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	92.14	Toluene	0.69	0.20	ppbv		2.6	0.75	ug/m3
79-01-6	131.4	Trichloroethylene	0.47	0.040	ppbv		2.5	0.21	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.24	0.10	ppbv		1.3	0.56	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.040	ppbv		ND	0.10	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	106.2	m,p-Xylene	0.24	0.20	ppbv		1.0	0.87	ug/m3
95-47-6	106.2	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	106.2	Xylenes (total)	0.24	0.20	ppbv		1.0	0.87	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	103%		65-128%

ND = Not detected

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 North America Inc.

Report of Analysis

Page 1 of 3

Client Sample ID:	VP-5						
Lab Sample ID:	JC56815-9					Date Sampled:	12/05/17
Matrix:	AIR - Ambient Air Comp.	Summa ID:	A896			Date Received:	12/07/17
Method:	TO-15					Percent Solids:	n/a
Project:	Orangeburg UB, Orangeburg, NY						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6W03672.D	1	12/22/17 02:56	DFT	n/a	n/a	V6W106
Run #2	6W03698.D	1	12/23/17 03:02	DFT	n/a	n/a	V6W107

	Initial Volume
Run #1	800 ml
Run #2	100 ml

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	31.3 ^a	0.80	ppbv		74.4 ^a	1.9	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.10	ppbv		ND	0.22	ug/m3
71-43-2	78.11	Benzene	0.27	0.10	ppbv		0.86	0.32	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.050	ppbv		ND	0.33	ug/m3
75-25-2	252.8	Bromoform	ND	0.020	ppbv		ND	0.21	ug/m3
74-83-9	94.94	Bromomethane	ND	0.10	ppbv		ND	0.39	ug/m3
593-60-2	106.9	Bromoethene	ND	0.10	ppbv		ND	0.44	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.10	ppbv		ND	0.52	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.10	ppbv		ND	0.31	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.10	ppbv		ND	0.46	ug/m3
75-00-3	64.52	Chloroethane	ND	0.10	ppbv		ND	0.26	ug/m3
67-66-3	119.4	Chloroform	ND	0.10	ppbv		ND	0.49	ug/m3
74-87-3	50.49	Chloromethane	0.40	0.10	ppbv		0.83	0.21	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.10	ppbv		ND	0.31	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.10	ppbv		ND	0.52	ug/m3
56-23-5	153.8	Carbon tetrachloride	0.050	0.020	ppbv		0.31	0.13	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.10	ppbv		ND	0.34	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.10	ppbv		ND	0.40	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.10	ppbv		ND	0.40	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.050	ppbv		ND	0.38	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.10	ppbv		ND	0.40	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.10	ppbv		ND	0.46	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.10	ppbv		ND	0.36	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.30	0.10	ppbv		1.5	0.49	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.050	ppbv		ND	0.43	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.10	ppbv		ND	0.40	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.10	ppbv		ND	0.40	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.10	ppbv		ND	0.45	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.050	ppbv		ND	0.30	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.020	ppbv		ND	0.12	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.050	ppbv		ND	0.30	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.10	ppbv		ND	0.45	ug/m3

ND = Not detected

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:	VP-5	Date Sampled:	12/05/17
Lab Sample ID:	JC56815-9	Date Received:	12/07/17
Matrix:	AIR - Ambient Air Comp. Summa ID: A896	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangeburg UB, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46.07	Ethanol	33.7 ^a	2.0	ppbv		63.5 ^a	3.8	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.10	ppbv		ND	0.43	ug/m3
141-78-6	88	Ethyl Acetate	0.95	0.10	ppbv		3.4	0.36	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.10	ppbv		ND	0.49	ug/m3
76-13-1	187.4	Freon 113	ND	0.050	ppbv		ND	0.38	ug/m3
76-14-2	170.9	Freon 114	ND	0.050	ppbv		ND	0.35	ug/m3
142-82-5	100.2	Heptane	ND	0.10	ppbv		ND	0.41	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.045	ppbv		ND	0.48	ug/m3
110-54-3	86.17	Hexane	0.19	0.10	ppbv		0.67	0.35	ug/m3
591-78-6	100	2-Hexanone	ND	0.10	ppbv		ND	0.41	ug/m3
67-63-0	60.1	Isopropyl Alcohol	1.8	0.10	ppbv		4.4	0.25	ug/m3
75-09-2	84.94	Methylene chloride	0.16	0.10	ppbv		0.56	0.35	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.29	0.10	ppbv		0.86	0.29	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.10	ppbv		ND	0.41	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.10	ppbv		ND	0.36	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.10	ppbv		ND	0.41	ug/m3
115-07-1	42	Propylene	0.50	0.25	ppbv		0.86	0.43	ug/m3
100-42-5	104.1	Styrene	ND	0.10	ppbv		ND	0.43	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.050	ppbv		ND	0.27	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.050	ppbv		ND	0.34	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.050	ppbv		ND	0.27	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.050	ppbv		ND	0.37	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	0.10	ppbv		ND	0.49	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.10	ppbv		ND	0.49	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.10	ppbv		ND	0.47	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.10	ppbv		ND	0.30	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.073	0.020	ppbv		0.50	0.14	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.10	ppbv		ND	0.29	ug/m3
108-88-3	92.14	Toluene	0.46	0.10	ppbv		1.7	0.38	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.020	ppbv		ND	0.11	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.16	0.050	ppbv		0.90	0.28	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.020	ppbv		ND	0.051	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.10	ppbv		ND	0.35	ug/m3
	106.2	m,p-Xylene	0.20	0.10	ppbv		0.87	0.43	ug/m3
95-47-6	106.2	o-Xylene	ND	0.10	ppbv		ND	0.43	ug/m3
1330-20-7	106.2	Xylenes (total)	0.20	0.10	ppbv		0.87	0.43	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	102%	93%	65-128%

ND = Not detected

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:	VP-5	Date Sampled:	12/05/17
Lab Sample ID:	JC56815-9	Date Received:	12/07/17
Matrix:	AIR - Ambient Air Comp. Summa ID: A896	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangeburg UB, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units

(a) Result is from Run# 2

ND = Not detected
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 North America Inc.

Report of Analysis

Page 1 of 3

Client Sample ID:	VP-9		
Lab Sample ID:	JC56815-10	Date Sampled:	12/05/17
Matrix:	AIR - Soil Vapor Comp.	Date Received:	12/07/17
Method:	TO-15	Percent Solids:	n/a
Project:	Orangeburg UB, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6W03643.D	1	12/20/17 22:15	DFT	n/a	n/a	V6W105
Run #2	6W03666.D	1	12/21/17 20:59	DFT	n/a	n/a	V6W106

	Initial Volume
Run #1	400 ml
Run #2	40.0 ml

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	80.2 ^a	2.0	ppbv		191 ^a	4.8	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	78.11	Benzene	0.37	0.20	ppbv		1.2	0.64	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.10	ppbv		ND	0.67	ug/m3
75-25-2	252.8	Bromoform	ND	0.040	ppbv		ND	0.41	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	76.14	Carbon disulfide	0.97	0.20	ppbv		3.0	0.62	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	0.39	0.20	ppbv		1.9	0.98	ug/m3
74-87-3	50.49	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	153.8	Carbon tetrachloride	0.081	0.040	ppbv		0.51	0.25	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.10	ppbv		ND	0.77	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.49	0.20	ppbv		2.4	0.99	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.10	ppbv		ND	0.85	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.10	ppbv		ND	0.60	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.040	ppbv		ND	0.24	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.10	ppbv		ND	0.60	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3

ND = Not detected

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:	VP-9		
Lab Sample ID:	JC56815-10		
Matrix:	AIR - Soil Vapor Comp.	Summa ID: A1083	Date Sampled: 12/05/17
Method:	TO-15		Date Received: 12/07/17
Project:	Orangeburg UB, Orangeburg, NY		Percent Solids: n/a

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46.07	Ethanol	98.5 ^a	5.0	ppbv		186 ^a	9.4	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	88	Ethyl Acetate	4.5	0.20	ppbv		16	0.72	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3
76-13-1	187.4	Freon 113	ND	0.10	ppbv		ND	0.77	ug/m3
76-14-2	170.9	Freon 114	ND	0.10	ppbv		ND	0.70	ug/m3
142-82-5	100.2	Heptane	0.26	0.20	ppbv		1.1	0.82	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.090	ppbv		ND	0.96	ug/m3
110-54-3	86.17	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	60.1	Isopropyl Alcohol	4.9	0.20	ppbv		12	0.49	ug/m3
75-09-2	84.94	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
78-93-3	72.11	Methyl ethyl ketone	1.5	0.20	ppbv		4.4	0.59	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	42	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	104.1	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.10	ppbv		ND	0.55	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.10	ppbv		ND	0.69	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.10	ppbv		ND	0.55	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.10	ppbv		ND	0.74	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	0.79	0.20	ppbv		3.9	0.98	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	0.24	0.20	ppbv		1.2	0.98	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	0.30	0.20	ppbv		0.91	0.61	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.98	0.040	ppbv		6.6	0.27	ug/m3
109-99-9	72.11	Tetrahydrofuran	0.44	0.20	ppbv		1.3	0.59	ug/m3
108-88-3	92.14	Toluene	1.8	0.20	ppbv		6.8	0.75	ug/m3
79-01-6	131.4	Trichloroethylene	0.14	0.040	ppbv		0.75	0.21	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.24	0.10	ppbv		1.3	0.56	ug/m3
75-01-4	62.5	Vinyl chloride	0.26	0.040	ppbv		0.66	0.10	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	106.2	m,p-Xylene	0.38	0.20	ppbv		1.7	0.87	ug/m3
95-47-6	106.2	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	106.2	Xylenes (total)	0.38	0.20	ppbv		1.7	0.87	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	104%	99%	65-128%

ND = Not detected

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

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Client Sample ID: VP-9

Lab Sample ID: JC56815-10

Matrix: AIR - Soil Vapor Comp. Summa ID: A1083

Method:	TO-15

Project: Orangeburg UB, Orangeburg, NY

Date Sampled: 12/05/17

Date Received: 12/07/17

Percent Solids: n/a

VOA T015 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units

(a) Result is from Run# 2

ND = Not detected

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 North America Inc.

Report of Analysis

Page 1 of 3

Client Sample ID:	VP-9	Date Sampled:	12/05/17
Lab Sample ID:	JC56815-11	Date Received:	12/07/17
Matrix:	AIR - Ambient Air Comp. Summa ID: A343	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangeburg UB, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6W03650.D	1	12/21/17 06:06	DFT	n/a	n/a	V6W105
Run #2	6W03673.D	1	12/22/17 03:47	DFT	n/a	n/a	V6W106
Run #3	6W03699.D	1	12/23/17 03:53	DFT	n/a	n/a	V6W107

	Initial Volume
Run #1	800 ml
Run #2	100 ml
Run #3	20.0 ml

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	268 ^a	4.0	ppbv		637 ^a	9.5	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.10	ppbv		ND	0.22	ug/m3
71-43-2	78.11	Benzene	0.40	0.10	ppbv		1.3	0.32	ug/m3
75-27-4	163.8	Bromodichloromethane	0.067	0.050	ppbv		0.45	0.33	ug/m3
75-25-2	252.8	Bromoform	ND	0.020	ppbv		ND	0.21	ug/m3
74-83-9	94.94	Bromomethane	ND	0.10	ppbv		ND	0.39	ug/m3
593-60-2	106.9	Bromoethene	ND	0.10	ppbv		ND	0.44	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.10	ppbv		ND	0.52	ug/m3
75-15-0	76.14	Carbon disulfide	0.23	0.10	ppbv		0.72	0.31	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.10	ppbv		ND	0.46	ug/m3
75-00-3	64.52	Chloroethane	ND	0.10	ppbv		ND	0.26	ug/m3
67-66-3	119.4	Chloroform	0.40	0.10	ppbv		2.0	0.49	ug/m3
74-87-3	50.49	Chloromethane	0.61	0.10	ppbv		1.3	0.21	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.10	ppbv		ND	0.31	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.10	ppbv		ND	0.52	ug/m3
56-23-5	153.8	Carbon tetrachloride	0.077	0.020	ppbv		0.48	0.13	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.10	ppbv		ND	0.34	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.10	ppbv		ND	0.40	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.10	ppbv		ND	0.40	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.050	ppbv		ND	0.38	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.10	ppbv		ND	0.40	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.10	ppbv		ND	0.46	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.10	ppbv		ND	0.36	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.41	0.10	ppbv		2.0	0.49	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.050	ppbv		ND	0.43	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.10	ppbv		ND	0.40	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.10	ppbv		ND	0.40	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.10	ppbv		ND	0.45	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.050	ppbv		ND	0.30	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.020	ppbv		ND	0.12	ug/m3

ND = Not detected

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:	VP-9	Date Sampled:	12/05/17
Lab Sample ID:	JC56815-11	Date Received:	12/07/17
Matrix:	AIR - Ambient Air Comp. Summa ID: A343	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangeburg UB, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
106-46-7	147	p-Dichlorobenzene	ND	0.050	ppbv		ND	0.30	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.10	ppbv		ND	0.45	ug/m3
64-17-5	46.07	Ethanol	123 ^b	2.0	ppbv		232 ^b	3.8	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.10	ppbv		ND	0.43	ug/m3
141-78-6	88	Ethyl Acetate	9.0	0.10	ppbv		32	0.36	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.10	ppbv		ND	0.49	ug/m3
76-13-1	187.4	Freon 113	0.071	0.050	ppbv		0.54	0.38	ug/m3
76-14-2	170.9	Freon 114	ND	0.050	ppbv		ND	0.35	ug/m3
142-82-5	100.2	Heptane	0.19	0.10	ppbv		0.78	0.41	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.045	ppbv		ND	0.48	ug/m3
110-54-3	86.17	Hexane	0.42	0.10	ppbv		1.5	0.35	ug/m3
591-78-6	100	2-Hexanone	ND	0.10	ppbv		ND	0.41	ug/m3
67-63-0	60.1	Isopropyl Alcohol	19.5 ^b	0.80	ppbv		47.9 ^b	2.0	ug/m3
75-09-2	84.94	Methylene chloride	1.0	0.10	ppbv		3.5	0.35	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.63	0.10	ppbv		1.9	0.29	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.10	ppbv		ND	0.41	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.10	ppbv		ND	0.36	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.10	ppbv		ND	0.41	ug/m3
115-07-1	42	Propylene	0.96	0.25	ppbv		1.6	0.43	ug/m3
100-42-5	104.1	Styrene	ND	0.10	ppbv		ND	0.43	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.050	ppbv		ND	0.27	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.050	ppbv		ND	0.34	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.050	ppbv		ND	0.27	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.050	ppbv		ND	0.37	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	0.20	0.10	ppbv		0.98	0.49	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.10	ppbv		ND	0.49	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	0.11	0.10	ppbv		0.51	0.47	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	0.16	0.10	ppbv		0.49	0.30	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.54	0.020	ppbv		3.7	0.14	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.10	ppbv		ND	0.29	ug/m3
108-88-3	92.14	Toluene	1.9	0.10	ppbv		7.2	0.38	ug/m3
79-01-6	131.4	Trichloroethylene	0.029	0.020	ppbv		0.16	0.11	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.26	0.050	ppbv		1.5	0.28	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.020	ppbv		ND	0.051	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.10	ppbv		ND	0.35	ug/m3
	106.2	m,p-Xylene	0.31	0.10	ppbv		1.3	0.43	ug/m3
95-47-6	106.2	o-Xylene	0.13	0.10	ppbv		0.56	0.43	ug/m3
1330-20-7	106.2	Xylenes (total)	0.44	0.10	ppbv		1.9	0.43	ug/m3

ND = Not detected

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:	VP-9	Date Sampled:	12/05/17
Lab Sample ID:	JC56815-11	Date Received:	12/07/17
Matrix:	AIR - Ambient Air Comp. Summa ID: A343	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangeburg UB, Orangeburg, NY		

VOA TO15 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
460-00-4	4-Bromofluorobenzene	103%	103%	98%	65-128%

- (a) Result is from Run# 3
(b) Result is from Run# 2

ND = Not detected
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 North America Inc.

Report of Analysis

Page 1 of 3

Client Sample ID:	SSD-MP-5	Date Sampled:	12/05/17
Lab Sample ID:	JC56815-12	Date Received:	12/07/17
Matrix:	AIR - Soil Vapor Comp. Summa ID: A039	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangeburg UB, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6W03644.D	1.48	12/20/17 23:15	DFT	n/a	n/a	V6W105
Run #2	6W03667.D	1.48	12/21/17 21:50	DFT	n/a	n/a	V6W106

	Initial Volume
Run #1	592 ml
Run #2	40.0 ml

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	102 ^a	3.0	ppbv		242 ^a	7.1	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	78.11	Benzene	0.43	0.20	ppbv		1.4	0.64	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.10	ppbv		ND	0.67	ug/m3
75-25-2	252.8	Bromoform	ND	0.040	ppbv		ND	0.41	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	50.49	Chloromethane	0.28	0.20	ppbv		0.58	0.41	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	153.8	Carbon tetrachloride	0.087	0.040	ppbv		0.55	0.25	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.10	ppbv		ND	0.77	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.50	0.20	ppbv		2.5	0.99	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.10	ppbv		ND	0.85	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.10	ppbv		ND	0.60	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.040	ppbv		ND	0.24	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.10	ppbv		ND	0.60	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3

ND = Not detected

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: SSD-MP-5
Lab Sample ID: JC56815-12
Matrix: AIR - Soil Vapor Comp. Summa ID: A039
Method: TO-15
Project: Orangeburg UB, Orangeburg, NY

Date Sampled: 12/05/17

Date Received: 12/07/17

Percent Solids: n/a

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46.07	Ethanol	107 ^a	7.4	ppbv		202 ^a	14	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	88	Ethyl Acetate	6.5	0.20	ppbv		23	0.72	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3
76-13-1	187.4	Freon 113	ND	0.10	ppbv		ND	0.77	ug/m3
76-14-2	170.9	Freon 114	ND	0.10	ppbv		ND	0.70	ug/m3
142-82-5	100.2	Heptane	0.31	0.20	ppbv		1.3	0.82	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.090	ppbv		ND	0.96	ug/m3
110-54-3	86.17	Hexane	0.27	0.20	ppbv		0.95	0.70	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	60.1	Isopropyl Alcohol	5.8	0.20	ppbv		14	0.49	ug/m3
75-09-2	84.94	Methylene chloride	0.20	0.20	ppbv		0.69	0.69	ug/m3
78-93-3	72.11	Methyl ethyl ketone	1.6	0.20	ppbv		4.7	0.59	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	42	Propylene	0.63	0.50	ppbv		1.1	0.86	ug/m3
100-42-5	104.1	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.10	ppbv		ND	0.55	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.10	ppbv		ND	0.69	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.10	ppbv		ND	0.55	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.10	ppbv		ND	0.74	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	0.37	0.20	ppbv		1.8	0.98	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.69	0.040	ppbv		4.7	0.27	ug/m3
109-99-9	72.11	Tetrahydrofuran	0.40	0.20	ppbv		1.2	0.59	ug/m3
108-88-3	92.14	Toluene	2.2	0.20	ppbv		8.3	0.75	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.040	ppbv		ND	0.21	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.26	0.10	ppbv		1.5	0.56	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.040	ppbv		ND	0.10	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	106.2	m,p-Xylene	0.40	0.20	ppbv		1.7	0.87	ug/m3
95-47-6	106.2	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	106.2	Xylenes (total)	0.40	0.20	ppbv		1.7	0.87	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	102%	99%	65-128%

ND = Not detected

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:	SSD-MP-5	Date Sampled:	12/05/17
Lab Sample ID:	JC56815-12	Date Received:	12/07/17
Matrix:	AIR - Soil Vapor Comp. Summa ID: A039	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangeburg UB, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units

(a) Result is from Run# 2

ND = Not detected
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 North America Inc.

Report of Analysis

Page 1 of 3

Client Sample ID:	SSD-MP-5	Date Sampled:	12/05/17
Lab Sample ID:	JC56815-13	Date Received:	12/07/17
Matrix:	AIR - Ambient Air Comp. Summa ID: A295	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangeburg UB, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6W03674.D	1	12/22/17 04:55	DFT	n/a	n/a	V6W106
Run #2	6W03700.D	1	12/23/17 04:44	DFT	n/a	n/a	V6W107

	Initial Volume
Run #1	800 ml
Run #2	20.0 ml

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	349 ^a	4.0	ppbv		829 ^a	9.5	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.10	ppbv		ND	0.22	ug/m3
71-43-2	78.11	Benzene	0.33	0.10	ppbv		1.1	0.32	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.050	ppbv		ND	0.33	ug/m3
75-25-2	252.8	Bromoform	ND	0.020	ppbv		ND	0.21	ug/m3
74-83-9	94.94	Bromomethane	ND	0.10	ppbv		ND	0.39	ug/m3
593-60-2	106.9	Bromoethene	ND	0.10	ppbv		ND	0.44	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.10	ppbv		ND	0.52	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.10	ppbv		ND	0.31	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.10	ppbv		ND	0.46	ug/m3
75-00-3	64.52	Chloroethane	ND	0.10	ppbv		ND	0.26	ug/m3
67-66-3	119.4	Chloroform	ND	0.10	ppbv		ND	0.49	ug/m3
74-87-3	50.49	Chloromethane	0.50	0.10	ppbv		1.0	0.21	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.10	ppbv		ND	0.31	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.10	ppbv		ND	0.52	ug/m3
56-23-5	153.8	Carbon tetrachloride	0.051	0.020	ppbv		0.32	0.13	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.10	ppbv		ND	0.34	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.10	ppbv		ND	0.40	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.10	ppbv		ND	0.40	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.050	ppbv		ND	0.38	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.10	ppbv		ND	0.40	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.10	ppbv		ND	0.46	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.10	ppbv		ND	0.36	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.31	0.10	ppbv		1.5	0.49	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.050	ppbv		ND	0.43	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.10	ppbv		ND	0.40	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.10	ppbv		ND	0.40	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.10	ppbv		ND	0.45	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.050	ppbv		ND	0.30	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.020	ppbv		ND	0.12	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.050	ppbv		ND	0.30	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.10	ppbv		ND	0.45	ug/m3

ND = Not detected

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:	SSD-MP-5	Date Sampled:	12/05/17
Lab Sample ID:	JC56815-13	Date Received:	12/07/17
Matrix:	AIR - Ambient Air Comp. Summa ID: A295	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangeburg UB, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46.07	Ethanol	149 ^a	10	ppbv		281 ^a	19	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.10	ppbv		ND	0.43	ug/m3
141-78-6	88	Ethyl Acetate	8.7	0.10	ppbv		31	0.36	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.10	ppbv		ND	0.49	ug/m3
76-13-1	187.4	Freon 113	ND	0.050	ppbv		ND	0.38	ug/m3
76-14-2	170.9	Freon 114	ND	0.050	ppbv		ND	0.35	ug/m3
142-82-5	100.2	Heptane	0.18	0.10	ppbv		0.74	0.41	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.045	ppbv		ND	0.48	ug/m3
110-54-3	86.17	Hexane	0.14	0.10	ppbv		0.49	0.35	ug/m3
591-78-6	100	2-Hexanone	ND	0.10	ppbv		ND	0.41	ug/m3
67-63-0	60.1	Isopropyl Alcohol	24.2 ^a	4.0	ppbv		59.5 ^a	9.8	ug/m3
75-09-2	84.94	Methylene chloride	0.16	0.10	ppbv		0.56	0.35	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.83	0.10	ppbv		2.4	0.29	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.10	ppbv		ND	0.41	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.10	ppbv		ND	0.36	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.10	ppbv		ND	0.41	ug/m3
115-07-1	42	Propylene	0.66	0.25	ppbv		1.1	0.43	ug/m3
100-42-5	104.1	Styrene	ND	0.10	ppbv		ND	0.43	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.050	ppbv		ND	0.27	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.050	ppbv		ND	0.34	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.050	ppbv		ND	0.27	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.050	ppbv		ND	0.37	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	0.22	0.10	ppbv		1.1	0.49	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.10	ppbv		ND	0.49	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.10	ppbv		ND	0.47	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	0.13	0.10	ppbv		0.39	0.30	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.13	0.020	ppbv		0.88	0.14	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.10	ppbv		ND	0.29	ug/m3
108-88-3	92.14	Toluene	2.0	0.10	ppbv		7.5	0.38	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.020	ppbv		ND	0.11	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.16	0.050	ppbv		0.90	0.28	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.020	ppbv		ND	0.051	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.10	ppbv		ND	0.35	ug/m3
	106.2	m,p-Xylene	0.25	0.10	ppbv		1.1	0.43	ug/m3
95-47-6	106.2	o-Xylene	0.10	0.10	ppbv		0.43	0.43	ug/m3
1330-20-7	106.2	Xylenes (total)	0.35	0.10	ppbv		1.5	0.43	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	104%	99%	65-128%

ND = Not detected

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:	SSD-MP-5	Date Sampled:	12/05/17
Lab Sample ID:	JC56815-13	Date Received:	12/07/17
Matrix:	AIR - Ambient Air Comp. Summa ID: A295	Percent Solids:	n/a
Method:	TO-15		
Project:	Orangeburg UB, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
(a) Result is from Run# 2									

ND = Not detected
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

5

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Summa Canister and Flow Controller Log
- Sample Tracking Chronicle
- Internal Chain of Custody

Air

4077 3094 0201
4077 3094 0186
4077 3094 0212
4077 3094 0197



ACCUTEST

AIR CHAIN OF CUSTODY

SGS Accutest - Dayton
2235 Route 130, Dayton, NJ 08810
TEL: 732-329-0200 FAX: 732-329-3499/3480
www.acctest.com

FED-EX Tracking #
4077 3094 0223
Lab Quote #

Lab Order Control #
MC-11817-93
Lab Job #
JC56815

PAGE 1 OF 2

Client / Reporting Information				Project Information				Weather Parameters				Requested Analysis					
Company Name GES				Project Name LAB - ORANGEBURG				Temperature (Fahrenheit)				Requested Analysis VIOISNYLL SIM ANALY VIOISNYSV					
Address 16 Mt. EBO ROAD SOUTH SUITE 21				Street 1-45 ORANGETOWN RD.				Start: 50 Maximum: 61									
City BRENSIDE State NY Zip 10509				City ORANGEBURG, NY State NY				Stop: 60 Minimum: 50									
Project Contact Michael DeGloria E-mail mdegloria@geschline.com				Project # 1102613-02-210 Alt # 114				Atmospheric Pressure (inches of Hg)									
Phone # 866-839-5195 x 3839 Fax # -				Client Purchase Order # 11905-00				Start: 30.18 Maximum: 30.18									
Stop: 20.91 Minimum: 20.91																	
Sampler(s) Name(s) Richardson Liam Mahrz								Other weather comment: Windy									
Lab Sample #	Field ID / Point of Collection	Air Type Indoor(I) Soil Vap(SV) Ambient(A)	Sampling Equipment Info			Start Sampling Information					Stop Sampling Information						
			Canister Serial #	Canister Size 6L or 1L	Flow Controller Serial #	Date	Time (24hr clock)	Canister Pressure (Hq)	Interior Temp (F)	Sampler Init.	Date	Time (24hr clock)	Canister Pressure (Hq)	Interior Temp (F)	Sampler Init.		
1	OUTSIDE	A	A1100	6	MC337	12-5-17	1045	30	50	NS	12-5-17	1758	6	60	CM	X	
2	SSD-MP-2	SV	A476	1	FL437	12-5-17	1219	730	65	NS	12-5-17	1917	15	65	CM	X	
3	SSD-MP-2	A	A851	1	FL465	12-5-17	1220	730	65	NS	12-5-17	1915	13	65	CM	X	
4	VP-1	SV	A1033	1	FL615	12-5-17	1214	30	65	NS	12-5-17	1912	11	65	CM	X	
5	VP-1	A	A1021	1	FL392	12-5-17	1215	29	65	NS	12-5-17	1910	12	65	CM	X	
6	VP-6	SV	A825	1	ML203	12-5-17	1200	29	55	NS	12-5-17	1800	6	65	CM	X	
7	VP-6	A	A326	1	FL603	12-5-17	1001	730	55	NS	12-5-17	1759	10	65	CM	X	
8	VP-5	SV	A222	1	FL910	12-5-17	0955	285	55	NS	12-5-17	1757	8	65	CM	X	
9	VP-5	A	A890	1	FL540	12-5-17	0956	730	55	NS	12-5-17	1753	7	65	CM	X	
10	VP-9	SV	A1083	1	FL522	12-5-17	1029	730	60	NS	12-5-17	1809	9	65	CM	X	
Turnaround Time (Business days)				Data Deliverable Information				Comments / Remarks									
Standard - 15 Days 10 Day ☒ 5 Day 3 Day 2 Day 1 Day Other				Approved By: _____ Date: _____				All NJDEP TO-15 is mandatory Full T1 Comm A Comm B INITIAL ASSESSMENT Reduced T2 Full T1 LABEL VERIFICATION Other: DKQP reporting				* NYCAT B REPORT * REPORTING LIMITS MUST MEET THE NYS0004 MAY 2017 REQUIREMENTS SUMMA Sample inventory is verified upon receipt in the Laboratory					
Sample Custody must be documented below each time samples change possession, including courier delivery.																	
Relinquished By Laboratory		Date/Time		Received By		Relinquished By		Date/Time		Received By		Relinquished By		Date/Time		Received By	
1 Ray Mawani		11/27/17 14:00		1 FedEx		2 FedEx		11/29/17 13:00		2 GCS		3 Richardson		12-6-17 07:00		4	
5				5		4 FedEx		12-11-17 9:20		4							
Relinquished By		Date/Time		Received By		Custody Seal #											
						112 114 116 118 120											

JC56815: Chain of Custody

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ACCUTEST

AIR CHAIN OF CUSTODY

SGS Accutest - Dayton
2235 Route 130, Dayton, NJ 08810
TEL: 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #

Lab Quote #

MC-11817-93
JCS6815

PAGE 2 of 2

Client / Reporting Information				Project Information				Weather Parameters				Requested Analysis					
Company Name: GES				Project Name: LAB - ORANGE TOWNSHIP				Temperature (Fahrenheit)				Requested Analysis: VT015 NYLL SIM ANALYSIS					
Address: 16 Mt. Eden Rd. South, Suite 21				Street: 1-45 ORANGE TOWN RD.				Start: 50 Maximum: 61									
City: Brownston State: NY Zip: 10509				City: Orangeburg State: NY				Stop: 60 Minimum: 50									
Project Contact: Michael DeBlonia E-mail: mdeblonia@gesonline.com				Project #: 102613-02-210 ACTION 111				Atmospheric Pressure (inches of Hg)									
Phone #: 866-839-5195 x 3839 Fax #: -				Client Purchase Order #: 11905-00				Start: 30.18 Maximum: 30.18									
Sampler(s) Name(s): Kim Brown Liam Miller								Stop: 30.91 Minimum: 20.91									
								Other weather comment: Wet Late									
Lab Sample #	Field ID / Point of Collection	Air Type	Sampling Equipment Info	Start Sampling Information				Stop Sampling Information									
		Indoor(I) Soil Vap(SV) Ambient(A)	Canister Serial #	Canister Size 6L or 1L	Flow Controller Serial #	Date	Time (24hr clock)	Canister Pressure ("Hg)	Interior Temp (F)	Sampler Init.	Date	Time (24hr clock)	Canister Pressure ("Hg)	Interior Temp (F)	Sampler Init.		
11	VP-9	A	A343	6	FL008	12-5-17	1030	28	60	RS	12-5-17	1830	6	65	CM		
12	SSD-MP-5	SV	A039	6	FL007	12-5-17	1034	30	60	RS	12-5-17	1834	8	65	CM		
13	SSD-MP-5	A	A255	6	FL008	12-5-17	1036	30	60	RS	12-5-17	1826	9	65	CM		
Turnaround Time (Business days)				Data Deliverable Information				Comments / Remarks									
Standard - 15 Days 10 Day ☒ 5 Day 3 Day 2 Day 1 Day Other				Approved By: _____ Date: _____ All NJDEP TO-15 is mandatory Full T1 Comm A Comm B Reduced T2 Full T1 Other: OKQP reporting				* NYLFB REPORT * RETURNING LIMITS MUST MEET NYSDOH MAY 2017 REQUIREMENTS Sample inventory is verified upon receipt in the Laboratory									
Sample Custody must be documented below each time samples change possession, including courier delivery.																	
Relinquished by Lab/Client		Date/Time		Received By:		Relinquished by:		Date/Time		Received By:		Relinquished by:		Date/Time		Received By:	
1 Ray Marano		11/27/17 14:14		1 FELIX		2 FELIX		11/29/17 13:00		2 GES		3 FELIX		12-7-17 920		4	
3 Kim Brown		12-6-17 0920		3 FELIX		4 FELIX											
Relinquished for:		Date/Time		Received By:		Custody Seal #											
5				5													

JC56815: Chain of Custody

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JC56815

AIR SAMPLING EQUIPMENT RETURN FORM

Q.E.S.

PROJECT: VB OKANDE BUNG

CONTROL# 4C-11817-93

5189575 #BOR

UNUSED SUMMA CANS

UNUSED CONTROLLERS

AC 237

825 27.

RELINQUISHED BY: 1 <i>FE. B. B.</i>	DATE & TIME: <i>12-7-17</i> <i>920</i>	RECEIVED BY: 2 <i>SA</i>	DATE & TIME: <i>12-7-17</i> <i>920</i>
RELINQUISHED BY: 3	DATE & TIME:	RECEIVED BY: 4	DATE & TIME:
CUSTODY SEAL #1:		# OF BOXES OR PIECES IN DELIVERY <i>5</i>	

NOTES: $CO_2 = 6.43$ 11P-8 HC

MO86-01
ub date: 3/18/16

SGS Accutest Sample Receipt Summary

Job Number: JC56815

Client: _____

Project: _____

Date / Time Received: 12/7/2017 9:20:00 AM

Delivery Method: _____

Airbill #s: _____

Cooler Temps (Raw Measured) °C:

Cooler Temps (Corrected) °C:

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: _____	N/A
3. Cooler media: _____	N/A
4. No. Coolers: _____	N/A

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: ☐ ☐ ☒	

Test Strip Lot #s: _____

pH 1-12: 216017

pH 12+: 208717

Other: (Specify) _____

Comments

SM089-03
Rev. Date 12/7/17

JC56815: Chain of Custody

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JC56815: Chain of Custody

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Job Change Order: JC56815

Requested Date: 12/28/2017 Received Date: 12/7/2017
Account Name: Groundwater & Environmental Se Due Date: 12/21/2017
Project Description: Orangeburg UB, Orangeburg, NY Deliverable: NYASPB
C/O Initiated By: kristin.degra PW: MC TAT (Days): 14

Sample #: JC56815-1, -3, -5, -7, -9, -11, - Change:
13 Please cancel VTO15SIMSL
Dept: 14
TAT: 14

Above Changes Per: Client DateTime: 12/28/2017 9:22:50 AM
To Client: This Change Order is confirmation of the revisions, previously discussed with the SGS Accutest Client Service Representative.
Page 1 of 1

Job Change Order: JC56815

Requested Date: 12/28/2017
Account Name: Groundwater & Environmental Se
Project Description: Orangeburg UB, Orangeburg, NY
C/O Initiated By: kristin.degra PM: MC

Received Date: 12/7/2017
Due Date: 12/21/2017
Deliverable: NYASPB
TAT (Days): 14

Sample #: JC56815-1, -3, -5, -7, -9, -11, -
13 Change:

Please cancel VTO15SIMSL

Dept:

TAT: 14

Above Changes Per: Client

Date/Time: 12/28/2017 9:22:50 AM

To Client: This Change Order is confirmation of the revisions, previously discussed with the SGS Accutest Client Service Representative.

Page 1 of 1

Summa Canister and Flow Controller Log

Page 1 of 1

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY
Received: 12/07/17

SUMMA CANISTERS													
Shipping							Receiving						
Summa ID	L	Vac " Hg	Date Out	By	SCC Batch	SCC FileID	Sample Number	Date In	By	Vac " Hg	Pres psig	Final psig	Dil Fact
A1100	6	29.4	11/27/17	PC	CP9483	5W27985.D	JC56815-1	12/08/17	AO	6.5			1
A476	6	29.4	11/27/17	PC	CP9483	5W27985.D	JC56815-2	12/08/17	AO	10.5			1
A851	6	29.4	11/27/17	PC	CP9462	5W27738.D	JC56815-3	12/08/17	AO	10.5			1
A1033	6	29.4	11/27/17	PC	CP9483	5W27985.D	JC56815-4	12/08/17	AO	11			1
A1021	6	29.4	11/27/17	PC	CP9483	5W27985.D	JC56815-5	12/08/17	AO	11			1
A225	6	29.4	11/27/17	PC	CP9483	5W27985.D	JC56815-6	12/08/17	AO	6			1
A326	6	29.4	11/27/17	PC	CP9467	5W27816.D	JC56815-7	12/08/17	AO	7			1
A222	6	29.4	11/27/17	PC	CP9483	5W27985.D	JC56815-8	12/08/17	AO	7.5			1
A896	6	29.4	11/27/17	PC	CP9480	6W03156.D	JC56815-9	12/08/17	AO	7.5			1
A1083	6	29.4	11/27/17	PC	CP9483	5W27985.D	JC56815-10	12/08/17	AO	7.5			1
A343	6	29.4	11/27/17	PC	CP9480	6W03156.D	JC56815-11	12/08/17	AO	7.5			1
A039	6	29.4	11/27/17	PC	CP9483	5W27985.D	JC56815-12	12/08/17	AO	8			1
A295	6	29.4	11/27/17	PC	CP9483	5W27985.D	JC56815-13	12/08/17	AO	7.5			1

FLOW CONTROLLERS / OTHER										
Shipping					Receiving					
Flow Ctrl ID	Date Out	By	cc/ min	Time hrs.	Date In	By	cc/ min	Flow RPD	Equipment Type	
FC095	11/27/17	PC	9.4	8	12/11/17	AO	10.5	11.1	Flow Controller	
FC392	11/27/17	PC	9.4	8	12/11/17	AO	11.1	16.6	Flow Controller	
FC407	11/27/17	PC	9.4	8	12/11/17	AO	9.8	4.2	Flow Controller	
FC420	11/27/17	PC	9.4	8	12/11/17	AO	10.3	9.1	Flow Controller	
FC437	11/27/17	PC	9.4	8	12/11/17	AO	10.2	8.2	Flow Controller	
FC465	11/27/17	PC	9.4	8	12/11/17	AO	10.6	12	Flow Controller	
FC528	11/27/17	PC	9.4	8	12/11/17	AO	9.8	4.2	Flow Controller	
FC540	11/27/17	PC	9.4	8	12/11/17	AO	10.1	7.2	Flow Controller	
FC603	11/27/17	PC	9.4	8	12/11/17	AO	10.7	12.9	Flow Controller	
FC608	11/27/17	PC	9.4	8	12/11/17	AO	10.1	7.2	Flow Controller	
FC615	11/27/17	PC	9.4	8	12/11/17	AO	10.5	11.1	Flow Controller	
MC203	11/27/17	PC	9.4	8	12/11/17	AO	11	15.7	Flow Controller	
MC237	11/27/17	PC	9.4	8	12/11/17	AO	10.3	9.1	Flow Controller	

SGS Bottle Order(s):

MC-11817-93

Prep Date 11/27/17 **Room Temp(F)** 70 **Bar Pres "Hg** 29.92

Internal Sample Tracking Chronicle

Groundwater & Environmental Services

Job No: JC56815

Orangeburg UB, Orangeburg, NY

Project No: 1102613-02-210 ORG 1111 / 11905-00

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC56815-1 OUTSIDE	Collected: 05-DEC-17 17:58	By: LM	Received: 07-DEC-17	By: AS		
JC56815-1	TO-15	22-DEC-17 17:36	DFT			VTO15NYLL
JC56815-2 SSD-MP-2	Collected: 05-DEC-17 19:17	By: LM	Received: 07-DEC-17	By: AS		
JC56815-2	TO-15	20-DEC-17 17:20	DFT			VTO15NYSVLL
JC56815-3 SSD-MP-2	Collected: 05-DEC-17 19:15	By: LM	Received: 07-DEC-17	By: AS		
JC56815-3	TO-15	21-DEC-17 01:29	DFT			VTO15NYLL
JC56815-3	TO-15	21-DEC-17 23:51	DFT			VTO15NYLL
JC56815-4 VP-1	Collected: 05-DEC-17 19:12	By: LM	Received: 07-DEC-17	By: AS		
JC56815-4	TO-15	20-DEC-17 19:22	DFT			VTO15NYSVLL
JC56815-4	TO-15	21-DEC-17 20:08	DFT			VTO15NYSVLL
JC56815-5 VP-1	Collected: 05-DEC-17 19:10	By: LM	Received: 07-DEC-17	By: AS		
JC56815-5	TO-15	21-DEC-17 02:33	DFT			VTO15NYLL
JC56815-5	TO-15	22-DEC-17 00:43	DFT			VTO15NYLL
JC56815-6 VP-6	Collected: 05-DEC-17 18:00	By: LM	Received: 07-DEC-17	By: AS		
JC56815-6	TO-15	20-DEC-17 20:20	DFT			VTO15NYSVLL
JC56815-7 VP-6	Collected: 05-DEC-17 17:59	By: LM	Received: 07-DEC-17	By: AS		
JC56815-7	TO-15	22-DEC-17 01:50	DFT			VTO15NYLL
JC56815-7	TO-15	23-DEC-17 02:10	DFT			VTO15NYLL

Internal Sample Tracking Chronicle

Groundwater & Environmental Services

Job No: JC56815

Orangeburg UB, Orangeburg, NY

Project No: 1102613-02-210 ORG 1111 / 11905-00

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC56815-8 VP-5	Collected: 05-DEC-17 17:57	By: LM	Received: 07-DEC-17	By: AS		
JC56815-8	TO-15	20-DEC-17 21:17	DFT			VTO15NYSVLL
JC56815-9 VP-5	Collected: 05-DEC-17 17:53	By: LM	Received: 07-DEC-17	By: AS		
JC56815-9	TO-15	22-DEC-17 02:56	DFT			VTO15NYLL
JC56815-9	TO-15	23-DEC-17 03:02	DFT			VTO15NYLL
JC56815-10 VP-9	Collected: 05-DEC-17 18:29	By: LM	Received: 07-DEC-17	By: AS		
JC56815-10	TO-15	20-DEC-17 22:15	DFT			VTO15NYSVLL
JC56815-10	TO-15	21-DEC-17 20:59	DFT			VTO15NYSVLL
JC56815-11 VP-9	Collected: 05-DEC-17 18:30	By: LM	Received: 07-DEC-17	By: AS		
JC56815-11	TO-15	21-DEC-17 06:06	DFT			VTO15NYLL
JC56815-11	TO-15	22-DEC-17 03:47	DFT			VTO15NYLL
JC56815-11	TO-15	23-DEC-17 03:53	DFT			VTO15NYLL
JC56815-12 SSD-MP-5	Collected: 05-DEC-17 18:24	By: LM	Received: 07-DEC-17	By: AS		
JC56815-12	TO-15	20-DEC-17 23:15	DFT			VTO15NYSVLL
JC56815-12	TO-15	21-DEC-17 21:50	DFT			VTO15NYSVLL
JC56815-13 SSD-MP-5	Collected: 05-DEC-17 18:26	By: LM	Received: 07-DEC-17	By: AS		
JC56815-13	TO-15	22-DEC-17 04:55	DFT			VTO15NYLL
JC56815-13	TO-15	23-DEC-17 04:44	DFT			VTO15NYLL

SGS Internal Chain of Custody

Page 1 of 1

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY
Received: 12/07/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC56815-1.1	Robert Lofrano	Air Storage	12/07/17 16:35	Return to Storage
JC56815-2.1	Robert Lofrano	Air Storage	12/07/17 16:35	Return to Storage
JC56815-3.1	Robert Lofrano	Air Storage	12/07/17 16:35	Return to Storage
JC56815-4.1	Robert Lofrano	Air Storage	12/07/17 16:35	Return to Storage
JC56815-5.1	Robert Lofrano	Air Storage	12/07/17 16:35	Return to Storage
JC56815-6.1	Robert Lofrano	Air Storage	12/07/17 16:35	Return to Storage
JC56815-7.1	Robert Lofrano	Air Storage	12/07/17 16:35	Return to Storage
JC56815-8.1	Robert Lofrano	Air Storage	12/07/17 16:35	Return to Storage
JC56815-9.1	Robert Lofrano	Air Storage	12/07/17 16:35	Return to Storage
JC56815-10.1	Robert Lofrano	Air Storage	12/07/17 16:35	Return to Storage
JC56815-11.1	Robert Lofrano	Air Storage	12/07/17 16:35	Return to Storage
JC56815-12.1	Robert Lofrano	Air Storage	12/07/17 16:35	Return to Storage
JC56815-13.1	Robert Lofrano	Air Storage	12/07/17 16:35	Return to Storage

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
- Initial Calibration RT/ISTD Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary**Job Number:** JC56815**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W105-MB	6W03636.D	1	12/20/17	DFT	n/a	n/a	V6W105

The QC reported here applies to the following samples:**Method:** TO-15

JC56815-2, JC56815-3, JC56815-4, JC56815-5, JC56815-6, JC56815-8, JC56815-10, JC56815-11, JC56815-12

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3

Method Blank Summary

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W105-MB	6W03636.D	1	12/20/17	DFT	n/a	n/a	V6W105

The QC reported here applies to the following samples:

Method: TO-15

JC56815-2, JC56815-3, JC56815-4, JC56815-5, JC56815-6, JC56815-8, JC56815-10, JC56815-11, JC56815-12

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

Method Blank Summary

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W105-MB	6W03636.D	1	12/20/17	DFT	n/a	n/a	V6W105

The QC reported here applies to the following samples: Method: TO-15
JC56815-2, JC56815-3, JC56815-4, JC56815-5, JC56815-6, JC56815-8, JC56815-10, JC56815-11, JC56815-12

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	100% 65-128%

Method Blank Summary

Page 1 of 3

Job Number: JC56815**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W106-MB	6W03659.D	1	12/21/17	DFT	n/a	n/a	V6W106

The QC reported here applies to the following samples:**Method:** TO-15

JC56815-3, JC56815-4, JC56815-5, JC56815-7, JC56815-9, JC56815-10, JC56815-11, JC56815-12, JC56815-13

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3

Method Blank Summary

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W106-MB	6W03659.D	1	12/21/17	DFT	n/a	n/a	V6W106

The QC reported here applies to the following samples:

Method: TO-15

JC56815-3, JC56815-4, JC56815-5, JC56815-7, JC56815-9, JC56815-10, JC56815-11, JC56815-12, JC56815-13

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

Method Blank Summary

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W106-MB	6W03659.D	1	12/21/17	DFT	n/a	n/a	V6W106

The QC reported here applies to the following samples: Method: TO-15

JC56815-3, JC56815-4, JC56815-5, JC56815-7, JC56815-9, JC56815-10, JC56815-11, JC56815-12, JC56815-13

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	101% 65-128%

Method Blank Summary

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W107-MB	6W03686.D	1	12/22/17	DFT	n/a	n/a	V6W107

The QC reported here applies to the following samples:

Method: TO-15

JC56815-1, JC56815-7, JC56815-9, JC56815-11, JC56815-13

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3

Method Blank Summary

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Job Number: JC56815**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W107-MB	6W03686.D	1	12/22/17	DFT	n/a	n/a	V6W107

The QC reported here applies to the following samples:**Method:** TO-15

JC56815-1, JC56815-7, JC56815-9, JC56815-11, JC56815-13

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

Method Blank Summary

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W107-MB	6W03686.D	1	12/22/17	DFT	n/a	n/a	V6W107

The QC reported here applies to the following samples: Method: TO-15

JC56815-1, JC56815-7, JC56815-9, JC56815-11, JC56815-13

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	101% 65-128%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
124-38-9	Carbon dioxide	3.61	32	ppbv	JN
	Total TIC, Volatile		0	ppbv	

Method Blank Summary**Job Number:** JC56815**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1090-MB	5W27722.D	1	11/08/17	TCH	n/a	n/a	V5W1090

The QC reported here applies to the following samples:**Method:** TO-15

V5W1090-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3

Method Blank Summary

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Job Number: JC56815**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1090-MB	5W27722.D	1	11/08/17	TCH	n/a	n/a	V5W1090

The QC reported here applies to the following samples:**Method:** TO-15

V5W1090-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

Method Blank Summary

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1090-MB	5W27722.D	1	11/08/17	TCH	n/a	n/a	V5W1090

The QC reported here applies to the following samples: Method: TO-15

V5W1090-SCC

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	94% 65-128%

Method Blank Summary**Job Number:** JC56815**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1093-MB	5W27800.D	1	11/13/17	TCH	n/a	n/a	V5W1093

The QC reported here applies to the following samples:**Method:** TO-15

V5W1093-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3

Method Blank Summary

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Job Number: JC56815**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1093-MB	5W27800.D	1	11/13/17	TCH	n/a	n/a	V5W1093

The QC reported here applies to the following samples:**Method:** TO-15

V5W1093-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

Method Blank Summary

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1093-MB	5W27800.D	1	11/13/17	TCH	n/a	n/a	V5W1093

The QC reported here applies to the following samples: Method: TO-15
V5W1093-SCC

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	94% 65-128%

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W86-MB	6W03152.D	1	11/21/17	DFT	n/a	n/a	V6W86

The QC reported here applies to the following samples:

Method: TO-15

V6W86-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3

Method Blank Summary

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Job Number: JC56815**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W86-MB	6W03152.D	1	11/21/17	DFT	n/a	n/a	V6W86

The QC reported here applies to the following samples:**Method:** TO-15

V6W86-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

Method Blank Summary

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W86-MB	6W03152.D	1	11/21/17	DFT	n/a	n/a	V6W86

The QC reported here applies to the following samples: Method: TO-15

V6W86-SCC

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	94% 65-128%

6.1.6
6

Method Blank Summary**Job Number:** JC56815**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1099-MB	5W27982.D	1	11/22/17	TCH	n/a	n/a	V5W1099

The QC reported here applies to the following samples:**Method:** TO-15

V5W1099-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3

Method Blank Summary

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Job Number: JC56815**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1099-MB	5W27982.D	1	11/22/17	TCH	n/a	n/a	V5W1099

The QC reported here applies to the following samples:**Method:** TO-15

V5W1099-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

Method Blank Summary

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1099-MB	5W27982.D	1	11/22/17	TCH	n/a	n/a	V5W1099

The QC reported here applies to the following samples: Method: TO-15

V5W1099-SCC

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	99% 65-128%

Blank Spike/Blank Spike Duplicate Summary

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Job Number: JC56815**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W105-BS	6W03633.D	1	12/20/17	DFT	n/a	n/a	V6W105
V6W105-BSD	6W03634.D	1	12/20/17	DFT	n/a	n/a	V6W105

The QC reported here applies to the following samples:**Method:** TO-15

JC56815-2, JC56815-3, JC56815-4, JC56815-5, JC56815-6, JC56815-8, JC56815-10, JC56815-11, JC56815-12

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	10	9.0	90	9.1	91	1	70-130/30
106-99-0	1,3-Butadiene	10	9.7	97	9.5	95	2	70-130/30
71-43-2	Benzene	10	9.3	93	9.3	93	0	70-130/30
75-27-4	Bromodichloromethane	10	9.6	96	9.7	97	1	70-130/30
75-25-2	Bromoform	10	10.3	103	10.5	105	2	70-130/30
74-83-9	Bromomethane	10	9.7	97	9.6	96	1	70-130/30
593-60-2	Bromoethene	10	9.9	99	10.1	101	2	70-130/30
100-44-7	Benzyl Chloride	10	10.7	107	10.3	103	4	70-130/30
75-15-0	Carbon disulfide	10	9.4	94	9.4	94	0	70-130/30
108-90-7	Chlorobenzene	10	8.9	89	9.1	91	2	70-130/30
75-00-3	Chloroethane	10	9.4	94	9.3	93	1	70-130/30
67-66-3	Chloroform	10	9.3	93	9.4	94	1	70-130/30
74-87-3	Chloromethane	10	9.8	98	9.7	97	1	70-130/30
107-05-1	3-Chloropropene	10	9.8	98	10	100	2	70-130/30
95-49-8	2-Chlorotoluene	10	9.6	96	9.8	98	2	70-130/30
56-23-5	Carbon tetrachloride	10	9.6	96	9.7	97	1	70-130/30
110-82-7	Cyclohexane	10	9.7	97	9.7	97	0	70-130/30
75-34-3	1,1-Dichloroethane	10	9.5	95	9.5	95	0	70-130/30
75-35-4	1,1-Dichloroethylene	10	9.3	93	9.4	94	1	70-130/30
106-93-4	1,2-Dibromoethane	10	9.5	95	9.6	96	1	70-130/30
107-06-2	1,2-Dichloroethane	10	9.5	95	9.5	95	0	70-130/30
78-87-5	1,2-Dichloropropane	10	9.4	94	9.4	94	0	70-130/30
123-91-1	1,4-Dioxane	10	9.7	97	9.9	99	2	70-130/30
75-71-8	Dichlorodifluoromethane	10	8.8	88	8.2	82	7	70-130/30
124-48-1	Dibromochloromethane	10	9.8	98	9.9	99	1	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	9.3	93	9.3	93	0	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	9.5	95	9.5	95	0	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	9.6	96	9.7	97	1	70-130/30
541-73-1	m-Dichlorobenzene	10	9.3	93	9.0	90	3	70-130/30
95-50-1	o-Dichlorobenzene	10	9.3	93	9.4	94	1	70-130/30
106-46-7	p-Dichlorobenzene	10	9.4	94	9.5	95	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	9.6	96	9.8	98	2	70-130/30
64-17-5	Ethanol	10	9.1	91	9.0	90	1	70-130/30
100-41-4	Ethylbenzene	10	9.5	95	9.6	96	1	70-130/30
141-78-6	Ethyl Acetate	10	10.0	100	10.2	102	2	70-130/30
622-96-8	4-Ethyltoluene	10	9.9	99	9.9	99	0	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W105-BS	6W03633.D	1	12/20/17	DFT	n/a	n/a	V6W105
V6W105-BSD	6W03634.D	1	12/20/17	DFT	n/a	n/a	V6W105

The QC reported here applies to the following samples:

Method: TO-15

JC56815-2, JC56815-3, JC56815-4, JC56815-5, JC56815-6, JC56815-8, JC56815-10, JC56815-11, JC56815-12

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
76-13-1	Freon 113	10	9.4	94	9.4	94	0	70-130/30
76-14-2	Freon 114	10	9.6	96	9.4	94	2	70-130/30
142-82-5	Heptane	10	9.5	95	9.7	97	2	70-130/30
87-68-3	Hexachlorobutadiene	10	9.6	96	9.7	97	1	70-130/30
110-54-3	Hexane	10	9.4	94	9.4	94	0	70-130/30
591-78-6	2-Hexanone	10	9.9	99	9.9	99	0	70-130/30
67-63-0	Isopropyl Alcohol	10	9.1	91	9.2	92	1	70-130/30
75-09-2	Methylene chloride	10	8.6	86	8.6	86	0	70-130/30
78-93-3	Methyl ethyl ketone	10	9.9	99	9.9	99	0	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	10.3	103	10.3	103	0	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	9.7	97	9.8	98	1	70-130/30
80-62-6	Methylmethacrylate	10	10.2	102	10.4	104	2	70-130/30
115-07-1	Propylene	10	9.3	93	9.2	92	1	70-130/30
100-42-5	Styrene	10	10.6	106	10.8	108	2	70-130/30
71-55-6	1,1,1-Trichloroethane	10	9.6	96	9.7	97	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	9.6	96	9.6	96	0	70-130/30
79-00-5	1,1,2-Trichloroethane	10	9.4	94	9.6	96	2	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	9.2	92	9.4	94	2	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	9.9	99	9.3	93	6	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	9.8	98	9.9	99	1	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	9.4	94	9.4	94	0	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	10.1	101	10.1	101	0	70-130/30
127-18-4	Tetrachloroethylene	10	9.1	91	9.3	93	2	70-130/30
109-99-9	Tetrahydrofuran	10	10.2	102	10.2	102	0	70-130/30
108-88-3	Toluene	10	9.2	92	9.3	93	1	70-130/30
79-01-6	Trichloroethylene	10	9.4	94	9.6	96	2	70-130/30
75-69-4	Trichlorofluoromethane	10	9.7	97	9.8	98	1	70-130/30
75-01-4	Vinyl chloride	10	9.7	97	9.6	96	1	70-130/30
108-05-4	Vinyl Acetate	10	9.4	94	9.4	94	0	70-130/30
	m,p-Xylene	20	19.2	96	19.5	98	2	70-130/30
95-47-6	o-Xylene	10	9.7	97	9.8	98	1	70-130/30
1330-20-7	Xylenes (total)	30	28.9	96	29.3	98	1	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W105-BS	6W03633.D	1	12/20/17	DFT	n/a	n/a	V6W105
V6W105-BSD	6W03634.D	1	12/20/17	DFT	n/a	n/a	V6W105

The QC reported here applies to the following samples: Method: TO-15

JC56815-2, JC56815-3, JC56815-4, JC56815-5, JC56815-6, JC56815-8, JC56815-10, JC56815-11, JC56815-12

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	100%	100%	65-128%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Page 1 of 3

Job Number: JC56815**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W106-BS	6W03656.D	1	12/21/17	DFT	n/a	n/a	V6W106
V6W106-BSD	6W03657.D	1	12/21/17	DFT	n/a	n/a	V6W106

The QC reported here applies to the following samples:**Method:** TO-15

JC56815-3, JC56815-4, JC56815-5, JC56815-7, JC56815-9, JC56815-10, JC56815-11, JC56815-12, JC56815-13

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	10	9.6	96	9.0	90	6	70-130/30
106-99-0	1,3-Butadiene	10	11.0	110	9.8	98	12	70-130/30
71-43-2	Benzene	10	10	100	9.3	93	7	70-130/30
75-27-4	Bromodichloromethane	10	10.7	107	9.4	94	13	70-130/30
75-25-2	Bromoform	10	10.9	109	10.4	104	5	70-130/30
74-83-9	Bromomethane	10	11.2	112	10	100	11	70-130/30
593-60-2	Bromoethene	10	11.0	110	10.2	102	8	70-130/30
100-44-7	Benzyl Chloride	10	10.8	108	10.3	103	5	70-130/30
75-15-0	Carbon disulfide	10	10.2	102	9.5	95	7	70-130/30
108-90-7	Chlorobenzene	10	9.4	94	8.9	89	5	70-130/30
75-00-3	Chloroethane	10	10.9	109	9.6	96	13	70-130/30
67-66-3	Chloroform	10	10.1	101	9.4	94	7	70-130/30
74-87-3	Chloromethane	10	11.0	110	9.9	99	11	70-130/30
107-05-1	3-Chloropropene	10	10.7	107	9.9	99	8	70-130/30
95-49-8	2-Chlorotoluene	10	10.2	102	9.7	97	5	70-130/30
56-23-5	Carbon tetrachloride	10	10.3	103	9.7	97	6	70-130/30
110-82-7	Cyclohexane	10	10.2	102	9.6	96	6	70-130/30
75-34-3	1,1-Dichloroethane	10	10.1	101	9.5	95	6	70-130/30
75-35-4	1,1-Dichloroethylene	10	10	100	9.4	94	6	70-130/30
106-93-4	1,2-Dibromoethane	10	10.7	107	9.5	95	12	70-130/30
107-06-2	1,2-Dichloroethane	10	10	100	9.4	94	6	70-130/30
78-87-5	1,2-Dichloropropane	10	10.5	105	9.2	92	13	70-130/30
123-91-1	1,4-Dioxane	10	11.0	110	9.7	97	13	70-130/30
75-71-8	Dichlorodifluoromethane	10	9.3	93	8.4	84	10	70-130/30
124-48-1	Dibromochloromethane	10	11.2	112	9.8	98	13	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	9.9	99	9.3	93	6	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	10.1	101	9.4	94	7	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	10.8	108	9.5	95	13	70-130/30
541-73-1	m-Dichlorobenzene	10	9.6	96	9.1	91	5	70-130/30
95-50-1	o-Dichlorobenzene	10	9.8	98	9.2	92	6	70-130/30
106-46-7	p-Dichlorobenzene	10	10.0	100	9.6	96	4	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	10.9	109	9.6	96	13	70-130/30
64-17-5	Ethanol	10	10.6	106	9.1	91	15	70-130/30
100-41-4	Ethylbenzene	10	9.9	99	9.5	95	4	70-130/30
141-78-6	Ethyl Acetate	10	10.8	108	10.0	100	8	70-130/30
622-96-8	4-Ethyltoluene	10	10.3	103	9.8	98	5	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W106-BS	6W03656.D	1	12/21/17	DFT	n/a	n/a	V6W106
V6W106-BSD	6W03657.D	1	12/21/17	DFT	n/a	n/a	V6W106

The QC reported here applies to the following samples:

Method: TO-15

JC56815-3, JC56815-4, JC56815-5, JC56815-7, JC56815-9, JC56815-10, JC56815-11, JC56815-12, JC56815-13

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
76-13-1	Freon 113	10	10.2	102	9.5	95	7	70-130/30
76-14-2	Freon 114	10	10.9	109	9.8	98	11	70-130/30
142-82-5	Heptane	10	10.7	107	9.4	94	13	70-130/30
87-68-3	Hexachlorobutadiene	10	10.2	102	9.8	98	4	70-130/30
110-54-3	Hexane	10	9.9	99	9.3	93	6	70-130/30
591-78-6	2-Hexanone	10	11.0	110	9.7	97	13	70-130/30
67-63-0	Isopropyl Alcohol	10	9.4	94	8.9	89	5	70-130/30
75-09-2	Methylene chloride	10	9.3	93	8.7	87	7	70-130/30
78-93-3	Methyl ethyl ketone	10	10.6	106	9.9	99	7	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	11.5	115	10.1	101	13	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	10.4	104	9.8	98	6	70-130/30
80-62-6	Methylmethacrylate	10	11.5	115	10.1	101	13	70-130/30
115-07-1	Propylene	10	9.5	95	9.0	90	5	70-130/30
100-42-5	Styrene	10	11.1	111	10.6	106	5	70-130/30
71-55-6	1,1,1-Trichloroethane	10	10.4	104	9.7	97	7	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	10	100	9.5	95	5	70-130/30
79-00-5	1,1,2-Trichloroethane	10	10.8	108	9.4	94	14	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	10	100	9.7	97	3	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	9.9	99	9.4	94	5	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	10.3	103	9.8	98	5	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	10.4	104	9.1	91	13	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	10.7	107	10	100	7	70-130/30
127-18-4	Tetrachloroethylene	10	10.5	105	9.2	92	13	70-130/30
109-99-9	Tetrahydrofuran	10	10.9	109	10.2	102	7	70-130/30
108-88-3	Toluene	10	10.4	104	9.1	91	13	70-130/30
79-01-6	Trichloroethylene	10	10.7	107	9.4	94	13	70-130/30
75-69-4	Trichlorofluoromethane	10	10.5	105	9.9	99	6	70-130/30
75-01-4	Vinyl chloride	10	11.0	110	9.9	99	11	70-130/30
108-05-4	Vinyl Acetate	10	9.7	97	9.1	91	6	70-130/30
	m,p-Xylene	20	20.1	101	19.1	96	5	70-130/30
95-47-6	o-Xylene	10	10.1	101	9.6	96	5	70-130/30
1330-20-7	Xylenes (total)	30	30.2	101	28.7	96	5	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W106-BS	6W03656.D	1	12/21/17	DFT	n/a	n/a	V6W106
V6W106-BSD	6W03657.D	1	12/21/17	DFT	n/a	n/a	V6W106

The QC reported here applies to the following samples: Method: TO-15

JC56815-3, JC56815-4, JC56815-5, JC56815-7, JC56815-9, JC56815-10, JC56815-11, JC56815-12, JC56815-13

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	105%	103%	65-128%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

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Job Number: JC56815**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W107-BS	6W03683.D	1	12/22/17	DFT	n/a	n/a	V6W107
V6W107-BSD	6W03684.D	1	12/22/17	DFT	n/a	n/a	V6W107

The QC reported here applies to the following samples:**Method:** TO-15

JC56815-1, JC56815-7, JC56815-9, JC56815-11, JC56815-13

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	10	9.8	98	9.4	94	4	70-130/30
106-99-0	1,3-Butadiene	10	9.0	90	9.0	90	0	70-130/30
71-43-2	Benzene	10	10.2	102	10.1	101	1	70-130/30
75-27-4	Bromodichloromethane	10	10	100	9.9	99	1	70-130/30
75-25-2	Bromoform	10	11.4	114	11.7	117	3	70-130/30
74-83-9	Bromomethane	10	10.4	104	10.7	107	3	70-130/30
593-60-2	Bromoethene	10	11.9	119	11.9	119	0	70-130/30
100-44-7	Benzyl Chloride	10	10.6	106	11.0	110	4	70-130/30
75-15-0	Carbon disulfide	10	10.6	106	10.5	105	1	70-130/30
108-90-7	Chlorobenzene	10	10.2	102	10.3	103	1	70-130/30
75-00-3	Chloroethane	10	9.4	94	9.6	96	2	70-130/30
67-66-3	Chloroform	10	10.1	101	10.0	100	1	70-130/30
74-87-3	Chloromethane	10	8.6	86	8.6	86	0	70-130/30
107-05-1	3-Chloropropene	10	11.4	114	11.3	113	1	70-130/30
95-49-8	2-Chlorotoluene	10	10.6	106	10.8	108	2	70-130/30
56-23-5	Carbon tetrachloride	10	10.8	108	10.8	108	0	70-130/30
110-82-7	Cyclohexane	10	10.6	106	10.3	103	3	70-130/30
75-34-3	1,1-Dichloroethane	10	10.3	103	10.1	101	2	70-130/30
75-35-4	1,1-Dichloroethylene	10	10.4	104	10.2	102	2	70-130/30
106-93-4	1,2-Dibromoethane	10	9.9	99	10	100	1	70-130/30
107-06-2	1,2-Dichloroethane	10	9.9	99	9.8	98	1	70-130/30
78-87-5	1,2-Dichloropropane	10	9.6	96	9.4	94	2	70-130/30
123-91-1	1,4-Dioxane	10	10.3	103	10.2	102	1	70-130/30
75-71-8	Dichlorodifluoromethane	10	8.8	88	9.0	90	2	70-130/30
124-48-1	Dibromochloromethane	10	10.5	105	10.6	106	1	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	10.4	104	10.1	101	3	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	10.3	103	10.1	101	2	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	10.3	103	10.3	103	0	70-130/30
541-73-1	m-Dichlorobenzene	10	9.6	96	10.0	100	4	70-130/30
95-50-1	o-Dichlorobenzene	10	9.5	95	10	100	5	70-130/30
106-46-7	p-Dichlorobenzene	10	9.8	98	10.3	103	5	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	10.4	104	10.2	102	2	70-130/30
64-17-5	Ethanol	10	8.0	80	7.9	79	1	70-130/30
100-41-4	Ethylbenzene	10	10.4	104	10.5	105	1	70-130/30
141-78-6	Ethyl Acetate	10	10.3	103	10.1	101	2	70-130/30
622-96-8	4-Ethyltoluene	10	10.4	104	10.6	106	2	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Page 2 of 3

Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W107-BS	6W03683.D	1	12/22/17	DFT	n/a	n/a	V6W107
V6W107-BSD	6W03684.D	1	12/22/17	DFT	n/a	n/a	V6W107

The QC reported here applies to the following samples:

Method: TO-15

JC56815-1, JC56815-7, JC56815-9, JC56815-11, JC56815-13

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
76-13-1	Freon 113	10	10.6	106	10.6	106	0	70-130/30
76-14-2	Freon 114	10	9.9	99	10.1	101	2	70-130/30
142-82-5	Heptane	10	10.2	102	10.1	101	1	70-130/30
87-68-3	Hexachlorobutadiene	10	8.8	88	9.2	92	4	70-130/30
110-54-3	Hexane	10	9.5	95	9.2	92	3	70-130/30
591-78-6	2-Hexanone	10	9.7	97	9.5	95	2	70-130/30
67-63-0	Isopropyl Alcohol	10	9.4	94	9.0	90	4	70-130/30
75-09-2	Methylene chloride	10	9.8	98	9.8	98	0	70-130/30
78-93-3	Methyl ethyl ketone	10	11.0	110	10.9	109	1	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	10.4	104	10.1	101	3	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	10.9	109	10.7	107	2	70-130/30
80-62-6	Methylmethacrylate	10	10.7	107	10.6	106	1	70-130/30
115-07-1	Propylene	10	7.7	77	7.6	76	1	70-130/30
100-42-5	Styrene	10	11.9	119	12.1	121	2	70-130/30
71-55-6	1,1,1-Trichloroethane	10	10.5	105	10.4	104	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	9.5	95	9.6	96	1	70-130/30
79-00-5	1,1,2-Trichloroethane	10	10.1	101	10.1	101	0	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	9.4	94	9.9	99	5	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	10.1	101	10.4	104	3	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	10.4	104	10.7	107	3	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	9.5	95	9.2	92	3	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	10.9	109	10.7	107	2	70-130/30
127-18-4	Tetrachloroethylene	10	9.7	97	9.9	99	2	70-130/30
109-99-9	Tetrahydrofuran	10	11.4	114	11.1	111	3	70-130/30
108-88-3	Toluene	10	9.8	98	9.8	98	0	70-130/30
79-01-6	Trichloroethylene	10	10	100	9.9	99	1	70-130/30
75-69-4	Trichlorofluoromethane	10	11.0	110	11.0	110	0	70-130/30
75-01-4	Vinyl chloride	10	9.6	96	9.6	96	0	70-130/30
108-05-4	Vinyl Acetate	10	9.6	96	9.1	91	5	70-130/30
	m,p-Xylene	20	20.6	103	20.9	105	1	70-130/30
95-47-6	o-Xylene	10	10.1	101	10.3	103	2	70-130/30
1330-20-7	Xylenes (total)	30	30.8	103	31.2	104	1	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W107-BS	6W03683.D	1	12/22/17	DFT	n/a	n/a	V6W107
V6W107-BSD	6W03684.D	1	12/22/17	DFT	n/a	n/a	V6W107

The QC reported here applies to the following samples: Method: TO-15

JC56815-1, JC56815-7, JC56815-9, JC56815-11, JC56815-13

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	100%	101%	65-128%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Page 1 of 3

Job Number: JC56815**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1090-BS	5W27719.D	1	11/08/17	TCH	n/a	n/a	V5W1090
V5W1090-BSD	5W27720.D	1	11/08/17	TCH	n/a	n/a	V5W1090

The QC reported here applies to the following samples:**Method:** TO-15

V5W1090-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	10	10.7	107	10.6	106	1	70-130/30
106-99-0	1,3-Butadiene	10	11.4	114	11.1	111	3	70-130/30
71-43-2	Benzene	10	8.7	87	8.9	89	2	70-130/30
75-27-4	Bromodichloromethane	10	9.8	98	10.0	100	2	70-130/30
75-25-2	Bromoform	10	11.9	119	12.0	120	1	70-130/30
74-83-9	Bromomethane	10	10.4	104	10.1	101	3	70-130/30
593-60-2	Bromoethene	10	11.5	115	11.2	112	3	70-130/30
100-44-7	Benzyl Chloride	10	11.7	117	12.0	120	3	70-130/30
75-15-0	Carbon disulfide	10	9.7	97	9.8	98	1	70-130/30
108-90-7	Chlorobenzene	10	10.3	103	10.4	104	1	70-130/30
75-00-3	Chloroethane	10	11.6	116	11.3	113	3	70-130/30
67-66-3	Chloroform	10	9.3	93	9.5	95	2	70-130/30
74-87-3	Chloromethane	10	9.9	99	9.6	96	3	70-130/30
107-05-1	3-Chloropropene	10	9.1	91	9.5	95	4	70-130/30
95-49-8	2-Chlorotoluene	10	10.3	103	10.6	106	3	70-130/30
56-23-5	Carbon tetrachloride	10	9.9	99	10.0	100	1	70-130/30
110-82-7	Cyclohexane	10	8.6	86	8.7	87	1	70-130/30
75-34-3	1,1-Dichloroethane	10	8.8	88	9.0	90	2	70-130/30
75-35-4	1,1-Dichloroethylene	10	9.2	92	9.5	95	3	70-130/30
106-93-4	1,2-Dibromoethane	10	9.5	95	9.7	97	2	70-130/30
107-06-2	1,2-Dichloroethane	10	9.4	94	9.7	97	3	70-130/30
78-87-5	1,2-Dichloropropane	10	9.2	92	9.3	93	1	70-130/30
123-91-1	1,4-Dioxane	10	9.9	99	10.1	101	2	70-130/30
75-71-8	Dichlorodifluoromethane	10	10	100	9.7	97	3	70-130/30
124-48-1	Dibromochloromethane	10	9.9	99	10.1	101	2	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	8.8	88	9.1	91	3	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	8.7	87	8.9	89	2	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	9.1	91	9.5	95	4	70-130/30
541-73-1	m-Dichlorobenzene	10	10.6	106	10.8	108	2	70-130/30
95-50-1	o-Dichlorobenzene	10	10.2	102	10.3	103	1	70-130/30
106-46-7	p-Dichlorobenzene	10	10.2	102	10.4	104	2	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	9.5	95	9.9	99	4	70-130/30
64-17-5	Ethanol	10	10.3	103	10.0	100	3	70-130/30
100-41-4	Ethylbenzene	10	10.2	102	10.3	103	1	70-130/30
141-78-6	Ethyl Acetate	10	9.7	97	9.9	99	2	70-130/30
622-96-8	4-Ethyltoluene	10	10.2	102	10.3	103	1	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1090-BS	5W27719.D	1	11/08/17	TCH	n/a	n/a	V5W1090
V5W1090-BSD	5W27720.D	1	11/08/17	TCH	n/a	n/a	V5W1090

The QC reported here applies to the following samples:

Method: TO-15

V5W1090-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
76-13-1	Freon 113	10	9.9	99	10.0	100	1	70-130/30
76-14-2	Freon 114	10	11.4	114	11.0	110	4	70-130/30
142-82-5	Heptane	10	10.1	101	10.3	103	2	70-130/30
87-68-3	Hexachlorobutadiene	10	8.0	80	8.3	83	4	70-130/30
110-54-3	Hexane	10	8.5	85	9.0	90	6	70-130/30
591-78-6	2-Hexanone	10	10.8	108	11.0	110	2	70-130/30
67-63-0	Isopropyl Alcohol	10	8.8	88	9.0	90	2	70-130/30
75-09-2	Methylene chloride	10	8.6	86	8.8	88	2	70-130/30
78-93-3	Methyl ethyl ketone	10	9.4	94	9.5	95	1	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	10	100	10.3	103	3	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	8.7	87	9.0	90	3	70-130/30
80-62-6	Methylmethacrylate	10	9.6	96	9.9	99	3	70-130/30
115-07-1	Propylene	10	7.5	75	7.4	74	1	70-130/30
100-42-5	Styrene	10	10.6	106	10.8	108	2	70-130/30
71-55-6	1,1,1-Trichloroethane	10	9.6	96	9.7	97	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	10.6	106	10.7	107	1	70-130/30
79-00-5	1,1,2-Trichloroethane	10	9.6	96	9.8	98	2	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	11.1	111	11.2	112	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	10.4	104	10.5	105	1	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	9.9	99	10.0	100	1	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	9.4	94	9.7	97	3	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	7.5	75	7.7	77	3	70-130/30
127-18-4	Tetrachloroethylene	10	9.3	93	9.4	94	1	70-130/30
109-99-9	Tetrahydrofuran	10	9.5	95	9.6	96	1	70-130/30
108-88-3	Toluene	10	9.2	92	9.4	94	2	70-130/30
79-01-6	Trichloroethylene	10	9.9	99	10.0	100	1	70-130/30
75-69-4	Trichlorofluoromethane	10	12.1	121	12.2	122	1	70-130/30
75-01-4	Vinyl chloride	10	11.7	117	11.4	114	3	70-130/30
108-05-4	Vinyl Acetate	10	7.3	73	7.7	77	5	70-130/30
	m,p-Xylene	20	21.5	108	21.8	109	1	70-130/30
95-47-6	o-Xylene	10	10.9	109	11.1	111	2	70-130/30
1330-20-7	Xylenes (total)	30	32.4	108	33.0	110	2	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1090-BS	5W27719.D	1	11/08/17	TCH	n/a	n/a	V5W1090
V5W1090-BSD	5W27720.D	1	11/08/17	TCH	n/a	n/a	V5W1090

The QC reported here applies to the following samples: Method: TO-15

V5W1090-SCC

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	107%	107%	65-128%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

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Job Number: JC56815**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1093-BS	5W27797.D	1	11/13/17	TCH	n/a	n/a	V5W1093
V5W1093-BSD	5W27798.D	1	11/13/17	TCH	n/a	n/a	V5W1093

The QC reported here applies to the following samples:**Method:** TO-15

V5W1093-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	10	10.8	108	10.9	109	1	70-130/30
106-99-0	1,3-Butadiene	10	11.7	117	11.5	115	2	70-130/30
71-43-2	Benzene	10	8.3	83	8.7	87	5	70-130/30
75-27-4	Bromodichloromethane	10	9.5	95	9.9	99	4	70-130/30
75-25-2	Bromoform	10	12.6	126	12.4	124	2	70-130/30
74-83-9	Bromomethane	10	10.8	108	10.5	105	3	70-130/30
593-60-2	Bromoethene	10	11.7	117	11.7	117	0	70-130/30
100-44-7	Benzyl Chloride	10	12.1	121	11.9	119	2	70-130/30
75-15-0	Carbon disulfide	10	9.5	95	9.8	98	3	70-130/30
108-90-7	Chlorobenzene	10	10.2	102	10.2	102	0	70-130/30
75-00-3	Chloroethane	10	11.9	119	11.5	115	3	70-130/30
67-66-3	Chloroform	10	9.2	92	9.6	96	4	70-130/30
74-87-3	Chloromethane	10	10.2	102	10.1	101	1	70-130/30
107-05-1	3-Chloropropene	10	9.1	91	9.4	94	3	70-130/30
95-49-8	2-Chlorotoluene	10	11.0	110	10.7	107	3	70-130/30
56-23-5	Carbon tetrachloride	10	10.1	101	10.5	105	4	70-130/30
110-82-7	Cyclohexane	10	8.2	82	8.7	87	6	70-130/30
75-34-3	1,1-Dichloroethane	10	8.6	86	8.9	89	3	70-130/30
75-35-4	1,1-Dichloroethylene	10	9.0	90	9.4	94	4	70-130/30
106-93-4	1,2-Dibromoethane	10	9.2	92	9.6	96	4	70-130/30
107-06-2	1,2-Dichloroethane	10	9.3	93	9.8	98	5	70-130/30
78-87-5	1,2-Dichloropropane	10	8.6	86	8.9	89	3	70-130/30
123-91-1	1,4-Dioxane	10	10.0	100	10.3	103	3	70-130/30
75-71-8	Dichlorodifluoromethane	10	10.0	100	9.9	99	1	70-130/30
124-48-1	Dibromochloromethane	10	9.6	96	10.2	102	6	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	8.7	87	9.1	91	4	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	8.4	84	8.9	89	6	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	8.8	88	9.2	92	4	70-130/30
541-73-1	m-Dichlorobenzene	10	11.3	113	10.8	108	5	70-130/30
95-50-1	o-Dichlorobenzene	10	10.7	107	10.4	104	3	70-130/30
106-46-7	p-Dichlorobenzene	10	10.9	109	10.6	106	3	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	9.4	94	9.9	99	5	70-130/30
64-17-5	Ethanol	10	10.5	105	10.3	103	2	70-130/30
100-41-4	Ethylbenzene	10	10.4	104	10.4	104	0	70-130/30
141-78-6	Ethyl Acetate	10	9.3	93	9.6	96	3	70-130/30
622-96-8	4-Ethyltoluene	10	10.6	106	10.4	104	2	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1093-BS	5W27797.D	1	11/13/17	TCH	n/a	n/a	V5W1093
V5W1093-BSD	5W27798.D	1	11/13/17	TCH	n/a	n/a	V5W1093

The QC reported here applies to the following samples:

Method: TO-15

V5W1093-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
76-13-1	Freon 113	10	9.8	98	10.1	101	3	70-130/30
76-14-2	Freon 114	10	11.9	119	11.5	115	3	70-130/30
142-82-5	Heptane	10	9.9	99	10.1	101	2	70-130/30
87-68-3	Hexachlorobutadiene	10	8.9	89	8.7	87	2	70-130/30
110-54-3	Hexane	10	8.4	84	8.8	88	5	70-130/30
591-78-6	2-Hexanone	10	10.7	107	10.9	109	2	70-130/30
67-63-0	Isopropyl Alcohol	10	9.1	91	9.4	94	3	70-130/30
75-09-2	Methylene chloride	10	8.4	84	8.7	87	4	70-130/30
78-93-3	Methyl ethyl ketone	10	9.0	90	9.4	94	4	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	10.1	101	10.1	101	0	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	8.6	86	9.0	90	5	70-130/30
80-62-6	Methylmethacrylate	10	9.6	96	9.8	98	2	70-130/30
115-07-1	Propylene	10	7.4	74	7.5	75	1	70-130/30
100-42-5	Styrene	10	11.2	112	10.8	108	4	70-130/30
71-55-6	1,1,1-Trichloroethane	10	9.6	96	10.0	100	4	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	10.8	108	10.5	105	3	70-130/30
79-00-5	1,1,2-Trichloroethane	10	9.1	91	9.6	96	5	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	11.6	116	11.4	114	2	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	11.0	110	10.6	106	4	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	10.4	104	10.2	102	2	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	9.3	93	9.5	95	2	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	7.6	76	7.9	79	4	70-130/30
127-18-4	Tetrachloroethylene	10	9.0	90	9.3	93	3	70-130/30
109-99-9	Tetrahydrofuran	10	9.1	91	9.6	96	5	70-130/30
108-88-3	Toluene	10	8.6	86	9.1	91	6	70-130/30
79-01-6	Trichloroethylene	10	9.7	97	9.9	99	2	70-130/30
75-69-4	Trichlorofluoromethane	10	12.7	127	12.9	129	2	70-130/30
75-01-4	Vinyl chloride	10	12.0	120	11.5	115	4	70-130/30
108-05-4	Vinyl Acetate	10	7.2	72	7.6	76	5	70-130/30
	m,p-Xylene	20	22.3	112	22.0	110	1	70-130/30
95-47-6	o-Xylene	10	11.2	112	11.1	111	1	70-130/30
1330-20-7	Xylenes (total)	30	33.6	112	33.1	110	1	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1093-BS	5W27797.D	1	11/13/17	TCH	n/a	n/a	V5W1093
V5W1093-BSD	5W27798.D	1	11/13/17	TCH	n/a	n/a	V5W1093

The QC reported here applies to the following samples: Method: TO-15

V5W1093-SCC

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	112%	109%	65-128%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

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Job Number: JC56815**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W86-BS	6W03149.D	1	11/21/17	DFT	n/a	n/a	V6W86
V6W86-BSD	6W03150.D	1	11/21/17	DFT	n/a	n/a	V6W86

The QC reported here applies to the following samples:**Method:** TO-15

V6W86-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	10	11.0	110	10.9	109	1	70-130/30
106-99-0	1,3-Butadiene	10	10.8	108	10.4	104	4	70-130/30
71-43-2	Benzene	10	11.3	113	11.1	111	2	70-130/30
75-27-4	Bromodichloromethane	10	11.7	117	11.4	114	3	70-130/30
75-25-2	Bromoform	10	12.5	125	12.0	120	4	70-130/30
74-83-9	Bromomethane	10	11.1	111	10.7	107	4	70-130/30
593-60-2	Bromoethene	10	12.1	121	11.9	119	2	70-130/30
100-44-7	Benzyl Chloride	10	13.6	136* a	13.1	131* a	4	70-130/30
75-15-0	Carbon disulfide	10	11.4	114	11.2	112	2	70-130/30
108-90-7	Chlorobenzene	10	10.9	109	10.5	105	4	70-130/30
75-00-3	Chloroethane	10	10.8	108	10.5	105	3	70-130/30
67-66-3	Chloroform	10	11.4	114	11.2	112	2	70-130/30
74-87-3	Chloromethane	10	10.9	109	10.7	107	2	70-130/30
107-05-1	3-Chloropropene	10	12.1	121	11.8	118	3	70-130/30
95-49-8	2-Chlorotoluene	10	11.7	117	11.2	112	4	70-130/30
56-23-5	Carbon tetrachloride	10	11.6	116	11.3	113	3	70-130/30
110-82-7	Cyclohexane	10	12.1	121	11.9	119	2	70-130/30
75-34-3	1,1-Dichloroethane	10	11.6	116	11.4	114	2	70-130/30
75-35-4	1,1-Dichloroethylene	10	11.5	115	11.3	113	2	70-130/30
106-93-4	1,2-Dibromoethane	10	11.5	115	11.2	112	3	70-130/30
107-06-2	1,2-Dichloroethane	10	11.6	116	11.4	114	2	70-130/30
78-87-5	1,2-Dichloropropane	10	11.7	117	11.4	114	3	70-130/30
123-91-1	1,4-Dioxane	10	12.0	120	11.6	116	3	70-130/30
75-71-8	Dichlorodifluoromethane	10	10.7	107	10.4	104	3	70-130/30
124-48-1	Dibromochloromethane	10	11.9	119	11.5	115	3	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	11.5	115	11.3	113	2	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	11.7	117	11.5	115	2	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	11.9	119	11.7	117	2	70-130/30
541-73-1	m-Dichlorobenzene	10	11.3	113	10.8	108	5	70-130/30
95-50-1	o-Dichlorobenzene	10	11.2	112	10.7	107	5	70-130/30
106-46-7	p-Dichlorobenzene	10	11.5	115	11.1	111	4	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	12.1	121	11.8	118	3	70-130/30
64-17-5	Ethanol	10	10.3	103	9.9	99	4	70-130/30
100-41-4	Ethylbenzene	10	11.7	117	11.2	112	4	70-130/30
141-78-6	Ethyl Acetate	10	12.5	125	12.3	123	2	70-130/30
622-96-8	4-Ethyltoluene	10	11.9	119	11.5	115	3	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Page 2 of 3

Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W86-BS	6W03149.D	1	11/21/17	DFT	n/a	n/a	V6W86
V6W86-BSD	6W03150.D	1	11/21/17	DFT	n/a	n/a	V6W86

The QC reported here applies to the following samples:

Method: TO-15

V6W86-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
76-13-1	Freon 113	10	11.4	114	11.1	111	3	70-130/30
76-14-2	Freon 114	10	10.8	108	10.3	103	5	70-130/30
142-82-5	Heptane	10	11.8	118	11.5	115	3	70-130/30
87-68-3	Hexachlorobutadiene	10	11.3	113	10.9	109	4	70-130/30
110-54-3	Hexane	10	11.7	117	11.6	116	1	70-130/30
591-78-6	2-Hexanone	10	12.6	126	12.2	122	3	70-130/30
67-63-0	Isopropyl Alcohol	10	11.4	114	11.2	112	2	70-130/30
75-09-2	Methylene chloride	10	10.4	104	10.3	103	1	70-130/30
78-93-3	Methyl ethyl ketone	10	12.2	122	12.0	120	2	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	12.9	129	12.6	126	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	12.0	120	11.7	117	3	70-130/30
80-62-6	Methylmethacrylate	10	12.8	128	12.5	125	2	70-130/30
115-07-1	Propylene	10	11.6	116	11.6	116	0	70-130/30
100-42-5	Styrene	10	13.1	131* a	12.6	126	4	70-130/30
71-55-6	1,1,1-Trichloroethane	10	11.7	117	11.4	114	3	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	11.5	115	11.1	111	4	70-130/30
79-00-5	1,1,2-Trichloroethane	10	11.5	115	11.2	112	3	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	11.2	112	11.0	110	2	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	11.9	119	11.4	114	4	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	11.7	117	11.3	113	3	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	11.6	116	11.4	114	2	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	12.5	125	12.3	123	2	70-130/30
127-18-4	Tetrachloroethylene	10	10.9	109	10.6	106	3	70-130/30
109-99-9	Tetrahydrofuran	10	12.6	126	12.4	124	2	70-130/30
108-88-3	Toluene	10	11.3	113	10.9	109	4	70-130/30
79-01-6	Trichloroethylene	10	11.5	115	11.2	112	3	70-130/30
75-69-4	Trichlorofluoromethane	10	11.7	117	11.5	115	2	70-130/30
75-01-4	Vinyl chloride	10	11.0	110	10.6	106	4	70-130/30
108-05-4	Vinyl Acetate	10	11.9	119	11.7	117	2	70-130/30
	m,p-Xylene	20	23.5	118	22.5	113	4	70-130/30
95-47-6	o-Xylene	10	11.7	117	11.3	113	3	70-130/30
1330-20-7	Xylenes (total)	30	35.2	117	33.8	113	4	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W86-BS	6W03149.D	1	11/21/17	DFT	n/a	n/a	V6W86
V6W86-BSD	6W03150.D	1	11/21/17	DFT	n/a	n/a	V6W86

The QC reported here applies to the following samples: Method: TO-15

V6W86-SCC

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	96%	95%	65-128%

(a) High percent recoveries and no associated positive reported in the QC batch.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

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Job Number: JC56815**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1099-BS	5W27979.D	1	11/22/17	TCH	n/a	n/a	V5W1099
V5W1099-BSD	5W27980.D	1	11/22/17	TCH	n/a	n/a	V5W1099

The QC reported here applies to the following samples:**Method:** TO-15

V5W1099-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	10	8.0	80	8.2	82	2	70-130/30
106-99-0	1,3-Butadiene	10	8.3	83	8.3	83	0	70-130/30
71-43-2	Benzene	10	9.2	92	9.3	93	1	70-130/30
75-27-4	Bromodichloromethane	10	9.7	97	9.7	97	0	70-130/30
75-25-2	Bromoform	10	11.1	111	11.2	112	1	70-130/30
74-83-9	Bromomethane	10	8.7	87	8.7	87	0	70-130/30
593-60-2	Bromoethene	10	9.2	92	9.1	91	1	70-130/30
100-44-7	Benzyl Chloride	10	10.4	104	10.3	103	1	70-130/30
75-15-0	Carbon disulfide	10	9.8	98	9.9	99	1	70-130/30
108-90-7	Chlorobenzene	10	9.3	93	9.3	93	0	70-130/30
75-00-3	Chloroethane	10	8.7	87	8.6	86	1	70-130/30
67-66-3	Chloroform	10	9.5	95	9.5	95	0	70-130/30
74-87-3	Chloromethane	10	9.0	90	8.9	89	1	70-130/30
107-05-1	3-Chloropropene	10	9.7	97	9.7	97	0	70-130/30
95-49-8	2-Chlorotoluene	10	9.8	98	9.7	97	1	70-130/30
56-23-5	Carbon tetrachloride	10	10.4	104	10.3	103	1	70-130/30
110-82-7	Cyclohexane	10	9.2	92	9.2	92	0	70-130/30
75-34-3	1,1-Dichloroethane	10	9.5	95	9.5	95	0	70-130/30
75-35-4	1,1-Dichloroethylene	10	9.7	97	9.7	97	0	70-130/30
106-93-4	1,2-Dibromoethane	10	9.7	97	9.7	97	0	70-130/30
107-06-2	1,2-Dichloroethane	10	9.7	97	9.7	97	0	70-130/30
78-87-5	1,2-Dichloropropane	10	9.5	95	9.5	95	0	70-130/30
123-91-1	1,4-Dioxane	10	9.9	99	9.8	98	1	70-130/30
75-71-8	Dichlorodifluoromethane	10	9.4	94	9.3	93	1	70-130/30
124-48-1	Dibromochloromethane	10	9.8	98	9.9	99	1	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	9.7	97	9.6	96	1	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	9.4	94	9.4	94	0	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	9.4	94	9.4	94	0	70-130/30
541-73-1	m-Dichlorobenzene	10	9.5	95	9.5	95	0	70-130/30
95-50-1	o-Dichlorobenzene	10	9.2	92	9.2	92	0	70-130/30
106-46-7	p-Dichlorobenzene	10	9.3	93	9.1	91	2	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	9.7	97	9.8	98	1	70-130/30
64-17-5	Ethanol	10	8.5	85	8.5	85	0	70-130/30
100-41-4	Ethylbenzene	10	9.2	92	9.3	93	1	70-130/30
141-78-6	Ethyl Acetate	10	10.4	104	10.2	102	2	70-130/30
622-96-8	4-Ethyltoluene	10	9.1	91	9.1	91	0	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1099-BS	5W27979.D	1	11/22/17	TCH	n/a	n/a	V5W1099
V5W1099-BSD	5W27980.D	1	11/22/17	TCH	n/a	n/a	V5W1099

The QC reported here applies to the following samples:

Method: TO-15

V5W1099-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
76-13-1	Freon 113	10	9.7	97	9.6	96	1	70-130/30
76-14-2	Freon 114	10	9.5	95	9.4	94	1	70-130/30
142-82-5	Heptane	10	9.4	94	9.5	95	1	70-130/30
87-68-3	Hexachlorobutadiene	10	8.2	82	8.1	81	1	70-130/30
110-54-3	Hexane	10	9.1	91	9.1	91	0	70-130/30
591-78-6	2-Hexanone	10	10.9	109	10.9	109	0	70-130/30
67-63-0	Isopropyl Alcohol	10	8.5	85	7.7	77	10	70-130/30
75-09-2	Methylene chloride	10	8.6	86	8.6	86	0	70-130/30
78-93-3	Methyl ethyl ketone	10	9.8	98	9.7	97	1	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	10	100	10.1	101	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	9.2	92	9.2	92	0	70-130/30
80-62-6	Methylmethacrylate	10	9.7	97	9.8	98	1	70-130/30
115-07-1	Propylene	10	8.7	87	8.5	85	2	70-130/30
100-42-5	Styrene	10	9.7	97	9.7	97	0	70-130/30
71-55-6	1,1,1-Trichloroethane	10	9.4	94	9.3	93	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	9.5	95	9.5	95	0	70-130/30
79-00-5	1,1,2-Trichloroethane	10	9.4	94	9.5	95	1	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	11.4	114	11.1	111	3	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	9.0	90	9.0	90	0	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	8.8	88	8.8	88	0	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	9.5	95	9.5	95	0	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	9.3	93	9.3	93	0	70-130/30
127-18-4	Tetrachloroethylene	10	9.2	92	9.2	92	0	70-130/30
109-99-9	Tetrahydrofuran	10	9.8	98	9.7	97	1	70-130/30
108-88-3	Toluene	10	9.0	90	9.0	90	0	70-130/30
79-01-6	Trichloroethylene	10	9.5	95	9.5	95	0	70-130/30
75-69-4	Trichlorofluoromethane	10	9.8	98	9.7	97	1	70-130/30
75-01-4	Vinyl chloride	10	9.3	93	9.1	91	2	70-130/30
108-05-4	Vinyl Acetate	10	8.9	89	9.0	90	1	70-130/30
	m,p-Xylene	20	17.7	89	17.8	89	1	70-130/30
95-47-6	o-Xylene	10	9.3	93	9.4	94	1	70-130/30
1330-20-7	Xylenes (total)	30	27.1	90	27.2	91	0	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1099-BS	5W27979.D	1	11/22/17	TCH	n/a	n/a	V5W1099
V5W1099-BSD	5W27980.D	1	11/22/17	TCH	n/a	n/a	V5W1099

The QC reported here applies to the following samples: Method: TO-15

V5W1099-SCC

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	108%	108%	65-128%

* = Outside of Control Limits.

Duplicate Summary**Job Number:** JC56815**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC56815-2DUP	6W03639.D	1.65	12/20/17	DFT	n/a	n/a	V6W105
JC56815-2	6W03638.D	1.65	12/20/17	DFT	n/a	n/a	V6W105

The QC reported here applies to the following samples:**Method:** TO-15

JC56815-2, JC56815-3, JC56815-4, JC56815-5, JC56815-6, JC56815-8, JC56815-10, JC56815-11, JC56815-12

CAS No.	Compound	JC56815-2 ppbv	DUP Q	ppbv	Q	RPD	Limits
67-64-1	Acetone	21.1		18.3		14	25
106-99-0	1,3-Butadiene	ND		ND		nc	25
71-43-2	Benzene	0.32		0.32		0	25
75-27-4	Bromodichloromethane	ND		ND		nc	25
75-25-2	Bromoform	ND		ND		nc	25
74-83-9	Bromomethane	ND		ND		nc	25
593-60-2	Bromoethene	ND		ND		nc	25
100-44-7	Benzyl Chloride	ND		ND		nc	25
75-15-0	Carbon disulfide	ND		ND		nc	25
108-90-7	Chlorobenzene	ND		ND		nc	25
75-00-3	Chloroethane	ND		ND		nc	25
67-66-3	Chloroform	0.29		0.27		7	25
74-87-3	Chloromethane	0.90		0.89		1	25
107-05-1	3-Chloropropene	ND		ND		nc	25
95-49-8	2-Chlorotoluene	ND		ND		nc	25
56-23-5	Carbon tetrachloride	0.10		0.11	J	10	25
110-82-7	Cyclohexane	ND		ND		nc	25
75-34-3	1,1-Dichloroethane	ND		ND		nc	25
75-35-4	1,1-Dichloroethylene	ND		ND		nc	25
106-93-4	1,2-Dibromoethane	ND		ND		nc	25
107-06-2	1,2-Dichloroethane	ND		ND		nc	25
78-87-5	1,2-Dichloropropane	ND		ND		nc	25
123-91-1	1,4-Dioxane	ND		ND		nc	25
75-71-8	Dichlorodifluoromethane	0.60		0.62		3	25
124-48-1	Dibromochloromethane	ND		ND		nc	25
156-60-5	trans-1,2-Dichloroethylene	ND		ND		nc	25
156-59-2	cis-1,2-Dichloroethylene	ND		ND		nc	25
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	25
541-73-1	m-Dichlorobenzene	ND		ND		nc	25
95-50-1	o-Dichlorobenzene	ND		ND		nc	25
106-46-7	p-Dichlorobenzene	ND		ND		nc	25
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	25
64-17-5	Ethanol	50.7	E	47.5	E	7	25
100-41-4	Ethylbenzene	0.11		0.10	J	10	25
141-78-6	Ethyl Acetate	0.64		0.60		6	25
622-96-8	4-Ethyltoluene	0.19		0.17	J	11	25

* = Outside of Control Limits.

Duplicate Summary

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC56815-2DUP	6W03639.D	1.65	12/20/17	DFT	n/a	n/a	V6W105
JC56815-2	6W03638.D	1.65	12/20/17	DFT	n/a	n/a	V6W105

The QC reported here applies to the following samples:

Method: TO-15

JC56815-2, JC56815-3, JC56815-4, JC56815-5, JC56815-6, JC56815-8, JC56815-10, JC56815-11, JC56815-12

CAS No.	Compound	JC56815-2 ppbv	DUP Q	ppbv	Q	RPD	Limits
76-13-1	Freon 113	0.091		0.092	J	1	25
76-14-2	Freon 114	ND		ND		nc	25
142-82-5	Heptane	ND		ND		nc	25
87-68-3	Hexachlorobutadiene	ND		ND		nc	25
110-54-3	Hexane	0.90		0.94		4	25
591-78-6	2-Hexanone	ND		ND		nc	25
67-63-0	Isopropyl Alcohol	1.2		1.2		0	25
75-09-2	Methylene chloride	5.4		2.6		70* a	25
78-93-3	Methyl ethyl ketone	6.0		5.5		9	25
108-10-1	Methyl Isobutyl Ketone	ND		ND		nc	25
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	25
80-62-6	Methylmethacrylate	ND		ND		nc	25
115-07-1	Propylene	ND		ND		nc	25
100-42-5	Styrene	ND		ND		nc	25
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	25
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	25
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	25
120-82-1	1,2,4-Trichlorobenzene	ND		ND		nc	25
95-63-6	1,2,4-Trimethylbenzene	0.74		0.66		11	25
108-67-8	1,3,5-Trimethylbenzene	0.22		0.20		10	25
540-84-1	2,2,4-Trimethylpentane	ND		ND		nc	25
75-65-0	Tertiary Butyl Alcohol	ND		ND		nc	25
127-18-4	Tetrachloroethylene	0.058		0.048		19	25
109-99-9	Tetrahydrofuran	3.4		3.1		9	25
108-88-3	Toluene	0.55		0.53		4	25
79-01-6	Trichloroethylene	ND		ND		nc	25
75-69-4	Trichlorofluoromethane	0.37		0.38		3	25
75-01-4	Vinyl chloride	ND		ND		nc	25
108-05-4	Vinyl Acetate	ND		ND		nc	25
	m,p-Xylene	0.34		0.32		6	25
95-47-6	o-Xylene	0.15		0.14	J	7	25
1330-20-7	Xylenes (total)	0.34		0.46		6	25

* = Outside of Control Limits.

Duplicate Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC56815-2DUP	6W03639.D	1.65	12/20/17	DFT	n/a	n/a	V6W105
JC56815-2	6W03638.D	1.65	12/20/17	DFT	n/a	n/a	V6W105

The QC reported here applies to the following samples:

Method: TO-15

JC56815-2, JC56815-3, JC56815-4, JC56815-5, JC56815-6, JC56815-8, JC56815-10, JC56815-11, JC56815-12

CAS No.	Surrogate Recoveries	DUP	JC56815-2	Limits
460-00-4	4-Bromofluorobenzene	103%	101%	65-128%

(a) Analytical precision exceeds in-house control limits.

* = Outside of Control Limits.

Duplicate Summary

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Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC57421-1DUP	6W03661.D	1	12/21/17	DFT	n/a	n/a	V6W106
JC57421-1	6W03660.D	1	12/21/17	DFT	n/a	n/a	V6W106

The QC reported here applies to the following samples:**Method:** TO-15

JC56815-3, JC56815-4, JC56815-5, JC56815-7, JC56815-9, JC56815-10, JC56815-11, JC56815-12, JC56815-13

CAS No.	Compound	JC57421-1 ppbv	DUP Q	ppbv	Q	RPD	Limits
67-64-1	Acetone	43.6		42.3		3	25
106-99-0	1,3-Butadiene	7.9		7.4		7	25
71-43-2	Benzene	1.6		1.6		0	25
75-27-4	Bromodichloromethane	ND		ND		nc	25
75-25-2	Bromoform	ND		ND		nc	25
74-83-9	Bromomethane	ND		ND		nc	25
593-60-2	Bromoethene	ND		ND		nc	25
100-44-7	Benzyl Chloride	ND		ND		nc	25
75-15-0	Carbon disulfide	3.9		3.8		3	25
108-90-7	Chlorobenzene	ND		ND		nc	25
75-00-3	Chloroethane	ND		ND		nc	25
67-66-3	Chloroform	ND		ND		nc	25
74-87-3	Chloromethane	ND		ND		nc	25
107-05-1	3-Chloropropene	ND		ND		nc	25
95-49-8	2-Chlorotoluene	ND		ND		nc	25
56-23-5	Carbon tetrachloride	ND		ND		nc	25
110-82-7	Cyclohexane	ND		ND		nc	25
75-34-3	1,1-Dichloroethane	ND		ND		nc	25
75-35-4	1,1-Dichloroethylene	ND		ND		nc	25
106-93-4	1,2-Dibromoethane	ND		ND		nc	25
107-06-2	1,2-Dichloroethane	ND		ND		nc	25
78-87-5	1,2-Dichloropropane	ND		ND		nc	25
123-91-1	1,4-Dioxane	ND		ND		nc	25
75-71-8	Dichlorodifluoromethane	ND		ND		nc	25
124-48-1	Dibromochloromethane	ND		ND		nc	25
156-60-5	trans-1,2-Dichloroethylene	ND		ND		nc	25
156-59-2	cis-1,2-Dichloroethylene	ND		ND		nc	25
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	25
541-73-1	m-Dichlorobenzene	ND		ND		nc	25
95-50-1	o-Dichlorobenzene	ND		ND		nc	25
106-46-7	p-Dichlorobenzene	ND		ND		nc	25
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	25
64-17-5	Ethanol	22.8		21.1		8	25
100-41-4	Ethylbenzene	0.60	J	0.60	J	0	25
141-78-6	Ethyl Acetate	3.1		3.0		3	25
622-96-8	4-Ethyltoluene	ND		ND		nc	25

* = Outside of Control Limits.

Duplicate Summary

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC57421-1DUP	6W03661.D	1	12/21/17	DFT	n/a	n/a	V6W106
JC57421-1	6W03660.D	1	12/21/17	DFT	n/a	n/a	V6W106

The QC reported here applies to the following samples:

Method: TO-15

JC56815-3, JC56815-4, JC56815-5, JC56815-7, JC56815-9, JC56815-10, JC56815-11, JC56815-12, JC56815-13

CAS No.	Compound	JC57421-1 ppbv	DUP Q	ppbv	Q	RPD	Limits
76-13-1	Freon 113	ND		ND		nc	25
76-14-2	Freon 114	ND		ND		nc	25
142-82-5	Heptane	0.65	J	0.64	J	2	25
87-68-3	Hexachlorobutadiene	ND		ND		nc	25
110-54-3	Hexane	1.4		1.4		0	25
591-78-6	2-Hexanone	0.48	J	0.46	J	4	25
67-63-0	Isopropyl Alcohol	1.7		1.7		0	25
75-09-2	Methylene chloride	ND		ND		nc	25
78-93-3	Methyl ethyl ketone	8.9		8.7		2	25
108-10-1	Methyl Isobutyl Ketone	ND		ND		nc	25
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	25
80-62-6	Methylmethacrylate	ND		ND		nc	25
115-07-1	Propylene	56.7		52.5		8	25
100-42-5	Styrene	ND		ND		nc	25
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	25
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	25
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	25
120-82-1	1,2,4-Trichlorobenzene	ND		ND		nc	25
95-63-6	1,2,4-Trimethylbenzene	ND		ND		nc	25
108-67-8	1,3,5-Trimethylbenzene	ND		ND		nc	25
540-84-1	2,2,4-Trimethylpentane	ND		ND		nc	25
75-65-0	Tertiary Butyl Alcohol	1.9		1.8		5	25
127-18-4	Tetrachloroethylene	83.8		80.9		4	25
109-99-9	Tetrahydrofuran	ND		ND		nc	25
108-88-3	Toluene	1.7		1.6		6	25
79-01-6	Trichloroethylene	ND		ND		nc	25
75-69-4	Trichlorofluoromethane	ND		ND		nc	25
75-01-4	Vinyl chloride	ND		ND		nc	25
108-05-4	Vinyl Acetate	ND		ND		nc	25
	m,p-Xylene	2.0		1.9		5	25
95-47-6	o-Xylene	0.81		0.79	J	3	25
1330-20-7	Xylenes (total)	2.8		2.7		4	25

* = Outside of Control Limits.

Duplicate Summary

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC57421-1DUP	6W03661.D	1	12/21/17	DFT	n/a	n/a	V6W106
JC57421-1	6W03660.D	1	12/21/17	DFT	n/a	n/a	V6W106

The QC reported here applies to the following samples: Method: TO-15

JC56815-3, JC56815-4, JC56815-5, JC56815-7, JC56815-9, JC56815-10, JC56815-11, JC56815-12, JC56815-13

CAS No.	Surrogate Recoveries	DUP	JC57421-1	Limits
460-00-4	4-Bromofluorobenzene	103%	105%	65-128%

* = Outside of Control Limits.

Duplicate Summary

Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC57579-2DUP	6W03689.D	1	12/22/17	DFT	n/a	n/a	V6W107
JC57579-2	6W03688.D	1	12/22/17	DFT	n/a	n/a	V6W107

The QC reported here applies to the following samples:

Method: TO-15

JC56815-1, JC56815-7, JC56815-9, JC56815-11, JC56815-13

CAS No.	Compound	JC57579-2 ppbv	DUP Q	ppbv	Q	RPD	Limits
67-64-1	Acetone	5.5		5.6		2	25
106-99-0	1,3-Butadiene	ND		ND		nc	25
71-43-2	Benzene	ND		ND		nc	25
75-27-4	Bromodichloromethane	ND		ND		nc	25
75-25-2	Bromoform	ND		ND		nc	25
74-83-9	Bromomethane	ND		ND		nc	25
593-60-2	Bromoethene	ND		ND		nc	25
100-44-7	Benzyl Chloride	ND		ND		nc	25
75-15-0	Carbon disulfide	ND		ND		nc	25
108-90-7	Chlorobenzene	ND		ND		nc	25
75-00-3	Chloroethane	ND		ND		nc	25
67-66-3	Chloroform	0.87		0.87		0	25
74-87-3	Chloromethane	ND		ND		nc	25
107-05-1	3-Chloropropene	ND		ND		nc	25
95-49-8	2-Chlorotoluene	ND		ND		nc	25
56-23-5	Carbon tetrachloride	0.72		0.70	J	3	25
110-82-7	Cyclohexane	ND		ND		nc	25
75-34-3	1,1-Dichloroethane	ND		ND		nc	25
75-35-4	1,1-Dichloroethylene	ND		ND		nc	25
106-93-4	1,2-Dibromoethane	ND		ND		nc	25
107-06-2	1,2-Dichloroethane	ND		ND		nc	25
78-87-5	1,2-Dichloropropane	ND		ND		nc	25
123-91-1	1,4-Dioxane	ND		ND		nc	25
75-71-8	Dichlorodifluoromethane	ND		ND		nc	25
124-48-1	Dibromochloromethane	ND		ND		nc	25
156-60-5	trans-1,2-Dichloroethylene	ND		ND		nc	25
156-59-2	cis-1,2-Dichloroethylene	ND		ND		nc	25
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	25
541-73-1	m-Dichlorobenzene	ND		ND		nc	25
95-50-1	o-Dichlorobenzene	ND		ND		nc	25
106-46-7	p-Dichlorobenzene	ND		ND		nc	25
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	25
64-17-5	Ethanol	4.5		4.2		7	25
100-41-4	Ethylbenzene	ND		ND		nc	25
141-78-6	Ethyl Acetate	1.6		1.7		6	25
622-96-8	4-Ethyltoluene	ND		ND		nc	25

* = Outside of Control Limits.

Duplicate Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC57579-2DUP	6W03689.D	1	12/22/17	DFT	n/a	n/a	V6W107
JC57579-2	6W03688.D	1	12/22/17	DFT	n/a	n/a	V6W107

The QC reported here applies to the following samples:

Method: TO-15

JC56815-1, JC56815-7, JC56815-9, JC56815-11, JC56815-13

CAS No.	Compound	JC57579-2 ppbv	DUP Q	ppbv	Q	RPD	Limits
76-13-1	Freon 113	ND	ND			nc	25
76-14-2	Freon 114	ND	ND			nc	25
142-82-5	Heptane	1.1	1.1			0	25
87-68-3	Hexachlorobutadiene	ND	ND			nc	25
110-54-3	Hexane	3.4	3.4			0	25
591-78-6	2-Hexanone	ND	ND			nc	25
67-63-0	Isopropyl Alcohol	ND	ND			nc	25
75-09-2	Methylene chloride	ND	ND			nc	25
78-93-3	Methyl ethyl ketone	0.51	0.56		J	9	25
108-10-1	Methyl Isobutyl Ketone	ND	ND			nc	25
1634-04-4	Methyl Tert Butyl Ether	ND	ND			nc	25
80-62-6	Methylmethacrylate	ND	ND			nc	25
115-07-1	Propylene	ND	ND			nc	25
100-42-5	Styrene	ND	ND			nc	25
71-55-6	1,1,1-Trichloroethane	2.3	2.3			0	25
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND			nc	25
79-00-5	1,1,2-Trichloroethane	ND	ND			nc	25
120-82-1	1,2,4-Trichlorobenzene	ND	ND			nc	25
95-63-6	1,2,4-Trimethylbenzene	ND	ND			nc	25
108-67-8	1,3,5-Trimethylbenzene	ND	ND			nc	25
540-84-1	2,2,4-Trimethylpentane	ND	ND			nc	25
75-65-0	Tertiary Butyl Alcohol	2.6	2.6			0	25
127-18-4	Tetrachloroethylene	0.32	0.33			3	25
109-99-9	Tetrahydrofuran	ND	ND			nc	25
108-88-3	Toluene	1.1	1.1			0	25
79-01-6	Trichloroethylene	ND	ND			nc	25
75-69-4	Trichlorofluoromethane	ND	ND			nc	25
75-01-4	Vinyl chloride	ND	ND			nc	25
108-05-4	Vinyl Acetate	ND	ND			nc	25
	m,p-Xylene	0.59	0.61		J	3	25
95-47-6	o-Xylene	ND	ND			nc	25
1330-20-7	Xylenes (total)	0.59	0.61		J	3	25

* = Outside of Control Limits.

Duplicate Summary

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC57579-2DUP	6W03689.D	1	12/22/17	DFT	n/a	n/a	V6W107
JC57579-2	6W03688.D	1	12/22/17	DFT	n/a	n/a	V6W107

The QC reported here applies to the following samples: Method: TO-15

JC56815-1, JC56815-7, JC56815-9, JC56815-11, JC56815-13

CAS No.	Surrogate Recoveries	DUP	JC57579-2	Limits
460-00-4	4-Bromofluorobenzene	103%	97%	65-128%

* = Outside of Control Limits.

Summa Cleaning Certification**Job Number:** JC56815**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1090-SCC	5W27738.D	1	11/09/17	TCH	n/a	n/a	V5W1090

The QC reported here (Summa A851) applies to the following samples:**Method:** TO-15

Batch CP9462 cleaned 11/02/17: JC56815-3(A851)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3

Summa Cleaning Certification

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Job Number: JC56815**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1090-SCC	5W27738.D	1	11/09/17	TCH	n/a	n/a	V5W1090

The QC reported here (Summa A851) applies to the following samples:**Method:** TO-15

Batch CP9462 cleaned 11/02/17: JC56815-3(A851)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

Summa Cleaning Certification

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1090-SCC	5W27738.D	1	11/09/17	TCH	n/a	n/a	V5W1090

The QC reported here (Summa A851) applies to the following samples: Method: TO-15

Batch CP9462 cleaned 11/02/17: JC56815-3(A851)

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	93% 65-128%

6.4.1
6

Summa Cleaning Certification**Job Number:** JC56815**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1093-SCC	5W27816.D	1	11/14/17	TCH	n/a	n/a	V5W1093

The QC reported here (Summa M207) applies to the following samples:**Method:** TO-15

Batch CP9467 cleaned 11/03/17: JC56815-7(A326)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3

Summa Cleaning Certification

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Job Number: JC56815**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1093-SCC	5W27816.D	1	11/14/17	TCH	n/a	n/a	V5W1093

The QC reported here (Summa M207) applies to the following samples:**Method:** TO-15

Batch CP9467 cleaned 11/03/17: JC56815-7(A326)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

Summa Cleaning Certification

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1093-SCC	5W27816.D	1	11/14/17	TCH	n/a	n/a	V5W1093

The QC reported here (Summa M207) applies to the following samples: Method: TO-15

Batch CP9467 cleaned 11/03/17: JC56815-7(A326)

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	94% 65-128%

Summa Cleaning Certification

Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W86-SCC	6W03156.D	1	11/21/17	DFT	n/a	n/a	V6W86

The QC reported here (Summa A902) applies to the following samples:

Method: TO-15

Batch CP9480 cleaned 11/15/17: JC56815-9(A896), JC56815-11(A343)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W86-SCC	6W03156.D	1	11/21/17	DFT	n/a	n/a	V6W86

The QC reported here (Summa A902) applies to the following samples:

Method: TO-15

Batch CP9480 cleaned 11/15/17: JC56815-9(A896), JC56815-11(A343)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

Summa Cleaning Certification

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W86-SCC	6W03156.D	1	11/21/17	DFT	n/a	n/a	V6W86

The QC reported here (Summa A902) applies to the following samples: Method: TO-15

Batch CP9480 cleaned 11/15/17: JC56815-9(A896), JC56815-11(A343)

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	91% 65-128%

Summa Cleaning Certification**Job Number:** JC56815**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1099-SCC	5W27985.D	1	11/22/17	TCH	n/a	n/a	V5W1099

The QC reported here (Summa M257) applies to the following samples:**Method:** TO-15

Batch CP9483 cleaned 11/15/17: JC56815-1(A1100), JC56815-2(A476), JC56815-4(A1033), JC56815-5(A1021), JC56815-6(A225), JC56815-8(A222), JC56815-10(A1083), JC56815-12(A039), JC56815-13(A295)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3

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Job Number: JC56815**Account:** GESNYP Groundwater & Environmental Services**Project:** Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1099-SCC	5W27985.D	1	11/22/17	TCH	n/a	n/a	V5W1099

The QC reported here (Summa M257) applies to the following samples:**Method:** TO-15

Batch CP9483 cleaned 11/15/17: JC56815-1(A1100), JC56815-2(A476), JC56815-4(A1033), JC56815-5(A1021), JC56815-6(A225), JC56815-8(A222), JC56815-10(A1083), JC56815-12(A039), JC56815-13(A295)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

Summa Cleaning Certification

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1099-SCC	5W27985.D	1	11/22/17	TCH	n/a	n/a	V5W1099

The QC reported here (Summa M257) applies to the following samples: Method: TO-15

Batch CP9483 cleaned 11/15/17: JC56815-1(A1100), JC56815-2(A476), JC56815-4(A1033), JC56815-5(A1021), JC56815-6(A225), JC56815-8(A222), JC56815-10(A1083), JC56815-12(A039), JC56815-13(A295)

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	98% 65-128%

Instrument Performance Check (BFB)

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Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1065-BFB	Injection Date: 10/06/17
Lab File ID: 5W27079.D	Injection Time: 12:05
Instrument ID: GCMS5W	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	31941	13.0	Pass
75	30.0 - 66.0% of mass 95	98781	40.4	Pass
95	Base peak, 100% relative abundance	244800	100.0	Pass
96	5.0 - 9.0% of mass 95	16052	6.56	Pass
173	Less than 2.0% of mass 174	1412	0.58 (0.59) ^a	Pass
174	50.0 - 120.0% of mass 95	240832	98.4	Pass
175	4.0 - 9.0% of mass 174	17781	7.26 (7.38) ^a	Pass
176	93.0 - 101.0% of mass 174	233813	95.5 (97.1) ^a	Pass
177	5.0 - 9.0% of mass 176	15298	6.25 (6.54) ^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
V5W1065-IC1065	5W27080.D	10/06/17	12:49	00:44	Initial cal 0.04
V5W1065-IC1065	5W27081.D	10/06/17	13:35	01:30	Initial cal 0.1
V5W1065-IC1065	5W27082.D	10/06/17	14:28	02:23	Initial cal 0.2
V5W1065-IC1065	5W27084.D	10/06/17	16:10	04:05	Initial cal 0.5
V5W1065-IC1065	5W27085.D	10/06/17	17:00	04:55	Initial cal 5
V5W1065-ICC1065	5W27086.D	10/06/17	17:45	05:40	Initial cal 10
V5W1065-IC1065	5W27087.D	10/06/17	18:33	06:28	Initial cal 20
V5W1065-IC1065	5W27088.D	10/06/17	19:23	07:18	Initial cal 40
V5W1065-ICV1065	5W27092.D	10/07/17	08:32	20:27	Initial cal verification 10

Instrument Performance Check (BFB)

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Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1090-BFB	Injection Date: 11/08/17
Lab File ID: 5W27717.D	Injection Time: 08:55
Instrument ID: GCMS5W	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	30637	13.4	Pass
75	30.0 - 66.0% of mass 95	93984	41.0	Pass
95	Base peak, 100% relative abundance	229120	100.0	Pass
96	5.0 - 9.0% of mass 95	15131	6.60	Pass
173	Less than 2.0% of mass 174	1899	0.83 (0.89) ^a	Pass
174	50.0 - 120.0% of mass 95	212437	92.7	Pass
175	4.0 - 9.0% of mass 174	15675	6.84 (7.38) ^a	Pass
176	93.0 - 101.0% of mass 174	204309	89.2 (96.2) ^a	Pass
177	5.0 - 9.0% of mass 176	13614	5.94 (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
V5W1090-CC1065	5W27718.D	11/08/17	09:41	00:46	Continuing cal 10
V5W1090-BS	5W27719.D	11/08/17	10:29	01:34	Blank Spike
V5W1090-BSD	5W27720.D	11/08/17	11:15	02:20	Blank Spike Duplicate
V5W1090-MB	5W27722.D	11/08/17	13:05	04:10	Method Blank
V5W1090-SCC	5W27723.D	11/08/17	14:34	05:39	Summa Cleaning Certification
V5W1090-SCC	5W27724.D	11/08/17	15:25	06:30	Summa Cleaning Certification
ZZZZZZ	5W27725.D	11/08/17	16:09	07:14	(unrelated sample)
ZZZZZZ	5W27726.D	11/08/17	17:16	08:21	(unrelated sample)
ZZZZZZ	5W27727.D	11/08/17	18:02	09:07	(unrelated sample)
ZZZZZZ	5W27728.D	11/08/17	18:53	09:58	(unrelated sample)
JC54916-2	5W27730.D	11/08/17	20:33	11:38	(used for QC only; not part of job JC56815)
JC54916-2DUP	5W27731.D	11/08/17	21:32	12:37	Duplicate
ZZZZZZ	5W27732.D	11/08/17	22:30	13:35	(unrelated sample)
ZZZZZZ	5W27733.D	11/08/17	23:25	14:30	(unrelated sample)
ZZZZZZ	5W27734.D	11/09/17	00:15	15:20	(unrelated sample)
ZZZZZZ	5W27735.D	11/09/17	01:02	16:07	(unrelated sample)
ZZZZZZ	5W27736.D	11/09/17	01:51	16:56	(unrelated sample)
V5W1090-SCC	5W27737.D	11/09/17	02:42	17:47	Summa Cleaning Certification
V5W1090-SCC	5W27738.D	11/09/17	03:32	18:37	Summa Cleaning Certification
V5W1090-SCC	5W27739.D	11/09/17	04:23	19:28	Summa Cleaning Certification
V5W1090-SCC	5W27742.D	11/09/17	06:56	22:01	Summa Cleaning Certification

Instrument Performance Check (BFB)

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Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1093-BFB	Injection Date: 11/13/17
Lab File ID: 5W27795.D	Injection Time: 07:57
Instrument ID: GCMS5W	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	28896	13.0	Pass
75	30.0 - 66.0% of mass 95	91205	41.0	Pass
95	Base peak, 100% relative abundance	222315	100.0	Pass
96	5.0 - 9.0% of mass 95	14593	6.56	Pass
173	Less than 2.0% of mass 174	1979	0.89 (0.92) ^a	Pass
174	50.0 - 120.0% of mass 95	214677	96.6	Pass
175	4.0 - 9.0% of mass 174	15561	7.00 (7.25) ^a	Pass
176	93.0 - 101.0% of mass 174	208533	93.8 (97.1) ^a	Pass
177	5.0 - 9.0% of mass 176	13449	6.05 (6.45) ^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
V5W1093-CC1065	5W27796.D	11/13/17	08:42	00:45	Continuing cal 10
V5W1093-BS	5W27797.D	11/13/17	09:33	01:36	Blank Spike
V5W1093-BSD	5W27798.D	11/13/17	10:19	02:22	Blank Spike Duplicate
V5W1093-MB	5W27800.D	11/13/17	12:06	04:09	Method Blank
ZZZZZZ	5W27801.D	11/13/17	13:12	05:15	(unrelated sample)
JC55333-8	5W27803.D	11/13/17	14:42	06:45	(used for QC only; not part of job JC56815)
JC55333-8DUP	5W27804.D	11/13/17	15:27	07:30	Duplicate
ZZZZZZ	5W27805.D	11/13/17	16:12	08:15	(unrelated sample)
V5W1093-SCC	5W27806.D	11/13/17	17:03	09:06	Summa Cleaning Certification
ZZZZZZ	5W27807.D	11/13/17	17:56	09:59	(unrelated sample)
ZZZZZZ	5W27808.D	11/13/17	18:49	10:52	(unrelated sample)
V5W1093-SCC	5W27812.D	11/13/17	22:21	14:24	Summa Cleaning Certification
ZZZZZZ	5W27813.D	11/13/17	23:07	15:10	(unrelated sample)
ZZZZZZ	5W27814.D	11/13/17	23:53	15:56	(unrelated sample)
V5W1093-SCC	5W27816.D	11/14/17	01:34	17:37	Summa Cleaning Certification
V5W1093-SCC	5W27817.D	11/14/17	02:24	18:27	Summa Cleaning Certification
V5W1093-SCC	5W27818.D	11/14/17	03:15	19:18	Summa Cleaning Certification
ZZZZZZ	5W27819.D	11/14/17	04:01	20:04	(unrelated sample)
V5W1093-SCC	5W27821.D	11/14/17	05:42	21:45	Summa Cleaning Certification

Instrument Performance Check (BFB)

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Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1097-BFB	Injection Date: 11/17/17
Lab File ID: 5W27906.D	Injection Time: 18:39
Instrument ID: GCMS5W	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	34091	13.3	Pass
75	30.0 - 66.0% of mass 95	101387	39.5	Pass
95	Base peak, 100% relative abundance	256427	100.0	Pass
96	5.0 - 9.0% of mass 95	17580	6.86	Pass
173	Less than 2.0% of mass 174	1947	0.76 (0.84) ^a	Pass
174	50.0 - 120.0% of mass 95	230656	89.9	Pass
175	4.0 - 9.0% of mass 174	16959	6.61 (7.35) ^a	Pass
176	93.0 - 101.0% of mass 174	222613	86.8 (96.5) ^a	Pass
177	5.0 - 9.0% of mass 176	14968	5.84 (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
V5W1097-IC1097	5W27907.D	11/17/17	19:24	00:45	Initial cal 0.04
V5W1097-IC1097	5W27908.D	11/17/17	20:08	01:29	Initial cal 0.1
V5W1097-IC1097	5W27909.D	11/17/17	20:52	02:13	Initial cal 0.2
V5W1097-IC1097	5W27910.D	11/17/17	21:39	03:00	Initial cal 0.5
V5W1097-IC1097	5W27911.D	11/17/17	22:23	03:44	Initial cal 5
V5W1097-ICC1097	5W27912.D	11/17/17	23:08	04:29	Initial cal 10
V5W1097-IC1097	5W27913.D	11/17/17	23:55	05:16	Initial cal 20
V5W1097-IC1097	5W27915.D	11/18/17	01:32	06:53	Initial cal 40

Instrument Performance Check (BFB)

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1098-BFB1	Injection Date: 11/20/17
Lab File ID: 5W27916.D	Injection Time: 09:37
Instrument ID: GCMS5W	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	69661	12.9	Pass
75	30.0 - 66.0% of mass 95	213525	39.6	Pass
95	Base peak, 100% relative abundance	538624	100.0	Pass
96	5.0 - 9.0% of mass 95	36189	6.72	Pass
173	Less than 2.0% of mass 174	3760	0.70 (0.78) ^a	Pass
174	50.0 - 120.0% of mass 95	481152	89.3	Pass
175	4.0 - 9.0% of mass 174	35757	6.64 (7.43) ^a	Pass
176	93.0 - 101.0% of mass 174	465365	86.4 (96.7) ^a	Pass
177	5.0 - 9.0% of mass 176	31272	5.81 (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
V5W1097-ICV1097	5W27917.D	11/20/17	10:22	00:45	Initial cal verification 10
V5W1098-CC1097	5W27918.D	11/20/17	11:24	01:47	Continuing cal 10
V5W1098-BS1	5W27919.D	11/20/17	12:12	02:35	Blank Spike
V5W1098-BSD1	5W27920.D	11/20/17	12:57	03:20	Blank Spike Duplicate
V5W1098-MB1	5W27922.D	11/20/17	14:45	05:08	Method Blank
ZZZZZZ	5W27925.D	11/20/17	17:21	07:44	(unrelated sample)
ZZZZZZ	5W27926.D	11/20/17	18:06	08:29	(unrelated sample)
ZZZZZZ	5W27928.D	11/20/17	19:33	09:56	(unrelated sample)
ZZZZZZ	5W27930.D	11/20/17	21:05	11:28	(unrelated sample)
ZZZZZZ	5W27931.D	11/20/17	21:50	12:13	(unrelated sample)
ZZZZZZ	5W27932.D	11/20/17	22:35	12:58	(unrelated sample)
ZZZZZZ	5W27933.D	11/20/17	23:19	13:42	(unrelated sample)
ZZZZZZ	5W27934.D	11/21/17	00:04	14:27	(unrelated sample)
JC55180-26	5W27935.D	11/21/17	00:50	15:13	(used for QC only; not part of job JC56815)
JC55180-26DUP	5W27936.D	11/21/17	01:35	15:58	Duplicate
ZZZZZZ	5W27937.D	11/21/17	02:19	16:42	(unrelated sample)
ZZZZZZ	5W27938.D	11/21/17	03:04	17:27	(unrelated sample)
ZZZZZZ	5W27939.D	11/21/17	03:48	18:11	(unrelated sample)
V5W1098-SCC	5W27940.D	11/21/17	04:40	19:03	Summa Cleaning Certification
V5W1098-CC1097	5W27941.D	11/21/17	05:25	19:48	Continuing cal 10
V5W1098-SCC	5W27943.D	11/21/17	07:06	21:29	Summa Cleaning Certification
V5W1098-SCC	5W27945.D	11/21/17	08:46	23:09	Summa Cleaning Certification

Instrument Performance Check (BFB)

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Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1099-BFB	Injection Date: 11/22/17
Lab File ID: 5W27977.D	Injection Time: 12:20
Instrument ID: GCMS5W	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	33717	13.5	Pass
75	30.0 - 66.0% of mass 95	100947	40.4	Pass
95	Base peak, 100% relative abundance	249621	100.0	Pass
96	5.0 - 9.0% of mass 95	16489	6.61	Pass
173	Less than 2.0% of mass 174	1739	0.70 (0.76) ^a	Pass
174	50.0 - 120.0% of mass 95	228672	91.6	Pass
175	4.0 - 9.0% of mass 174	16675	6.68 (7.29) ^a	Pass
176	93.0 - 101.0% of mass 174	221291	88.7 (96.8) ^a	Pass
177	5.0 - 9.0% of mass 176	14255	5.71 (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
V5W1099-CC1097	5W27978.D	11/22/17	13:06	00:46	Continuing cal 10
V5W1099-BS	5W27979.D	11/22/17	13:53	01:33	Blank Spike
V5W1099-BSD	5W27980.D	11/22/17	14:38	02:18	Blank Spike Duplicate
V5W1099-MB	5W27982.D	11/22/17	16:24	04:04	Method Blank
V5W1099-SCC	5W27983.D	11/22/17	17:25	05:05	Summa Cleaning Certification
V5W1099-SCC	5W27984.D	11/22/17	18:16	05:56	Summa Cleaning Certification
V5W1099-SCC	5W27985.D	11/22/17	19:07	06:47	Summa Cleaning Certification
ZZZZZZ	5W27986.D	11/22/17	19:53	07:33	(unrelated sample)
ZZZZZZ	5W27987.D	11/22/17	20:38	08:18	(unrelated sample)
ZZZZZZ	5W27988.D	11/22/17	21:23	09:03	(unrelated sample)
ZZZZZZ	5W27989.D	11/22/17	22:09	09:49	(unrelated sample)
ZZZZZZ	5W27990.D	11/22/17	22:55	10:35	(unrelated sample)
ZZZZZZ	5W27991.D	11/22/17	23:40	11:20	(unrelated sample)
ZZZZZZ	5W27992.D	11/23/17	00:24	12:04	(unrelated sample)
ZZZZZZ	5W27993.D	11/23/17	01:08	12:48	(unrelated sample)
ZZZZZZ	5W27994.D	11/23/17	01:53	13:33	(unrelated sample)
ZZZZZZ	5W27995.D	11/23/17	02:39	14:19	(unrelated sample)
ZZZZZZ	5W27996.D	11/23/17	03:23	15:03	(unrelated sample)
JC55180-23	5W27997.D	11/23/17	04:10	15:50	(used for QC only; not part of job JC56815)
JC55180-23DUP	5W27998.D	11/23/17	04:55	16:35	Duplicate
ZZZZZZ	5W27999.D	11/23/17	05:41	17:21	(unrelated sample)
ZZZZZZ	5W28000.D	11/23/17	06:24	18:04	(unrelated sample)
V5W1099-ECC1097	5W28001.D	11/23/17	07:09	18:49	Ending cal 10

Instrument Performance Check (BFB)

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Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V6W76-BFB	Injection Date: 11/07/17
Lab File ID: 6W02917.D	Injection Time: 15:21
Instrument ID: GCMS6W	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	37216	14.9	Pass
75	30.0 - 66.0% of mass 95	108349	43.3	Pass
95	Base peak, 100% relative abundance	250197	100.0	Pass
96	5.0 - 9.0% of mass 95	16510	6.60	Pass
173	Less than 2.0% of mass 174	1729	0.69 (0.78) ^a	Pass
174	50.0 - 120.0% of mass 95	222741	89.0	Pass
175	4.0 - 9.0% of mass 174	16283	6.51 (7.31) ^a	Pass
176	93.0 - 101.0% of mass 174	216427	86.5 (97.2) ^a	Pass
177	5.0 - 9.0% of mass 176	14110	5.64 (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
V6W76-IC76	6W02918.D	11/07/17	16:11	00:50	Initial cal 0.04
V6W76-IC76	6W02919.D	11/07/17	17:01	01:40	Initial cal 0.1
V6W76-IC76	6W02920.D	11/07/17	17:52	02:31	Initial cal 0.2
V6W76-IC76	6W02921.D	11/07/17	18:44	03:23	Initial cal 0.5
V6W76-IC76	6W02922.D	11/07/17	19:35	04:14	Initial cal 5
V6W76-ICC76	6W02923.D	11/07/17	20:26	05:05	Initial cal 10
V6W76-IC76	6W02924.D	11/07/17	21:19	05:58	Initial cal 20
V6W76-IC76	6W02925.D	11/07/17	22:15	06:54	Initial cal 40
V6W76-ICV76	6W02927.D	11/07/17	23:57	08:36	Initial cal verification 10

Instrument Performance Check (BFB)

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Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V6W86-BFB	Injection Date: 11/21/17
Lab File ID: 6W03147.D	Injection Time: 09:13
Instrument ID: GCMS6W	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	32547	15.9	Pass
75	30.0 - 66.0% of mass 95	90837	44.3	Pass
95	Base peak, 100% relative abundance	205013	100.0	Pass
96	5.0 - 9.0% of mass 95	13731	6.70	Pass
173	Less than 2.0% of mass 174	1398	0.68 (0.82) ^a	Pass
174	50.0 - 120.0% of mass 95	169536	82.7	Pass
175	4.0 - 9.0% of mass 174	12556	6.12 (7.41) ^a	Pass
176	93.0 - 101.0% of mass 174	164949	80.5 (97.3) ^a	Pass
177	5.0 - 9.0% of mass 176	11004	5.37 (6.67) ^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
V6W86-CC76	6W03148.D	11/21/17	10:11	00:58	Continuing cal 10
V6W86-BS	6W03149.D	11/21/17	11:03	01:50	Blank Spike
V6W86-BSD	6W03150.D	11/21/17	11:54	02:41	Blank Spike Duplicate
V6W86-MB	6W03152.D	11/21/17	13:47	04:34	Method Blank
JC54251-7R	6W03153.D	11/21/17	14:47	05:34	(used for QC only; not part of job JC56815)
JC54251-7RDUP	6W03154.D	11/21/17	15:45	06:32	Duplicate
V6W86-SCC	6W03156.D	11/21/17	17:38	08:25	Summa Cleaning Certification
ZZZZZZ	6W03157.D	11/21/17	18:39	09:26	(unrelated sample)
ZZZZZZ	6W03158.D	11/21/17	19:34	10:21	(unrelated sample)
ZZZZZZ	6W03159.D	11/21/17	20:26	11:13	(unrelated sample)
ZZZZZZ	6W03160.D	11/21/17	21:24	12:11	(unrelated sample)
ZZZZZZ	6W03161.D	11/21/17	22:15	13:02	(unrelated sample)
ZZZZZZ	6W03162.D	11/21/17	23:06	13:53	(unrelated sample)
ZZZZZZ	6W03163.D	11/21/17	23:57	14:44	(unrelated sample)
ZZZZZZ	6W03164.D	11/22/17	00:49	15:36	(unrelated sample)
ZZZZZZ	6W03165.D	11/22/17	01:40	16:27	(unrelated sample)
ZZZZZZ	6W03166.D	11/22/17	02:31	17:18	(unrelated sample)
ZZZZZZ	6W03167.D	11/22/17	03:22	18:09	(unrelated sample)
ZZZZZZ	6W03168.D	11/22/17	04:14	19:01	(unrelated sample)
V6W86-ECC76	6W03171.D	11/22/17	06:58	21:45	Ending cal 10

Instrument Performance Check (BFB)

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Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V6W105-BFB	Injection Date: 12/20/17
Lab File ID: 6W03631.D	Injection Time: 11:01
Instrument ID: GCMS6W	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	35768	16.0	Pass
75	30.0 - 66.0% of mass 95	100272	44.8	Pass
95	Base peak, 100% relative abundance	224021	100.0	Pass
96	5.0 - 9.0% of mass 95	14769	6.59	Pass
173	Less than 2.0% of mass 174	1649	0.74 (0.87) ^a	Pass
174	50.0 - 120.0% of mass 95	190571	85.1	Pass
175	4.0 - 9.0% of mass 174	14030	6.26 (7.36) ^a	Pass
176	93.0 - 101.0% of mass 174	184939	82.6 (97.0) ^a	Pass
177	5.0 - 9.0% of mass 176	11947	5.33 (6.46) ^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
V6W105-CC76	6W03632.D	12/20/17	11:52	00:51	Continuing cal 10
V6W105-BS	6W03633.D	12/20/17	12:44	01:43	Blank Spike
V6W105-BSD	6W03634.D	12/20/17	13:35	02:34	Blank Spike Duplicate
V6W105-MB	6W03636.D	12/20/17	15:27	04:26	Method Blank
ZZZZZZ	6W03637.D	12/20/17	16:19	05:18	(unrelated sample)
JC56815-2	6W03638.D	12/20/17	17:20	06:19	SSD-MP-2
JC56815-2DUP	6W03639.D	12/20/17	18:21	07:20	Duplicate
JC56815-4	6W03640.D	12/20/17	19:22	08:21	VP-1
JC56815-6	6W03641.D	12/20/17	20:20	09:19	VP-6
JC56815-8	6W03642.D	12/20/17	21:17	10:16	VP-5
JC56815-10	6W03643.D	12/20/17	22:15	11:14	VP-9
JC56815-12	6W03644.D	12/20/17	23:15	12:14	SSD-MP-5
JC56815-3	6W03646.D	12/21/17	01:29	14:28	SSD-MP-2
JC56815-5	6W03647.D	12/21/17	02:33	15:32	VP-1
JC56815-11	6W03650.D	12/21/17	06:06	19:05	VP-9
V6W105-SCC	6W03653.D	12/21/17	09:09	22:08	Summa Cleaning Certification

Instrument Performance Check (BFB)

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Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V6W106-BFB	Injection Date: 12/21/17
Lab File ID: 6W03654.D	Injection Time: 10:04
Instrument ID: GCMS6W	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	28685	15.1	Pass
75	30.0 - 66.0% of mass 95	83947	44.2	Pass
95	Base peak, 100% relative abundance	190123	100.0	Pass
96	5.0 - 9.0% of mass 95	12698	6.68	Pass
173	Less than 2.0% of mass 174	1508	0.79 (0.92) ^a	Pass
174	50.0 - 120.0% of mass 95	164651	86.6	Pass
175	4.0 - 9.0% of mass 174	11894	6.26 (7.22) ^a	Pass
176	93.0 - 101.0% of mass 174	158208	83.2 (96.1) ^a	Pass
177	5.0 - 9.0% of mass 176	10560	5.55 (6.67) ^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
V6W106-CC76	6W03655.D	12/21/17	10:55	00:51	Continuing cal 10
V6W106-BS	6W03656.D	12/21/17	11:46	01:42	Blank Spike
V6W106-BSD	6W03657.D	12/21/17	12:38	02:34	Blank Spike Duplicate
V6W106-MB	6W03659.D	12/21/17	14:50	04:46	Method Blank
JC57421-1	6W03660.D	12/21/17	15:51	05:47	(used for QC only; not part of job JC56815)
JC57421-1DUP	6W03661.D	12/21/17	16:42	06:38	Duplicate
ZZZZZZ	6W03662.D	12/21/17	17:34	07:30	(unrelated sample)
ZZZZZZ	6W03663.D	12/21/17	18:25	08:21	(unrelated sample)
ZZZZZZ	6W03664.D	12/21/17	19:17	09:13	(unrelated sample)
JC56815-4	6W03665.D	12/21/17	20:08	10:04	VP-1
JC56815-10	6W03666.D	12/21/17	20:59	10:55	VP-9
JC56815-12	6W03667.D	12/21/17	21:50	11:46	SSD-MP-5
JC56815-3	6W03669.D	12/21/17	23:51	13:47	SSD-MP-2
JC56815-5	6W03670.D	12/22/17	00:43	14:39	VP-1
JC56815-7	6W03671.D	12/22/17	01:50	15:46	VP-6
JC56815-9	6W03672.D	12/22/17	02:56	16:52	VP-5
JC56815-11	6W03673.D	12/22/17	03:47	17:43	VP-9
JC56815-13	6W03674.D	12/22/17	04:55	18:51	SSD-MP-5
ZZZZZZ	6W03675.D	12/22/17	05:46	19:42	(unrelated sample)
ZZZZZZ	6W03676.D	12/22/17	06:42	20:38	(unrelated sample)
ZZZZZZ	6W03677.D	12/22/17	07:39	21:35	(unrelated sample)

Instrument Performance Check (BFB)

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Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V6W107-BFB	Injection Date: 12/22/17
Lab File ID: 6W03681.D	Injection Time: 12:05
Instrument ID: GCMS6W	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	27984	13.6	Pass
75	30.0 - 66.0% of mass 95	87920	42.7	Pass
95	Base peak, 100% relative abundance	205973	100.0	Pass
96	5.0 - 9.0% of mass 95	13792	6.70	Pass
173	Less than 2.0% of mass 174	1501	0.73 (0.85) ^a	Pass
174	50.0 - 120.0% of mass 95	177088	86.0	Pass
175	4.0 - 9.0% of mass 174	12957	6.29 (7.32) ^a	Pass
176	93.0 - 101.0% of mass 174	170453	82.8 (96.3) ^a	Pass
177	5.0 - 9.0% of mass 176	11202	5.44 (6.57) ^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
V6W107-CC76	6W03682.D	12/22/17	12:56	00:51	Continuing cal 10
V6W107-BS	6W03683.D	12/22/17	13:48	01:43	Blank Spike
V6W107-BSD	6W03684.D	12/22/17	14:39	02:34	Blank Spike Duplicate
V6W107-MB	6W03686.D	12/22/17	16:32	04:27	Method Blank
JC56815-1	6W03687.D	12/22/17	17:36	05:31	OUTSIDE
JC57579-2	6W03688.D	12/22/17	18:28	06:23	(used for QC only; not part of job JC56815)
JC57579-2DUP	6W03689.D	12/22/17	19:19	07:14	Duplicate
ZZZZZZ	6W03690.D	12/22/17	20:10	08:05	(unrelated sample)
ZZZZZZ	6W03691.D	12/22/17	21:02	08:57	(unrelated sample)
ZZZZZZ	6W03692.D	12/22/17	21:53	09:48	(unrelated sample)
ZZZZZZ	6W03693.D	12/22/17	22:44	10:39	(unrelated sample)
ZZZZZZ	6W03694.D	12/22/17	23:36	11:31	(unrelated sample)
ZZZZZZ	6W03695.D	12/23/17	00:27	12:22	(unrelated sample)
ZZZZZZ	6W03696.D	12/23/17	01:19	13:14	(unrelated sample)
JC56815-7	6W03697.D	12/23/17	02:10	14:05	VP-6
JC56815-9	6W03698.D	12/23/17	03:02	14:57	VP-5
JC56815-11	6W03699.D	12/23/17	03:53	15:48	VP-9
JC56815-13	6W03700.D	12/23/17	04:44	16:39	SSD-MP-5
ZZZZZZ	6W03703.D	12/23/17	07:17	19:12	(unrelated sample)

Internal Standard Area Summary

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Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Check Std: V5W1090-CC1065	Injection Date: 11/08/17
Lab File ID: 5W27718.D	Injection Time: 09:41
Instrument ID: GCMS5W	Method: TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	298157	8.17	946728	10.29	383895	15.76
Upper Limit ^a	417420	8.50	1325419	10.62	537453	16.09
Lower Limit ^b	178894	7.84	568037	9.96	230337	15.43

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
V5W1090-BS	258682	8.14	860148	10.27	344810	15.76
V5W1090-BSD	261905	8.16	868989	10.28	353240	15.76
V5W1090-MB	268469	8.17	896640	10.29	366248	15.76
V5W1090-SCC	273030	8.16	902533	10.29	368118	15.76
V5W1090-SCC	271272	8.17	890246	10.29	362769	15.76
ZZZZZZ	282845	8.17	878554	10.29	369033	15.76
ZZZZZZ	255617	8.14	785957	10.27	305840	15.75
ZZZZZZ	280787	8.16	862062	10.28	341949	15.76
ZZZZZZ	269221	8.17	859693	10.29	353751	15.76
JC54916-2	279484	8.17	903837	10.29	361309	15.76
JC54916-2DUP	270560	8.17	880728	10.29	340697	15.76
ZZZZZZ	264694	8.16	840041	10.28	333791	15.76
ZZZZZZ	273989	8.17	881218	10.29	342241	15.76
ZZZZZZ	245508	8.14	768535	10.27	313934	15.75
ZZZZZZ	299609	8.17	975770	10.29	403179	15.76
ZZZZZZ	290940	8.17	944910	10.29	401033	15.76
V5W1090-SCC	267422	8.17	856327	10.29	349119	15.76
V5W1090-SCC	270056	8.17	864925	10.29	354804	15.76
V5W1090-SCC	267393	8.16	852245	10.29	347608	15.76
V5W1090-SCC	266743	8.16	835252	10.28	341209	15.76

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = + 40% of check standard area; Retention time + 0.33 minutes.

(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Internal Standard Area Summary

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Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Check Std: V5W1093-CC1065	Injection Date: 11/13/17
Lab File ID: 5W27796.D	Injection Time: 08:42
Instrument ID: GCMS5W	Method: TO-15

	IS 1		IS 2		IS 3	
	AREA	RT	AREA	RT	AREA	RT
Check Std	270892	8.17	857560	10.29	339833	15.76
Upper Limit ^a	379249	8.50	1200584	10.62	475766	16.09
Lower Limit ^b	162535	7.84	514536	9.96	203900	15.43

Lab Sample ID	IS 1		IS 2		IS 3	
	AREA	RT	AREA	RT	AREA	RT
V5W1093-BS	247609	8.17	805873	10.29	313628	15.76
V5W1093-BSD	235368	8.17	781496	10.29	319884	15.76
V5W1093-MB	232299	8.17	768841	10.29	307662	15.76
ZZZZZZ	256338	8.18	850592	10.29	353369	15.76
JC55333-8	254836	8.17	838472	10.30	338005	15.76
JC55333-8DUP	252958	8.18	838590	10.29	328052	15.76
ZZZZZZ	266504	8.18	863767	10.30	354412	15.76
V5W1093-SCC	246092	8.16	785749	10.29	317905	15.76
ZZZZZZ	255984	8.17	784406	10.29	291500	15.76
ZZZZZZ	248199	8.16	761240	10.29	264161	15.76
V5W1093-SCC	230899	8.17	733336	10.29	302733	15.76
ZZZZZZ	241461	8.17	788073	10.29	318998	15.75
ZZZZZZ	243308	8.17	789860	10.29	315754	15.75
V5W1093-SCC	215292	8.14	661623	10.27	268834	15.75
V5W1093-SCC	233234	8.16	737921	10.28	294473	15.75
V5W1093-SCC	237182	8.16	743981	10.28	299650	15.75
ZZZZZZ	261253	8.17	868747	10.30	344490	15.76
V5W1093-SCC	243034	8.16	755867	10.28	307896	15.75

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = + 40% of check standard area; Retention time + 0.33 minutes.

(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Internal Standard Area Summary

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Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Check Std: V5W1099-CC1097	Injection Date: 11/22/17
Lab File ID: 5W27978.D	Injection Time: 13:06
Instrument ID: GCMS5W	Method: TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	298634	8.16	1042119	10.29	447005	15.76
Upper Limit ^a	418088	8.49	1458967	10.62	625807	16.09
Lower Limit ^b	179180	7.83	625271	9.96	268203	15.43

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
V5W1099-BS	302204	8.16	1067956	10.28	455503	15.75
V5W1099-BSD	308579	8.16	1079534	10.29	458557	15.76
V5W1099-MB	300718	8.16	1057393	10.28	457046	15.75
V5W1099-SCC	304013	8.16	1071508	10.28	467731	15.75
V5W1099-SCC	296449	8.16	1052350	10.28	459221	15.75
V5W1099-SCC	303836	8.16	1076559	10.28	464650	15.75
ZZZZZZ	296544	8.25	1066099	10.33	450370	15.77
ZZZZZZ	318089	8.17	1127428	10.29	473278	15.75
ZZZZZZ	297933	8.16	1052150	10.29	461533	15.76
ZZZZZZ	303298	8.17	1078783	10.29	477957	15.76
ZZZZZZ	280577	8.16	1013892	10.29	449877	15.75
ZZZZZZ	287947	8.16	1042035	10.32	448834	15.76
ZZZZZZ	296548	8.17	1067047	10.29	464144	15.76
ZZZZZZ	280954	8.14	997557	10.27	425271	15.75
ZZZZZZ	282268	8.17	984022	10.28	443106	15.75
ZZZZZZ	292548	8.17	1029407	10.29	456521	15.75
ZZZZZZ	284342	8.17	1020218	10.29	447168	15.75
JC55180-23	279589	8.18	994449	10.29	436911	15.75
JC55180-23DUP	282425	8.16	1003186	10.29	452868	15.75
ZZZZZZ	278476	8.17	992013	10.29	438313	15.76
ZZZZZZ	277444	8.14	970607	10.27	417413	15.75
V5W1099-ECC109	2789531	8.16	1014714	10.28	465503	15.75

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = + 40% of check standard area; Retention time + 0.33 minutes.

(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Internal Standard Area Summary

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Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Check Std: V6W86-CC76	Injection Date: 11/21/17
Lab File ID: 6W03148.D	Injection Time: 10:11
Instrument ID: GCMS6W	Method: TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	238126	8.19	886308	10.40	418509	15.93
Upper Limit ^a	333376	8.52	1240831	10.73	585913	16.26
Lower Limit ^b	142876	7.86	531785	10.07	251105	15.60

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
V6W86-BS	232482	8.19	862736	10.40	407563	15.93
V6W86-BSD	237344	8.19	883268	10.40	422254	15.93
V6W86-MB	234238	8.19	879530	10.39	392403	15.93
JC54251-7R	218872	8.19	805152	10.39	349224	15.93
JC54251-7RDUP	213925	8.19	780573	10.39	349061	15.93
V6W86-SCC	205413	8.19	772903	10.39	352984	15.93
ZZZZZZ	191678	8.19	724082	10.39	338685	15.93
ZZZZZZ	183350	8.19	685528	10.40	300434	15.93
ZZZZZZ	179489	8.19	691668	10.40	354542	15.93
ZZZZZZ	209499	8.19	777171	10.39	346574	15.93
ZZZZZZ	197790	8.19	739717	10.39	345742	15.93
ZZZZZZ	186330	8.19	700774	10.39	324730	15.93
ZZZZZZ	188431	8.19	716320	10.39	340093	15.93
ZZZZZZ	185056	8.19	701968	10.40	324804	15.93
ZZZZZZ	188461	8.19	719439	10.39	336019	15.93
ZZZZZZ	191151	8.19	719682	10.39	341550	15.94
ZZZZZZ	190676	8.19	712228	10.39	348275	15.93
ZZZZZZ	188512	8.19	703388	10.39	318319	15.93
V6W86-ECC76	173199	8.20	650122	10.40	334850	15.93

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = + 40% of check standard area; Retention time + 0.33 minutes.
(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Internal Standard Area Summary

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Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Check Std: V6W105-CC76	Injection Date: 12/20/17
Lab File ID: 6W03632.D	Injection Time: 11:52
Instrument ID: GCMS6W	Method: TO-15

	IS 1		IS 2		IS 3	
	AREA	RT	AREA	RT	AREA	RT
Check Std	229719	8.19	846762	10.39	375486	15.93
Upper Limit ^a	321607	8.52	1185467	10.72	525680	16.26
Lower Limit ^b	137831	7.86	508057	10.06	225292	15.60

Lab Sample ID	IS 1		IS 2		IS 3	
	AREA	RT	AREA	RT	AREA	RT
V6W105-BS	235046	8.19	876068	10.39	416852	15.93
V6W105-BSD	238593	8.19	883707	10.39	416984	15.93
V6W105-MB	242212	8.19	891233	10.39	400323	15.93
ZZZZZZ	214657	8.19	779611	10.39	322990	15.93
JC56815-2	211828	8.19	775626	10.39	353671	15.93
JC56815-2DUP	212025	8.19	789143	10.39	361301	15.93
JC56815-4	213170	8.20	793793	10.40	366496	15.93
JC56815-6	219300	8.19	810810	10.39	373839	15.93
JC56815-8	217703	8.19	811923	10.39	372167	15.93
JC56815-10	216274	8.19	803351	10.39	353224	15.93
JC56815-12	218766	8.19	815391	10.39	368867	15.93
JC56815-3	236859	8.19	873565	10.39	382866	15.93
JC56815-5	219306	8.19	812314	10.39	371124	15.93
JC56815-11	222972	8.19	833484	10.40	377257	15.93
V6W105-SCC	218642	8.19	808293	10.39	360606	15.93

IS 1 = Bromochloromethane

IS 2 = 1,4-Difluorobenzene

IS 3 = Chlorobenzene-D5

(a) Upper Limit = + 40% of check standard area; Retention time + 0.33 minutes.

(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Internal Standard Area Summary

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Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Check Std: V6W106-CC76	Injection Date: 12/21/17
Lab File ID: 6W03655.D	Injection Time: 10:55
Instrument ID: GCMS6W	Method: TO-15

	IS 1		IS 2		IS 3	
	AREA	RT	AREA	RT	AREA	RT
Check Std	197198	8.19	717994	10.40	354816	15.93
Upper Limit ^a	276077	8.52	1005192	10.73	496742	16.26
Lower Limit ^b	118319	7.86	430796	10.07	212890	15.60

Lab Sample ID	IS 1		IS 2		IS 3	
	AREA	RT	AREA	RT	AREA	RT
V6W106-BS	197556	8.19	704571	10.40	364413	15.93
V6W106-BSD	217731	8.19	823006	10.39	391171	15.93
V6W106-MB	221840	8.19	820641	10.39	362153	15.93
JC57421-1	207580	8.20	773897	10.40	351667	15.93
JC57421-1DUP	209763	8.20	781724	10.40	354898	15.93
ZZZZZZ	210193	8.20	785843	10.40	356107	15.93
ZZZZZZ	206742	8.20	781259	10.40	361472	15.93
ZZZZZZ	213575	8.20	809499	10.40	373736	15.93
JC56815-4	229207	8.20	850296	10.40	378596	15.93
JC56815-10	224159	8.19	834283	10.39	367308	15.93
JC56815-12	218213	8.19	802789	10.39	359802	15.93
JC56815-3	211031	8.19	779084	10.39	340287	15.93
JC56815-5	193814	8.19	712171	10.39	308032	15.93
JC56815-7	193221	8.19	710966	10.39	315702	15.93
JC56815-9	193060	8.19	718591	10.39	321740	15.93
JC56815-11	189365	8.20	698803	10.39	315410	15.93
JC56815-13	192848	8.19	715506	10.40	321156	15.93
ZZZZZZ	196771	8.20	730698	10.40	324923	15.93
ZZZZZZ	194390	8.19	725131	10.39	323887	15.93
ZZZZZZ	178024	8.20	707523	10.40	324699	15.93

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = + 40% of check standard area; Retention time + 0.33 minutes.

(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Internal Standard Area Summary

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Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Check Std: V6W107-CC76	Injection Date: 12/22/17
Lab File ID: 6W03682.D	Injection Time: 12:56
Instrument ID: GCMS6W	Method: TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	236868	8.19	894932	10.40	404444	15.93
Upper Limit ^a	331615	8.52	1252905	10.73	566222	16.26
Lower Limit ^b	142121	7.86	536959	10.07	242666	15.60

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
V6W107-BS	228359	8.19	869334	10.40	385165	15.93
V6W107-BSD	217007	8.19	821491	10.40	361910	15.93
V6W107-MB	231432	8.19	852334	10.39	367581	15.93
JC56815-1	226760	8.19	832831	10.39	368654	15.93
JC57579-2	217757	8.20	814711	10.40	366937	15.93
JC57579-2DUP	208790	8.20	766996	10.40	332160	15.93
ZZZZZZ	199925	8.20	741135	10.40	318924	15.93
ZZZZZZ	199721	8.20	747046	10.40	328691	15.93
ZZZZZZ	196501	8.20	733665	10.40	337752	15.93
ZZZZZZ	189071	8.19	710617	10.40	329194	15.93
ZZZZZZ	196633	8.19	735409	10.39	337832	15.93
ZZZZZZ	180983	8.20	667463	10.40	284948	15.93
ZZZZZZ	177139	8.20	614744	10.40	301816	15.93
JC56815-7	180222	8.19	661233	10.39	279190	15.93
JC56815-9	184513	8.19	685088	10.39	316293	15.93
JC56815-11	176092	8.19	656555	10.39	299916	15.93
JC56815-13	167494	8.19	602228	10.39	285731	15.93
ZZZZZZ	175925	8.19	630813	10.39	311520	15.93

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = + 40% of check standard area; Retention time + 0.33 minutes.

(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V5W1065-IC1065	5W27080.D	10/06/17 12:49	TCH	0.04	GCMS5W	TO-15	Reporting this level
V5W1065-IC1065	5W27081.D	10/06/17 13:35	TCH	0.1	GCMS5W	TO-15	
V5W1065-IC1065	5W27082.D	10/06/17 14:28	TCH	0.2	GCMS5W	TO-15	
V5W1065-IC1065	5W27084.D	10/06/17 16:10	TCH	0.5	GCMS5W	TO-15	
V5W1065-IC1065	5W27085.D	10/06/17 17:00	TCH	5	GCMS5W	TO-15	
V5W1065-ICC1065	5W27086.D	10/06/17 17:45	TCH	10	GCMS5W	TO-15	
V5W1065-IC1065	5W27087.D	10/06/17 18:33	TCH	20	GCMS5W	TO-15	
V5W1065-IC1065	5W27088.D	10/06/17 19:23	TCH	40	GCMS5W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acrylonitrile	5.76	8.18	0.704 ok	0.703	0.643-0.763
1,3-Butadiene	4.52	8.18	0.553 ok	0.552	0.492-0.612
Benzene	9.87	8.18	1.207 ok	1.208	1.148-1.268
Bromobenzene	18.34	15.77	1.163 ok	1.162	1.102-1.222
Bromodichloromethane	11.06	10.29	1.075 ok	1.075	1.015-1.135
Bromoform	16.72	15.77	1.060 ok	1.060	1.000-1.120
Bromomethane	4.73	8.18	0.578 ok	0.578	0.518-0.638
Bromoethene	5.14	8.18	0.628 ok	0.628	0.568-0.688
Benzyl Chloride	20.17	15.77	1.279 ok	1.279	1.219-1.339
n-Butylbenzene	21.17	15.77	1.342 ok	1.342	1.282-1.402
sec-Butylbenzene	20.36	15.77	1.291 ok	1.291	1.231-1.351
tert-Butylbenzene	19.95	15.77	1.265 ok	1.265	1.205-1.325
Carbon disulfide	6.39	8.18	0.781 ok	0.780	0.720-0.840
Chlorobenzene	15.83	15.77	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	4.05	8.18	0.495 ok	0.494	0.434-0.554
Chloroethane	4.87	8.18	0.595 ok	0.594	0.534-0.654
Chlorotrifluoroethene	4.07	8.18	0.498 ok	0.497	0.437-0.557
Chloroform	8.31	8.18	1.016 ok	1.016	0.956-1.076
Chloromethane	4.25	8.18	0.520 ok	0.519	0.459-0.579
3-Chloropropene	6.23	8.18	0.762 ok	0.760	0.700-0.820
2-Chlorotoluene	18.96	15.77	1.202 ok	1.202	1.142-1.262
Carbon tetrachloride	10.03	8.18	1.226 ok	1.227	1.167-1.287
Cyclohexane	10.16	8.18	1.242 ok	1.243	1.183-1.303
1,1-Dichloroethane	7.17	8.18	0.877 ok	0.876	0.816-0.936
1,1-Dichloroethylene	6.01	8.18	0.735 ok	0.735	0.675-0.795
1,2-Dibromoethane	14.27	10.29	1.387 ok	1.386	1.326-1.446
1,2-Dichloroethane	9.09	8.18	1.111 ok	1.112	1.052-1.172
1,2-Dichloropropane	10.82	10.29	1.052 ok	1.051	0.991-1.111
1,3-Dichloropropane	13.45	10.29	1.307 ok	1.306	1.246-1.366
Dichlorodifluoromethane	4.13	8.18	0.505 ok	0.504	0.444-0.564
Dichlorofluoromethane	4.93	8.18	0.603 ok	0.602	0.542-0.662
Dibromochloromethane	13.95	10.29	1.356 ok	1.355	1.295-1.415
Dibromomethane	10.80	10.29	1.050 ok	1.049	0.989-1.109
trans-1,2-Dichloroethylene	6.97	8.18	0.852 ok	0.852	0.792-0.912
cis-1,2-Dichloroethylene	8.00	8.18	0.978 ok	0.979	0.919-1.039
cis-1,3-Dichloropropene	12.18	10.29	1.184 ok	1.183	1.123-1.243
m-Dichlorobenzene	20.17	15.77	1.279 ok	1.279	1.219-1.339
o-Dichlorobenzene	20.74	15.77	1.315 ok	1.315	1.255-1.375
p-Dichlorobenzene	20.27	15.77	1.285 ok	1.285	1.225-1.345
trans-1,3-Dichloropropene	12.86	10.29	1.250 ok	1.248	1.188-1.308

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V5W1065-IC1065	5W27080.D	10/06/17 12:49	TCH	0.04	GCMS5W	TO-15	Reporting this level
V5W1065-IC1065	5W27081.D	10/06/17 13:35	TCH	0.1	GCMS5W	TO-15	
V5W1065-IC1065	5W27082.D	10/06/17 14:28	TCH	0.2	GCMS5W	TO-15	
V5W1065-IC1065	5W27084.D	10/06/17 16:10	TCH	0.5	GCMS5W	TO-15	
V5W1065-IC1065	5W27085.D	10/06/17 17:00	TCH	5	GCMS5W	TO-15	
V5W1065-ICC1065	5W27086.D	10/06/17 17:45	TCH	10	GCMS5W	TO-15	
V5W1065-IC1065	5W27087.D	10/06/17 18:33	TCH	20	GCMS5W	TO-15	
V5W1065-IC1065	5W27088.D	10/06/17 19:23	TCH	40	GCMS5W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Di-Isopropyl ether	8.24	8.18	1.007 ok	1.005	0.945-1.065
2,3-Dimethylpentane	10.43	8.18	1.275 ok	1.277	1.217-1.337
2,4-Dimethylpentane	9.12	8.18	1.115 ok	1.116	1.056-1.176
Ethyl Acrylate	10.92	10.29	1.061 ok	1.058	0.998-1.118
4-Ethyltoluene	19.26	15.77	1.221 ok	1.221	1.161-1.281
Freon 113	6.34	8.18	0.775 ok	0.775	0.715-0.835
Freon 114	4.32	8.18	0.528 ok	0.527	0.467-0.587
Freon 123	5.26	8.18	0.643 ok	0.642	0.582-0.702
Freon 123A	5.30	8.18	0.648 ok	0.648	0.588-0.708
Freon 141B	5.57	8.18	0.681 ok	0.680	0.620-0.740
Freon 142B	4.23	8.18	0.517 ok	0.517	0.457-0.577
Freon 143a	3.92	8.18	0.479 ok	0.478	0.418-0.538
Heptane	11.46	10.29	1.114 ok	1.113	1.053-1.173
Hexachlorobutadiene	23.55	15.77	1.493 ok	1.494	1.434-1.554
Hexachloroethane	21.63	15.77	1.372 ok	1.372	1.312-1.432
Hexane	8.19	8.18	1.001 ok	1.001	0.941-1.061
2-Hexanone	13.84	10.29	1.345 ok	1.341	1.281-1.401
Iodomethane	5.95	8.18	0.727 ok	0.727	0.667-0.787
p-Isopropyltoluene	20.59	15.77	1.306 ok	1.306	1.246-1.366
Methylene chloride	6.13	8.18	0.749 ok	0.749	0.689-0.809
Methyl ethyl ketone	7.64	8.18	0.934 ok	0.930	0.870-0.990
Methyl Isobutyl Ketone	12.27	10.29	1.192 ok	1.190	1.130-1.250
Methylmethacrylate	11.42	10.29	1.110 ok	1.108	1.048-1.168
Naphthalene	23.13	15.77	1.467 ok	1.466	1.406-1.526
Nonane	17.69	15.77	1.122 ok	1.122	1.062-1.182
Octane	14.73	10.29	1.431 ok	1.431	1.371-1.491
Pentane	5.75	8.18	0.703 ok	0.703	0.643-0.763
n-Propylbenzene	19.03	15.77	1.207 ok	1.207	1.147-1.267
Propylene	4.06	8.18	0.496 ok	0.496	0.436-0.556
Styrene	17.18	15.77	1.089 ok	1.089	1.029-1.149
1,1,1-Trichloroethane	9.36	8.18	1.144 ok	1.145	1.085-1.205
1,1,1,2-Tetrachloroethane	15.81	10.29	1.536 ok	1.537	1.477-1.597
1,1,2,2-Tetrachloroethane	17.33	15.77	1.099 ok	1.099	1.039-1.159
1,1,2-Trichloroethane	13.05	10.29	1.268 ok	1.268	1.208-1.328
1,2,4-Trichlorobenzene	23.00	15.77	1.458 ok	1.457	1.397-1.517
1,2,3-Trichloropropane	17.52	15.77	1.111 ok	1.111	1.051-1.171
1,2,4-Trimethylbenzene	19.98	15.77	1.267 ok	1.267	1.207-1.327
1,3,5-Trimethylbenzene	19.38	15.77	1.229 ok	1.229	1.169-1.289
2,2,4-Trimethylpentane	11.12	10.29	1.081 ok	1.080	1.020-1.140
Tertiary Butyl Alcohol	6.13	8.18	0.749 ok	0.745	0.685-0.805

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V5W1065-IC1065	5W27080.D	10/06/17 12:49	TCH	0.04	GCMS5W	TO-15	Reporting this level
V5W1065-IC1065	5W27081.D	10/06/17 13:35	TCH	0.1	GCMS5W	TO-15	
V5W1065-IC1065	5W27082.D	10/06/17 14:28	TCH	0.2	GCMS5W	TO-15	
V5W1065-IC1065	5W27084.D	10/06/17 16:10	TCH	0.5	GCMS5W	TO-15	
V5W1065-IC1065	5W27085.D	10/06/17 17:00	TCH	5	GCMS5W	TO-15	
V5W1065-ICC1065	5W27086.D	10/06/17 17:45	TCH	10	GCMS5W	TO-15	
V5W1065-IC1065	5W27087.D	10/06/17 18:33	TCH	20	GCMS5W	TO-15	
V5W1065-IC1065	5W27088.D	10/06/17 19:23	TCH	40	GCMS5W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Tetrachloroethylene	14.89	10.29	1.447 ok	1.447	1.387-1.507
Tetrahydrofuran	8.84	8.18	1.081 ok	1.075	1.015-1.135
Trichloroethylene	11.10	10.29	1.079 ok	1.079	1.019-1.139
Trichlorofluoromethane	5.47	8.18	0.669 ok	0.668	0.608-0.728
Vinyl chloride	4.41	8.18	0.539 ok	0.539	0.479-0.599
Vinyl Acetate	7.34	8.18	0.897 ok	0.896	0.836-0.956

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.18 ok	8.17	7.84-8.50	285389	ok 284320	170592-398048
1,4-Difluorobenzene	10.29 ok	10.29	9.96-10.62	995094	ok 977438	586463-1368413
Chlorobenzene-D5	15.77 ok	15.77	15.44-16.10	428758	ok 428337	257002-599672

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Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1065-IC1065	5W27080.D	10/06/17 12:49	TCH	0.04	GCMS5W	TO-15
V5W1065-IC1065	5W27081.D	10/06/17 13:35	TCH	0.1	GCMS5W	TO-15 Reporting this level
V5W1065-IC1065	5W27082.D	10/06/17 14:28	TCH	0.2	GCMS5W	TO-15
V5W1065-IC1065	5W27084.D	10/06/17 16:10	TCH	0.5	GCMS5W	TO-15
V5W1065-IC1065	5W27085.D	10/06/17 17:00	TCH	5	GCMS5W	TO-15
V5W1065-ICC1065	5W27086.D	10/06/17 17:45	TCH	10	GCMS5W	TO-15
V5W1065-IC1065	5W27087.D	10/06/17 18:33	TCH	20	GCMS5W	TO-15
V5W1065-IC1065	5W27088.D	10/06/17 19:23	TCH	40	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.33	8.14	0.655 ok	0.656	0.596-0.716
Acrylonitrile	5.71	8.14	0.701 ok	0.703	0.643-0.763
1,3-Butadiene	4.46	8.14	0.548 ok	0.552	0.492-0.612
Benzene	9.85	8.14	1.210 ok	1.208	1.148-1.268
Bromobenzene	18.34	15.76	1.164 ok	1.162	1.102-1.222
Bromodichloromethane	11.04	10.27	1.075 ok	1.075	1.015-1.135
Bromoform	16.72	15.76	1.061 ok	1.060	1.000-1.120
Bromomethane	4.67	8.14	0.574 ok	0.578	0.518-0.638
Bromoethene	5.09	8.14	0.625 ok	0.628	0.568-0.688
n-Butane	4.49	8.14	0.552 ok	0.555	0.495-0.615
Benzyl Chloride	20.17	15.76	1.280 ok	1.279	1.219-1.339
n-Butylbenzene	21.17	15.76	1.343 ok	1.342	1.282-1.402
sec-Butylbenzene	20.35	15.76	1.291 ok	1.291	1.231-1.351
tert-Butylbenzene	19.95	15.76	1.266 ok	1.265	1.205-1.325
Carbon disulfide	6.34	8.14	0.779 ok	0.780	0.720-0.840
Chlorobenzene	15.82	15.76	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	3.98	8.14	0.489 ok	0.494	0.434-0.554
Chloroethane	4.81	8.14	0.591 ok	0.594	0.534-0.654
Chlorotrifluoroethene	4.02	8.14	0.494 ok	0.497	0.437-0.557
Chloroform	8.27	8.14	1.016 ok	1.016	0.956-1.076
Chloromethane	4.20	8.14	0.516 ok	0.519	0.459-0.579
3-Chloropropene	6.17	8.14	0.758 ok	0.760	0.700-0.820
2-Chlorotoluene	18.95	15.76	1.202 ok	1.202	1.142-1.262
Carbon tetrachloride	10.01	8.14	1.230 ok	1.227	1.167-1.287
Cyclohexane	10.13	8.14	1.244 ok	1.243	1.183-1.303
1,1-Dichloroethane	7.12	8.14	0.875 ok	0.876	0.816-0.936
1,1-Dichloroethylene	5.96	8.14	0.732 ok	0.735	0.675-0.795
1,2-Dibromoethane	14.26	10.27	1.389 ok	1.386	1.326-1.446
1,2-Dichloroethane	9.06	8.14	1.113 ok	1.112	1.052-1.172
1,2-Dichloropropane	10.80	10.27	1.052 ok	1.051	0.991-1.111
1,3-Dichloropropane	13.44	10.27	1.309 ok	1.306	1.246-1.366
1,4-Dioxane	11.20	10.27	1.091 ok	1.086	1.026-1.146
Dichlorodifluoromethane	4.06	8.14	0.499 ok	0.504	0.444-0.564
Dichlorofluoromethane	4.88	8.14	0.600 ok	0.602	0.542-0.662
Dibromochloromethane	13.94	10.27	1.357 ok	1.355	1.295-1.415
Dibromomethane	10.78	10.27	1.050 ok	1.049	0.989-1.109
trans-1,2-Dichloroethylene	6.92	8.14	0.850 ok	0.852	0.792-0.912
cis-1,2-Dichloroethylene	7.97	8.14	0.979 ok	0.979	0.919-1.039
cis-1,3-Dichloropropene	12.16	10.27	1.184 ok	1.183	1.123-1.243
m-Dichlorobenzene	20.17	15.76	1.280 ok	1.279	1.219-1.339

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1065-IC1065	5W27080.D	10/06/17 12:49	TCH	0.04	GCMS5W	TO-15
V5W1065-IC1065	5W27081.D	10/06/17 13:35	TCH	0.1	GCMS5W	TO-15 Reporting this level
V5W1065-IC1065	5W27082.D	10/06/17 14:28	TCH	0.2	GCMS5W	TO-15
V5W1065-IC1065	5W27084.D	10/06/17 16:10	TCH	0.5	GCMS5W	TO-15
V5W1065-IC1065	5W27085.D	10/06/17 17:00	TCH	5	GCMS5W	TO-15
V5W1065-ICC1065	5W27086.D	10/06/17 17:45	TCH	10	GCMS5W	TO-15
V5W1065-IC1065	5W27087.D	10/06/17 18:33	TCH	20	GCMS5W	TO-15
V5W1065-IC1065	5W27088.D	10/06/17 19:23	TCH	40	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
o-Dichlorobenzene	20.74	15.76	1.316 ok	1.315	1.255-1.375
p-Dichlorobenzene	20.27	15.76	1.286 ok	1.285	1.225-1.345
trans-1,3-Dichloropropene	12.84	10.27	1.250 ok	1.248	1.188-1.308
Di-Isopropyl ether	8.20	8.14	1.007 ok	1.005	0.945-1.065
2,3-Dimethylpentane	10.41	8.14	1.279 ok	1.277	1.217-1.337
2,4-Dimethylpentane	9.09	8.14	1.117 ok	1.116	1.056-1.176
Ethyl Acetate	8.26	8.14	1.015 ok	1.012	0.952-1.072
Ethyl Acrylate	10.89	10.27	1.060 ok	1.058	0.998-1.118
4-Ethyltoluene	19.25	15.76	1.221 ok	1.221	1.161-1.281
Freon 113	6.29	8.14	0.773 ok	0.775	0.715-0.835
Freon 114	4.27	8.14	0.525 ok	0.527	0.467-0.587
Freon 123	5.20	8.14	0.639 ok	0.642	0.582-0.702
Freon 123A	5.25	8.14	0.645 ok	0.648	0.588-0.708
Freon 141B	5.51	8.14	0.677 ok	0.680	0.620-0.740
Freon 142B	4.17	8.14	0.512 ok	0.517	0.457-0.577
Freon 143a	3.86	8.14	0.474 ok	0.478	0.418-0.538
Freon 152A	3.95	8.14	0.485 ok	0.489	0.429-0.549
Heptane	11.44	10.27	1.114 ok	1.113	1.053-1.173
Hexachlorobutadiene	23.56	15.76	1.495 ok	1.494	1.434-1.554
Hexachloroethane	21.63	15.76	1.372 ok	1.372	1.312-1.432
Hexane	8.15	8.14	1.001 ok	1.001	0.941-1.061
2-Hexanone	13.82	10.27	1.346 ok	1.341	1.281-1.401
Iodomethane	5.90	8.14	0.725 ok	0.727	0.667-0.787
p-Isopropyltoluene	20.59	15.76	1.306 ok	1.306	1.246-1.366
Methylene chloride	6.08	8.14	0.747 ok	0.749	0.689-0.809
Methyl ethyl ketone	7.59	8.14	0.932 ok	0.930	0.870-0.990
Methyl Isobutyl Ketone	12.25	10.27	1.193 ok	1.190	1.130-1.250
Methylmethacrylate	11.39	10.27	1.109 ok	1.108	1.048-1.168
Naphthalene	23.12	15.76	1.467 ok	1.466	1.406-1.526
Nonane	17.69	15.76	1.122 ok	1.122	1.062-1.182
Octane	14.72	10.27	1.433 ok	1.431	1.371-1.491
Pentane	5.70	8.14	0.700 ok	0.703	0.643-0.763
n-Propylbenzene	19.03	15.76	1.207 ok	1.207	1.147-1.267
Propylene	4.01	8.14	0.493 ok	0.496	0.436-0.556
Styrene	17.17	15.76	1.089 ok	1.089	1.029-1.149
1,1,1-Trichloroethane	9.33	8.14	1.146 ok	1.145	1.085-1.205
1,1,1,2-Tetrachloroethane	15.80	10.27	1.538 ok	1.537	1.477-1.597
1,1,2,2-Tetrachloroethane	17.32	15.76	1.099 ok	1.099	1.039-1.159
1,1,2-Trichloroethane	13.04	10.27	1.270 ok	1.268	1.208-1.328
1,2,4-Trichlorobenzene	22.99	15.76	1.459 ok	1.457	1.397-1.517

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1065-IC1065	5W27080.D	10/06/17 12:49	TCH	0.04	GCMS5W	TO-15
V5W1065-IC1065	5W27081.D	10/06/17 13:35	TCH	0.1	GCMS5W	TO-15 Reporting this level
V5W1065-IC1065	5W27082.D	10/06/17 14:28	TCH	0.2	GCMS5W	TO-15
V5W1065-IC1065	5W27084.D	10/06/17 16:10	TCH	0.5	GCMS5W	TO-15
V5W1065-IC1065	5W27085.D	10/06/17 17:00	TCH	5	GCMS5W	TO-15
V5W1065-IC1065	5W27086.D	10/06/17 17:45	TCH	10	GCMS5W	TO-15
V5W1065-IC1065	5W27087.D	10/06/17 18:33	TCH	20	GCMS5W	TO-15
V5W1065-IC1065	5W27088.D	10/06/17 19:23	TCH	40	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
1,2,3-Trichloropropane	17.51	15.76	1.111 ok	1.111	1.051-1.171
1,2,4-Trimethylbenzene	19.97	15.76	1.267 ok	1.267	1.207-1.327
1,3,5-Trimethylbenzene	19.38	15.76	1.230 ok	1.229	1.169-1.289
2,2,4-Trimethylpentane	11.09	10.27	1.080 ok	1.080	1.020-1.140
Tertiary Butyl Alcohol	6.06	8.14	0.744 ok	0.745	0.685-0.805
Tetrachloroethylene	14.88	10.27	1.449 ok	1.447	1.387-1.507
Tetrahydrofuran	8.79	8.14	1.080 ok	1.075	1.015-1.135
Trichloroethylene	11.08	10.27	1.079 ok	1.079	1.019-1.139
Trichlorofluoromethane	5.42	8.14	0.666 ok	0.668	0.608-0.728
Vinyl chloride	4.36	8.14	0.536 ok	0.539	0.479-0.599
Vinyl Acetate	7.29	8.14	0.896 ok	0.896	0.836-0.956

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.14 ok	8.17	7.84-8.50	256090	ok 284320	170592-398048
1,4-Difluorobenzene	10.27 ok	10.29	9.96-10.62	886442	ok 977438	586463-1368413
Chlorobenzene-D5	15.76 ok	15.77	15.44-16.10	385129	ok 428337	257002-599672

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1065-IC1065	5W27080.D	10/06/17 12:49	TCH	0.04	GCMS5W	TO-15
V5W1065-IC1065	5W27081.D	10/06/17 13:35	TCH	0.1	GCMS5W	TO-15
V5W1065-IC1065	5W27082.D	10/06/17 14:28	TCH	0.2	GCMS5W	TO-15
V5W1065-IC1065	5W27084.D	10/06/17 16:10	TCH	0.5	GCMS5W	TO-15
V5W1065-IC1065	5W27085.D	10/06/17 17:00	TCH	5	GCMS5W	TO-15
V5W1065-ICC1065	5W27086.D	10/06/17 17:45	TCH	10	GCMS5W	TO-15
V5W1065-IC1065	5W27087.D	10/06/17 18:33	TCH	20	GCMS5W	TO-15
V5W1065-IC1065	5W27088.D	10/06/17 19:23	TCH	40	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.35	8.16	0.656	ok 0.656	0.596-0.716
Acrylonitrile	5.73	8.16	0.702	ok 0.703	0.643-0.763
Acetonitrile	5.14	8.16	0.630	ok 0.630	0.570-0.690
1,3-Butadiene	4.49	8.16	0.550	ok 0.552	0.492-0.612
Benzene	9.86	8.16	1.208	ok 1.208	1.148-1.268
Bromobenzene	18.33	15.76	1.163	ok 1.162	1.102-1.222
Bromodichloromethane	11.05	10.28	1.075	ok 1.075	1.015-1.135
Bromoform	16.72	15.76	1.061	ok 1.060	1.000-1.120
Bromomethane	4.71	8.16	0.577	ok 0.578	0.518-0.638
Bromoethene	5.11	8.16	0.626	ok 0.628	0.568-0.688
n-Butane	4.52	8.16	0.554	ok 0.555	0.495-0.615
Benzyl Chloride	20.16	15.76	1.279	ok 1.279	1.219-1.339
n-Butylbenzene	21.16	15.76	1.343	ok 1.342	1.282-1.402
sec-Butylbenzene	20.34	15.76	1.291	ok 1.291	1.231-1.351
tert-Butylbenzene	19.95	15.76	1.266	ok 1.265	1.205-1.325
Carbon disulfide	6.36	8.16	0.779	ok 0.780	0.720-0.840
Chlorobenzene	15.82	15.76	1.004	ok 1.004	0.944-1.064
Chlorodifluoromethane	4.01	8.16	0.491	ok 0.494	0.434-0.554
Chloroethane	4.83	8.16	0.592	ok 0.594	0.534-0.654
Chlorotrifluoroethene	4.04	8.16	0.495	ok 0.497	0.437-0.557
Chloroform	8.29	8.16	1.016	ok 1.016	0.956-1.076
Chloromethane	4.22	8.16	0.517	ok 0.519	0.459-0.579
3-Chloropropene	6.20	8.16	0.760	ok 0.760	0.700-0.820
2-Chlorotoluene	18.95	15.76	1.202	ok 1.202	1.142-1.262
Carbon tetrachloride	10.02	8.16	1.228	ok 1.227	1.167-1.287
Cyclohexane	10.15	8.16	1.244	ok 1.243	1.183-1.303
1,1-Dichloroethane	7.15	8.16	0.876	ok 0.876	0.816-0.936
1,1-Dichloroethylene	5.98	8.16	0.733	ok 0.735	0.675-0.795
1,2-Dibromoethane	14.25	10.28	1.386	ok 1.386	1.326-1.446
1,2-Dichloroethane	9.07	8.16	1.112	ok 1.112	1.052-1.172
1,2-Dichloropropane	10.81	10.28	1.052	ok 1.051	0.991-1.111
1,3-Dichloropropane	13.43	10.28	1.306	ok 1.306	1.246-1.366
1,4-Dioxane	11.19	10.28	1.089	ok 1.086	1.026-1.146
Dichlorodifluoromethane	4.09	8.16	0.501	ok 0.504	0.444-0.564
Dichlorofluoromethane	4.91	8.16	0.602	ok 0.602	0.542-0.662
Dibromochloromethane	13.94	10.28	1.356	ok 1.355	1.295-1.415
Dibromomethane	10.78	10.28	1.049	ok 1.049	0.989-1.109
trans-1,2-Dichloroethylene	6.95	8.16	0.852	ok 0.852	0.792-0.912
cis-1,2-Dichloroethylene	7.99	8.16	0.979	ok 0.979	0.919-1.039
cis-1,3-Dichloropropene	12.17	10.28	1.184	ok 1.183	1.123-1.243

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Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1065-IC1065	5W27080.D	10/06/17 12:49	TCH	0.04	GCMS5W	TO-15
V5W1065-IC1065	5W27081.D	10/06/17 13:35	TCH	0.1	GCMS5W	TO-15
V5W1065-IC1065	5W27082.D	10/06/17 14:28	TCH	0.2	GCMS5W	TO-15 Reporting this level
V5W1065-IC1065	5W27084.D	10/06/17 16:10	TCH	0.5	GCMS5W	TO-15
V5W1065-IC1065	5W27085.D	10/06/17 17:00	TCH	5	GCMS5W	TO-15
V5W1065-ICC1065	5W27086.D	10/06/17 17:45	TCH	10	GCMS5W	TO-15
V5W1065-IC1065	5W27087.D	10/06/17 18:33	TCH	20	GCMS5W	TO-15
V5W1065-IC1065	5W27088.D	10/06/17 19:23	TCH	40	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
m-Dichlorobenzene	20.17	15.76	1.280 ok	1.279	1.219-1.339
o-Dichlorobenzene	20.73	15.76	1.315 ok	1.315	1.255-1.375
p-Dichlorobenzene	20.26	15.76	1.286 ok	1.285	1.225-1.345
trans-1,3-Dichloropropene	12.84	10.28	1.249 ok	1.248	1.188-1.308
Di-Isopropyl ether	8.21	8.16	1.006 ok	1.005	0.945-1.065
2,3-Dimethylpentane	10.43	8.16	1.278 ok	1.277	1.217-1.337
2,4-Dimethylpentane	9.11	8.16	1.116 ok	1.116	1.056-1.176
Ethanol	4.96	8.16	0.608 ok	0.609	0.549-0.669
Ethylbenzene	16.37	15.76	1.039 ok	1.038	0.978-1.098
Ethyl Acetate	8.26	8.16	1.012 ok	1.012	0.952-1.072
Ethyl Acrylate	10.88	10.28	1.058 ok	1.058	0.998-1.118
4-Ethyltoluene	19.25	15.76	1.221 ok	1.221	1.161-1.281
Freon 113	6.32	8.16	0.775 ok	0.775	0.715-0.835
Freon 114	4.29	8.16	0.526 ok	0.527	0.467-0.587
Freon 123	5.23	8.16	0.641 ok	0.642	0.582-0.702
Freon 123A	5.28	8.16	0.647 ok	0.648	0.588-0.708
Freon 141B	5.54	8.16	0.679 ok	0.680	0.620-0.740
Freon 142B	4.20	8.16	0.515 ok	0.517	0.457-0.577
Freon 143a	3.88	8.16	0.475 ok	0.478	0.418-0.538
Freon 152A	3.98	8.16	0.488 ok	0.489	0.429-0.549
Heptane	11.44	10.28	1.113 ok	1.113	1.053-1.173
Hexachlorobutadiene	23.55	15.76	1.494 ok	1.494	1.434-1.554
Hexachloroethane	21.63	15.76	1.372 ok	1.372	1.312-1.432
Hexane	8.17	8.16	1.001 ok	1.001	0.941-1.061
2-Hexanone	13.81	10.28	1.343 ok	1.341	1.281-1.401
Iodomethane	5.92	8.16	0.725 ok	0.727	0.667-0.787
Isopropylbenzene	18.22	15.76	1.156 ok	1.155	1.095-1.215
Isopropyl Alcohol	5.56	8.16	0.681 ok	0.681	0.621-0.741
p-Isopropyltoluene	20.59	15.76	1.306 ok	1.306	1.246-1.366
Methylene chloride	6.11	8.16	0.749 ok	0.749	0.689-0.809
Methyl ethyl ketone	7.60	8.16	0.931 ok	0.930	0.870-0.990
Methyl Isobutyl Ketone	12.25	10.28	1.192 ok	1.190	1.130-1.250
Methyl Tert Butyl Ether	7.25	8.16	0.888 ok	0.886	0.826-0.946
Methylmethacrylate	11.39	10.28	1.108 ok	1.108	1.048-1.168
Naphthalene	23.11	15.76	1.466 ok	1.466	1.406-1.526
Nonane	17.69	15.76	1.122 ok	1.122	1.062-1.182
Octane	14.72	10.28	1.432 ok	1.431	1.371-1.491
Pentane	5.73	8.16	0.702 ok	0.703	0.643-0.763
n-Propylbenzene	19.02	15.76	1.207 ok	1.207	1.147-1.267
Propylene	4.03	8.16	0.494 ok	0.496	0.436-0.556

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Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1065-IC1065	5W27080.D	10/06/17 12:49	TCH	0.04	GCMS5W	TO-15
V5W1065-IC1065	5W27081.D	10/06/17 13:35	TCH	0.1	GCMS5W	TO-15
V5W1065-IC1065	5W27082.D	10/06/17 14:28	TCH	0.2	GCMS5W	TO-15
V5W1065-IC1065	5W27084.D	10/06/17 16:10	TCH	0.5	GCMS5W	TO-15
V5W1065-IC1065	5W27085.D	10/06/17 17:00	TCH	5	GCMS5W	TO-15
V5W1065-IC1065	5W27086.D	10/06/17 17:45	TCH	10	GCMS5W	TO-15
V5W1065-IC1065	5W27087.D	10/06/17 18:33	TCH	20	GCMS5W	TO-15
V5W1065-IC1065	5W27088.D	10/06/17 19:23	TCH	40	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Styrene	17.17	15.76	1.089 ok	1.089	1.029-1.149
1,1,1-Trichloroethane	9.34	8.16	1.145 ok	1.145	1.085-1.205
1,1,1,2-Tetrachloroethane	15.80	10.28	1.537 ok	1.537	1.477-1.597
1,1,2,2-Tetrachloroethane	17.32	15.76	1.099 ok	1.099	1.039-1.159
1,1,2-Trichloroethane	13.04	10.28	1.268 ok	1.268	1.208-1.328
1,2,4-Trichlorobenzene	22.99	15.76	1.459 ok	1.457	1.397-1.517
1,2,3-Trichloropropane	17.51	15.76	1.111 ok	1.111	1.051-1.171
1,2,4-Trimethylbenzene	19.97	15.76	1.267 ok	1.267	1.207-1.327
1,3,5-Trimethylbenzene	19.38	15.76	1.230 ok	1.229	1.169-1.289
2,2,4-Trimethylpentane	11.11	10.28	1.081 ok	1.080	1.020-1.140
Tertiary Butyl Alcohol	6.08	8.16	0.745 ok	0.745	0.685-0.805
Tetrachloroethylene	14.89	10.28	1.448 ok	1.447	1.387-1.507
Tetrahydrofuran	8.80	8.16	1.078 ok	1.075	1.015-1.135
Toluene	13.39	10.28	1.303 ok	1.301	1.241-1.361
Trichloroethylene	11.09	10.28	1.079 ok	1.079	1.019-1.139
Trichlorofluoromethane	5.44	8.16	0.667 ok	0.668	0.608-0.728
Vinyl chloride	4.39	8.16	0.538 ok	0.539	0.479-0.599
Vinyl Acetate	7.31	8.16	0.896 ok	0.896	0.836-0.956
m,p-Xylene	16.62	15.76	1.055 ok	1.055	0.995-1.115
o-Xylene	17.31	15.76	1.098 ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.73	15.76	0.364 ok	0.364	0.304-0.424

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.16 ok	8.17	7.84-8.50	269496 ok	284320	170592-398048
1,4-Difluorobenzene	10.28 ok	10.29	9.96-10.62	937921 ok	977438	586463-1368413
Chlorobenzene-D5	15.76 ok	15.77	15.44-16.10	416042 ok	428337	257002-599672

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Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1065-IC1065	5W27080.D	10/06/17 12:49	TCH	0.04	GCMS5W	TO-15
V5W1065-IC1065	5W27081.D	10/06/17 13:35	TCH	0.1	GCMS5W	TO-15
V5W1065-IC1065	5W27082.D	10/06/17 14:28	TCH	0.2	GCMS5W	TO-15
V5W1065-IC1065	5W27084.D	10/06/17 16:10	TCH	0.5	GCMS5W	TO-15 Reporting this level
V5W1065-IC1065	5W27085.D	10/06/17 17:00	TCH	5	GCMS5W	TO-15
V5W1065-ICC1065	5W27086.D	10/06/17 17:45	TCH	10	GCMS5W	TO-15
V5W1065-IC1065	5W27087.D	10/06/17 18:33	TCH	20	GCMS5W	TO-15
V5W1065-IC1065	5W27088.D	10/06/17 19:23	TCH	40	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+/- .06)
Acetone	5.38	8.18	0.658 ok	0.656	0.596-0.716
Acrylonitrile	5.75	8.18	0.703 ok	0.703	0.643-0.763
Acetonitrile	5.17	8.18	0.632 ok	0.630	0.570-0.690
1,3-Butadiene	4.52	8.18	0.553 ok	0.552	0.492-0.612
Benzene	9.87	8.18	1.207 ok	1.208	1.148-1.268
Bromobenzene	18.32	15.77	1.162 ok	1.162	1.102-1.222
Bromodichloromethane	11.06	10.29	1.075 ok	1.075	1.015-1.135
Bromoform	16.72	15.77	1.060 ok	1.060	1.000-1.120
Bromomethane	4.73	8.18	0.578 ok	0.578	0.518-0.638
Bromoethene	5.14	8.18	0.628 ok	0.628	0.568-0.688
n-Butane	4.55	8.18	0.556 ok	0.555	0.495-0.615
Benzyl Chloride	20.16	15.77	1.278 ok	1.279	1.219-1.339
n-Butylbenzene	21.16	15.77	1.342 ok	1.342	1.282-1.402
sec-Butylbenzene	20.34	15.77	1.290 ok	1.291	1.231-1.351
tert-Butylbenzene	19.95	15.77	1.265 ok	1.265	1.205-1.325
Carbon disulfide	6.38	8.18	0.780 ok	0.780	0.720-0.840
Chlorobenzene	15.83	15.77	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	4.05	8.18	0.495 ok	0.494	0.434-0.554
Chloroethane	4.86	8.18	0.594 ok	0.594	0.534-0.654
Chlorotrifluoroethene	4.07	8.18	0.498 ok	0.497	0.437-0.557
Chloroform	8.31	8.18	1.016 ok	1.016	0.956-1.076
Chloromethane	4.25	8.18	0.520 ok	0.519	0.459-0.579
3-Chloropropene	6.22	8.18	0.760 ok	0.760	0.700-0.820
2-Chlorotoluene	18.95	15.77	1.202 ok	1.202	1.142-1.262
Carbon tetrachloride	10.03	8.18	1.226 ok	1.227	1.167-1.287
Cyclohexane	10.16	8.18	1.242 ok	1.243	1.183-1.303
1,1-Dichloroethane	7.17	8.18	0.877 ok	0.876	0.816-0.936
1,1-Dichloroethylene	6.01	8.18	0.735 ok	0.735	0.675-0.795
1,2-Dibromoethane	14.26	10.29	1.386 ok	1.386	1.326-1.446
1,2-Dichloroethane	9.09	8.18	1.111 ok	1.112	1.052-1.172
1,2-Dichloropropane	10.82	10.29	1.052 ok	1.051	0.991-1.111
1,3-Dichloropropane	13.44	10.29	1.306 ok	1.306	1.246-1.366
1,4-Dioxane	11.19	10.29	1.087 ok	1.086	1.026-1.146
Dichlorodifluoromethane	4.13	8.18	0.505 ok	0.504	0.444-0.564
Dichlorofluoromethane	4.93	8.18	0.603 ok	0.602	0.542-0.662
Dibromochloromethane	13.94	10.29	1.355 ok	1.355	1.295-1.415
Dibromomethane	10.80	10.29	1.050 ok	1.049	0.989-1.109
trans-1,2-Dichloroethylene	6.97	8.18	0.852 ok	0.852	0.792-0.912
cis-1,2-Dichloroethylene	8.00	8.18	0.978 ok	0.979	0.919-1.039
cis-1,3-Dichloropropene	12.17	10.29	1.183 ok	1.183	1.123-1.243

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1065-IC1065	5W27080.D	10/06/17 12:49	TCH	0.04	GCMS5W	TO-15
V5W1065-IC1065	5W27081.D	10/06/17 13:35	TCH	0.1	GCMS5W	TO-15
V5W1065-IC1065	5W27082.D	10/06/17 14:28	TCH	0.2	GCMS5W	TO-15
V5W1065-IC1065	5W27084.D	10/06/17 16:10	TCH	0.5	GCMS5W	TO-15 Reporting this level
V5W1065-IC1065	5W27085.D	10/06/17 17:00	TCH	5	GCMS5W	TO-15
V5W1065-ICC1065	5W27086.D	10/06/17 17:45	TCH	10	GCMS5W	TO-15
V5W1065-IC1065	5W27087.D	10/06/17 18:33	TCH	20	GCMS5W	TO-15
V5W1065-IC1065	5W27088.D	10/06/17 19:23	TCH	40	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
m-Dichlorobenzene	20.16	15.77	1.278 ok	1.279	1.219-1.339
o-Dichlorobenzene	20.73	15.77	1.315 ok	1.315	1.255-1.375
p-Dichlorobenzene	20.26	15.77	1.285 ok	1.285	1.225-1.345
trans-1,3-Dichloropropene	12.84	10.29	1.248 ok	1.248	1.188-1.308
Di-Isopropyl ether	8.22	8.18	1.005 ok	1.005	0.945-1.065
2,3-Dimethylpentane	10.44	8.18	1.276 ok	1.277	1.217-1.337
2,4-Dimethylpentane	9.12	8.18	1.115 ok	1.116	1.056-1.176
Ethanol	4.98	8.18	0.609 ok	0.609	0.549-0.669
Ethylbenzene	16.37	15.77	1.038 ok	1.038	0.978-1.098
Ethyl Acetate	8.28	8.18	1.012 ok	1.012	0.952-1.072
Ethyl Acrylate	10.88	10.29	1.057 ok	1.058	0.998-1.118
4-Ethyltoluene	19.25	15.77	1.221 ok	1.221	1.161-1.281
Freon 113	6.34	8.18	0.775 ok	0.775	0.715-0.835
Freon 114	4.32	8.18	0.528 ok	0.527	0.467-0.587
Freon 123	5.26	8.18	0.643 ok	0.642	0.582-0.702
Freon 123A	5.30	8.18	0.648 ok	0.648	0.588-0.708
Freon 141B	5.57	8.18	0.681 ok	0.680	0.620-0.740
Freon 142B	4.23	8.18	0.517 ok	0.517	0.457-0.577
Freon 143a	3.92	8.18	0.479 ok	0.478	0.418-0.538
Freon 152A	4.01	8.18	0.490 ok	0.489	0.429-0.549
Heptane	11.45	10.29	1.113 ok	1.113	1.053-1.173
Hexachlorobutadiene	23.56	15.77	1.494 ok	1.494	1.434-1.554
Hexachloroethane	21.63	15.77	1.372 ok	1.372	1.312-1.432
Hexane	8.19	8.18	1.001 ok	1.001	0.941-1.061
2-Hexanone	13.80	10.29	1.341 ok	1.341	1.281-1.401
Iodomethane	5.95	8.18	0.727 ok	0.727	0.667-0.787
Isopropylbenzene	18.22	15.77	1.155 ok	1.155	1.095-1.215
Isopropyl Alcohol	5.58	8.18	0.682 ok	0.681	0.621-0.741
p-Isopropyltoluene	20.58	15.77	1.305 ok	1.306	1.246-1.366
Methylene chloride	6.13	8.18	0.749 ok	0.749	0.689-0.809
Methyl ethyl ketone	7.61	8.18	0.930 ok	0.930	0.870-0.990
Methyl Isobutyl Ketone	12.25	10.29	1.190 ok	1.190	1.130-1.250
Methyl Tert Butyl Ether	7.26	8.18	0.888 ok	0.886	0.826-0.946
Methylmethacrylate	11.40	10.29	1.108 ok	1.108	1.048-1.168
Naphthalene	23.11	15.77	1.465 ok	1.466	1.406-1.526
Nonane	17.69	15.77	1.122 ok	1.122	1.062-1.182
Octane	14.73	10.29	1.431 ok	1.431	1.371-1.491
Pentane	5.75	8.18	0.703 ok	0.703	0.643-0.763
n-Propylbenzene	19.02	15.77	1.206 ok	1.207	1.147-1.267
Propylene	4.06	8.18	0.496 ok	0.496	0.436-0.556

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1065-IC1065	5W27080.D	10/06/17 12:49	TCH	0.04	GCMS5W	TO-15
V5W1065-IC1065	5W27081.D	10/06/17 13:35	TCH	0.1	GCMS5W	TO-15
V5W1065-IC1065	5W27082.D	10/06/17 14:28	TCH	0.2	GCMS5W	TO-15
V5W1065-IC1065	5W27084.D	10/06/17 16:10	TCH	0.5	GCMS5W	TO-15 Reporting this level
V5W1065-IC1065	5W27085.D	10/06/17 17:00	TCH	5	GCMS5W	TO-15
V5W1065-ICC1065	5W27086.D	10/06/17 17:45	TCH	10	GCMS5W	TO-15
V5W1065-IC1065	5W27087.D	10/06/17 18:33	TCH	20	GCMS5W	TO-15
V5W1065-IC1065	5W27088.D	10/06/17 19:23	TCH	40	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Styrene	17.17	15.77	1.089 ok	1.089	1.029-1.149
1,1,1-Trichloroethane	9.36	8.18	1.144 ok	1.145	1.085-1.205
1,1,1,2-Tetrachloroethane	15.81	10.29	1.536 ok	1.537	1.477-1.597
1,1,2,2-Tetrachloroethane	17.32	15.77	1.098 ok	1.099	1.039-1.159
1,1,2-Trichloroethane	13.04	10.29	1.267 ok	1.268	1.208-1.328
1,2,4-Trichlorobenzene	22.98	15.77	1.457 ok	1.457	1.397-1.517
1,2,3-Trichloropropane	17.51	15.77	1.110 ok	1.111	1.051-1.171
1,2,4-Trimethylbenzene	19.97	15.77	1.266 ok	1.267	1.207-1.327
1,3,5-Trimethylbenzene	19.38	15.77	1.229 ok	1.229	1.169-1.289
2,2,4-Trimethylpentane	11.11	10.29	1.080 ok	1.080	1.020-1.140
Tertiary Butyl Alcohol	6.10	8.18	0.746 ok	0.745	0.685-0.805
Tetrachloroethylene	14.89	10.29	1.447 ok	1.447	1.387-1.507
Tetrahydrofuran	8.80	8.18	1.076 ok	1.075	1.015-1.135
Toluene	13.39	10.29	1.301 ok	1.301	1.241-1.361
Trichloroethylene	11.10	10.29	1.079 ok	1.079	1.019-1.139
Trichlorofluoromethane	5.47	8.18	0.669 ok	0.668	0.608-0.728
Vinyl chloride	4.41	8.18	0.539 ok	0.539	0.479-0.599
Vinyl Acetate	7.33	8.18	0.896 ok	0.896	0.836-0.956
m,p-Xylene	16.62	15.77	1.054 ok	1.055	0.995-1.115
o-Xylene	17.31	15.77	1.098 ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.75	15.77	0.365 ok	0.364	0.304-0.424

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.18 ok	8.17	7.84-8.50	287053	ok 284320	170592-398048
1,4-Difluorobenzene	10.29 ok	10.29	9.96-10.62	994982	ok 977438	586463-1368413
Chlorobenzene-D5	15.77 ok	15.77	15.44-16.10	435260	ok 428337	257002-599672

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Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1065-IC1065	5W27080.D	10/06/17 12:49	TCH	0.04	GCMS5W	TO-15
V5W1065-IC1065	5W27081.D	10/06/17 13:35	TCH	0.1	GCMS5W	TO-15
V5W1065-IC1065	5W27082.D	10/06/17 14:28	TCH	0.2	GCMS5W	TO-15
V5W1065-IC1065	5W27084.D	10/06/17 16:10	TCH	0.5	GCMS5W	TO-15
V5W1065-IC1065	5W27085.D	10/06/17 17:00	TCH	5	GCMS5W	TO-15 Reporting this level
V5W1065-ICC1065	5W27086.D	10/06/17 17:45	TCH	10	GCMS5W	TO-15
V5W1065-IC1065	5W27087.D	10/06/17 18:33	TCH	20	GCMS5W	TO-15
V5W1065-IC1065	5W27088.D	10/06/17 19:23	TCH	40	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.36	8.18	0.655 ok	0.656	0.596-0.716
Acrylonitrile	5.74	8.18	0.702 ok	0.703	0.643-0.763
Acetonitrile	5.15	8.18	0.630 ok	0.630	0.570-0.690
1,3-Butadiene	4.52	8.18	0.553 ok	0.552	0.492-0.612
Benzene	9.87	8.18	1.207 ok	1.208	1.148-1.268
Bromobenzene	18.32	15.77	1.162 ok	1.162	1.102-1.222
Bromodichloromethane	11.06	10.29	1.075 ok	1.075	1.015-1.135
Bromoform	16.72	15.77	1.060 ok	1.060	1.000-1.120
Bromomethane	4.73	8.18	0.578 ok	0.578	0.518-0.638
Bromoethene	5.14	8.18	0.628 ok	0.628	0.568-0.688
n-Butane	4.55	8.18	0.556 ok	0.555	0.495-0.615
Benzyl Chloride	20.15	15.77	1.278 ok	1.279	1.219-1.339
n-Butylbenzene	21.16	15.77	1.342 ok	1.342	1.282-1.402
sec-Butylbenzene	20.35	15.77	1.290 ok	1.291	1.231-1.351
tert-Butylbenzene	19.95	15.77	1.265 ok	1.265	1.205-1.325
Carbon disulfide	6.38	8.18	0.780 ok	0.780	0.720-0.840
Chlorobenzene	15.83	15.77	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	4.05	8.18	0.495 ok	0.494	0.434-0.554
Chloroethane	4.86	8.18	0.594 ok	0.594	0.534-0.654
Chlorotrifluoroethene	4.07	8.18	0.498 ok	0.497	0.437-0.557
Chloroform	8.31	8.18	1.016 ok	1.016	0.956-1.076
Chloromethane	4.25	8.18	0.520 ok	0.519	0.459-0.579
3-Chloropropene	6.22	8.18	0.760 ok	0.760	0.700-0.820
2-Chlorotoluene	18.94	15.77	1.201 ok	1.202	1.142-1.262
Carbon tetrachloride	10.03	8.18	1.226 ok	1.227	1.167-1.287
Cyclohexane	10.16	8.18	1.242 ok	1.243	1.183-1.303
1,1-Dichloroethane	7.17	8.18	0.877 ok	0.876	0.816-0.936
1,1-Dichloroethylene	6.01	8.18	0.735 ok	0.735	0.675-0.795
1,2-Dibromoethane	14.25	10.29	1.385 ok	1.386	1.326-1.446
1,2-Dichloroethane	9.09	8.18	1.111 ok	1.112	1.052-1.172
1,2-Dichloropropane	10.81	10.29	1.051 ok	1.051	0.991-1.111
1,3-Dichloropropane	13.44	10.29	1.306 ok	1.306	1.246-1.366
1,4-Dioxane	11.15	10.29	1.084 ok	1.086	1.026-1.146
Dichlorodifluoromethane	4.13	8.18	0.505 ok	0.504	0.444-0.564
Dichlorofluoromethane	4.93	8.18	0.603 ok	0.602	0.542-0.662
Dibromochloromethane	13.94	10.29	1.355 ok	1.355	1.295-1.415
Dibromomethane	10.79	10.29	1.049 ok	1.049	0.989-1.109
trans-1,2-Dichloroethylene	6.97	8.18	0.852 ok	0.852	0.792-0.912
cis-1,2-Dichloroethylene	8.00	8.18	0.978 ok	0.979	0.919-1.039
cis-1,3-Dichloropropene	12.16	10.29	1.182 ok	1.183	1.123-1.243

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1065-IC1065	5W27080.D	10/06/17 12:49	TCH	0.04	GCMS5W	TO-15
V5W1065-IC1065	5W27081.D	10/06/17 13:35	TCH	0.1	GCMS5W	TO-15
V5W1065-IC1065	5W27082.D	10/06/17 14:28	TCH	0.2	GCMS5W	TO-15
V5W1065-IC1065	5W27084.D	10/06/17 16:10	TCH	0.5	GCMS5W	TO-15
V5W1065-IC1065	5W27085.D	10/06/17 17:00	TCH	5	GCMS5W	TO-15 Reporting this level
V5W1065-ICC1065	5W27086.D	10/06/17 17:45	TCH	10	GCMS5W	TO-15
V5W1065-IC1065	5W27087.D	10/06/17 18:33	TCH	20	GCMS5W	TO-15
V5W1065-IC1065	5W27088.D	10/06/17 19:23	TCH	40	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
m-Dichlorobenzene	20.16	15.77	1.278 ok	1.279	1.219-1.339
o-Dichlorobenzene	20.73	15.77	1.315 ok	1.315	1.255-1.375
p-Dichlorobenzene	20.26	15.77	1.285 ok	1.285	1.225-1.345
trans-1,3-Dichloropropene	12.84	10.29	1.248 ok	1.248	1.188-1.308
Di-Isopropyl ether	8.21	8.18	1.004 ok	1.005	0.945-1.065
2,3-Dimethylpentane	10.44	8.18	1.276 ok	1.277	1.217-1.337
2,4-Dimethylpentane	9.12	8.18	1.115 ok	1.116	1.056-1.176
Ethanol	4.98	8.18	0.609 ok	0.609	0.549-0.669
Ethylbenzene	16.37	15.77	1.038 ok	1.038	0.978-1.098
Ethyl Acetate	8.26	8.18	1.010 ok	1.012	0.952-1.072
Ethyl Acrylate	10.87	10.29	1.056 ok	1.058	0.998-1.118
4-Ethyltoluene	19.25	15.77	1.221 ok	1.221	1.161-1.281
Freon 113	6.34	8.18	0.775 ok	0.775	0.715-0.835
Freon 114	4.32	8.18	0.528 ok	0.527	0.467-0.587
Freon 123	5.26	8.18	0.643 ok	0.642	0.582-0.702
Freon 123A	5.30	8.18	0.648 ok	0.648	0.588-0.708
Freon 141B	5.57	8.18	0.681 ok	0.680	0.620-0.740
Freon 142B	4.23	8.18	0.517 ok	0.517	0.457-0.577
Freon 143a	3.92	8.18	0.479 ok	0.478	0.418-0.538
Freon 152A	4.01	8.18	0.490 ok	0.489	0.429-0.549
Heptane	11.45	10.29	1.113 ok	1.113	1.053-1.173
Hexachlorobutadiene	23.56	15.77	1.494 ok	1.494	1.434-1.554
Hexachloroethane	21.63	15.77	1.372 ok	1.372	1.312-1.432
Hexane	8.19	8.18	1.001 ok	1.001	0.941-1.061
2-Hexanone	13.78	10.29	1.339 ok	1.341	1.281-1.401
Iodomethane	5.95	8.18	0.727 ok	0.727	0.667-0.787
Isopropylbenzene	18.21	15.77	1.155 ok	1.155	1.095-1.215
Isopropyl Alcohol	5.56	8.18	0.680 ok	0.681	0.621-0.741
p-Isopropyltoluene	20.58	15.77	1.305 ok	1.306	1.246-1.366
Methylene chloride	6.13	8.18	0.749 ok	0.749	0.689-0.809
Methyl ethyl ketone	7.59	8.18	0.928 ok	0.930	0.870-0.990
Methyl Isobutyl Ketone	12.23	10.29	1.189 ok	1.190	1.130-1.250
Methyl Tert Butyl Ether	7.24	8.18	0.885 ok	0.886	0.826-0.946
Methylmethacrylate	11.39	10.29	1.107 ok	1.108	1.048-1.168
Naphthalene	23.10	15.77	1.465 ok	1.466	1.406-1.526
Nonane	17.69	15.77	1.122 ok	1.122	1.062-1.182
Octane	14.72	10.29	1.431 ok	1.431	1.371-1.491
Pentane	5.75	8.18	0.703 ok	0.703	0.643-0.763
n-Propylbenzene	19.02	15.77	1.206 ok	1.207	1.147-1.267
Propylene	4.06	8.18	0.496 ok	0.496	0.436-0.556

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1065-IC1065	5W27080.D	10/06/17 12:49	TCH	0.04	GCMS5W	TO-15
V5W1065-IC1065	5W27081.D	10/06/17 13:35	TCH	0.1	GCMS5W	TO-15
V5W1065-IC1065	5W27082.D	10/06/17 14:28	TCH	0.2	GCMS5W	TO-15
V5W1065-IC1065	5W27084.D	10/06/17 16:10	TCH	0.5	GCMS5W	TO-15
V5W1065-IC1065	5W27085.D	10/06/17 17:00	TCH	5	GCMS5W	TO-15 Reporting this level
V5W1065-ICC1065	5W27086.D	10/06/17 17:45	TCH	10	GCMS5W	TO-15
V5W1065-IC1065	5W27087.D	10/06/17 18:33	TCH	20	GCMS5W	TO-15
V5W1065-IC1065	5W27088.D	10/06/17 19:23	TCH	40	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Styrene	17.16	15.77	1.088 ok	1.089	1.029-1.149
1,1,1-Trichloroethane	9.36	8.18	1.144 ok	1.145	1.085-1.205
1,1,1,2-Tetrachloroethane	15.81	10.29	1.536 ok	1.537	1.477-1.597
1,1,2,2-Tetrachloroethane	17.32	15.77	1.098 ok	1.099	1.039-1.159
1,1,2-Trichloroethane	13.04	10.29	1.267 ok	1.268	1.208-1.328
1,2,4-Trichlorobenzene	22.97	15.77	1.457 ok	1.457	1.397-1.517
1,2,3-Trichloropropane	17.50	15.77	1.110 ok	1.111	1.051-1.171
1,2,4-Trimethylbenzene	19.97	15.77	1.266 ok	1.267	1.207-1.327
1,3,5-Trimethylbenzene	19.38	15.77	1.229 ok	1.229	1.169-1.289
2,2,4-Trimethylpentane	11.11	10.29	1.080 ok	1.080	1.020-1.140
Tertiary Butyl Alcohol	6.08	8.18	0.743 ok	0.745	0.685-0.805
Tetrachloroethylene	14.89	10.29	1.447 ok	1.447	1.387-1.507
Tetrahydrofuran	8.77	8.18	1.072 ok	1.075	1.015-1.135
Toluene	13.39	10.29	1.301 ok	1.301	1.241-1.361
Trichloroethylene	11.10	10.29	1.079 ok	1.079	1.019-1.139
Trichlorofluoromethane	5.47	8.18	0.669 ok	0.668	0.608-0.728
Vinyl chloride	4.41	8.18	0.539 ok	0.539	0.479-0.599
Vinyl Acetate	7.32	8.18	0.895 ok	0.896	0.836-0.956
m,p-Xylene	16.62	15.77	1.054 ok	1.055	0.995-1.115
o-Xylene	17.31	15.77	1.098 ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.75	15.77	0.365 ok	0.364	0.304-0.424

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.18 ok	8.17	7.84-8.50	293092 ok	284320	170592-398048
1,4-Difluorobenzene	10.29 ok	10.29	9.96-10.62	1004061 ok	977438	586463-1368413
Chlorobenzene-D5	15.77 ok	15.77	15.44-16.10	463849 ok	428337	257002-599672

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1065-IC1065	5W27080.D	10/06/17 12:49	TCH	0.04	GCMS5W	TO-15
V5W1065-IC1065	5W27081.D	10/06/17 13:35	TCH	0.1	GCMS5W	TO-15
V5W1065-IC1065	5W27082.D	10/06/17 14:28	TCH	0.2	GCMS5W	TO-15
V5W1065-IC1065	5W27084.D	10/06/17 16:10	TCH	0.5	GCMS5W	TO-15
V5W1065-IC1065	5W27085.D	10/06/17 17:00	TCH	5	GCMS5W	TO-15
V5W1065-ICC1065	5W27086.D	10/06/17 17:45	TCH	10	GCMS5W	TO-15
V5W1065-IC1065	5W27087.D	10/06/17 18:33	TCH	20	GCMS5W	TO-15
V5W1065-IC1065	5W27088.D	10/06/17 19:23	TCH	40	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.36	8.17	0.656	ok 0.656	0.596-0.716
Acrylonitrile	5.75	8.17	0.704	ok 0.703	0.643-0.763
Acetonitrile	5.15	8.17	0.630	ok 0.630	0.570-0.690
1,3-Butadiene	4.52	8.17	0.553	ok 0.552	0.492-0.612
Benzene	9.87	8.17	1.208	ok 1.208	1.148-1.268
Bromobenzene	18.32	15.77	1.162	ok 1.162	1.102-1.222
Bromodichloromethane	11.06	10.29	1.075	ok 1.075	1.015-1.135
Bromoform	16.72	15.77	1.060	ok 1.060	1.000-1.120
Bromomethane	4.73	8.17	0.579	ok 0.578	0.518-0.638
Bromoethene	5.14	8.17	0.629	ok 0.628	0.568-0.688
n-Butane	4.55	8.17	0.557	ok 0.555	0.495-0.615
Benzyl Chloride	20.15	15.77	1.278	ok 1.279	1.219-1.339
n-Butylbenzene	21.16	15.77	1.342	ok 1.342	1.282-1.402
sec-Butylbenzene	20.35	15.77	1.290	ok 1.291	1.231-1.351
tert-Butylbenzene	19.95	15.77	1.265	ok 1.265	1.205-1.325
Carbon disulfide	6.38	8.17	0.781	ok 0.780	0.720-0.840
Chlorobenzene	15.83	15.77	1.004	ok 1.004	0.944-1.064
Chlorodifluoromethane	4.05	8.17	0.496	ok 0.494	0.434-0.554
Chloroethane	4.86	8.17	0.595	ok 0.594	0.534-0.654
Chlorotrifluoroethene	4.07	8.17	0.498	ok 0.497	0.437-0.557
Chloroform	8.31	8.17	1.017	ok 1.016	0.956-1.076
Chloromethane	4.25	8.17	0.520	ok 0.519	0.459-0.579
3-Chloropropene	6.22	8.17	0.761	ok 0.760	0.700-0.820
2-Chlorotoluene	18.95	15.77	1.202	ok 1.202	1.142-1.262
Carbon tetrachloride	10.03	8.17	1.228	ok 1.227	1.167-1.287
Cyclohexane	10.16	8.17	1.244	ok 1.243	1.183-1.303
1,1-Dichloroethane	7.17	8.17	0.878	ok 0.876	0.816-0.936
1,1-Dichloroethylene	6.01	8.17	0.736	ok 0.735	0.675-0.795
1,2-Dibromoethane	14.26	10.29	1.386	ok 1.386	1.326-1.446
1,2-Dichloroethane	9.09	8.17	1.113	ok 1.112	1.052-1.172
1,2-Dichloropropane	10.81	10.29	1.051	ok 1.051	0.991-1.111
1,3-Dichloropropane	13.44	10.29	1.306	ok 1.306	1.246-1.366
1,4-Dioxane	11.15	10.29	1.084	ok 1.086	1.026-1.146
Dichlorodifluoromethane	4.13	8.17	0.506	ok 0.504	0.444-0.564
Dichlorofluoromethane	4.93	8.17	0.603	ok 0.602	0.542-0.662
Dibromochloromethane	13.94	10.29	1.355	ok 1.355	1.295-1.415
Dibromomethane	10.80	10.29	1.050	ok 1.049	0.989-1.109
trans-1,2-Dichloroethylene	6.97	8.17	0.853	ok 0.852	0.792-0.912
cis-1,2-Dichloroethylene	8.00	8.17	0.979	ok 0.979	0.919-1.039
cis-1,3-Dichloropropene	12.16	10.29	1.182	ok 1.183	1.123-1.243

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1065-IC1065	5W27080.D	10/06/17 12:49	TCH	0.04	GCMS5W	TO-15
V5W1065-IC1065	5W27081.D	10/06/17 13:35	TCH	0.1	GCMS5W	TO-15
V5W1065-IC1065	5W27082.D	10/06/17 14:28	TCH	0.2	GCMS5W	TO-15
V5W1065-IC1065	5W27084.D	10/06/17 16:10	TCH	0.5	GCMS5W	TO-15
V5W1065-IC1065	5W27085.D	10/06/17 17:00	TCH	5	GCMS5W	TO-15
V5W1065-ICC1065	5W27086.D	10/06/17 17:45	TCH	10	GCMS5W	TO-15
V5W1065-IC1065	5W27087.D	10/06/17 18:33	TCH	20	GCMS5W	TO-15
V5W1065-IC1065	5W27088.D	10/06/17 19:23	TCH	40	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
m-Dichlorobenzene	20.16	15.77	1.278 ok	1.279	1.219-1.339
o-Dichlorobenzene	20.73	15.77	1.315 ok	1.315	1.255-1.375
p-Dichlorobenzene	20.26	15.77	1.285 ok	1.285	1.225-1.345
trans-1,3-Dichloropropene	12.84	10.29	1.248 ok	1.248	1.188-1.308
Di-Isopropyl ether	8.21	8.17	1.005 ok	1.005	0.945-1.065
2,3-Dimethylpentane	10.44	8.17	1.278 ok	1.277	1.217-1.337
2,4-Dimethylpentane	9.12	8.17	1.116 ok	1.116	1.056-1.176
Ethanol	4.98	8.17	0.610 ok	0.609	0.549-0.669
Ethylbenzene	16.37	15.77	1.038 ok	1.038	0.978-1.098
Ethyl Acetate	8.26	8.17	1.011 ok	1.012	0.952-1.072
Ethyl Acrylate	10.87	10.29	1.056 ok	1.058	0.998-1.118
4-Ethyltoluene	19.25	15.77	1.221 ok	1.221	1.161-1.281
Freon 113	6.34	8.17	0.776 ok	0.775	0.715-0.835
Freon 114	4.32	8.17	0.529 ok	0.527	0.467-0.587
Freon 123	5.26	8.17	0.644 ok	0.642	0.582-0.702
Freon 123A	5.30	8.17	0.649 ok	0.648	0.588-0.708
Freon 141B	5.57	8.17	0.682 ok	0.680	0.620-0.740
Freon 142B	4.23	8.17	0.518 ok	0.517	0.457-0.577
Freon 143a	3.92	8.17	0.480 ok	0.478	0.418-0.538
Freon 152A	4.01	8.17	0.491 ok	0.489	0.429-0.549
Heptane	11.45	10.29	1.113 ok	1.113	1.053-1.173
Hexachlorobutadiene	23.55	15.77	1.493 ok	1.494	1.434-1.554
Hexachloroethane	21.63	15.77	1.372 ok	1.372	1.312-1.432
Hexane	8.19	8.17	1.002 ok	1.001	0.941-1.061
2-Hexanone	13.78	10.29	1.339 ok	1.341	1.281-1.401
Iodomethane	5.95	8.17	0.728 ok	0.727	0.667-0.787
Isopropylbenzene	18.22	15.77	1.155 ok	1.155	1.095-1.215
Isopropyl Alcohol	5.57	8.17	0.682 ok	0.681	0.621-0.741
p-Isopropyltoluene	20.58	15.77	1.305 ok	1.306	1.246-1.366
Methylene chloride	6.13	8.17	0.750 ok	0.749	0.689-0.809
Methyl ethyl ketone	7.58	8.17	0.928 ok	0.930	0.870-0.990
Methyl Isobutyl Ketone	12.23	10.29	1.189 ok	1.190	1.130-1.250
Methyl Tert Butyl Ether	7.24	8.17	0.886 ok	0.886	0.826-0.946
Methylmethacrylate	11.39	10.29	1.107 ok	1.108	1.048-1.168
Naphthalene	23.10	15.77	1.465 ok	1.466	1.406-1.526
Nonane	17.69	15.77	1.122 ok	1.122	1.062-1.182
Octane	14.73	10.29	1.431 ok	1.431	1.371-1.491
Pentane	5.75	8.17	0.704 ok	0.703	0.643-0.763
n-Propylbenzene	19.02	15.77	1.206 ok	1.207	1.147-1.267
Propylene	4.06	8.17	0.497 ok	0.496	0.436-0.556

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1065-IC1065	5W27080.D	10/06/17 12:49	TCH	0.04	GCMS5W	TO-15
V5W1065-IC1065	5W27081.D	10/06/17 13:35	TCH	0.1	GCMS5W	TO-15
V5W1065-IC1065	5W27082.D	10/06/17 14:28	TCH	0.2	GCMS5W	TO-15
V5W1065-IC1065	5W27084.D	10/06/17 16:10	TCH	0.5	GCMS5W	TO-15
V5W1065-IC1065	5W27085.D	10/06/17 17:00	TCH	5	GCMS5W	TO-15
V5W1065-ICC1065	5W27086.D	10/06/17 17:45	TCH	10	GCMS5W	TO-15 Reporting this level
V5W1065-IC1065	5W27087.D	10/06/17 18:33	TCH	20	GCMS5W	TO-15
V5W1065-IC1065	5W27088.D	10/06/17 19:23	TCH	40	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Styrene	17.16	15.77	1.088 ok	1.089	1.029-1.149
1,1,1-Trichloroethane	9.36	8.17	1.146 ok	1.145	1.085-1.205
1,1,1,2-Tetrachloroethane	15.81	10.29	1.536 ok	1.537	1.477-1.597
1,1,2,2-Tetrachloroethane	17.32	15.77	1.098 ok	1.099	1.039-1.159
1,1,2-Trichloroethane	13.04	10.29	1.267 ok	1.268	1.208-1.328
1,2,4-Trichlorobenzene	22.97	15.77	1.457 ok	1.457	1.397-1.517
1,2,3-Trichloropropane	17.51	15.77	1.110 ok	1.111	1.051-1.171
1,2,4-Trimethylbenzene	19.97	15.77	1.266 ok	1.267	1.207-1.327
1,3,5-Trimethylbenzene	19.38	15.77	1.229 ok	1.229	1.169-1.289
2,2,4-Trimethylpentane	11.11	10.29	1.080 ok	1.080	1.020-1.140
Tertiary Butyl Alcohol	6.08	8.17	0.744 ok	0.745	0.685-0.805
Tetrachloroethylene	14.89	10.29	1.447 ok	1.447	1.387-1.507
Tetrahydrofuran	8.76	8.17	1.072 ok	1.075	1.015-1.135
Toluene	13.39	10.29	1.301 ok	1.301	1.241-1.361
Trichloroethylene	11.10	10.29	1.079 ok	1.079	1.019-1.139
Trichlorofluoromethane	5.47	8.17	0.670 ok	0.668	0.608-0.728
Vinyl chloride	4.41	8.17	0.540 ok	0.539	0.479-0.599
Vinyl Acetate	7.32	8.17	0.896 ok	0.896	0.836-0.956
m,p-Xylene	16.62	15.77	1.054 ok	1.055	0.995-1.115
o-Xylene	17.31	15.77	1.098 ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.75	15.77	0.365 ok	0.364	0.304-0.424

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.17 ok	8.17	7.84-8.50	291386 ok	284320	170592-398048
1,4-Difluorobenzene	10.29 ok	10.29	9.96-10.62	996968 ok	977438	586463-1368413
Chlorobenzene-D5	15.77 ok	15.77	15.44-16.10	450995 ok	428337	257002-599672

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1065-IC1065	5W27080.D	10/06/17 12:49	TCH	0.04	GCMS5W	TO-15
V5W1065-IC1065	5W27081.D	10/06/17 13:35	TCH	0.1	GCMS5W	TO-15
V5W1065-IC1065	5W27082.D	10/06/17 14:28	TCH	0.2	GCMS5W	TO-15
V5W1065-IC1065	5W27084.D	10/06/17 16:10	TCH	0.5	GCMS5W	TO-15
V5W1065-IC1065	5W27085.D	10/06/17 17:00	TCH	5	GCMS5W	TO-15
V5W1065-ICC1065	5W27086.D	10/06/17 17:45	TCH	10	GCMS5W	TO-15
V5W1065-IC1065	5W27087.D	10/06/17 18:33	TCH	20	GCMS5W	TO-15
V5W1065-IC1065	5W27088.D	10/06/17 19:23	TCH	40	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.36	8.18	0.655	ok 0.656	0.596-0.716
Acrylonitrile	5.75	8.18	0.703	ok 0.703	0.643-0.763
Acetonitrile	5.15	8.18	0.630	ok 0.630	0.570-0.690
1,3-Butadiene	4.52	8.18	0.553	ok 0.552	0.492-0.612
Benzene	9.88	8.18	1.208	ok 1.208	1.148-1.268
Bromobenzene	18.32	15.77	1.162	ok 1.162	1.102-1.222
Bromodichloromethane	11.07	10.30	1.075	ok 1.075	1.015-1.135
Bromoform	16.72	15.77	1.060	ok 1.060	1.000-1.120
Bromomethane	4.73	8.18	0.578	ok 0.578	0.518-0.638
Bromoethene	5.14	8.18	0.628	ok 0.628	0.568-0.688
n-Butane	4.55	8.18	0.556	ok 0.555	0.495-0.615
Benzyl Chloride	20.16	15.77	1.278	ok 1.279	1.219-1.339
n-Butylbenzene	21.16	15.77	1.342	ok 1.342	1.282-1.402
sec-Butylbenzene	20.35	15.77	1.290	ok 1.291	1.231-1.351
tert-Butylbenzene	19.96	15.77	1.266	ok 1.265	1.205-1.325
Carbon disulfide	6.38	8.18	0.780	ok 0.780	0.720-0.840
Chlorobenzene	15.83	15.77	1.004	ok 1.004	0.944-1.064
Chlorodifluoromethane	4.05	8.18	0.495	ok 0.494	0.434-0.554
Chloroethane	4.86	8.18	0.594	ok 0.594	0.534-0.654
Chlorotrifluoroethene	4.08	8.18	0.499	ok 0.497	0.437-0.557
Chloroform	8.32	8.18	1.017	ok 1.016	0.956-1.076
Chloromethane	4.25	8.18	0.520	ok 0.519	0.459-0.579
3-Chloropropene	6.22	8.18	0.760	ok 0.760	0.700-0.820
2-Chlorotoluene	18.95	15.77	1.202	ok 1.202	1.142-1.262
Carbon tetrachloride	10.04	8.18	1.227	ok 1.227	1.167-1.287
Cyclohexane	10.16	8.18	1.242	ok 1.243	1.183-1.303
1,1-Dichloroethane	7.17	8.18	0.877	ok 0.876	0.816-0.936
1,1-Dichloroethylene	6.02	8.18	0.736	ok 0.735	0.675-0.795
1,2-Dibromoethane	14.26	10.30	1.384	ok 1.386	1.326-1.446
1,2-Dichloroethane	9.09	8.18	1.111	ok 1.112	1.052-1.172
1,2-Dichloropropane	10.82	10.30	1.050	ok 1.051	0.991-1.111
1,3-Dichloropropane	13.44	10.30	1.305	ok 1.306	1.246-1.366
1,4-Dioxane	11.15	10.30	1.083	ok 1.086	1.026-1.146
Dichlorodifluoromethane	4.13	8.18	0.505	ok 0.504	0.444-0.564
Dichlorofluoromethane	4.93	8.18	0.603	ok 0.602	0.542-0.662
Dibromochloromethane	13.95	10.30	1.354	ok 1.355	1.295-1.415
Dibromomethane	10.80	10.30	1.049	ok 1.049	0.989-1.109
trans-1,2-Dichloroethylene	6.97	8.18	0.852	ok 0.852	0.792-0.912
cis-1,2-Dichloroethylene	8.01	8.18	0.979	ok 0.979	0.919-1.039
cis-1,3-Dichloropropene	12.17	10.30	1.182	ok 1.183	1.123-1.243

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1065-IC1065	5W27080.D	10/06/17 12:49	TCH	0.04	GCMS5W	TO-15
V5W1065-IC1065	5W27081.D	10/06/17 13:35	TCH	0.1	GCMS5W	TO-15
V5W1065-IC1065	5W27082.D	10/06/17 14:28	TCH	0.2	GCMS5W	TO-15
V5W1065-IC1065	5W27084.D	10/06/17 16:10	TCH	0.5	GCMS5W	TO-15
V5W1065-IC1065	5W27085.D	10/06/17 17:00	TCH	5	GCMS5W	TO-15
V5W1065-ICC1065	5W27086.D	10/06/17 17:45	TCH	10	GCMS5W	TO-15
V5W1065-IC1065	5W27087.D	10/06/17 18:33	TCH	20	GCMS5W	TO-15 Reporting this level
V5W1065-IC1065	5W27088.D	10/06/17 19:23	TCH	40	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
m-Dichlorobenzene	20.17	15.77	1.279 ok	1.279	1.219-1.339
o-Dichlorobenzene	20.73	15.77	1.315 ok	1.315	1.255-1.375
p-Dichlorobenzene	20.26	15.77	1.285 ok	1.285	1.225-1.345
trans-1,3-Dichloropropene	12.84	10.30	1.247 ok	1.248	1.188-1.308
Di-Isopropyl ether	8.21	8.18	1.004 ok	1.005	0.945-1.065
2,3-Dimethylpentane	10.44	8.18	1.276 ok	1.277	1.217-1.337
2,4-Dimethylpentane	9.13	8.18	1.116 ok	1.116	1.056-1.176
Ethanol	4.98	8.18	0.609 ok	0.609	0.549-0.669
Ethylbenzene	16.37	15.77	1.038 ok	1.038	0.978-1.098
Ethyl Acetate	8.26	8.18	1.010 ok	1.012	0.952-1.072
Ethyl Acrylate	10.87	10.30	1.055 ok	1.058	0.998-1.118
4-Ethyltoluene	19.25	15.77	1.221 ok	1.221	1.161-1.281
Freon 113	6.34	8.18	0.775 ok	0.775	0.715-0.835
Freon 114	4.32	8.18	0.528 ok	0.527	0.467-0.587
Freon 123	5.26	8.18	0.643 ok	0.642	0.582-0.702
Freon 123A	5.31	8.18	0.649 ok	0.648	0.588-0.708
Freon 141B	5.57	8.18	0.681 ok	0.680	0.620-0.740
Freon 142B	4.24	8.18	0.518 ok	0.517	0.457-0.577
Freon 143a	3.92	8.18	0.479 ok	0.478	0.418-0.538
Freon 152A	4.01	8.18	0.490 ok	0.489	0.429-0.549
Heptane	11.45	10.30	1.112 ok	1.113	1.053-1.173
Hexachlorobutadiene	23.56	15.77	1.494 ok	1.494	1.434-1.554
Hexachloroethane	21.63	15.77	1.372 ok	1.372	1.312-1.432
Hexane	8.19	8.18	1.001 ok	1.001	0.941-1.061
2-Hexanone	13.79	10.30	1.339 ok	1.341	1.281-1.401
Iodomethane	5.95	8.18	0.727 ok	0.727	0.667-0.787
Isopropylbenzene	18.22	15.77	1.155 ok	1.155	1.095-1.215
Isopropyl Alcohol	5.57	8.18	0.681 ok	0.681	0.621-0.741
p-Isopropyltoluene	20.59	15.77	1.306 ok	1.306	1.246-1.366
Methylene chloride	6.13	8.18	0.749 ok	0.749	0.689-0.809
Methyl ethyl ketone	7.58	8.18	0.927 ok	0.930	0.870-0.990
Methyl Isobutyl Ketone	12.23	10.30	1.187 ok	1.190	1.130-1.250
Methyl Tert Butyl Ether	7.24	8.18	0.885 ok	0.886	0.826-0.946
Methylmethacrylate	11.39	10.30	1.106 ok	1.108	1.048-1.168
Naphthalene	23.10	15.77	1.465 ok	1.466	1.406-1.526
Nonane	17.69	15.77	1.122 ok	1.122	1.062-1.182
Octane	14.73	10.30	1.430 ok	1.431	1.371-1.491
Pentane	5.75	8.18	0.703 ok	0.703	0.643-0.763
n-Propylbenzene	19.02	15.77	1.206 ok	1.207	1.147-1.267
Propylene	4.06	8.18	0.496 ok	0.496	0.436-0.556

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1065-IC1065	5W27080.D	10/06/17 12:49	TCH	0.04	GCMS5W	TO-15
V5W1065-IC1065	5W27081.D	10/06/17 13:35	TCH	0.1	GCMS5W	TO-15
V5W1065-IC1065	5W27082.D	10/06/17 14:28	TCH	0.2	GCMS5W	TO-15
V5W1065-IC1065	5W27084.D	10/06/17 16:10	TCH	0.5	GCMS5W	TO-15
V5W1065-IC1065	5W27085.D	10/06/17 17:00	TCH	5	GCMS5W	TO-15
V5W1065-ICC1065	5W27086.D	10/06/17 17:45	TCH	10	GCMS5W	TO-15
V5W1065-IC1065	5W27087.D	10/06/17 18:33	TCH	20	GCMS5W	TO-15
V5W1065-IC1065	5W27088.D	10/06/17 19:23	TCH	40	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Styrene	17.16	15.77	1.088 ok	1.089	1.029-1.149
1,1,1-Trichloroethane	9.36	8.18	1.144 ok	1.145	1.085-1.205
1,1,1,2-Tetrachloroethane	15.81	10.30	1.535 ok	1.537	1.477-1.597
1,1,2,2-Tetrachloroethane	17.32	15.77	1.098 ok	1.099	1.039-1.159
1,1,2-Trichloroethane	13.04	10.30	1.266 ok	1.268	1.208-1.328
1,2,4-Trichlorobenzene	22.97	15.77	1.457 ok	1.457	1.397-1.517
1,2,3-Trichloropropane	17.51	15.77	1.110 ok	1.111	1.051-1.171
1,2,4-Trimethylbenzene	19.98	15.77	1.267 ok	1.267	1.207-1.327
1,3,5-Trimethylbenzene	19.38	15.77	1.229 ok	1.229	1.169-1.289
2,2,4-Trimethylpentane	11.12	10.30	1.080 ok	1.080	1.020-1.140
Tertiary Butyl Alcohol	6.08	8.18	0.743 ok	0.745	0.685-0.805
Tetrachloroethylene	14.89	10.30	1.446 ok	1.447	1.387-1.507
Tetrahydrofuran	8.76	8.18	1.071 ok	1.075	1.015-1.135
Toluene	13.39	10.30	1.300 ok	1.301	1.241-1.361
Trichloroethylene	11.11	10.30	1.079 ok	1.079	1.019-1.139
Trichlorofluoromethane	5.47	8.18	0.669 ok	0.668	0.608-0.728
Vinyl chloride	4.42	8.18	0.540 ok	0.539	0.479-0.599
Vinyl Acetate	7.32	8.18	0.895 ok	0.896	0.836-0.956
m,p-Xylene	16.65	15.77	1.056 ok	1.055	0.995-1.115
o-Xylene	17.32	15.77	1.098 ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.75	15.77	0.365 ok	0.364	0.304-0.424

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.18 ok	8.17	7.84-8.50	293152	ok 284320	170592-398048
1,4-Difluorobenzene	10.30 ok	10.29	9.96-10.62	994053	ok 977438	586463-1368413
Chlorobenzene-D5	15.77 ok	15.77	15.44-16.10	418627	ok 428337	257002-599672

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1065-IC1065	5W27080.D	10/06/17 12:49	TCH	0.04	GCMS5W	TO-15
V5W1065-IC1065	5W27081.D	10/06/17 13:35	TCH	0.1	GCMS5W	TO-15
V5W1065-IC1065	5W27082.D	10/06/17 14:28	TCH	0.2	GCMS5W	TO-15
V5W1065-IC1065	5W27084.D	10/06/17 16:10	TCH	0.5	GCMS5W	TO-15
V5W1065-IC1065	5W27085.D	10/06/17 17:00	TCH	5	GCMS5W	TO-15
V5W1065-ICC1065	5W27086.D	10/06/17 17:45	TCH	10	GCMS5W	TO-15
V5W1065-IC1065	5W27087.D	10/06/17 18:33	TCH	20	GCMS5W	TO-15
V5W1065-IC1065	5W27088.D	10/06/17 19:23	TCH	40	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.36	8.18	0.655 ok	0.656	0.596-0.716
Acrylonitrile	5.75	8.18	0.703 ok	0.703	0.643-0.763
Acetonitrile	5.16	8.18	0.631 ok	0.630	0.570-0.690
1,3-Butadiene	4.52	8.18	0.553 ok	0.552	0.492-0.612
Benzene	9.88	8.18	1.208 ok	1.208	1.148-1.268
Bromobenzene	18.33	15.77	1.162 ok	1.162	1.102-1.222
Bromodichloromethane	11.07	10.30	1.075 ok	1.075	1.015-1.135
Bromoform	16.72	15.77	1.060 ok	1.060	1.000-1.120
Bromomethane	4.73	8.18	0.578 ok	0.578	0.518-0.638
Bromoethene	5.14	8.18	0.628 ok	0.628	0.568-0.688
n-Butane	4.55	8.18	0.556 ok	0.555	0.495-0.615
Benzyl Chloride	20.16	15.77	1.278 ok	1.279	1.219-1.339
n-Butylbenzene	21.17	15.77	1.342 ok	1.342	1.282-1.402
sec-Butylbenzene	20.36	15.77	1.291 ok	1.291	1.231-1.351
tert-Butylbenzene	19.96	15.77	1.266 ok	1.265	1.205-1.325
Carbon disulfide	6.38	8.18	0.780 ok	0.780	0.720-0.840
Chlorobenzene	15.83	15.77	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	4.05	8.18	0.495 ok	0.494	0.434-0.554
Chloroethane	4.87	8.18	0.595 ok	0.594	0.534-0.654
Chlorotrifluoroethene	4.08	8.18	0.499 ok	0.497	0.437-0.557
Chloroform	8.32	8.18	1.017 ok	1.016	0.956-1.076
Chloromethane	4.25	8.18	0.520 ok	0.519	0.459-0.579
3-Chloropropene	6.23	8.18	0.762 ok	0.760	0.700-0.820
2-Chlorotoluene	18.95	15.77	1.202 ok	1.202	1.142-1.262
Carbon tetrachloride	10.04	8.18	1.227 ok	1.227	1.167-1.287
Cyclohexane	10.16	8.18	1.242 ok	1.243	1.183-1.303
1,1-Dichloroethane	7.17	8.18	0.877 ok	0.876	0.816-0.936
1,1-Dichloroethylene	6.02	8.18	0.736 ok	0.735	0.675-0.795
1,2-Dibromoethane	14.26	10.30	1.384 ok	1.386	1.326-1.446
1,2-Dichloroethane	9.09	8.18	1.111 ok	1.112	1.052-1.172
1,2-Dichloropropane	10.82	10.30	1.050 ok	1.051	0.991-1.111
1,3-Dichloropropane	13.44	10.30	1.305 ok	1.306	1.246-1.366
Dichlorodifluoromethane	4.13	8.18	0.505 ok	0.504	0.444-0.564
Dichlorofluoromethane	4.93	8.18	0.603 ok	0.602	0.542-0.662
Dibromochloromethane	13.96	10.30	1.355 ok	1.355	1.295-1.415
Dibromomethane	10.81	10.30	1.050 ok	1.049	0.989-1.109
trans-1,2-Dichloroethylene	6.97	8.18	0.852 ok	0.852	0.792-0.912
cis-1,2-Dichloroethylene	8.01	8.18	0.979 ok	0.979	0.919-1.039
cis-1,3-Dichloropropene	12.17	10.30	1.182 ok	1.183	1.123-1.243
m-Dichlorobenzene	20.17	15.77	1.279 ok	1.279	1.219-1.339

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1065-IC1065	5W27080.D	10/06/17 12:49	TCH	0.04	GCMS5W	TO-15
V5W1065-IC1065	5W27081.D	10/06/17 13:35	TCH	0.1	GCMS5W	TO-15
V5W1065-IC1065	5W27082.D	10/06/17 14:28	TCH	0.2	GCMS5W	TO-15
V5W1065-IC1065	5W27084.D	10/06/17 16:10	TCH	0.5	GCMS5W	TO-15
V5W1065-IC1065	5W27085.D	10/06/17 17:00	TCH	5	GCMS5W	TO-15
V5W1065-ICC1065	5W27086.D	10/06/17 17:45	TCH	10	GCMS5W	TO-15
V5W1065-IC1065	5W27087.D	10/06/17 18:33	TCH	20	GCMS5W	TO-15
V5W1065-IC1065	5W27088.D	10/06/17 19:23	TCH	40	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
o-Dichlorobenzene	20.74	15.77	1.315	ok 1.315	1.255-1.375
p-Dichlorobenzene	20.27	15.77	1.285	ok 1.285	1.225-1.345
trans-1,3-Dichloropropene	12.84	10.30	1.247	ok 1.248	1.188-1.308
Di-Isopropyl ether	8.22	8.18	1.005	ok 1.005	0.945-1.065
2,3-Dimethylpentane	10.44	8.18	1.276	ok 1.277	1.217-1.337
2,4-Dimethylpentane	9.13	8.18	1.116	ok 1.116	1.056-1.176
Ethanol	4.98	8.18	0.609	ok 0.609	0.549-0.669
Ethylbenzene	16.37	15.77	1.038	ok 1.038	0.978-1.098
Ethyl Acetate	8.27	8.18	1.011	ok 1.012	0.952-1.072
Ethyl Acrylate	10.87	10.30	1.055	ok 1.058	0.998-1.118
4-Ethyltoluene	19.25	15.77	1.221	ok 1.221	1.161-1.281
Freon 113	6.34	8.18	0.775	ok 0.775	0.715-0.835
Freon 114	4.32	8.18	0.528	ok 0.527	0.467-0.587
Freon 123	5.26	8.18	0.643	ok 0.642	0.582-0.702
Freon 123A	5.31	8.18	0.649	ok 0.648	0.588-0.708
Freon 141B	5.57	8.18	0.681	ok 0.680	0.620-0.740
Freon 142B	4.24	8.18	0.518	ok 0.517	0.457-0.577
Freon 143a	3.92	8.18	0.479	ok 0.478	0.418-0.538
Freon 152A	4.02	8.18	0.491	ok 0.489	0.429-0.549
Heptane	11.46	10.30	1.113	ok 1.113	1.053-1.173
Hexachlorobutadiene	23.56	15.77	1.494	ok 1.494	1.434-1.554
Hexachloroethane	21.63	15.77	1.372	ok 1.372	1.312-1.432
Hexane	8.19	8.18	1.001	ok 1.001	0.941-1.061
2-Hexanone	13.79	10.30	1.339	ok 1.341	1.281-1.401
Iodomethane	5.95	8.18	0.727	ok 0.727	0.667-0.787
Isopropylbenzene	18.23	15.77	1.156	ok 1.155	1.095-1.215
Isopropyl Alcohol	5.57	8.18	0.681	ok 0.681	0.621-0.741
p-Isopropyltoluene	20.59	15.77	1.306	ok 1.306	1.246-1.366
Methylene chloride	6.13	8.18	0.749	ok 0.749	0.689-0.809
Methyl ethyl ketone	7.58	8.18	0.927	ok 0.930	0.870-0.990
Methyl Isobutyl Ketone	12.24	10.30	1.188	ok 1.190	1.130-1.250
Methyl Tert Butyl Ether	7.24	8.18	0.885	ok 0.886	0.826-0.946
Methylmethacrylate	11.39	10.30	1.106	ok 1.108	1.048-1.168
Naphthalene	23.10	15.77	1.465	ok 1.466	1.406-1.526
Nonane	17.70	15.77	1.122	ok 1.122	1.062-1.182
Octane	14.73	10.30	1.430	ok 1.431	1.371-1.491
Pentane	5.75	8.18	0.703	ok 0.703	0.643-0.763
n-Propylbenzene	19.03	15.77	1.207	ok 1.207	1.147-1.267
Propylene	4.06	8.18	0.496	ok 0.496	0.436-0.556
Styrene	17.17	15.77	1.089	ok 1.089	1.029-1.149

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1065-IC1065	5W27080.D	10/06/17 12:49	TCH	0.04	GCMS5W	TO-15
V5W1065-IC1065	5W27081.D	10/06/17 13:35	TCH	0.1	GCMS5W	TO-15
V5W1065-IC1065	5W27082.D	10/06/17 14:28	TCH	0.2	GCMS5W	TO-15
V5W1065-IC1065	5W27084.D	10/06/17 16:10	TCH	0.5	GCMS5W	TO-15
V5W1065-IC1065	5W27085.D	10/06/17 17:00	TCH	5	GCMS5W	TO-15
V5W1065-ICC1065	5W27086.D	10/06/17 17:45	TCH	10	GCMS5W	TO-15
V5W1065-IC1065	5W27087.D	10/06/17 18:33	TCH	20	GCMS5W	TO-15
V5W1065-IC1065	5W27088.D	10/06/17 19:23	TCH	40	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
1,1,1-Trichloroethane	9.36	8.18	1.144 ok	1.145	1.085-1.205
1,1,1,2-Tetrachloroethane	15.82	10.30	1.536 ok	1.537	1.477-1.597
1,1,2,2-Tetrachloroethane	17.33	15.77	1.099 ok	1.099	1.039-1.159
1,1,2-Trichloroethane	13.05	10.30	1.267 ok	1.268	1.208-1.328
1,2,4-Trichlorobenzene	22.97	15.77	1.457 ok	1.457	1.397-1.517
1,2,3-Trichloropropane	17.51	15.77	1.110 ok	1.111	1.051-1.171
1,2,4-Trimethylbenzene	19.98	15.77	1.267 ok	1.267	1.207-1.327
1,3,5-Trimethylbenzene	19.38	15.77	1.229 ok	1.229	1.169-1.289
2,2,4-Trimethylpentane	11.12	10.30	1.080 ok	1.080	1.020-1.140
Tertiary Butyl Alcohol	6.08	8.18	0.743 ok	0.745	0.685-0.805
Tetrachloroethylene	14.89	10.30	1.446 ok	1.447	1.387-1.507
Tetrahydrofuran	8.76	8.18	1.071 ok	1.075	1.015-1.135
Toluene	13.39	10.30	1.300 ok	1.301	1.241-1.361
Trichloroethylene	11.11	10.30	1.079 ok	1.079	1.019-1.139
Trichlorofluoromethane	5.47	8.18	0.669 ok	0.668	0.608-0.728
Vinyl chloride	4.42	8.18	0.540 ok	0.539	0.479-0.599
Vinyl Acetate	7.32	8.18	0.895 ok	0.896	0.836-0.956
m,p-Xylene	16.65	15.77	1.056 ok	1.055	0.995-1.115
o-Xylene	17.31	15.77	1.098 ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.75	15.77	0.365 ok	0.364	0.304-0.424

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.18 ok	8.17	7.84-8.50	298904	ok 284320	170592-398048
1,4-Difluorobenzene	10.30 ok	10.29	9.96-10.62	1009982	ok 977438	586463-1368413
Chlorobenzene-D5	15.77 ok	15.77	15.44-16.10	428032	ok 428337	257002-599672

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V5W1097-IC1097	5W27907.D	11/17/17 19:24	TCH	0.04	GCMS5W	TO-15	Reporting this level
V5W1097-IC1097	5W27908.D	11/17/17 20:08	TCH	0.1	GCMS5W	TO-15	
V5W1097-IC1097	5W27909.D	11/17/17 20:52	TCH	0.2	GCMS5W	TO-15	
V5W1097-IC1097	5W27910.D	11/17/17 21:39	TCH	0.5	GCMS5W	TO-15	
V5W1097-IC1097	5W27911.D	11/17/17 22:23	TCH	5	GCMS5W	TO-15	
V5W1097-ICC1097	5W27912.D	11/17/17 23:08	TCH	10	GCMS5W	TO-15	
V5W1097-IC1097	5W27913.D	11/17/17 23:55	TCH	20	GCMS5W	TO-15	
V5W1097-IC1097	5W27915.D	11/18/17 01:32	TCH	40	GCMS5W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acrylonitrile	5.75	8.16	0.705 ok	0.703	0.643-0.763
Acetonitrile	5.15	8.16	0.631 ok	0.631	0.571-0.691
1,3-Butadiene	4.50	8.16	0.551 ok	0.552	0.492-0.612
Benzene	9.86	8.16	1.208 ok	1.208	1.148-1.268
Bromobenzene	18.32	15.75	1.163 ok	1.163	1.103-1.223
Bromodichloromethane	11.05	10.28	1.075 ok	1.075	1.015-1.135
Bromoform	16.71	15.75	1.061 ok	1.061	1.001-1.121
Bromomethane	4.72	8.16	0.578 ok	0.578	0.518-0.638
Bromoethene	5.13	8.16	0.629 ok	0.628	0.568-0.688
n-Butane	4.55	8.16	0.558 ok	0.557	0.497-0.617
Benzyl Chloride	20.18	15.75	1.281 ok	1.279	1.219-1.339
n-Butylbenzene	21.16	15.75	1.343 ok	1.343	1.283-1.403
sec-Butylbenzene	20.34	15.75	1.291 ok	1.291	1.231-1.351
tert-Butylbenzene	19.95	15.75	1.267 ok	1.266	1.206-1.326
Carbon disulfide	6.38	8.16	0.782 ok	0.780	0.720-0.840
Chlorobenzene	15.82	15.75	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	4.03	8.16	0.494 ok	0.494	0.434-0.554
Chloroethane	4.85	8.16	0.594 ok	0.594	0.534-0.654
Chlorotrifluoroethene	4.06	8.16	0.498 ok	0.497	0.437-0.557
Chloroform	8.30	8.16	1.017 ok	1.017	0.957-1.077
Chloromethane	4.24	8.16	0.520 ok	0.519	0.459-0.579
3-Chloropropene	6.21	8.16	0.761 ok	0.761	0.701-0.821
2-Chlorotoluene	18.95	15.75	1.203 ok	1.202	1.142-1.262
Carbon tetrachloride	10.03	8.16	1.229 ok	1.228	1.168-1.288
Cyclohexane	10.15	8.16	1.244 ok	1.243	1.183-1.303
1,1-Dichloroethane	7.16	8.16	0.877 ok	0.877	0.817-0.937
1,1-Dichloroethylene	6.00	8.16	0.735 ok	0.735	0.675-0.795
1,2-Dibromoethane	14.25	10.28	1.386 ok	1.386	1.326-1.446
1,2-Dichloroethane	9.08	8.16	1.113 ok	1.112	1.052-1.172
1,2-Dichloropropane	10.81	10.28	1.052 ok	1.051	0.991-1.111
1,3-Dichloropropane	13.44	10.28	1.307 ok	1.306	1.246-1.366
Dichlorodifluoromethane	4.11	8.16	0.504 ok	0.504	0.444-0.564
Dichlorofluoromethane	4.92	8.16	0.603 ok	0.603	0.543-0.663
Dibromochloromethane	13.94	10.28	1.356 ok	1.355	1.295-1.415
Dibromomethane	10.79	10.28	1.050 ok	1.049	0.989-1.109
trans-1,2-Dichloroethylene	6.96	8.16	0.853 ok	0.852	0.792-0.912
cis-1,2-Dichloroethylene	7.99	8.16	0.979 ok	0.979	0.919-1.039
cis-1,3-Dichloropropene	12.18	10.28	1.185 ok	1.183	1.123-1.243
m-Dichlorobenzene	20.17	15.75	1.281 ok	1.280	1.220-1.340
o-Dichlorobenzene	20.74	15.75	1.317 ok	1.316	1.256-1.376

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V5W1097-IC1097	5W27907.D	11/17/17 19:24	TCH	0.04	GCMS5W	TO-15	Reporting this level
V5W1097-IC1097	5W27908.D	11/17/17 20:08	TCH	0.1	GCMS5W	TO-15	
V5W1097-IC1097	5W27909.D	11/17/17 20:52	TCH	0.2	GCMS5W	TO-15	
V5W1097-IC1097	5W27910.D	11/17/17 21:39	TCH	0.5	GCMS5W	TO-15	
V5W1097-IC1097	5W27911.D	11/17/17 22:23	TCH	5	GCMS5W	TO-15	
V5W1097-ICC1097	5W27912.D	11/17/17 23:08	TCH	10	GCMS5W	TO-15	
V5W1097-IC1097	5W27913.D	11/17/17 23:55	TCH	20	GCMS5W	TO-15	
V5W1097-IC1097	5W27915.D	11/18/17 01:32	TCH	40	GCMS5W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
p-Dichlorobenzene	20.28	15.75	1.288 ok	1.286	1.226-1.346
trans-1,3-Dichloropropene	12.85	10.28	1.250 ok	1.248	1.188-1.308
Di-Isopropyl ether	8.22	8.16	1.007 ok	1.006	0.946-1.066
2,3-Dimethylpentane	10.43	8.16	1.278 ok	1.278	1.218-1.338
2,4-Dimethylpentane	9.12	8.16	1.118 ok	1.117	1.057-1.177
Ethylbenzene	16.37	15.75	1.039 ok	1.039	0.979-1.099
Ethyl Acetate	8.29	8.16	1.016 ok	1.012	0.952-1.072
Ethyl Acrylate	10.90	10.28	1.060 ok	1.058	0.998-1.118
4-Ethyltoluene	19.25	15.75	1.222 ok	1.222	1.162-1.282
Freon 113	6.33	8.16	0.776 ok	0.775	0.715-0.835
Freon 114	4.31	8.16	0.528 ok	0.528	0.468-0.588
Freon 123	5.24	8.16	0.642 ok	0.642	0.582-0.702
Freon 123A	5.29	8.16	0.648 ok	0.648	0.588-0.708
Freon 141B	5.56	8.16	0.681 ok	0.681	0.621-0.741
Freon 142B	4.22	8.16	0.517 ok	0.517	0.457-0.577
Freon 143a	3.90	8.16	0.478 ok	0.478	0.418-0.538
Freon 152A	4.00	8.16	0.490 ok	0.490	0.430-0.550
Heptane	11.45	10.28	1.114 ok	1.113	1.053-1.173
Hexachlorobutadiene	23.55	15.75	1.495 ok	1.495	1.435-1.555
Hexachloroethane	21.62	15.75	1.373 ok	1.372	1.312-1.432
Hexane	8.18	8.16	1.002 ok	1.002	0.942-1.062
2-Hexanone	13.85	10.28	1.347 ok	1.341	1.281-1.401
Iodomethane	5.94	8.16	0.728 ok	0.727	0.667-0.787
Isopropylbenzene	18.21	15.75	1.156 ok	1.156	1.096-1.216
p-Isopropyltoluene	20.58	15.75	1.307 ok	1.306	1.246-1.366
Methylene chloride	6.12	8.16	0.750 ok	0.749	0.689-0.809
Methyl ethyl ketone	7.62	8.16	0.934 ok	0.930	0.870-0.990
Methyl Isobutyl Ketone	12.27	10.28	1.194 ok	1.190	1.130-1.250
Methyl Tert Butyl Ether	7.26	8.16	0.890 ok	0.887	0.827-0.947
Methylmethacrylate	11.41	10.28	1.110 ok	1.108	1.048-1.168
Nonane	17.68	15.75	1.123 ok	1.123	1.063-1.183
Octane	14.72	10.28	1.432 ok	1.431	1.371-1.491
n-Propylbenzene	19.03	15.75	1.208 ok	1.207	1.147-1.267
Styrene	17.19	15.75	1.091 ok	1.090	1.030-1.150
1,1,1-Trichloroethane	9.34	8.16	1.145 ok	1.145	1.085-1.205
1,1,1,2-Tetrachloroethane	15.80	10.28	1.537 ok	1.537	1.477-1.597
1,1,2,2-Tetrachloroethane	17.33	15.75	1.100 ok	1.099	1.039-1.159
1,1,2-Trichloroethane	13.04	10.28	1.268 ok	1.268	1.208-1.328
1,2,3-Trichloropropane	17.52	15.75	1.112 ok	1.111	1.051-1.171
1,2,4-Trimethylbenzene	19.97	15.75	1.268 ok	1.267	1.207-1.327

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V5W1097-IC1097	5W27907.D	11/17/17 19:24	TCH	0.04	GCMS5W	TO-15	Reporting this level
V5W1097-IC1097	5W27908.D	11/17/17 20:08	TCH	0.1	GCMS5W	TO-15	
V5W1097-IC1097	5W27909.D	11/17/17 20:52	TCH	0.2	GCMS5W	TO-15	
V5W1097-IC1097	5W27910.D	11/17/17 21:39	TCH	0.5	GCMS5W	TO-15	
V5W1097-IC1097	5W27911.D	11/17/17 22:23	TCH	5	GCMS5W	TO-15	
V5W1097-ICC1097	5W27912.D	11/17/17 23:08	TCH	10	GCMS5W	TO-15	
V5W1097-IC1097	5W27913.D	11/17/17 23:55	TCH	20	GCMS5W	TO-15	
V5W1097-IC1097	5W27915.D	11/18/17 01:32	TCH	40	GCMS5W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
1,3,5-Trimethylbenzene	19.37	15.75	1.230 ok	1.230	1.170-1.290
2,2,4-Trimethylpentane	11.11	10.28	1.081 ok	1.080	1.020-1.140
Tertiary Butyl Alcohol	6.11	8.16	0.749 ok	0.745	0.685-0.805
Tetrachloroethylene	14.87	10.28	1.446 ok	1.447	1.387-1.507
Tetrahydrofuran	8.82	8.16	1.081 ok	1.076	1.016-1.136
Toluene	13.39	10.28	1.303 ok	1.302	1.242-1.362
Trichloroethylene	11.09	10.28	1.079 ok	1.079	1.019-1.139
Trichlorofluoromethane	5.46	8.16	0.669 ok	0.668	0.608-0.728
Vinyl chloride	4.40	8.16	0.539 ok	0.539	0.479-0.599
Vinyl Acetate	7.32	8.16	0.897 ok	0.896	0.836-0.956
m,p-Xylene	16.62	15.75	1.055 ok	1.055	0.995-1.115
o-Xylene	17.31	15.75	1.099 ok	1.098	1.038-1.158

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.16 ok	8.16	7.83-8.49	326981 ok	320846	192508-449184
1,4-Difluorobenzene	10.28 ok	10.28	9.95-10.61	1171952 ok	1131216	678730-1583702
Chlorobenzene-D5	15.75 ok	15.75	15.42-16.08	494002 ok	475827	285496-666158

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1097-IC1097	5W27907.D	11/17/17 19:24	TCH	0.04	GCMS5W	TO-15
V5W1097-IC1097	5W27908.D	11/17/17 20:08	TCH	0.1	GCMS5W	TO-15 Reporting this level
V5W1097-IC1097	5W27909.D	11/17/17 20:52	TCH	0.2	GCMS5W	TO-15
V5W1097-IC1097	5W27910.D	11/17/17 21:39	TCH	0.5	GCMS5W	TO-15
V5W1097-IC1097	5W27911.D	11/17/17 22:23	TCH	5	GCMS5W	TO-15
V5W1097-ICC1097	5W27912.D	11/17/17 23:08	TCH	10	GCMS5W	TO-15
V5W1097-IC1097	5W27913.D	11/17/17 23:55	TCH	20	GCMS5W	TO-15
V5W1097-IC1097	5W27915.D	11/18/17 01:32	TCH	40	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acrylonitrile	5.75	8.16	0.705 ok	0.703	0.643-0.763
Acetonitrile	5.17	8.16	0.634 ok	0.631	0.571-0.691
1,3-Butadiene	4.51	8.16	0.553 ok	0.552	0.492-0.612
Benzene	9.86	8.16	1.208 ok	1.208	1.148-1.268
Bromobenzene	18.32	15.75	1.163 ok	1.163	1.103-1.223
Bromodichloromethane	11.06	10.28	1.076 ok	1.075	1.015-1.135
Bromoform	16.72	15.75	1.062 ok	1.061	1.001-1.121
Bromomethane	4.72	8.16	0.578 ok	0.578	0.518-0.638
Bromoethene	5.13	8.16	0.629 ok	0.628	0.568-0.688
n-Butane	4.55	8.16	0.558 ok	0.557	0.497-0.617
Benzyl Chloride	20.16	15.75	1.280 ok	1.279	1.219-1.339
n-Butylbenzene	21.16	15.75	1.343 ok	1.343	1.283-1.403
sec-Butylbenzene	20.34	15.75	1.291 ok	1.291	1.231-1.351
tert-Butylbenzene	19.95	15.75	1.267 ok	1.266	1.206-1.326
Carbon disulfide	6.38	8.16	0.782 ok	0.780	0.720-0.840
Chlorobenzene	15.82	15.75	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	4.04	8.16	0.495 ok	0.494	0.434-0.554
Chloroethane	4.85	8.16	0.594 ok	0.594	0.534-0.654
Chlorotrifluoroethene	4.06	8.16	0.498 ok	0.497	0.437-0.557
Chloroform	8.30	8.16	1.017 ok	1.017	0.957-1.077
Chloromethane	4.24	8.16	0.520 ok	0.519	0.459-0.579
3-Chloropropene	6.22	8.16	0.762 ok	0.761	0.701-0.821
2-Chlorotoluene	18.95	15.75	1.203 ok	1.202	1.142-1.262
Carbon tetrachloride	10.03	8.16	1.229 ok	1.228	1.168-1.288
Cyclohexane	10.14	8.16	1.243 ok	1.243	1.183-1.303
1,1-Dichloroethane	7.16	8.16	0.877 ok	0.877	0.817-0.937
1,1-Dichloroethylene	6.00	8.16	0.735 ok	0.735	0.675-0.795
1,2-Dibromoethane	14.25	10.28	1.386 ok	1.386	1.326-1.446
1,2-Dichloroethane	9.08	8.16	1.113 ok	1.112	1.052-1.172
1,2-Dichloropropane	10.81	10.28	1.052 ok	1.051	0.991-1.111
1,3-Dichloropropane	13.44	10.28	1.307 ok	1.306	1.246-1.366
1,4-Dioxane	11.20	10.28	1.089 ok	1.085	1.025-1.145
Dichlorodifluoromethane	4.12	8.16	0.505 ok	0.504	0.444-0.564
Dichlorofluoromethane	4.93	8.16	0.604 ok	0.603	0.543-0.663
Dibromochloromethane	13.94	10.28	1.356 ok	1.355	1.295-1.415
Dibromomethane	10.79	10.28	1.050 ok	1.049	0.989-1.109
trans-1,2-Dichloroethylene	6.96	8.16	0.853 ok	0.852	0.792-0.912
cis-1,2-Dichloroethylene	7.99	8.16	0.979 ok	0.979	0.919-1.039
cis-1,3-Dichloropropene	12.17	10.28	1.184 ok	1.183	1.123-1.243
m-Dichlorobenzene	20.16	15.75	1.280 ok	1.280	1.220-1.340

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1097-IC1097	5W27907.D	11/17/17 19:24	TCH	0.04	GCMS5W	TO-15
V5W1097-IC1097	5W27908.D	11/17/17 20:08	TCH	0.1	GCMS5W	TO-15 Reporting this level
V5W1097-IC1097	5W27909.D	11/17/17 20:52	TCH	0.2	GCMS5W	TO-15
V5W1097-IC1097	5W27910.D	11/17/17 21:39	TCH	0.5	GCMS5W	TO-15
V5W1097-IC1097	5W27911.D	11/17/17 22:23	TCH	5	GCMS5W	TO-15
V5W1097-IC1097	5W27912.D	11/17/17 23:08	TCH	10	GCMS5W	TO-15
V5W1097-IC1097	5W27913.D	11/17/17 23:55	TCH	20	GCMS5W	TO-15
V5W1097-IC1097	5W27915.D	11/18/17 01:32	TCH	40	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
o-Dichlorobenzene	20.73	15.75	1.316 ok	1.316	1.256-1.376
p-Dichlorobenzene	20.26	15.75	1.286 ok	1.286	1.226-1.346
trans-1,3-Dichloropropene	12.84	10.28	1.249 ok	1.248	1.188-1.308
Di-Isopropyl ether	8.22	8.16	1.007 ok	1.006	0.946-1.066
2,3-Dimethylpentane	10.43	8.16	1.278 ok	1.278	1.218-1.338
2,4-Dimethylpentane	9.12	8.16	1.118 ok	1.117	1.057-1.177
Ethanol	4.98	8.16	0.610 ok	0.609	0.549-0.669
Ethylbenzene	16.37	15.75	1.039 ok	1.039	0.979-1.099
Ethyl Acetate	8.28	8.16	1.015 ok	1.012	0.952-1.072
Ethyl Acrylate	10.89	10.28	1.059 ok	1.058	0.998-1.118
4-Ethyltoluene	19.25	15.75	1.222 ok	1.222	1.162-1.282
Freon 113	6.33	8.16	0.776 ok	0.775	0.715-0.835
Freon 114	4.31	8.16	0.528 ok	0.528	0.468-0.588
Freon 123	5.25	8.16	0.643 ok	0.642	0.582-0.702
Freon 123A	5.29	8.16	0.648 ok	0.648	0.588-0.708
Freon 141B	5.56	8.16	0.681 ok	0.681	0.621-0.741
Freon 142B	4.22	8.16	0.517 ok	0.517	0.457-0.577
Freon 143a	3.91	8.16	0.479 ok	0.478	0.418-0.538
Freon 152A	4.00	8.16	0.490 ok	0.490	0.430-0.550
Heptane	11.44	10.28	1.113 ok	1.113	1.053-1.173
Hexachlorobutadiene	23.55	15.75	1.495 ok	1.495	1.435-1.555
Hexachloroethane	21.62	15.75	1.373 ok	1.372	1.312-1.432
Hexane	8.18	8.16	1.002 ok	1.002	0.942-1.062
2-Hexanone	13.82	10.28	1.344 ok	1.341	1.281-1.401
Iodomethane	5.94	8.16	0.728 ok	0.727	0.667-0.787
Isopropylbenzene	18.21	15.75	1.156 ok	1.156	1.096-1.216
p-Isopropyltoluene	20.58	15.75	1.307 ok	1.306	1.246-1.366
Methylene chloride	6.12	8.16	0.750 ok	0.749	0.689-0.809
Methyl ethyl ketone	7.62	8.16	0.934 ok	0.930	0.870-0.990
Methyl Isobutyl Ketone	12.26	10.28	1.193 ok	1.190	1.130-1.250
Methyl Tert Butyl Ether	7.26	8.16	0.890 ok	0.887	0.827-0.947
Methylmethacrylate	11.40	10.28	1.109 ok	1.108	1.048-1.168
Nonane	17.69	15.75	1.123 ok	1.123	1.063-1.183
Octane	14.72	10.28	1.432 ok	1.431	1.371-1.491
Pentane	5.75	8.16	0.705 ok	0.703	0.643-0.763
n-Propylbenzene	19.02	15.75	1.208 ok	1.207	1.147-1.267
Propylene	4.06	8.16	0.498 ok	0.496	0.436-0.556
Styrene	17.17	15.75	1.090 ok	1.090	1.030-1.150
1,1,1-Trichloroethane	9.35	8.16	1.146 ok	1.145	1.085-1.205
1,1,1,2-Tetrachloroethane	15.80	10.28	1.537 ok	1.537	1.477-1.597

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1097-IC1097	5W27907.D	11/17/17 19:24	TCH	0.04	GCMS5W	TO-15
V5W1097-IC1097	5W27908.D	11/17/17 20:08	TCH	0.1	GCMS5W	TO-15 Reporting this level
V5W1097-IC1097	5W27909.D	11/17/17 20:52	TCH	0.2	GCMS5W	TO-15
V5W1097-IC1097	5W27910.D	11/17/17 21:39	TCH	0.5	GCMS5W	TO-15
V5W1097-IC1097	5W27911.D	11/17/17 22:23	TCH	5	GCMS5W	TO-15
V5W1097-ICC1097	5W27912.D	11/17/17 23:08	TCH	10	GCMS5W	TO-15
V5W1097-IC1097	5W27913.D	11/17/17 23:55	TCH	20	GCMS5W	TO-15
V5W1097-IC1097	5W27915.D	11/18/17 01:32	TCH	40	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
1,1,2,2-Tetrachloroethane	17.32	15.75	1.100 ok	1.099	1.039-1.159
1,1,2-Trichloroethane	13.04	10.28	1.268 ok	1.268	1.208-1.328
1,2,3-Trichloropropane	17.51	15.75	1.112 ok	1.111	1.051-1.171
1,2,4-Trimethylbenzene	19.97	15.75	1.268 ok	1.267	1.207-1.327
1,3,5-Trimethylbenzene	19.37	15.75	1.230 ok	1.230	1.170-1.290
2,2,4-Trimethylpentane	11.11	10.28	1.081 ok	1.080	1.020-1.140
Tertiary Butyl Alcohol	6.11	8.16	0.749 ok	0.745	0.685-0.805
Tetrachloroethylene	14.88	10.28	1.447 ok	1.447	1.387-1.507
Tetrahydrofuran	8.82	8.16	1.081 ok	1.076	1.016-1.136
Toluene	13.39	10.28	1.303 ok	1.302	1.242-1.362
Trichloroethylene	11.09	10.28	1.079 ok	1.079	1.019-1.139
Trichlorofluoromethane	5.46	8.16	0.669 ok	0.668	0.608-0.728
Vinyl chloride	4.41	8.16	0.540 ok	0.539	0.479-0.599
Vinyl Acetate	7.32	8.16	0.897 ok	0.896	0.836-0.956
m,p-Xylene	16.62	15.75	1.055 ok	1.055	0.995-1.115
o-Xylene	17.31	15.75	1.099 ok	1.098	1.038-1.158

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.16 ok	8.16	7.83-8.49	326969	ok 320846	192508-449184
1,4-Difluorobenzene	10.28 ok	10.28	9.95-10.61	1179140	ok 1131216	678730-1583702
Chlorobenzene-D5	15.75 ok	15.75	15.42-16.08	502720	ok 475827	285496-666158

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1097-IC1097	5W27907.D	11/17/17 19:24	TCH	0.04	GCMS5W	TO-15
V5W1097-IC1097	5W27908.D	11/17/17 20:08	TCH	0.1	GCMS5W	TO-15
V5W1097-IC1097	5W27909.D	11/17/17 20:52	TCH	0.2	GCMS5W	TO-15 Reporting this level
V5W1097-IC1097	5W27910.D	11/17/17 21:39	TCH	0.5	GCMS5W	TO-15
V5W1097-IC1097	5W27911.D	11/17/17 22:23	TCH	5	GCMS5W	TO-15
V5W1097-ICC1097	5W27912.D	11/17/17 23:08	TCH	10	GCMS5W	TO-15
V5W1097-IC1097	5W27913.D	11/17/17 23:55	TCH	20	GCMS5W	TO-15
V5W1097-IC1097	5W27915.D	11/18/17 01:32	TCH	40	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.33	8.13	0.656 ok	0.656	0.596-0.716
Acrylonitrile	5.70	8.13	0.701 ok	0.703	0.643-0.763
Acetonitrile	5.11	8.13	0.629 ok	0.631	0.571-0.691
1,3-Butadiene	4.47	8.13	0.550 ok	0.552	0.492-0.612
Benzene	9.84	8.13	1.210 ok	1.208	1.148-1.268
Bromobenzene	18.32	15.75	1.163 ok	1.163	1.103-1.223
Bromodichloromethane	11.04	10.26	1.076 ok	1.075	1.015-1.135
Bromoform	16.71	15.75	1.061 ok	1.061	1.001-1.121
Bromomethane	4.68	8.13	0.576 ok	0.578	0.518-0.638
Bromoethene	5.09	8.13	0.626 ok	0.628	0.568-0.688
n-Butane	4.50	8.13	0.554 ok	0.557	0.497-0.617
Benzyl Chloride	20.15	15.75	1.279 ok	1.279	1.219-1.339
n-Butylbenzene	21.16	15.75	1.343 ok	1.343	1.283-1.403
sec-Butylbenzene	20.34	15.75	1.291 ok	1.291	1.231-1.351
tert-Butylbenzene	19.95	15.75	1.267 ok	1.266	1.206-1.326
Carbon disulfide	6.33	8.13	0.779 ok	0.780	0.720-0.840
Chlorobenzene	15.82	15.75	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	4.00	8.13	0.492 ok	0.494	0.434-0.554
Chloroethane	4.81	8.13	0.592 ok	0.594	0.534-0.654
Chlorotrifluoroethene	4.02	8.13	0.494 ok	0.497	0.437-0.557
Chloroform	8.27	8.13	1.017 ok	1.017	0.957-1.077
Chloromethane	4.20	8.13	0.517 ok	0.519	0.459-0.579
3-Chloropropene	6.17	8.13	0.759 ok	0.761	0.701-0.821
2-Chlorotoluene	18.94	15.75	1.203 ok	1.202	1.142-1.262
Carbon tetrachloride	10.01	8.13	1.231 ok	1.228	1.168-1.288
Cyclohexane	10.13	8.13	1.246 ok	1.243	1.183-1.303
1,1-Dichloroethane	7.12	8.13	0.876 ok	0.877	0.817-0.937
1,1-Dichloroethylene	5.96	8.13	0.733 ok	0.735	0.675-0.795
1,2-Dibromoethane	14.24	10.26	1.388 ok	1.386	1.326-1.446
1,2-Dichloroethane	9.06	8.13	1.114 ok	1.112	1.052-1.172
1,2-Dichloropropane	10.79	10.26	1.052 ok	1.051	0.991-1.111
1,3-Dichloropropane	13.42	10.26	1.308 ok	1.306	1.246-1.366
1,4-Dioxane	11.18	10.26	1.090 ok	1.085	1.025-1.145
Dichlorodifluoromethane	4.07	8.13	0.501 ok	0.504	0.444-0.564
Dichlorofluoromethane	4.88	8.13	0.600 ok	0.603	0.543-0.663
Dibromochloromethane	13.93	10.26	1.358 ok	1.355	1.295-1.415
Dibromomethane	10.77	10.26	1.050 ok	1.049	0.989-1.109
trans-1,2-Dichloroethylene	6.93	8.13	0.852 ok	0.852	0.792-0.912
cis-1,2-Dichloroethylene	7.97	8.13	0.980 ok	0.979	0.919-1.039
cis-1,3-Dichloropropene	12.15	10.26	1.184 ok	1.183	1.123-1.243

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1097-IC1097	5W27907.D	11/17/17 19:24	TCH	0.04	GCMS5W	TO-15
V5W1097-IC1097	5W27908.D	11/17/17 20:08	TCH	0.1	GCMS5W	TO-15
V5W1097-IC1097	5W27909.D	11/17/17 20:52	TCH	0.2	GCMS5W	TO-15 Reporting this level
V5W1097-IC1097	5W27910.D	11/17/17 21:39	TCH	0.5	GCMS5W	TO-15
V5W1097-IC1097	5W27911.D	11/17/17 22:23	TCH	5	GCMS5W	TO-15
V5W1097-ICC1097	5W27912.D	11/17/17 23:08	TCH	10	GCMS5W	TO-15
V5W1097-IC1097	5W27913.D	11/17/17 23:55	TCH	20	GCMS5W	TO-15
V5W1097-IC1097	5W27915.D	11/18/17 01:32	TCH	40	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
m-Dichlorobenzene	20.16	15.75	1.280 ok	1.280	1.220-1.340
o-Dichlorobenzene	20.73	15.75	1.316 ok	1.316	1.256-1.376
p-Dichlorobenzene	20.26	15.75	1.286 ok	1.286	1.226-1.346
trans-1,3-Dichloropropene	12.83	10.26	1.250 ok	1.248	1.188-1.308
Di-Isopropyl ether	8.19	8.13	1.007 ok	1.006	0.946-1.066
2,3-Dimethylpentane	10.41	8.13	1.280 ok	1.278	1.218-1.338
2,4-Dimethylpentane	9.09	8.13	1.118 ok	1.117	1.057-1.177
Ethanol	4.94	8.13	0.608 ok	0.609	0.549-0.669
Ethylbenzene	16.36	15.75	1.039 ok	1.039	0.979-1.099
Ethyl Acetate	8.24	8.13	1.014 ok	1.012	0.952-1.072
Ethyl Acrylate	10.87	10.26	1.059 ok	1.058	0.998-1.118
4-Ethyltoluene	19.25	15.75	1.222 ok	1.222	1.162-1.282
Freon 113	6.30	8.13	0.775 ok	0.775	0.715-0.835
Freon 114	4.27	8.13	0.525 ok	0.528	0.468-0.588
Freon 123	5.21	8.13	0.641 ok	0.642	0.582-0.702
Freon 123A	5.25	8.13	0.646 ok	0.648	0.588-0.708
Freon 141B	5.52	8.13	0.679 ok	0.681	0.621-0.741
Freon 142B	4.18	8.13	0.514 ok	0.517	0.457-0.577
Freon 143a	3.87	8.13	0.476 ok	0.478	0.418-0.538
Freon 152A	3.96	8.13	0.487 ok	0.490	0.430-0.550
Heptane	11.43	10.26	1.114 ok	1.113	1.053-1.173
Hexachlorobutadiene	23.55	15.75	1.495 ok	1.495	1.435-1.555
Hexachloroethane	21.62	15.75	1.373 ok	1.372	1.312-1.432
Hexane	8.14	8.13	1.001 ok	1.002	0.942-1.062
2-Hexanone	13.80	10.26	1.345 ok	1.341	1.281-1.401
Iodomethane	5.90	8.13	0.726 ok	0.727	0.667-0.787
Isopropylbenzene	18.21	15.75	1.156 ok	1.156	1.096-1.216
Isopropyl Alcohol	5.54	8.13	0.681 ok	0.682	0.622-0.742
p-Isopropyltoluene	20.58	15.75	1.307 ok	1.306	1.246-1.366
Methylene chloride	6.08	8.13	0.748 ok	0.749	0.689-0.809
Methyl ethyl ketone	7.58	8.13	0.932 ok	0.930	0.870-0.990
Methyl Isobutyl Ketone	12.24	10.26	1.193 ok	1.190	1.130-1.250
Methyl Tert Butyl Ether	7.22	8.13	0.888 ok	0.887	0.827-0.947
Methylmethacrylate	11.38	10.26	1.109 ok	1.108	1.048-1.168
Naphthalene	23.11	15.75	1.467 ok	1.466	1.406-1.526
Nonane	17.68	15.75	1.123 ok	1.123	1.063-1.183
Octane	14.71	10.26	1.434 ok	1.431	1.371-1.491
Pentane	5.70	8.13	0.701 ok	0.703	0.643-0.763
n-Propylbenzene	19.02	15.75	1.208 ok	1.207	1.147-1.267
Propylene	4.02	8.13	0.494 ok	0.496	0.436-0.556

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1097-IC1097	5W27907.D	11/17/17 19:24	TCH	0.04	GCMS5W	TO-15
V5W1097-IC1097	5W27908.D	11/17/17 20:08	TCH	0.1	GCMS5W	TO-15
V5W1097-IC1097	5W27909.D	11/17/17 20:52	TCH	0.2	GCMS5W	TO-15
V5W1097-IC1097	5W27910.D	11/17/17 21:39	TCH	0.5	GCMS5W	TO-15
V5W1097-IC1097	5W27911.D	11/17/17 22:23	TCH	5	GCMS5W	TO-15
V5W1097-IC1097	5W27912.D	11/17/17 23:08	TCH	10	GCMS5W	TO-15
V5W1097-IC1097	5W27913.D	11/17/17 23:55	TCH	20	GCMS5W	TO-15
V5W1097-IC1097	5W27915.D	11/18/17 01:32	TCH	40	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Styrene	17.16	15.75	1.090 ok	1.090	1.030-1.150
1,1,1-Trichloroethane	9.32	8.13	1.146 ok	1.145	1.085-1.205
1,1,1,2-Tetrachloroethane	15.80	10.26	1.540 ok	1.537	1.477-1.597
1,1,2,2-Tetrachloroethane	17.31	15.75	1.099 ok	1.099	1.039-1.159
1,1,2-Trichloroethane	13.03	10.26	1.270 ok	1.268	1.208-1.328
1,2,4-Trichlorobenzene	22.98	15.75	1.459 ok	1.458	1.398-1.518
1,2,3-Trichloropropane	17.50	15.75	1.111 ok	1.111	1.051-1.171
1,2,4-Trimethylbenzene	19.96	15.75	1.267 ok	1.267	1.207-1.327
1,3,5-Trimethylbenzene	19.37	15.75	1.230 ok	1.230	1.170-1.290
2,2,4-Trimethylpentane	11.09	10.26	1.081 ok	1.080	1.020-1.140
Tertiary Butyl Alcohol	6.06	8.13	0.745 ok	0.745	0.685-0.805
Tetrachloroethylene	14.87	10.26	1.449 ok	1.447	1.387-1.507
Tetrahydrofuran	8.78	8.13	1.080 ok	1.076	1.016-1.136
Toluene	13.38	10.26	1.304 ok	1.302	1.242-1.362
Trichloroethylene	11.07	10.26	1.079 ok	1.079	1.019-1.139
Trichlorofluoromethane	5.42	8.13	0.667 ok	0.668	0.608-0.728
Vinyl chloride	4.36	8.13	0.536 ok	0.539	0.479-0.599
Vinyl Acetate	7.29	8.13	0.897 ok	0.896	0.836-0.956
m,p-Xylene	16.61	15.75	1.055 ok	1.055	0.995-1.115
o-Xylene	17.30	15.75	1.098 ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.70	15.75	0.362 ok	0.364	0.304-0.424

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.13 ok	8.16	7.83-8.49	295206 ok	320846	192508-449184
1,4-Difluorobenzene	10.26 ok	10.28	9.95-10.61	1052221 ok	1131216	678730-1583702
Chlorobenzene-D5	15.75 ok	15.75	15.42-16.08	452524 ok	475827	285496-666158

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1097-IC1097	5W27907.D	11/17/17 19:24	TCH	0.04	GCMS5W	TO-15
V5W1097-IC1097	5W27908.D	11/17/17 20:08	TCH	0.1	GCMS5W	TO-15
V5W1097-IC1097	5W27909.D	11/17/17 20:52	TCH	0.2	GCMS5W	TO-15
V5W1097-IC1097	5W27910.D	11/17/17 21:39	TCH	0.5	GCMS5W	TO-15 Reporting this level
V5W1097-IC1097	5W27911.D	11/17/17 22:23	TCH	5	GCMS5W	TO-15
V5W1097-ICC1097	5W27912.D	11/17/17 23:08	TCH	10	GCMS5W	TO-15
V5W1097-IC1097	5W27913.D	11/17/17 23:55	TCH	20	GCMS5W	TO-15
V5W1097-IC1097	5W27915.D	11/18/17 01:32	TCH	40	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.36	8.16	0.657 ok	0.656	0.596-0.716
Acrylonitrile	5.73	8.16	0.702 ok	0.703	0.643-0.763
Acetonitrile	5.15	8.16	0.631 ok	0.631	0.571-0.691
1,3-Butadiene	4.50	8.16	0.551 ok	0.552	0.492-0.612
Benzene	9.86	8.16	1.208 ok	1.208	1.148-1.268
Bromobenzene	18.32	15.75	1.163 ok	1.163	1.103-1.223
Bromodichloromethane	11.04	10.28	1.074 ok	1.075	1.015-1.135
Bromoform	16.71	15.75	1.061 ok	1.061	1.001-1.121
Bromomethane	4.71	8.16	0.577 ok	0.578	0.518-0.638
Bromoethene	5.12	8.16	0.627 ok	0.628	0.568-0.688
n-Butane	4.54	8.16	0.556 ok	0.557	0.497-0.617
Benzyl Chloride	20.15	15.75	1.279 ok	1.279	1.219-1.339
n-Butylbenzene	21.16	15.75	1.343 ok	1.343	1.283-1.403
sec-Butylbenzene	20.34	15.75	1.291 ok	1.291	1.231-1.351
tert-Butylbenzene	19.95	15.75	1.267 ok	1.266	1.206-1.326
Carbon disulfide	6.36	8.16	0.779 ok	0.780	0.720-0.840
Chlorobenzene	15.82	15.75	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	4.03	8.16	0.494 ok	0.494	0.434-0.554
Chloroethane	4.84	8.16	0.593 ok	0.594	0.534-0.654
Chlorotrifluoroethene	4.05	8.16	0.496 ok	0.497	0.437-0.557
Chloroform	8.29	8.16	1.016 ok	1.017	0.957-1.077
Chloromethane	4.24	8.16	0.520 ok	0.519	0.459-0.579
3-Chloropropene	6.21	8.16	0.761 ok	0.761	0.701-0.821
2-Chlorotoluene	18.94	15.75	1.203 ok	1.202	1.142-1.262
Carbon tetrachloride	10.02	8.16	1.228 ok	1.228	1.168-1.288
Cyclohexane	10.15	8.16	1.244 ok	1.243	1.183-1.303
1,1-Dichloroethane	7.15	8.16	0.876 ok	0.877	0.817-0.937
1,1-Dichloroethylene	5.99	8.16	0.734 ok	0.735	0.675-0.795
1,2-Dibromoethane	14.24	10.28	1.385 ok	1.386	1.326-1.446
1,2-Dichloroethane	9.07	8.16	1.112 ok	1.112	1.052-1.172
1,2-Dichloropropane	10.80	10.28	1.051 ok	1.051	0.991-1.111
1,3-Dichloropropane	13.43	10.28	1.306 ok	1.306	1.246-1.366
1,4-Dioxane	11.17	10.28	1.087 ok	1.085	1.025-1.145
Dichlorodifluoromethane	4.11	8.16	0.504 ok	0.504	0.444-0.564
Dichlorofluoromethane	4.91	8.16	0.602 ok	0.603	0.543-0.663
Dibromochloromethane	13.94	10.28	1.356 ok	1.355	1.295-1.415
Dibromomethane	10.78	10.28	1.049 ok	1.049	0.989-1.109
trans-1,2-Dichloroethylene	6.95	8.16	0.852 ok	0.852	0.792-0.912
cis-1,2-Dichloroethylene	7.99	8.16	0.979 ok	0.979	0.919-1.039
cis-1,3-Dichloropropene	12.16	10.28	1.183 ok	1.183	1.123-1.243

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1097-IC1097	5W27907.D	11/17/17 19:24	TCH	0.04	GCMS5W	TO-15
V5W1097-IC1097	5W27908.D	11/17/17 20:08	TCH	0.1	GCMS5W	TO-15
V5W1097-IC1097	5W27909.D	11/17/17 20:52	TCH	0.2	GCMS5W	TO-15
V5W1097-IC1097	5W27910.D	11/17/17 21:39	TCH	0.5	GCMS5W	TO-15 Reporting this level
V5W1097-IC1097	5W27911.D	11/17/17 22:23	TCH	5	GCMS5W	TO-15
V5W1097-ICC1097	5W27912.D	11/17/17 23:08	TCH	10	GCMS5W	TO-15
V5W1097-IC1097	5W27913.D	11/17/17 23:55	TCH	20	GCMS5W	TO-15
V5W1097-IC1097	5W27915.D	11/18/17 01:32	TCH	40	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
m-Dichlorobenzene	20.15	15.75	1.279 ok	1.280	1.220-1.340
o-Dichlorobenzene	20.73	15.75	1.316 ok	1.316	1.256-1.376
p-Dichlorobenzene	20.26	15.75	1.286 ok	1.286	1.226-1.346
trans-1,3-Dichloropropene	12.83	10.28	1.248 ok	1.248	1.188-1.308
Di-Isopropyl ether	8.21	8.16	1.006 ok	1.006	0.946-1.066
2,3-Dimethylpentane	10.43	8.16	1.278 ok	1.278	1.218-1.338
2,4-Dimethylpentane	9.11	8.16	1.116 ok	1.117	1.057-1.177
Ethanol	4.97	8.16	0.609 ok	0.609	0.549-0.669
Ethylbenzene	16.36	15.75	1.039 ok	1.039	0.979-1.099
Ethyl Acetate	8.26	8.16	1.012 ok	1.012	0.952-1.072
Ethyl Acrylate	10.87	10.28	1.057 ok	1.058	0.998-1.118
4-Ethyltoluene	19.24	15.75	1.222 ok	1.222	1.162-1.282
Freon 113	6.33	8.16	0.776 ok	0.775	0.715-0.835
Freon 114	4.30	8.16	0.527 ok	0.528	0.468-0.588
Freon 123	5.24	8.16	0.642 ok	0.642	0.582-0.702
Freon 123A	5.29	8.16	0.648 ok	0.648	0.588-0.708
Freon 141B	5.55	8.16	0.680 ok	0.681	0.621-0.741
Freon 142B	4.22	8.16	0.517 ok	0.517	0.457-0.577
Freon 143a	3.90	8.16	0.478 ok	0.478	0.418-0.538
Freon 152A	3.99	8.16	0.489 ok	0.490	0.430-0.550
Heptane	11.44	10.28	1.113 ok	1.113	1.053-1.173
Hexachlorobutadiene	23.55	15.75	1.495 ok	1.495	1.435-1.555
Hexachloroethane	21.62	15.75	1.373 ok	1.372	1.312-1.432
Hexane	8.17	8.16	1.001 ok	1.002	0.942-1.062
2-Hexanone	13.79	10.28	1.341 ok	1.341	1.281-1.401
Iodomethane	5.93	8.16	0.727 ok	0.727	0.667-0.787
Isopropylbenzene	18.21	15.75	1.156 ok	1.156	1.096-1.216
Isopropyl Alcohol	5.56	8.16	0.681 ok	0.682	0.622-0.742
p-Isopropyltoluene	20.58	15.75	1.307 ok	1.306	1.246-1.366
Methylene chloride	6.11	8.16	0.749 ok	0.749	0.689-0.809
Methyl ethyl ketone	7.59	8.16	0.930 ok	0.930	0.870-0.990
Methyl Isobutyl Ketone	12.24	10.28	1.191 ok	1.190	1.130-1.250
Methyl Tert Butyl Ether	7.24	8.16	0.887 ok	0.887	0.827-0.947
Methylmethacrylate	11.39	10.28	1.108 ok	1.108	1.048-1.168
Naphthalene	23.10	15.75	1.467 ok	1.466	1.406-1.526
Nonane	17.68	15.75	1.123 ok	1.123	1.063-1.183
Octane	14.71	10.28	1.431 ok	1.431	1.371-1.491
Pentane	5.73	8.16	0.702 ok	0.703	0.643-0.763
n-Propylbenzene	19.02	15.75	1.208 ok	1.207	1.147-1.267
Propylene	4.05	8.16	0.496 ok	0.496	0.436-0.556

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1097-IC1097	5W27907.D	11/17/17 19:24	TCH	0.04	GCMS5W	TO-15
V5W1097-IC1097	5W27908.D	11/17/17 20:08	TCH	0.1	GCMS5W	TO-15
V5W1097-IC1097	5W27909.D	11/17/17 20:52	TCH	0.2	GCMS5W	TO-15
V5W1097-IC1097	5W27910.D	11/17/17 21:39	TCH	0.5	GCMS5W	TO-15
V5W1097-IC1097	5W27911.D	11/17/17 22:23	TCH	5	GCMS5W	TO-15
V5W1097-ICC1097	5W27912.D	11/17/17 23:08	TCH	10	GCMS5W	TO-15
V5W1097-IC1097	5W27913.D	11/17/17 23:55	TCH	20	GCMS5W	TO-15
V5W1097-IC1097	5W27915.D	11/18/17 01:32	TCH	40	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Styrene	17.16	15.75	1.090 ok	1.090	1.030-1.150
1,1,1-Trichloroethane	9.34	8.16	1.145 ok	1.145	1.085-1.205
1,1,1,2-Tetrachloroethane	15.80	10.28	1.537 ok	1.537	1.477-1.597
1,1,2,2-Tetrachloroethane	17.32	15.75	1.100 ok	1.099	1.039-1.159
1,1,2-Trichloroethane	13.03	10.28	1.268 ok	1.268	1.208-1.328
1,2,4-Trichlorobenzene	22.97	15.75	1.458 ok	1.458	1.398-1.518
1,2,3-Trichloropropane	17.50	15.75	1.111 ok	1.111	1.051-1.171
1,2,4-Trimethylbenzene	19.96	15.75	1.267 ok	1.267	1.207-1.327
1,3,5-Trimethylbenzene	19.37	15.75	1.230 ok	1.230	1.170-1.290
2,2,4-Trimethylpentane	11.10	10.28	1.080 ok	1.080	1.020-1.140
Tertiary Butyl Alcohol	6.08	8.16	0.745 ok	0.745	0.685-0.805
Tetrachloroethylene	14.87	10.28	1.446 ok	1.447	1.387-1.507
Tetrahydrofuran	8.79	8.16	1.077 ok	1.076	1.016-1.136
Toluene	13.38	10.28	1.302 ok	1.302	1.242-1.362
Trichloroethylene	11.09	10.28	1.079 ok	1.079	1.019-1.139
Trichlorofluoromethane	5.45	8.16	0.668 ok	0.668	0.608-0.728
Vinyl chloride	4.40	8.16	0.539 ok	0.539	0.479-0.599
Vinyl Acetate	7.31	8.16	0.896 ok	0.896	0.836-0.956
m,p-Xylene	16.61	15.75	1.055 ok	1.055	0.995-1.115
o-Xylene	17.30	15.75	1.098 ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.73	15.75	0.364 ok	0.364	0.304-0.424

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.16 ok	8.16	7.83-8.49	316100 ok	320846	192508-449184
1,4-Difluorobenzene	10.28 ok	10.28	9.95-10.61	1131891 ok	1131216	678730-1583702
Chlorobenzene-D5	15.75 ok	15.75	15.42-16.08	493045 ok	475827	285496-666158

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1097-IC1097	5W27907.D	11/17/17 19:24	TCH	0.04	GCMS5W	TO-15
V5W1097-IC1097	5W27908.D	11/17/17 20:08	TCH	0.1	GCMS5W	TO-15
V5W1097-IC1097	5W27909.D	11/17/17 20:52	TCH	0.2	GCMS5W	TO-15
V5W1097-IC1097	5W27910.D	11/17/17 21:39	TCH	0.5	GCMS5W	TO-15
V5W1097-IC1097	5W27911.D	11/17/17 22:23	TCH	5	GCMS5W	TO-15 Reporting this level
V5W1097-ICC1097	5W27912.D	11/17/17 23:08	TCH	10	GCMS5W	TO-15
V5W1097-IC1097	5W27913.D	11/17/17 23:55	TCH	20	GCMS5W	TO-15
V5W1097-IC1097	5W27915.D	11/18/17 01:32	TCH	40	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.35	8.16	0.656 ok	0.656	0.596-0.716
Acrylonitrile	5.73	8.16	0.702 ok	0.703	0.643-0.763
Acetonitrile	5.15	8.16	0.631 ok	0.631	0.571-0.691
1,3-Butadiene	4.50	8.16	0.551 ok	0.552	0.492-0.612
Benzene	9.86	8.16	1.208 ok	1.208	1.148-1.268
Bromobenzene	18.31	15.75	1.163 ok	1.163	1.103-1.223
Bromodichloromethane	11.05	10.29	1.074 ok	1.075	1.015-1.135
Bromoform	16.70	15.75	1.060 ok	1.061	1.001-1.121
Bromomethane	4.72	8.16	0.578 ok	0.578	0.518-0.638
Bromoethene	5.13	8.16	0.629 ok	0.628	0.568-0.688
n-Butane	4.54	8.16	0.556 ok	0.557	0.497-0.617
Benzyl Chloride	20.15	15.75	1.279 ok	1.279	1.219-1.339
n-Butylbenzene	21.16	15.75	1.343 ok	1.343	1.283-1.403
sec-Butylbenzene	20.34	15.75	1.291 ok	1.291	1.231-1.351
tert-Butylbenzene	19.95	15.75	1.267 ok	1.266	1.206-1.326
Carbon disulfide	6.37	8.16	0.781 ok	0.780	0.720-0.840
Chlorobenzene	15.82	15.75	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	4.03	8.16	0.494 ok	0.494	0.434-0.554
Chloroethane	4.85	8.16	0.594 ok	0.594	0.534-0.654
Chlorotrifluoroethene	4.06	8.16	0.498 ok	0.497	0.437-0.557
Chloroform	8.30	8.16	1.017 ok	1.017	0.957-1.077
Chloromethane	4.24	8.16	0.520 ok	0.519	0.459-0.579
3-Chloropropene	6.21	8.16	0.761 ok	0.761	0.701-0.821
2-Chlorotoluene	18.94	15.75	1.203 ok	1.202	1.142-1.262
Carbon tetrachloride	10.03	8.16	1.229 ok	1.228	1.168-1.288
Cyclohexane	10.15	8.16	1.244 ok	1.243	1.183-1.303
1,1-Dichloroethane	7.16	8.16	0.877 ok	0.877	0.817-0.937
1,1-Dichloroethylene	6.00	8.16	0.735 ok	0.735	0.675-0.795
1,2-Dibromoethane	14.24	10.29	1.384 ok	1.386	1.326-1.446
1,2-Dichloroethane	9.08	8.16	1.113 ok	1.112	1.052-1.172
1,2-Dichloropropane	10.81	10.29	1.051 ok	1.051	0.991-1.111
1,3-Dichloropropane	13.42	10.29	1.304 ok	1.306	1.246-1.366
1,4-Dioxane	11.14	10.29	1.083 ok	1.085	1.025-1.145
Dichlorodifluoromethane	4.11	8.16	0.504 ok	0.504	0.444-0.564
Dichlorofluoromethane	4.93	8.16	0.604 ok	0.603	0.543-0.663
Dibromochloromethane	13.93	10.29	1.354 ok	1.355	1.295-1.415
Dibromomethane	10.79	10.29	1.049 ok	1.049	0.989-1.109
trans-1,2-Dichloroethylene	6.96	8.16	0.853 ok	0.852	0.792-0.912
cis-1,2-Dichloroethylene	8.00	8.16	0.980 ok	0.979	0.919-1.039
cis-1,3-Dichloropropene	12.16	10.29	1.182 ok	1.183	1.123-1.243

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1097-IC1097	5W27907.D	11/17/17 19:24	TCH	0.04	GCMS5W	TO-15
V5W1097-IC1097	5W27908.D	11/17/17 20:08	TCH	0.1	GCMS5W	TO-15
V5W1097-IC1097	5W27909.D	11/17/17 20:52	TCH	0.2	GCMS5W	TO-15
V5W1097-IC1097	5W27910.D	11/17/17 21:39	TCH	0.5	GCMS5W	TO-15
V5W1097-IC1097	5W27911.D	11/17/17 22:23	TCH	5	GCMS5W	TO-15 Reporting this level
V5W1097-ICC1097	5W27912.D	11/17/17 23:08	TCH	10	GCMS5W	TO-15
V5W1097-IC1097	5W27913.D	11/17/17 23:55	TCH	20	GCMS5W	TO-15
V5W1097-IC1097	5W27915.D	11/18/17 01:32	TCH	40	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
m-Dichlorobenzene	20.15	15.75	1.279 ok	1.280	1.220-1.340
o-Dichlorobenzene	20.73	15.75	1.316 ok	1.316	1.256-1.376
p-Dichlorobenzene	20.25	15.75	1.286 ok	1.286	1.226-1.346
trans-1,3-Dichloropropene	12.82	10.29	1.246 ok	1.248	1.188-1.308
Di-Isopropyl ether	8.21	8.16	1.006 ok	1.006	0.946-1.066
2,3-Dimethylpentane	10.43	8.16	1.278 ok	1.278	1.218-1.338
2,4-Dimethylpentane	9.12	8.16	1.118 ok	1.117	1.057-1.177
Ethanol	4.97	8.16	0.609 ok	0.609	0.549-0.669
Ethylbenzene	16.36	15.75	1.039 ok	1.039	0.979-1.099
Ethyl Acetate	8.25	8.16	1.011 ok	1.012	0.952-1.072
Ethyl Acrylate	10.86	10.29	1.055 ok	1.058	0.998-1.118
4-Ethyltoluene	19.24	15.75	1.222 ok	1.222	1.162-1.282
Freon 113	6.33	8.16	0.776 ok	0.775	0.715-0.835
Freon 114	4.31	8.16	0.528 ok	0.528	0.468-0.588
Freon 123	5.25	8.16	0.643 ok	0.642	0.582-0.702
Freon 123A	5.29	8.16	0.648 ok	0.648	0.588-0.708
Freon 141B	5.56	8.16	0.681 ok	0.681	0.621-0.741
Freon 142B	4.22	8.16	0.517 ok	0.517	0.457-0.577
Freon 143a	3.91	8.16	0.479 ok	0.478	0.418-0.538
Freon 152A	4.00	8.16	0.490 ok	0.490	0.430-0.550
Heptane	11.44	10.29	1.112 ok	1.113	1.053-1.173
Hexachlorobutadiene	23.55	15.75	1.495 ok	1.495	1.435-1.555
Hexachloroethane	21.62	15.75	1.373 ok	1.372	1.312-1.432
Hexane	8.18	8.16	1.002 ok	1.002	0.942-1.062
2-Hexanone	13.77	10.29	1.338 ok	1.341	1.281-1.401
Iodomethane	5.94	8.16	0.728 ok	0.727	0.667-0.787
Isopropylbenzene	18.21	15.75	1.156 ok	1.156	1.096-1.216
Isopropyl Alcohol	5.56	8.16	0.681 ok	0.682	0.622-0.742
p-Isopropyltoluene	20.58	15.75	1.307 ok	1.306	1.246-1.366
Methylene chloride	6.12	8.16	0.750 ok	0.749	0.689-0.809
Methyl ethyl ketone	7.58	8.16	0.929 ok	0.930	0.870-0.990
Methyl Isobutyl Ketone	12.22	10.29	1.188 ok	1.190	1.130-1.250
Methyl Tert Butyl Ether	7.23	8.16	0.886 ok	0.887	0.827-0.947
Methylmethacrylate	11.38	10.29	1.106 ok	1.108	1.048-1.168
Naphthalene	23.10	15.75	1.467 ok	1.466	1.406-1.526
Nonane	17.68	15.75	1.123 ok	1.123	1.063-1.183
Octane	14.71	10.29	1.430 ok	1.431	1.371-1.491
Pentane	5.74	8.16	0.703 ok	0.703	0.643-0.763
n-Propylbenzene	19.01	15.75	1.207 ok	1.207	1.147-1.267
Propylene	4.06	8.16	0.498 ok	0.496	0.436-0.556

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1097-IC1097	5W27907.D	11/17/17 19:24	TCH	0.04	GCMS5W	TO-15
V5W1097-IC1097	5W27908.D	11/17/17 20:08	TCH	0.1	GCMS5W	TO-15
V5W1097-IC1097	5W27909.D	11/17/17 20:52	TCH	0.2	GCMS5W	TO-15
V5W1097-IC1097	5W27910.D	11/17/17 21:39	TCH	0.5	GCMS5W	TO-15
V5W1097-IC1097	5W27911.D	11/17/17 22:23	TCH	5	GCMS5W	TO-15 Reporting this level
V5W1097-ICC1097	5W27912.D	11/17/17 23:08	TCH	10	GCMS5W	TO-15
V5W1097-IC1097	5W27913.D	11/17/17 23:55	TCH	20	GCMS5W	TO-15
V5W1097-IC1097	5W27915.D	11/18/17 01:32	TCH	40	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Styrene	17.15	15.75	1.089 ok	1.090	1.030-1.150
1,1,1-Trichloroethane	9.34	8.16	1.145 ok	1.145	1.085-1.205
1,1,1,2-Tetrachloroethane	15.80	10.29	1.535 ok	1.537	1.477-1.597
1,1,2,2-Tetrachloroethane	17.31	15.75	1.099 ok	1.099	1.039-1.159
1,1,2-Trichloroethane	13.03	10.29	1.266 ok	1.268	1.208-1.328
1,2,4-Trichlorobenzene	22.97	15.75	1.458 ok	1.458	1.398-1.518
1,2,3-Trichloropropane	17.50	15.75	1.111 ok	1.111	1.051-1.171
1,2,4-Trimethylbenzene	19.96	15.75	1.267 ok	1.267	1.207-1.327
1,3,5-Trimethylbenzene	19.36	15.75	1.229 ok	1.230	1.170-1.290
2,2,4-Trimethylpentane	11.11	10.29	1.080 ok	1.080	1.020-1.140
Tertiary Butyl Alcohol	6.07	8.16	0.744 ok	0.745	0.685-0.805
Tetrachloroethylene	14.87	10.29	1.445 ok	1.447	1.387-1.507
Tetrahydrofuran	8.76	8.16	1.074 ok	1.076	1.016-1.136
Toluene	13.38	10.29	1.300 ok	1.302	1.242-1.362
Trichloroethylene	11.09	10.29	1.078 ok	1.079	1.019-1.139
Trichlorofluoromethane	5.46	8.16	0.669 ok	0.668	0.608-0.728
Vinyl chloride	4.41	8.16	0.540 ok	0.539	0.479-0.599
Vinyl Acetate	7.31	8.16	0.896 ok	0.896	0.836-0.956
m,p-Xylene	16.61	15.75	1.055 ok	1.055	0.995-1.115
o-Xylene	17.30	15.75	1.098 ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.74	15.75	0.364 ok	0.364	0.304-0.424

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.16 ok	8.16	7.83-8.49	319791 ok	320846	192508-449184
1,4-Difluorobenzene	10.29 ok	10.28	9.95-10.61	1137679 ok	1131216	678730-1583702
Chlorobenzene-D5	15.75 ok	15.75	15.42-16.08	513062 ok	475827	285496-666158

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1097-IC1097	5W27907.D	11/17/17 19:24	TCH	0.04	GCMS5W	TO-15
V5W1097-IC1097	5W27908.D	11/17/17 20:08	TCH	0.1	GCMS5W	TO-15
V5W1097-IC1097	5W27909.D	11/17/17 20:52	TCH	0.2	GCMS5W	TO-15
V5W1097-IC1097	5W27910.D	11/17/17 21:39	TCH	0.5	GCMS5W	TO-15
V5W1097-IC1097	5W27911.D	11/17/17 22:23	TCH	5	GCMS5W	TO-15
V5W1097-ICC1097	5W27912.D	11/17/17 23:08	TCH	10	GCMS5W	TO-15
V5W1097-IC1097	5W27913.D	11/17/17 23:55	TCH	20	GCMS5W	TO-15
V5W1097-IC1097	5W27915.D	11/18/17 01:32	TCH	40	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.37	8.18	0.656	ok 0.656	0.596-0.716
Acrylonitrile	5.75	8.18	0.703	ok 0.703	0.643-0.763
Acetonitrile	5.16	8.18	0.631	ok 0.631	0.571-0.691
1,3-Butadiene	4.52	8.18	0.553	ok 0.552	0.492-0.612
Benzene	9.87	8.18	1.207	ok 1.208	1.148-1.268
Bromobenzene	18.32	15.76	1.162	ok 1.163	1.103-1.223
Bromodichloromethane	11.06	10.29	1.075	ok 1.075	1.015-1.135
Bromoform	16.71	15.76	1.060	ok 1.061	1.001-1.121
Bromomethane	4.74	8.18	0.579	ok 0.578	0.518-0.638
Bromoethene	5.14	8.18	0.628	ok 0.628	0.568-0.688
n-Butane	4.56	8.18	0.557	ok 0.557	0.497-0.617
Benzyl Chloride	20.15	15.76	1.279	ok 1.279	1.219-1.339
n-Butylbenzene	21.16	15.76	1.343	ok 1.343	1.283-1.403
sec-Butylbenzene	20.34	15.76	1.291	ok 1.291	1.231-1.351
tert-Butylbenzene	19.95	15.76	1.266	ok 1.266	1.206-1.326
Carbon disulfide	6.38	8.18	0.780	ok 0.780	0.720-0.840
Chlorobenzene	15.82	15.76	1.004	ok 1.004	0.944-1.064
Chlorodifluoromethane	4.05	8.18	0.495	ok 0.494	0.434-0.554
Chloroethane	4.87	8.18	0.595	ok 0.594	0.534-0.654
Chlorotrifluoroethene	4.08	8.18	0.499	ok 0.497	0.437-0.557
Chloroform	8.31	8.18	1.016	ok 1.017	0.957-1.077
Chloromethane	4.25	8.18	0.520	ok 0.519	0.459-0.579
3-Chloropropene	6.22	8.18	0.760	ok 0.761	0.701-0.821
2-Chlorotoluene	18.94	15.76	1.202	ok 1.202	1.142-1.262
Carbon tetrachloride	10.03	8.18	1.226	ok 1.228	1.168-1.288
Cyclohexane	10.16	8.18	1.242	ok 1.243	1.183-1.303
1,1-Dichloroethane	7.17	8.18	0.877	ok 0.877	0.817-0.937
1,1-Dichloroethylene	6.02	8.18	0.736	ok 0.735	0.675-0.795
1,2-Dibromoethane	14.25	10.29	1.385	ok 1.386	1.326-1.446
1,2-Dichloroethane	9.09	8.18	1.111	ok 1.112	1.052-1.172
1,2-Dichloropropane	10.81	10.29	1.051	ok 1.051	0.991-1.111
1,3-Dichloropropane	13.43	10.29	1.305	ok 1.306	1.246-1.366
1,4-Dioxane	11.14	10.29	1.083	ok 1.085	1.025-1.145
Dichlorodifluoromethane	4.13	8.18	0.505	ok 0.504	0.444-0.564
Dichlorofluoromethane	4.94	8.18	0.604	ok 0.603	0.543-0.663
Dibromochloromethane	13.94	10.29	1.355	ok 1.355	1.295-1.415
Dibromomethane	10.79	10.29	1.049	ok 1.049	0.989-1.109
trans-1,2-Dichloroethylene	6.97	8.18	0.852	ok 0.852	0.792-0.912
cis-1,2-Dichloroethylene	8.00	8.18	0.978	ok 0.979	0.919-1.039
cis-1,3-Dichloropropene	12.16	10.29	1.182	ok 1.183	1.123-1.243

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1097-IC1097	5W27907.D	11/17/17 19:24	TCH	0.04	GCMS5W	TO-15
V5W1097-IC1097	5W27908.D	11/17/17 20:08	TCH	0.1	GCMS5W	TO-15
V5W1097-IC1097	5W27909.D	11/17/17 20:52	TCH	0.2	GCMS5W	TO-15
V5W1097-IC1097	5W27910.D	11/17/17 21:39	TCH	0.5	GCMS5W	TO-15
V5W1097-IC1097	5W27911.D	11/17/17 22:23	TCH	5	GCMS5W	TO-15
V5W1097-ICC1097	5W27912.D	11/17/17 23:08	TCH	10	GCMS5W	TO-15
V5W1097-IC1097	5W27913.D	11/17/17 23:55	TCH	20	GCMS5W	TO-15
V5W1097-IC1097	5W27915.D	11/18/17 01:32	TCH	40	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
m-Dichlorobenzene	20.15	15.76	1.279 ok	1.280	1.220-1.340
o-Dichlorobenzene	20.73	15.76	1.315 ok	1.316	1.256-1.376
p-Dichlorobenzene	20.26	15.76	1.286 ok	1.286	1.226-1.346
trans-1,3-Dichloropropene	12.83	10.29	1.247 ok	1.248	1.188-1.308
Di-Isopropyl ether	8.21	8.18	1.004 ok	1.006	0.946-1.066
2,3-Dimethylpentane	10.44	8.18	1.276 ok	1.278	1.218-1.338
2,4-Dimethylpentane	9.12	8.18	1.115 ok	1.117	1.057-1.177
Ethanol	4.99	8.18	0.610 ok	0.609	0.549-0.669
Ethylbenzene	16.36	15.76	1.038 ok	1.039	0.979-1.099
Ethyl Acetate	8.26	8.18	1.010 ok	1.012	0.952-1.072
Ethyl Acrylate	10.87	10.29	1.056 ok	1.058	0.998-1.118
4-Ethyltoluene	19.24	15.76	1.221 ok	1.222	1.162-1.282
Freon 113	6.35	8.18	0.776 ok	0.775	0.715-0.835
Freon 114	4.33	8.18	0.529 ok	0.528	0.468-0.588
Freon 123	5.26	8.18	0.643 ok	0.642	0.582-0.702
Freon 123A	5.31	8.18	0.649 ok	0.648	0.588-0.708
Freon 141B	5.58	8.18	0.682 ok	0.681	0.621-0.741
Freon 142B	4.24	8.18	0.518 ok	0.517	0.457-0.577
Freon 143a	3.92	8.18	0.479 ok	0.478	0.418-0.538
Freon 152A	4.02	8.18	0.491 ok	0.490	0.430-0.550
Heptane	11.45	10.29	1.113 ok	1.113	1.053-1.173
Hexachlorobutadiene	23.55	15.76	1.494 ok	1.495	1.435-1.555
Hexachloroethane	21.62	15.76	1.372 ok	1.372	1.312-1.432
Hexane	8.19	8.18	1.001 ok	1.002	0.942-1.062
2-Hexanone	13.77	10.29	1.338 ok	1.341	1.281-1.401
Iodomethane	5.95	8.18	0.727 ok	0.727	0.667-0.787
Isopropylbenzene	18.21	15.76	1.155 ok	1.156	1.096-1.216
Isopropyl Alcohol	5.58	8.18	0.682 ok	0.682	0.622-0.742
p-Isopropyltoluene	20.58	15.76	1.306 ok	1.306	1.246-1.366
Methylene chloride	6.13	8.18	0.749 ok	0.749	0.689-0.809
Methyl ethyl ketone	7.59	8.18	0.928 ok	0.930	0.870-0.990
Methyl Isobutyl Ketone	12.23	10.29	1.189 ok	1.190	1.130-1.250
Methyl Tert Butyl Ether	7.24	8.18	0.885 ok	0.887	0.827-0.947
Methylmethacrylate	11.39	10.29	1.107 ok	1.108	1.048-1.168
Naphthalene	23.09	15.76	1.465 ok	1.466	1.406-1.526
Nonane	17.69	15.76	1.122 ok	1.123	1.063-1.183
Octane	14.71	10.29	1.430 ok	1.431	1.371-1.491
Pentane	5.75	8.18	0.703 ok	0.703	0.643-0.763
n-Propylbenzene	19.02	15.76	1.207 ok	1.207	1.147-1.267
Propylene	4.06	8.18	0.496 ok	0.496	0.436-0.556

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1097-IC1097	5W27907.D	11/17/17 19:24	TCH	0.04	GCMS5W	TO-15
V5W1097-IC1097	5W27908.D	11/17/17 20:08	TCH	0.1	GCMS5W	TO-15
V5W1097-IC1097	5W27909.D	11/17/17 20:52	TCH	0.2	GCMS5W	TO-15
V5W1097-IC1097	5W27910.D	11/17/17 21:39	TCH	0.5	GCMS5W	TO-15
V5W1097-IC1097	5W27911.D	11/17/17 22:23	TCH	5	GCMS5W	TO-15
V5W1097-ICC1097	5W27912.D	11/17/17 23:08	TCH	10	GCMS5W	TO-15
V5W1097-IC1097	5W27913.D	11/17/17 23:55	TCH	20	GCMS5W	TO-15
V5W1097-IC1097	5W27915.D	11/18/17 01:32	TCH	40	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Styrene	17.16	15.76	1.089 ok	1.090	1.030-1.150
1,1,1-Trichloroethane	9.36	8.18	1.144 ok	1.145	1.085-1.205
1,1,1,2-Tetrachloroethane	15.80	10.29	1.535 ok	1.537	1.477-1.597
1,1,2,2-Tetrachloroethane	17.31	15.76	1.098 ok	1.099	1.039-1.159
1,1,2-Trichloroethane	13.04	10.29	1.267 ok	1.268	1.208-1.328
1,2,4-Trichlorobenzene	22.97	15.76	1.457 ok	1.458	1.398-1.518
1,2,3-Trichloropropane	17.50	15.76	1.110 ok	1.111	1.051-1.171
1,2,4-Trimethylbenzene	19.96	15.76	1.266 ok	1.267	1.207-1.327
1,3,5-Trimethylbenzene	19.37	15.76	1.229 ok	1.230	1.170-1.290
2,2,4-Trimethylpentane	11.11	10.29	1.080 ok	1.080	1.020-1.140
Tertiary Butyl Alcohol	6.08	8.18	0.743 ok	0.745	0.685-0.805
Tetrachloroethylene	14.88	10.29	1.446 ok	1.447	1.387-1.507
Tetrahydrofuran	8.76	8.18	1.071 ok	1.076	1.016-1.136
Toluene	13.38	10.29	1.300 ok	1.302	1.242-1.362
Trichloroethylene	11.10	10.29	1.079 ok	1.079	1.019-1.139
Trichlorofluoromethane	5.47	8.18	0.669 ok	0.668	0.608-0.728
Vinyl chloride	4.42	8.18	0.540 ok	0.539	0.479-0.599
Vinyl Acetate	7.32	8.18	0.895 ok	0.896	0.836-0.956
m,p-Xylene	16.64	15.76	1.056 ok	1.055	0.995-1.115
o-Xylene	17.30	15.76	1.098 ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.75	15.76	0.365 ok	0.364	0.304-0.424

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.18 ok	8.16	7.83-8.49	323377 ok	320846	192508-449184
1,4-Difluorobenzene	10.29 ok	10.28	9.95-10.61	1129790 ok	1131216	678730-1583702
Chlorobenzene-D5	15.76 ok	15.75	15.42-16.08	493329 ok	475827	285496-666158

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1097-IC1097	5W27907.D	11/17/17 19:24	TCH	0.04	GCMS5W	TO-15
V5W1097-IC1097	5W27908.D	11/17/17 20:08	TCH	0.1	GCMS5W	TO-15
V5W1097-IC1097	5W27909.D	11/17/17 20:52	TCH	0.2	GCMS5W	TO-15
V5W1097-IC1097	5W27910.D	11/17/17 21:39	TCH	0.5	GCMS5W	TO-15
V5W1097-IC1097	5W27911.D	11/17/17 22:23	TCH	5	GCMS5W	TO-15
V5W1097-ICC1097	5W27912.D	11/17/17 23:08	TCH	10	GCMS5W	TO-15
V5W1097-IC1097	5W27913.D	11/17/17 23:55	TCH	20	GCMS5W	TO-15
V5W1097-IC1097	5W27915.D	11/18/17 01:32	TCH	40	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.35	8.17	0.655 ok	0.656	0.596-0.716
Acrylonitrile	5.73	8.17	0.701 ok	0.703	0.643-0.763
Acetonitrile	5.15	8.17	0.630 ok	0.631	0.571-0.691
1,3-Butadiene	4.51	8.17	0.552 ok	0.552	0.492-0.612
Benzene	9.86	8.17	1.207 ok	1.208	1.148-1.268
Bromobenzene	18.32	15.76	1.162 ok	1.163	1.103-1.223
Bromodichloromethane	11.06	10.29	1.075 ok	1.075	1.015-1.135
Bromoform	16.71	15.76	1.060 ok	1.061	1.001-1.121
Bromomethane	4.72	8.17	0.578 ok	0.578	0.518-0.638
Bromoethene	5.13	8.17	0.628 ok	0.628	0.568-0.688
n-Butane	4.55	8.17	0.557 ok	0.557	0.497-0.617
Benzyl Chloride	20.15	15.76	1.279 ok	1.279	1.219-1.339
n-Butylbenzene	21.16	15.76	1.343 ok	1.343	1.283-1.403
sec-Butylbenzene	20.34	15.76	1.291 ok	1.291	1.231-1.351
tert-Butylbenzene	19.95	15.76	1.266 ok	1.266	1.206-1.326
Carbon disulfide	6.38	8.17	0.781 ok	0.780	0.720-0.840
Chlorobenzene	15.82	15.76	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	4.04	8.17	0.494 ok	0.494	0.434-0.554
Chloroethane	4.85	8.17	0.594 ok	0.594	0.534-0.654
Chlorotrifluoroethene	4.07	8.17	0.498 ok	0.497	0.437-0.557
Chloroform	8.30	8.17	1.016 ok	1.017	0.957-1.077
Chloromethane	4.25	8.17	0.520 ok	0.519	0.459-0.579
3-Chloropropene	6.22	8.17	0.761 ok	0.761	0.701-0.821
2-Chlorotoluene	18.94	15.76	1.202 ok	1.202	1.142-1.262
Carbon tetrachloride	10.03	8.17	1.228 ok	1.228	1.168-1.288
Cyclohexane	10.15	8.17	1.242 ok	1.243	1.183-1.303
1,1-Dichloroethane	7.16	8.17	0.876 ok	0.877	0.817-0.937
1,1-Dichloroethylene	6.00	8.17	0.734 ok	0.735	0.675-0.795
1,2-Dibromoethane	14.25	10.29	1.385 ok	1.386	1.326-1.446
1,2-Dichloroethane	9.08	8.17	1.111 ok	1.112	1.052-1.172
1,2-Dichloropropane	10.81	10.29	1.051 ok	1.051	0.991-1.111
1,3-Dichloropropane	13.42	10.29	1.304 ok	1.306	1.246-1.366
1,4-Dioxane	11.14	10.29	1.083 ok	1.085	1.025-1.145
Dichlorodifluoromethane	4.12	8.17	0.504 ok	0.504	0.444-0.564
Dichlorofluoromethane	4.93	8.17	0.603 ok	0.603	0.543-0.663
Dibromochloromethane	13.94	10.29	1.355 ok	1.355	1.295-1.415
Dibromomethane	10.79	10.29	1.049 ok	1.049	0.989-1.109
trans-1,2-Dichloroethylene	6.96	8.17	0.852 ok	0.852	0.792-0.912
cis-1,2-Dichloroethylene	8.00	8.17	0.979 ok	0.979	0.919-1.039
cis-1,3-Dichloropropene	12.16	10.29	1.182 ok	1.183	1.123-1.243

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1097-IC1097	5W27907.D	11/17/17 19:24	TCH	0.04	GCMS5W	TO-15
V5W1097-IC1097	5W27908.D	11/17/17 20:08	TCH	0.1	GCMS5W	TO-15
V5W1097-IC1097	5W27909.D	11/17/17 20:52	TCH	0.2	GCMS5W	TO-15
V5W1097-IC1097	5W27910.D	11/17/17 21:39	TCH	0.5	GCMS5W	TO-15
V5W1097-IC1097	5W27911.D	11/17/17 22:23	TCH	5	GCMS5W	TO-15
V5W1097-ICC1097	5W27912.D	11/17/17 23:08	TCH	10	GCMS5W	TO-15
V5W1097-IC1097	5W27913.D	11/17/17 23:55	TCH	20	GCMS5W	TO-15 Reporting this level
V5W1097-IC1097	5W27915.D	11/18/17 01:32	TCH	40	GCMS5W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
m-Dichlorobenzene	20.15	15.76	1.279 ok	1.280	1.220-1.340
o-Dichlorobenzene	20.73	15.76	1.315 ok	1.316	1.256-1.376
p-Dichlorobenzene	20.26	15.76	1.286 ok	1.286	1.226-1.346
trans-1,3-Dichloropropene	12.83	10.29	1.247 ok	1.248	1.188-1.308
Di-Isopropyl ether	8.21	8.17	1.005 ok	1.006	0.946-1.066
2,3-Dimethylpentane	10.43	8.17	1.277 ok	1.278	1.218-1.338
2,4-Dimethylpentane	9.12	8.17	1.116 ok	1.117	1.057-1.177
Ethanol	4.97	8.17	0.608 ok	0.609	0.549-0.669
Ethylbenzene	16.36	15.76	1.038 ok	1.039	0.979-1.099
Ethyl Acetate	8.25	8.17	1.010 ok	1.012	0.952-1.072
Ethyl Acrylate	10.86	10.29	1.055 ok	1.058	0.998-1.118
4-Ethyltoluene	19.24	15.76	1.221 ok	1.222	1.162-1.282
Freon 113	6.33	8.17	0.775 ok	0.775	0.715-0.835
Freon 114	4.31	8.17	0.528 ok	0.528	0.468-0.588
Freon 123	5.25	8.17	0.643 ok	0.642	0.582-0.702
Freon 123A	5.29	8.17	0.647 ok	0.648	0.588-0.708
Freon 141B	5.56	8.17	0.681 ok	0.681	0.621-0.741
Freon 142B	4.23	8.17	0.518 ok	0.517	0.457-0.577
Freon 143a	3.92	8.17	0.480 ok	0.478	0.418-0.538
Freon 152A	4.01	8.17	0.491 ok	0.490	0.430-0.550
Heptane	11.45	10.29	1.113 ok	1.113	1.053-1.173
Hexachlorobutadiene	23.55	15.76	1.494 ok	1.495	1.435-1.555
Hexachloroethane	21.62	15.76	1.372 ok	1.372	1.312-1.432
Hexane	8.18	8.17	1.001 ok	1.002	0.942-1.062
2-Hexanone	13.77	10.29	1.338 ok	1.341	1.281-1.401
Iodomethane	5.94	8.17	0.727 ok	0.727	0.667-0.787
Isopropylbenzene	18.21	15.76	1.155 ok	1.156	1.096-1.216
Isopropyl Alcohol	5.56	8.17	0.681 ok	0.682	0.622-0.742
p-Isopropyltoluene	20.58	15.76	1.306 ok	1.306	1.246-1.366
Methylene chloride	6.12	8.17	0.749 ok	0.749	0.689-0.809
Methyl ethyl ketone	7.58	8.17	0.928 ok	0.930	0.870-0.990
Methyl Isobutyl Ketone	12.22	10.29	1.188 ok	1.190	1.130-1.250
Methyl Tert Butyl Ether	7.23	8.17	0.885 ok	0.887	0.827-0.947
Methylmethacrylate	11.38	10.29	1.106 ok	1.108	1.048-1.168
Naphthalene	23.09	15.76	1.465 ok	1.466	1.406-1.526
Nonane	17.69	15.76	1.122 ok	1.123	1.063-1.183
Octane	14.72	10.29	1.431 ok	1.431	1.371-1.491
Pentane	5.75	8.17	0.704 ok	0.703	0.643-0.763
n-Propylbenzene	19.02	15.76	1.207 ok	1.207	1.147-1.267
Propylene	4.06	8.17	0.497 ok	0.496	0.436-0.556

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1097-IC1097	5W27907.D	11/17/17 19:24	TCH	0.04	GCMS5W	TO-15
V5W1097-IC1097	5W27908.D	11/17/17 20:08	TCH	0.1	GCMS5W	TO-15
V5W1097-IC1097	5W27909.D	11/17/17 20:52	TCH	0.2	GCMS5W	TO-15
V5W1097-IC1097	5W27910.D	11/17/17 21:39	TCH	0.5	GCMS5W	TO-15
V5W1097-IC1097	5W27911.D	11/17/17 22:23	TCH	5	GCMS5W	TO-15
V5W1097-ICC1097	5W27912.D	11/17/17 23:08	TCH	10	GCMS5W	TO-15
V5W1097-IC1097	5W27913.D	11/17/17 23:55	TCH	20	GCMS5W	TO-15
V5W1097-IC1097	5W27915.D	11/18/17 01:32	TCH	40	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Styrene	17.16	15.76	1.089 ok	1.090	1.030-1.150
1,1,1-Trichloroethane	9.35	8.17	1.144 ok	1.145	1.085-1.205
1,1,1,2-Tetrachloroethane	15.80	10.29	1.535 ok	1.537	1.477-1.597
1,1,2,2-Tetrachloroethane	17.31	15.76	1.098 ok	1.099	1.039-1.159
1,1,2-Trichloroethane	13.04	10.29	1.267 ok	1.268	1.208-1.328
1,2,4-Trichlorobenzene	22.97	15.76	1.457 ok	1.458	1.398-1.518
1,2,3-Trichloropropane	17.50	15.76	1.110 ok	1.111	1.051-1.171
1,2,4-Trimethylbenzene	19.96	15.76	1.266 ok	1.267	1.207-1.327
1,3,5-Trimethylbenzene	19.37	15.76	1.229 ok	1.230	1.170-1.290
2,2,4-Trimethylpentane	11.11	10.29	1.080 ok	1.080	1.020-1.140
Tertiary Butyl Alcohol	6.08	8.17	0.744 ok	0.745	0.685-0.805
Tetrachloroethylene	14.88	10.29	1.446 ok	1.447	1.387-1.507
Tetrahydrofuran	8.75	8.17	1.071 ok	1.076	1.016-1.136
Toluene	13.38	10.29	1.300 ok	1.302	1.242-1.362
Trichloroethylene	11.09	10.29	1.078 ok	1.079	1.019-1.139
Trichlorofluoromethane	5.47	8.17	0.670 ok	0.668	0.608-0.728
Vinyl chloride	4.41	8.17	0.540 ok	0.539	0.479-0.599
Vinyl Acetate	7.32	8.17	0.896 ok	0.896	0.836-0.956
m,p-Xylene	16.64	15.76	1.056 ok	1.055	0.995-1.115
o-Xylene	17.30	15.76	1.098 ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.74	15.76	0.364 ok	0.364	0.304-0.424

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.17 ok	8.16	7.83-8.49	326637	ok 320846	192508-449184
1,4-Difluorobenzene	10.29 ok	10.28	9.95-10.61	1128229	ok 1131216	678730-1583702
Chlorobenzene-D5	15.76 ok	15.75	15.42-16.08	441211	ok 475827	285496-666158

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1097-IC1097	5W27907.D	11/17/17 19:24	TCH	0.04	GCMS5W	TO-15
V5W1097-IC1097	5W27908.D	11/17/17 20:08	TCH	0.1	GCMS5W	TO-15
V5W1097-IC1097	5W27909.D	11/17/17 20:52	TCH	0.2	GCMS5W	TO-15
V5W1097-IC1097	5W27910.D	11/17/17 21:39	TCH	0.5	GCMS5W	TO-15
V5W1097-IC1097	5W27911.D	11/17/17 22:23	TCH	5	GCMS5W	TO-15
V5W1097-ICC1097	5W27912.D	11/17/17 23:08	TCH	10	GCMS5W	TO-15
V5W1097-IC1097	5W27913.D	11/17/17 23:55	TCH	20	GCMS5W	TO-15
V5W1097-IC1097	5W27915.D	11/18/17 01:32	TCH	40	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.35	8.18	0.654	ok 0.656	0.596-0.716
Acrylonitrile	5.74	8.18	0.702	ok 0.703	0.643-0.763
Acetonitrile	5.15	8.18	0.630	ok 0.631	0.571-0.691
1,3-Butadiene	4.51	8.18	0.551	ok 0.552	0.492-0.612
Benzene	9.87	8.18	1.207	ok 1.208	1.148-1.268
Bromobenzene	18.32	15.76	1.162	ok 1.163	1.103-1.223
Bromodichloromethane	11.06	10.29	1.075	ok 1.075	1.015-1.135
Bromoform	16.72	15.76	1.061	ok 1.061	1.001-1.121
Bromomethane	4.72	8.18	0.577	ok 0.578	0.518-0.638
Bromoethene	5.13	8.18	0.627	ok 0.628	0.568-0.688
n-Butane	4.55	8.18	0.556	ok 0.557	0.497-0.617
Benzyl Chloride	20.15	15.76	1.279	ok 1.279	1.219-1.339
n-Butylbenzene	21.16	15.76	1.343	ok 1.343	1.283-1.403
sec-Butylbenzene	20.35	15.76	1.291	ok 1.291	1.231-1.351
tert-Butylbenzene	19.96	15.76	1.266	ok 1.266	1.206-1.326
Carbon disulfide	6.38	8.18	0.780	ok 0.780	0.720-0.840
Chlorobenzene	15.82	15.76	1.004	ok 1.004	0.944-1.064
Chlorodifluoromethane	4.04	8.18	0.494	ok 0.494	0.434-0.554
Chloroethane	4.85	8.18	0.593	ok 0.594	0.534-0.654
Chlorotrifluoroethene	4.06	8.18	0.496	ok 0.497	0.437-0.557
Chloroform	8.31	8.18	1.016	ok 1.017	0.957-1.077
Chloromethane	4.24	8.18	0.518	ok 0.519	0.459-0.579
3-Chloropropene	6.22	8.18	0.760	ok 0.761	0.701-0.821
2-Chlorotoluene	18.94	15.76	1.202	ok 1.202	1.142-1.262
Carbon tetrachloride	10.03	8.18	1.226	ok 1.228	1.168-1.288
Cyclohexane	10.15	8.18	1.241	ok 1.243	1.183-1.303
1,1-Dichloroethane	7.17	8.18	0.877	ok 0.877	0.817-0.937
1,1-Dichloroethylene	6.00	8.18	0.733	ok 0.735	0.675-0.795
1,2-Dibromoethane	14.26	10.29	1.386	ok 1.386	1.326-1.446
1,2-Dichloroethane	9.09	8.18	1.111	ok 1.112	1.052-1.172
1,2-Dichloropropane	10.81	10.29	1.051	ok 1.051	0.991-1.111
1,3-Dichloropropane	13.43	10.29	1.305	ok 1.306	1.246-1.366
1,4-Dioxane	11.14	10.29	1.083	ok 1.085	1.025-1.145
Dichlorodifluoromethane	4.12	8.18	0.504	ok 0.504	0.444-0.564
Dichlorofluoromethane	4.93	8.18	0.603	ok 0.603	0.543-0.663
Dibromochloromethane	13.94	10.29	1.355	ok 1.355	1.295-1.415
Dibromomethane	10.79	10.29	1.049	ok 1.049	0.989-1.109
trans-1,2-Dichloroethylene	6.96	8.18	0.851	ok 0.852	0.792-0.912
cis-1,2-Dichloroethylene	8.00	8.18	0.978	ok 0.979	0.919-1.039
cis-1,3-Dichloropropene	12.16	10.29	1.182	ok 1.183	1.123-1.243

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1097-IC1097	5W27907.D	11/17/17 19:24	TCH	0.04	GCMS5W	TO-15
V5W1097-IC1097	5W27908.D	11/17/17 20:08	TCH	0.1	GCMS5W	TO-15
V5W1097-IC1097	5W27909.D	11/17/17 20:52	TCH	0.2	GCMS5W	TO-15
V5W1097-IC1097	5W27910.D	11/17/17 21:39	TCH	0.5	GCMS5W	TO-15
V5W1097-IC1097	5W27911.D	11/17/17 22:23	TCH	5	GCMS5W	TO-15
V5W1097-ICC1097	5W27912.D	11/17/17 23:08	TCH	10	GCMS5W	TO-15
V5W1097-IC1097	5W27913.D	11/17/17 23:55	TCH	20	GCMS5W	TO-15
V5W1097-IC1097	5W27915.D	11/18/17 01:32	TCH	40	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
m-Dichlorobenzene	20.17	15.76	1.280 ok	1.280	1.220-1.340
o-Dichlorobenzene	20.73	15.76	1.315 ok	1.316	1.256-1.376
p-Dichlorobenzene	20.26	15.76	1.286 ok	1.286	1.226-1.346
trans-1,3-Dichloropropene	12.83	10.29	1.247 ok	1.248	1.188-1.308
Di-Isopropyl ether	8.21	8.18	1.004 ok	1.006	0.946-1.066
2,3-Dimethylpentane	10.44	8.18	1.276 ok	1.278	1.218-1.338
2,4-Dimethylpentane	9.12	8.18	1.115 ok	1.117	1.057-1.177
Ethanol	4.98	8.18	0.609 ok	0.609	0.549-0.669
Ethylbenzene	16.37	15.76	1.039 ok	1.039	0.979-1.099
Ethyl Acetate	8.26	8.18	1.010 ok	1.012	0.952-1.072
Ethyl Acrylate	10.87	10.29	1.056 ok	1.058	0.998-1.118
4-Ethyltoluene	19.25	15.76	1.221 ok	1.222	1.162-1.282
Freon 113	6.33	8.18	0.774 ok	0.775	0.715-0.835
Freon 114	4.31	8.18	0.527 ok	0.528	0.468-0.588
Freon 123	5.25	8.18	0.642 ok	0.642	0.582-0.702
Freon 123A	5.29	8.18	0.647 ok	0.648	0.588-0.708
Freon 141B	5.56	8.18	0.680 ok	0.681	0.621-0.741
Freon 142B	4.22	8.18	0.516 ok	0.517	0.457-0.577
Freon 143a	3.91	8.18	0.478 ok	0.478	0.418-0.538
Freon 152A	4.00	8.18	0.489 ok	0.490	0.430-0.550
Heptane	11.45	10.29	1.113 ok	1.113	1.053-1.173
Hexachlorobutadiene	23.55	15.76	1.494 ok	1.495	1.435-1.555
Hexachloroethane	21.63	15.76	1.372 ok	1.372	1.312-1.432
Hexane	8.18	8.18	1.000 ok	1.002	0.942-1.062
2-Hexanone	13.78	10.29	1.339 ok	1.341	1.281-1.401
Iodomethane	5.94	8.18	0.726 ok	0.727	0.667-0.787
Isopropylbenzene	18.21	15.76	1.155 ok	1.156	1.096-1.216
Isopropyl Alcohol	5.58	8.18	0.682 ok	0.682	0.622-0.742
p-Isopropyltoluene	20.59	15.76	1.306 ok	1.306	1.246-1.366
Methylene chloride	6.12	8.18	0.748 ok	0.749	0.689-0.809
Methyl ethyl ketone	7.58	8.18	0.927 ok	0.930	0.870-0.990
Methyl Isobutyl Ketone	12.22	10.29	1.188 ok	1.190	1.130-1.250
Methyl Tert Butyl Ether	7.23	8.18	0.884 ok	0.887	0.827-0.947
Methylmethacrylate	11.39	10.29	1.107 ok	1.108	1.048-1.168
Naphthalene	23.10	15.76	1.466 ok	1.466	1.406-1.526
Nonane	17.69	15.76	1.122 ok	1.123	1.063-1.183
Octane	14.72	10.29	1.431 ok	1.431	1.371-1.491
Pentane	5.75	8.18	0.703 ok	0.703	0.643-0.763
n-Propylbenzene	19.02	15.76	1.207 ok	1.207	1.147-1.267
Propylene	4.06	8.18	0.496 ok	0.496	0.436-0.556

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V5W1097-IC1097	5W27907.D	11/17/17 19:24	TCH	0.04	GCMS5W	TO-15
V5W1097-IC1097	5W27908.D	11/17/17 20:08	TCH	0.1	GCMS5W	TO-15
V5W1097-IC1097	5W27909.D	11/17/17 20:52	TCH	0.2	GCMS5W	TO-15
V5W1097-IC1097	5W27910.D	11/17/17 21:39	TCH	0.5	GCMS5W	TO-15
V5W1097-IC1097	5W27911.D	11/17/17 22:23	TCH	5	GCMS5W	TO-15
V5W1097-ICC1097	5W27912.D	11/17/17 23:08	TCH	10	GCMS5W	TO-15
V5W1097-IC1097	5W27913.D	11/17/17 23:55	TCH	20	GCMS5W	TO-15
V5W1097-IC1097	5W27915.D	11/18/17 01:32	TCH	40	GCMS5W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Styrene	17.16	15.76	1.089 ok	1.090	1.030-1.150
1,1,1-Trichloroethane	9.35	8.18	1.143 ok	1.145	1.085-1.205
1,1,1,2-Tetrachloroethane	15.80	10.29	1.535 ok	1.537	1.477-1.597
1,1,2,2-Tetrachloroethane	17.31	15.76	1.098 ok	1.099	1.039-1.159
1,1,2-Trichloroethane	13.04	10.29	1.267 ok	1.268	1.208-1.328
1,2,3-Trichloropropane	17.50	15.76	1.110 ok	1.111	1.051-1.171
1,2,4-Trimethylbenzene	19.97	15.76	1.267 ok	1.267	1.207-1.327
1,3,5-Trimethylbenzene	19.38	15.76	1.230 ok	1.230	1.170-1.290
2,2,4-Trimethylpentane	11.11	10.29	1.080 ok	1.080	1.020-1.140
Tertiary Butyl Alcohol	6.08	8.18	0.743 ok	0.745	0.685-0.805
Tetrachloroethylene	14.88	10.29	1.446 ok	1.447	1.387-1.507
Tetrahydrofuran	8.75	8.18	1.070 ok	1.076	1.016-1.136
Toluene	13.39	10.29	1.301 ok	1.302	1.242-1.362
Trichloroethylene	11.10	10.29	1.079 ok	1.079	1.019-1.139
Trichlorofluoromethane	5.46	8.18	0.667 ok	0.668	0.608-0.728
Vinyl chloride	4.41	8.18	0.539 ok	0.539	0.479-0.599
Vinyl Acetate	7.32	8.18	0.895 ok	0.896	0.836-0.956
m,p-Xylene	16.64	15.76	1.056 ok	1.055	0.995-1.115
o-Xylene	17.31	15.76	1.098 ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.74	15.76	0.364 ok	0.364	0.304-0.424

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.18 ok	8.16	7.83-8.49	331708	ok 320846	192508-449184
1,4-Difluorobenzene	10.29 ok	10.28	9.95-10.61	1118824	ok 1131216	678730-1583702
Chlorobenzene-D5	15.76 ok	15.75	15.42-16.08	416722	ok 475827	285496-666158

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W76-IC76	6W02918.D	11/07/17 16:11	DFT	0.04	GCMS6W	TO-15	Reporting this level
V6W76-IC76	6W02919.D	11/07/17 17:01	DFT	0.1	GCMS6W	TO-15	
V6W76-IC76	6W02920.D	11/07/17 17:52	DFT	0.2	GCMS6W	TO-15	
V6W76-IC76	6W02921.D	11/07/17 18:44	DFT	0.5	GCMS6W	TO-15	
V6W76-IC76	6W02922.D	11/07/17 19:35	DFT	5	GCMS6W	TO-15	
V6W76-ICC76	6W02923.D	11/07/17 20:26	DFT	10	GCMS6W	TO-15	
V6W76-IC76	6W02924.D	11/07/17 21:19	DFT	20	GCMS6W	TO-15	
V6W76-IC76	6W02925.D	11/07/17 22:15	DFT	40	GCMS6W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acrylonitrile	5.58	8.19	0.681 ok	0.681	0.621-0.741
Acetonitrile	4.93	8.19	0.602 ok	0.602	0.542-0.662
1,3-Butadiene	4.27	8.19	0.521 ok	0.521	0.461-0.581
Benzene	9.96	8.19	1.216 ok	1.216	1.156-1.276
Bromobenzene	18.50	15.93	1.161 ok	1.161	1.101-1.221
Bromodichloromethane	11.18	10.39	1.076 ok	1.076	1.016-1.136
Bromoform	16.89	15.93	1.060 ok	1.060	1.000-1.120
Bromomethane	4.49	8.19	0.548 ok	0.549	0.489-0.609
Bromoethene	4.94	8.19	0.603 ok	0.603	0.543-0.663
Benzyl Chloride	20.29	15.93	1.274 ok	1.274	1.214-1.334
n-Butylbenzene	21.27	15.93	1.335 ok	1.335	1.275-1.395
sec-Butylbenzene	20.48	15.93	1.286 ok	1.286	1.226-1.346
tert-Butylbenzene	20.09	15.93	1.261 ok	1.261	1.201-1.321
Carbon disulfide	6.29	8.19	0.768 ok	0.768	0.708-0.828
Chlorobenzene	16.00	15.93	1.004 ok	1.004	0.944-1.064
Chlorotrifluoroethene	3.80	8.19	0.464 ok	0.464	0.404-0.524
Chloroform	8.34	8.19	1.018 ok	1.018	0.958-1.078
Chloromethane	3.99	8.19	0.487 ok	0.487	0.427-0.547
2-Chlorotoluene	19.12	15.93	1.200 ok	1.200	1.140-1.260
Carbon tetrachloride	10.13	8.19	1.237 ok	1.236	1.176-1.296
Cyclohexane	10.27	8.19	1.254 ok	1.253	1.193-1.313
1,1-Dichloroethane	7.12	8.19	0.869 ok	0.870	0.810-0.930
1,1-Dichloroethylene	5.88	8.19	0.718 ok	0.719	0.659-0.779
1,2-Dibromoethane	14.42	10.39	1.388 ok	1.387	1.327-1.447
1,2-Dichloroethane	9.16	8.19	1.118 ok	1.117	1.057-1.177
1,2-Dichloropropane	10.94	10.39	1.053 ok	1.052	0.992-1.112
1,3-Dichloropropane	13.59	10.39	1.308 ok	1.308	1.248-1.368
Dichlorodifluoromethane	3.86	8.19	0.471 ok	0.471	0.411-0.531
Dichlorofluoromethane	4.71	8.19	0.575 ok	0.576	0.516-0.636
Dibromochloromethane	14.10	10.39	1.357 ok	1.357	1.297-1.417
Dibromomethane	10.91	10.39	1.050 ok	1.050	0.990-1.110
trans-1,2-Dichloroethylene	6.92	8.19	0.845 ok	0.845	0.785-0.905
cis-1,2-Dichloroethylene	8.01	8.19	0.978 ok	0.978	0.918-1.038
cis-1,3-Dichloropropene	12.30	10.39	1.184 ok	1.184	1.124-1.244
m-Dichlorobenzene	20.30	15.93	1.274 ok	1.274	1.214-1.334
o-Dichlorobenzene	20.86	15.93	1.309 ok	1.309	1.249-1.369
p-Dichlorobenzene	20.40	15.93	1.281 ok	1.281	1.221-1.341
trans-1,3-Dichloropropene	12.98	10.39	1.249 ok	1.249	1.189-1.309
Di-Isopropyl ether	8.24	8.19	1.006 ok	1.004	0.944-1.064
2,3-Dimethylpentane	10.55	8.19	1.288 ok	1.289	1.229-1.349

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W76-IC76	6W02918.D	11/07/17 16:11	DFT	0.04	GCMS6W	TO-15	Reporting this level
V6W76-IC76	6W02919.D	11/07/17 17:01	DFT	0.1	GCMS6W	TO-15	
V6W76-IC76	6W02920.D	11/07/17 17:52	DFT	0.2	GCMS6W	TO-15	
V6W76-IC76	6W02921.D	11/07/17 18:44	DFT	0.5	GCMS6W	TO-15	
V6W76-IC76	6W02922.D	11/07/17 19:35	DFT	5	GCMS6W	TO-15	
V6W76-ICC76	6W02923.D	11/07/17 20:26	DFT	10	GCMS6W	TO-15	
V6W76-IC76	6W02924.D	11/07/17 21:19	DFT	20	GCMS6W	TO-15	
V6W76-IC76	6W02925.D	11/07/17 22:15	DFT	40	GCMS6W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
2,4-Dimethylpentane	9.20	8.19	1.123 ok	1.123	1.063-1.183
Ethanol	4.74	8.19	0.579 ok	0.578	0.518-0.638
Ethylbenzene	16.54	15.93	1.038 ok	1.038	0.978-1.098
Ethyl Acrylate	10.98	10.39	1.057 ok	1.056	0.996-1.116
4-Ethyltoluene	19.41	15.93	1.218 ok	1.218	1.158-1.278
Freon 113	6.25	8.19	0.763 ok	0.763	0.703-0.823
Freon 114	4.07	8.19	0.497 ok	0.497	0.437-0.557
Freon 123A	5.12	8.19	0.625 ok	0.625	0.565-0.685
Freon 141B	5.41	8.19	0.661 ok	0.660	0.600-0.720
Freon 142B	3.97	8.19	0.485 ok	0.485	0.425-0.545
Freon 152A	3.73	8.19	0.455 ok	0.456	0.396-0.516
Heptane	11.60	10.39	1.116 ok	1.115	1.055-1.175
Hexachlorobutadiene	23.63	15.93	1.483 ok	1.483	1.423-1.543
Hexachloroethane	21.75	15.93	1.365 ok	1.365	1.305-1.425
Hexane	8.22	8.19	1.004 ok	1.004	0.944-1.064
2-Hexanone	13.95	10.39	1.343 ok	1.340	1.280-1.400
Iodomethane	5.82	8.19	0.711 ok	0.710	0.650-0.770
Isopropylbenzene	18.39	15.93	1.154 ok	1.154	1.094-1.214
p-Isopropyltoluene	20.71	15.93	1.300 ok	1.300	1.240-1.360
Methylene chloride	6.00	8.19	0.733 ok	0.733	0.673-0.793
Methyl Isobutyl Ketone	12.39	10.39	1.192 ok	1.190	1.130-1.250
Methyl Tert Butyl Ether	7.21	8.19	0.880 ok	0.878	0.818-0.938
Methylmethacrylate	11.50	10.39	1.107 ok	1.106	1.046-1.166
Naphthalene	23.18	15.93	1.455 ok	1.455	1.395-1.515
Nonane	17.86	15.93	1.121 ok	1.122	1.062-1.182
Octane	14.89	10.39	1.433 ok	1.432	1.372-1.492
n-Propylbenzene	19.19	15.93	1.205 ok	1.204	1.144-1.264
Propylene	3.80	8.19	0.464 ok	0.464	0.404-0.524
Styrene	17.33	15.93	1.088 ok	1.088	1.028-1.148
1,1,1-Trichloroethane	9.43	8.19	1.151 ok	1.151	1.091-1.211
1,1,1,2-Tetrachloroethane	15.98	10.39	1.538 ok	1.537	1.477-1.597
1,1,2,2-Tetrachloroethane	17.49	15.93	1.098 ok	1.098	1.038-1.158
1,1,2-Trichloroethane	13.20	10.39	1.270 ok	1.270	1.210-1.330
1,2,4-Trichlorobenzene	23.06	15.93	1.448 ok	1.447	1.387-1.507
1,2,3-Trichloropropane	17.68	15.93	1.110 ok	1.110	1.050-1.170
1,2,4-Trimethylbenzene	20.11	15.93	1.262 ok	1.262	1.202-1.322
1,3,5-Trimethylbenzene	19.53	15.93	1.226 ok	1.226	1.166-1.286
2,2,4-Trimethylpentane	11.25	10.39	1.083 ok	1.082	1.022-1.142
Tertiary Butyl Alcohol	5.96	8.19	0.728 ok	0.725	0.665-0.785
Tetrachloroethylene	15.05	10.39	1.449 ok	1.448	1.388-1.508

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W76-IC76	6W02918.D	11/07/17 16:11	DFT	0.04	GCMS6W	TO-15	Reporting this level
V6W76-IC76	6W02919.D	11/07/17 17:01	DFT	0.1	GCMS6W	TO-15	
V6W76-IC76	6W02920.D	11/07/17 17:52	DFT	0.2	GCMS6W	TO-15	
V6W76-IC76	6W02921.D	11/07/17 18:44	DFT	0.5	GCMS6W	TO-15	
V6W76-IC76	6W02922.D	11/07/17 19:35	DFT	5	GCMS6W	TO-15	
V6W76-ICC76	6W02923.D	11/07/17 20:26	DFT	10	GCMS6W	TO-15	
V6W76-IC76	6W02924.D	11/07/17 21:19	DFT	20	GCMS6W	TO-15	
V6W76-IC76	6W02925.D	11/07/17 22:15	DFT	40	GCMS6W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Toluene	13.54	10.39	1.303 ok	1.303	1.243-1.363
Trichloroethylene	11.22	10.39	1.080 ok	1.080	1.020-1.140
Trichlorofluoromethane	5.30	8.19	0.647 ok	0.647	0.587-0.707
Vinyl chloride	4.17	8.19	0.509 ok	0.508	0.448-0.568
Vinyl Acetate	7.28	8.19	0.889 ok	0.889	0.829-0.949
m,p-Xylene	16.80	15.93	1.055 ok	1.055	0.995-1.115
o-Xylene	17.49	15.93	1.098 ok	1.098	1.038-1.158

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.19 ok	8.19	7.86-8.52	252859	ok 241635	144981-338289
1,4-Difluorobenzene	10.39 ok	10.39	10.06-10.72	916411	ok 886229	531737-1240721
Chlorobenzene-D5	15.93 ok	15.93	15.60-16.26	385312	ok 424169	254501-593837

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W76-IC76	6W02918.D	11/07/17 16:11	DFT	0.04	GCMS6W	TO-15
V6W76-IC76	6W02919.D	11/07/17 17:01	DFT	0.1	GCMS6W	TO-15 Reporting this level
V6W76-IC76	6W02920.D	11/07/17 17:52	DFT	0.2	GCMS6W	TO-15
V6W76-IC76	6W02921.D	11/07/17 18:44	DFT	0.5	GCMS6W	TO-15
V6W76-IC76	6W02922.D	11/07/17 19:35	DFT	5	GCMS6W	TO-15
V6W76-ICC76	6W02923.D	11/07/17 20:26	DFT	10	GCMS6W	TO-15
V6W76-IC76	6W02924.D	11/07/17 21:19	DFT	20	GCMS6W	TO-15
V6W76-IC76	6W02925.D	11/07/17 22:15	DFT	40	GCMS6W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acrylonitrile	5.58	8.19	0.681 ok	0.681	0.621-0.741
Acetonitrile	4.93	8.19	0.602 ok	0.602	0.542-0.662
1,3-Butadiene	4.27	8.19	0.521 ok	0.521	0.461-0.581
Benzene	9.96	8.19	1.216 ok	1.216	1.156-1.276
Bromobenzene	18.50	15.93	1.161 ok	1.161	1.101-1.221
Bromodichloromethane	11.18	10.39	1.076 ok	1.076	1.016-1.136
Bromoform	16.89	15.93	1.060 ok	1.060	1.000-1.120
Bromomethane	4.51	8.19	0.551 ok	0.549	0.489-0.609
Bromoethene	4.94	8.19	0.603 ok	0.603	0.543-0.663
n-Butane	4.32	8.19	0.527 ok	0.527	0.467-0.587
Benzyl Chloride	20.29	15.93	1.274 ok	1.274	1.214-1.334
n-Butylbenzene	21.27	15.93	1.335 ok	1.335	1.275-1.395
sec-Butylbenzene	20.48	15.93	1.286 ok	1.286	1.226-1.346
tert-Butylbenzene	20.09	15.93	1.261 ok	1.261	1.201-1.321
Carbon disulfide	6.29	8.19	0.768 ok	0.768	0.708-0.828
Chlorobenzene	16.00	15.93	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	3.78	8.19	0.462 ok	0.461	0.401-0.521
Chloroethane	4.64	8.19	0.567 ok	0.567	0.507-0.627
Chlorotrifluoroethene	3.81	8.19	0.465 ok	0.464	0.404-0.524
Chloroform	8.33	8.19	1.017 ok	1.018	0.958-1.078
Chloromethane	3.99	8.19	0.487 ok	0.487	0.427-0.547
3-Chloropropene	6.12	8.19	0.747 ok	0.747	0.687-0.807
2-Chlorotoluene	19.11	15.93	1.200 ok	1.200	1.140-1.260
Carbon tetrachloride	10.13	8.19	1.237 ok	1.236	1.176-1.296
Cyclohexane	10.27	8.19	1.254 ok	1.253	1.193-1.313
1,1-Dichloroethane	7.13	8.19	0.871 ok	0.870	0.810-0.930
1,1-Dichloroethylene	5.89	8.19	0.719 ok	0.719	0.659-0.779
1,2-Dibromoethane	14.42	10.39	1.388 ok	1.387	1.327-1.447
1,2-Dichloroethane	9.15	8.19	1.117 ok	1.117	1.057-1.177
1,2-Dichloropropane	10.94	10.39	1.053 ok	1.052	0.992-1.112
1,3-Dichloropropane	13.60	10.39	1.309 ok	1.308	1.248-1.368
1,4-Dioxane	11.28	10.39	1.086 ok	1.083	1.023-1.143
Dichlorodifluoromethane	3.86	8.19	0.471 ok	0.471	0.411-0.531
Dichlorofluoromethane	4.72	8.19	0.576 ok	0.576	0.516-0.636
Dibromochloromethane	14.10	10.39	1.357 ok	1.357	1.297-1.417
Dibromomethane	10.91	10.39	1.050 ok	1.050	0.990-1.110
trans-1,2-Dichloroethylene	6.92	8.19	0.845 ok	0.845	0.785-0.905
cis-1,2-Dichloroethylene	8.01	8.19	0.978 ok	0.978	0.918-1.038
cis-1,3-Dichloropropene	12.31	10.39	1.185 ok	1.184	1.124-1.244
m-Dichlorobenzene	20.30	15.93	1.274 ok	1.274	1.214-1.334

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W76-IC76	6W02918.D	11/07/17 16:11	DFT	0.04	GCMS6W	TO-15
V6W76-IC76	6W02919.D	11/07/17 17:01	DFT	0.1	GCMS6W	TO-15 Reporting this level
V6W76-IC76	6W02920.D	11/07/17 17:52	DFT	0.2	GCMS6W	TO-15
V6W76-IC76	6W02921.D	11/07/17 18:44	DFT	0.5	GCMS6W	TO-15
V6W76-IC76	6W02922.D	11/07/17 19:35	DFT	5	GCMS6W	TO-15
V6W76-ICC76	6W02923.D	11/07/17 20:26	DFT	10	GCMS6W	TO-15
V6W76-IC76	6W02924.D	11/07/17 21:19	DFT	20	GCMS6W	TO-15
V6W76-IC76	6W02925.D	11/07/17 22:15	DFT	40	GCMS6W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
o-Dichlorobenzene	20.86	15.93	1.309 ok	1.309	1.249-1.369
p-Dichlorobenzene	20.40	15.93	1.281 ok	1.281	1.221-1.341
trans-1,3-Dichloropropene	12.99	10.39	1.250 ok	1.249	1.189-1.309
Di-Isopropyl ether	8.23	8.19	1.005 ok	1.004	0.944-1.064
2,3-Dimethylpentane	10.56	8.19	1.289 ok	1.289	1.229-1.349
2,4-Dimethylpentane	9.20	8.19	1.123 ok	1.123	1.063-1.183
Ethanol	4.74	8.19	0.579 ok	0.578	0.518-0.638
Ethylbenzene	16.54	15.93	1.038 ok	1.038	0.978-1.098
Ethyl Acetate	8.27	8.19	1.010 ok	1.009	0.949-1.069
Ethyl Acrylate	10.98	10.39	1.057 ok	1.056	0.996-1.116
4-Ethyltoluene	19.41	15.93	1.218 ok	1.218	1.158-1.278
Freon 113	6.25	8.19	0.763 ok	0.763	0.703-0.823
Freon 114	4.07	8.19	0.497 ok	0.497	0.437-0.557
Freon 123	5.08	8.19	0.620 ok	0.620	0.560-0.680
Freon 123A	5.12	8.19	0.625 ok	0.625	0.565-0.685
Freon 141B	5.41	8.19	0.661 ok	0.660	0.600-0.720
Freon 142B	3.97	8.19	0.485 ok	0.485	0.425-0.545
Freon 152A	3.74	8.19	0.457 ok	0.456	0.396-0.516
Heptane	11.59	10.39	1.115 ok	1.115	1.055-1.175
Hexachlorobutadiene	23.63	15.93	1.483 ok	1.483	1.423-1.543
Hexachloroethane	21.75	15.93	1.365 ok	1.365	1.305-1.425
Hexane	8.22	8.19	1.004 ok	1.004	0.944-1.064
2-Hexanone	13.94	10.39	1.342 ok	1.340	1.280-1.400
Iodomethane	5.82	8.19	0.711 ok	0.710	0.650-0.770
Isopropylbenzene	18.39	15.93	1.154 ok	1.154	1.094-1.214
p-Isopropyltoluene	20.71	15.93	1.300 ok	1.300	1.240-1.360
Methylene chloride	6.00	8.19	0.733 ok	0.733	0.673-0.793
Methyl ethyl ketone	7.57	8.19	0.924 ok	0.921	0.861-0.981
Methyl Isobutyl Ketone	12.37	10.39	1.191 ok	1.190	1.130-1.250
Methyl Tert Butyl Ether	7.20	8.19	0.879 ok	0.878	0.818-0.938
Methylmethacrylate	11.51	10.39	1.108 ok	1.106	1.046-1.166
Naphthalene	23.18	15.93	1.455 ok	1.455	1.395-1.515
Nonane	17.87	15.93	1.122 ok	1.122	1.062-1.182
Octane	14.89	10.39	1.433 ok	1.432	1.372-1.492
Pentane	5.61	8.19	0.685 ok	0.686	0.626-0.746
n-Propylbenzene	19.18	15.93	1.204 ok	1.204	1.144-1.264
Propylene	3.80	8.19	0.464 ok	0.464	0.404-0.524
Styrene	17.33	15.93	1.088 ok	1.088	1.028-1.148
1,1,1-Trichloroethane	9.44	8.19	1.153 ok	1.151	1.091-1.211
1,1,1,2-Tetrachloroethane	15.98	10.39	1.538 ok	1.537	1.477-1.597

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W76-IC76	6W02918.D	11/07/17 16:11	DFT	0.04	GCMS6W	TO-15
V6W76-IC76	6W02919.D	11/07/17 17:01	DFT	0.1	GCMS6W	TO-15 Reporting this level
V6W76-IC76	6W02920.D	11/07/17 17:52	DFT	0.2	GCMS6W	TO-15
V6W76-IC76	6W02921.D	11/07/17 18:44	DFT	0.5	GCMS6W	TO-15
V6W76-IC76	6W02922.D	11/07/17 19:35	DFT	5	GCMS6W	TO-15
V6W76-ICC76	6W02923.D	11/07/17 20:26	DFT	10	GCMS6W	TO-15
V6W76-IC76	6W02924.D	11/07/17 21:19	DFT	20	GCMS6W	TO-15
V6W76-IC76	6W02925.D	11/07/17 22:15	DFT	40	GCMS6W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
1,1,2,2-Tetrachloroethane	17.50	15.93	1.099 ok	1.098	1.038-1.158
1,1,2-Trichloroethane	13.20	10.39	1.270 ok	1.270	1.210-1.330
1,2,4-Trichlorobenzene	23.06	15.93	1.448 ok	1.447	1.387-1.507
1,2,3-Trichloropropane	17.69	15.93	1.110 ok	1.110	1.050-1.170
1,2,4-Trimethylbenzene	20.11	15.93	1.262 ok	1.262	1.202-1.322
1,3,5-Trimethylbenzene	19.53	15.93	1.226 ok	1.226	1.166-1.286
2,2,4-Trimethylpentane	11.25	10.39	1.083 ok	1.082	1.022-1.142
Tertiary Butyl Alcohol	5.96	8.19	0.728 ok	0.725	0.665-0.785
Tetrachloroethylene	15.05	10.39	1.449 ok	1.448	1.388-1.508
Tetrahydrofuran	8.82	8.19	1.077 ok	1.073	1.013-1.133
Toluene	13.55	10.39	1.304 ok	1.303	1.243-1.363
Trichloroethylene	11.22	10.39	1.080 ok	1.080	1.020-1.140
Trichlorofluoromethane	5.31	8.19	0.648 ok	0.647	0.587-0.707
Vinyl chloride	4.17	8.19	0.509 ok	0.508	0.448-0.568
Vinyl Acetate	7.28	8.19	0.889 ok	0.889	0.829-0.949
m,p-Xylene	16.81	15.93	1.055 ok	1.055	0.995-1.115
o-Xylene	17.49	15.93	1.098 ok	1.098	1.038-1.158

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.19 ok	8.19	7.86-8.52	249403	ok 241635	144981-338289
1,4-Difluorobenzene	10.39 ok	10.39	10.06-10.72	921813	ok 886229	531737-1240721
Chlorobenzene-D5	15.93 ok	15.93	15.60-16.26	418279	ok 424169	254501-593837

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W76-IC76	6W02918.D	11/07/17 16:11	DFT	0.04	GCMS6W	TO-15
V6W76-IC76	6W02919.D	11/07/17 17:01	DFT	0.1	GCMS6W	TO-15
V6W76-IC76	6W02920.D	11/07/17 17:52	DFT	0.2	GCMS6W	TO-15 Reporting this level
V6W76-IC76	6W02921.D	11/07/17 18:44	DFT	0.5	GCMS6W	TO-15
V6W76-IC76	6W02922.D	11/07/17 19:35	DFT	5	GCMS6W	TO-15
V6W76-ICC76	6W02923.D	11/07/17 20:26	DFT	10	GCMS6W	TO-15
V6W76-IC76	6W02924.D	11/07/17 21:19	DFT	20	GCMS6W	TO-15
V6W76-IC76	6W02925.D	11/07/17 22:15	DFT	40	GCMS6W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.17	8.19	0.631 ok	0.629	0.569-0.689
Acrylonitrile	5.58	8.19	0.681 ok	0.681	0.621-0.741
Acetonitrile	4.93	8.19	0.602 ok	0.602	0.542-0.662
1,3-Butadiene	4.27	8.19	0.521 ok	0.521	0.461-0.581
Benzene	9.96	8.19	1.216 ok	1.216	1.156-1.276
Bromobenzene	18.50	15.93	1.161 ok	1.161	1.101-1.221
Bromodichloromethane	11.18	10.39	1.076 ok	1.076	1.016-1.136
Bromoform	16.89	15.93	1.060 ok	1.060	1.000-1.120
Bromomethane	4.50	8.19	0.549 ok	0.549	0.489-0.609
Bromoethene	4.94	8.19	0.603 ok	0.603	0.543-0.663
n-Butane	4.32	8.19	0.527 ok	0.527	0.467-0.587
Benzyl Chloride	20.29	15.93	1.274 ok	1.274	1.214-1.334
n-Butylbenzene	21.27	15.93	1.335 ok	1.335	1.275-1.395
sec-Butylbenzene	20.48	15.93	1.286 ok	1.286	1.226-1.346
tert-Butylbenzene	20.10	15.93	1.262 ok	1.261	1.201-1.321
Carbon disulfide	6.29	8.19	0.768 ok	0.768	0.708-0.828
Chlorobenzene	16.00	15.93	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	3.78	8.19	0.462 ok	0.461	0.401-0.521
Chloroethane	4.64	8.19	0.567 ok	0.567	0.507-0.627
Chlorotrifluoroethene	3.80	8.19	0.464 ok	0.464	0.404-0.524
Chloroform	8.33	8.19	1.017 ok	1.018	0.958-1.078
Chloromethane	3.99	8.19	0.487 ok	0.487	0.427-0.547
3-Chloropropene	6.12	8.19	0.747 ok	0.747	0.687-0.807
2-Chlorotoluene	19.12	15.93	1.200 ok	1.200	1.140-1.260
Carbon tetrachloride	10.13	8.19	1.237 ok	1.236	1.176-1.296
Cyclohexane	10.26	8.19	1.253 ok	1.253	1.193-1.313
1,1-Dichloroethane	7.12	8.19	0.869 ok	0.870	0.810-0.930
1,1-Dichloroethylene	5.89	8.19	0.719 ok	0.719	0.659-0.779
1,2-Dibromoethane	14.42	10.39	1.388 ok	1.387	1.327-1.447
1,2-Dichloroethane	9.15	8.19	1.117 ok	1.117	1.057-1.177
1,2-Dichloropropane	10.94	10.39	1.053 ok	1.052	0.992-1.112
1,3-Dichloropropane	13.59	10.39	1.308 ok	1.308	1.248-1.368
1,4-Dioxane	11.28	10.39	1.086 ok	1.083	1.023-1.143
Dichlorodifluoromethane	3.86	8.19	0.471 ok	0.471	0.411-0.531
Dichlorofluoromethane	4.72	8.19	0.576 ok	0.576	0.516-0.636
Dibromochloromethane	14.10	10.39	1.357 ok	1.357	1.297-1.417
Dibromomethane	10.91	10.39	1.050 ok	1.050	0.990-1.110
trans-1,2-Dichloroethylene	6.92	8.19	0.845 ok	0.845	0.785-0.905
cis-1,2-Dichloroethylene	8.01	8.19	0.978 ok	0.978	0.918-1.038
cis-1,3-Dichloropropene	12.31	10.39	1.185 ok	1.184	1.124-1.244

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W76-IC76	6W02918.D	11/07/17 16:11	DFT	0.04	GCMS6W	TO-15
V6W76-IC76	6W02919.D	11/07/17 17:01	DFT	0.1	GCMS6W	TO-15
V6W76-IC76	6W02920.D	11/07/17 17:52	DFT	0.2	GCMS6W	TO-15 Reporting this level
V6W76-IC76	6W02921.D	11/07/17 18:44	DFT	0.5	GCMS6W	TO-15
V6W76-IC76	6W02922.D	11/07/17 19:35	DFT	5	GCMS6W	TO-15
V6W76-ICC76	6W02923.D	11/07/17 20:26	DFT	10	GCMS6W	TO-15
V6W76-IC76	6W02924.D	11/07/17 21:19	DFT	20	GCMS6W	TO-15
V6W76-IC76	6W02925.D	11/07/17 22:15	DFT	40	GCMS6W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
m-Dichlorobenzene	20.30	15.93	1.274 ok	1.274	1.214-1.334
o-Dichlorobenzene	20.86	15.93	1.309 ok	1.309	1.249-1.369
p-Dichlorobenzene	20.40	15.93	1.281 ok	1.281	1.221-1.341
trans-1,3-Dichloropropene	12.98	10.39	1.249 ok	1.249	1.189-1.309
Di-Isopropyl ether	8.23	8.19	1.005 ok	1.004	0.944-1.064
2,3-Dimethylpentane	10.56	8.19	1.289 ok	1.289	1.229-1.349
2,4-Dimethylpentane	9.20	8.19	1.123 ok	1.123	1.063-1.183
Ethanol	4.74	8.19	0.579 ok	0.578	0.518-0.638
Ethylbenzene	16.54	15.93	1.038 ok	1.038	0.978-1.098
Ethyl Acetate	8.27	8.19	1.010 ok	1.009	0.949-1.069
Ethyl Acrylate	10.97	10.39	1.056 ok	1.056	0.996-1.116
4-Ethyltoluene	19.41	15.93	1.218 ok	1.218	1.158-1.278
Freon 113	6.25	8.19	0.763 ok	0.763	0.703-0.823
Freon 114	4.07	8.19	0.497 ok	0.497	0.437-0.557
Freon 123	5.07	8.19	0.619 ok	0.620	0.560-0.680
Freon 123A	5.12	8.19	0.625 ok	0.625	0.565-0.685
Freon 141B	5.41	8.19	0.661 ok	0.660	0.600-0.720
Freon 142B	3.97	8.19	0.485 ok	0.485	0.425-0.545
Freon 143a	3.64	8.19	0.444 ok	0.444	0.384-0.504
Freon 152A	3.74	8.19	0.457 ok	0.456	0.396-0.516
Heptane	11.59	10.39	1.115 ok	1.115	1.055-1.175
Hexachlorobutadiene	23.62	15.93	1.483 ok	1.483	1.423-1.543
Hexachloroethane	21.74	15.93	1.365 ok	1.365	1.305-1.425
Hexane	8.22	8.19	1.004 ok	1.004	0.944-1.064
2-Hexanone	13.93	10.39	1.341 ok	1.340	1.280-1.400
Iodomethane	5.82	8.19	0.711 ok	0.710	0.650-0.770
Isopropylbenzene	18.39	15.93	1.154 ok	1.154	1.094-1.214
Isopropyl Alcohol	5.39	8.19	0.658 ok	0.656	0.596-0.716
p-Isopropyltoluene	20.71	15.93	1.300 ok	1.300	1.240-1.360
Methylene chloride	6.01	8.19	0.734 ok	0.733	0.673-0.793
Methyl ethyl ketone	7.56	8.19	0.923 ok	0.921	0.861-0.981
Methyl Isobutyl Ketone	12.37	10.39	1.191 ok	1.190	1.130-1.250
Methyl Tert Butyl Ether	7.20	8.19	0.879 ok	0.878	0.818-0.938
Methylmethacrylate	11.50	10.39	1.107 ok	1.106	1.046-1.166
Naphthalene	23.18	15.93	1.455 ok	1.455	1.395-1.515
Nonane	17.87	15.93	1.122 ok	1.122	1.062-1.182
Octane	14.89	10.39	1.433 ok	1.432	1.372-1.492
Pentane	5.61	8.19	0.685 ok	0.686	0.626-0.746
n-Propylbenzene	19.19	15.93	1.205 ok	1.204	1.144-1.264
Propylene	3.80	8.19	0.464 ok	0.464	0.404-0.524

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W76-IC76	6W02918.D	11/07/17 16:11	DFT	0.04	GCMS6W	TO-15
V6W76-IC76	6W02919.D	11/07/17 17:01	DFT	0.1	GCMS6W	TO-15
V6W76-IC76	6W02920.D	11/07/17 17:52	DFT	0.2	GCMS6W	TO-15 Reporting this level
V6W76-IC76	6W02921.D	11/07/17 18:44	DFT	0.5	GCMS6W	TO-15
V6W76-IC76	6W02922.D	11/07/17 19:35	DFT	5	GCMS6W	TO-15
V6W76-ICC76	6W02923.D	11/07/17 20:26	DFT	10	GCMS6W	TO-15
V6W76-IC76	6W02924.D	11/07/17 21:19	DFT	20	GCMS6W	TO-15
V6W76-IC76	6W02925.D	11/07/17 22:15	DFT	40	GCMS6W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Styrene	17.34	15.93	1.089 ok	1.088	1.028-1.148
1,1,1-Trichloroethane	9.42	8.19	1.150 ok	1.151	1.091-1.211
1,1,1,2-Tetrachloroethane	15.98	10.39	1.538 ok	1.537	1.477-1.597
1,1,2,2-Tetrachloroethane	17.49	15.93	1.098 ok	1.098	1.038-1.158
1,1,2-Trichloroethane	13.20	10.39	1.270 ok	1.270	1.210-1.330
1,2,4-Trichlorobenzene	23.06	15.93	1.448 ok	1.447	1.387-1.507
1,2,3-Trichloropropane	17.68	15.93	1.110 ok	1.110	1.050-1.170
1,2,4-Trimethylbenzene	20.11	15.93	1.262 ok	1.262	1.202-1.322
1,3,5-Trimethylbenzene	19.53	15.93	1.226 ok	1.226	1.166-1.286
2,2,4-Trimethylpentane	11.25	10.39	1.083 ok	1.082	1.022-1.142
Tertiary Butyl Alcohol	5.95	8.19	0.726 ok	0.725	0.665-0.785
Tetrachloroethylene	15.05	10.39	1.449 ok	1.448	1.388-1.508
Tetrahydrofuran	8.82	8.19	1.077 ok	1.073	1.013-1.133
Toluene	13.54	10.39	1.303 ok	1.303	1.243-1.363
Trichloroethylene	11.22	10.39	1.080 ok	1.080	1.020-1.140
Trichlorofluoromethane	5.30	8.19	0.647 ok	0.647	0.587-0.707
Vinyl chloride	4.16	8.19	0.508 ok	0.508	0.448-0.568
Vinyl Acetate	7.28	8.19	0.889 ok	0.889	0.829-0.949
m,p-Xylene	16.82	15.93	1.056 ok	1.055	0.995-1.115
o-Xylene	17.49	15.93	1.098 ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.61	15.93	0.352 ok	0.353	0.293-0.413

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.19 ok	8.19	7.86-8.52	238658	ok 241635	144981-338289
1,4-Difluorobenzene	10.39 ok	10.39	10.06-10.72	890407	ok 886229	531737-1240721
Chlorobenzene-D5	15.93 ok	15.93	15.60-16.26	407045	ok 424169	254501-593837

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W76-IC76	6W02918.D	11/07/17 16:11	DFT	0.04	GCMS6W	TO-15
V6W76-IC76	6W02919.D	11/07/17 17:01	DFT	0.1	GCMS6W	TO-15
V6W76-IC76	6W02920.D	11/07/17 17:52	DFT	0.2	GCMS6W	TO-15
V6W76-IC76	6W02921.D	11/07/17 18:44	DFT	0.5	GCMS6W	TO-15 Reporting this level
V6W76-IC76	6W02922.D	11/07/17 19:35	DFT	5	GCMS6W	TO-15
V6W76-ICC76	6W02923.D	11/07/17 20:26	DFT	10	GCMS6W	TO-15
V6W76-IC76	6W02924.D	11/07/17 21:19	DFT	20	GCMS6W	TO-15
V6W76-IC76	6W02925.D	11/07/17 22:15	DFT	40	GCMS6W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.16	8.19	0.630 ok	0.629	0.569-0.689
Acrylonitrile	5.58	8.19	0.681 ok	0.681	0.621-0.741
Acetonitrile	4.93	8.19	0.602 ok	0.602	0.542-0.662
1,3-Butadiene	4.27	8.19	0.521 ok	0.521	0.461-0.581
Benzene	9.96	8.19	1.216 ok	1.216	1.156-1.276
Bromobenzene	18.50	15.93	1.161 ok	1.161	1.101-1.221
Bromodichloromethane	11.18	10.39	1.076 ok	1.076	1.016-1.136
Bromoform	16.89	15.93	1.060 ok	1.060	1.000-1.120
Bromomethane	4.50	8.19	0.549 ok	0.549	0.489-0.609
Bromoethene	4.94	8.19	0.603 ok	0.603	0.543-0.663
n-Butane	4.32	8.19	0.527 ok	0.527	0.467-0.587
Benzyl Chloride	20.29	15.93	1.274 ok	1.274	1.214-1.334
n-Butylbenzene	21.27	15.93	1.335 ok	1.335	1.275-1.395
sec-Butylbenzene	20.48	15.93	1.286 ok	1.286	1.226-1.346
tert-Butylbenzene	20.10	15.93	1.262 ok	1.261	1.201-1.321
Carbon disulfide	6.29	8.19	0.768 ok	0.768	0.708-0.828
Chlorobenzene	16.00	15.93	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	3.77	8.19	0.460 ok	0.461	0.401-0.521
Chloroethane	4.64	8.19	0.567 ok	0.567	0.507-0.627
Chlorotrifluoroethene	3.80	8.19	0.464 ok	0.464	0.404-0.524
Chloroform	8.34	8.19	1.018 ok	1.018	0.958-1.078
Chloromethane	3.99	8.19	0.487 ok	0.487	0.427-0.547
3-Chloropropene	6.11	8.19	0.746 ok	0.747	0.687-0.807
2-Chlorotoluene	19.12	15.93	1.200 ok	1.200	1.140-1.260
Carbon tetrachloride	10.13	8.19	1.237 ok	1.236	1.176-1.296
Cyclohexane	10.27	8.19	1.254 ok	1.253	1.193-1.313
1,1-Dichloroethane	7.13	8.19	0.871 ok	0.870	0.810-0.930
1,1-Dichloroethylene	5.89	8.19	0.719 ok	0.719	0.659-0.779
1,2-Dibromoethane	14.42	10.39	1.388 ok	1.387	1.327-1.447
1,2-Dichloroethane	9.15	8.19	1.117 ok	1.117	1.057-1.177
1,2-Dichloropropane	10.94	10.39	1.053 ok	1.052	0.992-1.112
1,3-Dichloropropane	13.59	10.39	1.308 ok	1.308	1.248-1.368
1,4-Dioxane	11.26	10.39	1.084 ok	1.083	1.023-1.143
Dichlorodifluoromethane	3.86	8.19	0.471 ok	0.471	0.411-0.531
Dichlorofluoromethane	4.72	8.19	0.576 ok	0.576	0.516-0.636
Dibromochloromethane	14.10	10.39	1.357 ok	1.357	1.297-1.417
Dibromomethane	10.91	10.39	1.050 ok	1.050	0.990-1.110
trans-1,2-Dichloroethylene	6.92	8.19	0.845 ok	0.845	0.785-0.905
cis-1,2-Dichloroethylene	8.01	8.19	0.978 ok	0.978	0.918-1.038
cis-1,3-Dichloropropene	12.31	10.39	1.185 ok	1.184	1.124-1.244

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W76-IC76	6W02918.D	11/07/17 16:11	DFT	0.04	GCMS6W	TO-15
V6W76-IC76	6W02919.D	11/07/17 17:01	DFT	0.1	GCMS6W	TO-15
V6W76-IC76	6W02920.D	11/07/17 17:52	DFT	0.2	GCMS6W	TO-15
V6W76-IC76	6W02921.D	11/07/17 18:44	DFT	0.5	GCMS6W	TO-15 Reporting this level
V6W76-IC76	6W02922.D	11/07/17 19:35	DFT	5	GCMS6W	TO-15
V6W76-ICC76	6W02923.D	11/07/17 20:26	DFT	10	GCMS6W	TO-15
V6W76-IC76	6W02924.D	11/07/17 21:19	DFT	20	GCMS6W	TO-15
V6W76-IC76	6W02925.D	11/07/17 22:15	DFT	40	GCMS6W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
m-Dichlorobenzene	20.30	15.93	1.274 ok	1.274	1.214-1.334
o-Dichlorobenzene	20.86	15.93	1.309 ok	1.309	1.249-1.369
p-Dichlorobenzene	20.40	15.93	1.281 ok	1.281	1.221-1.341
trans-1,3-Dichloropropene	12.99	10.39	1.250 ok	1.249	1.189-1.309
Di-Isopropyl ether	8.23	8.19	1.005 ok	1.004	0.944-1.064
2,3-Dimethylpentane	10.56	8.19	1.289 ok	1.289	1.229-1.349
2,4-Dimethylpentane	9.20	8.19	1.123 ok	1.123	1.063-1.183
Ethanol	4.74	8.19	0.579 ok	0.578	0.518-0.638
Ethylbenzene	16.54	15.93	1.038 ok	1.038	0.978-1.098
Ethyl Acetate	8.27	8.19	1.010 ok	1.009	0.949-1.069
Ethyl Acrylate	10.97	10.39	1.056 ok	1.056	0.996-1.116
4-Ethyltoluene	19.41	15.93	1.218 ok	1.218	1.158-1.278
Freon 113	6.25	8.19	0.763 ok	0.763	0.703-0.823
Freon 114	4.07	8.19	0.497 ok	0.497	0.437-0.557
Freon 123	5.07	8.19	0.619 ok	0.620	0.560-0.680
Freon 123A	5.12	8.19	0.625 ok	0.625	0.565-0.685
Freon 141B	5.41	8.19	0.661 ok	0.660	0.600-0.720
Freon 142B	3.97	8.19	0.485 ok	0.485	0.425-0.545
Freon 143a	3.64	8.19	0.444 ok	0.444	0.384-0.504
Freon 152A	3.74	8.19	0.457 ok	0.456	0.396-0.516
Heptane	11.59	10.39	1.115 ok	1.115	1.055-1.175
Hexachlorobutadiene	23.63	15.93	1.483 ok	1.483	1.423-1.543
Hexachloroethane	21.74	15.93	1.365 ok	1.365	1.305-1.425
Hexane	8.22	8.19	1.004 ok	1.004	0.944-1.064
2-Hexanone	13.93	10.39	1.341 ok	1.340	1.280-1.400
Iodomethane	5.82	8.19	0.711 ok	0.710	0.650-0.770
Isopropylbenzene	18.39	15.93	1.154 ok	1.154	1.094-1.214
Isopropyl Alcohol	5.38	8.19	0.657 ok	0.656	0.596-0.716
p-Isopropyltoluene	20.71	15.93	1.300 ok	1.300	1.240-1.360
Methylene chloride	6.00	8.19	0.733 ok	0.733	0.673-0.793
Methyl ethyl ketone	7.55	8.19	0.922 ok	0.921	0.861-0.981
Methyl Isobutyl Ketone	12.37	10.39	1.191 ok	1.190	1.130-1.250
Methyl Tert Butyl Ether	7.19	8.19	0.878 ok	0.878	0.818-0.938
Methylmethacrylate	11.50	10.39	1.107 ok	1.106	1.046-1.166
Naphthalene	23.18	15.93	1.455 ok	1.455	1.395-1.515
Nonane	17.87	15.93	1.122 ok	1.122	1.062-1.182
Octane	14.89	10.39	1.433 ok	1.432	1.372-1.492
Pentane	5.62	8.19	0.686 ok	0.686	0.626-0.746
n-Propylbenzene	19.19	15.93	1.205 ok	1.204	1.144-1.264
Propylene	3.80	8.19	0.464 ok	0.464	0.404-0.524

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W76-IC76	6W02918.D	11/07/17 16:11	DFT	0.04	GCMS6W	TO-15
V6W76-IC76	6W02919.D	11/07/17 17:01	DFT	0.1	GCMS6W	TO-15
V6W76-IC76	6W02920.D	11/07/17 17:52	DFT	0.2	GCMS6W	TO-15
V6W76-IC76	6W02921.D	11/07/17 18:44	DFT	0.5	GCMS6W	TO-15 Reporting this level
V6W76-IC76	6W02922.D	11/07/17 19:35	DFT	5	GCMS6W	TO-15
V6W76-ICC76	6W02923.D	11/07/17 20:26	DFT	10	GCMS6W	TO-15
V6W76-IC76	6W02924.D	11/07/17 21:19	DFT	20	GCMS6W	TO-15
V6W76-IC76	6W02925.D	11/07/17 22:15	DFT	40	GCMS6W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Styrene	17.33	15.93	1.088 ok	1.088	1.028-1.148
1,1,1-Trichloroethane	9.43	8.19	1.151 ok	1.151	1.091-1.211
1,1,1,2-Tetrachloroethane	15.98	10.39	1.538 ok	1.537	1.477-1.597
1,1,2,2-Tetrachloroethane	17.49	15.93	1.098 ok	1.098	1.038-1.158
1,1,2-Trichloroethane	13.20	10.39	1.270 ok	1.270	1.210-1.330
1,2,4-Trichlorobenzene	23.05	15.93	1.447 ok	1.447	1.387-1.507
1,2,3-Trichloropropane	17.69	15.93	1.110 ok	1.110	1.050-1.170
1,2,4-Trimethylbenzene	20.11	15.93	1.262 ok	1.262	1.202-1.322
1,3,5-Trimethylbenzene	19.53	15.93	1.226 ok	1.226	1.166-1.286
2,2,4-Trimethylpentane	11.25	10.39	1.083 ok	1.082	1.022-1.142
Tertiary Butyl Alcohol	5.94	8.19	0.725 ok	0.725	0.665-0.785
Tetrachloroethylene	15.05	10.39	1.449 ok	1.448	1.388-1.508
Tetrahydrofuran	8.80	8.19	1.074 ok	1.073	1.013-1.133
Toluene	13.54	10.39	1.303 ok	1.303	1.243-1.363
Trichloroethylene	11.22	10.39	1.080 ok	1.080	1.020-1.140
Trichlorofluoromethane	5.31	8.19	0.648 ok	0.647	0.587-0.707
Vinyl chloride	4.16	8.19	0.508 ok	0.508	0.448-0.568
Vinyl Acetate	7.28	8.19	0.889 ok	0.889	0.829-0.949
m,p-Xylene	16.81	15.93	1.055 ok	1.055	0.995-1.115
o-Xylene	17.48	15.93	1.097 ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.62	15.93	0.353 ok	0.353	0.293-0.413

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.19 ok	8.19	7.86-8.52	232517	ok 241635	144981-338289
1,4-Difluorobenzene	10.39 ok	10.39	10.06-10.72	866042	ok 886229	531737-1240721
Chlorobenzene-D5	15.93 ok	15.93	15.60-16.26	401025	ok 424169	254501-593837

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W76-IC76	6W02918.D	11/07/17 16:11	DFT	0.04	GCMS6W	TO-15
V6W76-IC76	6W02919.D	11/07/17 17:01	DFT	0.1	GCMS6W	TO-15
V6W76-IC76	6W02920.D	11/07/17 17:52	DFT	0.2	GCMS6W	TO-15
V6W76-IC76	6W02921.D	11/07/17 18:44	DFT	0.5	GCMS6W	TO-15
V6W76-IC76	6W02922.D	11/07/17 19:35	DFT	5	GCMS6W	TO-15 Reporting this level
V6W76-ICC76	6W02923.D	11/07/17 20:26	DFT	10	GCMS6W	TO-15
V6W76-IC76	6W02924.D	11/07/17 21:19	DFT	20	GCMS6W	TO-15
V6W76-IC76	6W02925.D	11/07/17 22:15	DFT	40	GCMS6W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.15	8.19	0.629 ok	0.629	0.569-0.689
Acrylonitrile	5.58	8.19	0.681 ok	0.681	0.621-0.741
Acetonitrile	4.93	8.19	0.602 ok	0.602	0.542-0.662
1,3-Butadiene	4.27	8.19	0.521 ok	0.521	0.461-0.581
Benzene	9.96	8.19	1.216 ok	1.216	1.156-1.276
Bromobenzene	18.50	15.93	1.161 ok	1.161	1.101-1.221
Bromodichloromethane	11.18	10.40	1.075 ok	1.076	1.016-1.136
Bromoform	16.89	15.93	1.060 ok	1.060	1.000-1.120
Bromomethane	4.50	8.19	0.549 ok	0.549	0.489-0.609
Bromoethene	4.94	8.19	0.603 ok	0.603	0.543-0.663
n-Butane	4.32	8.19	0.527 ok	0.527	0.467-0.587
Benzyl Chloride	20.29	15.93	1.274 ok	1.274	1.214-1.334
n-Butylbenzene	21.27	15.93	1.335 ok	1.335	1.275-1.395
sec-Butylbenzene	20.48	15.93	1.286 ok	1.286	1.226-1.346
tert-Butylbenzene	20.10	15.93	1.262 ok	1.261	1.201-1.321
Carbon disulfide	6.29	8.19	0.768 ok	0.768	0.708-0.828
Chlorobenzene	16.00	15.93	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	3.77	8.19	0.460 ok	0.461	0.401-0.521
Chloroethane	4.64	8.19	0.567 ok	0.567	0.507-0.627
Chlorotrifluoroethene	3.80	8.19	0.464 ok	0.464	0.404-0.524
Chloroform	8.34	8.19	1.018 ok	1.018	0.958-1.078
Chloromethane	3.99	8.19	0.487 ok	0.487	0.427-0.547
3-Chloropropene	6.12	8.19	0.747 ok	0.747	0.687-0.807
2-Chlorotoluene	19.12	15.93	1.200 ok	1.200	1.140-1.260
Carbon tetrachloride	10.13	8.19	1.237 ok	1.236	1.176-1.296
Cyclohexane	10.27	8.19	1.254 ok	1.253	1.193-1.313
1,1-Dichloroethane	7.12	8.19	0.869 ok	0.870	0.810-0.930
1,1-Dichloroethylene	5.89	8.19	0.719 ok	0.719	0.659-0.779
1,2-Dibromoethane	14.42	10.40	1.387 ok	1.387	1.327-1.447
1,2-Dichloroethane	9.15	8.19	1.117 ok	1.117	1.057-1.177
1,2-Dichloropropane	10.94	10.40	1.052 ok	1.052	0.992-1.112
1,3-Dichloropropane	13.59	10.40	1.307 ok	1.308	1.248-1.368
1,4-Dioxane	11.24	10.40	1.081 ok	1.083	1.023-1.143
Dichlorodifluoromethane	3.86	8.19	0.471 ok	0.471	0.411-0.531
Dichlorofluoromethane	4.72	8.19	0.576 ok	0.576	0.516-0.636
Dibromochloromethane	14.10	10.40	1.356 ok	1.357	1.297-1.417
Dibromomethane	10.91	10.40	1.049 ok	1.050	0.990-1.110
trans-1,2-Dichloroethylene	6.92	8.19	0.845 ok	0.845	0.785-0.905
cis-1,2-Dichloroethylene	8.01	8.19	0.978 ok	0.978	0.918-1.038
cis-1,3-Dichloropropene	12.31	10.40	1.184 ok	1.184	1.124-1.244

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W76-IC76	6W02918.D	11/07/17 16:11	DFT	0.04	GCMS6W	TO-15
V6W76-IC76	6W02919.D	11/07/17 17:01	DFT	0.1	GCMS6W	TO-15
V6W76-IC76	6W02920.D	11/07/17 17:52	DFT	0.2	GCMS6W	TO-15
V6W76-IC76	6W02921.D	11/07/17 18:44	DFT	0.5	GCMS6W	TO-15
V6W76-IC76	6W02922.D	11/07/17 19:35	DFT	5	GCMS6W	TO-15 Reporting this level
V6W76-ICC76	6W02923.D	11/07/17 20:26	DFT	10	GCMS6W	TO-15
V6W76-IC76	6W02924.D	11/07/17 21:19	DFT	20	GCMS6W	TO-15
V6W76-IC76	6W02925.D	11/07/17 22:15	DFT	40	GCMS6W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
m-Dichlorobenzene	20.30	15.93	1.274 ok	1.274	1.214-1.334
o-Dichlorobenzene	20.86	15.93	1.309 ok	1.309	1.249-1.369
p-Dichlorobenzene	20.40	15.93	1.281 ok	1.281	1.221-1.341
trans-1,3-Dichloropropene	12.99	10.40	1.249 ok	1.249	1.189-1.309
Di-Isopropyl ether	8.22	8.19	1.004 ok	1.004	0.944-1.064
2,3-Dimethylpentane	10.56	8.19	1.289 ok	1.289	1.229-1.349
2,4-Dimethylpentane	9.20	8.19	1.123 ok	1.123	1.063-1.183
Ethanol	4.73	8.19	0.578 ok	0.578	0.518-0.638
Ethylbenzene	16.54	15.93	1.038 ok	1.038	0.978-1.098
Ethyl Acetate	8.26	8.19	1.009 ok	1.009	0.949-1.069
Ethyl Acrylate	10.97	10.40	1.055 ok	1.056	0.996-1.116
4-Ethyltoluene	19.41	15.93	1.218 ok	1.218	1.158-1.278
Freon 113	6.25	8.19	0.763 ok	0.763	0.703-0.823
Freon 114	4.07	8.19	0.497 ok	0.497	0.437-0.557
Freon 123	5.08	8.19	0.620 ok	0.620	0.560-0.680
Freon 123A	5.12	8.19	0.625 ok	0.625	0.565-0.685
Freon 141B	5.41	8.19	0.661 ok	0.660	0.600-0.720
Freon 142B	3.97	8.19	0.485 ok	0.485	0.425-0.545
Freon 143a	3.64	8.19	0.444 ok	0.444	0.384-0.504
Freon 152A	3.74	8.19	0.457 ok	0.456	0.396-0.516
Heptane	11.59	10.40	1.114 ok	1.115	1.055-1.175
Hexachlorobutadiene	23.63	15.93	1.483 ok	1.483	1.423-1.543
Hexachloroethane	21.74	15.93	1.365 ok	1.365	1.305-1.425
Hexane	8.22	8.19	1.004 ok	1.004	0.944-1.064
2-Hexanone	13.92	10.40	1.338 ok	1.340	1.280-1.400
Iodomethane	5.82	8.19	0.711 ok	0.710	0.650-0.770
Isopropylbenzene	18.39	15.93	1.154 ok	1.154	1.094-1.214
Isopropyl Alcohol	5.37	8.19	0.656 ok	0.656	0.596-0.716
p-Isopropyltoluene	20.71	15.93	1.300 ok	1.300	1.240-1.360
Methylene chloride	6.00	8.19	0.733 ok	0.733	0.673-0.793
Methyl ethyl ketone	7.54	8.19	0.921 ok	0.921	0.861-0.981
Methyl Isobutyl Ketone	12.36	10.40	1.188 ok	1.190	1.130-1.250
Methyl Tert Butyl Ether	7.18	8.19	0.877 ok	0.878	0.818-0.938
Methylmethacrylate	11.50	10.40	1.106 ok	1.106	1.046-1.166
Naphthalene	23.18	15.93	1.455 ok	1.455	1.395-1.515
Nonane	17.87	15.93	1.122 ok	1.122	1.062-1.182
Octane	14.89	10.40	1.432 ok	1.432	1.372-1.492
Pentane	5.62	8.19	0.686 ok	0.686	0.626-0.746
n-Propylbenzene	19.19	15.93	1.205 ok	1.204	1.144-1.264
Propylene	3.80	8.19	0.464 ok	0.464	0.404-0.524

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W76-IC76	6W02918.D	11/07/17 16:11	DFT	0.04	GCMS6W	TO-15
V6W76-IC76	6W02919.D	11/07/17 17:01	DFT	0.1	GCMS6W	TO-15
V6W76-IC76	6W02920.D	11/07/17 17:52	DFT	0.2	GCMS6W	TO-15
V6W76-IC76	6W02921.D	11/07/17 18:44	DFT	0.5	GCMS6W	TO-15
V6W76-IC76	6W02922.D	11/07/17 19:35	DFT	5	GCMS6W	TO-15 Reporting this level
V6W76-ICC76	6W02923.D	11/07/17 20:26	DFT	10	GCMS6W	TO-15
V6W76-IC76	6W02924.D	11/07/17 21:19	DFT	20	GCMS6W	TO-15
V6W76-IC76	6W02925.D	11/07/17 22:15	DFT	40	GCMS6W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Styrene	17.33	15.93	1.088 ok	1.088	1.028-1.148
1,1,1-Trichloroethane	9.43	8.19	1.151 ok	1.151	1.091-1.211
1,1,1,2-Tetrachloroethane	15.98	10.40	1.537 ok	1.537	1.477-1.597
1,1,2,2-Tetrachloroethane	17.49	15.93	1.098 ok	1.098	1.038-1.158
1,1,2-Trichloroethane	13.20	10.40	1.269 ok	1.270	1.210-1.330
1,2,4-Trichlorobenzene	23.05	15.93	1.447 ok	1.447	1.387-1.507
1,2,3-Trichloropropane	17.68	15.93	1.110 ok	1.110	1.050-1.170
1,2,4-Trimethylbenzene	20.11	15.93	1.262 ok	1.262	1.202-1.322
1,3,5-Trimethylbenzene	19.53	15.93	1.226 ok	1.226	1.166-1.286
2,2,4-Trimethylpentane	11.25	10.40	1.082 ok	1.082	1.022-1.142
Tertiary Butyl Alcohol	5.92	8.19	0.723 ok	0.725	0.665-0.785
Tetrachloroethylene	15.05	10.40	1.447 ok	1.448	1.388-1.508
Tetrahydrofuran	8.78	8.19	1.072 ok	1.073	1.013-1.133
Toluene	13.54	10.40	1.302 ok	1.303	1.243-1.363
Trichloroethylene	11.22	10.40	1.079 ok	1.080	1.020-1.140
Trichlorofluoromethane	5.30	8.19	0.647 ok	0.647	0.587-0.707
Vinyl chloride	4.16	8.19	0.508 ok	0.508	0.448-0.568
Vinyl Acetate	7.28	8.19	0.889 ok	0.889	0.829-0.949
m,p-Xylene	16.81	15.93	1.055 ok	1.055	0.995-1.115
o-Xylene	17.49	15.93	1.098 ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.62	15.93	0.353 ok	0.353	0.293-0.413

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.19 ok	8.19	7.86-8.52	223358 ok	241635	144981-338289
1,4-Difluorobenzene	10.40 ok	10.39	10.06-10.72	815599 ok	886229	531737-1240721
Chlorobenzene-D5	15.93 ok	15.93	15.60-16.26	370753 ok	424169	254501-593837

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W76-IC76	6W02918.D	11/07/17 16:11	DFT	0.04	GCMS6W	TO-15
V6W76-IC76	6W02919.D	11/07/17 17:01	DFT	0.1	GCMS6W	TO-15
V6W76-IC76	6W02920.D	11/07/17 17:52	DFT	0.2	GCMS6W	TO-15
V6W76-IC76	6W02921.D	11/07/17 18:44	DFT	0.5	GCMS6W	TO-15
V6W76-IC76	6W02922.D	11/07/17 19:35	DFT	5	GCMS6W	TO-15
V6W76-ICC76	6W02923.D	11/07/17 20:26	DFT	10	GCMS6W	TO-15
V6W76-IC76	6W02924.D	11/07/17 21:19	DFT	20	GCMS6W	TO-15
V6W76-IC76	6W02925.D	11/07/17 22:15	DFT	40	GCMS6W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.15	8.20	0.628 ok	0.629	0.569-0.689
Acrylonitrile	5.57	8.20	0.679 ok	0.681	0.621-0.741
Acetonitrile	4.93	8.20	0.601 ok	0.602	0.542-0.662
1,3-Butadiene	4.27	8.20	0.521 ok	0.521	0.461-0.581
Benzene	9.96	8.20	1.215 ok	1.216	1.156-1.276
Bromobenzene	18.50	15.93	1.161 ok	1.161	1.101-1.221
Bromodichloromethane	11.19	10.40	1.076 ok	1.076	1.016-1.136
Bromoform	16.89	15.93	1.060 ok	1.060	1.000-1.120
Bromomethane	4.50	8.20	0.549 ok	0.549	0.489-0.609
Bromoethene	4.94	8.20	0.602 ok	0.603	0.543-0.663
n-Butane	4.32	8.20	0.527 ok	0.527	0.467-0.587
Benzyl Chloride	20.30	15.93	1.274 ok	1.274	1.214-1.334
n-Butylbenzene	21.27	15.93	1.335 ok	1.335	1.275-1.395
sec-Butylbenzene	20.48	15.93	1.286 ok	1.286	1.226-1.346
tert-Butylbenzene	20.10	15.93	1.262 ok	1.261	1.201-1.321
Carbon disulfide	6.29	8.20	0.767 ok	0.768	0.708-0.828
Chlorobenzene	16.00	15.93	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	3.77	8.20	0.460 ok	0.461	0.401-0.521
Chloroethane	4.64	8.20	0.566 ok	0.567	0.507-0.627
Chlorotrifluoroethene	3.80	8.20	0.463 ok	0.464	0.404-0.524
Chloroform	8.34	8.20	1.017 ok	1.018	0.958-1.078
Chloromethane	3.99	8.20	0.487 ok	0.487	0.427-0.547
3-Chloropropene	6.12	8.20	0.746 ok	0.747	0.687-0.807
2-Chlorotoluene	19.12	15.93	1.200 ok	1.200	1.140-1.260
Carbon tetrachloride	10.13	8.20	1.235 ok	1.236	1.176-1.296
Cyclohexane	10.27	8.20	1.252 ok	1.253	1.193-1.313
1,1-Dichloroethane	7.13	8.20	0.870 ok	0.870	0.810-0.930
1,1-Dichloroethylene	5.89	8.20	0.718 ok	0.719	0.659-0.779
1,2-Dibromoethane	14.42	10.40	1.387 ok	1.387	1.327-1.447
1,2-Dichloroethane	9.15	8.20	1.116 ok	1.117	1.057-1.177
1,2-Dichloropropane	10.94	10.40	1.052 ok	1.052	0.992-1.112
1,3-Dichloropropane	13.59	10.40	1.307 ok	1.308	1.248-1.368
1,4-Dioxane	11.24	10.40	1.081 ok	1.083	1.023-1.143
Dichlorodifluoromethane	3.86	8.20	0.471 ok	0.471	0.411-0.531
Dichlorofluoromethane	4.72	8.20	0.576 ok	0.576	0.516-0.636
Dibromochloromethane	14.10	10.40	1.356 ok	1.357	1.297-1.417
Dibromomethane	10.91	10.40	1.049 ok	1.050	0.990-1.110
trans-1,2-Dichloroethylene	6.92	8.20	0.844 ok	0.845	0.785-0.905
cis-1,2-Dichloroethylene	8.01	8.20	0.977 ok	0.978	0.918-1.038
cis-1,3-Dichloropropene	12.31	10.40	1.184 ok	1.184	1.124-1.244

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W76-IC76	6W02918.D	11/07/17 16:11	DFT	0.04	GCMS6W	TO-15
V6W76-IC76	6W02919.D	11/07/17 17:01	DFT	0.1	GCMS6W	TO-15
V6W76-IC76	6W02920.D	11/07/17 17:52	DFT	0.2	GCMS6W	TO-15
V6W76-IC76	6W02921.D	11/07/17 18:44	DFT	0.5	GCMS6W	TO-15
V6W76-IC76	6W02922.D	11/07/17 19:35	DFT	5	GCMS6W	TO-15
V6W76-ICC76	6W02923.D	11/07/17 20:26	DFT	10	GCMS6W	TO-15
V6W76-IC76	6W02924.D	11/07/17 21:19	DFT	20	GCMS6W	TO-15
V6W76-IC76	6W02925.D	11/07/17 22:15	DFT	40	GCMS6W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
m-Dichlorobenzene	20.30	15.93	1.274	ok 1.274	1.214-1.334
o-Dichlorobenzene	20.86	15.93	1.309	ok 1.309	1.249-1.369
p-Dichlorobenzene	20.40	15.93	1.281	ok 1.281	1.221-1.341
trans-1,3-Dichloropropene	12.99	10.40	1.249	ok 1.249	1.189-1.309
Di-Isopropyl ether	8.22	8.20	1.002	ok 1.004	0.944-1.064
2,3-Dimethylpentane	10.56	8.20	1.288	ok 1.289	1.229-1.349
2,4-Dimethylpentane	9.20	8.20	1.122	ok 1.123	1.063-1.183
Ethanol	4.73	8.20	0.577	ok 0.578	0.518-0.638
Ethylbenzene	16.54	15.93	1.038	ok 1.038	0.978-1.098
Ethyl Acetate	8.26	8.20	1.007	ok 1.009	0.949-1.069
Ethyl Acrylate	10.97	10.40	1.055	ok 1.056	0.996-1.116
4-Ethyltoluene	19.41	15.93	1.218	ok 1.218	1.158-1.278
Freon 113	6.25	8.20	0.762	ok 0.763	0.703-0.823
Freon 114	4.07	8.20	0.496	ok 0.497	0.437-0.557
Freon 123	5.08	8.20	0.620	ok 0.620	0.560-0.680
Freon 123A	5.12	8.20	0.624	ok 0.625	0.565-0.685
Freon 141B	5.41	8.20	0.660	ok 0.660	0.600-0.720
Freon 142B	3.97	8.20	0.484	ok 0.485	0.425-0.545
Freon 143a	3.64	8.20	0.444	ok 0.444	0.384-0.504
Freon 152A	3.74	8.20	0.456	ok 0.456	0.396-0.516
Heptane	11.60	10.40	1.115	ok 1.115	1.055-1.175
Hexachlorobutadiene	23.62	15.93	1.483	ok 1.483	1.423-1.543
Hexachloroethane	21.74	15.93	1.365	ok 1.365	1.305-1.425
Hexane	8.22	8.20	1.002	ok 1.004	0.944-1.064
2-Hexanone	13.92	10.40	1.338	ok 1.340	1.280-1.400
Iodomethane	5.82	8.20	0.710	ok 0.710	0.650-0.770
Isopropylbenzene	18.39	15.93	1.154	ok 1.154	1.094-1.214
Isopropyl Alcohol	5.37	8.20	0.655	ok 0.656	0.596-0.716
p-Isopropyltoluene	20.71	15.93	1.300	ok 1.300	1.240-1.360
Methylene chloride	6.00	8.20	0.732	ok 0.733	0.673-0.793
Methyl ethyl ketone	7.54	8.20	0.920	ok 0.921	0.861-0.981
Methyl Isobutyl Ketone	12.36	10.40	1.188	ok 1.190	1.130-1.250
Methyl Tert Butyl Ether	7.18	8.20	0.876	ok 0.878	0.818-0.938
Methylmethacrylate	11.50	10.40	1.106	ok 1.106	1.046-1.166
Naphthalene	23.18	15.93	1.455	ok 1.455	1.395-1.515
Nonane	17.87	15.93	1.122	ok 1.122	1.062-1.182
Octane	14.89	10.40	1.432	ok 1.432	1.372-1.492
Pentane	5.62	8.20	0.685	ok 0.686	0.626-0.746
n-Propylbenzene	19.19	15.93	1.205	ok 1.204	1.144-1.264
Propylene	3.80	8.20	0.463	ok 0.464	0.404-0.524

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W76-IC76	6W02918.D	11/07/17 16:11	DFT	0.04	GCMS6W	TO-15
V6W76-IC76	6W02919.D	11/07/17 17:01	DFT	0.1	GCMS6W	TO-15
V6W76-IC76	6W02920.D	11/07/17 17:52	DFT	0.2	GCMS6W	TO-15
V6W76-IC76	6W02921.D	11/07/17 18:44	DFT	0.5	GCMS6W	TO-15
V6W76-IC76	6W02922.D	11/07/17 19:35	DFT	5	GCMS6W	TO-15
V6W76-ICC76	6W02923.D	11/07/17 20:26	DFT	10	GCMS6W	TO-15 Reporting this level
V6W76-IC76	6W02924.D	11/07/17 21:19	DFT	20	GCMS6W	TO-15
V6W76-IC76	6W02925.D	11/07/17 22:15	DFT	40	GCMS6W	TO-15

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Styrene	17.33	15.93	1.088 ok	1.088	1.028-1.148
1,1,1-Trichloroethane	9.43	8.20	1.150 ok	1.151	1.091-1.211
1,1,1,2-Tetrachloroethane	15.98	10.40	1.537 ok	1.537	1.477-1.597
1,1,2,2-Tetrachloroethane	17.49	15.93	1.098 ok	1.098	1.038-1.158
1,1,2-Trichloroethane	13.20	10.40	1.269 ok	1.270	1.210-1.330
1,2,4-Trichlorobenzene	23.06	15.93	1.448 ok	1.447	1.387-1.507
1,2,3-Trichloropropane	17.69	15.93	1.110 ok	1.110	1.050-1.170
1,2,4-Trimethylbenzene	20.11	15.93	1.262 ok	1.262	1.202-1.322
1,3,5-Trimethylbenzene	19.53	15.93	1.226 ok	1.226	1.166-1.286
2,2,4-Trimethylpentane	11.25	10.40	1.082 ok	1.082	1.022-1.142
Tertiary Butyl Alcohol	5.92	8.20	0.722 ok	0.725	0.665-0.785
Tetrachloroethylene	15.06	10.40	1.448 ok	1.448	1.388-1.508
Tetrahydrofuran	8.77	8.20	1.070 ok	1.073	1.013-1.133
Toluene	13.55	10.40	1.303 ok	1.303	1.243-1.363
Trichloroethylene	11.23	10.40	1.080 ok	1.080	1.020-1.140
Trichlorofluoromethane	5.30	8.20	0.646 ok	0.647	0.587-0.707
Vinyl chloride	4.16	8.20	0.507 ok	0.508	0.448-0.568
Vinyl Acetate	7.28	8.20	0.888 ok	0.889	0.829-0.949
m,p-Xylene	16.81	15.93	1.055 ok	1.055	0.995-1.115
o-Xylene	17.49	15.93	1.098 ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.62	15.93	0.353 ok	0.353	0.293-0.413

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.20 ok	8.19	7.86-8.52	229071 ok	241635	144981-338289
1,4-Difluorobenzene	10.40 ok	10.39	10.06-10.72	813074 ok	886229	531737-1240721
Chlorobenzene-D5	15.93 ok	15.93	15.60-16.26	418516 ok	424169	254501-593837

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W76-IC76	6W02918.D	11/07/17 16:11	DFT	0.04	GCMS6W	TO-15
V6W76-IC76	6W02919.D	11/07/17 17:01	DFT	0.1	GCMS6W	TO-15
V6W76-IC76	6W02920.D	11/07/17 17:52	DFT	0.2	GCMS6W	TO-15
V6W76-IC76	6W02921.D	11/07/17 18:44	DFT	0.5	GCMS6W	TO-15
V6W76-IC76	6W02922.D	11/07/17 19:35	DFT	5	GCMS6W	TO-15
V6W76-ICC76	6W02923.D	11/07/17 20:26	DFT	10	GCMS6W	TO-15
V6W76-IC76	6W02924.D	11/07/17 21:19	DFT	20	GCMS6W	TO-15
V6W76-IC76	6W02925.D	11/07/17 22:15	DFT	40	GCMS6W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.15	8.19	0.629	ok	0.569-0.689
Acrylonitrile	5.58	8.19	0.681	ok	0.621-0.741
Acetonitrile	4.93	8.19	0.602	ok	0.542-0.662
1,3-Butadiene	4.28	8.19	0.523	ok	0.461-0.581
Benzene	9.96	8.19	1.216	ok	1.156-1.276
Bromobenzene	18.51	15.94	1.161	ok	1.101-1.221
Bromodichloromethane	11.19	10.40	1.076	ok	1.016-1.136
Bromoform	16.89	15.94	1.060	ok	1.000-1.120
Bromomethane	4.51	8.19	0.551	ok	0.489-0.609
Bromoethene	4.94	8.19	0.603	ok	0.543-0.663
n-Butane	4.32	8.19	0.527	ok	0.467-0.587
Benzyl Chloride	20.30	15.94	1.274	ok	1.214-1.334
n-Butylbenzene	21.28	15.94	1.335	ok	1.275-1.395
sec-Butylbenzene	20.49	15.94	1.285	ok	1.226-1.346
tert-Butylbenzene	20.10	15.94	1.261	ok	1.201-1.321
Carbon disulfide	6.29	8.19	0.768	ok	0.708-0.828
Chlorobenzene	16.00	15.94	1.004	ok	0.944-1.064
Chlorodifluoromethane	3.77	8.19	0.460	ok	0.401-0.521
Chloroethane	4.65	8.19	0.568	ok	0.507-0.627
Chlorotrifluoroethene	3.80	8.19	0.464	ok	0.404-0.524
Chloroform	8.34	8.19	1.018	ok	0.958-1.078
Chloromethane	3.99	8.19	0.487	ok	0.427-0.547
3-Chloropropene	6.11	8.19	0.746	ok	0.687-0.807
2-Chlorotoluene	19.12	15.94	1.199	ok	1.140-1.260
Carbon tetrachloride	10.13	8.19	1.237	ok	1.176-1.296
Cyclohexane	10.27	8.19	1.254	ok	1.193-1.313
1,1-Dichloroethane	7.13	8.19	0.871	ok	0.810-0.930
1,1-Dichloroethylene	5.89	8.19	0.719	ok	0.659-0.779
1,2-Dibromoethane	14.42	10.40	1.387	ok	1.327-1.447
1,2-Dichloroethane	9.16	8.19	1.118	ok	1.057-1.177
1,2-Dichloropropane	10.94	10.40	1.052	ok	0.992-1.112
1,3-Dichloropropane	13.60	10.40	1.308	ok	1.248-1.368
1,4-Dioxane	11.24	10.40	1.081	ok	1.023-1.143
Dichlorodifluoromethane	3.86	8.19	0.471	ok	0.411-0.531
Dichlorofluoromethane	4.72	8.19	0.576	ok	0.516-0.636
Dibromochloromethane	14.11	10.40	1.357	ok	1.297-1.417
Dibromomethane	10.91	10.40	1.049	ok	0.990-1.110
trans-1,2-Dichloroethylene	6.92	8.19	0.845	ok	0.785-0.905
cis-1,2-Dichloroethylene	8.01	8.19	0.978	ok	0.918-1.038
cis-1,3-Dichloropropene	12.31	10.40	1.184	ok	1.124-1.244

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W76-IC76	6W02918.D	11/07/17 16:11	DFT	0.04	GCMS6W	TO-15
V6W76-IC76	6W02919.D	11/07/17 17:01	DFT	0.1	GCMS6W	TO-15
V6W76-IC76	6W02920.D	11/07/17 17:52	DFT	0.2	GCMS6W	TO-15
V6W76-IC76	6W02921.D	11/07/17 18:44	DFT	0.5	GCMS6W	TO-15
V6W76-IC76	6W02922.D	11/07/17 19:35	DFT	5	GCMS6W	TO-15
V6W76-ICC76	6W02923.D	11/07/17 20:26	DFT	10	GCMS6W	TO-15
V6W76-IC76	6W02924.D	11/07/17 21:19	DFT	20	GCMS6W	TO-15
V6W76-IC76	6W02925.D	11/07/17 22:15	DFT	40	GCMS6W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
m-Dichlorobenzene	20.31	15.94	1.274	ok 1.274	1.214-1.334
o-Dichlorobenzene	20.86	15.94	1.309	ok 1.309	1.249-1.369
p-Dichlorobenzene	20.41	15.94	1.280	ok 1.281	1.221-1.341
trans-1,3-Dichloropropene	12.99	10.40	1.249	ok 1.249	1.189-1.309
Di-Isopropyl ether	8.22	8.19	1.004	ok 1.004	0.944-1.064
2,3-Dimethylpentane	10.56	8.19	1.289	ok 1.289	1.229-1.349
2,4-Dimethylpentane	9.20	8.19	1.123	ok 1.123	1.063-1.183
Ethanol	4.74	8.19	0.579	ok 0.578	0.518-0.638
Ethylbenzene	16.55	15.94	1.038	ok 1.038	0.978-1.098
Ethyl Acetate	8.26	8.19	1.009	ok 1.009	0.949-1.069
Ethyl Acrylate	10.97	10.40	1.055	ok 1.056	0.996-1.116
4-Ethyltoluene	19.41	15.94	1.218	ok 1.218	1.158-1.278
Freon 113	6.25	8.19	0.763	ok 0.763	0.703-0.823
Freon 114	4.07	8.19	0.497	ok 0.497	0.437-0.557
Freon 123	5.07	8.19	0.619	ok 0.620	0.560-0.680
Freon 123A	5.12	8.19	0.625	ok 0.625	0.565-0.685
Freon 141B	5.41	8.19	0.661	ok 0.660	0.600-0.720
Freon 142B	3.97	8.19	0.485	ok 0.485	0.425-0.545
Freon 143a	3.64	8.19	0.444	ok 0.444	0.384-0.504
Freon 152A	3.74	8.19	0.457	ok 0.456	0.396-0.516
Heptane	11.60	10.40	1.115	ok 1.115	1.055-1.175
Hexachlorobutadiene	23.63	15.94	1.482	ok 1.483	1.423-1.543
Hexachloroethane	21.75	15.94	1.364	ok 1.365	1.305-1.425
Hexane	8.23	8.19	1.005	ok 1.004	0.944-1.064
2-Hexanone	13.92	10.40	1.338	ok 1.340	1.280-1.400
Iodomethane	5.82	8.19	0.711	ok 0.710	0.650-0.770
Isopropylbenzene	18.40	15.94	1.154	ok 1.154	1.094-1.214
Isopropyl Alcohol	5.37	8.19	0.656	ok 0.656	0.596-0.716
p-Isopropyltoluene	20.71	15.94	1.299	ok 1.300	1.240-1.360
Methylene chloride	6.01	8.19	0.734	ok 0.733	0.673-0.793
Methyl ethyl ketone	7.54	8.19	0.921	ok 0.921	0.861-0.981
Methyl Isobutyl Ketone	12.36	10.40	1.188	ok 1.190	1.130-1.250
Methyl Tert Butyl Ether	7.18	8.19	0.877	ok 0.878	0.818-0.938
Methylmethacrylate	11.50	10.40	1.106	ok 1.106	1.046-1.166
Naphthalene	23.18	15.94	1.454	ok 1.455	1.395-1.515
Nonane	17.87	15.94	1.121	ok 1.122	1.062-1.182
Octane	14.89	10.40	1.432	ok 1.432	1.372-1.492
Pentane	5.62	8.19	0.686	ok 0.686	0.626-0.746
n-Propylbenzene	19.19	15.94	1.204	ok 1.204	1.144-1.264
Propylene	3.80	8.19	0.464	ok 0.464	0.404-0.524

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W76-IC76	6W02918.D	11/07/17 16:11	DFT	0.04	GCMS6W	TO-15
V6W76-IC76	6W02919.D	11/07/17 17:01	DFT	0.1	GCMS6W	TO-15
V6W76-IC76	6W02920.D	11/07/17 17:52	DFT	0.2	GCMS6W	TO-15
V6W76-IC76	6W02921.D	11/07/17 18:44	DFT	0.5	GCMS6W	TO-15
V6W76-IC76	6W02922.D	11/07/17 19:35	DFT	5	GCMS6W	TO-15
V6W76-ICC76	6W02923.D	11/07/17 20:26	DFT	10	GCMS6W	TO-15
V6W76-IC76	6W02924.D	11/07/17 21:19	DFT	20	GCMS6W	TO-15
V6W76-IC76	6W02925.D	11/07/17 22:15	DFT	40	GCMS6W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Styrene	17.33	15.94	1.087 ok	1.088	1.028-1.148
1,1,1-Trichloroethane	9.43	8.19	1.151 ok	1.151	1.091-1.211
1,1,1,2-Tetrachloroethane	15.98	10.40	1.537 ok	1.537	1.477-1.597
1,1,2,2-Tetrachloroethane	17.50	15.94	1.098 ok	1.098	1.038-1.158
1,1,2-Trichloroethane	13.20	10.40	1.269 ok	1.270	1.210-1.330
1,2,4-Trichlorobenzene	23.06	15.94	1.447 ok	1.447	1.387-1.507
1,2,3-Trichloropropane	17.69	15.94	1.110 ok	1.110	1.050-1.170
1,2,4-Trimethylbenzene	20.11	15.94	1.262 ok	1.262	1.202-1.322
1,3,5-Trimethylbenzene	19.53	15.94	1.225 ok	1.226	1.166-1.286
2,2,4-Trimethylpentane	11.25	10.40	1.082 ok	1.082	1.022-1.142
Tertiary Butyl Alcohol	5.92	8.19	0.723 ok	0.725	0.665-0.785
Tetrachloroethylene	15.06	10.40	1.448 ok	1.448	1.388-1.508
Tetrahydrofuran	8.77	8.19	1.071 ok	1.073	1.013-1.133
Toluene	13.55	10.40	1.303 ok	1.303	1.243-1.363
Trichloroethylene	11.23	10.40	1.080 ok	1.080	1.020-1.140
Trichlorofluoromethane	5.31	8.19	0.648 ok	0.647	0.587-0.707
Vinyl chloride	4.17	8.19	0.509 ok	0.508	0.448-0.568
Vinyl Acetate	7.28	8.19	0.889 ok	0.889	0.829-0.949
m,p-Xylene	16.81	15.94	1.055 ok	1.055	0.995-1.115
o-Xylene	17.49	15.94	1.097 ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.62	15.94	0.353 ok	0.353	0.293-0.413

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.19 ok	8.19	7.86-8.52	245937	ok 241635	144981-338289
1,4-Difluorobenzene	10.40 ok	10.39	10.06-10.72	898144	ok 886229	531737-1240721
Chlorobenzene-D5	15.94 ok	15.93	15.60-16.26	470529	ok 424169	254501-593837

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W76-IC76	6W02918.D	11/07/17 16:11	DFT	0.04	GCMS6W	TO-15
V6W76-IC76	6W02919.D	11/07/17 17:01	DFT	0.1	GCMS6W	TO-15
V6W76-IC76	6W02920.D	11/07/17 17:52	DFT	0.2	GCMS6W	TO-15
V6W76-IC76	6W02921.D	11/07/17 18:44	DFT	0.5	GCMS6W	TO-15
V6W76-IC76	6W02922.D	11/07/17 19:35	DFT	5	GCMS6W	TO-15
V6W76-ICC76	6W02923.D	11/07/17 20:26	DFT	10	GCMS6W	TO-15
V6W76-IC76	6W02924.D	11/07/17 21:19	DFT	20	GCMS6W	TO-15
V6W76-IC76	6W02925.D	11/07/17 22:15	DFT	40	GCMS6W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.15	8.20	0.628 ok	0.629	0.569-0.689
Acrylonitrile	5.58	8.20	0.680 ok	0.681	0.621-0.741
Acetonitrile	4.93	8.20	0.601 ok	0.602	0.542-0.662
1,3-Butadiene	4.27	8.20	0.521 ok	0.521	0.461-0.581
Benzene	9.96	8.20	1.215 ok	1.216	1.156-1.276
Bromobenzene	18.52	15.94	1.162 ok	1.161	1.101-1.221
Bromodichloromethane	11.19	10.40	1.076 ok	1.076	1.016-1.136
Bromoform	16.90	15.94	1.060 ok	1.060	1.000-1.120
Bromomethane	4.50	8.20	0.549 ok	0.549	0.489-0.609
Bromoethene	4.94	8.20	0.602 ok	0.603	0.543-0.663
n-Butane	4.32	8.20	0.527 ok	0.527	0.467-0.587
Benzyl Chloride	20.30	15.94	1.274 ok	1.274	1.214-1.334
n-Butylbenzene	21.28	15.94	1.335 ok	1.335	1.275-1.395
sec-Butylbenzene	20.49	15.94	1.285 ok	1.286	1.226-1.346
tert-Butylbenzene	20.10	15.94	1.261 ok	1.261	1.201-1.321
Carbon disulfide	6.29	8.20	0.767 ok	0.768	0.708-0.828
Chlorobenzene	16.01	15.94	1.004 ok	1.004	0.944-1.064
Chlorodifluoromethane	3.77	8.20	0.460 ok	0.461	0.401-0.521
Chloroethane	4.64	8.20	0.566 ok	0.567	0.507-0.627
Chlorotrifluoroethene	3.80	8.20	0.463 ok	0.464	0.404-0.524
Chloroform	8.34	8.20	1.017 ok	1.018	0.958-1.078
Chloromethane	3.99	8.20	0.487 ok	0.487	0.427-0.547
3-Chloropropene	6.12	8.20	0.746 ok	0.747	0.687-0.807
2-Chlorotoluene	19.12	15.94	1.199 ok	1.200	1.140-1.260
Carbon tetrachloride	10.13	8.20	1.235 ok	1.236	1.176-1.296
Cyclohexane	10.27	8.20	1.252 ok	1.253	1.193-1.313
1,1-Dichloroethane	7.13	8.20	0.870 ok	0.870	0.810-0.930
1,1-Dichloroethylene	5.89	8.20	0.718 ok	0.719	0.659-0.779
1,2-Dibromoethane	14.43	10.40	1.387 ok	1.387	1.327-1.447
1,2-Dichloroethane	9.16	8.20	1.117 ok	1.117	1.057-1.177
1,2-Dichloropropane	10.94	10.40	1.052 ok	1.052	0.992-1.112
1,3-Dichloropropane	13.60	10.40	1.308 ok	1.308	1.248-1.368
1,4-Dioxane	11.24	10.40	1.081 ok	1.083	1.023-1.143
Dichlorodifluoromethane	3.85	8.20	0.470 ok	0.471	0.411-0.531
Dichlorofluoromethane	4.72	8.20	0.576 ok	0.576	0.516-0.636
Dibromochloromethane	14.11	10.40	1.357 ok	1.357	1.297-1.417
Dibromomethane	10.92	10.40	1.050 ok	1.050	0.990-1.110
trans-1,2-Dichloroethylene	6.92	8.20	0.844 ok	0.845	0.785-0.905
cis-1,2-Dichloroethylene	8.01	8.20	0.977 ok	0.978	0.918-1.038
cis-1,3-Dichloropropene	12.31	10.40	1.184 ok	1.184	1.124-1.244

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815

Account: GESNYP Groundwater & Environmental Services

Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W76-IC76	6W02918.D	11/07/17 16:11	DFT	0.04	GCMS6W	TO-15
V6W76-IC76	6W02919.D	11/07/17 17:01	DFT	0.1	GCMS6W	TO-15
V6W76-IC76	6W02920.D	11/07/17 17:52	DFT	0.2	GCMS6W	TO-15
V6W76-IC76	6W02921.D	11/07/17 18:44	DFT	0.5	GCMS6W	TO-15
V6W76-IC76	6W02922.D	11/07/17 19:35	DFT	5	GCMS6W	TO-15
V6W76-ICC76	6W02923.D	11/07/17 20:26	DFT	10	GCMS6W	TO-15
V6W76-IC76	6W02924.D	11/07/17 21:19	DFT	20	GCMS6W	TO-15
V6W76-IC76	6W02925.D	11/07/17 22:15	DFT	40	GCMS6W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
m-Dichlorobenzene	20.31	15.94	1.274	ok 1.274	1.214-1.334
o-Dichlorobenzene	20.87	15.94	1.309	ok 1.309	1.249-1.369
p-Dichlorobenzene	20.41	15.94	1.280	ok 1.281	1.221-1.341
trans-1,3-Dichloropropene	12.99	10.40	1.249	ok 1.249	1.189-1.309
Di-Isopropyl ether	8.22	8.20	1.002	ok 1.004	0.944-1.064
2,3-Dimethylpentane	10.56	8.20	1.288	ok 1.289	1.229-1.349
2,4-Dimethylpentane	9.20	8.20	1.122	ok 1.123	1.063-1.183
Ethanol	4.74	8.20	0.578	ok 0.578	0.518-0.638
Ethylbenzene	16.55	15.94	1.038	ok 1.038	0.978-1.098
Ethyl Acetate	8.26	8.20	1.007	ok 1.009	0.949-1.069
Ethyl Acrylate	10.97	10.40	1.055	ok 1.056	0.996-1.116
4-Ethyltoluene	19.42	15.94	1.218	ok 1.218	1.158-1.278
Freon 113	6.25	8.20	0.762	ok 0.763	0.703-0.823
Freon 114	4.07	8.20	0.496	ok 0.497	0.437-0.557
Freon 123	5.08	8.20	0.620	ok 0.620	0.560-0.680
Freon 123A	5.12	8.20	0.624	ok 0.625	0.565-0.685
Freon 141B	5.41	8.20	0.660	ok 0.660	0.600-0.720
Freon 142B	3.97	8.20	0.484	ok 0.485	0.425-0.545
Freon 143a	3.64	8.20	0.444	ok 0.444	0.384-0.504
Freon 152A	3.74	8.20	0.456	ok 0.456	0.396-0.516
Heptane	11.60	10.40	1.115	ok 1.115	1.055-1.175
Hexachlorobutadiene	23.63	15.94	1.482	ok 1.483	1.423-1.543
Hexachloroethane	21.75	15.94	1.364	ok 1.365	1.305-1.425
Hexane	8.22	8.20	1.002	ok 1.004	0.944-1.064
2-Hexanone	13.93	10.40	1.339	ok 1.340	1.280-1.400
Iodomethane	5.82	8.20	0.710	ok 0.710	0.650-0.770
Isopropylbenzene	18.40	15.94	1.154	ok 1.154	1.094-1.214
Isopropyl Alcohol	5.37	8.20	0.655	ok 0.656	0.596-0.716
p-Isopropyltoluene	20.72	15.94	1.300	ok 1.300	1.240-1.360
Methylene chloride	6.01	8.20	0.733	ok 0.733	0.673-0.793
Methyl ethyl ketone	7.54	8.20	0.920	ok 0.921	0.861-0.981
Methyl Isobutyl Ketone	12.36	10.40	1.188	ok 1.190	1.130-1.250
Methyl Tert Butyl Ether	7.18	8.20	0.876	ok 0.878	0.818-0.938
Methylmethacrylate	11.50	10.40	1.106	ok 1.106	1.046-1.166
Naphthalene	23.18	15.94	1.454	ok 1.455	1.395-1.515
Nonane	17.87	15.94	1.121	ok 1.122	1.062-1.182
Octane	14.89	10.40	1.432	ok 1.432	1.372-1.492
Pentane	5.62	8.20	0.685	ok 0.686	0.626-0.746
n-Propylbenzene	19.19	15.94	1.204	ok 1.204	1.144-1.264
Propylene	3.80	8.20	0.463	ok 0.464	0.404-0.524

Initial Calibration Retention Time/Internal Standard Area Summary

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Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method
V6W76-IC76	6W02918.D	11/07/17 16:11	DFT	0.04	GCMS6W	TO-15
V6W76-IC76	6W02919.D	11/07/17 17:01	DFT	0.1	GCMS6W	TO-15
V6W76-IC76	6W02920.D	11/07/17 17:52	DFT	0.2	GCMS6W	TO-15
V6W76-IC76	6W02921.D	11/07/17 18:44	DFT	0.5	GCMS6W	TO-15
V6W76-IC76	6W02922.D	11/07/17 19:35	DFT	5	GCMS6W	TO-15
V6W76-ICC76	6W02923.D	11/07/17 20:26	DFT	10	GCMS6W	TO-15
V6W76-IC76	6W02924.D	11/07/17 21:19	DFT	20	GCMS6W	TO-15
V6W76-IC76	6W02925.D	11/07/17 22:15	DFT	40	GCMS6W	TO-15

Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT	Mean Rel RT	Rel RT Range (+ /- .06)
Styrene	17.34	15.94	1.088	ok 1.088	1.028-1.148
1,1,1-Trichloroethane	9.43	8.20	1.150	ok 1.151	1.091-1.211
1,1,1,2-Tetrachloroethane	15.98	10.40	1.537	ok 1.537	1.477-1.597
1,1,2,2-Tetrachloroethane	17.51	15.94	1.098	ok 1.098	1.038-1.158
1,1,2-Trichloroethane	13.21	10.40	1.270	ok 1.270	1.210-1.330
1,2,4-Trichlorobenzene	23.06	15.94	1.447	ok 1.447	1.387-1.507
1,2,3-Trichloropropane	17.69	15.94	1.110	ok 1.110	1.050-1.170
1,2,4-Trimethylbenzene	20.12	15.94	1.262	ok 1.262	1.202-1.322
1,3,5-Trimethylbenzene	19.54	15.94	1.226	ok 1.226	1.166-1.286
2,2,4-Trimethylpentane	11.26	10.40	1.083	ok 1.082	1.022-1.142
Tertiary Butyl Alcohol	5.93	8.20	0.723	ok 0.725	0.665-0.785
Tetrachloroethylene	15.06	10.40	1.448	ok 1.448	1.388-1.508
Tetrahydrofuran	8.76	8.20	1.068	ok 1.073	1.013-1.133
Toluene	13.55	10.40	1.303	ok 1.303	1.243-1.363
Trichloroethylene	11.23	10.40	1.080	ok 1.080	1.020-1.140
Trichlorofluoromethane	5.30	8.20	0.646	ok 0.647	0.587-0.707
Vinyl chloride	4.16	8.20	0.507	ok 0.508	0.448-0.568
Vinyl Acetate	7.28	8.20	0.888	ok 0.889	0.829-0.949
m,p-Xylene	16.82	15.94	1.055	ok 1.055	0.995-1.115
o-Xylene	17.49	15.94	1.097	ok 1.098	1.038-1.158
TVHC As Equiv Pentane	5.61	15.94	0.352	ok 0.353	0.293-0.413

Internal Standard	RT (min.)	Mean RT(min.)	RT Range (+ /- 0.33)	Area	Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.20	ok 8.19	7.86-8.52	261279	ok 241635	144981-338289
1,4-Difluorobenzene	10.40	ok 10.39	10.06-10.72	968343	ok 886229	531737-1240721
Chlorobenzene-D5	15.94	ok 15.93	15.60-16.26	521891	ok 424169	254501-593837

Surrogate Recovery Summary

Page 1 of 2

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Method: TO-15 **Matrix:** AIR

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1
JC56815-1	6W03687.D	103
JC56815-2	6W03638.D	101
JC56815-3	6W03669.D	102
JC56815-3	6W03646.D	102
JC56815-4	6W03665.D	101
JC56815-4	6W03640.D	103
JC56815-5	6W03670.D	102
JC56815-5	6W03647.D	102
JC56815-6	6W03641.D	100
JC56815-7	6W03697.D	102
JC56815-7	6W03671.D	104
JC56815-8	6W03642.D	103
JC56815-9	6W03698.D	93
JC56815-9	6W03672.D	102
JC56815-10	6W03666.D	99
JC56815-10	6W03643.D	104
JC56815-11	6W03673.D	103
JC56815-11	6W03699.D	98
JC56815-11	6W03650.D	103
JC56815-12	6W03667.D	99
JC56815-12	6W03644.D	102
JC56815-13	6W03700.D	99
JC56815-13	6W03674.D	104
JC56815-2DUP	6W03639.D	103
JC57421-1DUP	6W03661.D	103
JC57579-2DUP	6W03689.D	103
V5W1090-SCC	5W27738.D	93
V5W1093-SCC	5W27816.D	94
V5W1099-SCC	5W27985.D	98
V6W105-BS	6W03633.D	100
V6W105-BSD	6W03634.D	100
V6W105-MB	6W03636.D	100
V6W106-BS	6W03656.D	105
V6W106-BSD	6W03657.D	103
V6W106-MB	6W03659.D	101
V6W107-BS	6W03683.D	100
V6W107-BSD	6W03684.D	101
V6W107-MB	6W03686.D	101
V6W86-SCC	6W03156.D	91
V5W1090-BS	5W27719.D	107

6.8.1

6

Surrogate Recovery Summary

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Method: TO-15	Matrix: AIR

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1
V5W1090-BSD	5W27720.D	107
V5W1090-MB	5W27722.D	94
V5W1093-BS	5W27797.D	112
V5W1093-BSD	5W27798.D	109
V5W1093-MB	5W27800.D	94
V5W1099-BS	5W27979.D	108
V5W1099-BSD	5W27980.D	108
V5W1099-MB	5W27982.D	99
V6W86-BS	6W03149.D	96
V6W86-BSD	6W03150.D	95
V6W86-MB	6W03152.D	94

Surrogate Compounds	Recovery Limits
S1 = 4-Bromofluorobenzene	65-128%

Initial Calibration Summary

Page 1 of 3

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1065-ICC1065
Lab FileID: 5W27086.D

Response Factor Report Air5w

Method Path : C:\msdchem\1\methods\
Method File : m5w1065.M
Title : T0-15 Full Scan Mode
Last Update : Sat Oct 07 09:10:30 2017
Response Via : Initial Calibration

Calibration Files

20 =5W27087.D 0.5 =5W27084.D 0.2 =5W27082.D 0.1 =5W27081.D 0.04=5W27080.D 10 =5W27086.D 5 =5W27085.D 40 =5W27088.D

Compound	20	0.5	0.2	0.1	0.04	10	5	40	Avg	%RSD
1) I Bromochloromethane	-----ISTD-----									
2) 1,1,1-Trifluor...	2.125	1.526	1.794	2.496	2.418	2.323	2.369	1.530	2.073	19.32
3) Freon 152A	0.480	0.508	0.594	0.707		0.486	0.500	0.470	0.535	16.11
4) Chlorodifluoro...	0.189	0.183	0.196	0.186	0.168	0.194	0.198	0.181	0.187	5.32
5) Propene	0.479	0.498	0.527	0.583	0.645	0.497	0.512	0.445	0.523	12.07
6) Chlorotrifluor...	1.319	1.259	1.308	1.392	1.390	1.328	1.349	1.280	1.328	3.61
7) Dichlorodifluo...	2.047	2.088	2.191	2.369	2.296	2.127	2.196	1.968	2.160	6.08
8) 1-Chloro-1,1-d...	1.345	1.384	1.436	1.589	1.633	1.389	1.428	1.254	1.432	8.70
9) Chloromethane	0.628	0.661	0.676	0.757	0.726	0.651	0.671	0.581	0.669	8.16
10) Dichlorotetra...	2.046	2.083	2.114	2.365	2.368	2.127	2.174	1.856	2.142	7.83
11) Vinyl Chloride	0.722	0.724	0.733	0.820	0.768	0.745	0.743	0.660	0.740	6.12
12) 1,3-Butadiene	0.465	0.491	0.515	0.575	0.552	0.482	0.496	0.426	0.500	9.48
13) n-Butane	0.099	0.104	0.094	0.116		0.104	0.108	0.091	0.102	8.51
14) Bromomethane	0.845	0.913	1.027	1.191	1.450	0.875	0.906	0.785	0.999	22.12
15) Chloroethane	0.339	0.362	0.353	0.396	0.358	0.355	0.365	0.316	0.356	6.41
16) Dichlorofluoro...	1.543	1.632	1.708	1.863	2.016	1.619	1.692	1.431	1.688	10.81
17) Acetonitrile	0.393	0.436	0.435			0.420	0.450	0.365	0.417	7.67
18) Freon 123	1.903	2.082	2.181	2.387	2.486	2.049	2.146	1.679	2.114	12.09
19) Freon 123A	1.110	1.208	1.266	1.365	1.432	1.188	1.245	0.981	1.224	11.51
20) Bromoethene	0.839	0.859	0.890	0.951	0.956	0.877	0.904	0.791	0.883	6.25
21) Trichlorofluor...	1.984	2.116	2.194	2.344	2.257	2.070	2.172	1.818	2.119	7.76
22) Acetone	0.276	0.336	0.381	0.428		0.293	0.300	0.259	0.325	18.77
23) Pentane	0.184	0.189	0.216	0.235	0.238	0.193	0.197	0.176	0.203	11.55
24) 1,1-Dichloro-1...	1.781	1.732	1.812	2.171	2.406	1.748	1.888	1.685	1.903	13.32
25) Iodomethane	2.651	2.587	2.703	3.030	3.056	2.678	2.746	2.578	2.754	6.80
26) Isopropyl Alcohol	0.193	0.277	0.284			0.177	0.218	0.174	0.221	22.27
27) 1,1-Dichloroet...	1.240	1.240	1.270	1.345	1.351	1.285	1.324	1.171	1.278	4.80
28) Freon 113	1.893	1.906	1.947	2.161	2.027	1.941	1.998	1.811	1.961	5.33
29) Methylene Chlo...	0.755	0.795	0.897	1.056	1.409	0.777	0.803	0.728	0.903	25.44
30) Carbon Disulfide	2.556	2.524	2.601	2.793	2.779	2.626	2.694	2.458	2.629	4.54
31) Ethanol	0.176	0.219	0.298			0.182	0.192	0.166	0.206	23.66
32) Acrylonitrile	0.553	0.516	0.565	0.565	0.596	0.577	0.598	0.530	0.563	5.15
33) 3-Chloropropene	0.349	0.328	0.338	0.372	0.358	0.353	0.365	0.341	0.350	4.14
34) trans-1,2-Dich...	1.149	1.134	1.128	1.233	1.233	1.183	1.203	1.119	1.173	3.99
35) tert-Butyl Alc...	1.512	1.713	1.806	2.239	2.149	1.543	1.579	1.448	1.749	17.05
36) Methyl tert-Bu...	2.166	2.212	2.322			2.206	2.264	2.107	2.213	3.39
37) Vinyl Acetate	1.660	1.625	1.862	2.083	2.263	1.693	1.715	1.605	1.813	13.24
38) 1,1-Dichloroet...	1.464	1.497	1.531	1.635	1.719	1.501	1.541	1.410	1.537	6.36
39) 2-Butanone	0.401	0.382	0.396	0.390	0.379	0.410	0.413	0.388	0.395	3.11
40) Hexane	1.154	1.131	1.147	1.231	1.339	1.189	1.230	1.097	1.190	6.43
41) cis-1,2-Dichlo...	1.087	1.070	1.094	1.198	1.225	1.118	1.137	1.056	1.123	5.39
42) Di-isopropyl E...	0.694	0.667	0.697	0.670	0.734	0.700	0.727	0.677	0.696	3.56
43) Ethyl Acetate	0.263	0.254	0.265	0.222		0.271	0.278	0.252	0.258	7.04
44) Methyl Acrylate	1.296	1.332	1.369	1.386	1.522	1.350	1.371	1.227	1.357	6.20
45) Chloroform	1.766	1.882	1.981	2.118	2.149	1.831	1.879	1.685	1.911	8.50
46) 2,4-Dimethylpe...	1.347	1.305	1.368	1.435	1.449	1.383	1.410	1.285	1.373	4.28

Initial Calibration Summary

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1065-ICC1065
Lab FileID: 5W27086.D

47)	Tetrahydrofuran	0.380	0.363	0.362	0.363	0.291	0.384	0.389	0.369	0.363	8.49
48)	1,1,1-Trichlor...	1.658	1.639	1.754	1.910	1.868	1.682	1.735	1.623	1.734	6.14
49)	1,2-Dichloroet...	1.000	1.059	1.078	1.110	1.113	1.041	1.063	0.955	1.052	5.10
50)	Benzene	2.548	2.620	2.775	3.125	3.119	2.619	2.694	2.475	2.747	9.04
51)	Carbon Tetrach...	1.747	1.592	1.657	1.883	1.878	1.744	1.759	1.758	1.752	5.62
52)	Cyclohexane	1.150	1.099	1.144	1.260	1.283	1.166	1.186	1.107	1.174	5.68
53)	2,3-Dimethylpe...	0.539	0.519	0.524	0.569	0.564	0.545	0.562	0.524	0.543	3.69
54) I	1,4-Difluorobenzene	-----ISTD-----									
55)	2,2,4-Trimethy...	1.061	1.059	1.076	1.139	1.183	1.104	1.134	0.949	1.088	6.51
56)	Heptane	0.233	0.224	0.228	0.247	0.228	0.238	0.244	0.224	0.233	3.84
57)	Trichloroethene	0.358	0.355	0.366	0.401	0.442	0.363	0.374	0.335	0.374	8.87
58)	1,2-Dichloropr...	0.270	0.275	0.289	0.311	0.298	0.281	0.286	0.255	0.283	6.07
59)	Dibromomethane	0.365	0.368	0.413	0.453	0.523	0.367	0.374	0.364	0.403	14.29
60)	Ethyl Acrylate	0.526	0.484	0.495	0.499	0.462	0.533	0.536	0.496	0.504	5.12
61)	Methyl Methacr...	0.266	0.254	0.252	0.250	0.260	0.270	0.272	0.253	0.260	3.35
62)	1,4-Dioxane	0.146	0.146	0.153	0.152		0.150	0.151		0.149	2.04
63)	Bromodichlorom...	0.550	0.552	0.579	0.626	0.626	0.553	0.574	0.526	0.573	6.31
64)	cis-1,3-Dichlo...	0.427	0.422	0.437	0.447	0.433	0.435	0.446	0.418	0.433	2.40
65)	4-Methyl-2-pen...	0.218	0.200	0.197	0.172	0.164	0.218	0.217	0.205	0.199	10.49
66)	trans-1,3-Dich...	0.363	0.377	0.383	0.371	0.377	0.385	0.399	0.347	0.375	4.13
67)	Toluene	0.872	0.943	1.012			0.908	0.953	0.835	0.920	6.80
68)	1,1,2-Trichlor...	0.317	0.340	0.352	0.369	0.352	0.330	0.342	0.307	0.339	5.96
69)	1,3-Dichloropr...	0.399	0.440	0.445	0.452	0.437	0.424	0.443	0.377	0.427	6.14
70)	2-Hexanone	0.292	0.267	0.244	0.203	0.160	0.293	0.292	0.272	0.253	19.13
71)	Ethyl Methacry...	0.429	0.405	0.390	0.379	0.411	0.435	0.435	0.394	0.410	5.25
72)	Dibromochlorom...	0.551	0.590	0.630	0.681	0.687	0.589	0.629	0.524	0.610	9.47
73)	Tetrachloroethene	0.511	0.518	0.570	0.627	0.687	0.513	0.537	0.506	0.559	11.82
74)	1,2-Dibromoethane	0.493	0.554	0.567	0.592	0.647	0.536	0.563	0.464	0.552	10.26
75)	Octane	0.464	0.486	0.488	0.524	0.610	0.490	0.501	0.422	0.498	10.87
76)	1,1,1,2-Tetrac...	0.381	0.445	0.456	0.480	0.500	0.433	0.447	0.351	0.437	11.28
77) I	Chlorobenzene-d5	-----ISTD-----									
78)	Chlorobenzene	1.597	1.842	1.910	2.145	2.301	1.692	1.723	1.433	1.830	15.59
79)	Ethylbenzene	2.426	3.083	3.236			2.572	2.592	2.141	2.675	15.38
80)	m,p-Xylene	1.866	2.363	2.524			1.991	1.951	1.594	2.048	16.60
81)	Styrene	1.610	1.518	1.459	1.681	1.791	1.551	1.495	1.331	1.554	9.05
82)	Nonane	1.105	1.174	1.192	1.363	1.606	1.056	1.033	0.912	1.180	18.39
83)	o-Xylene	1.884	2.396	2.514			2.018	2.018	1.520	2.058	17.44
84)	Bromoform	1.219	1.369	1.341	1.443	1.594	1.359	1.366	1.021	1.339	12.41
85)	1,1,2,2-Tetrac...	1.508	1.659	1.649	1.764	1.936	1.437	1.428	1.223	1.576	14.15
86)	1,2,3-Trichlor...	1.088	1.174	1.179	1.293	1.307	1.039	1.017	0.881	1.122	12.90
87)	Isopropylbenzene	2.756	3.313	3.504			2.735	2.686	2.227	2.870	16.16
88)	Bromobenzene	0.965	1.056	1.066	1.192	1.334	0.991	0.969	0.773	1.043	15.99
89)	2-Chlorotoluene	0.737	0.781	0.774	0.875	0.922	0.733	0.710	0.589	0.765	13.35
90)	n-Propylbenzene	0.821	0.836	0.825	0.880	0.896	0.773	0.752	0.668	0.806	9.13
91) S	4-Bromofluorob...	1.450	1.449	1.406	1.417	1.416	1.486	1.437	1.192	1.407	6.42
92)	4-Ethyltoluene	2.778	2.889	2.855	3.174	3.691	2.616	2.494	2.278	2.847	15.30
93)	1,3,5-Trimethy...	2.336	2.637	2.656	2.865	3.070	2.196	2.139	1.974	2.484	15.41
94)	alpha-Methylst...	1.214	1.150	1.104	1.221	1.252	1.104	1.057	1.058	1.145	6.66
95)	tert-Butylbenzene	0.541	0.602	0.594	0.675	0.691	0.497	0.489	0.458	0.568	15.21
96)	1,2,4-Trimethy...	2.204	2.474	2.438	2.636	2.801	2.059	2.015	1.817	2.305	14.62
97)	1,3-Dichlorobe...	1.546	1.584	1.573	1.717	1.943	1.418	1.363	1.313	1.557	13.12
98)	Benzyl Chloride	1.615	1.350	1.287	1.395	1.527	1.457	1.340	1.422	1.424	7.53
99)	1,4-Dichlorobe...	1.515	1.532	1.543	1.759	1.971	1.385	1.307	1.332	1.543	14.62
100)	sec-Butylbenzene	0.630	0.728	0.708	0.718	0.788	0.581	0.566	0.557	0.660	13.23
101)	p-Isopropyltol...	0.718	0.885	0.875	0.876	0.959	0.668	0.651	0.637	0.784	16.34
102)	1,2-Dichlorobe...	1.425	1.527	1.494	1.644	1.825	1.301	1.249	1.293	1.470	13.39
103)	n-Butylbenzene	0.607	0.671	0.613	0.639	0.672	0.548	0.516	0.577	0.605	9.26
104)	Hexachloroethane	0.920	1.097	1.085	1.107	1.127	0.854	0.808	0.780	0.972	15.13

Initial Calibration Summary

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1065-ICC1065
Lab FileID: 5W27086.D

105)	1,2,4-Trichlor...	0.575	0.432	0.322	0.348	0.366	0.478	0.381	0.610	0.439	24.32
106)	Naphthalene	1.143	0.777	0.574	0.532	0.831	0.916	0.701	1.212	0.836	29.45
107)	Hexachlorobuta...	0.686	0.964	0.941	1.034	1.251	0.628	0.572	0.678	0.844	28.27
108) I	Bromochloromethane...	-----ISTD-----									
109)	TVHC as equiv ...	4.253	4.383	4.726		4.469	4.639	4.014	4.414		5.89

(#) = Out of Range											

m5w1065.M Sat Oct 07 09:16:55 2017

6.9.1
6

Initial Calibration Verification

Page 1 of 3

Job Number: JC56815
 Account: GESNYP Groundwater & Environmental Services
 Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1065-ICV1065
 Lab FileID: 5W27092.D

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\
 Data File : 5W27092.D
 Acq On : 7 Oct 2017 8:32 am
 Operator : thomash
 Sample : icv1065-10
 Misc : MS20430,v5w1065,,,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 07 09:17:57 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Bromochloromethane	1.000	1.000	0.0	99	0.00
2	1,1,1-Trifluoroethane	2.073	0.000	100.0#	0#	-3.92#
3	Freon 152A	0.535	0.517	3.4	105	0.00
4	Chlorodifluoromethane	0.187	0.204	-9.1	104	0.00
5	Propene	0.523	0.521	0.4	104	0.00
6	Chlorotrifluoroethene	1.328	1.381	-4.0	103	0.00
7	Dichlorodifluoromethane	2.160	2.241	-3.7	105	0.00
8	1-Chloro-1,1-difluoroethane	1.432	1.416	1.1	101	0.00
9	Chloromethane	0.669	0.671	-0.3	102	0.00
10	Dichlorotetrafluoroethane	2.142	2.275	-6.2	106	0.00
11	Vinyl Chloride	0.740	0.756	-2.2	101	0.00
12	1,3-Butadiene	0.500	0.487	2.6	100	0.00
13	n-Butane	0.102	0.110	-7.8	105	0.00
14	Bromomethane	0.999	0.920	7.9	104	0.00
15	Chloroethane	0.356	0.364	-2.2	102	0.00
16	Dichlorofluoromethane	1.688	1.751	-3.7	107	0.00
17	Acetonitrile	0.417	0.451	-8.2	106	0.00
18	Freon 123	2.114	2.155	-1.9	104	0.00
19	Freon 123A	1.224	1.203	1.7	100	0.00
20	Bromoethene	0.883	0.891	-0.9	101	0.00
21	Trichlorofluoromethane	2.119	2.211	-4.3	106	0.00
22	Acetone	0.325	0.318	2.2	107	0.00
23	Pentane	0.203	0.214	-5.4	110	0.00
24	1,1-Dichloro-1-fluoroethane	1.903	0.000	100.0#	0#	-5.57#
25	Iodomethane	2.754	2.763	-0.3	102	0.00
26	Isopropyl Alcohol	0.221	0.240	-8.6	135	0.00
27	1,1-Dichloroethene	1.278	1.294	-1.3	100	0.00
28	Freon 113	1.961	1.932	1.5	99	0.00
29	Methylene Chloride	0.903	0.784	13.2	100	0.00
30	Carbon Disulfide	2.629	2.603	1.0	98	0.00
31	Ethanol	0.206	0.248	-20.4	135	0.00
32	Acrylonitrile	0.563	0.649	-15.3	112	0.00
33	3-Chloropropene	0.350	0.399	-14.0	112	0.00
34	trans-1,2-Dichloroethene	1.173	1.249	-6.5	105	0.00
35	tert-Butyl Alcohol	1.749	1.555	11.1	100	0.00
36	Methyl tert-Butyl Ether	2.213	2.380	-7.5	107	0.00
37	Vinyl Acetate	1.813	2.033	-12.1	119	0.00
38	1,1-Dichloroethane	1.537	1.564	-1.8	103	0.00

Initial Calibration Verification

Page 2 of 3

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1065-ICV1065
Lab FileID: 5W27092.D

39	2-Butanone	0.395	0.424	-7.3	103	0.00
40	Hexane	1.190	1.262	-6.1	105	0.00
41	cis-1,2-Dichloroethene	1.123	1.156	-2.9	103	0.00
42	Di-isopropyl Ether	0.696	0.754	-8.3	107	0.00
43	Ethyl Acetate	0.258	0.289	-12.0	106	0.00
44	Methyl Acrylate	1.357	1.445	-6.5	106	0.00
45	Chloroform	1.911	1.872	2.0	101	0.00
46	2,4-Dimethylpentane	1.373	1.498	-9.1	107	0.00
47	Tetrahydrofuran	0.363	0.427	-17.6	110	0.00
48	1,1,1-Trichloroethane	1.734	1.842	-6.2	109	0.00
49	1,2-Dichloroethane	1.052	1.076	-2.3	103	0.00
50	Benzene	2.747	2.625	4.4	99	0.00
51	Carbon Tetrachloride	1.752	1.813	-3.5	103	0.00
52	Cyclohexane	1.174	1.237	-5.4	105	0.00
53	2,3-Dimethylpentane	0.543	0.578	-6.4	105	0.00
54 I	1,4-Difluorobenzene	1.000	1.000	0.0	98	0.00
55	2,2,4-Trimethylpentane	1.088	1.209	-11.1	107	0.00
56	Heptane	0.233	0.251	-7.7	103	0.00
57	Trichloroethene	0.374	0.374	0.0	101	0.00
58	1,2-Dichloropropane	0.283	0.279	1.4	97	0.00
59	Dibromomethane	0.403	0.369	8.4	98	0.00
60	Ethyl Acrylate	0.504	0.576	-14.3	106	0.00
61	Methyl Methacrylate	0.260	0.290	-11.5	105	0.00
62	1,4-Dioxane	0.149	0.193	-29.5	126	0.00
63	Bromodichloromethane	0.573	0.562	1.9	99	0.00
64	cis-1,3-Dichloropropene	0.433	0.466	-7.6	105	0.00
65	4-Methyl-2-pentanone	0.199	0.234	-17.6	105	0.00
66	trans-1,3-Dichloropropene	0.375	0.396	-5.6	100	0.00
67	Toluene	0.920	0.864	6.1	93	0.00
68	1,1,2-Trichloroethane	0.339	0.318	6.2	94	0.00
69	1,3-Dichloropropane	0.427	0.407	4.7	94	0.00
70	2-Hexanone	0.253	0.325	-28.5	109	0.00
71	Ethyl Methacrylate	0.410	0.474	-15.6	107	0.00
72	Dibromochloromethane	0.610	0.554	9.2	92	0.00
73	Tetrachloroethene	0.559	0.477	14.7	91	0.00
74	1,2-Dibromoethane	0.552	0.521	5.6	95	0.00
75	Octane	0.498	0.517	-3.8	103	0.00
76	1,1,1,2-Tetrachloroethane	0.437	0.406	7.1	92	0.00
77 I	Chlorobenzene-d5	1.000	1.000	0.0	90	0.00
78	Chlorobenzene	1.830	1.728	5.6	92	0.00
79	Ethylbenzene	2.675	2.795	-4.5	98	0.00
80	m,p-Xylene	2.048	2.171	-6.0	98	0.02
81	Styrene	1.554	1.818	-17.0	106	0.00
82	Nonane	1.180	1.226	-3.9	105	0.00
83	o-Xylene	2.058	2.207	-7.2	99	0.00
84	Bromoform	1.339	1.452	-8.4	96	0.00
85	1,1,2,2-Tetrachloroethane	1.576	1.634	-3.7	103	0.00
86	1,2,3-Trichloropropane	1.122	1.211	-7.9	105	0.00
87	Isopropylbenzene	2.870	3.325	-15.9	110	0.00
88	Bromobenzene	1.043	1.121	-7.5	102	0.00
89	2-Chlorotoluene	0.765	0.840	-9.8	103	0.00
90	n-Propylbenzene	0.806	0.874	-8.4	102	0.00
91 S	4-Bromofluorobenzene	1.407	1.702	-21.0	103	0.00
92	4-Ethyltoluene	2.847	3.036	-6.6	105	0.00
93	1,3,5-Trimethylbenzene	2.484	2.487	-0.1	102	0.00
94	alpha-Methylstyrene	1.145	1.266	-10.6	103	0.00
95	tert-Butylbenzene	0.568	0.572	-0.7	104	0.00
96	1,2,4-Trimethylbenzene	2.305	2.356	-2.2	103	0.00

Initial Calibration Verification

Page 3 of 3

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1065-ICV1065
Lab FileID: 5W27092.D

97	1,3-Dichlorobenzene	1.557	1.665	-6.9	106	0.00
98	Benzyl Chloride	1.424	1.690	-18.7	105	0.00
99	1,4-Dichlorobenzene	1.543	1.638	-6.2	107	0.00
100	sec-Butylbenzene	0.660	0.691	-4.7	107	0.00
101	p-Isopropyltoluene	0.784	0.745	5.0	101	0.00
102	1,2-Dichlorobenzene	1.470	1.485	-1.0	103	0.00
103	n-Butylbenzene	0.605	0.623	-3.0	103	0.00
104	Hexachloroethane	0.972	0.941	3.2	100	0.00
105	1,2,4-Trichlorobenzene	0.439	0.509	-15.9	96	0.00
106	Naphthalene	0.836	0.971	-16.1	96	0.00
107	Hexachlorobutadiene	0.844	0.645	23.6	93	0.00

108 I	Bromochloromethane (A)	1.000	1.000	0.0	99	0.00
109	TVHC as equiv Pentane	4.414	5.013	-13.6	111	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

m5w1065.M Sat Oct 07 09:19:37 2017

Continuing Calibration Summary

Page 1 of 3

Job Number: JC56815
 Account: GESNYP Groundwater & Environmental Services
 Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1090-CC1065
 Lab FileID: 5W27718.D

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\
 Data File : 5W27718.D
 Acq On : 8 Nov 2017 9:41 am
 Operator : thomash
 Sample : cc1065-10
 Misc : MS21792,v5w1090,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 08 11:01:51 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I Bromochloromethane	1.000	1.000	0.0	102	0.00
2	1,1,1-Trifluoroethane	2.073	2.100	-1.3	93	0.00
3	Freon 152A	0.535	0.452	15.5	95	0.00
4	Chlorodifluoromethane	0.187	0.186	0.5	98	0.00
5	Propene	0.523	0.417	20.3	86	0.00
6	Chlorotrifluoroethene	1.328	1.351	-1.7	104	0.00
7	Dichlorodifluoromethane	2.160	2.099	2.8	101	0.00
8	1-Chloro-1,1-difluoroethane	1.432	1.491	-4.1	110	0.00
9	Chloromethane	0.669	0.688	-2.8	108	0.00
10	Dichlorotetrafluoroethane	2.142	2.447	-14.2	118	0.00
11	Vinyl Chloride	0.740	0.872	-17.8	120	0.00
12	1,3-Butadiene	0.500	0.572	-14.4	121	0.00
13	n-Butane	0.102	0.127	-24.5	125	0.00
14	Bromomethane	0.999	1.069	-7.0	125	0.00
15	Chloroethane	0.356	0.431	-21.1	124	0.00
16	Dichlorofluoromethane	1.688	2.039	-20.8	129	0.00
17	Acetonitrile	0.417	0.490	-17.5	119	0.00
18	Freon 123	2.114	2.533	-19.8	126	0.00
19	Freon 123A	1.224	1.363	-11.4	117	0.00
20	Bromoethene	0.883	0.999	-13.1	117	0.00
21	Trichlorofluoromethane	2.119	2.565	-21.0	127	0.00
22	Acetone	0.325	0.360	-10.8	126	0.00
23	Pentane	0.203	0.172	15.3	91	0.00
24	1,1-Dichloro-1-fluoroethane	1.903	1.820	4.4	106	0.00
25	Iodomethane	2.754	2.479	10.0	95	0.00
26	Isopropyl Alcohol	0.221	0.220	0.5	127	0.00
27	1,1-Dichloroethene	1.278	1.164	8.9	93	0.00
28	Freon 113	1.961	1.965	-0.2	104	0.00
29	Methylene Chloride	0.903	0.781	13.5	103	0.00
30	Carbon Disulfide	2.629	2.608	0.8	102	0.00
31	Ethanol	0.206	0.216	-4.9	121	0.00
32	Acrylonitrile	0.563	0.511	9.2	91	0.00
33	3-Chloropropene	0.350	0.313	10.6	91	0.00
34	trans-1,2-Dichloroethene	1.173	1.017	13.3	88	0.00
35	tert-Butyl Alcohol	1.749	1.258	28.1	83	0.00
36	Methyl tert-Butyl Ether	2.213	1.832	17.2	85	0.00
37	Vinyl Acetate	1.813	1.318	27.3	80	0.00
38	1,1-Dichloroethane	1.537	1.382	10.1	94	0.00

Continuing Calibration Summary

Page 2 of 3

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1090-CC1065
Lab FileID: 5W27718.D

39	2-Butanone	0.395	0.362	8.4	90	0.00
40	Hexane	1.190	1.068	10.3	92	0.00
41	cis-1,2-Dichloroethene	1.123	0.954	15.0	87	0.00
42	Di-isopropyl Ether	0.696	0.669	3.9	98	0.00
43	Ethyl Acetate	0.258	0.257	0.4	97	0.00
44	Methyl Acrylate	1.357	1.244	8.3	94	0.00
45	Chloroform	1.911	1.806	5.5	101	0.00
46	2,4-Dimethylpentane	1.373	1.248	9.1	92	0.00
47	Tetrahydrofuran	0.363	0.324	10.7	86	0.00
48	1,1,1-Trichloroethane	1.734	1.599	7.8	97	0.00
49	1,2-Dichloroethane	1.052	0.988	6.1	97	-0.01
50	Benzene	2.747	2.316	15.7	91	0.00
51	Carbon Tetrachloride	1.752	1.643	6.2	96	0.00
52	Cyclohexane	1.174	0.996	15.2	87	0.00
53	2,3-Dimethylpentane	0.543	0.505	7.0	95	0.00
54 I	1,4-Difluorobenzene	1.000	1.000	0.0	95	0.00
55	2,2,4-Trimethylpentane	1.088	1.108	-1.8	95	0.00
56	Heptane	0.233	0.245	-5.2	98	0.00
57	Trichloroethene	0.374	0.378	-1.1	99	0.00
58	1,2-Dichloropropane	0.283	0.268	5.3	91	0.00
59	Dibromomethane	0.403	0.374	7.2	97	0.00
60	Ethyl Acrylate	0.504	0.494	2.0	88	0.00
61	Methyl Methacrylate	0.260	0.263	-1.2	93	0.00
62	1,4-Dioxane	0.149	0.154	-3.4	98	0.00
63	Bromodichloromethane	0.573	0.567	1.0	97	0.00
64	cis-1,3-Dichloropropene	0.433	0.387	10.6	85	0.00
65	4-Methyl-2-pentanone	0.199	0.211	-6.0	92	0.00
66	trans-1,3-Dichloropropene	0.375	0.351	6.4	87	0.00
67	Toluene	0.920	0.828	10.0	87	0.00
68	1,1,2-Trichloroethane	0.339	0.326	3.8	94	0.00
69	1,3-Dichloropropane	0.427	0.424	0.7	95	0.00
70	2-Hexanone	0.253	0.287	-13.4	93	0.00
71	Ethyl Methacrylate	0.410	0.446	-8.8	97	0.00
72	Dibromochloromethane	0.610	0.588	3.6	95	0.00
73	Tetrachloroethene	0.559	0.497	11.1	92	0.00
74	1,2-Dibromoethane	0.552	0.515	6.7	91	0.00
75	Octane	0.498	0.462	7.2	90	-0.01
76	1,1,1,2-Tetrachloroethane	0.437	0.433	0.9	95	0.00
77 I	Chlorobenzene-d5	1.000	1.000	0.0	85	0.00
78	Chlorobenzene	1.830	1.882	-2.8	95	0.00
79	Ethylbenzene	2.675	2.792	-4.4	92	0.00
80	m,p-Xylene	2.048	2.264	-10.5	97	0.01
81	Styrene	1.554	1.657	-6.6	91	0.00
82	Nonane	1.180	1.153	2.3	93	0.00
83	o-Xylene	2.058	2.326	-13.0	98	0.00
84	Bromoform	1.339	1.575	-17.6	99	0.00
85	1,1,2,2-Tetrachloroethane	1.576	1.780	-12.9	105	-0.01
86	1,2,3-Trichloropropane	1.122	1.234	-10.0	101	0.00
87	Isopropylbenzene	2.870	3.075	-7.1	96	0.00
88	Bromobenzene	1.043	1.158	-11.0	99	0.00
89	2-Chlorotoluene	0.765	0.818	-6.9	95	0.00
90	n-Propylbenzene	0.806	0.899	-11.5	99	0.00
91 S	4-Bromofluorobenzene	1.407	1.538	-9.3	88	0.00
92	4-Ethyltoluene	2.847	2.980	-4.7	97	-0.01
93	1,3,5-Trimethylbenzene	2.484	2.525	-1.7	98	0.00
94	alpha-Methylstyrene	1.145	1.244	-8.6	96	0.00
95	tert-Butylbenzene	0.568	0.589	-3.7	101	0.00
96	1,2,4-Trimethylbenzene	2.305	2.474	-7.3	102	0.00

Continuing Calibration Summary

Page 3 of 3

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1090-CC1065
Lab FileID: 5W27718.D

97	1,3-Dichlorobenzene	1.557	1.678	-7.8	101	0.00
98	Benzyl Chloride	1.424	1.677	-17.8	98	0.00
99	1,4-Dichlorobenzene	1.543	1.612	-4.5	99	0.00
100	sec-Butylbenzene	0.660	0.679	-2.9	99	0.00
101	p-Isopropyltoluene	0.784	0.780	0.5	99	0.00
102	1,2-Dichlorobenzene	1.470	1.515	-3.1	99	0.00
103	n-Butylbenzene	0.605	0.601	0.7	93	0.00
104	Hexachloroethane	0.972	1.010	-3.9	101	0.00
105	1,2,4-Trichlorobenzene	0.439	0.433	1.4	77	0.00
106	Naphthalene	0.836	0.794	5.0	74	0.00
107	Hexachlorobutadiene	0.844	0.666	21.1	90	0.00

108 I	Bromochloromethane (A)	1.000	1.000	0.0	102	0.00
109	TVHC as equiv Pentane	4.414	4.021	8.9	92	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

m5w1065.M Wed Nov 08 12:05:06 2017

Continuing Calibration Summary

Page 1 of 3

Job Number: JC56815
 Account: GESNYP Groundwater & Environmental Services
 Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1093-CC1065
 Lab FileID: 5W27796.D

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\
 Data File : 5W27796.D
 Acq On : 13 Nov 2017 8:42 am
 Operator : thomash
 Sample : cc1065-10
 Misc : MS21947,v5w1093,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 13 09:12:06 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I Bromochloromethane	1.000	1.000	0.0	93	0.00
2	1,1,1-Trifluoroethane	2.073	2.190	-5.6	88	0.00
3	Freon 152A	0.535	0.441	17.6	84	0.00
4	Chlorodifluoromethane	0.187	0.187	0.0	90	0.00
5	Propene	0.523	0.409	21.8	77	0.00
6	Chlorotrifluoroethene	1.328	1.362	-2.6	95	0.00
7	Dichlorodifluoromethane	2.160	2.088	3.3	91	0.00
8	1-Chloro-1,1-difluoroethane	1.432	1.526	-6.6	102	0.00
9	Chloromethane	0.669	0.676	-1.0	97	0.00
10	Dichlorotetrafluoroethane	2.142	2.432	-13.5	106	0.00
11	Vinyl Chloride	0.740	0.874	-18.1	109	0.00
12	1,3-Butadiene	0.500	0.597	-19.4	115	0.00
13	n-Butane	0.102	0.131	-28.4	118	0.00
14	Bromomethane	0.999	1.084	-8.5	115	0.00
15	Chloroethane	0.356	0.440	-23.6	115	0.00
16	Dichlorofluoromethane	1.688	2.113	-25.2	121	0.00
17	Acetonitrile	0.417	0.536	-28.5	119	0.00
18	Freon 123	2.114	2.679	-26.7	122	0.00
19	Freon 123A	1.224	1.430	-16.8	112	0.00
20	Bromoethene	0.883	1.041	-17.9	110	0.00
21	Trichlorofluoromethane	2.119	2.720	-28.4	122	0.00
22	Acetone	0.325	0.377	-16.0	120	0.00
23	Pentane	0.203	0.167	17.7	81	0.00
24	1,1-Dichloro-1-fluoroethane	1.903	2.104	-10.6	112	0.00
25	Iodomethane	2.754	2.590	6.0	90	0.00
26	Isopropyl Alcohol	0.221	0.235	-6.3	124	0.00
27	1,1-Dichloroethene	1.278	1.143	10.6	83	0.00
28	Freon 113	1.961	1.975	-0.7	95	0.00
29	Methylene Chloride	0.903	0.780	13.6	93	0.00
30	Carbon Disulfide	2.629	2.580	1.9	91	0.00
31	Ethanol	0.206	0.223	-8.3	113	0.00
32	Acrylonitrile	0.563	0.508	9.8	82	-0.01
33	3-Chloropropene	0.350	0.317	9.4	83	0.00
34	trans-1,2-Dichloroethene	1.173	0.994	15.3	78	0.00
35	tert-Butyl Alcohol	1.749	1.277	27.0	77	0.00
36	Methyl tert-Butyl Ether	2.213	1.830	17.3	77	0.00
37	Vinyl Acetate	1.813	1.305	28.0	72	0.00
38	1,1-Dichloroethane	1.537	1.348	12.3	83	0.00

Continuing Calibration Summary

Page 2 of 3

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1093-CC1065
Lab FileID: 5W27796.D

39	2-Butanone	0.395	0.352	10.9	80	0.00
40	Hexane	1.190	1.043	12.4	82	0.00
41	cis-1,2-Dichloroethene	1.123	0.927	17.5	77	0.00
42	Di-isopropyl Ether	0.696	0.667	4.2	89	0.00
43	Ethyl Acetate	0.258	0.250	3.1	86	0.00
44	Methyl Acrylate	1.357	1.203	11.3	83	0.00
45	Chloroform	1.911	1.800	5.8	91	0.00
46	2,4-Dimethylpentane	1.373	1.206	12.2	81	0.00
47	Tetrahydrofuran	0.363	0.321	11.6	78	0.00
48	1,1,1-Trichloroethane	1.734	1.636	5.7	90	0.00
49	1,2-Dichloroethane	1.052	0.983	6.6	88	-0.01
50	Benzene	2.747	2.292	16.6	81	0.00
51	Carbon Tetrachloride	1.752	1.774	-1.3	95	0.00
52	Cyclohexane	1.174	0.981	16.4	78	0.00
53	2,3-Dimethylpentane	0.543	0.493	9.2	84	0.00
54 I	1,4-Difluorobenzene	1.000	1.000	0.0	86	0.00
55	2,2,4-Trimethylpentane	1.088	1.078	0.9	84	0.00
56	Heptane	0.233	0.242	-3.9	87	0.00
57	Trichloroethene	0.374	0.379	-1.3	90	0.00
58	1,2-Dichloropropane	0.283	0.262	7.4	80	0.00
59	Dibromomethane	0.403	0.387	4.0	91	-0.01
60	Ethyl Acrylate	0.504	0.476	5.6	77	0.00
61	Methyl Methacrylate	0.260	0.256	1.5	82	0.00
62	1,4-Dioxane	0.149	0.154	-3.4	89	0.00
63	Bromodichloromethane	0.573	0.570	0.5	89	0.00
64	cis-1,3-Dichloropropene	0.433	0.388	10.4	77	0.00
65	4-Methyl-2-pentanone	0.199	0.208	-4.5	82	-0.01
66	trans-1,3-Dichloropropene	0.375	0.360	4.0	80	0.00
67	Toluene	0.920	0.833	9.5	79	0.00
68	1,1,2-Trichloroethane	0.339	0.329	2.9	86	0.00
69	1,3-Dichloropropane	0.427	0.424	0.7	86	-0.01
70	2-Hexanone	0.253	0.281	-11.1	83	0.00
71	Ethyl Methacrylate	0.410	0.438	-6.8	87	0.00
72	Dibromochloromethane	0.610	0.620	-1.6	90	0.00
73	Tetrachloroethene	0.559	0.515	7.9	86	0.00
74	1,2-Dibromoethane	0.552	0.525	4.9	84	-0.01
75	Octane	0.498	0.450	9.6	79	-0.01
76	1,1,1,2-Tetrachloroethane	0.437	0.454	-3.9	90	-0.01
77 I	Chlorobenzene-d5	1.000	1.000	0.0	75	0.00
78	Chlorobenzene	1.830	1.957	-6.9	87	0.00
79	Ethylbenzene	2.675	2.850	-6.5	84	-0.01
80	m,p-Xylene	2.048	2.348	-14.6	89	-0.01
81	Styrene	1.554	1.701	-9.5	83	0.00
82	Nonane	1.180	1.134	3.9	81	0.00
83	o-Xylene	2.058	2.363	-14.8	88	0.00
84	Bromoform	1.339	1.733	-29.4	96	0.00
85	1,1,2,2-Tetrachloroethane	1.576	1.770	-12.3	93	-0.01
86	1,2,3-Trichloropropane	1.122	1.235	-10.1	90	-0.01
87	Isopropylbenzene	2.870	3.148	-9.7	87	-0.01
88	Bromobenzene	1.043	1.211	-16.1	92	0.00
89	2-Chlorotoluene	0.765	0.844	-10.3	87	-0.01
90	n-Propylbenzene	0.806	0.926	-14.9	90	0.00
91 S	4-Bromofluorobenzene	1.407	1.564	-11.2	79	0.00
92	4-Ethyltoluene	2.847	3.042	-6.8	88	-0.01
93	1,3,5-Trimethylbenzene	2.484	2.595	-4.5	89	0.00
94	alpha-Methylstyrene	1.145	1.259	-10.0	86	0.00
95	tert-Butylbenzene	0.568	0.603	-6.2	91	0.00
96	1,2,4-Trimethylbenzene	2.305	2.526	-9.6	92	0.00

6.9.4
6

Continuing Calibration Summary

Page 3 of 3

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1093-CC1065
Lab FileID: 5W27796.D

97	1,3-Dichlorobenzene	1.557	1.754	-12.7	93	0.00
98	Benzyl Chloride	1.424	1.729	-21.4	89	0.00
99	1,4-Dichlorobenzene	1.543	1.666	-8.0	91	0.00
100	sec-Butylbenzene	0.660	0.705	-6.8	91	0.00
101	p-Isopropyltoluene	0.784	0.803	-2.4	91	0.00
102	1,2-Dichlorobenzene	1.470	1.577	-7.3	91	0.00
103	n-Butylbenzene	0.605	0.622	-2.8	85	0.00
104	Hexachloroethane	0.972	1.071	-10.2	95	0.00
105	1,2,4-Trichlorobenzene	0.439	0.470	-7.1	74	0.00
106	Naphthalene	0.836	0.838	-0.2	69	0.00
107	Hexachlorobutadiene	0.844	0.726	14.0	87	0.00

108 I	Bromochloromethane (A)	1.000	1.000	0.0	93	0.00
109	TVHC as equiv Pentane	4.414	3.960	10.3	82	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

m5w1065.M Mon Nov 13 12:01:31 2017

Initial Calibration Summary

Page 1 of 3

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1097-ICC1097
Lab FileID: 5W27912.D

Response Factor Report Air5w

Method Path : C:\msdchem\1\methods\
Method File : m5w1097.M
Title : T0-15 Full Scan Mode
Last Update : Mon Nov 20 10:49:33 2017
Response Via : Initial Calibration

Calibration Files

20 =5W27913.D 0.5 =5W27910.D 0.2 =5W27909.D 0.1 =5W27908.D 0.04=5W27907.D 10 =5W27912.D 5 =5W27911.D 40 =5W27915.D

Compound	20	0.5	0.2	0.1	0.04	10	5	40	Avg	%RSD
1) I Bromochloromethane	-----ISTD-----									
2) 1,1,1-Trifluor...	1.960	2.110	2.393	2.556	2.665	2.098	2.533	1.487	2.225	17.57
3) Freon 152A	0.499	0.496	0.519	0.563	0.534	0.517	0.551	0.483	0.520	5.35
4) Chlorodifluoro...	0.179	0.181	0.189	0.189	0.196	0.187	0.199	0.171	0.186	5.01
5) Propene	0.531	0.576	0.638	0.764		0.527	0.603	0.494	0.591	15.39
6) Chlorotrifluor...	1.329	1.303	1.366	1.432	1.410	1.362	1.460	1.277	1.367	4.65
7) Dichlorodifluo...	1.983	2.018	2.110	2.307	2.359	2.081	2.261	1.877	2.124	7.99
8) 1-Chloro-1,1-d...	1.243	1.268	1.356	1.497	1.561	1.320	1.413	1.162	1.352	9.86
9) Chloromethane	0.673	0.699	0.744	0.861	0.974	0.719	0.762	0.630	0.758	14.62
10) Dichlorotetra...	2.049	2.119	2.181	2.430	2.473	2.217	2.359	1.871	2.212	9.19
11) Vinyl Chloride	0.770	0.782	0.805	0.851	0.843	0.827	0.870	0.731	0.810	5.78
12) 1,3-Butadiene	0.519	0.545	0.586	0.671	0.804	0.549	0.589	0.491	0.594	16.89
13) n-Butane	0.112	0.127	0.145	0.166	0.216	0.120	0.127	0.106	0.140	25.85
14) Bromomethane	0.888	0.932	0.979	1.083	1.410	0.928	0.994	0.838	1.006	17.76
15) Chloroethane	0.377	0.388	0.404	0.462	0.528	0.396	0.422	0.358	0.417	13.12
16) Dichlorofluoro...	1.609	1.695	1.844	2.080	2.080	1.707	1.838	1.508	1.795	11.56
17) Acetonitrile	0.439	0.462	0.537	0.526	0.574	0.468	0.507	0.414	0.491	11.02
18) Freon 123	2.023	2.219	2.330	2.625	3.264	2.182	2.381	1.816	2.355	18.64
19) Freon 123A	1.112	1.211	1.245	1.374	1.327	1.198	1.304	0.983	1.219	10.35
20) Bromoethene	0.882	0.902	0.957	1.033	1.077	0.926	0.994	0.830	0.950	8.62
21) Trichlorofluor...	1.817	1.911	1.961	2.096	1.992	2.157	2.087	1.694	1.965	7.88
22) Acetone	0.310	0.448	0.551			0.342	0.357	0.292	0.383	25.65
23) Pentane	0.203	0.225	0.282	0.371		0.211	0.232	0.192	0.245	25.66
24) 1,1-Dichloro-1...	1.535	1.745	1.773	2.083	2.221	1.777	1.869	1.485	1.811	13.77
25) Iodomethane	2.598	2.615	2.768	2.939	3.083	2.699	2.902	2.443	2.756	7.61
26) Isopropyl Alcohol	0.164	0.268	0.394			0.207	0.214	0.167	0.236	36.56
27) 1,1-Dichloroet...	1.309	1.299	1.333	1.432	1.381	1.372	1.477	1.211	1.352	6.12
28) Freon 113	1.900	1.945	2.031	2.186	2.056	1.984	2.139	1.796	2.005	6.33
29) Methylene Chlo...	0.794	0.853	0.948	1.114	1.333	0.827	0.895	0.754	0.940	20.63
30) Carbon Disulfide	2.683	2.677	2.753	2.940	2.829	2.777	2.987	2.544	2.774	5.22
31) Ethanol	0.194	0.229	0.270	0.284		0.199	0.213	0.185	0.225	17.16
32) Acrylonitrile	0.599	0.568	0.669	0.654	0.721	0.626	0.687	0.566	0.636	8.84
33) 3-Chloropropene	0.365	0.357	0.364	0.424	0.313	0.375	0.403	0.349	0.369	9.16
34) trans-1,2-Dich...	1.209	1.179	1.229	1.285	1.272	1.257	1.349	1.162	1.243	4.91
35) tert-Butyl Alc...	1.614	1.652	1.674	1.814	1.703	1.681	1.804	1.521	1.683	5.70
36) Methyl tert-Bu...	2.254	2.312	2.394	2.671	2.458	2.352	2.531	2.148	2.390	6.86
37) Vinyl Acetate	1.712	1.859	1.944	2.052	2.359	1.778	1.862	1.658	1.903	11.72
38) 1,1-Dichloroet...	1.520	1.547	1.614	1.732	1.715	1.603	1.728	1.461	1.615	6.36
39) 2-Butanone	0.432	0.429	0.440	0.430	0.419	0.448	0.480	0.415	0.437	4.71
40) Hexane	1.272	1.277	1.366	1.511	1.670	1.330	1.422	1.207	1.382	10.87
41) cis-1,2-Dichlo...	1.149	1.165	1.236	1.270	1.250	1.185	1.277	1.089	1.203	5.54
42) Di-isopropyl E...	0.730	0.715	0.720	0.816	0.686	0.765	0.814	0.712	0.745	6.51
43) Ethyl Acetate	0.285	0.287	0.277	0.298	0.203	0.298	0.320	0.269	0.280	12.32
44) Methyl Acrylate	1.396	1.429	1.541	1.896	1.796	1.490	1.589	1.321	1.557	12.75
45) Chloroform	1.759	1.873	1.952	2.065	2.087	1.835	1.981	1.656	1.901	7.85
46) 2,4-Dimethylpe...	1.479	1.523	1.568	1.768	1.825	1.547	1.679	1.410	1.600	9.01

Initial Calibration Summary

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1097-ICC1097
Lab FileID: 5W27912.D

47)	Tetrahydrofuran	0.407	0.403	0.395	0.440	0.371	0.427	0.452	0.388	0.410	6.66
48)	1,1,1-Trichlor...	1.601	1.634	1.692	1.811	1.865	1.663	1.784	1.519	1.696	6.85
49)	1,2-Dichloroet...	0.975	1.029	1.071	1.149	1.026	1.031	1.126	0.915	1.040	7.32
50)	Benzene	2.653	2.774	2.914	3.242	3.272	2.772	2.973	2.506	2.888	9.33
51)	Carbon Tetrach...	1.555	1.368	1.462	1.537	1.566	1.573	1.634	1.529	1.528	5.27
52)	Cyclohexane	1.249	1.286	1.338	1.408	1.478	1.292	1.402	1.188	1.330	7.15
53)	2,3-Dimethylpe...	0.578	0.577	0.592	0.698	0.693	0.602	0.647	0.559	0.618	8.78
54) I	1,4-Difluorobenzene	-----ISTD-----									
55)	2,2,4-Trimethy...	1.138	1.160	1.160	1.270	1.269	1.203	1.278	1.052	1.191	6.66
56)	Heptane	0.250	0.243	0.252	0.271	0.270	0.258	0.271	0.241	0.257	4.89
57)	Trichloroethene	0.346	0.357	0.369	0.411	0.406	0.363	0.382	0.331	0.370	7.55
58)	1,2-Dichloropr...	0.282	0.289	0.306	0.318	0.303	0.293	0.311	0.264	0.296	5.97
59)	Dibromomethane	0.337	0.344	0.383	0.411	0.474	0.347	0.366	0.324	0.373	13.17
60)	Ethyl Acrylate	0.556	0.535	0.554	0.568	0.597	0.567	0.596	0.517	0.561	4.91
61)	Methyl Methacr...	0.276	0.275	0.269	0.304	0.272	0.285	0.299	0.259	0.280	5.49
62)	1,4-Dioxane	0.149	0.150	0.160	0.159		0.154	0.161	0.129	0.152	7.35
63)	Bromodichlorom...	0.518	0.525	0.559	0.588	0.563	0.542	0.568	0.497	0.545	5.52
64)	cis-1,3-Dichlo...	0.421	0.444	0.445	0.489	0.428	0.444	0.476	0.399	0.443	6.53
65)	4-Methyl-2-pen...	0.232	0.219	0.208	0.217	0.179	0.236	0.248	0.225	0.220	9.46
66)	trans-1,3-Dich...	0.353	0.385	0.384	0.399	0.365	0.394	0.426	0.329	0.379	7.92
67)	Toluene	0.833	0.965	0.995	1.121	1.084	0.912	1.006	0.764	0.960	12.52
68)	1,1,2-Trichlor...	0.300	0.341	0.348	0.383	0.355	0.331	0.359	0.278	0.337	9.98
69)	1,3-Dichloropr...	0.385	0.452	0.461	0.460	0.422	0.431	0.475	0.348	0.429	10.15
70)	2-Hexanone	0.318	0.290	0.261	0.232	0.135	0.322	0.335	0.313	0.276	24.04
71)	Ethyl Methacry...	0.456	0.436	0.424	0.449	0.443	0.461	0.484	0.430	0.448	4.28
72)	Dibromochlorom...	0.479	0.555	0.574	0.586	0.543	0.541	0.601	0.430	0.539	10.64
73)	Tetrachloroethene	0.449	0.488	0.523	0.568	0.544	0.473	0.517	0.429	0.499	9.54
74)	1,2-Dibromoethane	0.455	0.537	0.549	0.574	0.542	0.524	0.575	0.405	0.520	11.50
75)	Octane	0.496	0.525	0.566	0.681	0.798	0.547	0.575	0.457	0.581	18.91
76)	1,1,1,2-Tetrac...	0.330	0.401	0.424	0.446	0.411	0.403	0.439	0.288	0.393	14.05
77) I	Chlorobenzene-d5	-----ISTD-----									
78)	Chlorobenzene	1.565	1.806	1.911	2.044	2.054	1.731	1.825	1.400	1.792	12.59
79)	Ethylbenzene	2.505	2.826	2.971	3.343	3.252	2.711	2.780	2.181	2.821	13.42
80)	m,p-Xylene	1.945	2.133	2.261	2.815	2.904	2.075	2.130	1.669	2.242	18.74
81)	Styrene	1.717	1.554	1.604	1.644	1.574	1.610	1.625	1.503	1.604	3.98
82)	Nonane	1.289	1.188	1.244	1.410	1.636	1.195	1.212	1.148	1.290	12.50
83)	o-Xylene	1.959	2.188	2.324	2.572	2.567	2.098	2.133	1.627	2.184	14.36
84)	Bromoform	1.140	1.145	1.149	1.184	1.104	1.261	1.299	0.983	1.158	8.33
85)	1,1,2,2-Tetrac...	1.656	1.545	1.612	1.741	1.708	1.516	1.529	1.541	1.606	5.41
86)	1,2,3-Trichlor...	1.179	1.122	1.154	1.237	1.207	1.101	1.110	1.046	1.145	5.43
87)	Isopropylbenzene	2.849	2.888	3.031	3.264	3.002	2.779	2.824	2.425	2.883	8.36
88)	Bromobenzene	0.954	0.945	1.006	1.058	1.001	0.963	0.966	0.803	0.962	7.69
89)	2-Chlorotoluene	0.758	0.739	0.751	0.789	0.680	0.732	0.736	0.649	0.729	6.11
90)	n-Propylbenzene	0.858	0.776	0.772	0.862	0.769	0.786	0.778	0.766	0.796	5.03
91) S	4-Bromofluorob...	1.411	1.325	1.302	1.305	1.316	1.397	1.332	1.217	1.326	4.53
92)	4-Ethyltoluene	2.952	2.794	2.854	3.110	2.960	2.663	2.667	2.687	2.836	5.76
93)	1,3,5-Trimethy...	2.453	2.383	2.490	2.716	2.670	2.203	2.209	2.291	2.427	8.03
94)	alpha-Methylst...	1.273	1.134	1.142	1.202	0.981	1.130	1.105	1.259	1.153	8.09
95)	tert-Butylbenzene	0.576	0.539	0.563	0.593	0.587	0.512	0.509	0.557	0.554	5.78
96)	1,2,4-Trimethy...	2.348	2.251	2.294	2.465	2.521	2.119	2.110	2.225	2.292	6.49
97)	1,3-Dichlorobe...	1.584	1.391	1.437	1.528	1.376	1.393	1.360	1.546	1.452	6.05
98)	Benzyl Chloride	1.768	1.235	1.237	1.270	1.290	1.542	1.440	1.780	1.445	15.87
99)	1,4-Dichlorobe...	1.541	1.363	1.452	1.537	1.533	1.344	1.311	1.536	1.452	6.79
100)	sec-Butylbenzene	0.657	0.622	0.646	0.703	0.620	0.576	0.580	0.664	0.633	6.80
101)	p-Isopropyltol...	0.739	0.730	0.750	0.776	0.712	0.643	0.655	0.754	0.720	6.61
102)	1,2-Dichlorobe...	1.437	1.335	1.355	1.413	1.376	1.265	1.241	1.478	1.363	5.99
103)	n-Butylbenzene	0.616	0.592	0.577	0.600	0.485	0.535	0.529	0.663	0.575	9.80
104)	Hexachloroethane	0.850	0.772	0.770	0.828	0.713	0.769	0.740	0.830	0.784	6.08

Initial Calibration Summary

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1097-ICC1097
Lab FileID: 5W27912.D

105)	1,2,4-Trichlor...	0.530	0.319	0.273		0.438	0.375		0.387	26.10	
106)	Naphthalene	1.061	0.532	0.423		0.859	0.699	1.203	0.796	38.03	
107)	Hexachlorobuta...	0.601	0.642	0.685	0.780	0.763	0.530	0.515	0.675	0.649	15.04
108) I	Bromochloromethane...	-----ISTD-----									
109)	TVHC as equiv ...	4.588	4.776	5.327		4.818	5.292	4.316	4.853	8.16	

(#) = Out of Range											

m5w1097.M Mon Nov 20 11:50:42 2017

Initial Calibration Verification

Page 1 of 3

Job Number: JC56815
 Account: GESNYP Groundwater & Environmental Services
 Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1097-ICV1097
 Lab FileID: 5W27917.D

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\
 Data File : 5W27917.D
 Acq On : 20 Nov 2017 10:22 am
 Operator : thomash
 Sample : icv1097-10
 Misc : MS22171,v5w1097,,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 20 11:27:34 2017
 Quant Method : C:\msdchem\1\methods\m5w1097.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Mon Nov 20 10:48:12 2017
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Bromochloromethane	1.000	1.000	0.0	100	-0.02
2	1,1,1-Trifluoroethane	2.225	0.000	100.0#	0#	-3.92#
3	Freon 152A	0.520	0.547	-5.2	106	-0.02
4	Chlorodifluoromethane	0.186	0.196	-5.4	105	-0.02
5	Propene	0.591	0.573	3.0	109	-0.02
6	Chlorotrifluoroethene	1.367	1.419	-3.8	104	-0.02
7	Dichlorodifluoromethane	2.124	2.223	-4.7	107	-0.02
8	1-Chloro-1,1-difluoroethane	1.352	1.350	0.1	102	-0.02
9	Chloromethane	0.758	0.752	0.8	105	-0.02
10	Dichlorotetrafluoroethane	2.212	2.436	-10.1	110	-0.02
11	Vinyl Chloride	0.810	0.837	-3.3	101	-0.02
12	1,3-Butadiene	0.594	0.545	8.2	99	-0.02
13	n-Butane	0.140	0.124	11.4	103	-0.02
14	Bromomethane	1.006	0.997	0.9	107	-0.02
15	Chloroethane	0.417	0.401	3.8	101	-0.02
16	Dichlorofluoromethane	1.795	1.798	-0.2	105	-0.02
17	Acetonitrile	0.491	0.483	1.6	103	-0.02
18	Freon 123	2.355	2.249	4.5	103	-0.02
19	Freon 123A	1.219	1.206	1.1	101	-0.02
20	Bromoethene	0.950	0.942	0.8	102	-0.02
21	Trichlorofluoromethane	1.965	2.038	-3.7	94	-0.02
22	Acetone	0.383	0.337	12.0	98	-0.03
23	Pentane	0.245	0.229	6.5	109	-0.02
24	1,1-Dichloro-1-fluoroethane	1.811	0.000	100.0#	0#	-5.58#
25	Iodomethane	2.756	2.788	-1.2	103	-0.02
26	Isopropyl Alcohol	0.236	0.244	-3.4	118	-0.03
27	1,1-Dichloroethene	1.352	1.362	-0.7	99	-0.02
28	Freon 113	2.005	1.975	1.5	99	-0.02
29	Methylene Chloride	0.940	0.824	12.3	99	-0.02
30	Carbon Disulfide	2.774	2.706	2.5	97	-0.02
31	Ethanol	0.225	0.269	-19.6	135	-0.03
32	Acrylonitrile	0.636	0.682	-7.2	109	-0.03
33	3-Chloropropene	0.369	0.403	-9.2	107	-0.02
34	trans-1,2-Dichloroethene	1.243	1.304	-4.9	104	-0.02
35	tert-Butyl Alcohol	1.683	1.644	2.3	98	-0.02
36	Methyl tert-Butyl Ether	2.390	2.467	-3.2	105	-0.02
37	Vinyl Acetate	1.903	1.870	1.7	105	-0.02
38	1,1-Dichloroethane	1.615	1.645	-1.9	102	-0.02

Initial Calibration Verification

Page 2 of 3

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1097-ICV1097
Lab FileID: 5W27917.D

39	2-Butanone	0.437	0.457	-4.6	102	-0.02
40	Hexane	1.382	1.371	0.8	103	-0.02
41	cis-1,2-Dichloroethene	1.203	1.205	-0.2	102	-0.02
42	Di-isopropyl Ether	0.745	0.808	-8.5	105	-0.02
43	Ethyl Acetate	0.280	0.310	-10.7	104	-0.02
44	Methyl Acrylate	1.557	1.509	3.1	101	-0.02
45	Chloroform	1.901	1.909	-0.4	104	-0.02
46	2,4-Dimethylpentane	1.600	1.623	-1.4	105	-0.01
47	Tetrahydrofuran	0.410	0.460	-12.2	108	-0.01
48	1,1,1-Trichloroethane	1.696	1.800	-6.1	108	-0.02
49	1,2-Dichloroethane	1.040	1.060	-1.9	103	-0.01
50	Benzene	2.888	2.827	2.1	102	-0.01
51	Carbon Tetrachloride	1.528	1.691	-10.7	107	-0.01
52	Cyclohexane	1.330	1.353	-1.7	105	-0.01
53	2,3-Dimethylpentane	0.618	0.623	-0.8	103	-0.01
54 I	1,4-Difluorobenzene	1.000	1.000	0.0	100	-0.01
55	2,2,4-Trimethylpentane	1.191	1.261	-5.9	104	-0.01
56	Heptane	0.257	0.267	-3.9	103	0.00
57	Trichloroethene	0.370	0.377	-1.9	104	-0.01
58	1,2-Dichloropropane	0.296	0.298	-0.7	101	-0.01
59	Dibromomethane	0.373	0.362	2.9	104	-0.01
60	Ethyl Acrylate	0.561	0.581	-3.6	102	-0.01
61	Methyl Methacrylate	0.280	0.294	-5.0	102	-0.01
62	1,4-Dioxane	0.152	0.197	-29.6	127	-0.01
63	Bromodichloromethane	0.545	0.549	-0.7	101	-0.01
64	cis-1,3-Dichloropropene	0.443	0.462	-4.3	104	-0.01
65	4-Methyl-2-pentanone	0.220	0.244	-10.9	103	-0.01
66	trans-1,3-Dichloropropene	0.379	0.382	-0.8	97	0.00
67	Toluene	0.960	0.925	3.6	101	0.00
68	1,1,2-Trichloroethane	0.337	0.335	0.6	101	0.00
69	1,3-Dichloropropane	0.429	0.431	-0.5	99	0.00
70	2-Hexanone	0.276	0.330	-19.6	102	0.00
71	Ethyl Methacrylate	0.448	0.485	-8.3	105	0.00
72	Dibromochloromethane	0.539	0.550	-2.0	101	0.00
73	Tetrachloroethene	0.499	0.481	3.6	101	0.00
74	1,2-Dibromoethane	0.520	0.536	-3.1	102	0.00
75	Octane	0.581	0.570	1.9	104	0.00
76	1,1,1,2-Tetrachloroethane	0.393	0.412	-4.8	102	0.00
77 I	Chlorobenzene-d5	1.000	1.000	0.0	98	0.00
78	Chlorobenzene	1.792	1.772	1.1	100	0.00
79	Ethylbenzene	2.821	2.879	-2.1	104	0.00
80	m,p-Xylene	2.242	2.184	2.6	103	0.00
81	Styrene	1.604	1.713	-6.8	104	0.00
82	Nonane	1.290	1.274	1.2	104	0.00
83	o-Xylene	2.184	2.227	-2.0	104	0.00
84	Bromoform	1.158	1.347	-16.3	105	0.00
85	1,1,2,2-Tetrachloroethane	1.606	1.604	0.1	103	0.00
86	1,2,3-Trichloropropane	1.145	1.176	-2.7	104	0.00
87	Isopropylbenzene	2.883	3.196	-10.9	113	0.00
88	Bromobenzene	0.962	1.021	-6.1	104	0.00
89	2-Chlorotoluene	0.729	0.802	-10.0	107	0.00
90	n-Propylbenzene	0.796	0.834	-4.8	104	0.00
91 S	4-Bromofluorobenzene	1.326	1.470	-10.9	103	0.00
92	4-Ethyltoluene	2.836	2.877	-1.4	106	0.00
93	1,3,5-Trimethylbenzene	2.427	2.394	1.4	106	0.00
94	alpha-Methylstyrene	1.153	1.184	-2.7	103	0.00
95	tert-Butylbenzene	0.554	0.552	0.4	105	0.00
96	1,2,4-Trimethylbenzene	2.292	2.263	1.3	105	0.00

Initial Calibration Verification

Page 3 of 3

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1097-ICV1097
Lab FileID: 5W27917.D

97	1,3-Dichlorobenzene	1.452	1.465	-0.9	103	0.00
98	Benzyl Chloride	1.445	1.537	-6.4	98	0.00
99	1,4-Dichlorobenzene	1.452	1.406	3.2	102	0.00
100	sec-Butylbenzene	0.633	0.654	-3.3	111	0.00
101	p-Isopropyltoluene	0.720	0.699	2.9	106	0.00
102	1,2-Dichlorobenzene	1.363	1.313	3.7	102	0.00
103	n-Butylbenzene	0.575	0.593	-3.1	108	0.00
104	Hexachloroethane	0.784	0.853	-8.8	109	0.00
105	1,2,4-Trichlorobenzene	0.387	0.441	-14.0	99	0.00
106	Naphthalene	0.796	0.801	-0.6	91	0.00
107	Hexachlorobutadiene	0.649	0.569	12.3	105	0.00
108 I	Bromochloromethane (A)	1.000	1.000	0.0	100	-0.02
109	TVHC as equiv Pentane	4.853	5.276	-8.7	109	-0.02

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

m5w1097.M Mon Nov 20 11:50:06 2017

Continuing Calibration Summary

Page 1 of 3

Job Number: JC56815
 Account: GESNYP Groundwater & Environmental Services
 Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1099-CC1097
 Lab FileID: 5W27978.D

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\
 Data File : 5W27978.D
 Acq On : 22 Nov 2017 1:06 pm
 Operator : thomash
 Sample : cc1097-10
 Misc : MS22061,v5w1099,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 22 14:44:24 2017
 Quant Method : C:\msdchem\1\methods\m5w1097.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Mon Nov 20 10:49:33 2017
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Bromochloromethane	1.000	1.000	0.0	92	-0.01
2	1,1,1-Trifluoroethane	2.225	1.907	14.3	84	-0.01
3	Freon 152A	0.520	0.481	7.5	86	-0.02
4	Chlorodifluoromethane	0.186	0.177	4.8	87	-0.02
5	Propene	0.591	0.506	14.4	89	-0.01
6	Chlorotrifluoroethene	1.367	1.282	6.2	87	-0.02
7	Dichlorodifluoromethane	2.124	1.996	6.0	89	-0.02
8	1-Chloro-1,1-difluoroethane	1.352	1.303	3.6	91	-0.01
9	Chloromethane	0.758	0.687	9.4	88	-0.02
10	Dichlorotetrafluoroethane	2.212	2.117	4.3	88	-0.02
11	Vinyl Chloride	0.810	0.784	3.2	88	-0.01
12	1,3-Butadiene	0.594	0.498	16.2	84	-0.02
13	n-Butane	0.140	0.111	20.7	86	-0.02
14	Bromomethane	1.006	0.890	11.5	89	-0.02
15	Chloroethane	0.417	0.367	12.0	86	-0.02
16	Dichlorofluoromethane	1.795	1.635	8.9	88	-0.02
17	Acetonitrile	0.491	0.436	11.2	86	-0.02
18	Freon 123	2.355	2.067	12.2	87	-0.02
19	Freon 123A	1.219	1.133	7.1	87	-0.01
20	Bromoethene	0.950	0.866	8.8	86	-0.01
21	Trichlorofluoromethane	1.965	1.950	0.8	83	-0.01
22	Acetone	0.383	0.311	18.8	84	-0.02
23	Pentane	0.245	0.203	17.1	89	-0.01
24	1,1-Dichloro-1-fluoroethane	1.811	1.755	3.1	91	-0.02
25	Iodomethane	2.756	2.539	7.9	87	-0.01
26	Isopropyl Alcohol	0.236	0.211	10.6	94	-0.02
27	1,1-Dichloroethene	1.352	1.315	2.7	88	-0.01
28	Freon 113	2.005	1.932	3.6	90	-0.02
29	Methylene Chloride	0.940	0.803	14.6	90	-0.02
30	Carbon Disulfide	2.774	2.721	1.9	90	-0.01
31	Ethanol	0.225	0.194	13.8	90	-0.02
32	Acrylonitrile	0.636	0.604	5.0	89	-0.02
33	3-Chloropropene	0.369	0.354	4.1	87	-0.01
34	trans-1,2-Dichloroethene	1.243	1.195	3.9	88	-0.01
35	tert-Butyl Alcohol	1.683	1.553	7.7	85	-0.02
36	Methyl tert-Butyl Ether	2.390	2.186	8.5	86	-0.01
37	Vinyl Acetate	1.903	1.695	10.9	88	-0.01
38	1,1-Dichloroethane	1.615	1.538	4.8	89	-0.02

Continuing Calibration Summary

Page 2 of 3

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1099-CC1097
Lab FileID: 5W27978.D

39	2-Butanone	0.437	0.421	3.7	87	-0.02
40	Hexane	1.382	1.250	9.6	87	-0.01
41	cis-1,2-Dichloroethene	1.203	1.119	7.0	87	-0.01
42	Di-isopropyl Ether	0.745	0.711	4.6	86	-0.01
43	Ethyl Acetate	0.280	0.288	-2.9	89	-0.01
44	Methyl Acrylate	1.557	1.403	9.9	87	-0.01
45	Chloroform	1.901	1.798	5.4	90	-0.01
46	2,4-Dimethylpentane	1.600	1.454	9.1	87	0.00
47	Tetrahydrofuran	0.410	0.394	3.9	85	0.00
48	1,1,1-Trichloroethane	1.696	1.590	6.2	88	-0.01
49	1,2-Dichloroethane	1.040	0.999	3.9	90	0.00
50	Benzene	2.888	2.666	7.7	89	0.00
51	Carbon Tetrachloride	1.528	1.590	-4.1	93	0.00
52	Cyclohexane	1.330	1.215	8.6	87	0.00
53	2,3-Dimethylpentane	0.618	0.569	7.9	87	0.00
54 I	1,4-Difluorobenzene	1.000	1.000	0.0	92	0.00
55	2,2,4-Trimethylpentane	1.191	1.150	3.4	88	0.00
56	Heptane	0.257	0.247	3.9	88	0.00
57	Trichloroethene	0.370	0.354	4.3	90	0.00
58	1,2-Dichloropropane	0.296	0.283	4.4	89	0.00
59	Dibromomethane	0.373	0.340	8.8	90	0.00
60	Ethyl Acrylate	0.561	0.535	4.6	87	0.00
61	Methyl Methacrylate	0.280	0.274	2.1	88	0.00
62	1,4-Dioxane	0.152	0.151	0.7	90	0.00
63	Bromodichloromethane	0.545	0.534	2.0	91	0.00
64	cis-1,3-Dichloropropene	0.443	0.418	5.6	87	0.00
65	4-Methyl-2-pentanone	0.220	0.223	-1.4	87	0.00
66	trans-1,3-Dichloropropene	0.379	0.372	1.8	87	0.00
67	Toluene	0.960	0.865	9.9	87	0.00
68	1,1,2-Trichloroethane	0.337	0.322	4.5	90	0.00
69	1,3-Dichloropropane	0.429	0.418	2.6	89	0.00
70	2-Hexanone	0.276	0.302	-9.4	87	0.00
71	Ethyl Methacrylate	0.448	0.442	1.3	89	0.00
72	Dibromochloromethane	0.539	0.532	1.3	91	0.00
73	Tetrachloroethene	0.499	0.461	7.6	90	0.00
74	1,2-Dibromoethane	0.520	0.508	2.3	89	0.00
75	Octane	0.581	0.505	13.1	85	0.00
76	1,1,1,2-Tetrachloroethane	0.393	0.395	-0.5	90	0.00
77 I	Chlorobenzene-d5	1.000	1.000	0.0	91	0.00
78	Chlorobenzene	1.792	1.664	7.1	87	0.00
79	Ethylbenzene	2.821	2.609	7.5	87	0.00
80	m,p-Xylene	2.242	2.010	10.3	88	-0.02
81	Styrene	1.604	1.557	2.9	88	0.00
82	Nonane	1.290	1.143	11.4	87	0.00
83	o-Xylene	2.184	2.033	6.9	88	0.00
84	Bromoform	1.158	1.290	-11.4	93	0.00
85	1,1,2,2-Tetrachloroethane	1.606	1.520	5.4	91	0.00
86	1,2,3-Trichloropropane	1.145	1.087	5.1	89	0.00
87	Isopropylbenzene	2.883	2.706	6.1	88	0.00
88	Bromobenzene	0.962	0.965	-0.3	91	0.00
89	2-Chlorotoluene	0.729	0.724	0.7	90	0.00
90	n-Propylbenzene	0.796	0.768	3.5	89	0.00
91 S	4-Bromofluorobenzene	1.326	1.443	-8.8	94	0.00
92	4-Ethyltoluene	2.836	2.598	8.4	88	0.00
93	1,3,5-Trimethylbenzene	2.427	2.153	11.3	89	0.00
94	alpha-Methylstyrene	1.153	1.085	5.9	87	0.00
95	tert-Butylbenzene	0.554	0.498	10.1	88	0.00
96	1,2,4-Trimethylbenzene	2.292	2.072	9.6	89	0.00

Continuing Calibration Summary

Page 3 of 3

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1099-CC1097
Lab FileID: 5W27978.D

97	1,3-Dichlorobenzene	1.452	1.374	5.4	89	0.00
98	Benzyl Chloride	1.445	1.494	-3.4	88	0.00
99	1,4-Dichlorobenzene	1.452	1.336	8.0	90	0.00
100	sec-Butylbenzene	0.633	0.577	8.8	91	0.00
101	p-Isopropyltoluene	0.720	0.645	10.4	91	0.00
102	1,2-Dichlorobenzene	1.363	1.260	7.6	90	0.00
103	n-Butylbenzene	0.575	0.528	8.2	89	0.00
104	Hexachloroethane	0.784	0.787	-0.4	93	0.00
105	1,2,4-Trichlorobenzene	0.387	0.430	-11.1	89	0.00
106	Naphthalene	0.796	0.809	-1.6	85	0.00
107	Hexachlorobutadiene	0.649	0.535	17.6	92	0.00

108 I	Bromochloromethane (A)	1.000	1.000	0.0	92	-0.01
109	TVHC as equiv Pentane	4.853	4.702	3.1	90	-0.01

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

m5w1097.M Wed Nov 22 15:29:07 2017

Continuing Calibration Summary

Page 1 of 3

Job Number: JC56815
 Account: GESNYP Groundwater & Environmental Services
 Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1099-ECC1097
 Lab FileID: 5W28001.D

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\
 Data File : 5W28001.D
 Acq On : 23 Nov 2017 7:09 am
 Operator : thomash
 Sample : ecc1097-10
 Misc : MS22061,v5w1099,,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 27 08:24:08 2017
 Quant Method : C:\msdchem\1\methods\m5w1097.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Mon Nov 20 10:49:33 2017
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Bromochloromethane	1.000	1.000	0.0	90	-0.01
2	1,1,1-Trifluoroethane	2.225	2.082	6.4	89	-0.02
3	Freon 152A	0.520	0.510	1.9	88	-0.02
4	Chlorodifluoromethane	0.186	0.194	-4.3	93	-0.02
5	Propene	0.591	0.571	3.4	97	-0.01
6	Chlorotrifluoroethene	1.367	1.274	6.8	84	-0.02
7	Dichlorodifluoromethane	2.124	2.105	0.9	91	-0.02
8	1-Chloro-1,1-difluoroethane	1.352	1.417	-4.8	96	-0.02
9	Chloromethane	0.758	0.766	-1.1	95	-0.02
10	Dichlorotetrafluoroethane	2.212	2.264	-2.4	91	-0.02
11	Vinyl Chloride	0.810	0.861	-6.3	93	-0.02
12	1,3-Butadiene	0.594	0.582	2.0	95	-0.02
13	n-Butane	0.140	0.128	8.6	96	-0.02
14	Bromomethane	1.006	0.989	1.7	95	-0.02
15	Chloroethane	0.417	0.430	-3.1	97	-0.02
16	Dichlorofluoromethane	1.795	1.878	-4.6	99	-0.02
17	Acetonitrile	0.491	0.543	-10.6	104	-0.02
18	Freon 123	2.355	2.349	0.3	96	-0.02
19	Freon 123A	1.219	1.243	-2.0	93	-0.02
20	Bromoethene	0.950	0.939	1.2	91	-0.02
21	Trichlorofluoromethane	1.965	2.149	-9.4	89	-0.01
22	Acetone	0.383	0.367	4.2	96	-0.02
23	Pentane	0.245	0.214	12.7	91	-0.02
24	1,1-Dichloro-1-fluoroethane	1.811	1.830	-1.0	92	-0.02
25	Iodomethane	2.756	2.397	13.0	80	-0.02
26	Isopropyl Alcohol	0.236	0.226	4.2	98	-0.02
27	1,1-Dichloroethene	1.352	1.371	-1.4	89	-0.02
28	Freon 113	2.005	1.965	2.0	89	-0.02
29	Methylene Chloride	0.940	0.821	12.7	89	-0.02
30	Carbon Disulfide	2.774	2.822	-1.7	91	-0.02
31	Ethanol	0.225	0.234	-4.0	105	-0.02
32	Acrylonitrile	0.636	0.646	-1.6	92	-0.02
33	3-Chloropropene	0.369	0.360	2.4	86	-0.01
34	trans-1,2-Dichloroethene	1.243	1.253	-0.8	89	-0.01
35	tert-Butyl Alcohol	1.683	1.604	4.7	85	-0.02
36	Methyl tert-Butyl Ether	2.390	2.207	7.7	84	-0.02
37	Vinyl Acetate	1.903	1.862	2.2	94	-0.02
38	1,1-Dichloroethane	1.615	1.647	-2.0	92	-0.02

Continuing Calibration Summary

Page 2 of 3

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1099-ECC1097
Lab FileID: 5W28001.D

39	2-Butanone	0.437	0.433	0.9	86	-0.02
40	Hexane	1.382	1.367	1.1	92	-0.02
41	cis-1,2-Dichloroethene	1.203	1.184	1.6	89	-0.01
42	Di-isopropyl Ether	0.745	0.734	1.5	86	-0.01
43	Ethyl Acetate	0.280	0.309	-10.4	93	-0.01
44	Methyl Acrylate	1.557	1.546	0.7	93	-0.02
45	Chloroform	1.901	1.910	-0.5	93	-0.01
46	2,4-Dimethylpentane	1.600	1.562	2.4	90	-0.01
47	Tetrahydrofuran	0.410	0.397	3.2	83	-0.01
48	1,1,1-Trichloroethane	1.696	1.670	1.5	90	-0.01
49	1,2-Dichloroethane	1.040	1.099	-5.7	95	-0.01
50	Benzene	2.888	2.739	5.2	88	-0.01
51	Carbon Tetrachloride	1.528	1.662	-8.8	95	-0.01
52	Cyclohexane	1.330	1.296	2.6	90	-0.01
53	2,3-Dimethylpentane	0.618	0.594	3.9	88	-0.01
54 I	1,4-Difluorobenzene	1.000	1.000	0.0	90	-0.01
55	2,2,4-Trimethylpentane	1.191	1.254	-5.3	94	-0.01
56	Heptane	0.257	0.263	-2.3	92	0.00
57	Trichloroethene	0.370	0.377	-1.9	93	-0.01
58	1,2-Dichloropropane	0.296	0.306	-3.4	94	-0.01
59	Dibromomethane	0.373	0.331	11.3	86	-0.01
60	Ethyl Acrylate	0.561	0.577	-2.9	91	-0.01
61	Methyl Methacrylate	0.280	0.286	-2.1	90	-0.01
62	1,4-Dioxane	0.152	0.152	0.0	89	0.00
63	Bromodichloromethane	0.545	0.574	-5.3	95	0.00
64	cis-1,3-Dichloropropene	0.443	0.434	2.0	88	0.00
65	4-Methyl-2-pentanone	0.220	0.238	-8.2	91	0.00
66	trans-1,3-Dichloropropene	0.379	0.389	-2.6	89	0.00
67	Toluene	0.960	0.904	5.8	89	0.00
68	1,1,2-Trichloroethane	0.337	0.332	1.5	90	0.00
69	1,3-Dichloropropane	0.429	0.448	-4.4	93	0.00
70	2-Hexanone	0.276	0.326	-18.1	91	0.00
71	Ethyl Methacrylate	0.448	0.474	-5.8	92	0.00
72	Dibromochloromethane	0.539	0.556	-3.2	92	0.00
73	Tetrachloroethene	0.499	0.461	7.6	88	0.00
74	1,2-Dibromoethane	0.520	0.521	-0.2	89	0.00
75	Octane	0.581	0.567	2.4	93	0.00
76	1,1,1,2-Tetrachloroethane	0.393	0.410	-4.3	91	0.00
77 I	Chlorobenzene-d5	1.000	1.000	0.0	94	0.00
78	Chlorobenzene	1.792	1.626	9.3	89	0.00
79	Ethylbenzene	2.821	2.534	10.2	88	0.00
80	m,p-Xylene	2.242	1.969	12.2	90	-0.02
81	Styrene	1.604	1.468	8.5	86	0.00
82	Nonane	1.290	1.225	5.0	97	0.00
83	o-Xylene	2.184	2.009	8.0	90	0.00
84	Bromoform	1.158	1.213	-4.7	91	0.00
85	1,1,2,2-Tetrachloroethane	1.606	1.533	4.5	95	0.00
86	1,2,3-Trichloropropane	1.145	1.101	3.8	94	0.00
87	Isopropylbenzene	2.883	2.607	9.6	89	0.00
88	Bromobenzene	0.962	0.914	5.0	90	0.00
89	2-Chlorotoluene	0.729	0.685	6.0	88	0.00
90	n-Propylbenzene	0.796	0.742	6.8	89	0.00
91 S	4-Bromofluorobenzene	1.326	1.401	-5.7	95	0.00
92	4-Ethyltoluene	2.836	2.538	10.5	90	0.00
93	1,3,5-Trimethylbenzene	2.427	2.099	13.5	90	0.00
94	alpha-Methylstyrene	1.153	1.041	9.7	87	0.00
95	tert-Butylbenzene	0.554	0.482	13.0	89	0.00
96	1,2,4-Trimethylbenzene	2.292	2.042	10.9	91	0.00

Continuing Calibration Summary

Page 3 of 3

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V5W1099-ECC1097
Lab FileID: 5W28001.D

97	1,3-Dichlorobenzene	1.452	1.332	8.3	90	0.00
98	Benzyl Chloride	1.445	1.496	-3.5	92	0.00
99	1,4-Dichlorobenzene	1.452	1.277	12.1	90	0.00
100	sec-Butylbenzene	0.633	0.553	12.6	91	0.00
101	p-Isopropyltoluene	0.720	0.635	11.8	93	0.00
102	1,2-Dichlorobenzene	1.363	1.202	11.8	90	0.00
103	n-Butylbenzene	0.575	0.508	11.7	90	0.00
104	Hexachloroethane	0.784	0.726	7.4	89	0.00
105	1,2,4-Trichlorobenzene	0.387	0.385	0.5	83	0.00
106	Naphthalene	0.796	0.728	8.5	80	0.00
107	Hexachlorobutadiene	0.649	0.484	25.4	86	0.00

108 I	Bromochloromethane (A)	1.000	1.000	0.0	90	-0.01
109	TVHC as equiv Pentane	4.853	5.197	-7.1	97	-0.02

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

m5w1097.M Mon Nov 27 08:48:21 2017

Initial Calibration Summary

Page 1 of 4

Job Number: JC56815
 Account: GESNYP Groundwater & Environmental Services
 Project: Orangeburg UB, Orangeburg, NY

Sample: V6W76-ICC76
 Lab FileID: 6W02923.D

Response Factor Report GCMS6W

Method : C:\msdchem\1\methods\6w076.M (RTE Integrator)
 Title : T0-15 Full Scan Mode
 Last Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Calibration Files

20 =6W02924.D 0.5 =6W02921.D 0.2 =6W02920.D 0.1 =6W02919.D
 0.04=6W02918.D 10 =6W02923.D 5 =6W02922.D 40 =6W02925.D
 = =

Compound	20	0.5	0.2	0.1	0.04	10	5	40	Avg	%RSD
1) I Bromochloromethane	-----ISTD-----									
2) 1,1,1-Trifluoroethane										
	1.190	1.596	2.166			1.624	2.112	0.685	1.562	35.97
3) Freon 152A										
	0.580	0.647	0.675	0.792	0.671	0.643	0.650	0.536	0.649	11.56
4) Chlorodifluoromethane										
	0.224	0.236	0.220	0.215		0.246	0.250	0.201	0.227	7.67
5) Propene										
	0.677	0.726	0.759	0.820	0.609	0.752	0.770	0.597	0.714	11.12
6) Chlorotrifluoroethene										
	1.505	1.574	1.644	1.806	1.556	1.640	1.657	1.355	1.592	8.23
7) Dichlorodifluoromethane										
	2.338	2.491	2.664	2.824	2.531	2.585	2.602	1.957	2.499	10.38
8) 1-Chloro-1,1-difluoroethane										
	1.542	1.769	1.821	1.886	1.712	1.743	1.834	1.227	1.692	12.69
9) Chloromethane										
	0.748	0.903	0.904	0.924	0.636	0.846	0.914	0.570	0.806	17.18
10) Dichlorotetrafluoroethane										
	2.086	2.460	2.556	2.696	2.400	2.376	2.522	1.596	2.336	14.86
11) Vinyl Chloride										
	0.870	1.003	1.003	1.018	0.817	0.968	1.032	0.716	0.929	12.39
12) 1,3-Butadiene										
	0.655	0.758	0.761	0.771	0.644	0.739	0.795	0.516	0.705	13.31
13) n-Butane										
	0.160	0.188	0.159	0.148		0.180	0.193	0.126	0.165	14.48
14) Bromomethane										
	0.800	0.906	0.936	0.957	0.734	0.890	0.933	0.685	0.855	11.98
15) Chloroethane										
	0.442	0.498	0.534	0.532		0.495	0.528	0.369	0.485	12.46
16) Dichlorofluoromethane										
	1.781	2.140	2.168	2.302	1.904	2.018	2.176	1.429	1.990	14.12
17) Acetonitrile										
	0.740	0.772	0.754	0.840	0.773	0.782	0.801	0.664	0.766	6.68
18) Freon 123										
	2.520	2.557	2.679	2.823		2.638	2.681	2.223	2.589	7.29
19) Freon 123A										
	1.366	1.365	1.439	1.556	1.308	1.418	1.436	1.178	1.383	7.98
20) Bromoethene										
	0.961	0.914	0.931	1.021	0.848	0.974	0.975	0.877	0.938	6.04
21) Trichlorofluoromethane										
	2.304	2.347	2.423	2.648	2.336	2.380	2.437	2.075	2.369	6.72
22) Acetone										
	0.467	0.548	0.618			0.493	0.504	0.415	0.507	13.71
23) Pentane										

Initial Calibration Summary

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V6W76-ICC76
Lab FileID: 6W02923.D

		0.247	0.241	0.226	0.196		0.262	0.269	0.222		0.238	10.57
24)	1,1-Dichloro-1-fluoroethane	1.952	2.057	2.147	2.277	2.098	2.067	2.115	1.737		2.056	7.69
25)	Iodomethane	2.757	2.690	2.782	3.112	2.788	2.803	2.840	2.511		2.785	6.00
26)	Isopropyl Alcohol	1.881	2.067	2.388			2.001	2.071	1.655		2.011	12.03
27)	1,1-Dichloroethene	1.470	1.511	1.542	1.680	1.477	1.563	1.620	1.299		1.520	7.50
28)	Freon 113	2.082	2.148	2.225	2.401	2.160	2.183	2.224	1.856		2.160	7.11
29)	Methylene Chloride	0.909	0.997	1.101	1.193	1.280	0.958	0.989	0.818		1.031	14.75
30)	Carbon Disulfide	3.138	3.253	3.370	3.571	3.345	3.330	3.421	2.796		3.278	7.06
31)	Ethanol	0.247	0.338	0.345	0.353	0.224	0.279	0.305	0.196		0.286	20.75
32)	Acrylonitrile	0.757	0.737	0.735	0.731	0.523	0.799	0.822	0.682		0.723	12.66
33)	3-Chloropropene	0.470	0.463	0.430	0.444		0.492	0.499	0.428		0.461	6.18
34)	trans-1,2-Dichloroethene	1.421	1.494	1.519	1.552	1.438	1.497	1.533	1.281		1.467	5.96
35)	tert-Butyl Alcohol	2.012	1.949	1.943	1.989	1.598	2.124	2.178	1.739		1.942	9.84
36)	Methyl tert-Butyl Ether	2.705	2.636	2.679	2.927	2.539	2.839	2.904	2.451		2.710	6.30
37)	Vinyl Acetate	2.445	2.361	2.413	2.513	2.242	2.577	2.635	2.168		2.419	6.61
38)	1,1-Dichloroethane	1.758	1.841	1.916	1.978	1.710	1.854	1.921	1.588		1.821	7.06
39)	2-Butanone	0.535	0.516	0.513	0.466		0.556	0.569	0.490		0.521	6.90
40)	Hexane	1.591	1.631	1.643	1.757	1.481	1.704	1.760	1.304		1.609	9.54
41)	cis-1,2-Dichloroethene	1.341	1.355	1.390	1.493	1.273	1.409	1.457	1.214		1.367	6.73
42)	Di-isopropyl Ether	0.904	0.891	0.887	0.924	0.656	0.955	0.982	0.775		0.872	12.20
43)	Ethyl Acetate	0.349	0.330	0.322	0.268		0.370	0.378	0.302		0.331	11.62
44)	Methyl Acrylate	1.937	1.967	1.926	1.984		2.069	2.134	1.621		1.948	8.33
45)	Chloroform	2.062	2.188	2.222	2.365	2.145	2.186	2.266	1.841		2.159	7.21
46)	2,4-Dimethylpentane	1.814	1.798	1.784	1.851	1.548	1.921	1.978	1.618		1.789	8.04
47)	Tetrahydrofuran	0.496	0.455	0.423	0.379		0.516	0.528	0.454		0.464	11.45
48)	1,1,1-Trichloroethane	1.918	1.955	1.999	2.042	1.886	1.987	2.040	1.742		1.946	5.09
49)	1,2-Dichloroethane	1.222	1.285	1.332	1.358	1.140	1.286	1.338	1.096		1.257	7.66
50)	Benzene	3.224	3.375	3.487	3.702	3.418	3.390	3.513	2.916		3.378	6.83
51)	Carbon Tetrachloride	2.090	2.077	2.132	2.319	2.131	2.166	2.207	1.916		2.130	5.42
52)	Cyclohexane	1.567	1.517	1.553	1.605	1.405	1.653	1.690	1.407		1.550	6.74
53)	2,3-Dimethylpentane											

Initial Calibration Summary

Page 3 of 4

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V6W76-ICC76
Lab FileID: 6W02923.D

		0.718	0.740	0.761	0.724	0.505	0.753	0.783	0.643		0.704	12.83
54)	I	1,4-Difluorobenzene -----ISTD-----										
55)		2,2,4-Trimethylpentane										
		1.361	1.406	1.376	1.480	1.324	1.522	1.537	1.099		1.388	10.09
56)		Heptane										
		0.303	0.296	0.294	0.309	0.259	0.332	0.332	0.263		0.298	9.11
57)		Trichloroethene										
		0.389	0.386	0.393	0.420	0.361	0.427	0.428	0.324		0.391	9.14
58)		1,2-Dichloropropane										
		0.329	0.332	0.337	0.354	0.294	0.359	0.358	0.281		0.330	8.88
59)		Dibromomethane										
		0.376	0.374	0.387	0.442	0.488	0.398	0.392	0.336		0.399	11.61
60)		Ethyl Acrylate										
		0.660	0.587	0.561	0.581	0.478	0.715	0.705	0.573		0.608	13.19
61)		Methyl Methacrylate										
		0.333	0.295	0.285	0.292	0.209	0.358	0.352	0.296		0.302	15.62
62)		1,4-Dioxane										
		0.175	0.169	0.159	0.154		0.191	0.189	0.146		0.169	10.12
63)		Bromodichloromethane										
		0.635	0.614	0.617	0.635	0.564	0.684	0.680	0.550		0.622	7.70
64)		cis-1,3-Dichloropropene										
		0.518	0.480	0.483	0.516	0.462	0.556	0.545	0.465		0.503	7.16
65)		4-Methyl-2-pentanone										
		0.270	0.241	0.223	0.234	0.173	0.294	0.290	0.239		0.246	16.05
66)		trans-1,3-Dichloropropene										
		0.474	0.432	0.429	0.461	0.410	0.509	0.495	0.425		0.454	7.88
67)		Toluene										
		1.059	1.049	1.054	1.164	1.167	1.151	1.147	0.927		1.090	7.65
68)		1,1,2-Trichloroethane										
		0.364	0.364	0.361	0.358	0.333	0.393	0.390	0.324		0.361	6.74
69)		1,3-Dichloropropane										
		0.505	0.509	0.524	0.522	0.498	0.554	0.554	0.446		0.514	6.71
70)		2-Hexanone										
		0.376	0.331	0.312	0.325	0.306	0.403	0.395	0.324		0.347	11.12
71)		Ethyl Methacrylate										
		0.549	0.460	0.416	0.429	0.336	0.594	0.580	0.473		0.480	18.61
72)		Dibromochloromethane										
		0.652	0.582	0.575	0.623	0.575	0.700	0.690	0.573		0.621	8.62
73)		Tetrachloroethene										
		0.528	0.542	0.551	0.597	0.570	0.567	0.565	0.463		0.548	7.28
74)		1,2-Dibromoethane										
		0.579	0.554	0.544	0.585	0.528	0.626	0.619	0.510		0.568	7.34
75)		Octane										
		0.631	0.626	0.609	0.626	0.545	0.696	0.692	0.529		0.619	9.69
76)		1,1,1,2-Tetrachloroethane										
		0.448	0.443	0.442	0.483	0.418	0.481	0.475	0.379		0.446	7.92
77)	I	Chlorobenzene-d5 -----ISTD-----										
78)		Chlorobenzene										
		1.555	1.828	1.894	2.059	2.085	1.736	1.965	1.271		1.799	15.29
79)		Ethylbenzene										
		2.540	2.778	2.802	3.002	3.000	2.819	3.168	2.132		2.780	11.60
80)		m,p-Xylene										
		1.931	2.163	2.170	2.253	2.240	2.171	2.444	1.583		2.120	12.19
81)		Styrene										
		1.475	1.343	1.276	1.314	1.220	1.617	1.781	1.257		1.410	14.07
82)		Nonane										
		1.214	1.534	1.407	1.478	1.340	1.383	1.570	0.947		1.359	14.79
83)		o-Xylene										

Initial Calibration Summary

Page 4 of 4

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V6W76-ICC76
Lab FileID: 6W02923.D

	1.951	2.218	2.170	2.248	2.174	2.215	2.496	1.534	2.126	13.23
84)	Bromoform									
	1.200	1.083	1.076	1.123	1.138	1.301	1.418	1.026	1.171	11.17
85)	1,1,2,2-Tetrachloroethane									
	1.354	1.498	1.493	1.616	1.653	1.548	1.770	1.040	1.497	14.82
86)	1,2,3-Trichloropropane									
	1.007	1.129	1.128	1.252	1.137	1.125	1.286	0.852	1.114	12.22
87)	Isopropylbenzene									
	2.553	3.008	3.043	3.232	3.346	2.862	3.239	2.108	2.924	14.16
88)	Bromobenzene									
	0.859	0.960	0.959	1.029	1.115	0.954	1.080	0.740	0.962	12.54
89)	2-Chlorotoluene									
	0.640	0.707	0.689	0.706	0.701	0.709	0.795	0.550	0.687	10.12
90)	n-Propylbenzene									
	0.732	0.840	0.775	0.856	0.696	0.818	0.920	0.607	0.780	12.78
91)	4-Bromofluorobenzene									
	1.234	1.310	1.304	1.276	1.348	1.312	1.348	1.177	1.289	4.54
92)	4-Ethyltoluene									
	2.523	2.802	2.641	2.777	2.661	2.837	3.215	2.039	2.687	12.36
93)	1,3,5-Trimethylbenzene									
	2.101	2.407	2.270	2.381	2.301	2.372	2.673	1.708	2.277	12.29
94)	alpha-Methylstyrene									
	1.059	0.920	0.824	0.854	0.830	1.169	1.284	0.885	0.978	17.69
95)	tert-Butylbenzene									
	0.494	0.608	0.591	0.612	0.518	0.574	0.651	0.374	0.552	16.00
96)	1,2,4-Trimethylbenzene									
	1.965	2.321	2.189	2.273	2.092	2.308	2.633	1.445	2.153	16.07
97)	1,3-Dichlorobenzene									
	1.296	1.435	1.395	1.570	1.579	1.487	1.678	1.029	1.433	14.12
98)	Benzyl Chloride									
	1.662	1.263	1.222	1.339	1.410	1.849	1.978	1.300	1.503	19.23
99)	1,4-Dichlorobenzene									
	1.285	1.337	1.284	1.430	1.481	1.449	1.619	1.072	1.370	12.00
100)	sec-Butylbenzene									
	0.587	0.697	0.677	0.706	0.578	0.659	0.754	0.471	0.641	14.12
101)	p-Isopropyltoluene									
	0.637	0.775	0.731	0.766	0.718	0.737	0.842	0.474	0.710	15.72
102)	1,2-Dichlorobenzene									
	1.217	1.297	1.287	1.475	1.559	1.363	1.540	1.016	1.344	13.53
103)	n-Butylbenzene									
	0.573	0.571	0.535	0.556	0.513	0.629	0.707	0.469	0.569	12.77
104)	Hexachloroethane									
	0.769	0.814	0.788	0.874	0.877	0.829	0.902	0.626	0.810	10.78
105)	1,2,4-Trichlorobenzene									
	0.628	0.420	0.440	0.505	0.871	0.638	0.682	0.560	0.593	24.76
106)	Naphthalene									
	1.335	0.725	0.691	0.767	1.124	1.391	1.500	1.181	1.089	29.54
107)	Hexachlorobutadiene									
	0.719	0.709	0.728	0.828	1.038	0.760	0.851	0.594	0.778	16.85
108)	I Bromochloromethane (A -----ISTD-----									
109)	TVHC as equiv Pentane									
	4.307	4.383	4.612			4.510	4.665	3.737	4.369	7.73

(#) = Out of Range ### Number of calibration levels exceeded format ###

6w076.M

Wed Nov 08 09:39:39 2017

Initial Calibration Verification

Page 1 of 3

Job Number: JC56815
 Account: GESNYP Groundwater & Environmental Services
 Project: Orangeburg UB, Orangeburg, NY

Sample: V6W76-ICV76
 Lab FileID: 6W02927.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\6W02927.D
 Acq On : 7 Nov 2017 11:57 pm
 Sample : icv76-10
 Misc : MS21818,V6W76,,,,,1
 MS Integration Params: Rteint.p

Vial: 11
 Operator: DANAT
 Inst : GCMS6W
 Multiplr: 1.00

Method : C:\msdchem\1\methods\6w076.M (RTE Integrator)
 Title : TO-15 Full Scan Mode
 Last Update : Wed Nov 08 09:25:32 2017
 Response via : Single Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Bromochloromethane	1.000	1.000	0.0	121	0.00	8.19
2	1,1,1-Trifluoroethane			NA			
3	Freon 152A	0.649	0.607	6.5	114	0.00	3.74
4	Chlorodifluoromethane	0.227	0.228	-0.4	113	0.00	3.77
5	Propene	0.714	0.674	5.6	109	0.00	3.80
6	Chlorotrifluoroethene	1.592	1.360	14.6	100	0.00	3.80
7	Dichlorodifluoromethane	2.499	2.440	2.4	114	0.00	3.86
8	1-Chloro-1,1-difluoroetha	1.692	1.528	9.7	106	0.00	3.97
9	Chloromethane	0.806	0.724	10.2	104	0.00	3.99
10	Dichlorotetrafluoroethane	2.336	2.194	6.1	112	0.00	4.07
11	Vinyl Chloride	0.929	0.825	11.2	103	0.00	4.16
12	1,3-Butadiene	0.705	0.593	15.9	97	0.00	4.27
13	n-Butane	0.165	0.152	7.9	102	0.00	4.32
14	Bromomethane	0.855	0.783	8.4	107	0.00	4.50
15	Chloroethane	0.485	0.409	15.7	100	0.00	4.64
16	Dichlorofluoromethane	1.990	1.725	13.3	104	0.00	4.72
17	Acetonitrile	0.766	0.739	3.5	115	0.00	4.93
18	Freon 123	2.589	2.590	-0.0	119	0.00	5.07
19	Freon 123A	1.383	1.471	-6.4	126	0.00	5.12
20	Bromoethene	0.938	0.959	-2.2	119	0.00	4.94
21	Trichlorofluoromethane	2.369	2.414	-1.9	123	0.00	5.31
22	Acetone	0.507	0.472	6.9	116	0.00	5.15
23	Pentane	0.238	0.262	-10.1	121	0.00	5.62
24	1,1-Dichloro-1-fluoroetha			NA			
25	Iodomethane	2.785	2.910	-4.5	126	0.00	5.82
26	Isopropyl Alcohol	2.011	1.658	17.6	100	0.00	5.37
27	1,1-Dichloroethene	1.520	1.410	7.2	109	0.00	5.89
28	Freon 113	2.160	2.045	5.3	114	0.00	6.25
29	Methylene Chloride	1.031	0.902	12.5	114	0.00	6.00
30	Carbon Disulfide	3.278	3.031	7.5	110	0.00	6.29
31	Ethanol	0.286	0.285	0.3	124	0.00	4.73
32	Acrylonitrile	0.723	0.795	-10.0	121	0.00	5.57
33	3-Chloropropene	0.461	0.510	-10.6	126	0.00	6.11
34	trans-1,2-Dichloroethene	1.467	1.438	2.0	116	0.00	6.92
35	tert-Butyl Alcohol	1.942	1.934	0.4	110	0.00	5.92
36	Methyl tert-Butyl Ether	2.710	2.831	-4.5	121	0.00	7.18
37	Vinyl Acetate	2.419	2.711	-12.1	128	0.00	7.28
38	1,1-Dichloroethane	1.821	1.767	3.0	116	0.00	7.13
39	2-Butanone	0.521	0.543	-4.2	118	0.00	7.54
40	Hexane	1.609	1.597	0.7	114	0.00	8.22
41	cis-1,2-Dichloroethene	1.367	1.336	2.3	115	0.00	8.01
42	Di-isopropyl Ether	0.872	0.938	-7.6	119	0.00	8.22

Initial Calibration Verification

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Job Number: JC56815

Sample: V6W76-ICV76

Account: GESNYP Groundwater & Environmental Services

Lab FileID: 6W02927.D

Project: Orangeburg UB, Orangeburg, NY

43	Ethyl Acetate	0.331	0.352	-6.3	116	0.00	8.26
44	Methyl Acrylate	1.948	1.922	1.3	113	0.00	8.24
45	Chloroform	2.159	2.120	1.8	118	0.00	8.34
46	2,4-Dimethylpentane	1.789	1.861	-4.0	117	0.00	9.20
47	Tetrahydrofuran	0.464	0.528	-13.8	124	0.00	8.77
48	1,1,1-Trichloroethane	1.946	2.099	-7.9	128	0.00	9.43
49	1,2-Dichloroethane	1.257	1.234	1.8	116	0.00	9.15
50	Benzene	3.378	3.319	1.7	119	0.00	9.96
51	Carbon Tetrachloride	2.130	2.166	-1.7	121	0.00	10.13
52	Cyclohexane	1.550	1.598	-3.1	117	0.00	10.27
53	2,3-Dimethylpentane	0.704	0.738	-4.8	119	0.00	10.56
54 I	1,4-Difluorobenzene	1.000	1.000	0.0	126	0.00	10.40
55	2,2,4-Trimethylpentane	1.388	1.400	-0.9	116	0.00	11.25
56	Heptane	0.298	0.309	-3.7	117	0.00	11.60
57	Trichloroethene	0.391	0.400	-2.3	118	0.00	11.23
58	1,2-Dichloropropane	0.330	0.326	1.2	114	0.00	10.94
59	Dibromomethane	0.399	0.392	1.8	124	0.00	10.91
60	Ethyl Acrylate	0.608	0.645	-6.1	114	0.00	10.97
61	Methyl Methacrylate	0.302	0.333	-10.3	117	0.00	11.50
62	1,4-Dioxane	0.169	0.215	-27.2	142#	0.00	11.24
63	Bromodichloromethane	0.622	0.637	-2.4	117	0.00	11.19
64	cis-1,3-Dichloropropene	0.503	0.547	-8.7	124	0.00	12.31
65	4-Methyl-2-pentanone	0.246	0.271	-10.2	116	0.00	12.36
66	trans-1,3-Dichloropropene	0.454	0.461	-1.5	114	0.00	12.99
67	Toluene	1.090	1.096	-0.6	120	0.00	13.55
68	1,1,2-Trichloroethane	0.361	0.372	-3.0	119	0.00	13.20
69	1,3-Dichloropropane	0.514	0.500	2.7	114	0.00	13.59
70	2-Hexanone	0.347	0.370	-6.6	116	0.00	13.92
71	Ethyl Methacrylate	0.480	0.555	-15.6	118	0.00	13.95
72	Dibromochloromethane	0.621	0.680	-9.5	122	0.00	14.10
73	Tetrachloroethene	0.548	0.560	-2.2	124	0.00	15.05
74	1,2-Dibromoethane	0.568	0.592	-4.2	119	0.00	14.42
75	Octane	0.619	0.634	-2.4	115	0.00	14.89
76	1,1,1,2-Tetrachloroethane	0.446	0.455	-2.0	119	0.00	15.98
77 I	Chlorobenzene-d5	1.000	1.000	0.0	116	0.00	15.94
78	Chlorobenzene	1.799	1.762	2.1	117	0.00	16.00
79	Ethylbenzene	2.780	2.898	-4.2	119	0.00	16.54
80	m,p-Xylene	2.120	2.197	-3.6	117	0.00	16.81
81	Styrene	1.410	1.656	-17.4	118	0.00	17.33
82	Nonane	1.359	1.326	2.4	111	0.00	17.87
83	o-Xylene	2.126	2.231	-4.9	116	0.00	17.49
84	Bromoform	1.171	1.345	-14.9	120	0.00	16.89
85	1,1,2,2-Tetrachloroethane	1.497	1.503	-0.4	112	0.00	17.49
86	1,2,3-Trichloropropane	1.114	1.125	-1.0	116	0.00	17.69
87	Isopropylbenzene	2.924	3.144	-7.5	127	0.00	18.39
88	Bromobenzene	0.962	0.975	-1.4	118	0.00	18.50
89	2-Chlorotoluene	0.687	0.734	-6.8	120	0.00	19.12
90	n-Propylbenzene	0.780	0.820	-5.1	116	0.00	19.19
91 S	4-Bromofluorobenzene	1.289	1.296	-0.5	114	0.00	18.18
92	4-Ethyltoluene	2.687	2.849	-6.0	116	0.00	19.41
93	1,3,5-Trimethylbenzene	2.277	2.444	-7.3	119	0.00	19.53
94	alpha-Methylstyrene	0.978	1.161	-18.7	115	0.00	19.76
95	tert-Butylbenzene	0.552	0.561	-1.6	113	0.00	20.10
96	1,2,4-Trimethylbenzene	2.153	2.226	-3.4	112	0.00	20.11
97	1,3-Dichlorobenzene	1.433	1.462	-2.0	114	0.00	20.30
98	Benzyl Chloride	1.503	1.740	-15.8	109	0.00	20.30
99	1,4-Dichlorobenzene	1.370	1.420	-3.6	113	0.00	20.40
100	sec-Butylbenzene	0.641	0.691	-7.8	121	0.00	20.48

6.9.10
6

Initial Calibration Verification

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Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V6W76-ICV76
Lab FileID: 6W02927.D

101	p-Isopropyltoluene	0.710	0.753	-6.1	118	0.00	20.71
102	1,2-Dichlorobenzene	1.344	1.350	-0.4	115	0.00	20.86
103	n-Butylbenzene	0.569	0.645	-13.4	118	0.00	21.28
104	Hexachloroethane	0.810	0.849	-4.8	118	0.00	21.74
105	1,2,4-Trichlorobenzene	0.593	0.641	-8.1	116	0.00	23.05
106	Naphthalene	1.089	1.362	-25.1	113	0.00	23.18
107	Hexachlorobutadiene	0.778	0.772	0.8	117	0.00	23.63
108 I	Bromochloromethane (A)	1.000	1.000	0.0	121	0.00	8.19
109	TVHC as equiv Pentane	4.369	4.461	-2.1	120	0.00	5.62

(#) = Out of Range
 6W02923.D 6W076.M

SPCC's out = 0 CCC's out = 0
 Wed Nov 08 09:40:06 2017

6.9.10
 6

Continuing Calibration Summary

Page 1 of 3

Job Number: JC56815
 Account: GESNYP Groundwater & Environmental Services
 Project: Orangeburg UB, Orangeburg, NY

Sample: V6W86-CC76
 Lab FileID: 6W03148.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\6W03148.D
 Acq On : 21 Nov 2017 10:11 am
 Sample : cc76-10
 Misc : MS22325,V6W86,,,,,1
 MS Integration Params: Rteint.p

Vial: 2
 Operator: DANAT
 Inst : GCMS6W
 Multiplr: 1.00

Method : C:\msdchem\1\methods\6w076.M (RTE Integrator)
 Title : T0-15 Full Scan Mode
 Last Update : Wed Nov 08 09:25:32 2017
 Response via : Single Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I Bromochloromethane	1.000	1.000	0.0	104	0.00	8.19
2	1,1,1-Trifluoroethane	1.562	1.923	-23.1	123	0.00	3.64
3	Freon 152A	0.649	0.684	-5.4	111	0.00	3.74
4	Chlorodifluoromethane	0.227	0.257	-13.2	109	0.00	3.77
5	Propene	0.714	0.794	-11.2	110	0.00	3.80
6	Chlorotrifluoroethene	1.592	1.723	-8.2	109	0.00	3.80
7	Dichlorodifluoromethane	2.499	2.780	-11.2	112	0.00	3.86
8	1-Chloro-1,1-difluoroetha	1.692	1.800	-6.4	107	0.00	3.97
9	Chloromethane	0.806	0.866	-7.4	106	0.00	3.99
10	Dichlorotetrafluoroethane	2.336	2.440	-4.5	107	0.00	4.07
11	Vinyl Chloride	0.929	0.991	-6.7	106	0.00	4.16
12	1,3-Butadiene	0.705	0.739	-4.8	104	0.00	4.27
13	n-Butane	0.165	0.184	-11.5	106	0.00	4.32
14	Bromomethane	0.855	0.920	-7.6	108	0.00	4.50
15	Chloroethane	0.485	0.503	-3.7	106	0.00	4.64
16	Dichlorofluoromethane	1.990	2.013	-1.2	104	0.00	4.72
17	Acetonitrile	0.766	0.856	-11.7	114	0.00	4.93
18	Freon 123	2.589	2.914	-12.6	115	0.00	5.08
19	Freon 123A	1.383	1.579	-14.2	116	0.00	5.12
20	Bromoethene	0.938	1.119	-19.3	119	0.00	4.94
21	Trichlorofluoromethane	2.369	2.723	-14.9	119	0.00	5.30
22	Acetone	0.507	0.538	-6.1	114	0.00	5.15
23	Pentane	0.238	0.284	-19.3	113	0.00	5.62
24	1,1-Dichloro-1-fluoroetha	2.056	2.261	-10.0	114	0.00	5.41
25	Iodomethane	2.785	3.191	-14.6	118	0.00	5.82
26	Isopropyl Alcohol	2.011	2.188	-8.8	114	0.00	5.36
27	1,1-Dichloroethene	1.520	1.699	-11.8	113	0.00	5.89
28	Freon 113	2.160	2.399	-11.1	114	0.00	6.25
29	Methylene Chloride	1.031	1.050	-1.8	114	0.00	6.00
30	Carbon Disulfide	3.278	3.638	-11.0	114	0.00	6.29
31	Ethanol	0.286	0.276	3.5	103	0.00	4.73
32	Acrylonitrile	0.723	0.882	-22.0	115	0.00	5.57
33	3-Chloropropene	0.461	0.538	-16.7	114	0.00	6.12
34	trans-1,2-Dichloroethene	1.467	1.627	-10.9	113	0.00	6.92
35	tert-Butyl Alcohol	1.942	2.343	-20.6	115	0.00	5.92
36	Methyl tert-Butyl Ether	2.710	3.138	-15.8	115	0.00	7.17
37	Vinyl Acetate	2.419	2.760	-14.1	111	0.00	7.28
38	1,1-Dichloroethane	1.821	2.047	-12.4	115	0.00	7.12
39	2-Butanone	0.521	0.615	-18.0	115	0.00	7.53
40	Hexane	1.609	1.823	-13.3	111	0.00	8.22
41	cis-1,2-Dichloroethene	1.367	1.540	-12.7	114	0.00	8.01
42	Di-isopropyl Ether	0.872	1.031	-18.2	112	0.00	8.22

6.9.11

6

Continuing Calibration Summary

Page 2 of 3

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V6W86-CC76
Lab FileID: 6W03148.D

43	Ethyl Acetate	0.331	0.404	-22.1	114	0.00	8.25
44	Methyl Acrylate	1.948	2.248	-15.4	113	0.00	8.24
45	Chloroform	2.159	2.400	-11.2	114	0.00	8.34
46	2,4-Dimethylpentane	1.789	2.088	-16.7	113	0.00	9.20
47	Tetrahydrofuran	0.464	0.570	-22.8	115	0.00	8.76
48	1,1,1-Trichloroethane	1.946	2.215	-13.8	116	0.00	9.42
49	1,2-Dichloroethane	1.257	1.413	-12.4	114	0.00	9.15
50	Benzene	3.378	3.716	-10.0	114	0.00	9.96
51	Carbon Tetrachloride	2.130	2.409	-13.1	116	0.00	10.13
52	Cyclohexane	1.550	1.806	-16.5	114	0.00	10.27
53	2,3-Dimethylpentane	0.704	0.820	-16.5	113	0.00	10.56
54 I	1,4-Difluorobenzene	1.000	1.000	0.0	109	0.00	10.40
55	2,2,4-Trimethylpentane	1.388	1.558	-12.2	112	0.00	11.25
56	Heptane	0.298	0.338	-13.4	111	0.00	11.59
57	Trichloroethene	0.391	0.438	-12.0	112	0.00	11.22
58	1,2-Dichloropropane	0.330	0.374	-13.3	113	0.00	10.94
59	Dibromomethane	0.399	0.416	-4.3	114	0.00	10.91
60	Ethyl Acrylate	0.608	0.750	-23.4	114	0.00	10.96
61	Methyl Methacrylate	0.302	0.377	-24.8	115	0.00	11.49
62	1,4-Dioxane	0.169	0.196	-16.0	112	0.00	11.23
63	Bromodichloromethane	0.622	0.708	-13.8	113	0.00	11.18
64	cis-1,3-Dichloropropene	0.503	0.583	-15.9	114	0.00	12.31
65	4-Methyl-2-pentanone	0.246	0.307	-24.8	114	0.00	12.35
66	trans-1,3-Dichloropropene	0.454	0.534	-17.6	114	0.00	12.98
67	Toluene	1.090	1.189	-9.1	113	0.00	13.54
68	1,1,2-Trichloroethane	0.361	0.405	-12.2	112	0.00	13.19
69	1,3-Dichloropropane	0.514	0.576	-12.1	113	0.00	13.59
70	2-Hexanone	0.347	0.420	-21.0	114	0.00	13.92
71	Ethyl Methacrylate	0.480	0.616	-28.3	113	0.00	13.95
72	Dibromochloromethane	0.621	0.721	-16.1	112	0.00	14.10
73	Tetrachloroethene	0.548	0.587	-7.1	113	0.00	15.05
74	1,2-Dibromoethane	0.568	0.641	-12.9	112	0.00	14.42
75	Octane	0.619	0.721	-16.5	113	0.00	14.89
76	1,1,1,2-Tetrachloroethane	0.446	0.495	-11.0	112	0.00	15.98
77 I	Chlorobenzene-d5	1.000	1.000	0.0	100	0.00	15.93
78	Chlorobenzene	1.799	1.911	-6.2	110	0.00	16.00
79	Ethylbenzene	2.780	3.169	-14.0	112	0.00	16.54
80	m,p-Xylene	2.120	2.411	-13.7	111	0.00	16.81
81	Styrene	1.410	1.805	-28.0	112	0.00	17.33
82	Nonane	1.359	1.551	-14.1	112	0.00	17.87
83	o-Xylene	2.126	2.428	-14.2	110	0.00	17.48
84	Bromoform	1.171	1.436	-22.6	110	0.00	16.89
85	1,1,2,2-Tetrachloroethane	1.497	1.680	-12.2	109	0.00	17.49
86	1,2,3-Trichloropropane	1.114	1.251	-12.3	111	0.00	17.68
87	Isopropylbenzene	2.924	3.162	-8.1	110	0.00	18.39
88	Bromobenzene	0.962	1.047	-8.8	110	0.00	18.50
89	2-Chlorotoluene	0.687	0.782	-13.8	110	0.00	19.12
90	n-Propylbenzene	0.780	0.891	-14.2	109	0.00	19.18
91 S	4-Bromofluorobenzene	1.289	1.222	5.2	93	0.00	18.18
92	4-Ethyltoluene	2.687	3.114	-15.9	110	0.00	19.41
93	1,3,5-Trimethylbenzene	2.277	2.603	-14.3	110	0.00	19.53
94	alpha-Methylstyrene	0.978	1.270	-29.9	109	0.00	19.76
95	tert-Butylbenzene	0.552	0.604	-9.4	105	0.00	20.09
96	1,2,4-Trimethylbenzene	2.153	2.492	-15.7	108	0.00	20.11
97	1,3-Dichlorobenzene	1.433	1.567	-9.4	105	0.00	20.30
98	Benzyl Chloride	1.503	1.961	-30.5#	106	0.00	20.29
99	1,4-Dichlorobenzene	1.370	1.531	-11.8	106	0.00	20.40
100	sec-Butylbenzene	0.641	0.709	-10.6	108	0.00	20.48

6.9.11
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Continuing Calibration Summary

Page 3 of 3

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V6W86-CC76
Lab FileID: 6W03148.D

101	p-Isopropyltoluene	0.710	0.774	-9.0	105	0.00	20.71
102	1,2-Dichlorobenzene	1.344	1.454	-8.2	107	0.00	20.86
103	n-Butylbenzene	0.569	0.678	-19.2	108	0.00	21.27
104	Hexachloroethane	0.810	0.873	-7.8	105	0.00	21.74
105	1,2,4-Trichlorobenzene	0.593	0.642	-8.3	101	0.00	23.06
106	Naphthalene	1.089	1.309	-20.2	94	0.00	23.18
107	Hexachlorobutadiene	0.778	0.848	-9.0	112	0.00	23.62
108 I	Bromochloromethane (A)	1.000	1.000	0.0	104	0.00	8.19
109	TVHC as equiv Pentane	4.369	4.803	-9.9	111	0.00	5.62

(#) = Out of Range
 6W02923.D 6W076.M

SPCC's out = 0 CCC's out = 0
 Tue Nov 21 14:13:03 2017

6.9.11
 6

Continuing Calibration Summary

Page 1 of 3

Job Number: JC56815
 Account: GESNYP Groundwater & Environmental Services
 Project: Orangeburg UB, Orangeburg, NY

Sample: V6W86-ECC76
 Lab FileID: 6W03171.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\6W03171.D
 Acq On : 22 Nov 2017 6:58 am
 Sample : ecc76-10
 Misc : MS22168,V6W86,,,,,1
 MS Integration Params: Rteint.p

Vial: 5
 Operator: DANAT
 Inst : GCMS6W
 Multiplr: 1.00

Method : C:\msdchem\1\methods\6w076.M (RTE Integrator)
 Title : TO-15 Full Scan Mode
 Last Update : Wed Nov 08 09:25:32 2017
 Response via : Single Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I Bromochloromethane	1.000	1.000	0.0	76	0.00	8.20
2	1,1,1-Trifluoroethane	1.562	2.081	-33.2#	97	0.00	3.64
3	Freon 152A	0.649	0.767	-18.2	90	0.00	3.74
4	Chlorodifluoromethane	0.227	0.302	-33.0#	93	0.00	3.78
5	Propene	0.714	0.956	-33.9#	96	0.00	3.80
6	Chlorotrifluoroethene	1.592	1.832	-15.1	84	0.00	3.81
7	Dichlorodifluoromethane	2.499	2.968	-18.8	87	0.00	3.86
8	1-Chloro-1,1-difluoroetha	1.692	2.282	-34.9#	99	0.00	3.97
9	Chloromethane	0.806	1.166	-44.7#	104	0.00	3.99
10	Dichlorotetrafluoroethane	2.336	3.015	-29.1	96	0.00	4.07
11	Vinyl Chloride	0.929	1.272	-36.9#	99	0.00	4.17
12	1,3-Butadiene	0.705	1.002	-42.1#	102	0.00	4.28
13	n-Butane	0.165	0.244	-47.9#	102	0.00	4.32
14	Bromomethane	0.855	1.081	-26.4	92	0.00	4.51
15	Chloroethane	0.485	0.660	-36.1#	101	0.00	4.65
16	Dichlorofluoromethane	1.990	2.733	-37.3#	102	0.00	4.72
17	Acetonitrile	0.766	1.001	-30.7#	97	0.00	4.93
18	Freon 123	2.589	3.098	-19.7	89	0.00	5.08
19	Freon 123A	1.383	1.571	-13.6	84	0.00	5.12
20	Bromoethene	0.938	1.100	-17.3	85	0.00	4.95
21	Trichlorofluoromethane	2.369	2.795	-18.0	89	0.00	5.31
22	Acetone	0.507	0.598	-17.9	92	0.00	5.15
23	Pentane	0.238	0.317	-33.2#	91	0.00	5.62
24	1,1-Dichloro-1-fluoroetha	2.056	2.437	-18.5	89	0.00	5.41
25	Iodomethane	2.785	3.041	-9.2	82	0.00	5.82
26	Isopropyl Alcohol	2.011	2.552	-26.9	96	0.00	5.37
27	1,1-Dichloroethene	1.520	1.907	-25.5	92	0.00	5.89
28	Freon 113	2.160	2.510	-16.2	87	0.00	6.25
29	Methylene Chloride	1.031	1.116	-8.2	88	0.00	6.01
30	Carbon Disulfide	3.278	3.911	-19.3	89	0.00	6.29
31	Ethanol	0.286	0.430	-50.3#	116	0.00	4.73
32	Acrylonitrile	0.723	0.984	-36.1#	93	0.00	5.58
33	3-Chloropropene	0.461	0.572	-24.1	88	0.00	6.12
34	trans-1,2-Dichloroethene	1.467	1.794	-22.3	91	0.00	6.92
35	tert-Butyl Alcohol	1.942	2.612	-34.5#	93	0.00	5.92
36	Methyl tert-Butyl Ether	2.710	3.371	-24.4	90	0.00	7.18
37	Vinyl Acetate	2.419	3.207	-32.6#	94	0.00	7.28
38	1,1-Dichloroethane	1.821	2.266	-24.4	92	0.00	7.13
39	2-Butanone	0.521	0.658	-26.3	89	0.00	7.53
40	Hexane	1.609	2.102	-30.6#	93	0.00	8.22
41	cis-1,2-Dichloroethene	1.367	1.698	-24.2	91	0.00	8.01
42	Di-isopropyl Ether	0.872	1.100	-26.1	87	0.00	8.22

6.9.12

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Continuing Calibration Summary

Page 2 of 3

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V6W86-ECC76
Lab FileID: 6W03171.D

43	Ethyl Acetate	0.331	0.453	-36.9#	93	0.00	8.26
44	Methyl Acrylate	1.948	2.625	-34.8#	96	0.00	8.24
45	Chloroform	2.159	2.601	-20.5	90	0.00	8.34
46	2,4-Dimethylpentane	1.789	2.334	-30.5#	92	0.00	9.20
47	Tetrahydrofuran	0.464	0.604	-30.2#	89	0.00	8.77
48	1,1,1-Trichloroethane	1.946	2.357	-21.1	90	0.00	9.43
49	1,2-Dichloroethane	1.257	1.607	-27.8	94	0.00	9.15
50	Benzene	3.378	3.968	-17.5	89	0.00	9.96
51	Carbon Tetrachloride	2.130	2.510	-17.8	88	0.00	10.13
52	Cyclohexane	1.550	2.003	-29.2	92	0.00	10.27
53	2,3-Dimethylpentane	0.704	0.889	-26.3	89	0.00	10.56
54 I	1,4-Difluorobenzene	1.000	1.000	0.0	80	0.00	10.40
55	2,2,4-Trimethylpentane	1.388	1.787	-28.7	94	0.00	11.25
56	Heptane	0.298	0.370	-24.2	89	0.00	11.60
57	Trichloroethene	0.391	0.471	-20.5	88	0.00	11.23
58	1,2-Dichloropropane	0.330	0.420	-27.3	94	0.00	10.94
59	Dibromomethane	0.399	0.401	-0.5	81	0.00	10.91
60	Ethyl Acrylate	0.608	0.852	-40.1#	95	0.00	10.96
61	Methyl Methacrylate	0.302	0.406	-34.4#	91	0.00	11.50
62	1,4-Dioxane	0.169	0.212	-25.4	89	0.00	11.23
63	Bromodichloromethane	0.622	0.777	-24.9	91	0.00	11.19
64	cis-1,3-Dichloropropene	0.503	0.630	-25.2	91	0.00	12.31
65	4-Methyl-2-pentanone	0.246	0.346	-40.7#	94	0.00	12.35
66	trans-1,3-Dichloropropene	0.454	0.578	-27.3	91	0.00	12.99
67	Toluene	1.090	1.272	-16.7	88	0.00	13.54
68	1,1,2-Trichloroethane	0.361	0.433	-19.9	88	0.00	13.20
69	1,3-Dichloropropane	0.514	0.633	-23.2	91	0.00	13.59
70	2-Hexanone	0.347	0.477	-37.5#	95	0.00	13.92
71	Ethyl Methacrylate	0.480	0.690	-43.7#	93	0.00	13.95
72	Dibromochloromethane	0.621	0.764	-23.0	87	0.00	14.10
73	Tetrachloroethene	0.548	0.592	-8.0	83	0.00	15.05
74	1,2-Dibromoethane	0.568	0.686	-20.8	88	0.00	14.42
75	Octane	0.619	0.856	-38.3#	98	0.00	14.89
76	1,1,1,2-Tetrachloroethane	0.446	0.525	-17.7	87	0.00	15.98
77 I	Chlorobenzene-d5	1.000	1.000	0.0	80	0.00	15.93
78	Chlorobenzene	1.799	1.891	-5.1	87	0.00	16.00
79	Ethylbenzene	2.780	3.169	-14.0	90	0.00	16.54
80	m,p-Xylene	2.120	2.480	-17.0	91	0.00	16.82
81	Styrene	1.410	1.797	-27.4	89	0.00	17.34
82	Nonane	1.359	1.765	-29.9	102	0.00	17.87
83	o-Xylene	2.126	2.569	-20.8	93	0.00	17.49
84	Bromoform	1.171	1.380	-17.8	85	0.00	16.89
85	1,1,2,2-Tetrachloroethane	1.497	1.833	-22.4	95	0.00	17.49
86	1,2,3-Trichloropropane	1.114	1.335	-19.8	95	0.00	17.68
87	Isopropylbenzene	2.924	3.260	-11.5	91	0.00	18.39
88	Bromobenzene	0.962	1.031	-7.2	86	0.00	18.50
89	2-Chlorotoluene	0.687	0.794	-15.6	90	0.00	19.12
90	n-Propylbenzene	0.780	0.921	-18.1	90	0.00	19.18
91 S	4-Bromofluorobenzene	1.289	1.202	6.7	73	0.00	18.18
92	4-Ethyltoluene	2.687	3.292	-22.5	93	0.00	19.41
93	1,3,5-Trimethylbenzene	2.277	2.753	-20.9	93	0.00	19.53
94	alpha-Methylstyrene	0.978	1.322	-35.2#	90	0.00	19.76
95	tert-Butylbenzene	0.552	0.654	-18.5	91	0.00	20.09
96	1,2,4-Trimethylbenzene	2.153	2.768	-28.6	96	0.00	20.11
97	1,3-Dichlorobenzene	1.433	1.656	-15.6	89	0.00	20.30
98	Benzyl Chloride	1.503	2.144	-42.6#	93	0.00	20.29
99	1,4-Dichlorobenzene	1.370	1.592	-16.2	88	0.00	20.40
100	sec-Butylbenzene	0.641	0.752	-17.3	91	0.00	20.48

6.9.12
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Continuing Calibration Summary

Page 3 of 3

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V6W86-ECC76
Lab FileID: 6W03171.D

101	p-Isopropyltoluene	0.710	0.851	-19.9	92	0.00	20.71
102	1,2-Dichlorobenzene	1.344	1.537	-14.4	90	0.00	20.86
103	n-Butylbenzene	0.569	0.725	-27.4	92	0.00	21.27
104	Hexachloroethane	0.810	0.889	-9.8	86	0.00	21.74
105	1,2,4-Trichlorobenzene	0.593	0.632	-6.6	79	0.00	23.06
106	Naphthalene	1.089	1.315	-20.8	76	0.00	23.18
107	Hexachlorobutadiene	0.778	0.862	-10.8	91	0.00	23.62
108 I	Bromochloromethane (A)	1.000	1.000	0.0	76	0.00	8.20
109	TVHC as equiv Pentane	4.369	5.770	-32.1#	97	0.00	5.62

(#) = Out of Range
 6W02923.D 6W076.M

SPCC's out = 0 CCC's out = 0
 Wed Nov 22 11:31:50 2017

6.9.12
 6

Continuing Calibration Summary

Page 1 of 3

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V6W105-CC76
Lab FileID: 6W03632.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\6W03632.D
 Acq On : 20 Dec 2017 11:52 am
 Sample : cc76-10
 Misc : MS23032,V6W105,,,,,1
 MS Integration Params: Rteint.p

Vial: 2
 Operator: DANAT
 Inst : GCMS6W
 Multiplr: 1.00

Method : C:\msdchem\1\methods\6w076.M (RTE Integrator)
 Title : TO-15 Full Scan Mode
 Last Update : Wed Nov 08 09:25:32 2017
 Response via : Single Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I Bromochloromethane	1.000	1.000	0.0	100	0.00	8.19
2	1,1,1-Trifluoroethane	1.562	1.540	1.4	95	0.00	3.64
3	Freon 152A	0.649	0.600	7.6	94	0.00	3.74
4	Chlorodifluoromethane	0.227	0.227	0.0	93	0.00	3.77
5	Propene	0.714	0.677	5.2	90	0.00	3.80
6	Chlorotrifluoroethene	1.592	1.540	3.3	94	0.00	3.80
7	Dichlorodifluoromethane	2.499	2.483	0.6	96	0.00	3.86
8	1-Chloro-1,1-difluoroetha	1.692	1.728	-2.1	99	0.00	3.97
9	Chloromethane	0.806	0.827	-2.6	98	0.00	3.99
10	Dichlorotetrafluoroethane	2.336	2.335	0.0	99	0.00	4.07
11	Vinyl Chloride	0.929	0.929	0.0	96	0.00	4.17
12	1,3-Butadiene	0.705	0.705	0.0	96	0.00	4.27
13	n-Butane	0.165	0.172	-4.2	96	0.00	4.32
14	Bromomethane	0.855	0.852	0.4	96	0.00	4.51
15	Chloroethane	0.485	0.477	1.6	97	0.00	4.64
16	Dichlorofluoromethane	1.990	1.956	1.7	97	0.00	4.72
17	Acetonitrile	0.766	0.726	5.2	93	0.00	4.93
18	Freon 123	2.589	2.494	3.7	95	0.00	5.08
19	Freon 123A	1.383	1.339	3.2	95	0.00	5.12
20	Bromoethene	0.938	0.943	-0.5	97	0.00	4.94
21	Trichlorofluoromethane	2.369	2.338	1.3	99	0.00	5.31
22	Acetone	0.507	0.468	7.7	95	0.00	5.15
23	Pentane	0.238	0.240	-0.8	92	0.00	5.62
24	1,1-Dichloro-1-fluoroetha	2.056	1.970	4.2	96	0.00	5.41
25	Iodomethane	2.785	2.683	3.7	96	0.00	5.82
26	Isopropyl Alcohol	2.011	1.853	7.9	93	0.00	5.36
27	1,1-Dichloroethene	1.520	1.443	5.1	93	0.00	5.89
28	Freon 113	2.160	2.058	4.7	95	0.00	6.25
29	Methylene Chloride	1.031	0.898	12.9	94	0.00	6.00
30	Carbon Disulfide	3.278	3.122	4.8	94	0.00	6.29
31	Ethanol	0.286	0.275	3.8	99	0.00	4.73
32	Acrylonitrile	0.723	0.741	-2.5	93	0.00	5.57
33	3-Chloropropene	0.461	0.458	0.7	93	0.00	6.12
34	trans-1,2-Dichloroethene	1.467	1.369	6.7	92	0.00	6.92
35	tert-Butyl Alcohol	1.942	1.952	-0.5	92	0.00	5.92
36	Methyl tert-Butyl Ether	2.710	2.646	2.4	93	0.00	7.17
37	Vinyl Acetate	2.419	2.274	6.0	88	0.00	7.28
38	1,1-Dichloroethane	1.821	1.743	4.3	94	0.00	7.12
39	2-Butanone	0.521	0.516	1.0	93	0.00	7.53
40	Hexane	1.609	1.531	4.8	90	0.00	8.22
41	cis-1,2-Dichloroethene	1.367	1.299	5.0	92	0.00	8.01
42	Di-isopropyl Ether	0.872	0.872	0.0	92	0.00	8.21

6.9.13

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Continuing Calibration Summary

Page 2 of 3

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V6W105-CC76
Lab FileID: 6W03632.D

43	Ethyl Acetate	0.331	0.336	-1.5	91	0.00	8.25
44	Methyl Acrylate	1.948	1.875	3.7	91	0.00	8.24
45	Chloroform	2.159	2.049	5.1	94	0.00	8.34
46	2,4-Dimethylpentane	1.789	1.759	1.7	92	0.00	9.20
47	Tetrahydrofuran	0.464	0.476	-2.6	93	0.00	8.76
48	1,1,1-Trichloroethane	1.946	1.882	3.3	95	0.00	9.43
49	1,2-Dichloroethane	1.257	1.196	4.9	93	0.00	9.15
50	Benzene	3.378	3.145	6.9	93	0.00	9.96
51	Carbon Tetrachloride	2.130	2.057	3.4	95	0.00	10.13
52	Cyclohexane	1.550	1.507	2.8	91	0.00	10.27
53	2,3-Dimethylpentane	0.704	0.695	1.3	92	0.00	10.56
54 I	1,4-Difluorobenzene	1.000	1.000	0.0	104	0.00	10.39
55	2,2,4-Trimethylpentane	1.388	1.325	4.5	91	0.00	11.25
56	Heptane	0.298	0.290	2.7	91	0.00	11.59
57	Trichloroethene	0.391	0.375	4.1	92	0.00	11.22
58	1,2-Dichloropropane	0.330	0.315	4.5	91	0.00	10.93
59	Dibromomethane	0.399	0.353	11.5	92	0.00	10.91
60	Ethyl Acrylate	0.608	0.624	-2.6	91	-0.01	10.95
61	Methyl Methacrylate	0.302	0.314	-4.0	91	0.00	11.49
62	1,4-Dioxane	0.169	0.167	1.2	91	-0.01	11.22
63	Bromodichloromethane	0.622	0.608	2.3	93	0.00	11.18
64	cis-1,3-Dichloropropene	0.503	0.488	3.0	91	0.00	12.31
65	4-Methyl-2-pentanone	0.246	0.257	-4.5	91	-0.01	12.34
66	trans-1,3-Dichloropropene	0.454	0.444	2.2	91	0.00	12.98
67	Toluene	1.090	1.018	6.6	92	0.00	13.54
68	1,1,2-Trichloroethane	0.361	0.349	3.3	92	0.00	13.19
69	1,3-Dichloropropane	0.514	0.489	4.9	92	0.00	13.58
70	2-Hexanone	0.347	0.348	-0.3	90	-0.01	13.91
71	Ethyl Methacrylate	0.480	0.518	-7.9	91	-0.01	13.94
72	Dibromochloromethane	0.621	0.620	0.2	92	0.00	14.10
73	Tetrachloroethene	0.548	0.506	7.7	93	-0.01	15.05
74	1,2-Dibromoethane	0.568	0.546	3.9	91	0.00	14.42
75	Octane	0.619	0.600	3.1	90	0.00	14.89
76	1,1,1,2-Tetrachloroethane	0.446	0.424	4.9	92	0.00	15.98
77 I	Chlorobenzene-d5	1.000	1.000	0.0	90	0.00	15.93
78	Chlorobenzene	1.799	1.752	2.6	91	0.00	16.00
79	Ethylbenzene	2.780	2.867	-3.1	91	0.00	16.54
80	m,p-Xylene	2.120	2.209	-4.2	91	0.00	16.81
81	Styrene	1.410	1.622	-15.0	90	0.00	17.33
82	Nonane	1.359	1.392	-2.4	90	0.00	17.86
83	o-Xylene	2.126	2.240	-5.4	91	0.00	17.48
84	Bromoform	1.171	1.319	-12.6	91	0.00	16.89
85	1,1,2,2-Tetrachloroethane	1.497	1.558	-4.1	90	0.00	17.49
86	1,2,3-Trichloropropane	1.114	1.146	-2.9	91	-0.01	17.68
87	Isopropylbenzene	2.924	2.927	-0.1	92	0.00	18.39
88	Bromobenzene	0.962	0.953	0.9	90	0.00	18.50
89	2-Chlorotoluene	0.687	0.716	-4.2	91	0.00	19.11
90	n-Propylbenzene	0.780	0.824	-5.6	90	0.00	19.18
91 S	4-Bromofluorobenzene	1.289	1.343	-4.2	92	0.00	18.17
92	4-Ethyltoluene	2.687	2.876	-7.0	91	0.00	19.40
93	1,3,5-Trimethylbenzene	2.277	2.429	-6.7	92	0.00	19.53
94	alpha-Methylstyrene	0.978	1.157	-18.3	89	0.00	19.76
95	tert-Butylbenzene	0.552	0.566	-2.5	89	0.00	20.09
96	1,2,4-Trimethylbenzene	2.153	2.324	-7.9	90	0.00	20.11
97	1,3-Dichlorobenzene	1.433	1.430	0.2	86	0.00	20.30
98	Benzyl Chloride	1.503	1.707	-13.6	83	0.00	20.29
99	1,4-Dichlorobenzene	1.370	1.385	-1.1	86	0.00	20.40
100	sec-Butylbenzene	0.641	0.660	-3.0	90	0.00	20.48

6.9.13

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Continuing Calibration Summary

Page 3 of 3

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V6W105-CC76
Lab FileID: 6W03632.D

101	p-Isopropyltoluene	0.710	0.736	-3.7	90	0.00	20.71
102	1,2-Dichlorobenzene	1.344	1.338	0.4	88	0.00	20.86
103	n-Butylbenzene	0.569	0.627	-10.2	89	0.00	21.27
104	Hexachloroethane	0.810	0.806	0.5	87	0.00	21.74
105	1,2,4-Trichlorobenzene	0.593	0.584	1.5	82	0.00	23.05
106	Naphthalene	1.089	1.299	-19.3	84	0.00	23.18
107	Hexachlorobutadiene	0.778	0.797	-2.4	94	0.00	23.62
108 I	Bromochloromethane (A)	1.000	1.000	0.0	100	0.00	8.19
109	TVHC as equiv Pentane	4.369	4.068	6.9	90	0.00	5.62

(#) = Out of Range
6W02923.D 6W076.M

SPCC's out = 0 CCC's out = 0
Wed Dec 20 15:34:30 2017

Continuing Calibration Summary

Page 1 of 3

Job Number: JC56815
 Account: GESNYP Groundwater & Environmental Services
 Project: Orangeburg UB, Orangeburg, NY

Sample: V6W106-CC76
 Lab FileID: 6W03655.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\6W03655.D
 Acq On : 21 Dec 2017 10:55 am
 Sample : cc76-10
 Misc : MS23032,V6W106,,,,,1
 MS Integration Params: Rteint.p

Vial: 2
 Operator: DANAT
 Inst : GCMS6W
 Multiplr: 1.00

Method : C:\msdchem\1\methods\6w076.M (RTE Integrator)
 Title : TO-15 Full Scan Mode
 Last Update : Wed Nov 08 09:25:32 2017
 Response via : Single Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I Bromochloromethane	1.000	1.000	0.0	86	0.00	8.19
2	1,1,1-Trifluoroethane	1.562	1.466	6.1	78	0.00	3.64
3	Freon 152A	0.649	0.619	4.6	83	0.00	3.74
4	Chlorodifluoromethane	0.227	0.227	0.0	79	0.00	3.78
5	Propene	0.714	0.656	8.1	75	0.00	3.80
6	Chlorotrifluoroethene	1.592	1.601	-0.6	84	0.00	3.81
7	Dichlorodifluoromethane	2.499	2.635	-5.4	88	0.00	3.86
8	1-Chloro-1,1-difluoroetha	1.692	1.826	-7.9	90	0.00	3.97
9	Chloromethane	0.806	0.890	-10.4	91	0.00	3.99
10	Dichlorotetrafluoroethane	2.336	2.519	-7.8	91	0.00	4.07
11	Vinyl Chloride	0.929	1.008	-8.5	90	0.00	4.17
12	1,3-Butadiene	0.705	0.762	-8.1	89	0.00	4.28
13	n-Butane	0.165	0.186	-12.7	89	0.00	4.32
14	Bromomethane	0.855	0.939	-9.8	91	0.00	4.51
15	Chloroethane	0.485	0.524	-8.0	91	0.00	4.65
16	Dichlorofluoromethane	1.990	2.131	-7.1	91	0.00	4.72
17	Acetonitrile	0.766	0.747	2.5	82	0.00	4.93
18	Freon 123	2.589	2.610	-0.8	85	0.00	5.08
19	Freon 123A	1.383	1.406	-1.7	85	0.00	5.12
20	Bromoethene	0.938	0.991	-5.7	88	0.00	4.95
21	Trichlorofluoromethane	2.369	2.435	-2.8	88	0.00	5.31
22	Acetone	0.507	0.481	5.1	84	0.00	5.15
23	Pentane	0.238	0.246	-3.4	81	0.00	5.62
24	1,1-Dichloro-1-fluoroetha	2.056	2.009	2.3	84	0.00	5.41
25	Iodomethane	2.785	2.816	-1.1	86	0.00	5.82
26	Isopropyl Alcohol	2.011	1.835	8.8	79	0.00	5.36
27	1,1-Dichloroethene	1.520	1.472	3.2	81	0.00	5.89
28	Freon 113	2.160	2.149	0.5	85	0.00	6.25
29	Methylene Chloride	1.031	0.935	9.3	84	0.00	6.01
30	Carbon Disulfide	3.278	3.260	0.5	84	0.00	6.29
31	Ethanol	0.286	0.300	-4.9	92	0.00	4.73
32	Acrylonitrile	0.723	0.751	-3.9	81	0.00	5.57
33	3-Chloropropene	0.461	0.471	-2.2	82	0.00	6.12
34	trans-1,2-Dichloroethene	1.467	1.404	4.3	81	0.00	6.92
35	tert-Butyl Alcohol	1.942	1.965	-1.2	80	0.00	5.92
36	Methyl tert-Butyl Ether	2.710	2.696	0.5	82	0.00	7.17
37	Vinyl Acetate	2.419	2.232	7.7	75	0.00	7.28
38	1,1-Dichloroethane	1.821	1.779	2.3	83	0.00	7.12
39	2-Butanone	0.521	0.532	-2.1	82	0.00	7.53
40	Hexane	1.609	1.540	4.3	78	0.00	8.22
41	cis-1,2-Dichloroethene	1.367	1.320	3.4	81	0.00	8.01
42	Di-isopropyl Ether	0.872	0.898	-3.0	81	0.00	8.21

6.9.14

6

Continuing Calibration Summary

Page 2 of 3

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V6W106-CC76
Lab FileID: 6W03655.D

43	Ethyl Acetate	0.331	0.346	-4.5	81	0.00	8.25
44	Methyl Acrylate	1.948	1.883	3.3	78	0.00	8.24
45	Chloroform	2.159	2.114	2.1	83	0.00	8.34
46	2,4-Dimethylpentane	1.789	1.769	1.1	79	0.00	9.20
47	Tetrahydrofuran	0.464	0.485	-4.5	81	0.00	8.76
48	1,1,1-Trichloroethane	1.946	1.942	0.2	84	0.00	9.43
49	1,2-Dichloroethane	1.257	1.203	4.3	81	0.00	9.15
50	Benzene	3.378	3.237	4.2	82	0.00	9.96
51	Carbon Tetrachloride	2.130	2.123	0.3	84	0.00	10.13
52	Cyclohexane	1.550	1.522	1.8	79	0.00	10.27
53	2,3-Dimethylpentane	0.704	0.711	-1.0	81	0.00	10.56
54 I	1,4-Difluorobenzene	1.000	1.000	0.0	88	0.00	10.40
55	2,2,4-Trimethylpentane	1.388	1.363	1.8	79	0.00	11.25
56	Heptane	0.298	0.303	-1.7	81	0.00	11.59
57	Trichloroethene	0.391	0.397	-1.5	82	0.00	11.22
58	1,2-Dichloropropane	0.330	0.328	0.6	81	0.00	10.93
59	Dibromomethane	0.399	0.378	5.3	84	0.00	10.91
60	Ethyl Acrylate	0.608	0.633	-4.1	78	0.00	10.96
61	Methyl Methacrylate	0.302	0.326	-7.9	80	0.00	11.49
62	1,4-Dioxane	0.169	0.176	-4.1	81	-0.01	11.22
63	Bromodichloromethane	0.622	0.632	-1.6	82	0.00	11.18
64	cis-1,3-Dichloropropene	0.503	0.506	-0.6	80	0.00	12.31
65	4-Methyl-2-pentanone	0.246	0.264	-7.3	79	-0.01	12.34
66	trans-1,3-Dichloropropene	0.454	0.460	-1.3	80	0.00	12.98
67	Toluene	1.090	1.068	2.0	82	0.00	13.54
68	1,1,2-Trichloroethane	0.361	0.366	-1.4	82	0.00	13.19
69	1,3-Dichloropropane	0.514	0.513	0.2	82	0.00	13.58
70	2-Hexanone	0.347	0.356	-2.6	78	-0.01	13.91
71	Ethyl Methacrylate	0.480	0.536	-11.7	80	-0.01	13.94
72	Dibromochloromethane	0.621	0.658	-6.0	83	0.00	14.10
73	Tetrachloroethene	0.548	0.547	0.2	85	0.00	15.05
74	1,2-Dibromoethane	0.568	0.575	-1.2	81	0.00	14.42
75	Octane	0.619	0.599	3.2	76	0.00	14.89
76	1,1,1,2-Tetrachloroethane	0.446	0.452	-1.3	83	0.00	15.98
77 I	Chlorobenzene-d5	1.000	1.000	0.0	85	0.00	15.93
78	Chlorobenzene	1.799	1.674	6.9	82	0.00	16.00
79	Ethylbenzene	2.780	2.724	2.0	82	0.00	16.53
80	m,p-Xylene	2.120	2.098	1.0	82	0.00	16.81
81	Styrene	1.410	1.549	-9.9	81	0.00	17.33
82	Nonane	1.359	1.252	7.9	77	0.00	17.86
83	o-Xylene	2.126	2.137	-0.5	82	0.00	17.48
84	Bromoform	1.171	1.263	-7.9	82	0.00	16.89
85	1,1,2,2-Tetrachloroethane	1.497	1.484	0.9	81	0.00	17.49
86	1,2,3-Trichloropropane	1.114	1.082	2.9	82	-0.01	17.68
87	Isopropylbenzene	2.924	2.812	3.8	83	0.00	18.39
88	Bromobenzene	0.962	0.926	3.7	82	0.00	18.50
89	2-Chlorotoluene	0.687	0.692	-0.7	83	0.00	19.11
90	n-Propylbenzene	0.780	0.791	-1.4	82	0.00	19.18
91 S	4-Bromofluorobenzene	1.289	1.346	-4.4	87	0.00	18.17
92	4-Ethyltoluene	2.687	2.754	-2.5	82	0.00	19.40
93	1,3,5-Trimethylbenzene	2.277	2.331	-2.4	83	0.00	19.53
94	alpha-Methylstyrene	0.978	1.112	-13.7	81	0.00	19.76
95	tert-Butylbenzene	0.552	0.532	3.6	79	0.00	20.09
96	1,2,4-Trimethylbenzene	2.153	2.138	0.7	79	0.00	20.11
97	1,3-Dichlorobenzene	1.433	1.366	4.7	78	0.00	20.30
98	Benzyl Chloride	1.503	1.582	-5.3	73	0.00	20.29
99	1,4-Dichlorobenzene	1.370	1.332	2.8	78	0.00	20.39
100	sec-Butylbenzene	0.641	0.633	1.2	81	0.00	20.47

6.9.14
6

Continuing Calibration Summary

Page 3 of 3

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V6W106-CC76
Lab FileID: 6W03655.D

101	p-Isopropyltoluene	0.710	0.688	3.1	79	0.00	20.71
102	1,2-Dichlorobenzene	1.344	1.301	3.2	81	0.00	20.86
103	n-Butylbenzene	0.569	0.601	-5.6	81	0.00	21.27
104	Hexachloroethane	0.810	0.791	2.3	81	0.00	21.74
105	1,2,4-Trichlorobenzene	0.593	0.582	1.9	77	0.00	23.06
106	Naphthalene	1.089	1.294	-18.8	79	0.00	23.18
107	Hexachlorobutadiene	0.778	0.784	-0.8	87	0.00	23.62
108 I	Bromochloromethane (A)	1.000	1.000	0.0	86	0.00	8.19
109	TVHC as equiv Pentane	4.369	4.112	5.9	78	0.00	5.62

(#) = Out of Range
6W02923.D 6W076.M

SPCC's out = 0 CCC's out = 0
Thu Dec 21 15:21:45 2017

6.9.14

6

Continuing Calibration Summary

Page 1 of 3

Job Number: JC56815
 Account: GESNYP Groundwater & Environmental Services
 Project: Orangeburg UB, Orangeburg, NY

Sample: V6W107-CC76
 Lab FileID: 6W03682.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\6W03682.D
 Acq On : 22 Dec 2017 12:56 pm
 Sample : cc76-10
 Misc : MS23193,V6W107,,,,,1
 MS Integration Params: Rteint.p

Vial: 2
 Operator: DANAT
 Inst : GCMS6W
 Multiplr: 1.00

Method : C:\msdchem\1\methods\6w076.M (RTE Integrator)
 Title : TO-15 Full Scan Mode
 Last Update : Wed Nov 08 09:25:32 2017
 Response via : Single Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I Bromochloromethane	1.000	1.000	0.0	103	0.00	8.19
2	1,1,1-Trifluoroethane	1.562	2.110	-35.1#	134	0.00	3.64
3	Freon 152A	0.649	0.609	6.2	98	0.00	3.74
4	Chlorodifluoromethane	0.227	0.221	2.6	93	0.00	3.77
5	Propene	0.714	0.584	18.2	80	0.00	3.80
6	Chlorotrifluoroethene	1.592	1.614	-1.4	102	0.00	3.80
7	Dichlorodifluoromethane	2.499	2.820	-12.8	113	0.00	3.86
8	1-Chloro-1,1-difluoroetha	1.692	1.741	-2.9	103	0.00	3.97
9	Chloromethane	0.806	0.806	0.0	99	0.00	3.99
10	Dichlorotetrafluoroethane	2.336	2.468	-5.7	107	0.00	4.07
11	Vinyl Chloride	0.929	0.991	-6.7	106	0.00	4.17
12	1,3-Butadiene	0.705	0.708	-0.4	99	0.00	4.28
13	n-Butane	0.165	0.180	-9.1	103	0.00	4.32
14	Bromomethane	0.855	0.951	-11.2	111	0.00	4.51
15	Chloroethane	0.485	0.521	-7.4	109	0.00	4.64
16	Dichlorofluoromethane	1.990	2.133	-7.2	109	0.00	4.72
17	Acetonitrile	0.766	0.867	-13.2	115	0.00	4.93
18	Freon 123	2.589	2.963	-14.4	116	0.00	5.08
19	Freon 123A	1.383	1.596	-15.4	116	0.00	5.12
20	Bromoethene	0.938	1.156	-23.2	123	0.00	4.94
21	Trichlorofluoromethane	2.369	2.804	-18.4	122	0.00	5.31
22	Acetone	0.507	0.552	-8.9	116	0.00	5.15
23	Pentane	0.238	0.269	-13.0	106	0.00	5.62
24	1,1-Dichloro-1-fluoroetha	2.056	2.283	-11.0	114	0.00	5.41
25	Iodomethane	2.785	3.216	-15.5	119	0.00	5.82
26	Isopropyl Alcohol	2.011	2.154	-7.1	111	0.00	5.36
27	1,1-Dichloroethene	1.520	1.641	-8.0	109	0.00	5.89
28	Freon 113	2.160	2.301	-6.5	109	0.00	6.25
29	Methylene Chloride	1.031	1.003	2.7	108	0.00	6.01
30	Carbon Disulfide	3.278	3.491	-6.5	108	0.00	6.29
31	Ethanol	0.286	0.269	5.9	100	0.00	4.73
32	Acrylonitrile	0.723	0.830	-14.8	107	0.00	5.57
33	3-Chloropropene	0.461	0.530	-15.0	111	0.00	6.12
34	trans-1,2-Dichloroethene	1.467	1.548	-5.5	107	0.00	6.92
35	tert-Butyl Alcohol	1.942	2.136	-10.0	104	0.00	5.92
36	Methyl tert-Butyl Ether	2.710	2.957	-9.1	108	0.00	7.17
37	Vinyl Acetate	2.419	2.384	1.4	96	0.00	7.28
38	1,1-Dichloroethane	1.821	1.931	-6.0	108	0.00	7.12
39	2-Butanone	0.521	0.575	-10.4	107	0.00	7.53
40	Hexane	1.609	1.588	1.3	96	0.00	8.22
41	cis-1,2-Dichloroethene	1.367	1.439	-5.3	106	0.00	8.01
42	Di-isopropyl Ether	0.872	0.960	-10.1	104	0.00	8.21

Continuing Calibration Summary

Page 2 of 3

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V6W107-CC76
Lab FileID: 6W03682.D

43	Ethyl Acetate	0.331	0.355	-7.3	99	0.00	8.25
44	Methyl Acrylate	1.948	1.891	2.9	94	0.00	8.24
45	Chloroform	2.159	2.194	-1.6	104	0.00	8.34
46	2,4-Dimethylpentane	1.789	1.921	-7.4	103	0.00	9.20
47	Tetrahydrofuran	0.464	0.533	-14.9	107	0.00	8.76
48	1,1,1-Trichloroethane	1.946	2.034	-4.5	106	0.00	9.43
49	1,2-Dichloroethane	1.257	1.274	-1.4	102	0.00	9.15
50	Benzene	3.378	3.462	-2.5	106	0.00	9.96
51	Carbon Tetrachloride	2.130	2.293	-7.7	109	0.00	10.13
52	Cyclohexane	1.550	1.669	-7.7	104	0.00	10.27
53	2,3-Dimethylpentane	0.704	0.780	-10.8	107	0.00	10.56
54 I	1,4-Difluorobenzene	1.000	1.000	0.0	110	0.00	10.40
55	2,2,4-Trimethylpentane	1.388	1.369	1.4	99	0.00	11.25
56	Heptane	0.298	0.313	-5.0	104	0.00	11.59
57	Trichloroethene	0.391	0.393	-0.5	101	0.00	11.22
58	1,2-Dichloropropane	0.330	0.329	0.3	101	0.00	10.94
59	Dibromomethane	0.399	0.378	5.3	105	0.00	10.91
60	Ethyl Acrylate	0.608	0.626	-3.0	96	0.00	10.96
61	Methyl Methacrylate	0.302	0.332	-9.9	102	0.00	11.49
62	1,4-Dioxane	0.169	0.176	-4.1	101	-0.01	11.22
63	Bromodichloromethane	0.622	0.630	-1.3	101	0.00	11.18
64	cis-1,3-Dichloropropene	0.503	0.530	-5.4	105	0.00	12.31
65	4-Methyl-2-pentanone	0.246	0.264	-7.3	99	-0.01	12.34
66	trans-1,3-Dichloropropene	0.454	0.481	-5.9	104	0.00	12.98
67	Toluene	1.090	1.080	0.9	103	0.00	13.54
68	1,1,2-Trichloroethane	0.361	0.369	-2.2	103	0.00	13.19
69	1,3-Dichloropropane	0.514	0.517	-0.6	103	0.00	13.59
70	2-Hexanone	0.347	0.353	-1.7	96	-0.01	13.91
71	Ethyl Methacrylate	0.480	0.523	-9.0	97	-0.01	13.94
72	Dibromochloromethane	0.621	0.657	-5.8	103	0.00	14.10
73	Tetrachloroethene	0.548	0.534	2.6	104	0.00	15.05
74	1,2-Dibromoethane	0.568	0.572	-0.7	101	0.00	14.42
75	Octane	0.619	0.573	7.4	91	0.00	14.89
76	1,1,1,2-Tetrachloroethane	0.446	0.450	-0.9	103	0.00	15.98
77 I	Chlorobenzene-d5	1.000	1.000	0.0	97	0.00	15.93
78	Chlorobenzene	1.799	1.825	-1.4	102	0.00	16.00
79	Ethylbenzene	2.780	2.911	-4.7	100	0.00	16.54
80	m,p-Xylene	2.120	2.196	-3.6	98	0.00	16.81
81	Styrene	1.410	1.660	-17.7	99	0.00	17.33
82	Nonane	1.359	1.209	11.0	84	0.00	17.87
83	o-Xylene	2.126	2.160	-1.6	94	0.00	17.48
84	Bromoform	1.171	1.310	-11.9	97	0.00	16.89
85	1,1,2,2-Tetrachloroethane	1.497	1.448	3.3	90	0.00	17.49
86	1,2,3-Trichloropropane	1.114	1.124	-0.9	97	-0.01	17.68
87	Isopropylbenzene	2.924	2.921	0.1	99	0.00	18.39
88	Bromobenzene	0.962	0.945	1.8	96	0.00	18.50
89	2-Chlorotoluene	0.687	0.716	-4.2	98	0.00	19.11
90	n-Propylbenzene	0.780	0.809	-3.7	96	0.00	19.18
91 S	4-Bromofluorobenzene	1.289	1.284	0.4	95	0.00	18.17
92	4-Ethyltoluene	2.687	2.758	-2.6	94	0.00	19.40
93	1,3,5-Trimethylbenzene	2.277	2.316	-1.7	94	0.00	19.53
94	alpha-Methylstyrene	0.978	1.112	-13.7	92	0.00	19.76
95	tert-Butylbenzene	0.552	0.537	2.7	90	0.00	20.09
96	1,2,4-Trimethylbenzene	2.153	2.120	1.5	89	0.00	20.11
97	1,3-Dichlorobenzene	1.433	1.331	7.1	86	0.00	20.30
98	Benzyl Chloride	1.503	1.562	-3.9	82	0.00	20.29
99	1,4-Dichlorobenzene	1.370	1.303	4.9	87	0.00	20.40
100	sec-Butylbenzene	0.641	0.634	1.1	93	0.00	20.48

6.9.15

6

Continuing Calibration Summary

Page 3 of 3

Job Number: JC56815
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V6W107-CC76
Lab FileID: 6W03682.D

101	p-Isopropyltoluene	0.710	0.694	2.3	91	0.00	20.71
102	1,2-Dichlorobenzene	1.344	1.250	7.0	89	0.00	20.86
103	n-Butylbenzene	0.569	0.596	-4.7	92	0.00	21.27
104	Hexachloroethane	0.810	0.764	5.7	89	0.00	21.74
105	1,2,4-Trichlorobenzene	0.593	0.542	8.6	82	0.00	23.06
106	Naphthalene	1.089	1.339	-23.0	93	0.00	23.18
107	Hexachlorobutadiene	0.778	0.672	13.6	85	0.00	23.62
108 I	Bromochloromethane (A)	1.000	1.000	0.0	103	0.00	8.19
109	TVHC as equiv Pentane	4.369	4.346	0.5	100	0.00	5.62

(#) = Out of Range
6W02923.D 6W076.M

SPCC's out = 0 CCC's out = 0
Fri Dec 22 16:45:05 2017

6.9.15

6



MS Volatiles

Raw Data

7

Data Path : C:\msdchem\1\data\
 Data File : 6W03687.D
 Acq On : 22 Dec 2017 5:36 pm
 Operator : DANAT
 Sample : jc56815-1
 Misc : MS22955,V6W107,800,,,1
 ALS Vial : 4 Sample Multiplier: 1

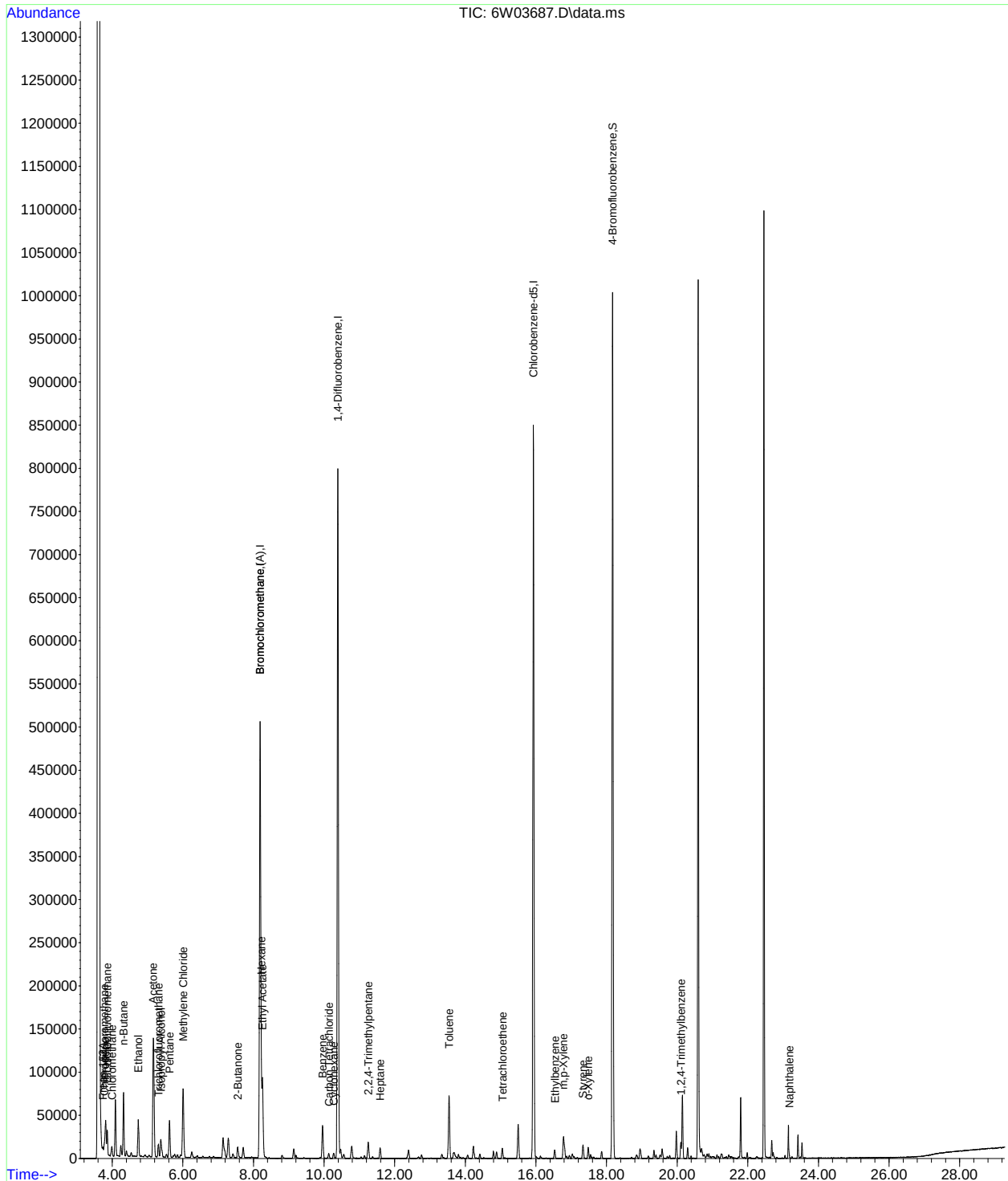
Quant Time: Dec 23 11:05:01 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

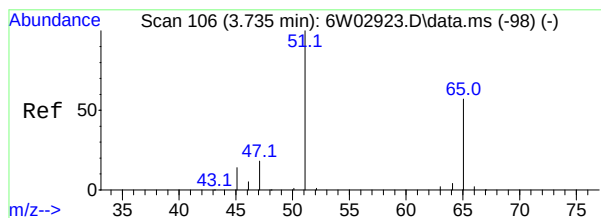
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.189	130	226760	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.391	114	832831	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.928	82	368654	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.189	130	226760	10.00	ppb(v	0.00
System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.173	95	488440	10.28	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	102.80%
Target Compounds						
					Qvalue	
3) Freon 152A	3.735	65	3256	0.22	ppb(v	93
4) Chlorodifluoromethane	3.778	67	2306	0.45	ppb(v	91
5) Propene	3.803	41	16607	1.03	ppb(v	94
7) Dichlorodifluoromethane	3.858	85	29819	0.53	ppb(v	99
9) Chloromethane	3.992	50	12525	0.69	ppb(v	99
13) n-Butane	4.323	58	10064	2.69	ppb(v#	93
21) Trichlorofluoromethane	5.308	101	15469	0.29	ppb(v	99
22) Acetone	5.155	58	51539	4.48	ppb(v	84
23) Pentane	5.620	57	5269	0.98	ppb(v	96
26) Isopropyl Alcohol	5.381	45	32538	0.71	ppb(v	97
29) Methylene Chloride	6.011	84	46048	1.97	ppb(v	99
31) Ethanol	4.739	45	54067	8.34	ppb(v	99
39) 2-Butanone	7.553	72	5259	0.45	ppb(v	93
40) Hexane	8.220	57	46486	1.27	ppb(v#	53
43) Ethyl Acetate	8.256	61	18862	2.51	ppb(v	94
50) Benzene	9.957	78	36861	0.48	ppb(v	98
51) Carbon Tetrachloride	10.135	117	4437m	0.09	ppb(v	
52) Cyclohexane	10.269	56	3624	0.10	ppb(v	95
55) 2,2,4-Trimethylpentane	11.248	57	20741	0.18	ppb(v	91
56) Heptane	11.591	71	3582	0.14	ppb(v	97
67) Toluene	13.536	91	70123	0.77	ppb(v	100
73) Tetrachloroethene	15.053	166	4456	0.10	ppb(v	96
79) Ethylbenzene	16.540	91	11354	0.11	ppb(v	97
80) m,p-Xylene	16.778	91	29619	0.38	ppb(v	94
81) Styrene	17.329	104	6743	0.13	ppb(v	96
83) o-Xylene	17.476	91	11548	0.15	ppb(v	97
96) 1,2,4-Trimethylbenzene	20.106	105	12555	0.16	ppb(v#	66
106) Naphthalene	23.177	128	3951	0.10	ppb(v	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

```
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Data File : 6W03687.D  
Acq On : 22 Dec 2017 5:36 pm  
Operator : DANAT  
Sample : jc56815-1  
Misc : MS22955,V6W107,800,,,,1  
ALS Vial : 4 Sample Multiplier: 1
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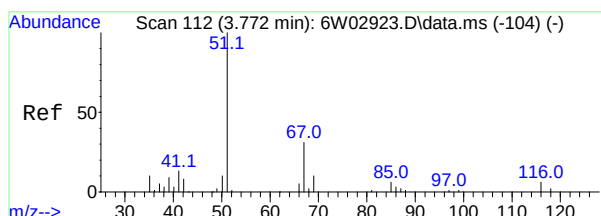
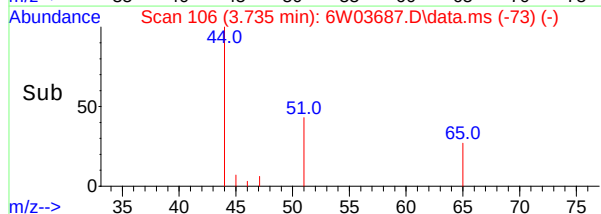
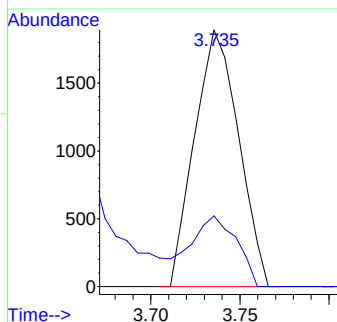
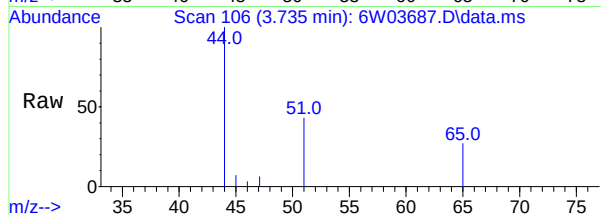
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Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration





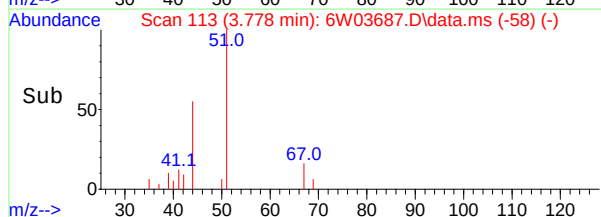
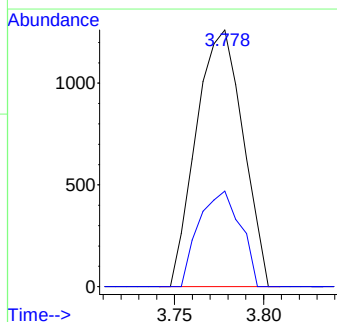
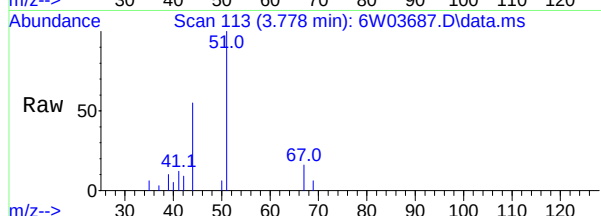
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Freon 152A
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Delta R.T. 0.000 min
Lab File: 6W03687.D
Acq: 22 Dec 2017 5:36 pm

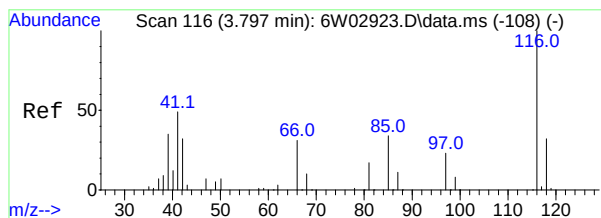
Tgt Ion: 65 Resp: 3256
Ion Ratio Lower Upper
65 100
45 27.6 16.9 31.5



#4
Chlorodifluoromethane
Concen: 0.45 ppb(v)
RT: 3.778 min Scan# 113
Delta R.T. 0.006 min
Lab File: 6W03687.D
Acq: 22 Dec 2017 5:36 pm

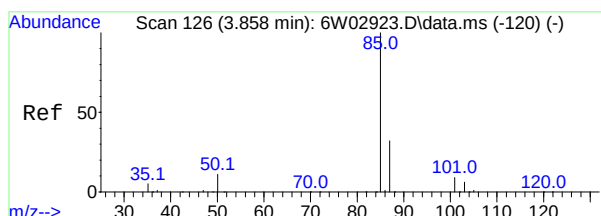
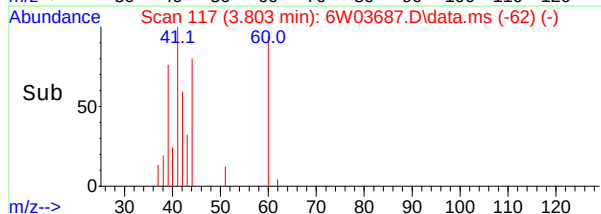
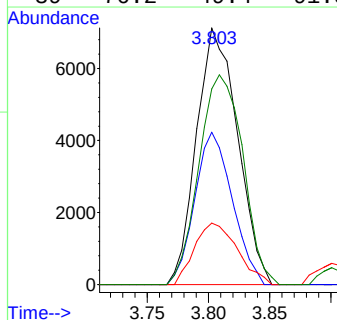
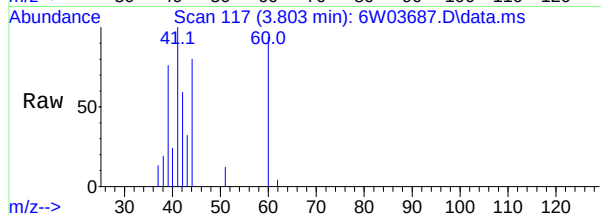
Tgt Ion: 67 Resp: 2306
Ion Ratio Lower Upper
67 100
69 37.2 22.7 42.1





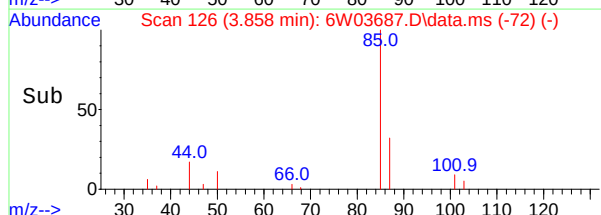
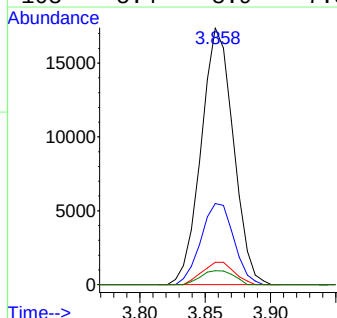
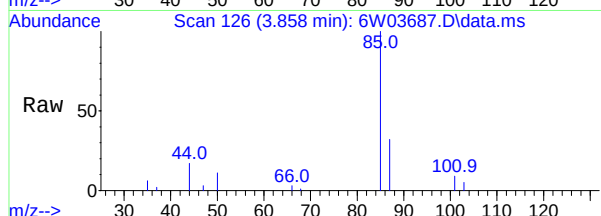
#5
Propene
Concen: 1.03 ppb(v)
RT: 3.803 min Scan# 117
Delta R.T. 0.006 min
Lab File: 6W03687.D
Acq: 22 Dec 2017 5:36 pm

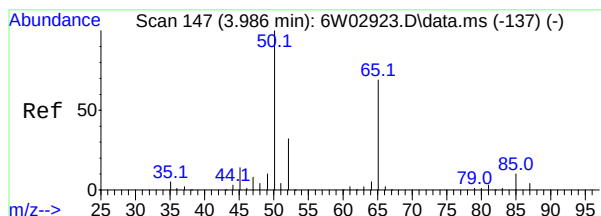
Tgt Ion: 41 Resp: 16607
Ion Ratio Lower Upper
41 100
42 59.4 45.4 84.4
40 23.9 17.4 32.2
39 76.2 49.4 91.8



#7
Dichlorodifluoromethane
Concen: 0.53 ppb(v)
RT: 3.858 min Scan# 126
Delta R.T. 0.000 min
Lab File: 6W03687.D
Acq: 22 Dec 2017 5:36 pm

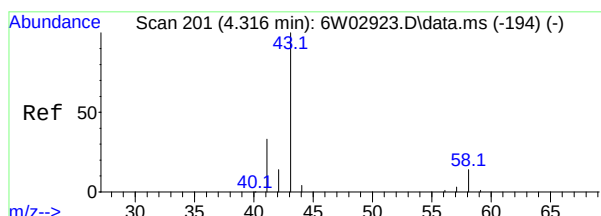
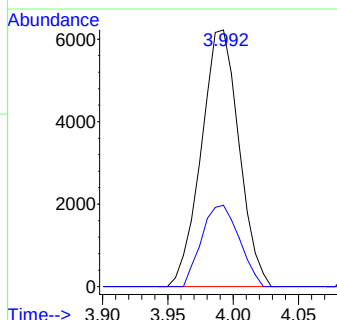
Tgt Ion: 85 Resp: 29819
Ion Ratio Lower Upper
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101 8.7 5.9 11.1
103 5.4 3.9 7.3





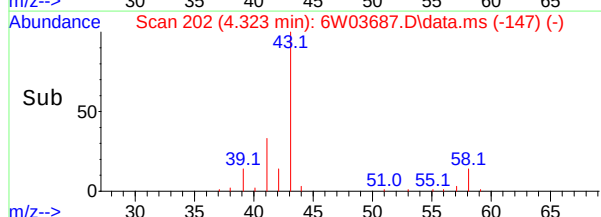
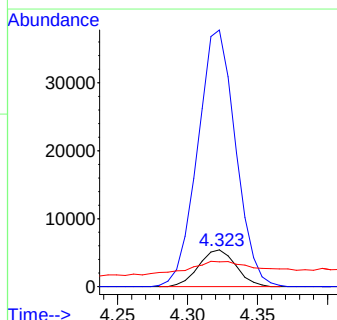
#9
Chloromethane
Concen: 0.69 ppb(v)
RT: 3.992 min Scan# 148
Delta R.T. 0.006 min
Lab File: 6W03687.D
Acq: 22 Dec 2017 5:36 pm

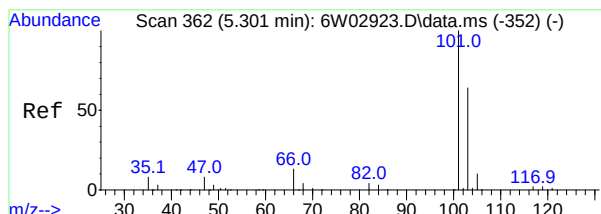
Tgt Ion: 50 Resp: 12525
Ion Ratio Lower Upper
50 100
52 31.7 22.7 42.1



#13
n-Butane
Concen: 2.69 ppb(v)
RT: 4.323 min Scan# 202
Delta R.T. 0.006 min
Lab File: 6W03687.D
Acq: 22 Dec 2017 5:36 pm

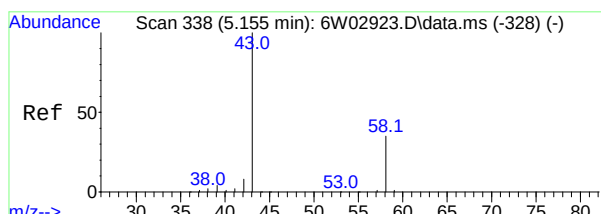
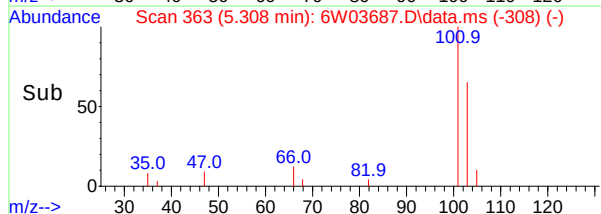
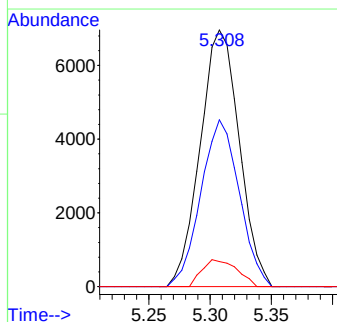
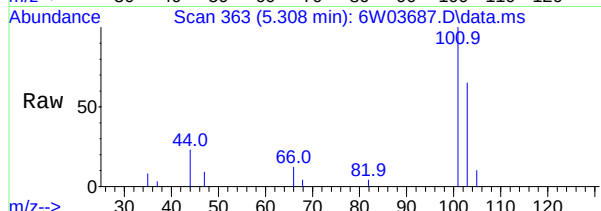
Tgt Ion: 58 Resp: 10064
Ion Ratio Lower Upper
58 100
43 700.2 499.8 928.2
44 67.7 21.1 39.1#





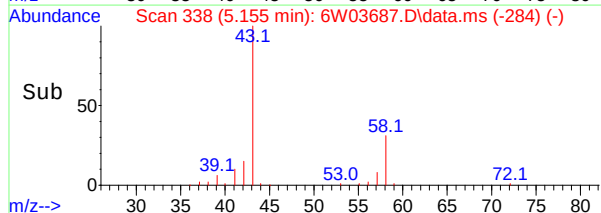
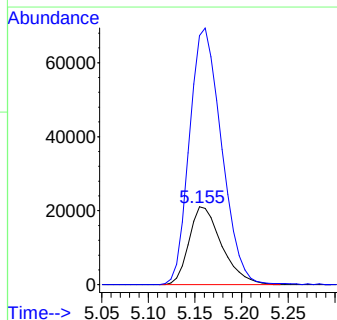
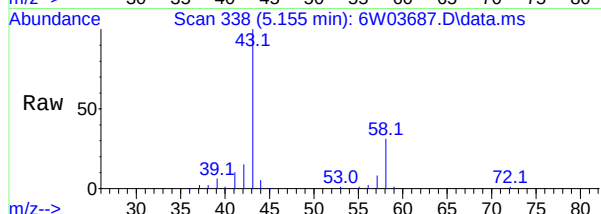
#21
Trichlorofluoromethane
Concen: 0.29 ppb(v)
RT: 5.308 min Scan# 363
Delta R.T. 0.006 min
Lab File: 6W03687.D
Acq: 22 Dec 2017 5:36 pm

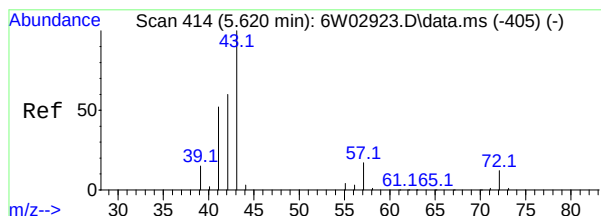
Tgt Ion: 101 Resp: 15469
Ion Ratio Lower Upper
101 100
103 65.0 45.1 83.9
105 9.8 7.3 13.5



#22
Acetone
Concen: 4.48 ppb(v)
RT: 5.155 min Scan# 338
Delta R.T. 0.000 min
Lab File: 6W03687.D
Acq: 22 Dec 2017 5:36 pm

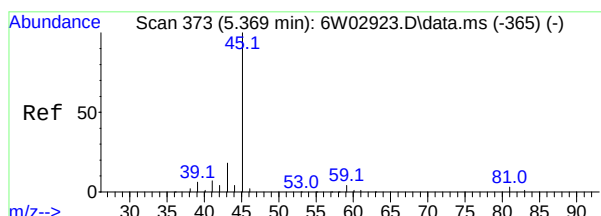
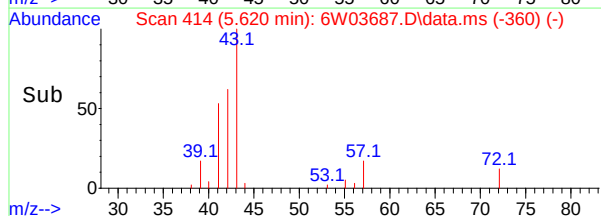
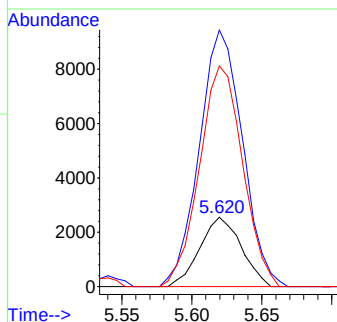
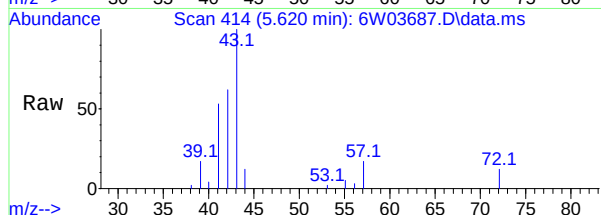
Tgt Ion: 58 Resp: 51539
Ion Ratio Lower Upper
58 100
43 320.0 202.4 375.8





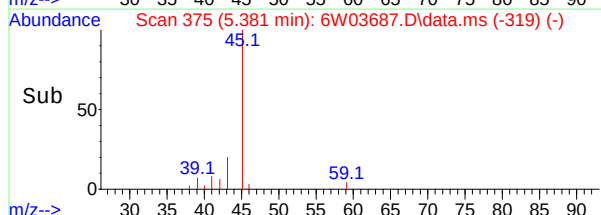
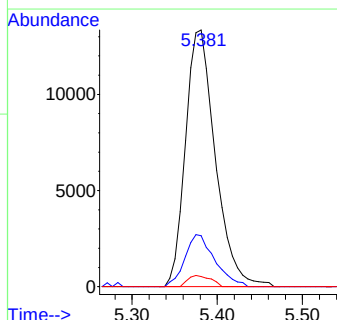
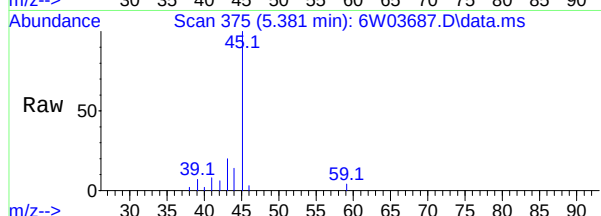
#23
Pentane
Concen: 0.98 ppb(v)
RT: 5.620 min Scan# 414
Delta R.T. 0.000 min
Lab File: 6W03687.D
Acq: 22 Dec 2017 5:36 pm

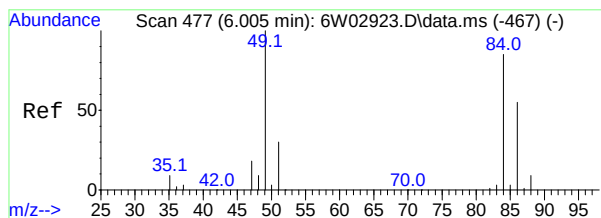
Tgt Ion: 57 Resp: 5269
Ion Ratio Lower Upper
57 100
42 370.4 252.4 468.8
41 318.4 218.7 406.1



#26
Isopropyl Alcohol
Concen: 0.71 ppb(v)
RT: 5.381 min Scan# 375
Delta R.T. 0.012 min
Lab File: 6W03687.D
Acq: 22 Dec 2017 5:36 pm

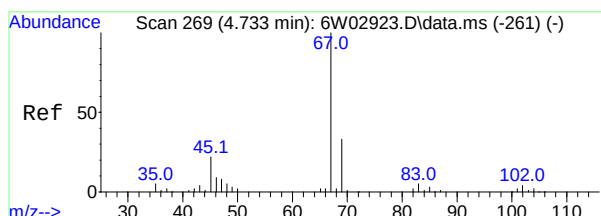
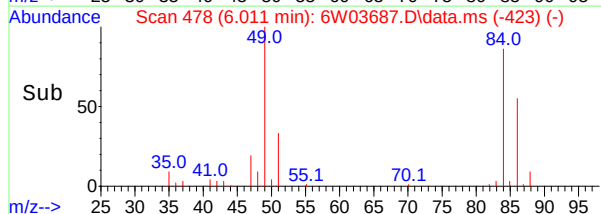
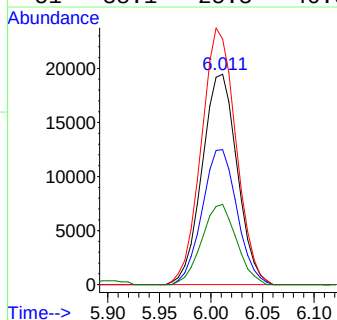
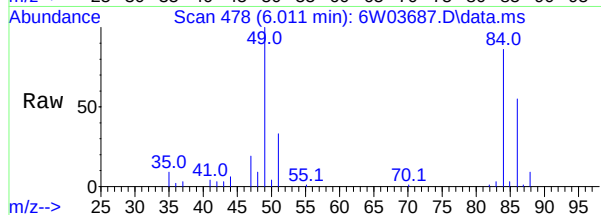
Tgt Ion: 45 Resp: 32538
Ion Ratio Lower Upper
45 100
43 19.9 12.8 23.8
59 4.0 3.0 5.6





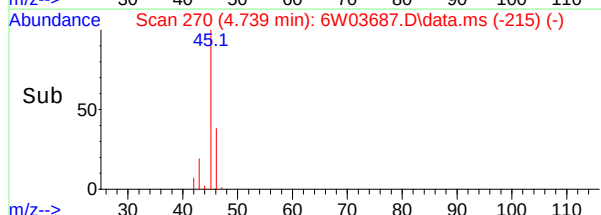
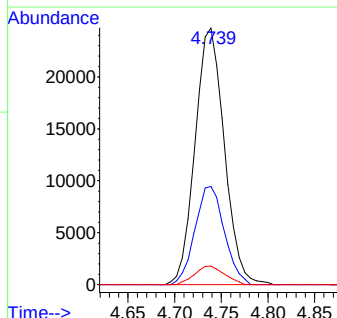
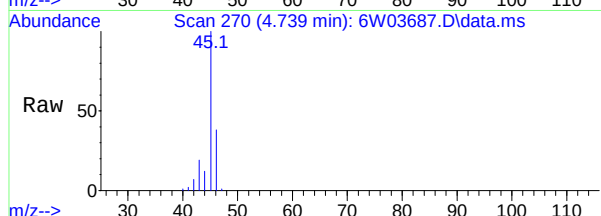
#29
Methylene Chloride
Concen: 1.97 ppb(v)
RT: 6.011 min Scan# 478
Delta R.T. 0.006 min
Lab File: 6W03687.D
Acq: 22 Dec 2017 5:36 pm

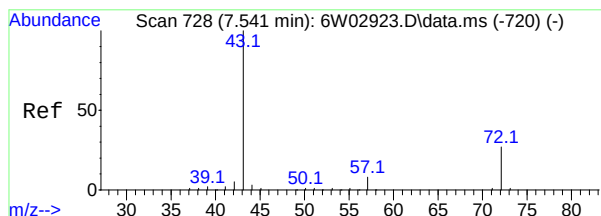
Tgt Ion: 84 Resp: 46048
Ion Ratio Lower Upper
84 100
86 64.2 44.8 83.2
49 116.7 82.1 152.5
51 38.1 25.3 46.9



#31
Ethanol
Concen: 8.34 ppb(v)
RT: 4.739 min Scan# 270
Delta R.T. 0.006 min
Lab File: 6W03687.D
Acq: 22 Dec 2017 5:36 pm

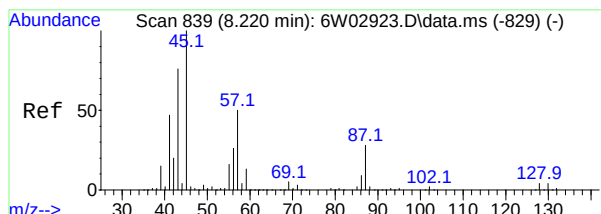
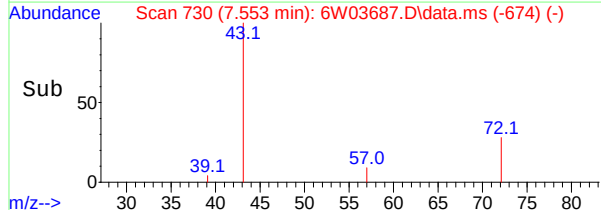
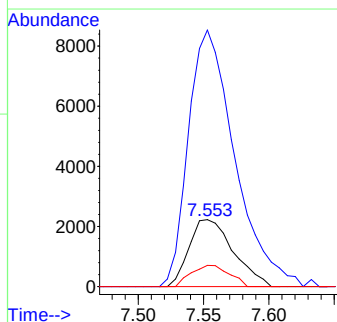
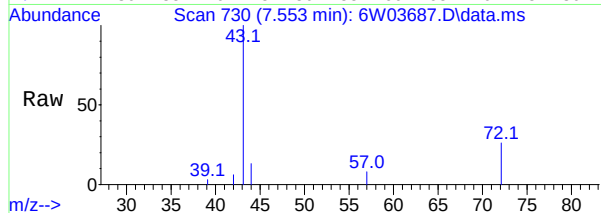
Tgt Ion: 45 Resp: 54067
Ion Ratio Lower Upper
45 100
46 38.3 27.2 50.4
42 7.2 5.6 10.4





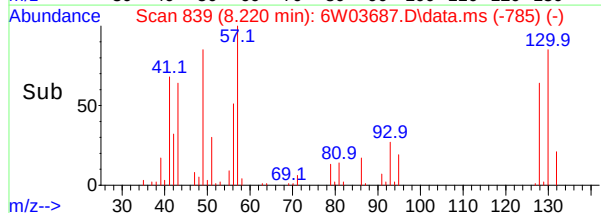
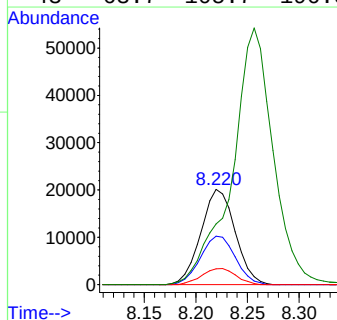
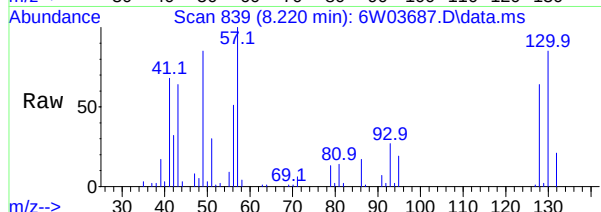
#39
2-Butanone
Concen: 0.45 ppb(v)
RT: 7.553 min Scan# 730
Delta R.T. 0.012 min
Lab File: 6W03687.D
Acq: 22 Dec 2017 5:36 pm

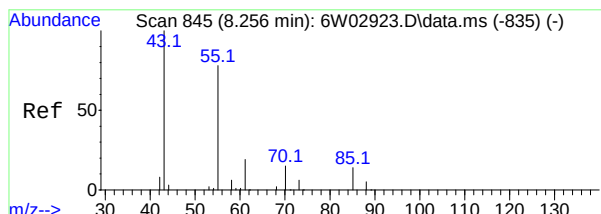
Tgt Ion: 72 Resp: 5259
Ion Ratio Lower Upper
72 100
43 383.1 257.4 478.0
57 31.7 21.0 39.0



#40
Hexane
Concen: 1.27 ppb(v)
RT: 8.220 min Scan# 839
Delta R.T. 0.000 min
Lab File: 6W03687.D
Acq: 22 Dec 2017 5:36 pm

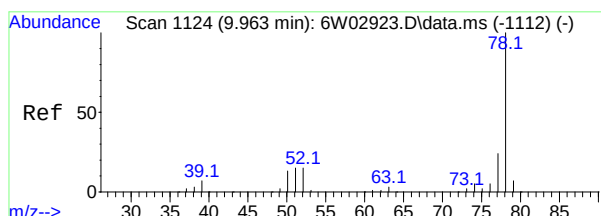
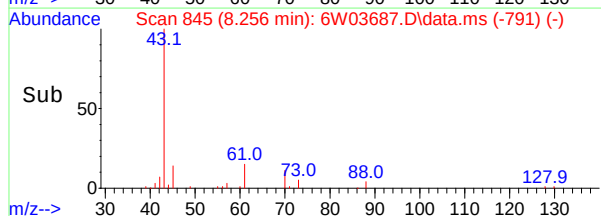
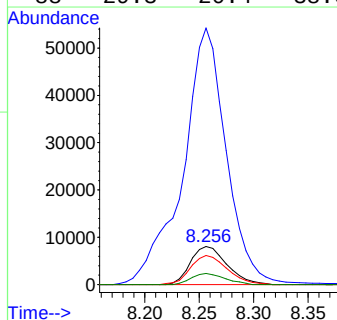
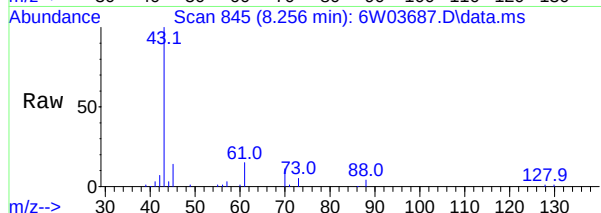
Tgt Ion: 57 Resp: 46486
Ion Ratio Lower Upper
57 100
56 50.9 36.0 67.0
86 16.5 12.1 22.5
43 63.7 105.7 196.3#





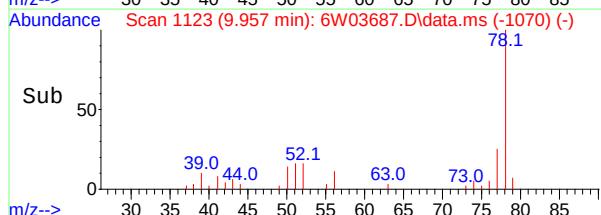
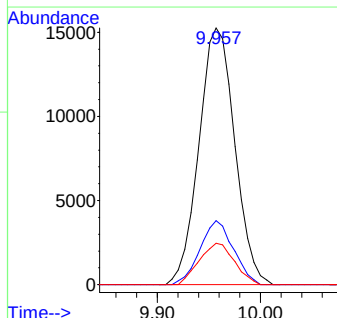
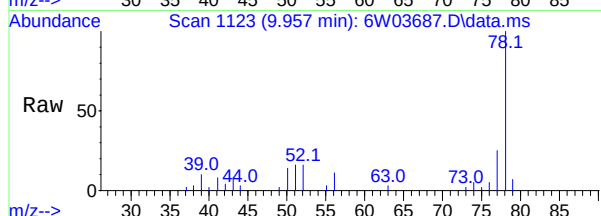
#43
Ethyl Acetate
Concen: 2.51 ppb(v)
RT: 8.256 min Scan# 845
Delta R.T. 0.000 min
Lab File: 6W03687.D
Acq: 22 Dec 2017 5:36 pm

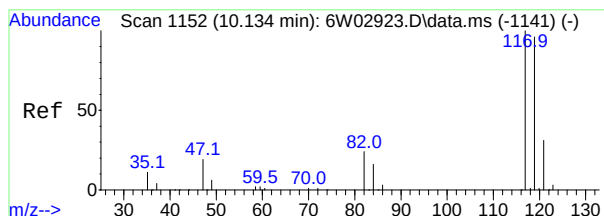
Tgt Ion: 61 Resp: 18862
Ion Ratio Lower Upper
61 100
43 673.3 488.5 907.1
70 76.3 54.9 101.9
88 29.3 20.4 38.0



#50
Benzene
Concen: 0.48 ppb(v)
RT: 9.957 min Scan# 1123
Delta R.T. -0.006 min
Lab File: 6W03687.D
Acq: 22 Dec 2017 5:36 pm

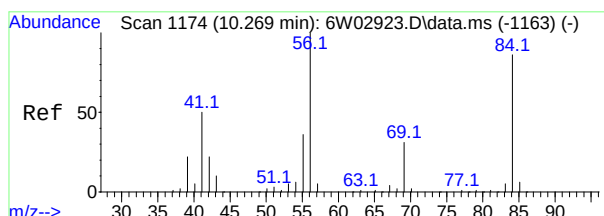
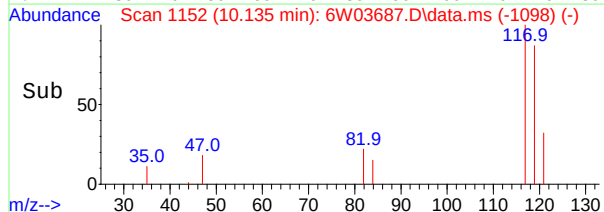
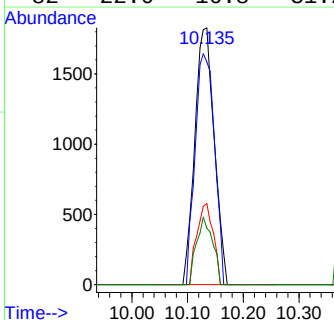
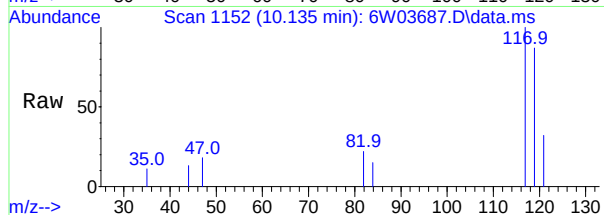
Tgt Ion: 78 Resp: 36861
Ion Ratio Lower Upper
78 100
77 24.9 16.6 30.8
51 16.1 10.6 19.6





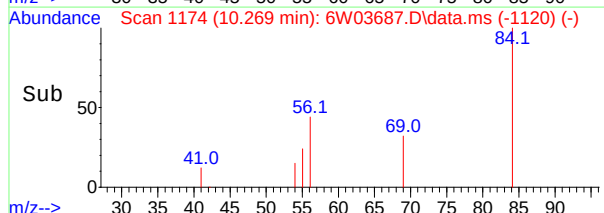
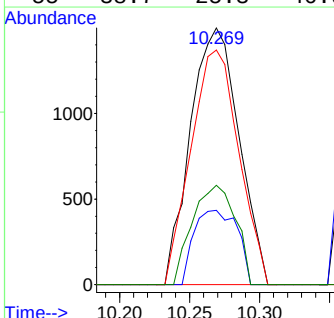
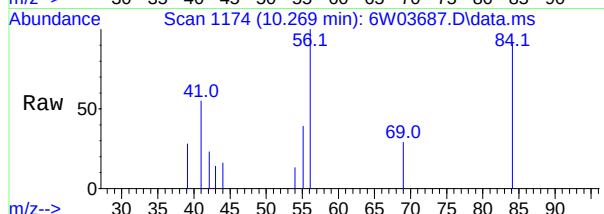
#51
Carbon Tetrachloride
Concen: 0.09 ppb(v) m
RT: 10.135 min Scan# 1152
Delta R.T. 0.000 min
Lab File: 6W03687.D
Acq: 22 Dec 2017 5:36 pm

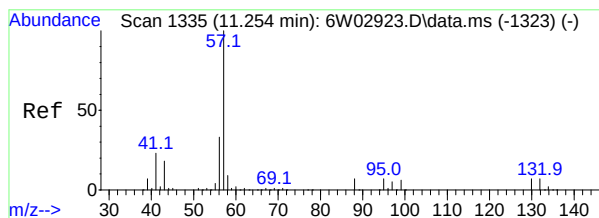
Tgt Ion:	117	Resp:	4437
Ion Ratio	Lower	Upper	
117	100		
119	86.7	67.4	125.2
121	31.6	21.9	40.7
82	22.0	16.8	31.2



#52
Cyclohexane
Concen: 0.10 ppb(v)
RT: 10.269 min Scan# 1174
Delta R.T. 0.000 min
Lab File: 6W03687.D
Acq: 22 Dec 2017 5:36 pm

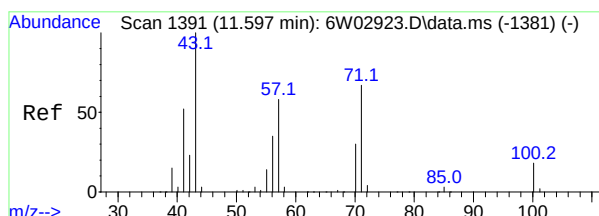
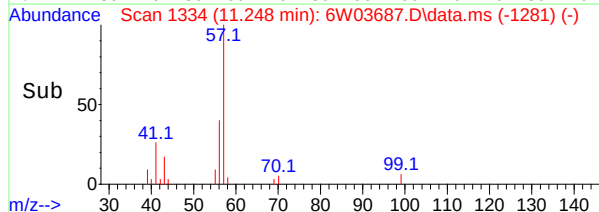
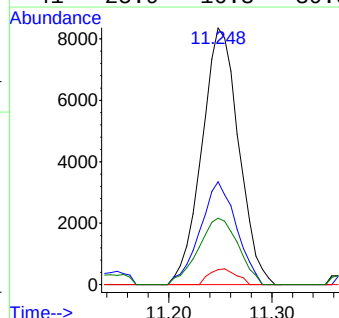
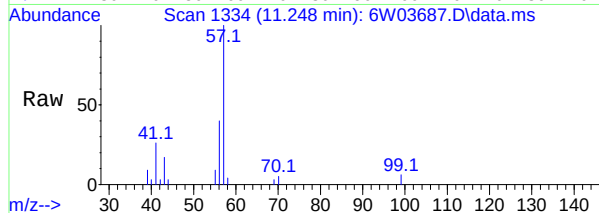
Tgt Ion:	56	Resp:	3624
Ion Ratio	Lower	Upper	
56	100		
69	28.9	22.0	40.8
84	91.3	60.5	112.3
55	38.7	25.3	46.9





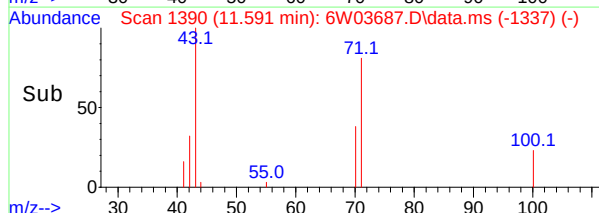
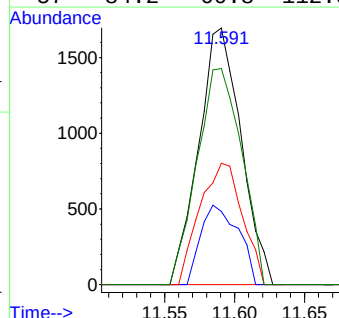
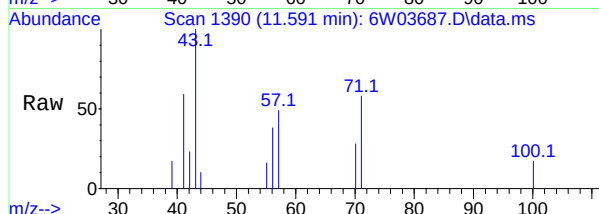
#55
2,2,4-Trimethylpentane
Concen: 0.18 ppb(v)
RT: 11.248 min Scan# 1334
Delta R.T. -0.006 min
Lab File: 6W03687.D
Acq: 22 Dec 2017 5:36 pm

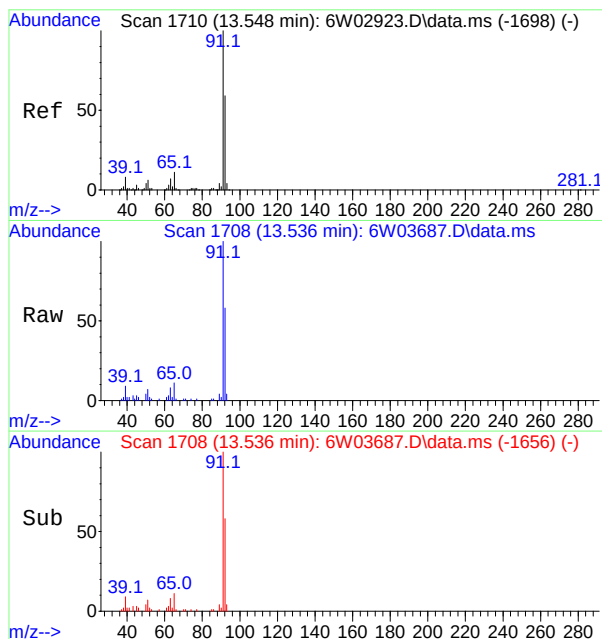
Tgt Ion:	57	Resp:	20741
Ion Ratio	Lower	Upper	
57	100		
56	40.1	23.0	42.8
99	5.8	4.5	8.3
41	25.9	16.3	30.3



#56
Heptane
Concen: 0.14 ppb(v)
RT: 11.591 min Scan# 1390
Delta R.T. -0.006 min
Lab File: 6W03687.D
Acq: 22 Dec 2017 5:36 pm

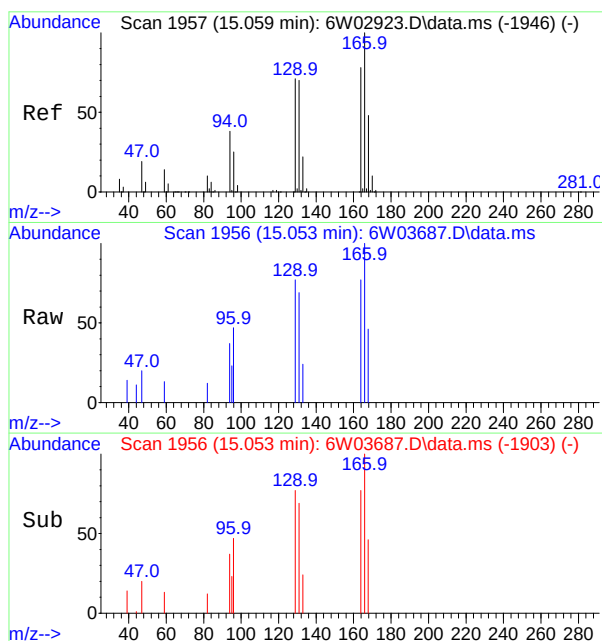
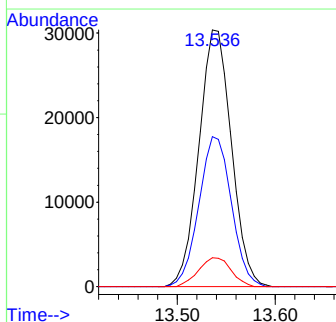
Tgt Ion:	71	Resp:	3582
Ion Ratio	Lower	Upper	
71	100		
100	28.5	20.9	38.7
70	47.2	32.1	59.5
57	84.2	60.8	112.8





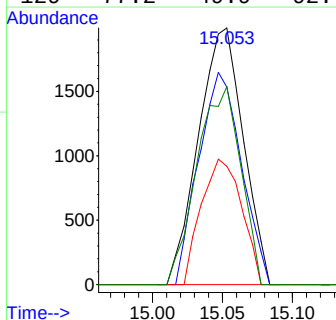
#67
Toluene
Concen: 0.77 ppb(v)
RT: 13.536 min Scan# 1708
Delta R.T. -0.012 min
Lab File: 6W03687.D
Acq: 22 Dec 2017 5:36 pm

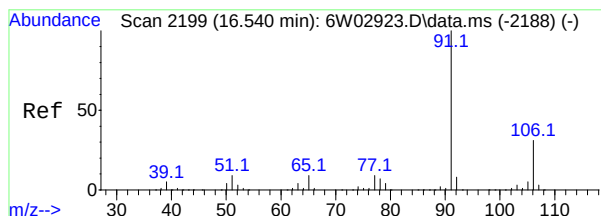
Tgt Ion: 91 Resp: 70123
Ion Ratio Lower Upper
91 100
92 58.4 41.0 76.2
65 11.3 7.8 14.4



#73
Tetrachloroethene
Concen: 0.10 ppb(v)
RT: 15.053 min Scan# 1956
Delta R.T. -0.006 min
Lab File: 6W03687.D
Acq: 22 Dec 2017 5:36 pm

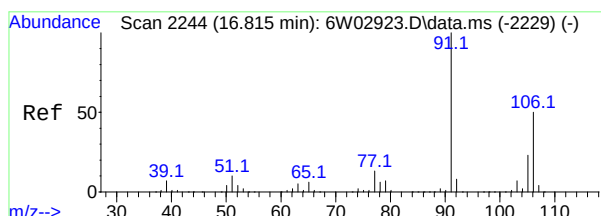
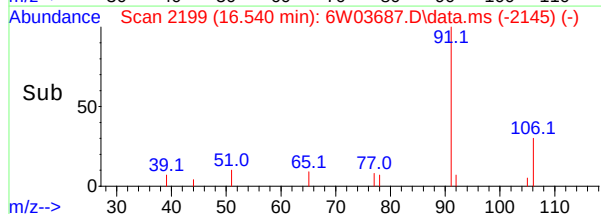
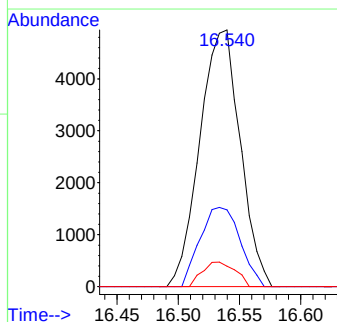
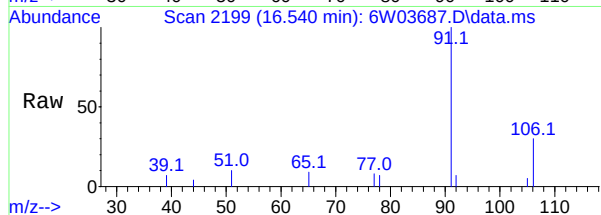
Tgt Ion: 166 Resp: 4456
Ion Ratio Lower Upper
166 100
164 76.9 54.5 101.1
168 46.1 33.9 62.9
129 77.2 49.9 92.7





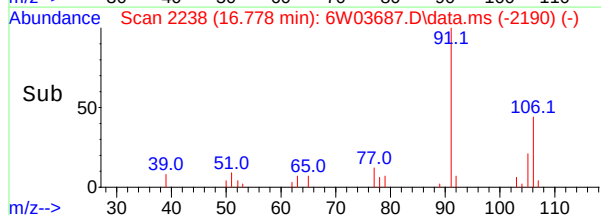
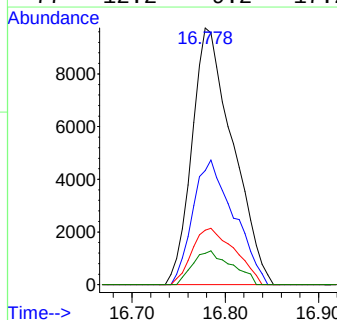
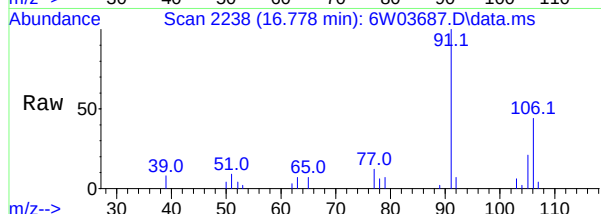
#79
Ethylbenzene
Concen: 0.11 ppb(v)
RT: 16.540 min Scan# 2199
Delta R.T. 0.000 min
Lab File: 6W03687.D
Acq: 22 Dec 2017 5:36 pm

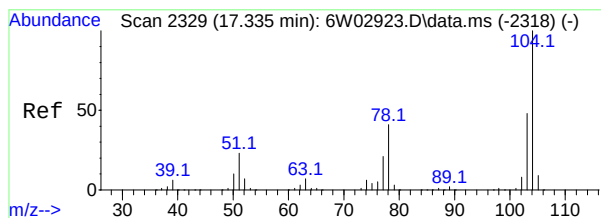
Tgt Ion: 91 Resp: 11354
Ion Ratio Lower Upper
91 100
106 29.9 22.0 41.0
77 8.0 6.0 11.2



#80
m,p-Xylene
Concen: 0.38 ppb(v)
RT: 16.778 min Scan# 2238
Delta R.T. -0.037 min
Lab File: 6W03687.D
Acq: 22 Dec 2017 5:36 pm

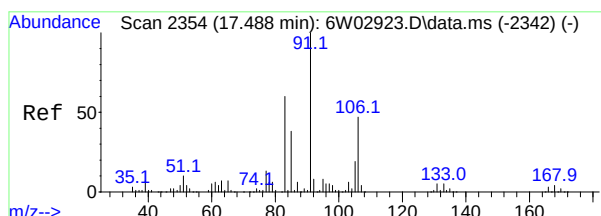
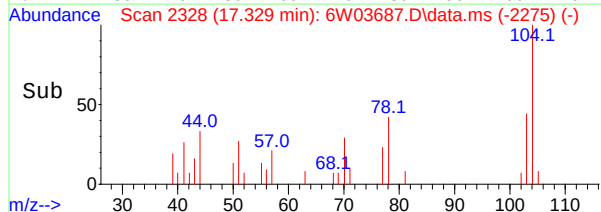
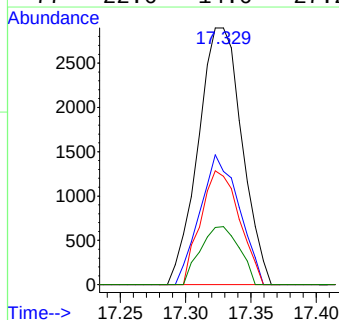
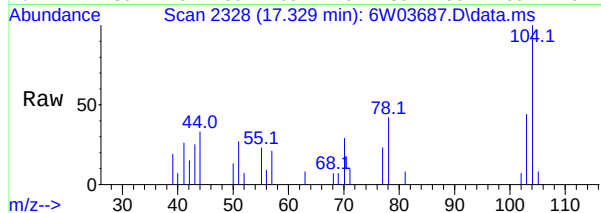
Tgt Ion: 91 Resp: 29619
Ion Ratio Lower Upper
91 100
106 44.5 35.1 65.3
105 21.3 16.0 29.8
77 12.2 9.2 17.2





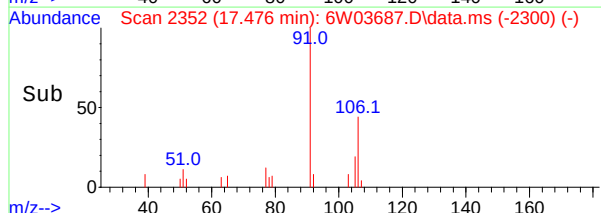
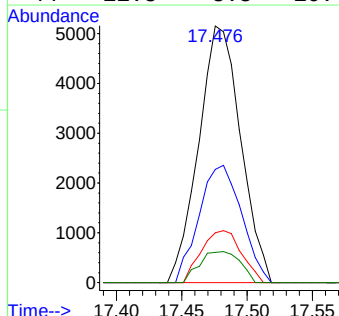
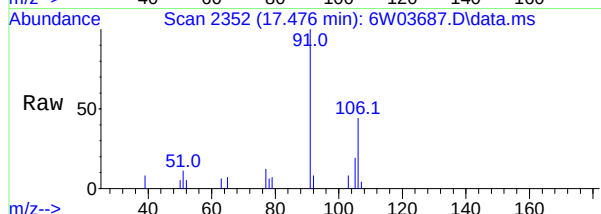
#81
Styrene
Concen: 0.13 ppb(v)
RT: 17.329 min Scan# 2328
Delta R.T. -0.006 min
Lab File: 6W03687.D
Acq: 22 Dec 2017 5:36 pm

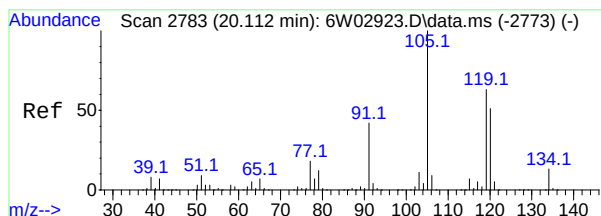
Tgt Ion:	104	Resp:	6743
Ion Ratio	Lower	Upper	
104	100		
103	44.1	33.4	62.0
78	42.2	28.8	53.4
77	22.6	14.6	27.2



#83
o-Xylene
Concen: 0.15 ppb(v)
RT: 17.476 min Scan# 2352
Delta R.T. -0.012 min
Lab File: 6W03687.D
Acq: 22 Dec 2017 5:36 pm

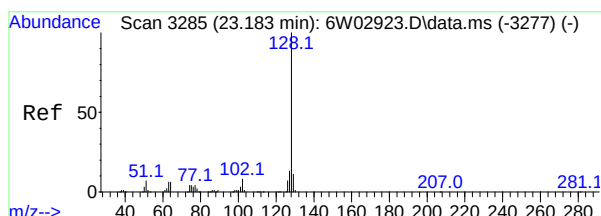
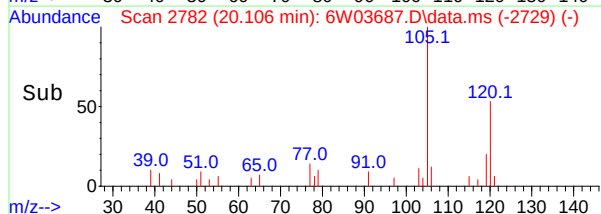
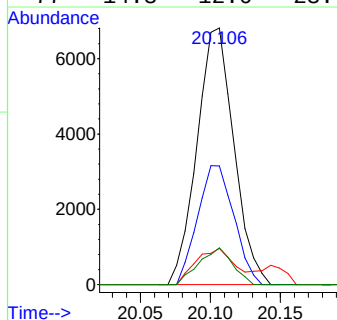
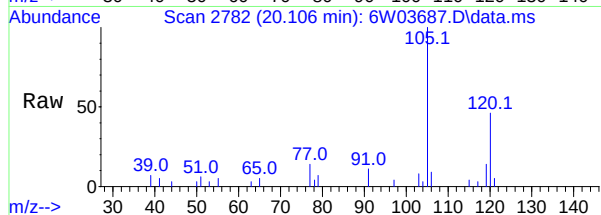
Tgt Ion:	91	Resp:	11548
Ion Ratio	Lower	Upper	
91	100		
106	44.1	33.2	61.6
105	19.4	13.4	25.0
77	11.8	8.8	16.4





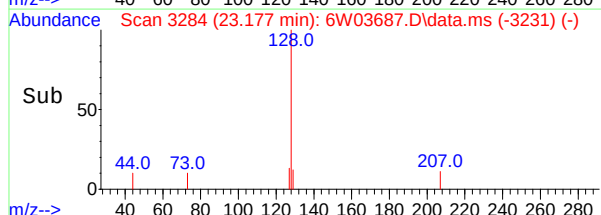
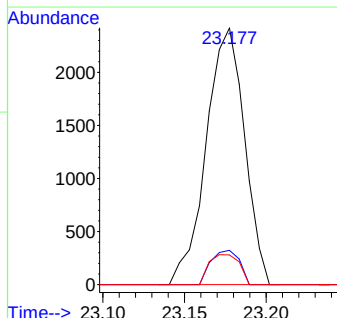
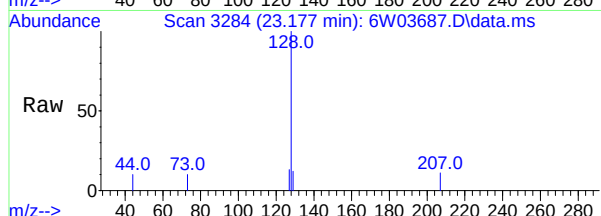
#96
1,2,4-Trimethylbenzene
Concen: 0.16 ppb(v)
RT: 20.106 min Scan# 2782
Delta R.T. -0.006 min
Lab File: 6W03687.D
Acq: 22 Dec 2017 5:36 pm

Tgt Ion:105	Resp:	12555
Ion Ratio	Lower	Upper
105	100	
120	46.2	35.7 66.3
119	14.1	44.4 82.4#
77	14.3	12.6 23.4



#106
Naphthalene
Concen: 0.10 ppb(v)
RT: 23.177 min Scan# 3284
Delta R.T. -0.006 min
Lab File: 6W03687.D
Acq: 22 Dec 2017 5:36 pm

Tgt Ion:128	Resp:	3951
Ion Ratio	Lower	Upper
128	100	
127	13.4	8.8 16.3
129	11.6	7.6 14.2



Manual Integration Approval Summary

Sample Number: JC56815-1

Method: TO-15

Lab FileID: 6W03687.D

Analyst approved: 12/23/17 11:04 Dana Tryon

Injection Time: 12/22/17 17:36

Supervisor approved: 12/23/17 11:06 Dana Tryon

Parameter	CAS	Sig#	R.T. (min.)	Reason
Carbon tetrachloride	56-23-5		10.13	Poor instrument integration

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03638.D
 Acq On : 20 Dec 2017 5:20 pm
 Operator : DANAT
 Sample : jc56815-2
 Misc : MS22955,V6W105,660,,,1.65
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 21 11:04:47 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.189	130	211828	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.391	114	775626	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.928	82	353671	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.189	130	211828	10.00	ppb(v	0.00

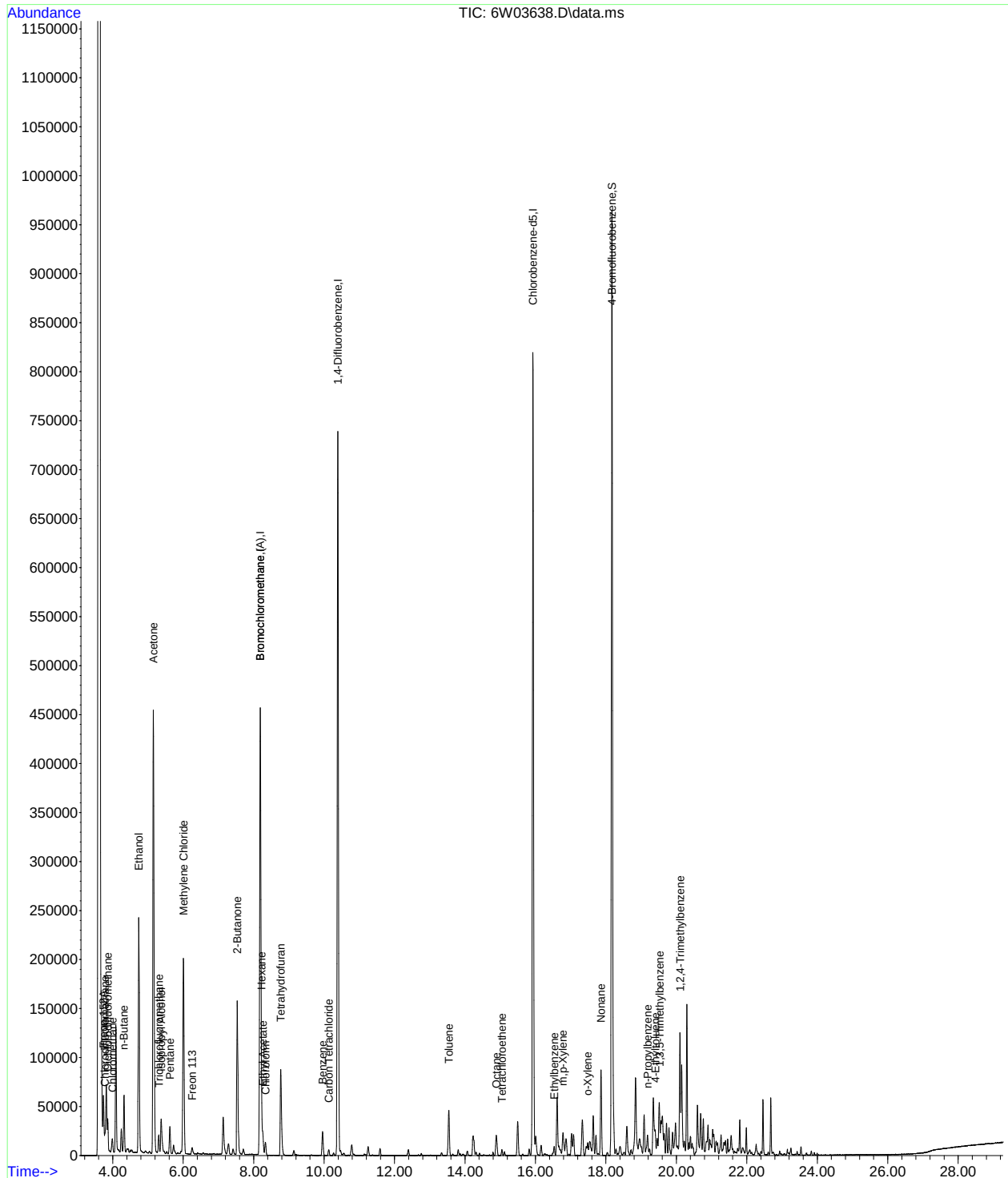
System Monitoring Compounds
 91) 4-Bromofluorobenzene 18.173 95 462563 10.15 ppb(v 0.00
 Spiked Amount 10.000 Range 65 - 128 Recovery = 101.50%

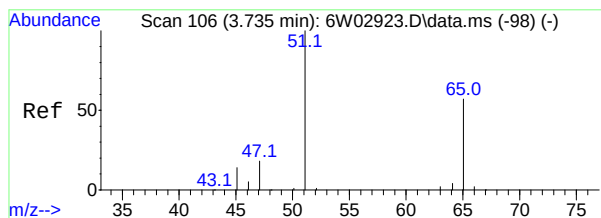
Target Compounds					Qvalue	
3) Freon 152A	3.735	65	25791	1.88	ppb(v	97
4) Chlorodifluoromethane	3.772	67	2805	0.58	ppb(v	86
7) Dichlorodifluoromethane	3.858	85	31823	0.60	ppb(v	99
9) Chloromethane	3.992	50	15331	0.90	ppb(v	99
13) n-Butane	4.316	58	7827	2.24	ppb(v#	91
21) Trichlorofluoromethane	5.308	101	18604	0.37	ppb(v	99
22) Acetone	5.149	58	226734	21.09	ppb(v	97
23) Pentane	5.620	57	3414	0.68	ppb(v	94
26) Isopropyl Alcohol	5.375	45	52930	1.24	ppb(v	96
28) Freon 113	6.250	101	4167	0.09	ppb(v	94
29) Methylene Chloride	6.011	84	118777	5.44	ppb(v	98
31) Ethanol	4.739	45	307038	50.69	ppb(v	99
39) 2-Butanone	7.534	72	66393	6.02	ppb(v	95
40) Hexane	8.220	57	30523	0.90	ppb(v#	51
43) Ethyl Acetate	8.262	61	4493	0.64	ppb(v	81
45) Chloroform	8.336	83	13388	0.29	ppb(v	99
47) Tetrahydrofuran	8.770	72	33401	3.40	ppb(v	95
50) Benzene	9.957	78	22790	0.32	ppb(v	99
51) Carbon Tetrachloride	10.128	117	4640	0.10	ppb(v	93
67) Toluene	13.542	91	46384	0.55	ppb(v	98
73) Tetrachloroethene	15.047	166	2450	0.06	ppb(v	95
75) Octane	14.888	43	9399	0.20	ppb(v	95
79) Ethylbenzene	16.534	91	10693	0.11	ppb(v	99
80) m,p-Xylene	16.778	91	25422	0.34	ppb(v	99
82) Nonane	17.861	43	39454	0.82	ppb(v	99
83) o-Xylene	17.482	91	11402	0.15	ppb(v	98
90) n-Propylbenzene	19.183	120	3381	0.12	ppb(v	93
92) 4-Ethyltoluene	19.403	105	17801	0.19	ppb(v	98
93) 1,3,5-Trimethylbenzene	19.525	105	17708	0.22	ppb(v	94
96) 1,2,4-Trimethylbenzene	20.106	105	56085	0.74	ppb(v#	64

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\
Data File : 6W03638.D
Acq On : 20 Dec 2017 5:20 pm
Operator : DANAT
Sample : jc56815-2
Misc : MS22955,V6W105,660,,,,,1.65
ALS Vial : 5 Sample Multiplier: 1

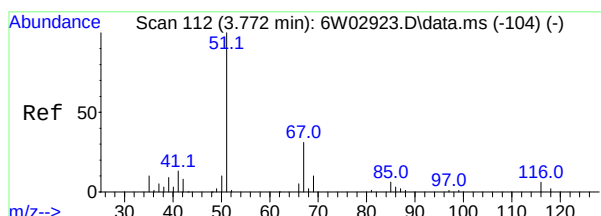
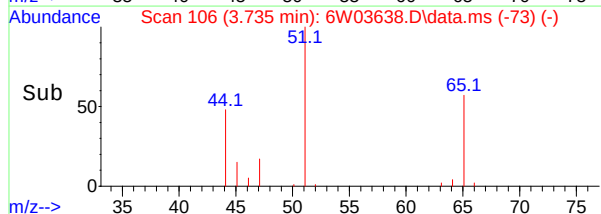
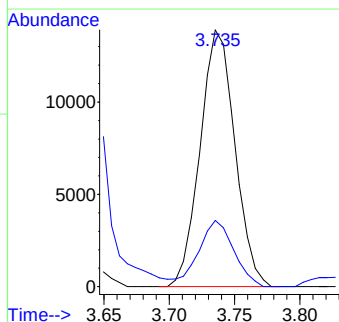
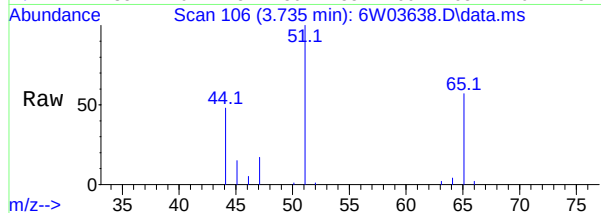
Quant Time: Dec 21 11:04:47 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration





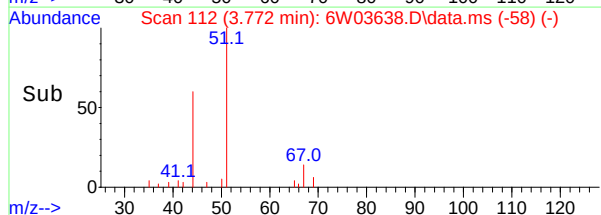
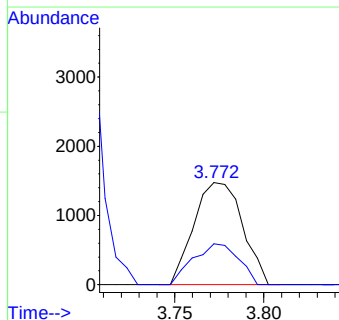
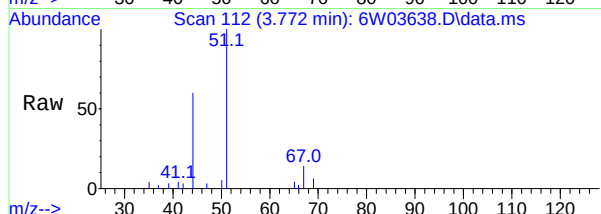
#3
Freon 152A
Concen: 1.88 ppb(v)
RT: 3.735 min Scan# 106
Delta R.T. -0.000 min
Lab File: 6W03638.D
Acq: 20 Dec 2017 5:20 pm

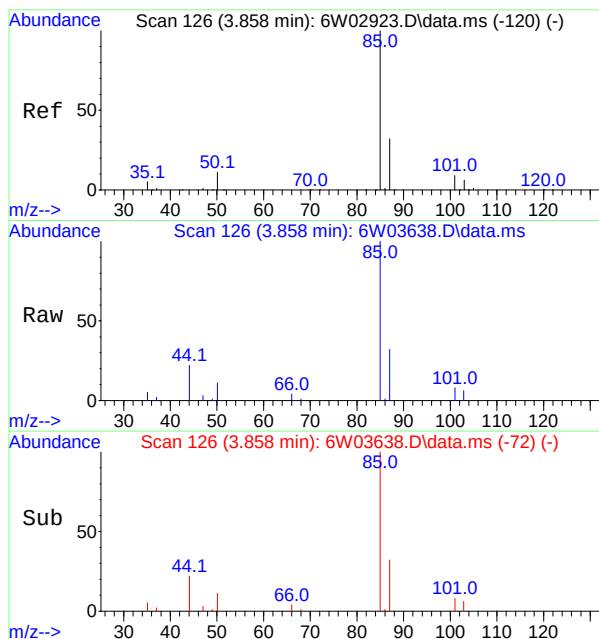
Tgt Ion: 65 Resp: 25791
Ion Ratio Lower Upper
65 100
45 25.8 16.9 31.5



#4
Chlorodifluoromethane
Concen: 0.58 ppb(v)
RT: 3.772 min Scan# 112
Delta R.T. -0.000 min
Lab File: 6W03638.D
Acq: 20 Dec 2017 5:20 pm

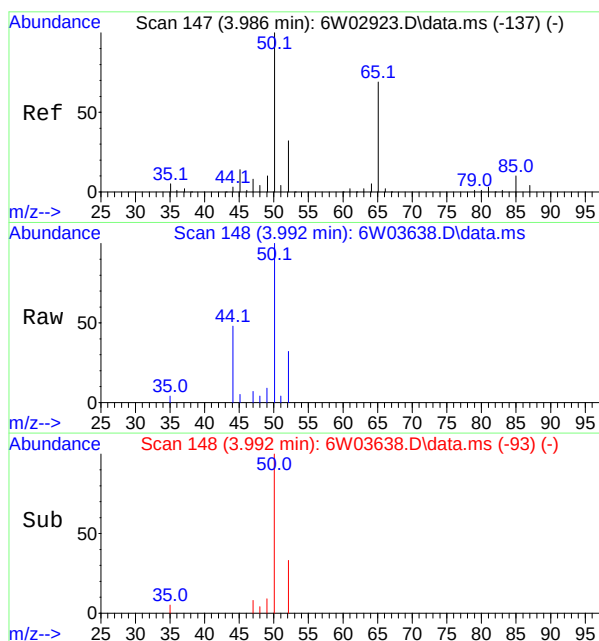
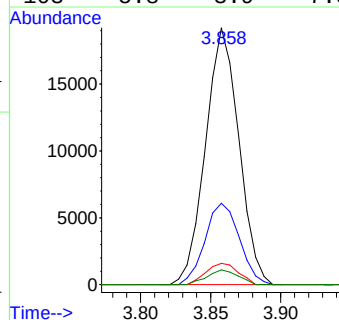
Tgt Ion: 67 Resp: 2805
Ion Ratio Lower Upper
67 100
69 40.1 22.7 42.1





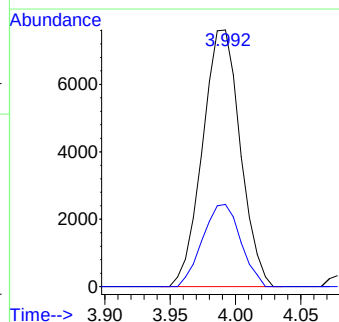
#7
Dichlorodifluoromethane
Concen: 0.60 ppb(v)
RT: 3.858 min Scan# 126
Delta R.T. -0.000 min
Lab File: 6W03638.D
Acq: 20 Dec 2017 5:20 pm

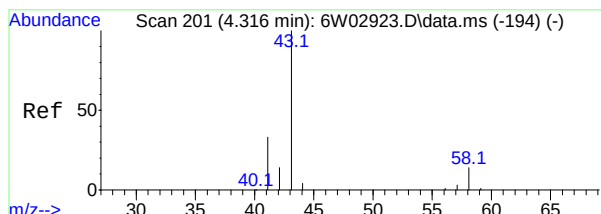
Tgt Ion: 85 Resp: 31823
Ion Ratio Lower Upper
85 100
87 31.7 22.7 42.3
101 8.3 5.9 11.1
103 5.8 3.9 7.3



#9
Chloromethane
Concen: 0.90 ppb(v)
RT: 3.992 min Scan# 148
Delta R.T. 0.006 min
Lab File: 6W03638.D
Acq: 20 Dec 2017 5:20 pm

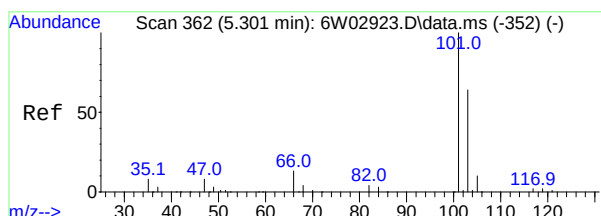
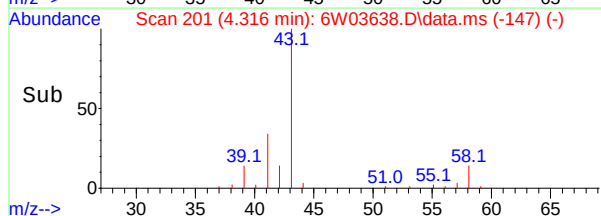
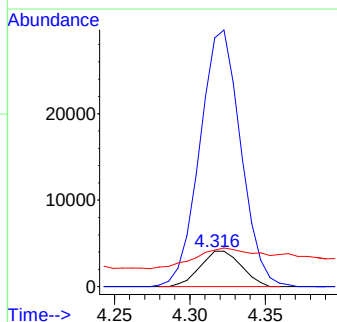
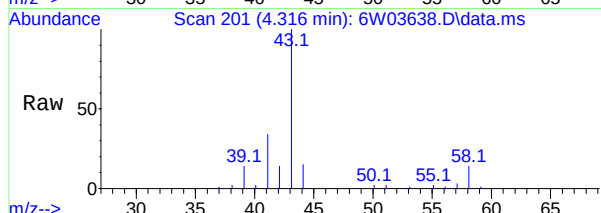
Tgt Ion: 50 Resp: 15331
Ion Ratio Lower Upper
50 100
52 32.0 22.7 42.1





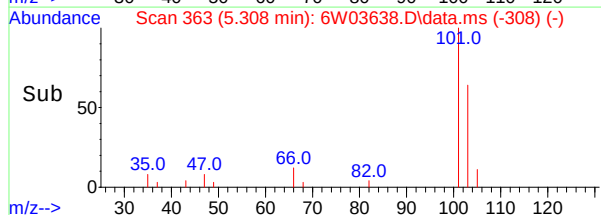
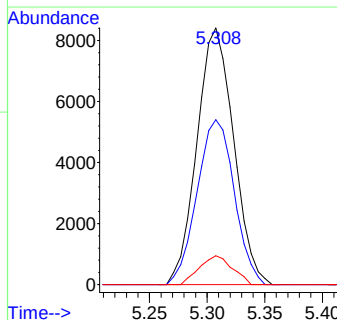
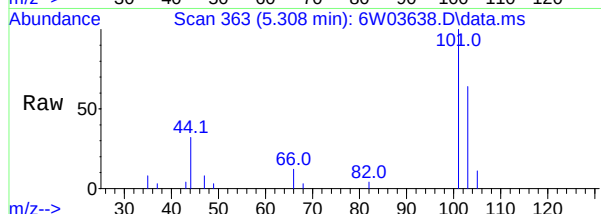
#13
n-Butane
Concen: 2.24 ppb(v)
RT: 4.316 min Scan# 201
Delta R.T. -0.000 min
Lab File: 6W03638.D
Acq: 20 Dec 2017 5:20 pm

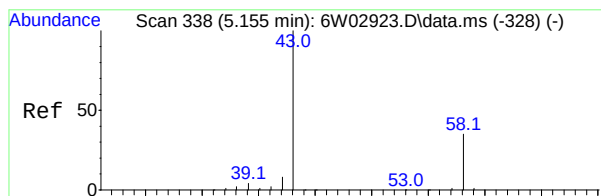
Tgt Ion: 58 Resp: 7827
Ion Ratio Lower Upper
58 100
43 699.4 499.8 928.2
44 102.5 21.1 39.1#



#21
Trichlorofluoromethane
Concen: 0.37 ppb(v)
RT: 5.308 min Scan# 363
Delta R.T. 0.006 min
Lab File: 6W03638.D
Acq: 20 Dec 2017 5:20 pm

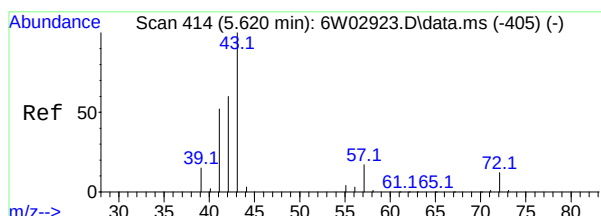
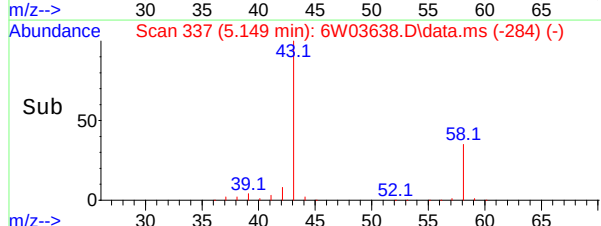
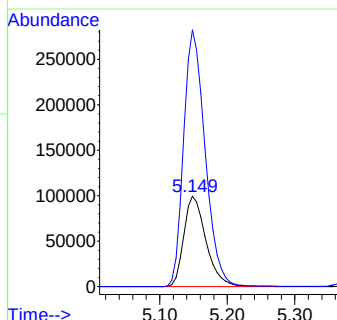
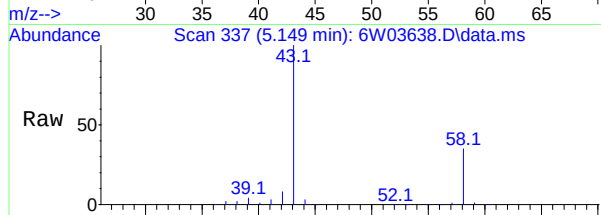
Tgt Ion: 101 Resp: 18604
Ion Ratio Lower Upper
101 100
103 64.2 45.1 83.9
105 11.3 7.3 13.5





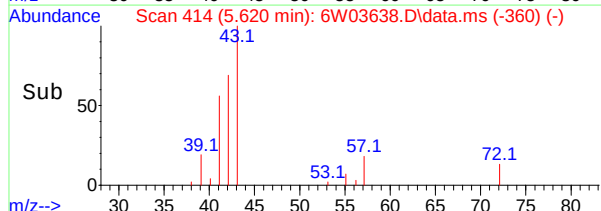
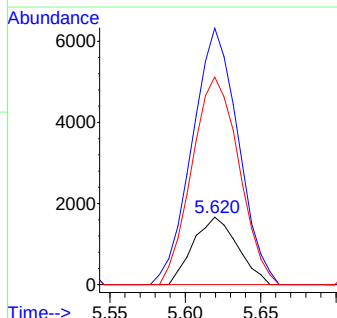
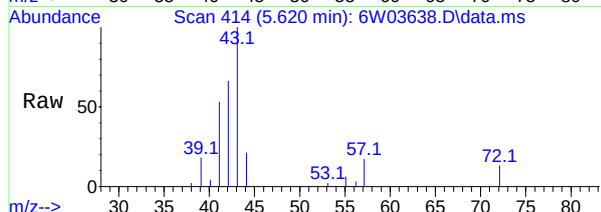
#22
Acetone
Concen: 21.09 ppb(v)
RT: 5.149 min Scan# 337
Delta R.T. -0.006 min
Lab File: 6W03638.D
Acq: 20 Dec 2017 5:20 pm

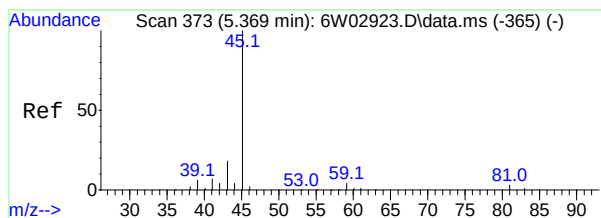
Tgt Ion: 58 Resp: 226734
Ion Ratio Lower Upper
58 100
43 283.7 202.4 375.8



#23
Pentane
Concen: 0.68 ppb(v)
RT: 5.620 min Scan# 414
Delta R.T. -0.000 min
Lab File: 6W03638.D
Acq: 20 Dec 2017 5:20 pm

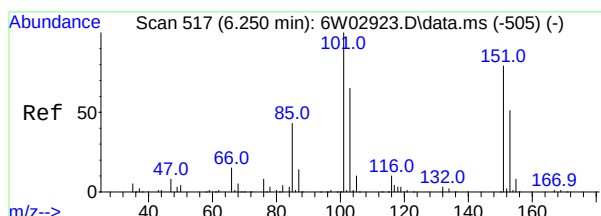
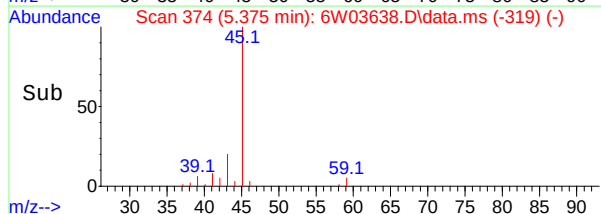
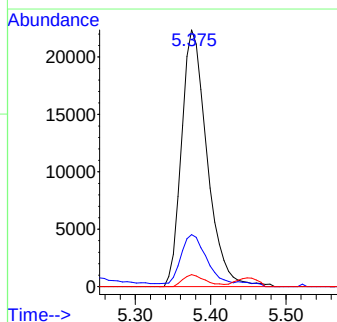
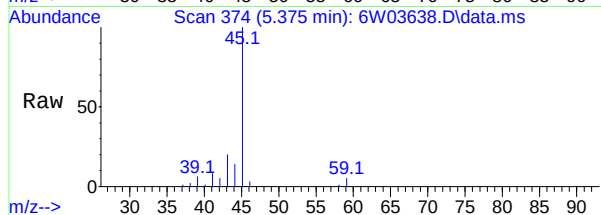
Tgt Ion: 57 Resp: 3414
Ion Ratio Lower Upper
57 100
42 380.2 252.4 468.8
41 307.4 218.7 406.1





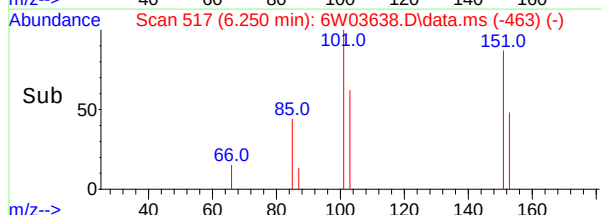
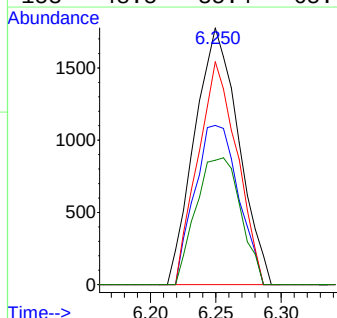
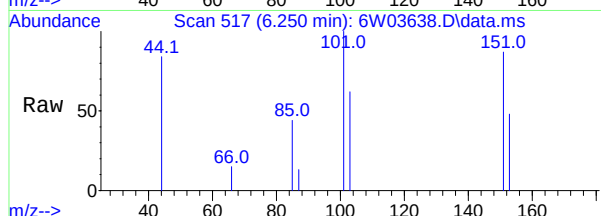
#26
Isopropyl Alcohol
Concen: 1.24 ppb(v)
RT: 5.375 min Scan# 374
Delta R.T. 0.006 min
Lab File: 6W03638.D
Acq: 20 Dec 2017 5:20 pm

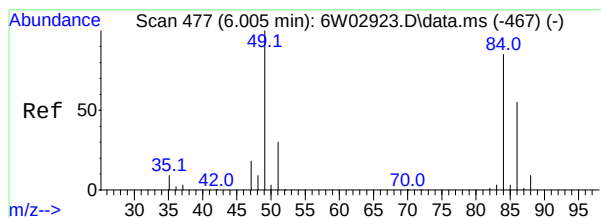
Tgt Ion: 45 Resp: 52930
Ion Ratio Lower Upper
45 100
43 20.2 12.8 23.8
59 4.7 3.0 5.6



#28
Freon 113
Concen: 0.09 ppb(v)
RT: 6.250 min Scan# 517
Delta R.T. -0.000 min
Lab File: 6W03638.D
Acq: 20 Dec 2017 5:20 pm

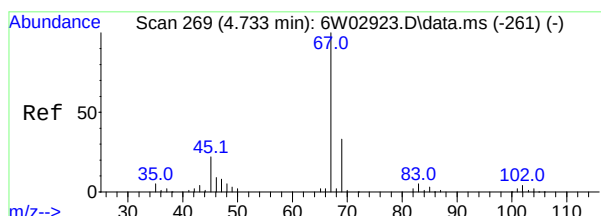
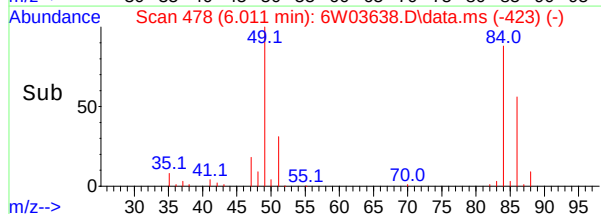
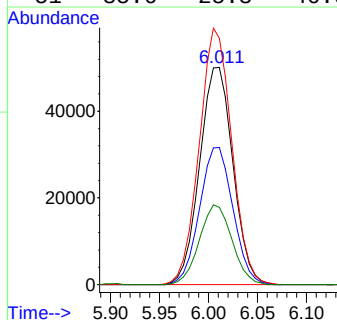
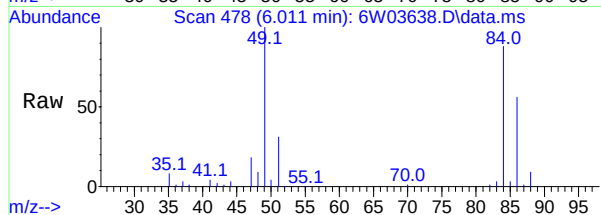
Tgt Ion: 101 Resp: 4167
Ion Ratio Lower Upper
101 100
103 62.0 45.4 84.4
151 86.8 55.3 102.7
153 48.5 35.4 65.7





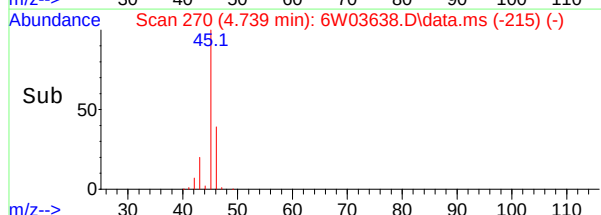
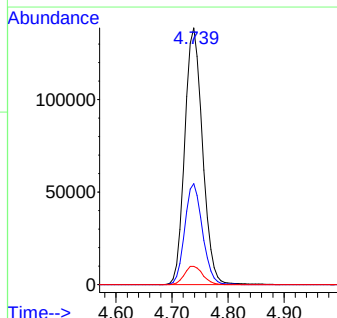
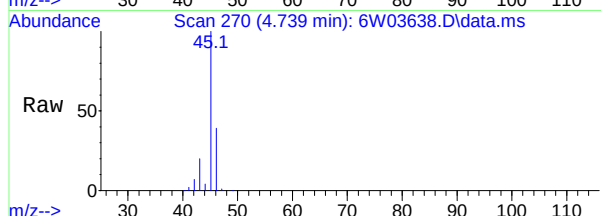
#29
Methylene Chloride
Concen: 5.44 ppb(v)
RT: 6.011 min Scan# 478
Delta R.T. 0.006 min
Lab File: 6W03638.D
Acq: 20 Dec 2017 5:20 pm

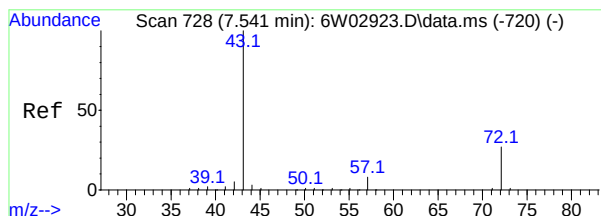
Tgt Ion: 84 Resp: 118777
Ion Ratio Lower Upper
84 100
86 63.1 44.8 83.2
49 113.5 82.1 152.5
51 35.6 25.3 46.9



#31
Ethanol
Concen: 50.69 ppb(v)
RT: 4.739 min Scan# 270
Delta R.T. 0.006 min
Lab File: 6W03638.D
Acq: 20 Dec 2017 5:20 pm

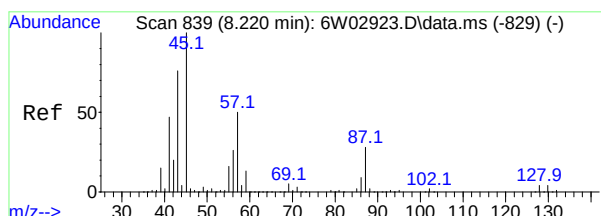
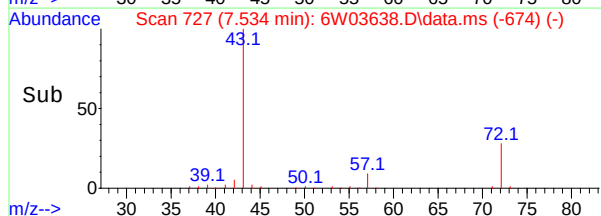
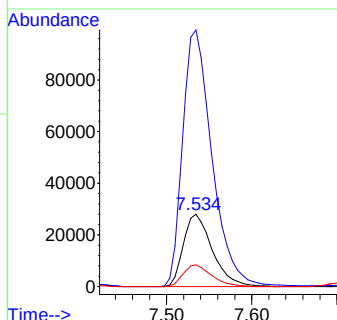
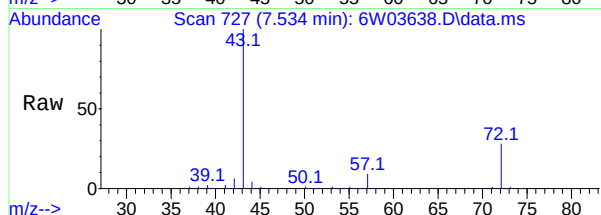
Tgt Ion: 45 Resp: 307038
Ion Ratio Lower Upper
45 100
46 39.3 27.2 50.4
42 7.1 5.6 10.4





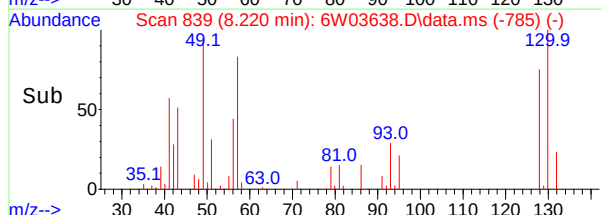
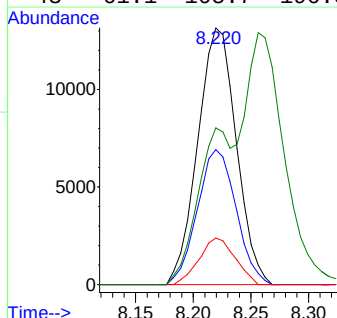
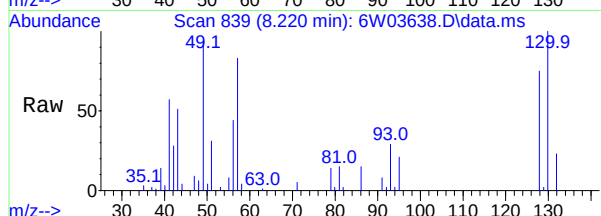
#39
2-Butanone
Concen: 6.02 ppb(v)
RT: 7.534 min Scan# 727
Delta R.T. -0.006 min
Lab File: 6W03638.D
Acq: 20 Dec 2017 5:20 pm

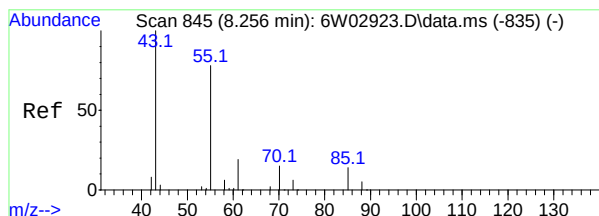
Tgt Ion: 72 Resp: 66393
Ion Ratio Lower Upper
72 100
43 355.0 257.4 478.0
57 30.3 21.0 39.0



#40
Hexane
Concen: 0.90 ppb(v)
RT: 8.220 min Scan# 839
Delta R.T. -0.000 min
Lab File: 6W03638.D
Acq: 20 Dec 2017 5:20 pm

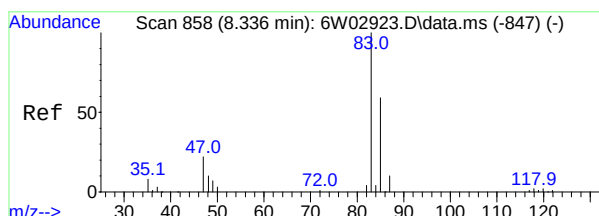
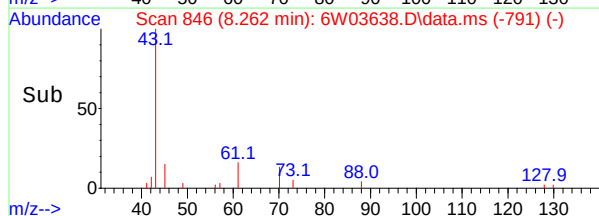
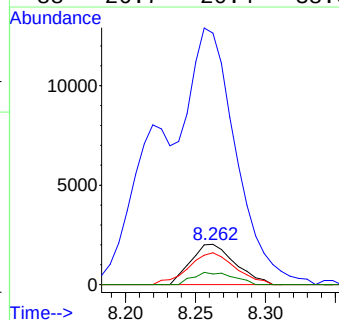
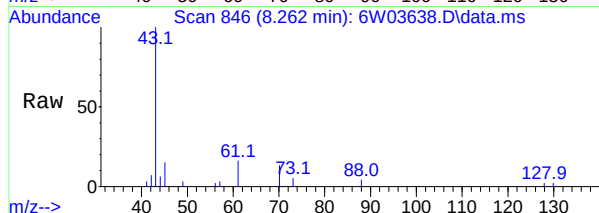
Tgt Ion: 57 Resp: 30523
Ion Ratio Lower Upper
57 100
56 52.6 36.0 67.0
86 18.1 12.1 22.5
43 61.1 105.7 196.3#





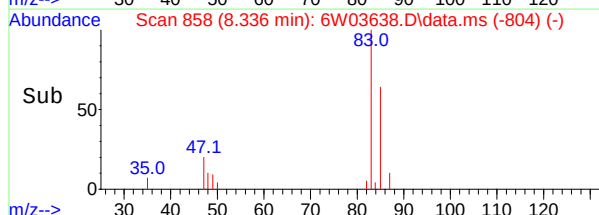
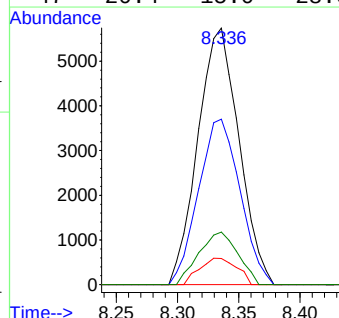
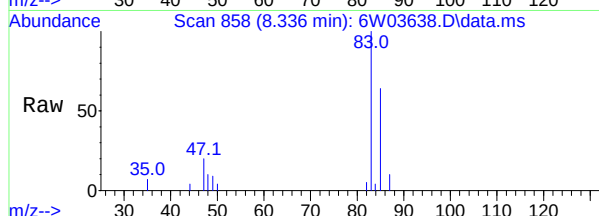
#43
Ethyl Acetate
Concen: 0.64 ppb(v)
RT: 8.262 min Scan# 846
Delta R.T. 0.006 min
Lab File: 6W03638.D
Acq: 20 Dec 2017 5:20 pm

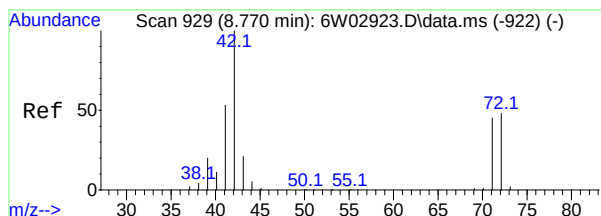
Tgt Ion: 61 Resp: 4493
Ion Ratio Lower Upper
61 100
43 624.1 488.5 907.1
70 79.1 54.9 101.9
88 26.7 20.4 38.0



#45
Chloroform
Concen: 0.29 ppb(v)
RT: 8.336 min Scan# 858
Delta R.T. -0.000 min
Lab File: 6W03638.D
Acq: 20 Dec 2017 5:20 pm

Tgt Ion: 83 Resp: 13388
Ion Ratio Lower Upper
83 100
85 64.5 45.2 84.0
87 10.2 7.3 13.7
47 20.4 15.0 28.0

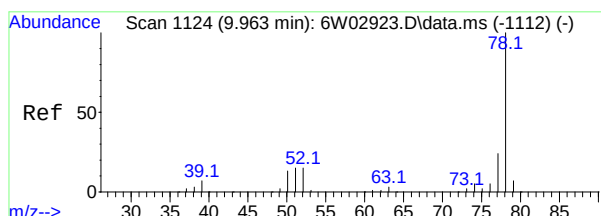
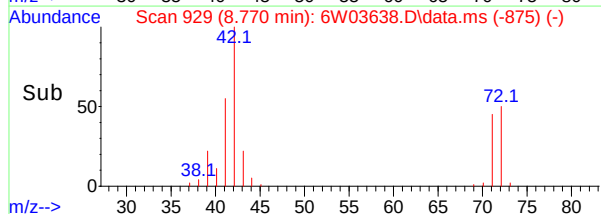
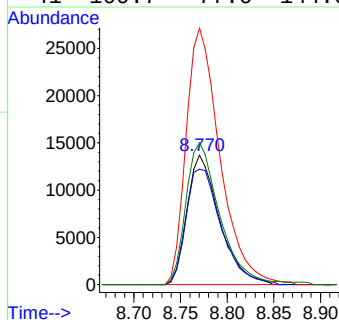
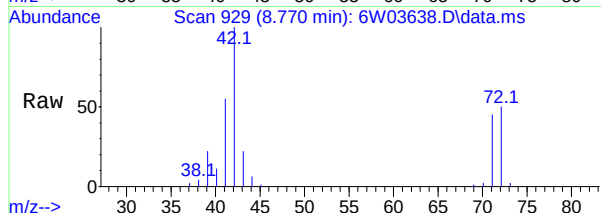




#47
Tetrahydrofuran
Concen: 3.40 ppb(v)
RT: 8.770 min Scan# 929
Delta R.T. -0.000 min
Lab File: 6W03638.D
Acq: 20 Dec 2017 5:20 pm

Tgt Ion: 72 Resp: 33401

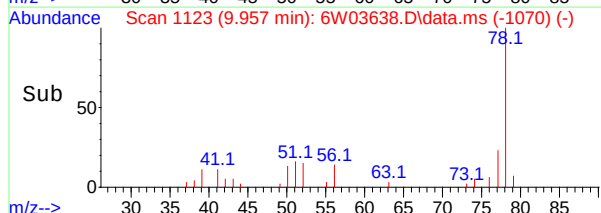
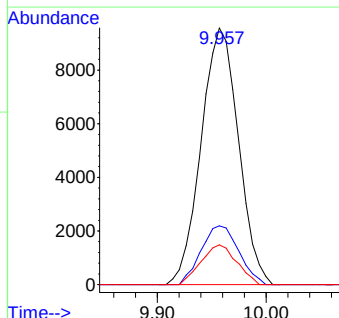
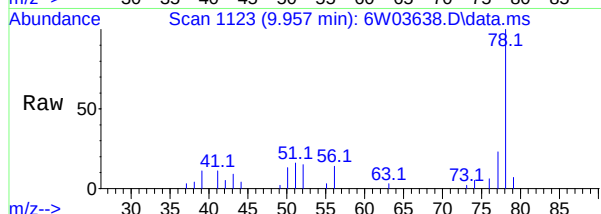
Ion	Ratio	Lower	Upper
72	100		
71	89.1	65.4	121.4
42	198.4	146.4	271.8
41	109.7	77.6	144.0

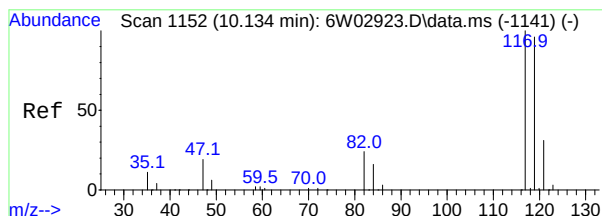


#50
Benzene
Concen: 0.32 ppb(v)
RT: 9.957 min Scan# 1123
Delta R.T. -0.006 min
Lab File: 6W03638.D
Acq: 20 Dec 2017 5:20 pm

Tgt Ion: 78 Resp: 22790

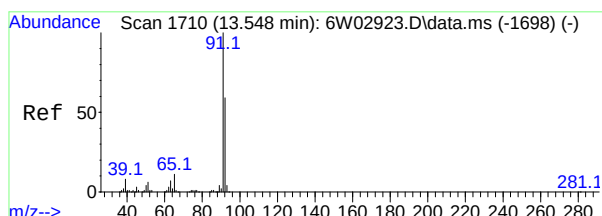
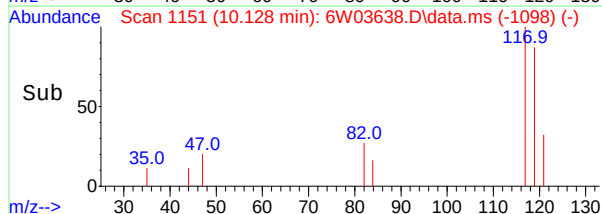
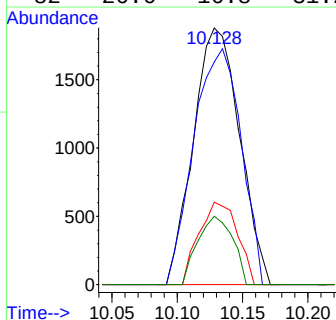
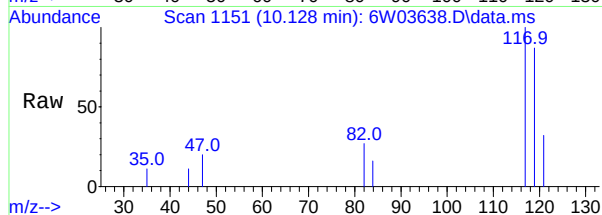
Ion	Ratio	Lower	Upper
78	100		
77	22.9	16.6	30.8
51	15.5	10.6	19.6





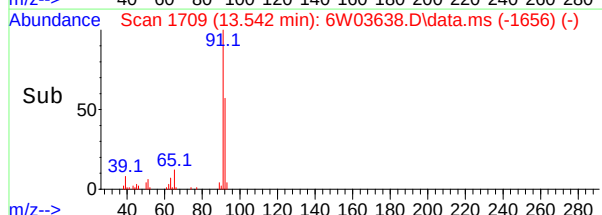
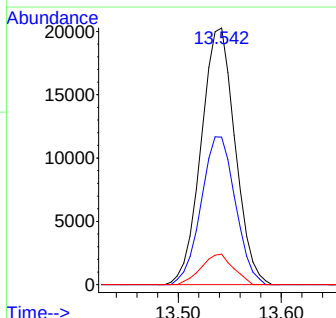
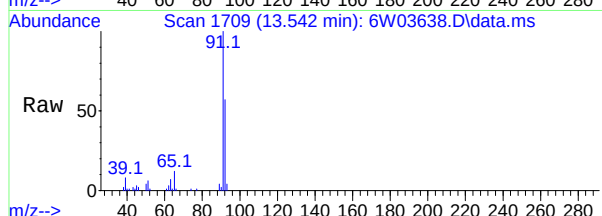
#51
Carbon Tetrachloride
Concen: 0.10 ppb(v)
RT: 10.128 min Scan# 1151
Delta R.T. -0.006 min
Lab File: 6W03638.D
Acq: 20 Dec 2017 5:20 pm

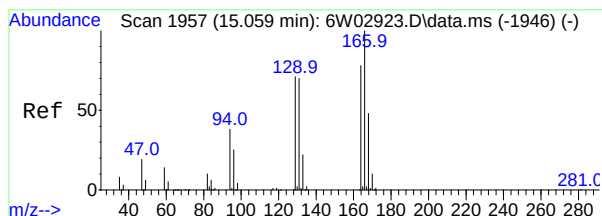
Tgt Ion: 117	Resp: 4640
Ion Ratio	Lower Upper
117	100
119	86.7 67.4 125.2
121	32.2 21.9 40.7
82	26.6 16.8 31.2



#67
Toluene
Concen: 0.55 ppb(v)
RT: 13.542 min Scan# 1709
Delta R.T. -0.006 min
Lab File: 6W03638.D
Acq: 20 Dec 2017 5:20 pm

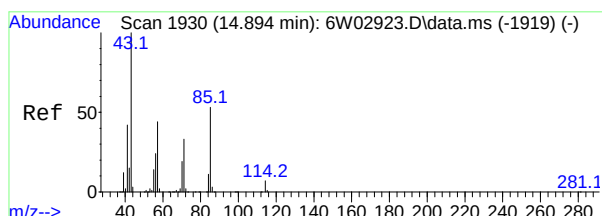
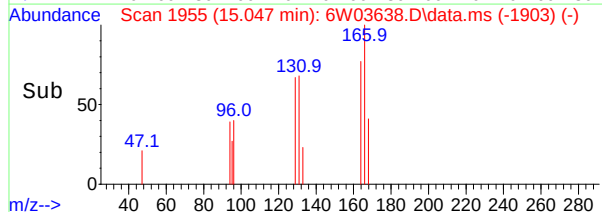
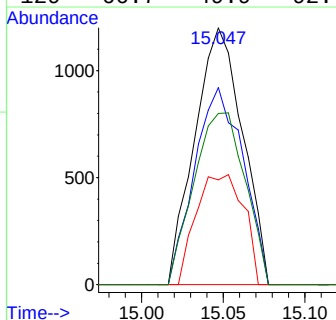
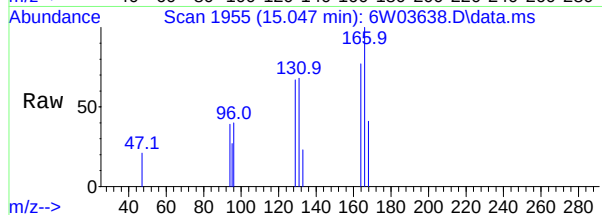
Tgt Ion: 91	Resp: 46384
Ion Ratio	Lower Upper
91	100
92	57.4 41.0 76.2
65	11.9 7.8 14.4





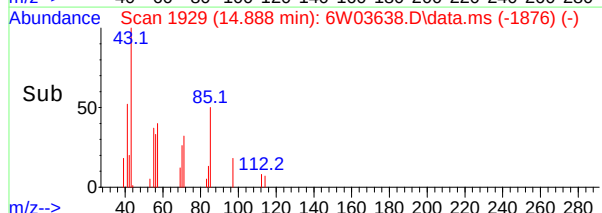
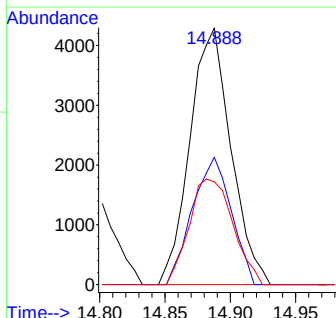
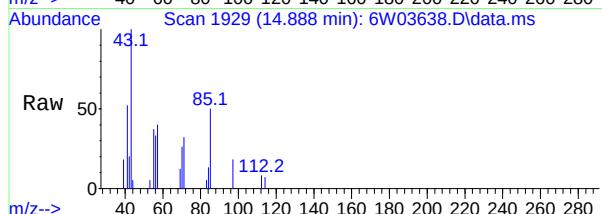
#73
Tetrachloroethene
Concen: 0.06 ppb(v)
RT: 15.047 min Scan# 1955
Delta R.T. -0.012 min
Lab File: 6W03638.D
Acq: 20 Dec 2017 5:20 pm

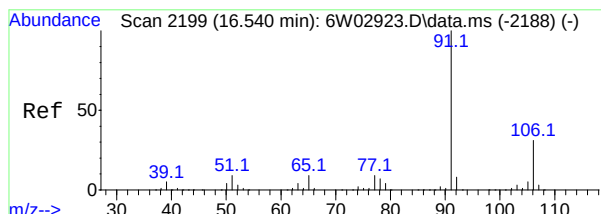
Tgt Ion: 166 Resp: 2450
Ion Ratio Lower Upper
166 100
164 76.8 54.5 101.1
168 40.8 33.9 62.9
129 66.7 49.9 92.7



#75
Octane
Concen: 0.20 ppb(v)
RT: 14.888 min Scan# 1929
Delta R.T. -0.006 min
Lab File: 6W03638.D
Acq: 20 Dec 2017 5:20 pm

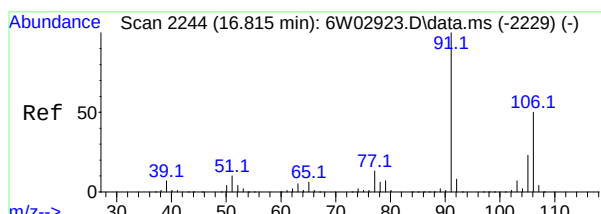
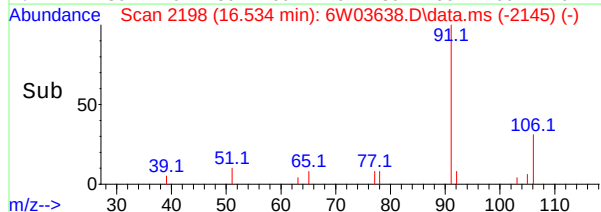
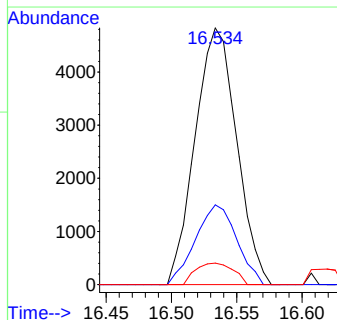
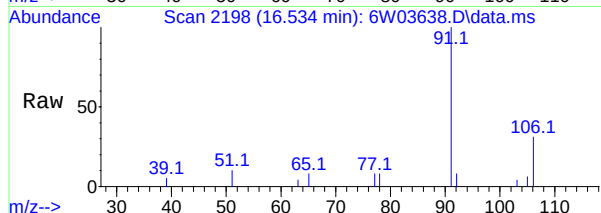
Tgt Ion: 43 Resp: 9399
Ion Ratio Lower Upper
43 100
85 49.6 36.8 68.4
57 40.1 30.7 56.9





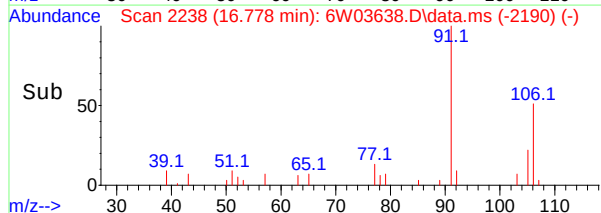
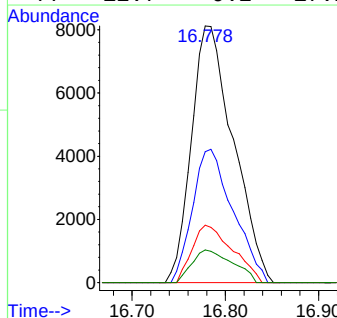
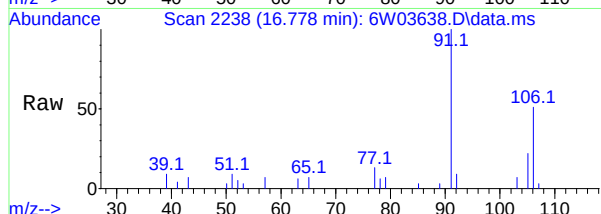
#79
Ethylbenzene
Concen: 0.11 ppb(v)
RT: 16.534 min Scan# 2198
Delta R.T. -0.006 min
Lab File: 6W03638.D
Acq: 20 Dec 2017 5:20 pm

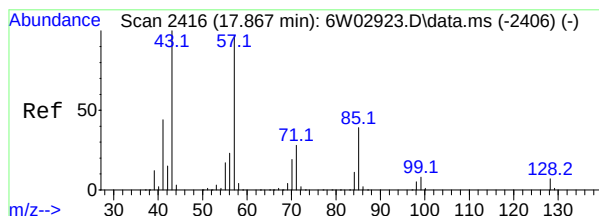
Tgt Ion: 91 Resp: 10693
Ion Ratio Lower Upper
91 100
106 31.1 22.0 41.0
77 8.4 6.0 11.2



#80
m,p-Xylene
Concen: 0.34 ppb(v)
RT: 16.778 min Scan# 2238
Delta R.T. -0.037 min
Lab File: 6W03638.D
Acq: 20 Dec 2017 5:20 pm

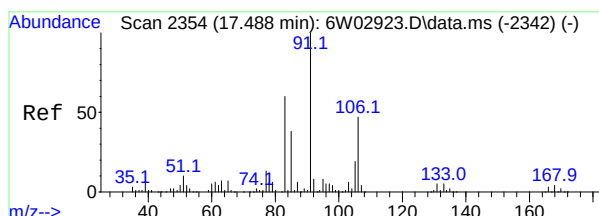
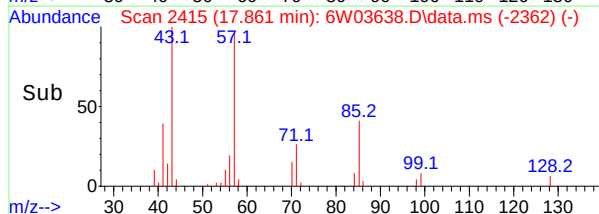
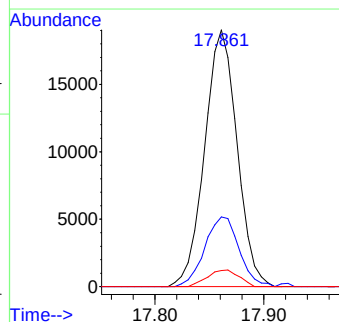
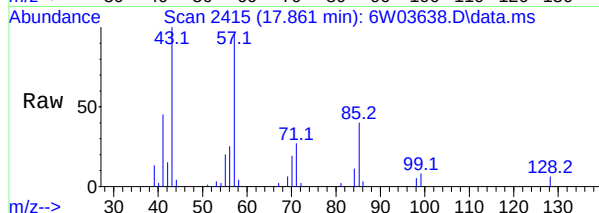
Tgt Ion: 91 Resp: 25422
Ion Ratio Lower Upper
91 100
106 51.0 35.1 65.3
105 22.4 16.0 29.8
77 12.7 9.2 17.2





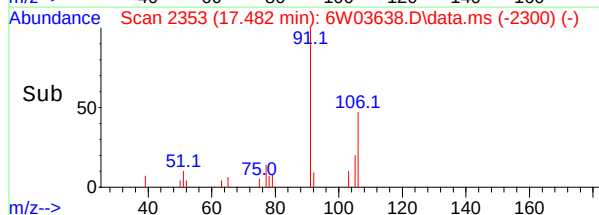
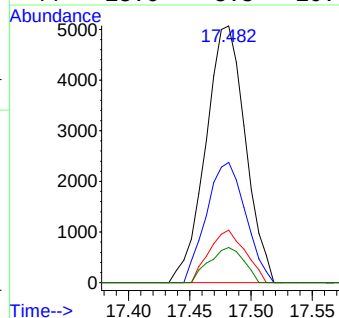
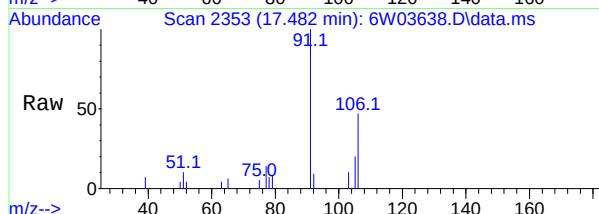
#82
Nonane
Concen: 0.82 ppb(v)
RT: 17.861 min Scan# 2415
Delta R.T. -0.006 min
Lab File: 6W03638.D
Acq: 20 Dec 2017 5:20 pm

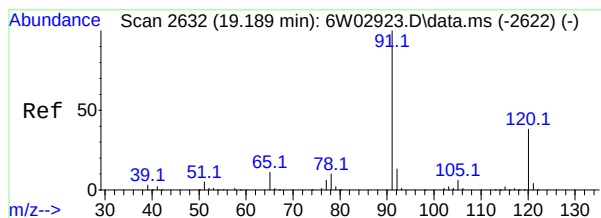
Tgt Ion: 43 Resp: 39454
Ion Ratio Lower Upper
43 100
71 27.2 19.5 36.3
128 6.3 4.6 8.6



#83
o-Xylene
Concen: 0.15 ppb(v)
RT: 17.482 min Scan# 2353
Delta R.T. -0.006 min
Lab File: 6W03638.D
Acq: 20 Dec 2017 5:20 pm

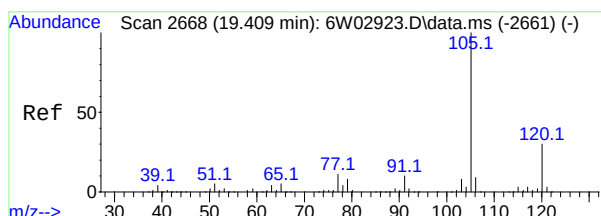
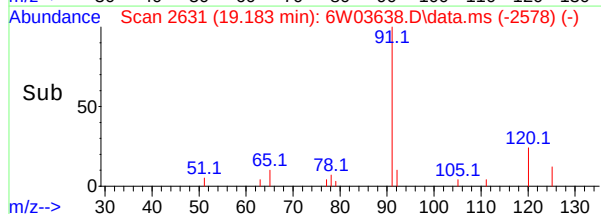
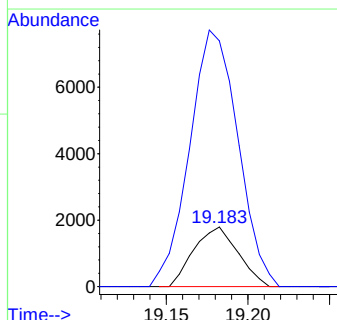
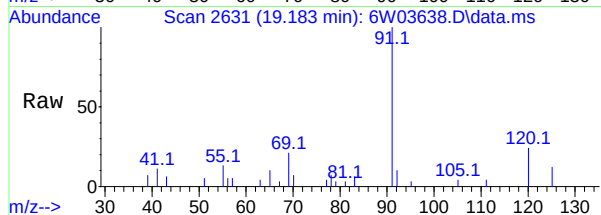
Tgt Ion: 91 Resp: 11402
Ion Ratio Lower Upper
91 100
106 46.8 33.2 61.6
105 20.5 13.4 25.0
77 13.6 8.8 16.4





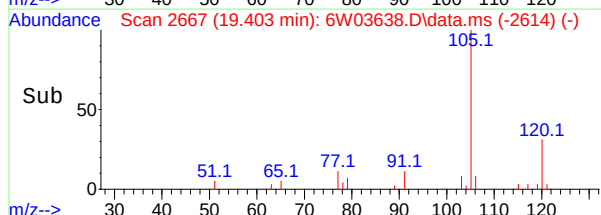
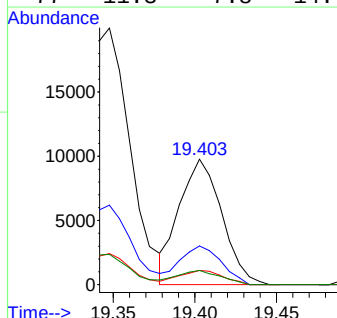
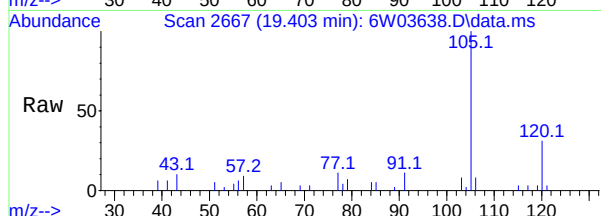
#90
n-Propylbenzene
Concen: 0.12 ppb(v)
RT: 19.183 min Scan# 2631
Delta R.T. -0.006 min
Lab File: 6W03638.D
Acq: 20 Dec 2017 5:20 pm

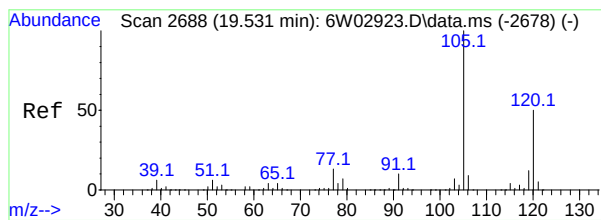
Tgt Ion:120 Resp: 3381
Ion Ratio Lower Upper
120 100
91 412.3 300.0 557.2



#92
4-Ethyltoluene
Concen: 0.19 ppb(v)
RT: 19.403 min Scan# 2667
Delta R.T. -0.006 min
Lab File: 6W03638.D
Acq: 20 Dec 2017 5:20 pm

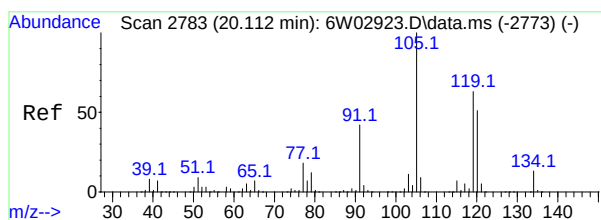
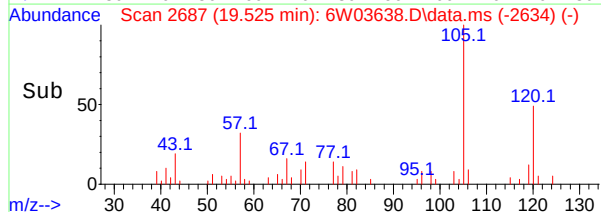
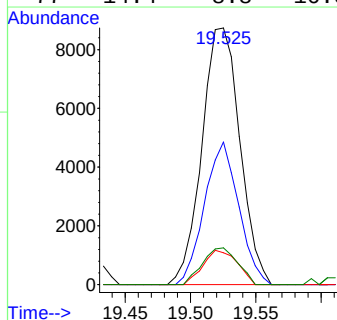
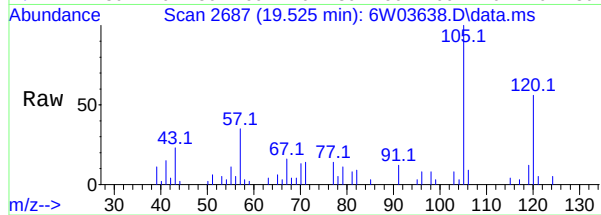
Tgt Ion:105 Resp: 17801
Ion Ratio Lower Upper
105 100
120 30.7 20.6 38.4
91 11.3 7.3 13.7
77 11.3 7.8 14.4





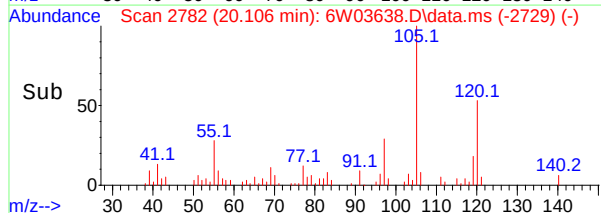
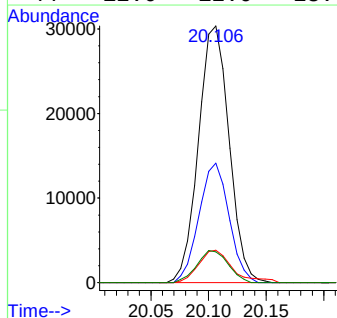
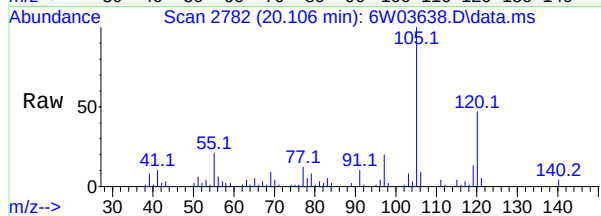
#93
 1,3,5-Trimethylbenzene
 Concen: 0.22 ppb(v)
 RT: 19.525 min Scan# 2687
 Delta R.T. -0.006 min
 Lab File: 6W03638.D
 Acq: 20 Dec 2017 5:20 pm

Tgt Ion:105	Resp:	17708
Ion Ratio	Lower	Upper
105	100	
120	55.6	34.9 64.9
119	12.4	8.6 16.0
77	14.4	8.8 16.3



#96
 1,2,4-Trimethylbenzene
 Concen: 0.74 ppb(v)
 RT: 20.106 min Scan# 2782
 Delta R.T. -0.006 min
 Lab File: 6W03638.D
 Acq: 20 Dec 2017 5:20 pm

Tgt Ion:105	Resp:	56085
Ion Ratio	Lower	Upper
105	100	
120	46.5	35.7 66.3
119	12.6	44.4 82.4#
77	12.0	12.6 23.4#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03646.D
 Acq On : 21 Dec 2017 1:29 am
 Operator : DANAT
 Sample : jc56815-3
 Misc : MS22955,V6W105,800,,,1.65
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Dec 21 17:23:56 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.189	130	236859	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.391	114	873565	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.928	82	382866	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.189	130	236859	10.00	ppb(v	0.00

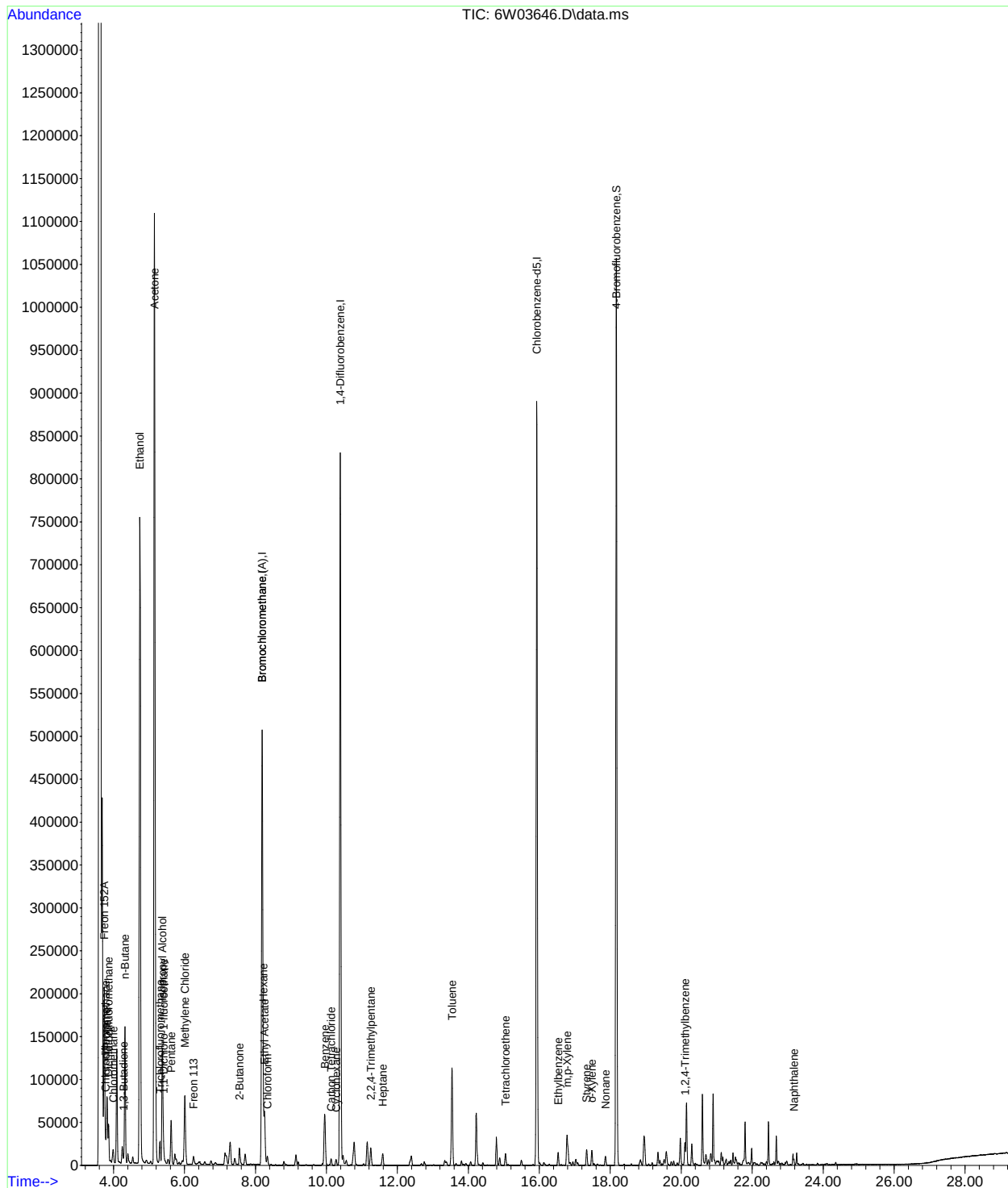
System Monitoring Compounds
 91) 4-Bromofluorobenzene 18.173 95 502759 10.19 ppb(v 0.00
 Spiked Amount 10.000 Range 65 - 128 Recovery = 101.90%

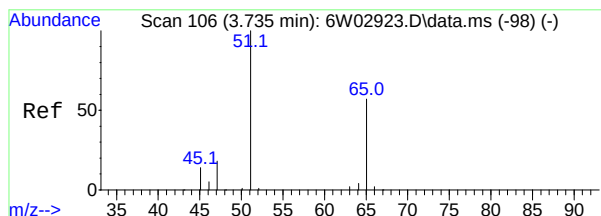
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) Freon 152A	3.741	65	104824	6.82	ppb(v	100
4) Chlorodifluoromethane	3.778	67	3966	0.74	ppb(v	83
5) Propene	3.815	41	28958	1.71	ppb(v#	74
7) Dichlorodifluoromethane	3.858	85	42885	0.72	ppb(v	99
9) Chloromethane	3.992	50	16692	0.87	ppb(v	99
12) 1,3-Butadiene	4.280	54	2688	0.16	ppb(v	95
13) n-Butane	4.323	58	21286	5.45	ppb(v#	95
21) Trichlorofluoromethane	5.308	101	25600	0.46	ppb(v	98
22) Acetone	5.149	58	555506	46.21	ppb(v	93
23) Pentane	5.620	57	6419	1.14	ppb(v	98
24) 1,1-Dichloro-1-fluoro...	5.412	81	4820	0.10	ppb(v#	89
26) Isopropyl Alcohol	5.375	45	206744	4.34	ppb(v	100
28) Freon 113	6.250	101	5427	0.11	ppb(v	98
29) Methylene Chloride	6.011	84	46415	1.90	ppb(v	98
31) Ethanol	4.739	45	1136209	167.76	ppb(v	99
39) 2-Butanone	7.547	72	8271	0.67	ppb(v	97
40) Hexane	8.220	57	30244	0.79	ppb(v#	52
43) Ethyl Acetate	8.256	61	12941	1.65	ppb(v	76
45) Chloroform	8.336	83	10154	0.20	ppb(v	98
50) Benzene	9.957	78	44272	0.55	ppb(v	99
51) Carbon Tetrachloride	10.128	117	6117	0.12	ppb(v	97
52) Cyclohexane	10.269	56	4400	0.12	ppb(v	97
55) 2,2,4-Trimethylpentane	11.248	57	21740	0.18	ppb(v	88
56) Heptane	11.591	71	4168	0.16	ppb(v	97
67) Toluene	13.536	91	111164	1.17	ppb(v	98
73) Tetrachloroethene	15.047	166	5311	0.11	ppb(v	96
79) Ethylbenzene	16.534	91	15812	0.15	ppb(v	100
80) m,p-Xylene	16.784	91	40458	0.50	ppb(v	99
81) Styrene	17.329	104	4653	0.09	ppb(v	92
82) Nonane	17.867	43	5554	0.11	ppb(v#	50
83) o-Xylene	17.482	91	15669	0.19	ppb(v	98
96) 1,2,4-Trimethylbenzene	20.106	105	17093	0.21	ppb(v#	64
106) Naphthalene	23.177	128	4948	0.12	ppb(v	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\
Data File : 6W03646.D
Acq On : 21 Dec 2017 1:29 am
Operator : DANAT
Sample : jc56815-3
Misc : MS22955,V6W105,800,,,,,1.65
ALS Vial : 12 Sample Multiplier: 1

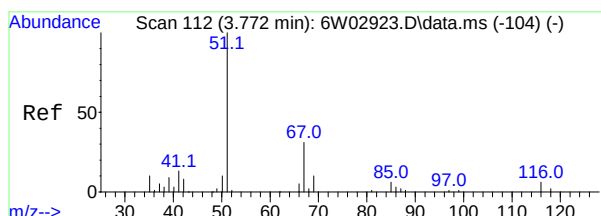
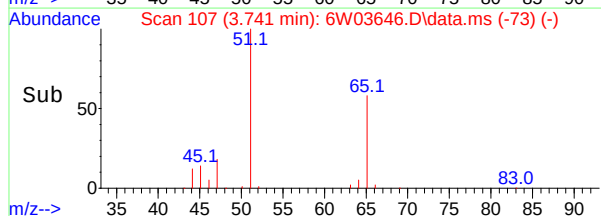
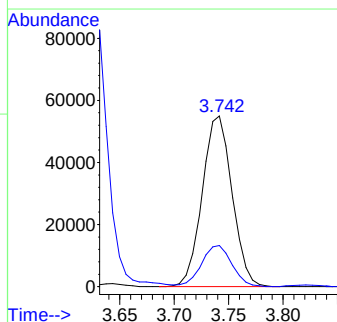
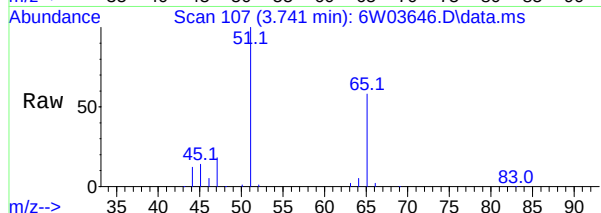
Quant Time: Dec 21 17:23:56 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration





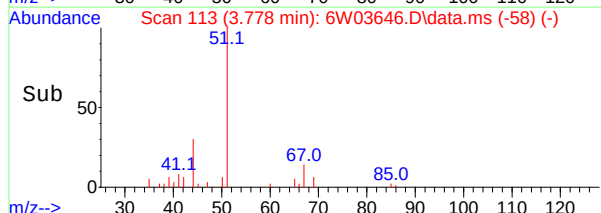
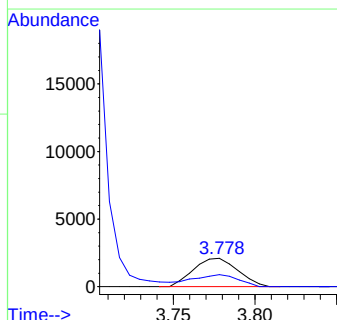
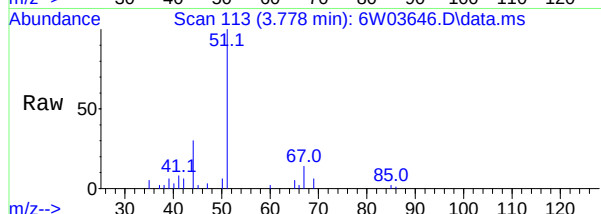
#3
Freon 152A
Concen: 6.82 ppb(v)
RT: 3.741 min Scan# 107
Delta R.T. 0.006 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

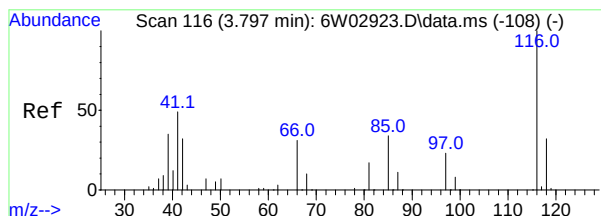
Tgt Ion: 65 Resp: 104824
Ion Ratio Lower Upper
65 100
45 24.1 16.9 31.5



#4
Chlorodifluoromethane
Concen: 0.74 ppb(v)
RT: 3.778 min Scan# 113
Delta R.T. 0.006 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

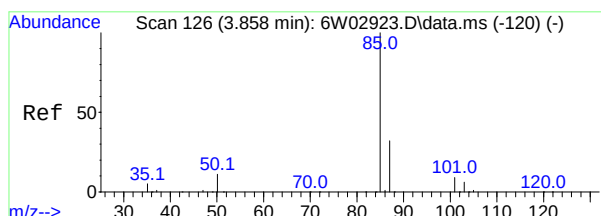
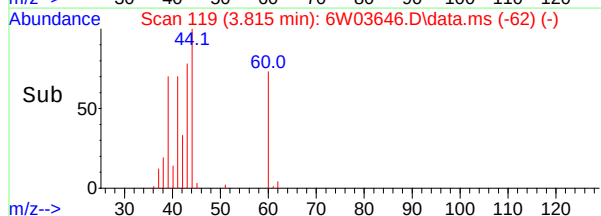
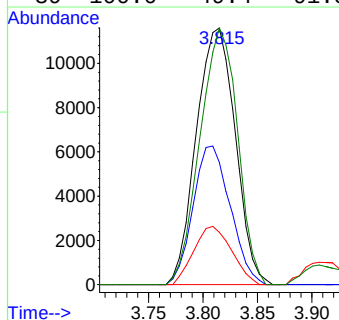
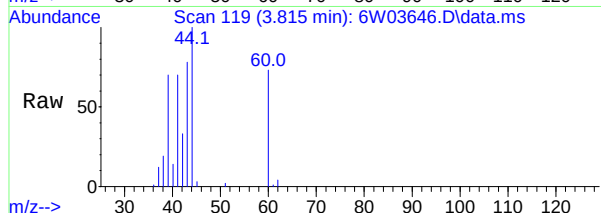
Tgt Ion: 67 Resp: 3966
Ion Ratio Lower Upper
67 100
69 41.8 22.7 42.1





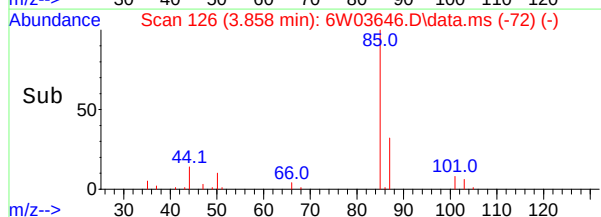
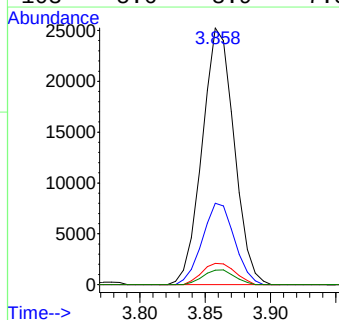
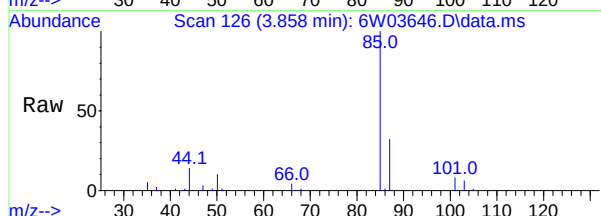
#5
 Propene
 Concen: 1.71 ppb(v)
 RT: 3.815 min Scan# 119
 Delta R.T. 0.018 min
 Lab File: 6W03646.D
 Acq: 21 Dec 2017 1:29 am

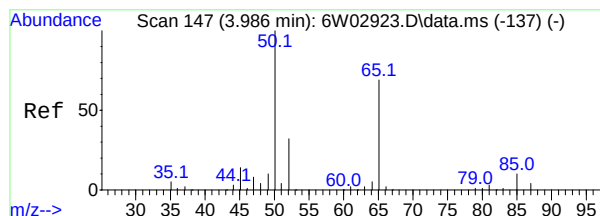
Tgt Ion: 41	Resp: 28958		
Ion Ratio	Lower	Upper	
41	100		
42	47.7	45.4	84.4
40	20.4	17.4	32.2
39	100.0	49.4	91.8#



#7
 Dichlorodifluoromethane
 Concen: 0.72 ppb(v)
 RT: 3.858 min Scan# 126
 Delta R.T. 0.000 min
 Lab File: 6W03646.D
 Acq: 21 Dec 2017 1:29 am

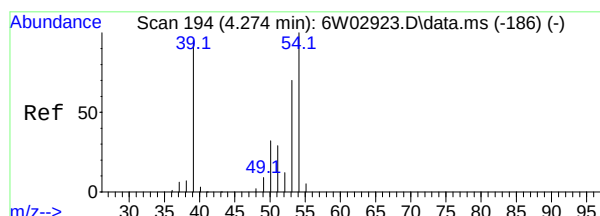
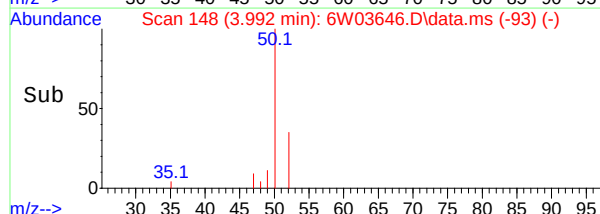
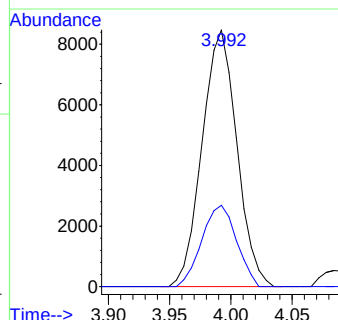
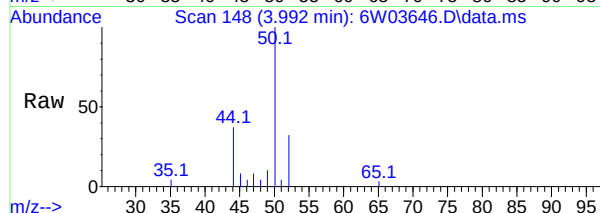
Tgt Ion: 85	Resp: 42885		
Ion Ratio	Lower	Upper	
85	100		
87	31.7	22.7	42.3
101	8.3	5.9	11.1
103	5.6	3.9	7.3





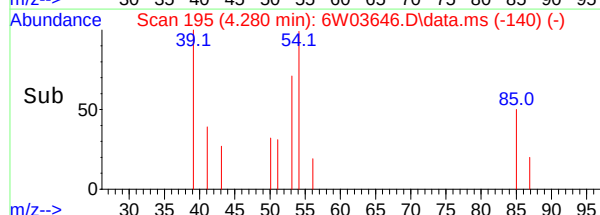
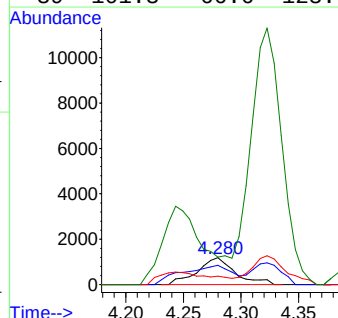
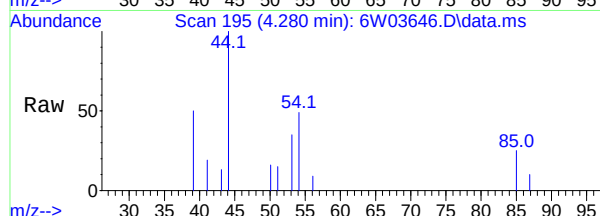
#9
Chloromethane
Concen: 0.87 ppb(v)
RT: 3.992 min Scan# 148
Delta R.T. 0.006 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

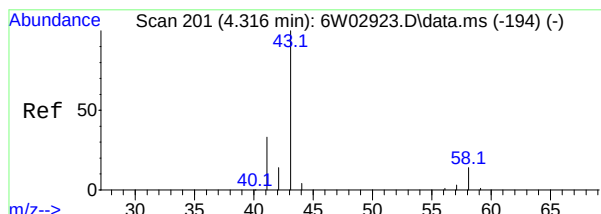
Tgt Ion: 50 Resp: 16692
Ion Ratio Lower Upper
50 100
52 31.7 22.7 42.1



#12
1,3-Butadiene
Concen: 0.16 ppb(v)
RT: 4.280 min Scan# 195
Delta R.T. 0.006 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

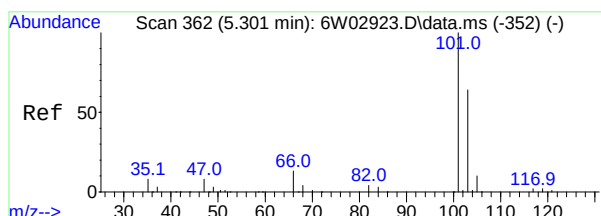
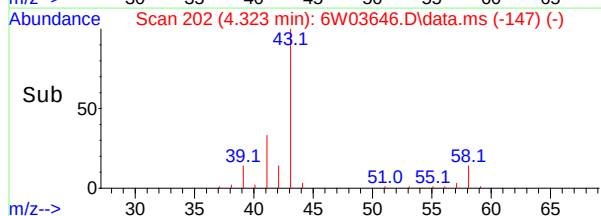
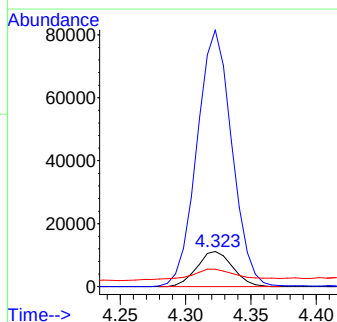
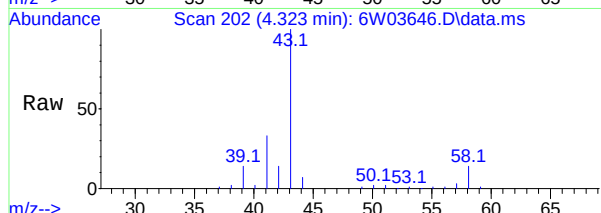
Tgt Ion: 54 Resp: 2688
Ion Ratio Lower Upper
54 100
53 71.9 49.1 91.1
51 31.5 20.5 38.1
39 101.3 66.6 123.6





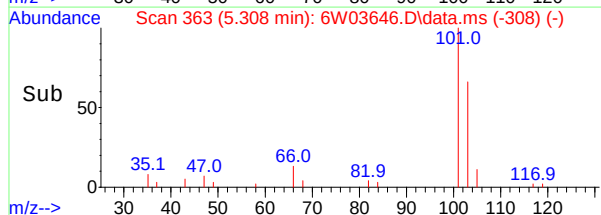
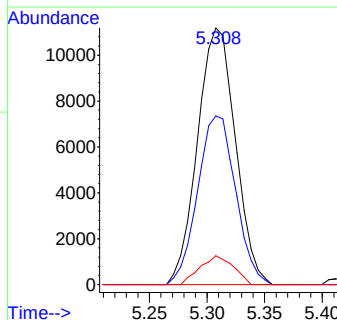
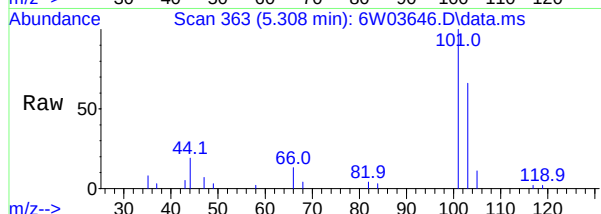
#13
n-Butane
Concen: 5.45 ppb(v)
RT: 4.323 min Scan# 202
Delta R.T. 0.006 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

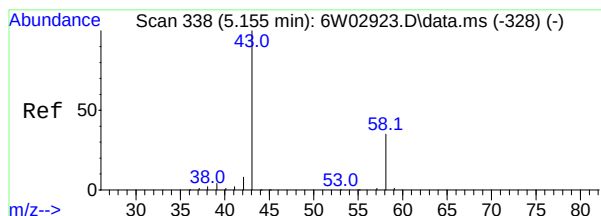
Tgt Ion: 58 Resp: 21286
Ion Ratio Lower Upper
58 100
43 728.0 499.8 928.2
44 49.3 21.1 39.1#



#21
Trichlorofluoromethane
Concen: 0.46 ppb(v)
RT: 5.308 min Scan# 363
Delta R.T. 0.006 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

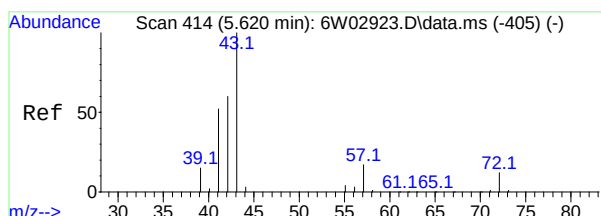
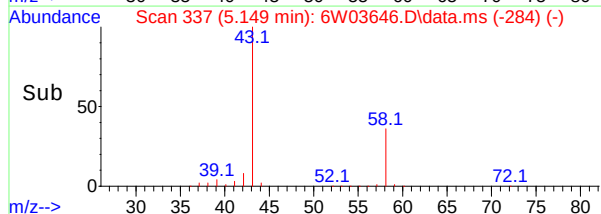
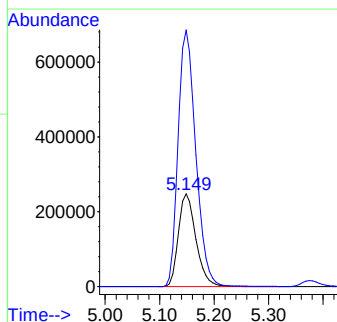
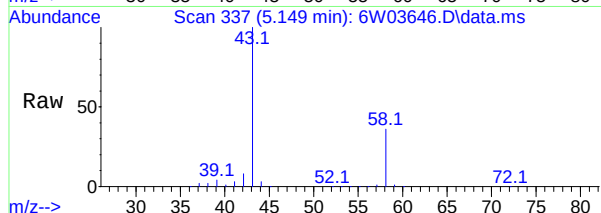
Tgt Ion: 101 Resp: 25600
Ion Ratio Lower Upper
101 100
103 65.8 45.1 83.9
105 11.3 7.3 13.5





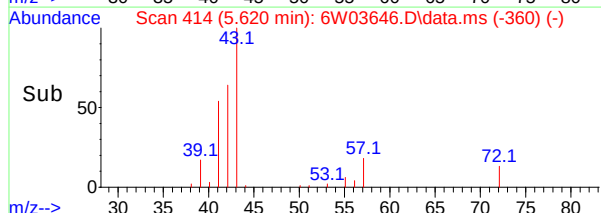
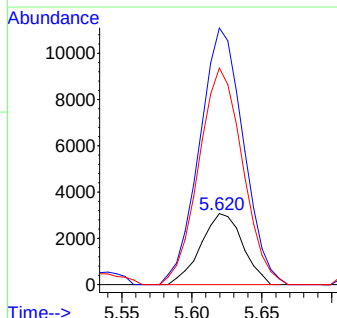
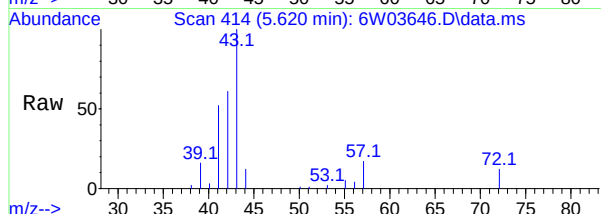
#22
Acetone
Concen: 46.21 ppb(v)
RT: 5.149 min Scan# 337
Delta R.T. -0.006 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

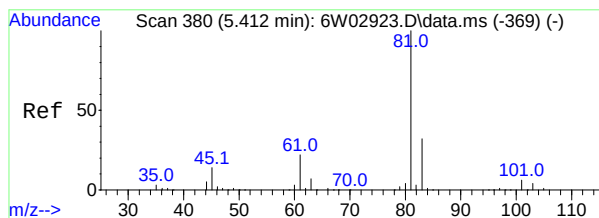
Tgt Ion: 58 Resp: 55506
Ion Ratio Lower Upper
58 100
43 276.2 202.4 375.8



#23
Pentane
Concen: 1.14 ppb(v)
RT: 5.620 min Scan# 414
Delta R.T. 0.000 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

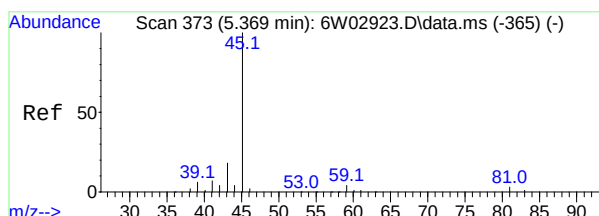
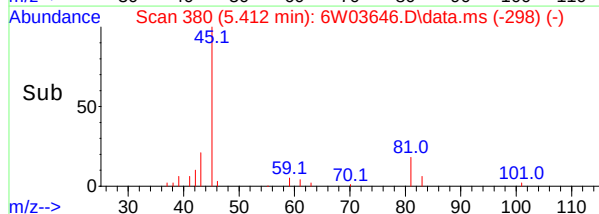
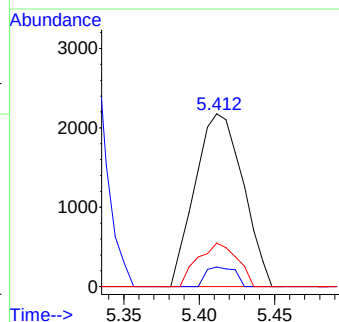
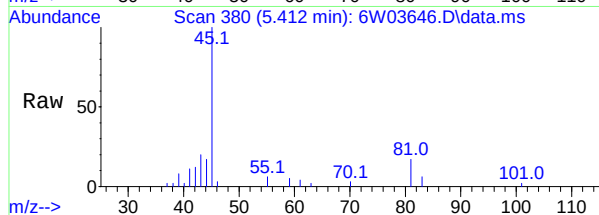
Tgt Ion: 57 Resp: 6419
Ion Ratio Lower Upper
57 100
42 361.4 252.4 468.8
41 304.8 218.7 406.1





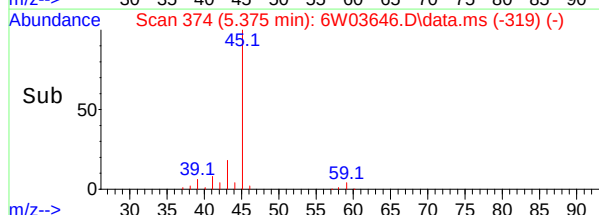
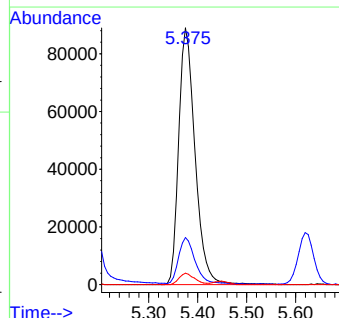
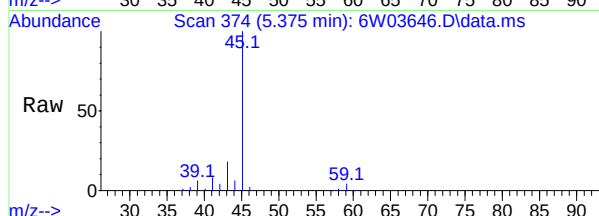
#24
1,1-Dichloro-1-fluoroethane
Concen: 0.10 ppb(v)
RT: 5.412 min Scan# 380
Delta R.T. 0.000 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

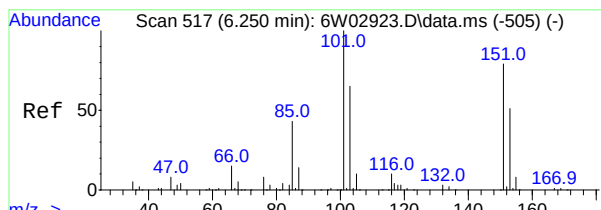
Tgt Ion: 81 Resp: 4820
Ion Ratio Lower Upper
81 100
101 0.0 8.0 12.0#
61 20.7 17.8 26.6



#26
Isopropyl Alcohol
Concen: 4.34 ppb(v)
RT: 5.375 min Scan# 374
Delta R.T. 0.006 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

Tgt Ion: 45 Resp: 206744
Ion Ratio Lower Upper
45 100
43 18.4 12.8 23.8
59 4.5 3.0 5.6

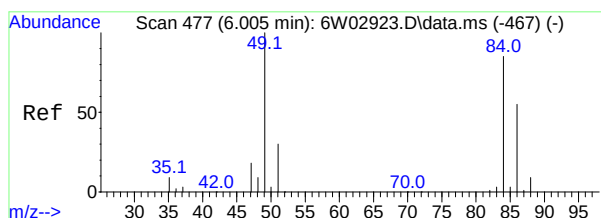
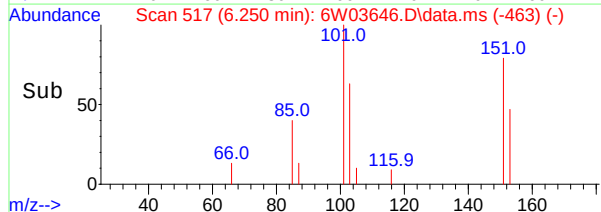
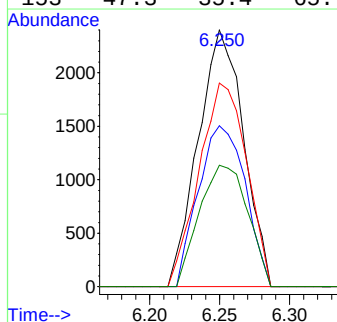
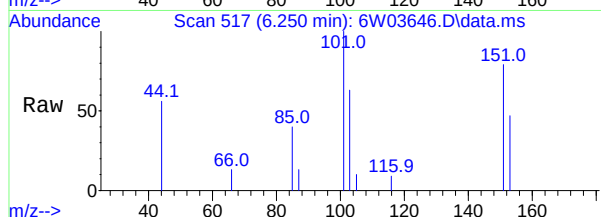




#28
 Freon 113
 Concen: 0.11 ppb(v)
 RT: 6.250 min Scan# 517
 Delta R.T. 0.000 min
 Lab File: 6W03646.D
 Acq: 21 Dec 2017 1:29 am

Tgt Ion: 101 Resp: 5427

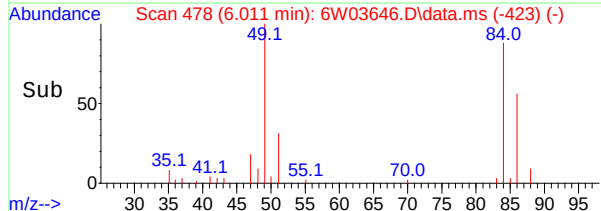
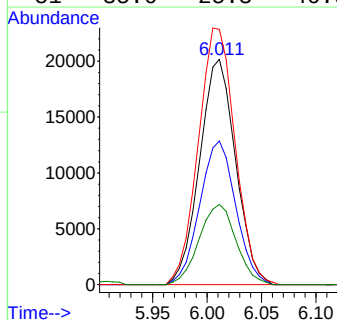
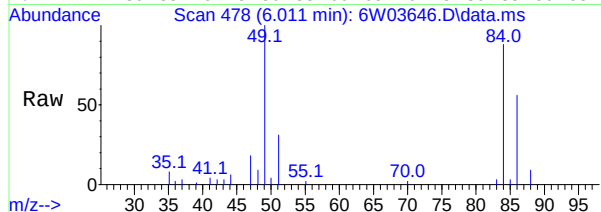
Ion	Ratio	Lower	Upper
101	100		
103	62.7	45.4	84.4
151	79.3	55.3	102.7
153	47.3	35.4	65.7

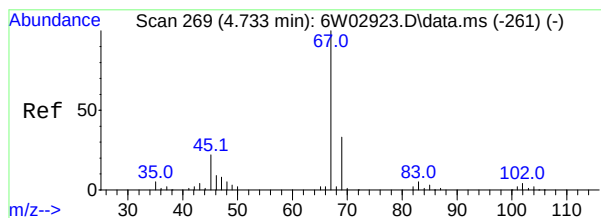


#29
 Methylene Chloride
 Concen: 1.90 ppb(v)
 RT: 6.011 min Scan# 478
 Delta R.T. 0.006 min
 Lab File: 6W03646.D
 Acq: 21 Dec 2017 1:29 am

Tgt Ion: 84 Resp: 46415

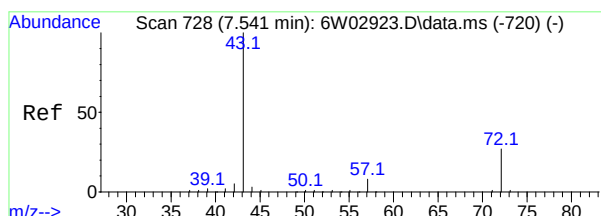
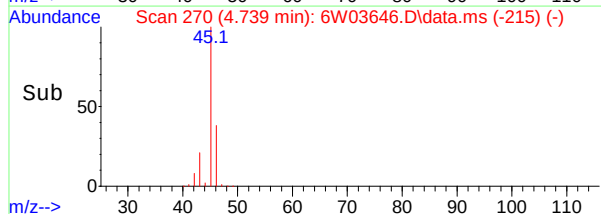
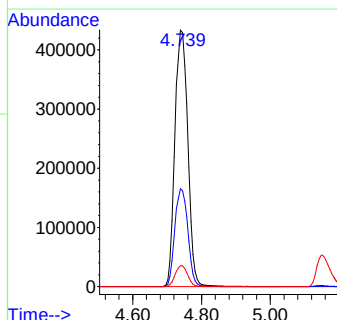
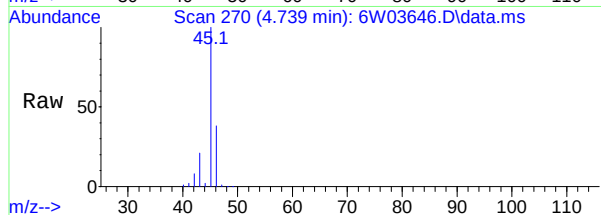
Ion	Ratio	Lower	Upper
84	100		
86	63.8	44.8	83.2
49	113.3	82.1	152.5
51	35.6	25.3	46.9





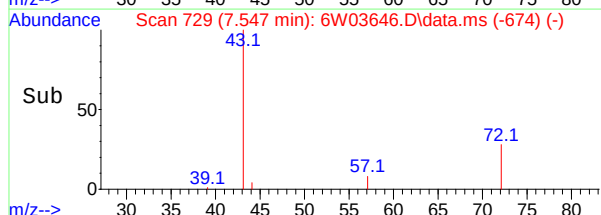
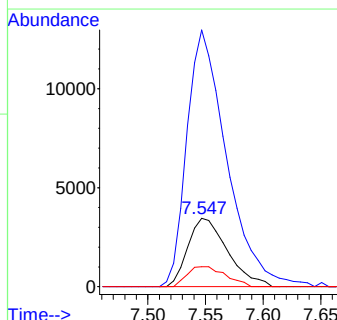
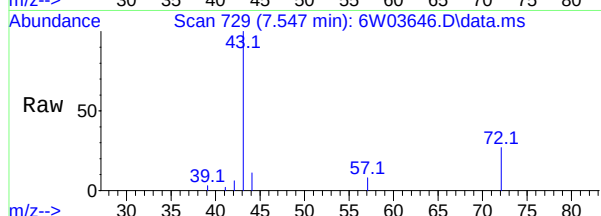
#31
Ethanol
Concen: 167.76 ppb(v)
RT: 4.739 min Scan# 270
Delta R.T. 0.006 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

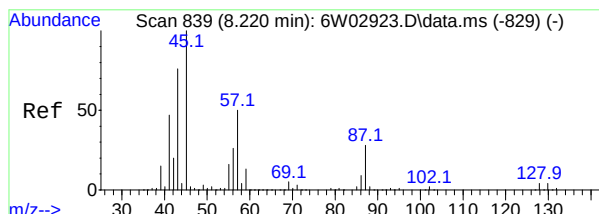
Tgt Ion: 45 Resp: 1136209
Ion Ratio Lower Upper
45 100
46 38.2 27.2 50.4
42 8.2 5.6 10.4



#39
2-Butanone
Concen: 0.67 ppb(v)
RT: 7.547 min Scan# 729
Delta R.T. 0.006 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

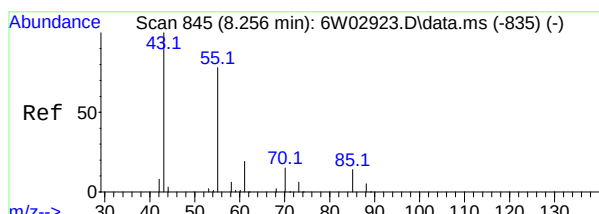
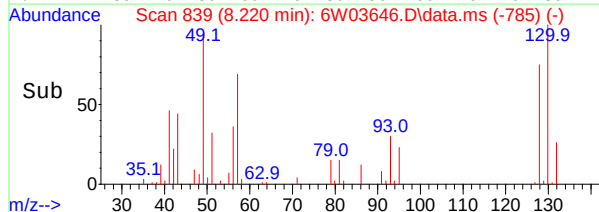
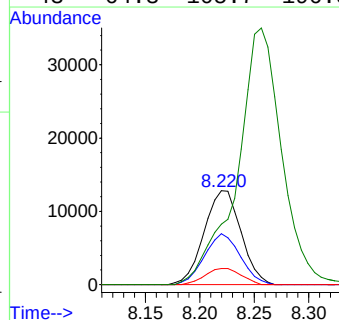
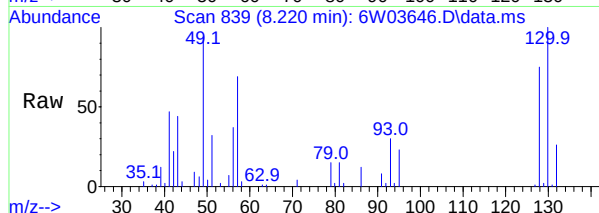
Tgt Ion: 72 Resp: 8271
Ion Ratio Lower Upper
72 100
43 375.1 257.4 478.0
57 29.1 21.0 39.0





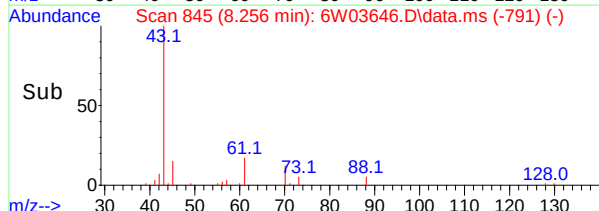
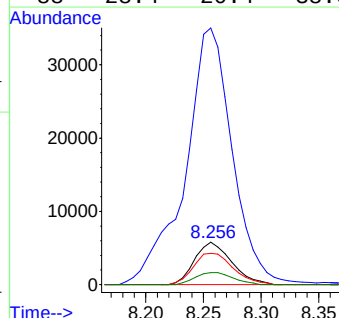
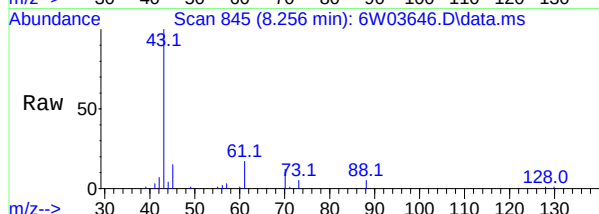
#40
Hexane
Concen: 0.79 ppb(v)
RT: 8.220 min Scan# 839
Delta R.T. 0.000 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

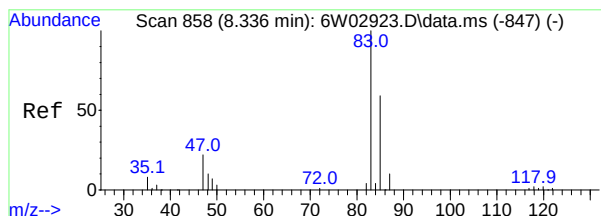
Tgt Ion: 57 Resp: 30244
Ion Ratio Lower Upper
57 100
56 54.3 36.0 67.0
86 17.2 12.1 22.5
43 64.3 105.7 196.3#



#43
Ethyl Acetate
Concen: 1.65 ppb(v)
RT: 8.256 min Scan# 845
Delta R.T. 0.000 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

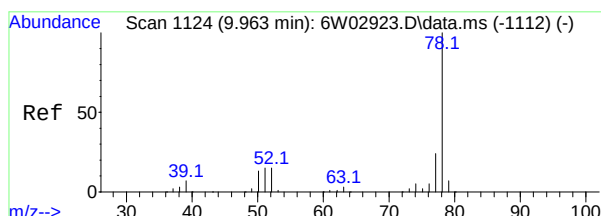
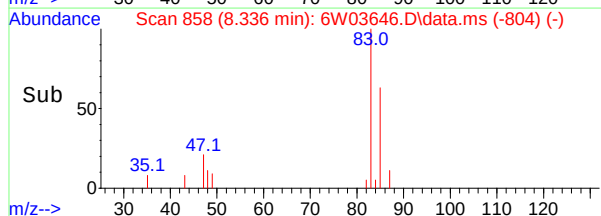
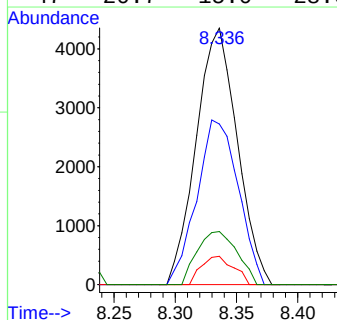
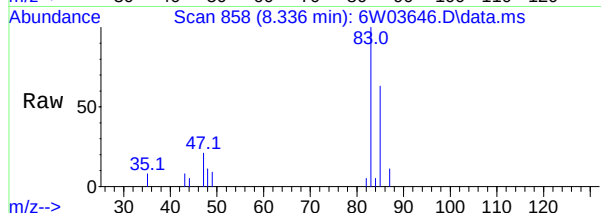
Tgt Ion: 61 Resp: 12941
Ion Ratio Lower Upper
61 100
43 603.2 488.5 907.1
70 73.6 54.9 101.9
88 28.4 20.4 38.0





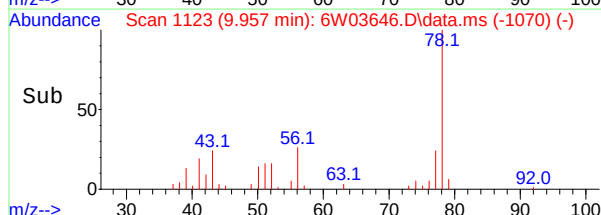
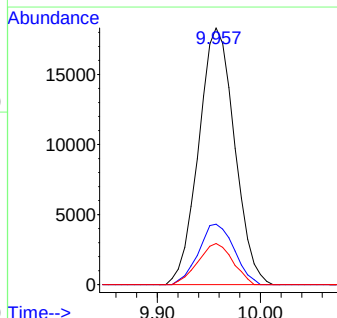
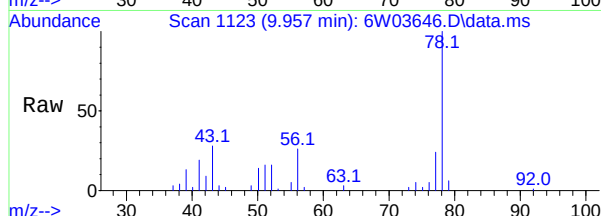
#45
Chloroform
Concen: 0.20 ppb(v)
RT: 8.336 min Scan# 858
Delta R.T. 0.000 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

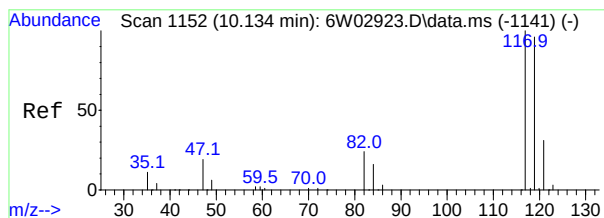
Tgt Ion:	83	Resp:	10154
Ion Ratio	Lower	Upper	
83	100		
85	62.5	45.2	84.0
87	11.1	7.3	13.7
47	20.7	15.0	28.0



#50
Benzene
Concen: 0.55 ppb(v)
RT: 9.957 min Scan# 1123
Delta R.T. -0.006 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

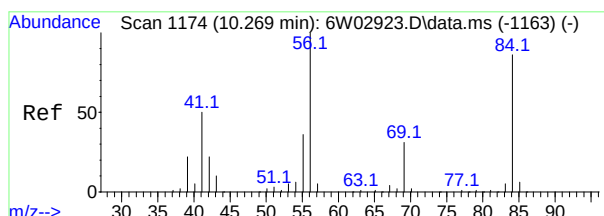
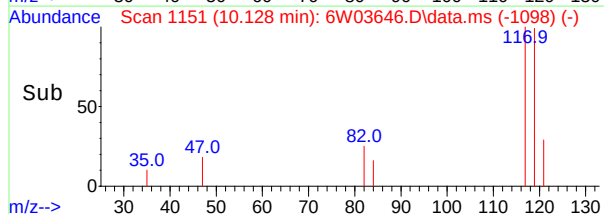
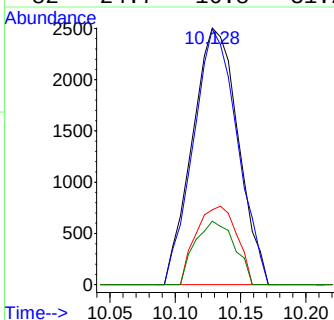
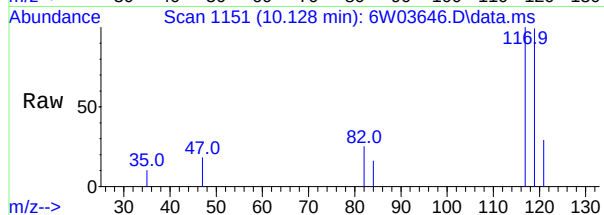
Tgt Ion:	78	Resp:	44272
Ion Ratio	Lower	Upper	
78	100		
77	23.6	16.6	30.8
51	16.0	10.6	19.6





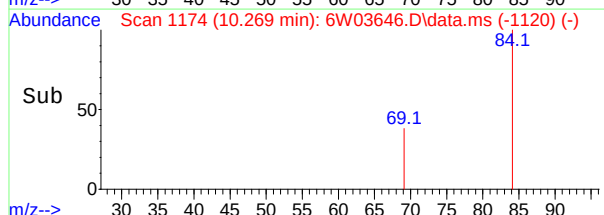
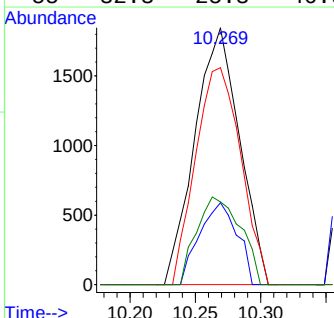
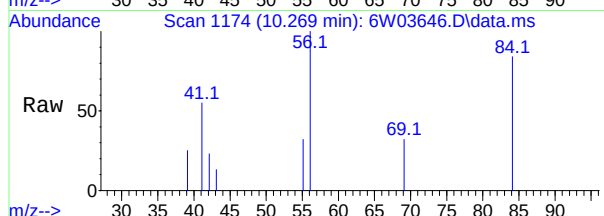
#51
Carbon Tetrachloride
Concen: 0.12 ppb(v)
RT: 10.128 min Scan# 1151
Delta R.T. -0.006 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

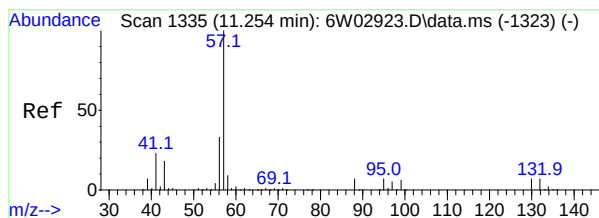
Tgt Ion: 117	Resp: 6117
Ion Ratio	Lower Upper
117	100
119	99.5 67.4 125.2
121	29.2 21.9 40.7
82	24.7 16.8 31.2



#52
Cyclohexane
Concen: 0.12 ppb(v)
RT: 10.269 min Scan# 1174
Delta R.T. 0.000 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

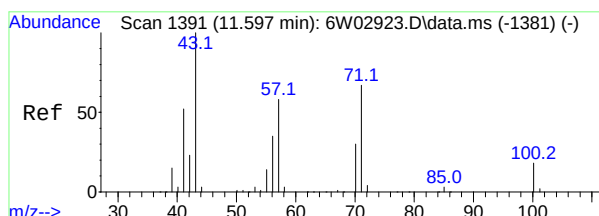
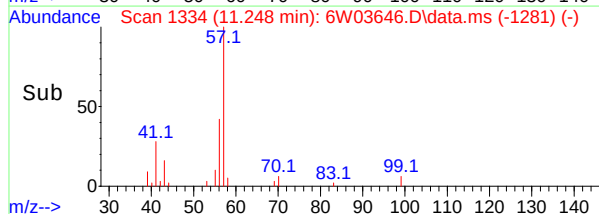
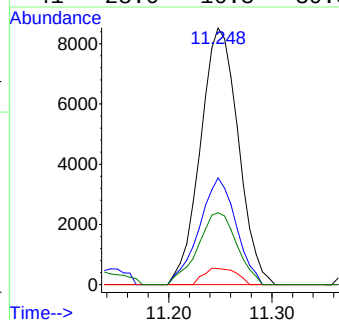
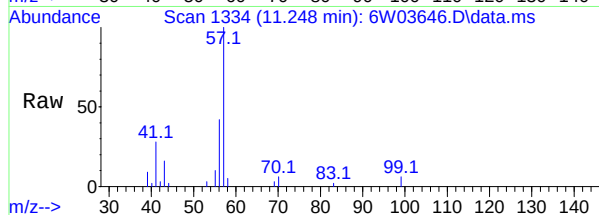
Tgt Ion: 56	Resp: 4400
Ion Ratio	Lower Upper
56	100
69	31.9 22.0 40.8
84	84.5 60.5 112.3
55	32.3 25.3 46.9





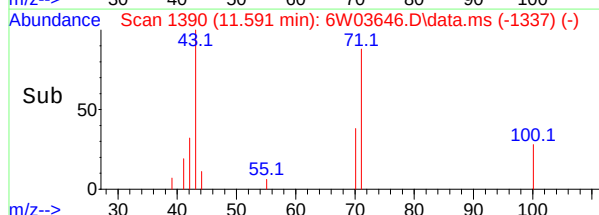
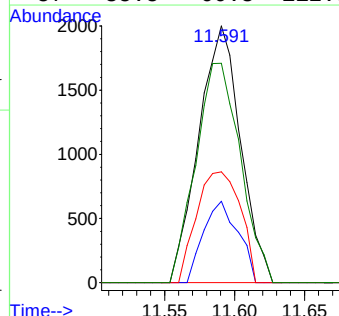
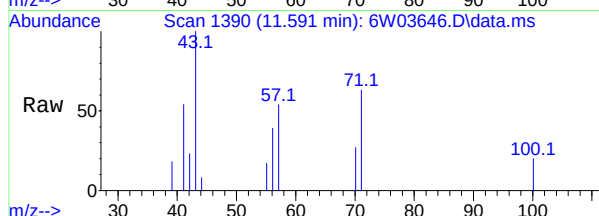
#55
2,2,4-Trimethylpentane
Concen: 0.18 ppb(v)
RT: 11.248 min Scan# 1334
Delta R.T. -0.006 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

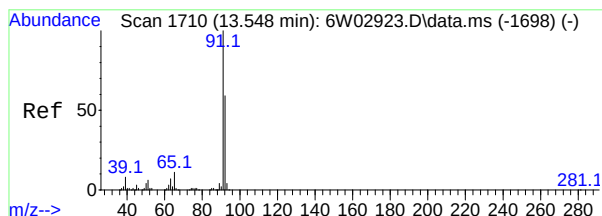
Tgt Ion:	57	Resp:	21740
Ion Ratio	Lower	Upper	
57	100		
56	41.6	23.0	42.8
99	6.2	4.5	8.3
41	28.0	16.3	30.3



#56
Heptane
Concen: 0.16 ppb(v)
RT: 11.591 min Scan# 1390
Delta R.T. -0.006 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

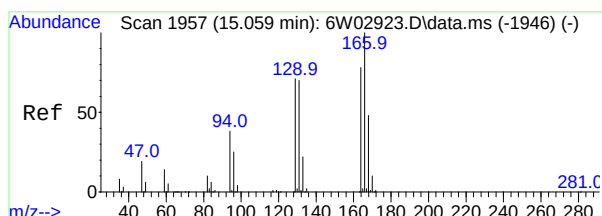
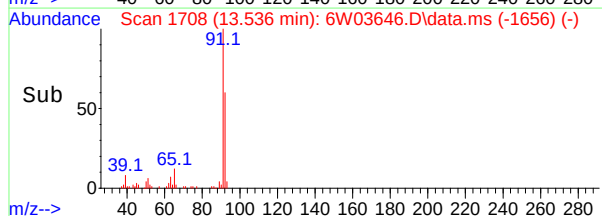
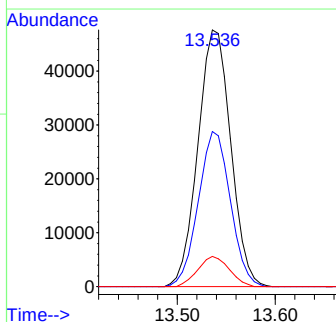
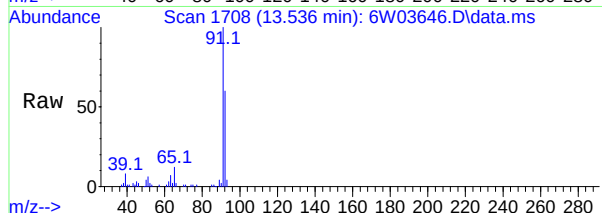
Tgt Ion:	71	Resp:	4168
Ion Ratio	Lower	Upper	
71	100		
100	31.7	20.9	38.7
70	43.1	32.1	59.5
57	85.5	60.8	112.8





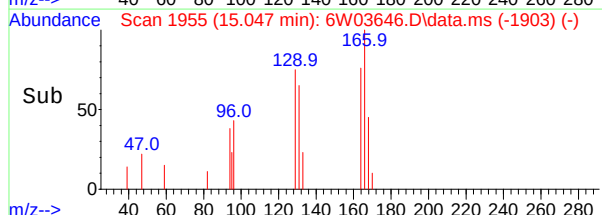
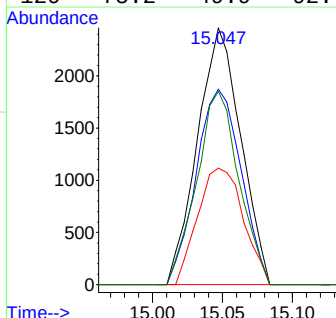
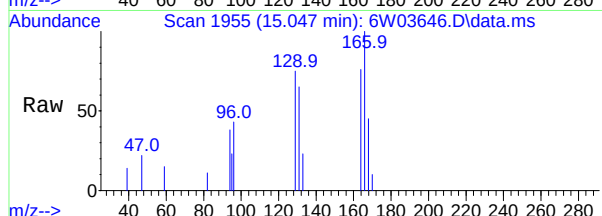
#67
Toluene
Concen: 1.17 ppb(v)
RT: 13.536 min Scan# 1708
Delta R.T. -0.012 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

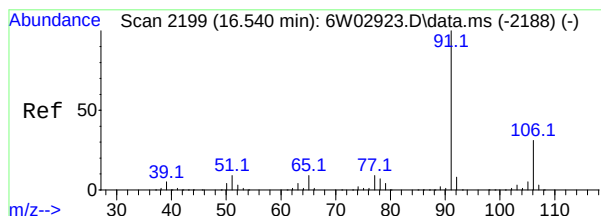
Tgt Ion:	91	Resp:	111164
Ion Ratio	Lower	Upper	
91	100		
92	60.4	41.0	76.2
65	11.8	7.8	14.4



#73
Tetrachloroethene
Concen: 0.11 ppb(v)
RT: 15.047 min Scan# 1955
Delta R.T. -0.012 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

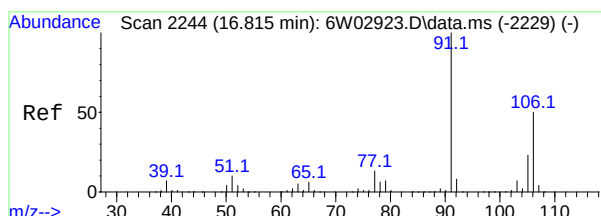
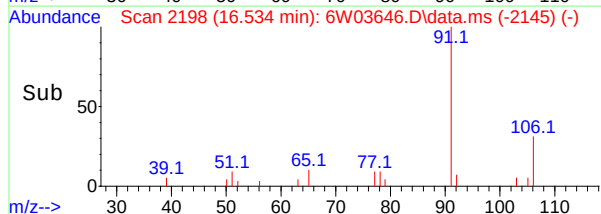
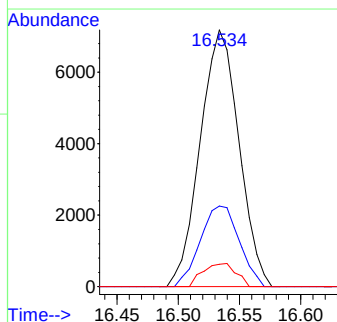
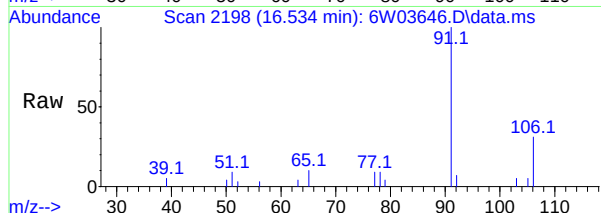
Tgt Ion:	166	Resp:	5311
Ion Ratio	Lower	Upper	
166	100		
164	76.1	54.5	101.1
168	45.4	33.9	62.9
129	75.2	49.9	92.7





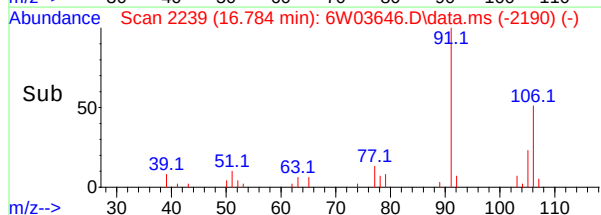
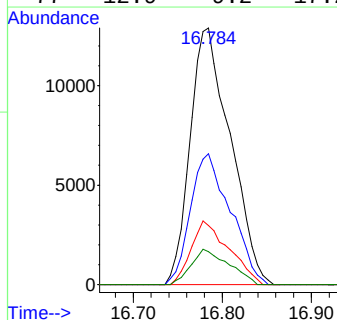
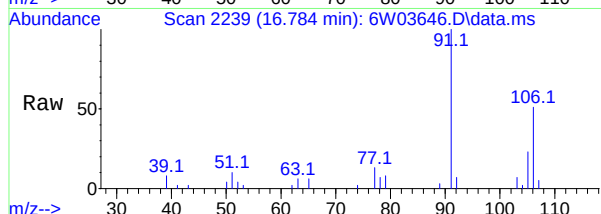
#79
Ethylbenzene
Concen: 0.15 ppb(v)
RT: 16.534 min Scan# 2198
Delta R.T. -0.006 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

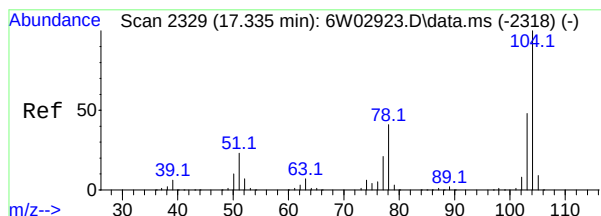
Tgt Ion: 91 Resp: 15812
Ion Ratio Lower Upper
91 100
106 31.4 22.0 41.0
77 8.7 6.0 11.2



#80
m,p-Xylene
Concen: 0.50 ppb(v)
RT: 16.784 min Scan# 2239
Delta R.T. -0.031 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

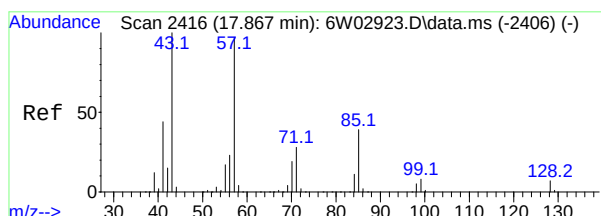
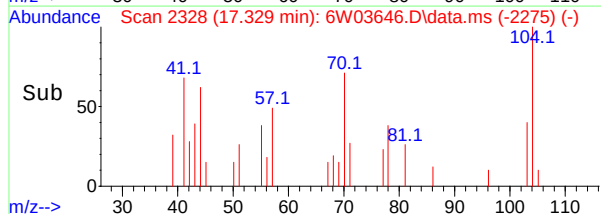
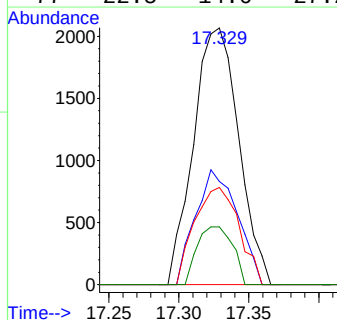
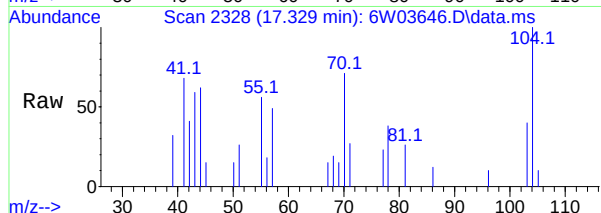
Tgt Ion: 91 Resp: 40458
Ion Ratio Lower Upper
91 100
106 51.0 35.1 65.3
105 23.0 16.0 29.8
77 12.9 9.2 17.2





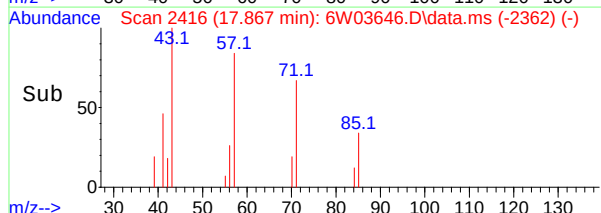
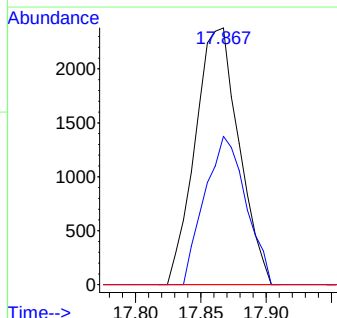
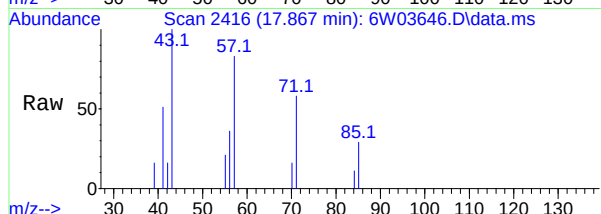
#81
Styrene
Concen: 0.09 ppb(v)
RT: 17.329 min Scan# 2328
Delta R.T. -0.006 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

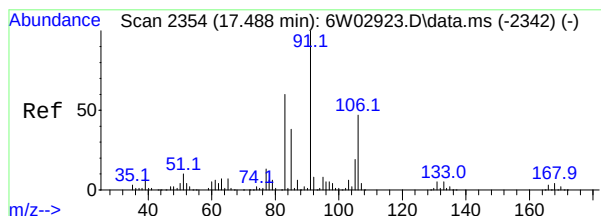
Tgt Ion: 104 Resp: 4653
Ion Ratio Lower Upper
104 100
103 40.1 33.4 62.0
78 37.8 28.8 53.4
77 22.5 14.6 27.2



#82
Nonane
Concen: 0.11 ppb(v)
RT: 17.867 min Scan# 2416
Delta R.T. 0.000 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

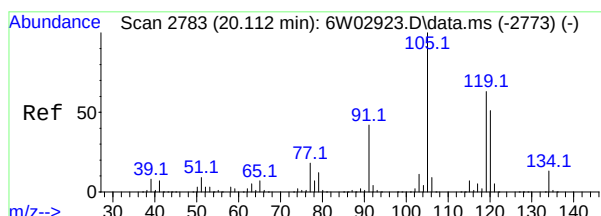
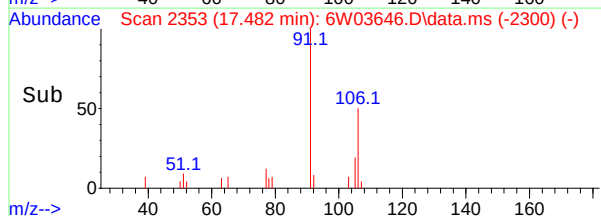
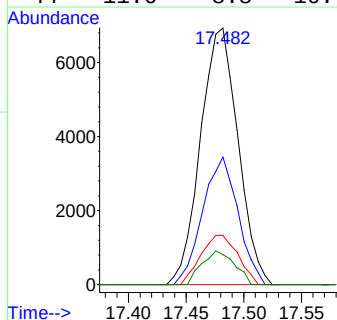
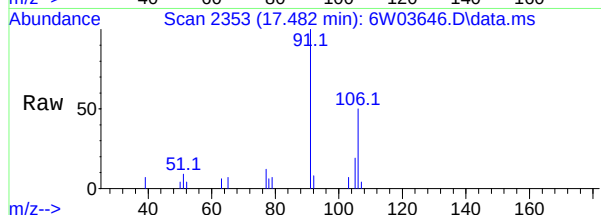
Tgt Ion: 43 Resp: 5554
Ion Ratio Lower Upper
43 100
71 57.7 19.5 36.3#
128 0.0 4.6 8.6#





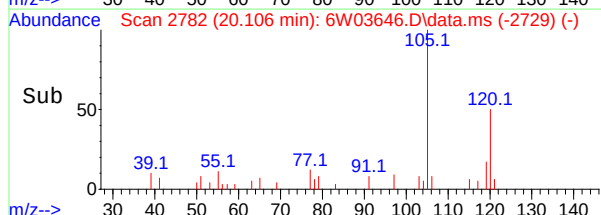
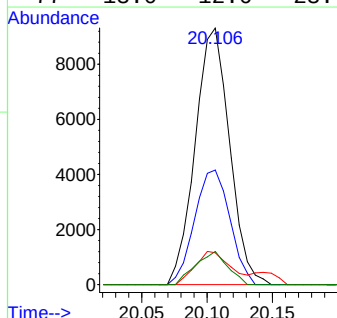
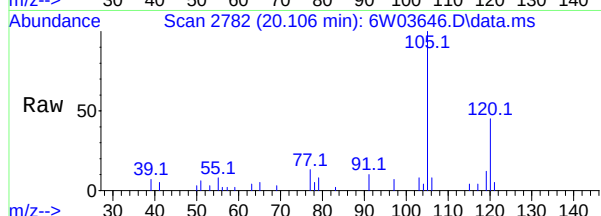
#83
o-Xylene
Concen: 0.19 ppb(v)
RT: 17.482 min Scan# 2353
Delta R.T. -0.006 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

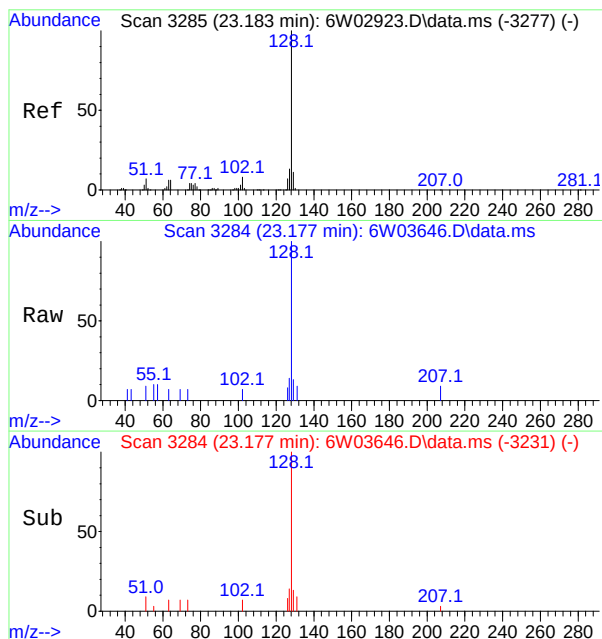
Tgt Ion:	91	Resp:	15669
Ion Ratio	Lower	Upper	
91	100		
106	49.7	33.2	61.6
105	19.2	13.4	25.0
77	11.6	8.8	16.4



#96
1,2,4-Trimethylbenzene
Concen: 0.21 ppb(v)
RT: 20.106 min Scan# 2782
Delta R.T. -0.006 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

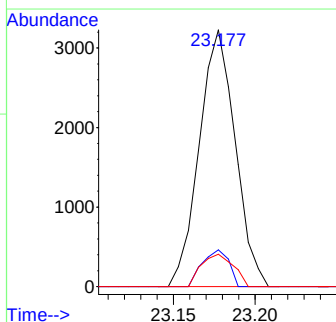
Tgt Ion:	105	Resp:	17093
Ion Ratio	Lower	Upper	
105	100		
120	44.6	35.7	66.3
119	12.4	44.4	82.4#
77	13.0	12.6	23.4





#106
Naphthalene
Concen: 0.12 ppb(v)
RT: 23.177 min Scan# 3284
Delta R.T. -0.006 min
Lab File: 6W03646.D
Acq: 21 Dec 2017 1:29 am

Tgt Ion:128 Resp: 4948
Ion Ratio Lower Upper
128 100
127 14.3 8.8 16.3
129 12.6 7.6 14.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03669.D
 Acq On : 21 Dec 2017 11:51 pm
 Operator : DANAT
 Sample : jc56815-3
 Misc : MS22955,V6W106,100,,,,,1.65
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Dec 22 14:54:56 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

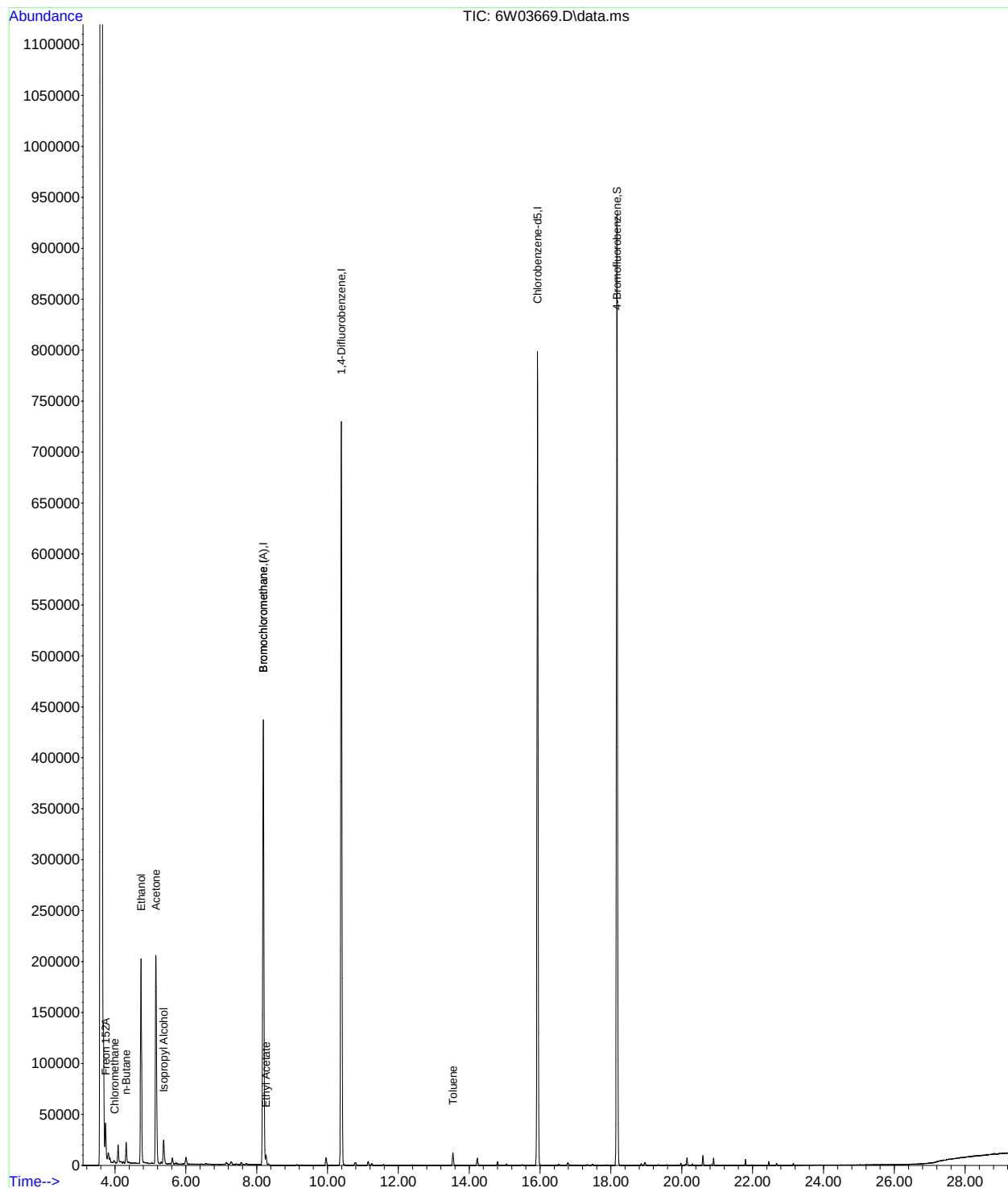
Internal Standards						
1) Bromochloromethane	8.189	130	211031	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.391	114	779084	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.928	82	340287	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.189	130	211031	10.00	ppb(v	0.00
System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.173	95	447016	10.19	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	101.90%
Target Compounds						
					Qvalue	
3) Freon 152A	3.735	65	18570	1.36	ppb(v	99
9) Chloromethane	3.986	50	1663	0.10	ppb(v	95
13) n-Butane	4.317	58	2756	0.79	ppb(v#	83
22) Acetone	5.155	58	104554	9.76	ppb(v	90
26) Isopropyl Alcohol	5.375	45	35690	0.84	ppb(v	97
31) Ethanol	4.733	45	256519	42.51	ppb(v	99
43) Ethyl Acetate	8.263	61	1960	0.28	ppb(v	65
67) Toluene	13.542	91	13492	0.16	ppb(v	97

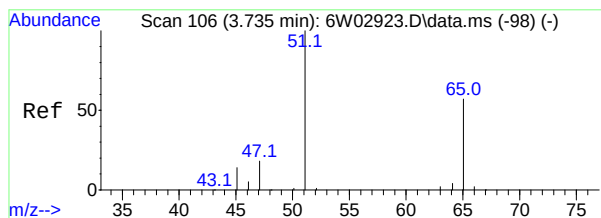
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W03669.D
Acq On : 21 Dec 2017 11:51 pm
Operator : DANAT
Sample : jc56815-3
Misc : MS22955,V6W106,100,,,,,1.65
ALS Vial : 12 Sample Multiplier: 1

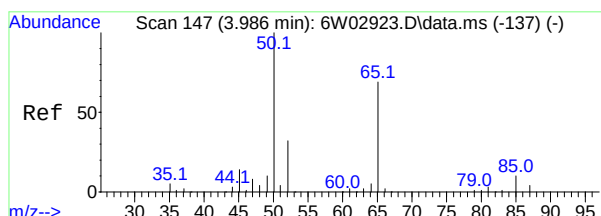
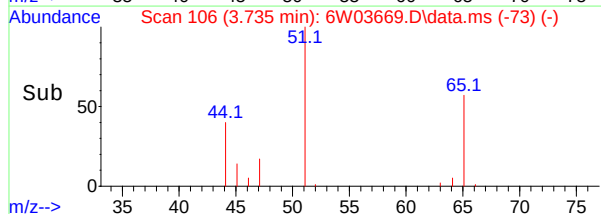
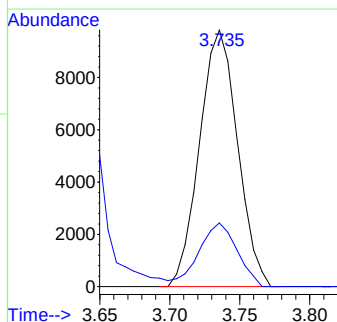
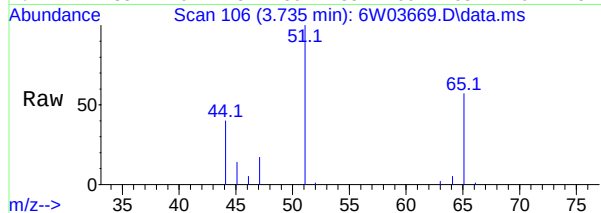
Quant Time: Dec 22 14:54:56 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration





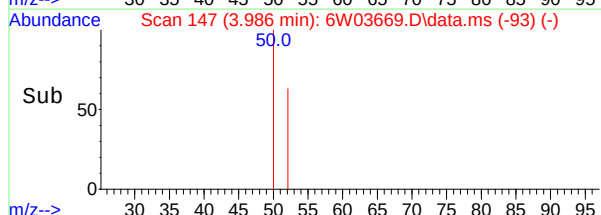
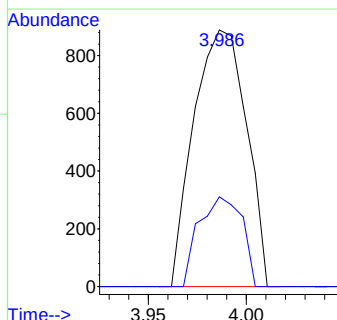
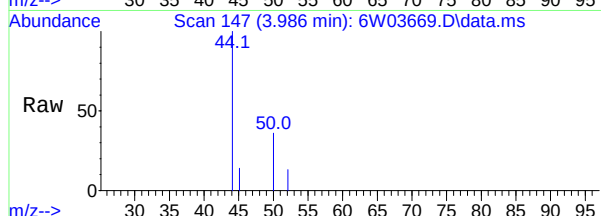
#3
Freon 152A
Concen: 1.36 ppb(v)
RT: 3.735 min Scan# 106
Delta R.T. 0.000 min
Lab File: 6W03669.D
Acq: 21 Dec 2017 11:51 pm

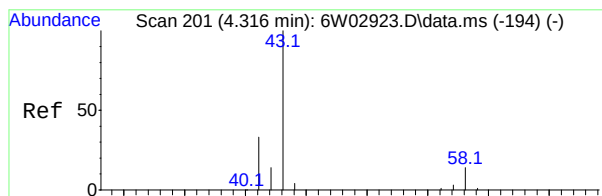
Tgt Ion: 65 Resp: 18570
Ion Ratio Lower Upper
65 100
45 24.8 16.9 31.5



#9
Chloromethane
Concen: 0.10 ppb(v)
RT: 3.986 min Scan# 147
Delta R.T. 0.000 min
Lab File: 6W03669.D
Acq: 21 Dec 2017 11:51 pm

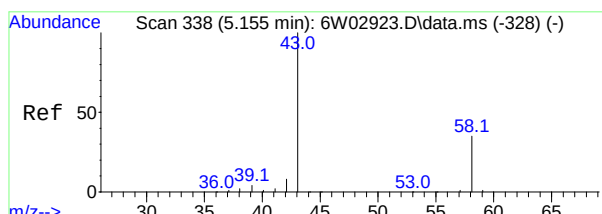
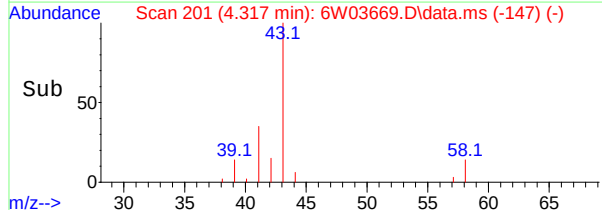
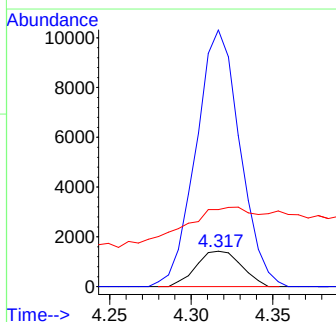
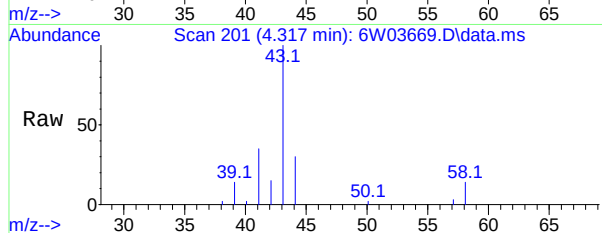
Tgt Ion: 50 Resp: 1663
Ion Ratio Lower Upper
50 100
52 35.0 22.7 42.1





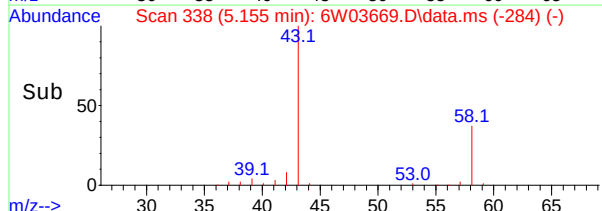
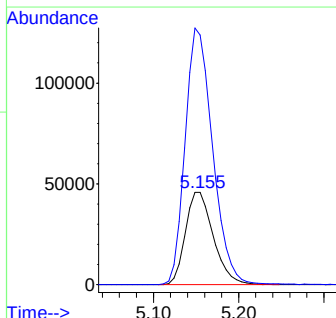
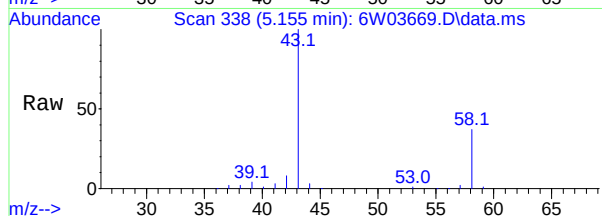
#13
n-Butane
Concen: 0.79 ppb(v)
RT: 4.317 min Scan# 201
Delta R.T. 0.000 min
Lab File: 6W03669.D
Acq: 21 Dec 2017 11:51 pm

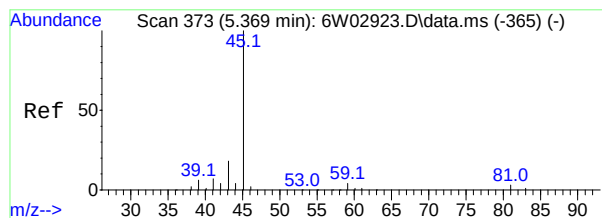
Tgt Ion: 58 Resp: 2756
Ion Ratio Lower Upper
58 100
43 726.0 499.8 928.2
44 218.0 21.1 39.1#



#22
Acetone
Concen: 9.76 ppb(v)
RT: 5.155 min Scan# 338
Delta R.T. 0.000 min
Lab File: 6W03669.D
Acq: 21 Dec 2017 11:51 pm

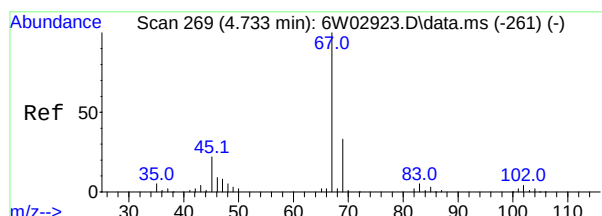
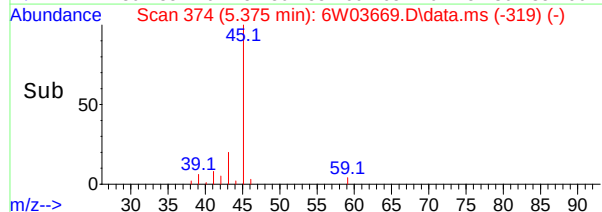
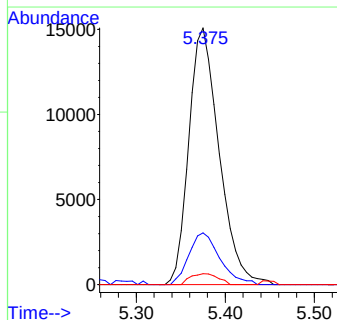
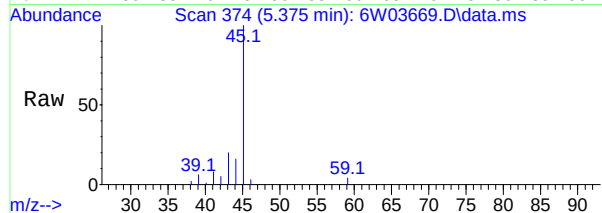
Tgt Ion: 58 Resp: 104554
Ion Ratio Lower Upper
58 100
43 270.6 202.4 375.8





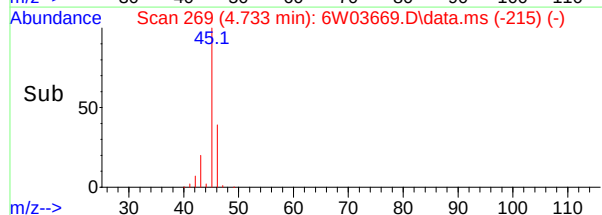
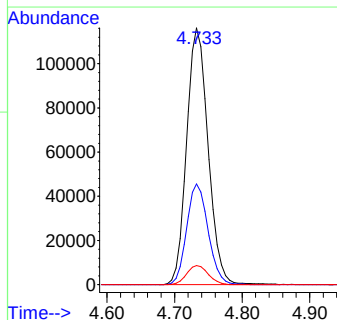
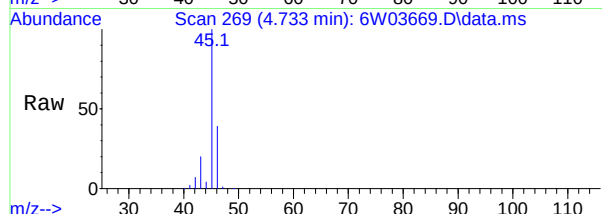
#26
Isopropyl Alcohol
Concen: 0.84 ppb(v)
RT: 5.375 min Scan# 374
Delta R.T. 0.006 min
Lab File: 6W03669.D
Acq: 21 Dec 2017 11:51 pm

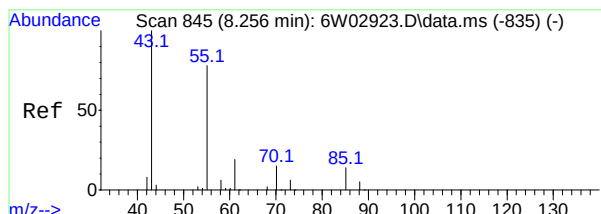
Tgt Ion: 45 Resp: 35690
Ion Ratio Lower Upper
45 100
43 20.1 12.8 23.8
59 4.3 3.0 5.6



#31
Ethanol
Concen: 42.51 ppb(v)
RT: 4.733 min Scan# 269
Delta R.T. 0.000 min
Lab File: 6W03669.D
Acq: 21 Dec 2017 11:51 pm

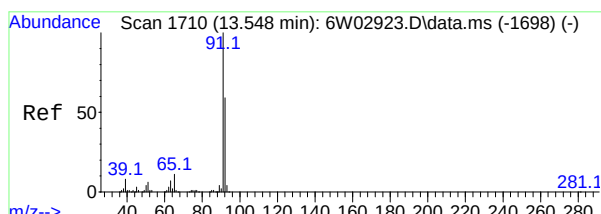
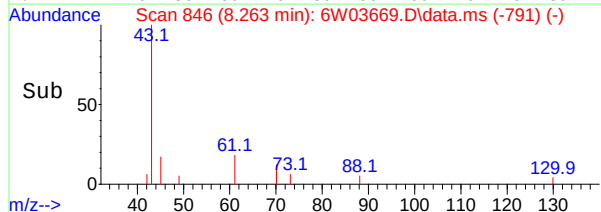
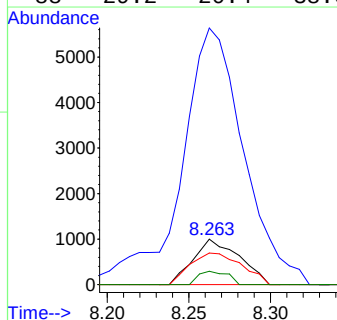
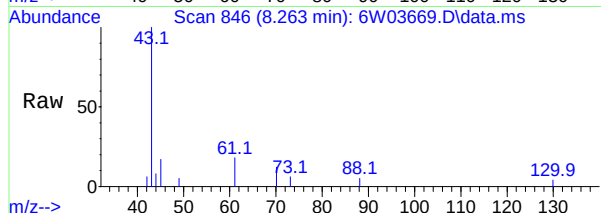
Tgt Ion: 45 Resp: 256519
Ion Ratio Lower Upper
45 100
46 39.2 27.2 50.4
42 7.5 5.6 10.4





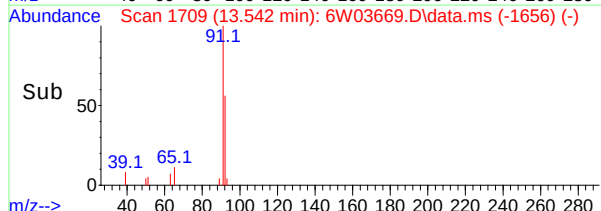
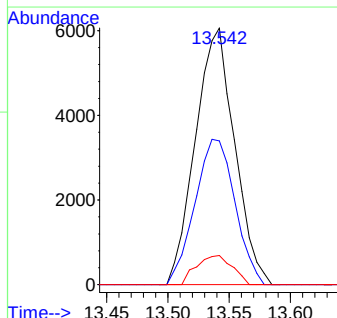
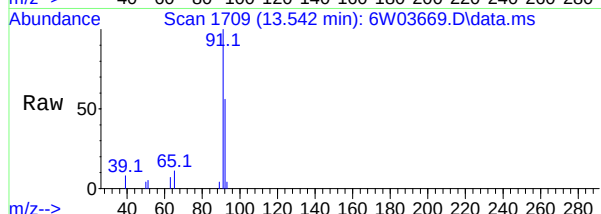
#43
Ethyl Acetate
Concen: 0.28 ppb(v)
RT: 8.263 min Scan# 846
Delta R.T. 0.006 min
Lab File: 6W03669.D
Acq: 21 Dec 2017 11:51 pm

Tgt Ion: 61 Resp: 1960
Ion Ratio Lower Upper
61 100
43 562.9 488.5 907.1
70 69.1 54.9 101.9
88 29.2 20.4 38.0



#67
Toluene
Concen: 0.16 ppb(v)
RT: 13.542 min Scan# 1709
Delta R.T. -0.006 min
Lab File: 6W03669.D
Acq: 21 Dec 2017 11:51 pm

Tgt Ion: 91 Resp: 13492
Ion Ratio Lower Upper
91 100
92 55.9 41.0 76.2
65 11.4 7.8 14.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03640.D
 Acq On : 20 Dec 2017 7:22 pm
 Operator : DANAT
 Sample : jc56815-4
 Misc : MS22955,V6W105,680,,,1.7
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 21 17:02:31 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.201	130	213170	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.397	114	793793	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.928	82	366496	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.201	130	213170	10.00	ppb(v	0.00

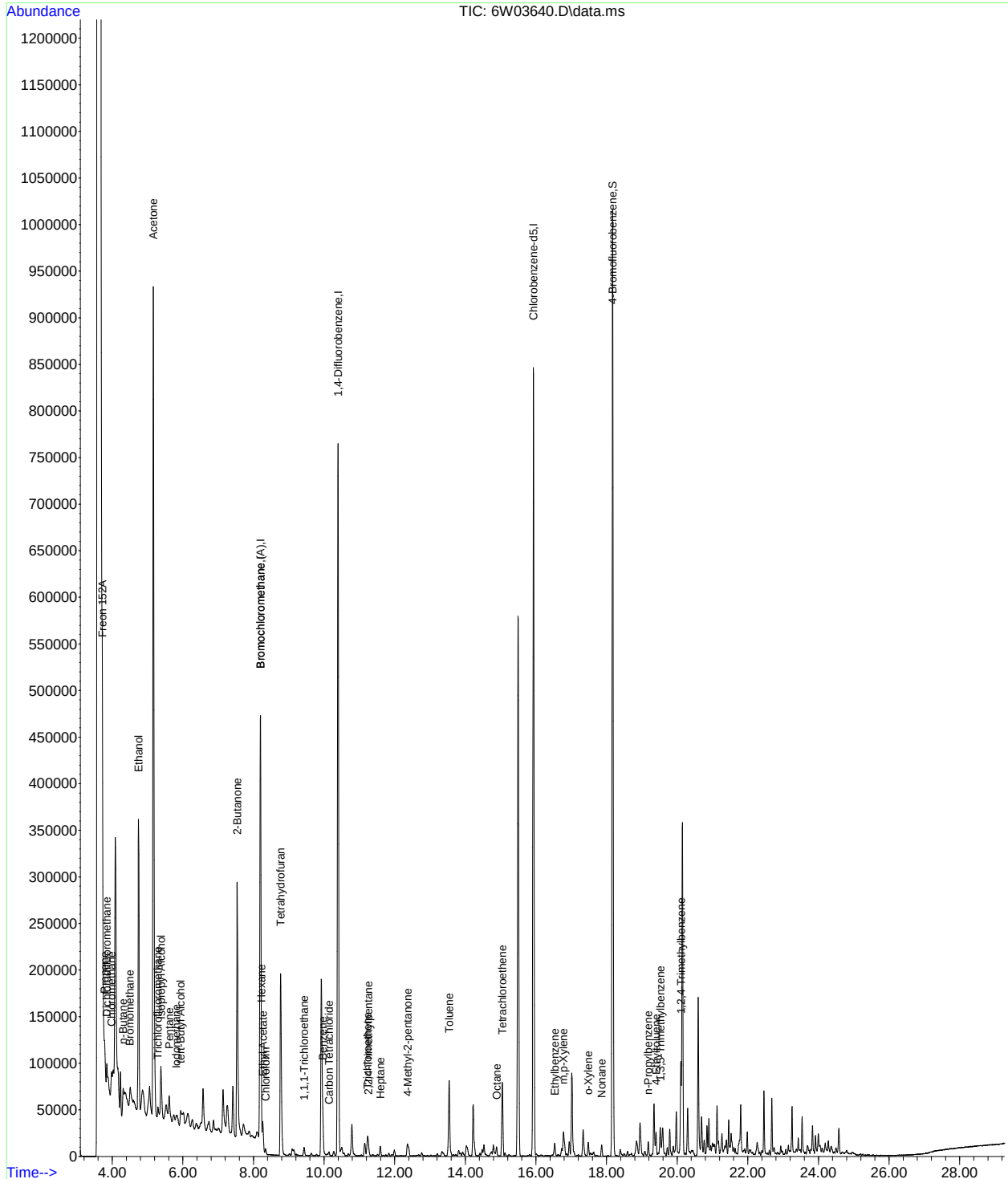
System Monitoring Compounds
 91) 4-Bromofluorobenzene 18.173 95 485131 10.27 ppb(v 0.00
 Spiked Amount 10.000 Range 65 - 128 Recovery = 102.70%

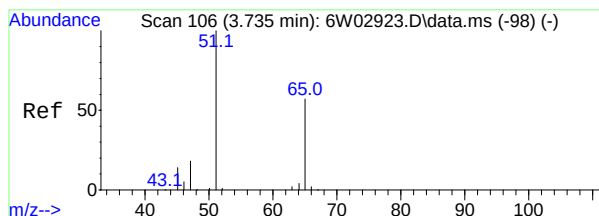
Target Compounds					Qvalue	
3) Freon 152A	3.723	65	101066	7.30	ppb(v	93
5) Propene	3.784	41	13993	0.92	ppb(v	98
7) Dichlorodifluoromethane	3.845	85	14321	0.27	ppb(v	98
9) Chloromethane	3.974	50	19033	1.11	ppb(v	100
13) n-Butane	4.304	58	1875	0.53	ppb(v#	1
14) Bromomethane	4.494	94	1942	0.11	ppb(v#	90
21) Trichlorofluoromethane	5.295	101	10447	0.21	ppb(v	97
22) Acetone	5.161	58	441795	40.84	ppb(v	94
23) Pentane	5.613	57	2413	0.48	ppb(v	95
25) Iodomethane	5.809	142	8156	0.14	ppb(v	99
26) Isopropyl Alcohol	5.381	45	69126	1.61	ppb(v	98
31) Ethanol	4.745	45	368548	60.46	ppb(v	99
35) tert-Butyl Alcohol	5.938	59	18221	0.44	ppb(v	92
39) 2-Butanone	7.541	72	112228	10.10	ppb(v	94
40) Hexane	8.226	57	7804	0.23	ppb(v#	50
43) Ethyl Acetate	8.269	61	7504	1.06	ppb(v	80
45) Chloroform	8.342	83	5810	0.13	ppb(v	98
47) Tetrahydrofuran	8.770	72	72883	7.36	ppb(v	96
48) 1,1,1-Trichloroethane	9.437	97	5422	0.13	ppb(v	98
50) Benzene	9.963	78	30818	0.43	ppb(v	96
51) Carbon Tetrachloride	10.141	117	3360	0.07	ppb(v	95
55) 2,2,4-Trimethylpentane	11.254	57	13995	0.13	ppb(v#	86
56) Heptane	11.597	71	3176	0.13	ppb(v	96
57) Trichloroethene	11.229	95	7141	0.23	ppb(v	98
65) 4-Methyl-2-pentanone	12.361	58	4008	0.21	ppb(v	81
67) Toluene	13.542	91	77994	0.90	ppb(v	100
73) Tetrachloroethene	15.047	166	31315	0.72	ppb(v	99
75) Octane	14.888	43	5439	0.11	ppb(v	97
79) Ethylbenzene	16.534	91	12363	0.12	ppb(v	99
80) m,p-Xylene	16.778	91	29862	0.38	ppb(v	98
82) Nonane	17.861	43	5726	0.11	ppb(v#	90
83) o-Xylene	17.482	91	12933	0.17	ppb(v	97
90) n-Propylbenzene	19.176	120	3650	0.13	ppb(v	94
92) 4-Ethyltoluene	19.403	105	18015	0.18	ppb(v	98
93) 1,3,5-Trimethylbenzene	19.525	105	19123	0.23	ppb(v	98
96) 1,2,4-Trimethylbenzene	20.106	105	62667	0.79	ppb(v#	65

(#) = qualifier out of range (m) = manual integration (+) = signals summed

```
Data Path : C:\msdchem\1\data\  
Data File : 6W03640.D  
Acq On : 20 Dec 2017 7:22 pm  
Operator : DANAT  
Sample : jc56815-4  
Misc : MS22955,V6W105,680,,,,,1.7  
ALS Vial : 6 Sample Multiplier: 1
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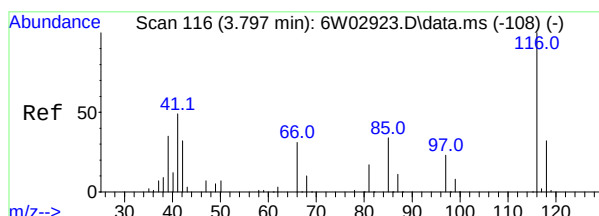
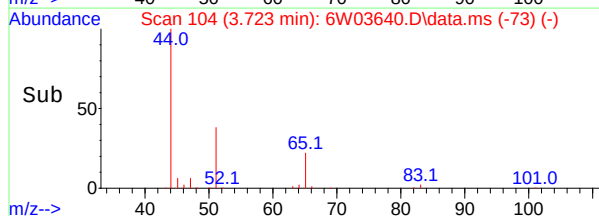
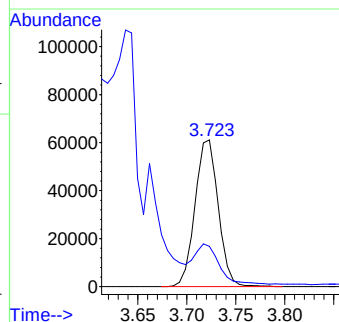
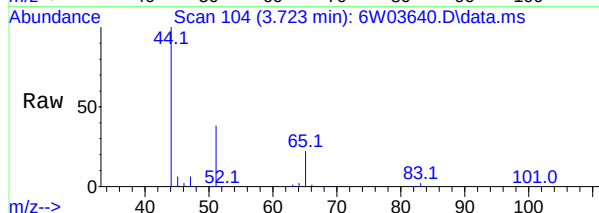
Quant Time: Dec 21 17:02:31 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration





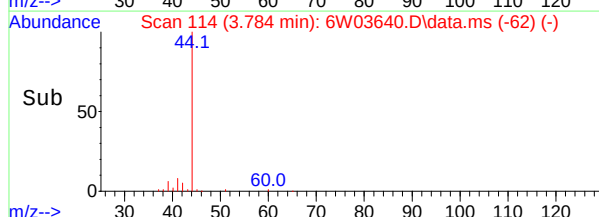
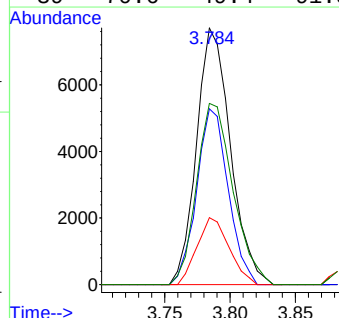
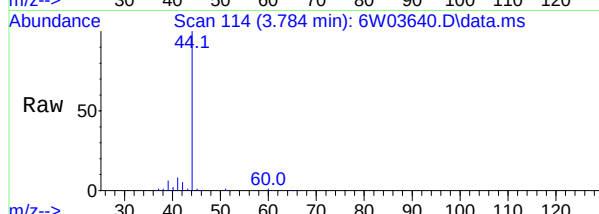
#3
Freon 152A
Concen: 7.30 ppb(v)
RT: 3.723 min Scan# 104
Delta R.T. -0.012 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

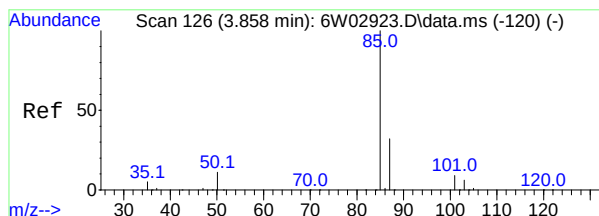
Tgt Ion: 65 Resp: 101066
Ion Ratio Lower Upper
65 100
45 27.5 16.9 31.5



#5
Propene
Concen: 0.92 ppb(v)
RT: 3.784 min Scan# 114
Delta R.T. -0.012 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

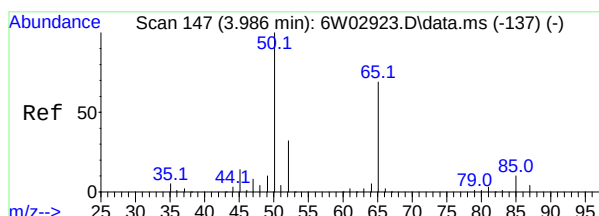
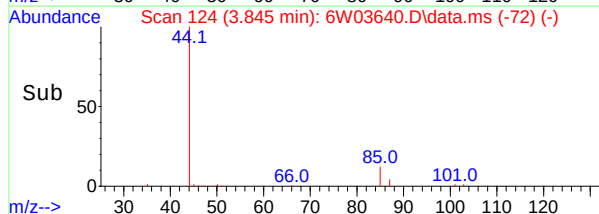
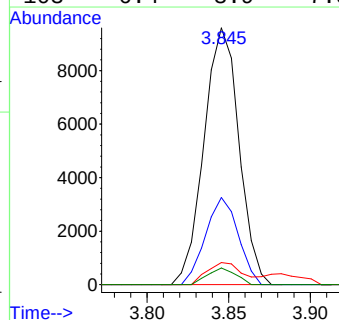
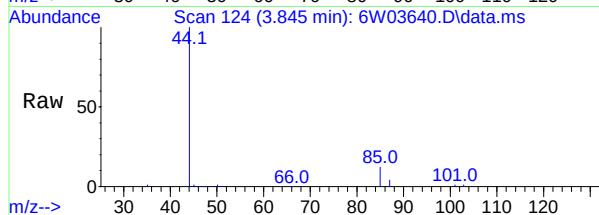
Tgt Ion: 41 Resp: 13993
Ion Ratio Lower Upper
41 100
42 68.5 45.4 84.4
40 26.1 17.4 32.2
39 70.6 49.4 91.8





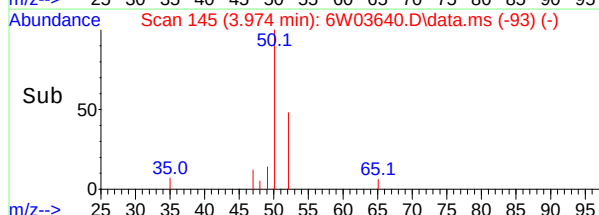
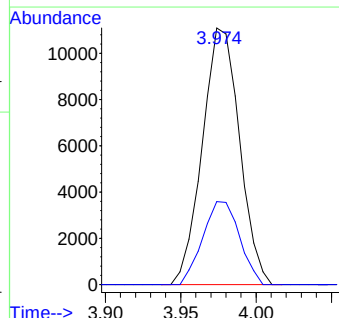
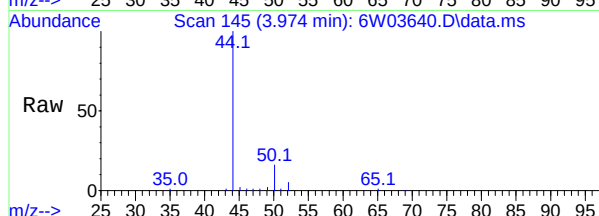
#7
 Dichlorodifluoromethane
 Concen: 0.27 ppb(v)
 RT: 3.845 min Scan# 124
 Delta R.T. -0.012 min
 Lab File: 6W03640.D
 Acq: 20 Dec 2017 7:22 pm

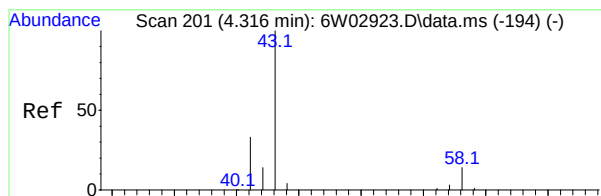
Tgt Ion:	85	Resp:	14321
Ion Ratio	100	Lower	Upper
85	100		
87	33.9	22.7	42.3
101	8.6	5.9	11.1
103	6.4	3.9	7.3



#9
 Chloromethane
 Concen: 1.11 ppb(v)
 RT: 3.974 min Scan# 145
 Delta R.T. -0.012 min
 Lab File: 6W03640.D
 Acq: 20 Dec 2017 7:22 pm

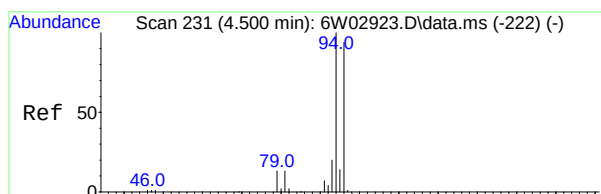
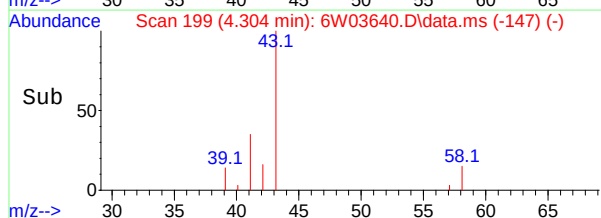
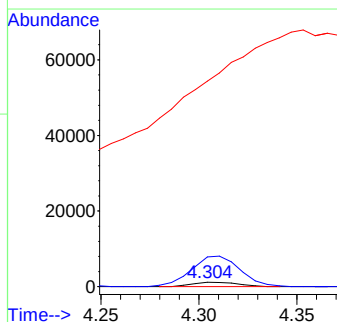
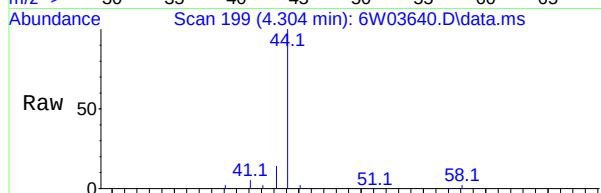
Tgt Ion:	50	Resp:	19033
Ion Ratio	100	Lower	Upper
50	100		
52	32.3	22.7	42.1





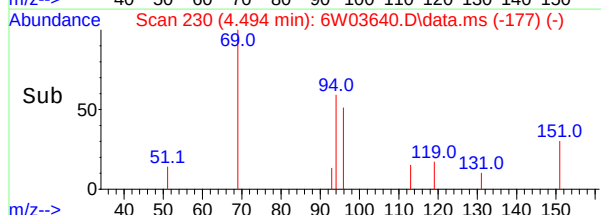
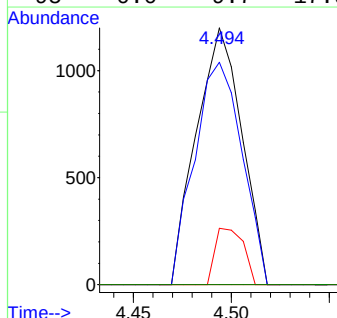
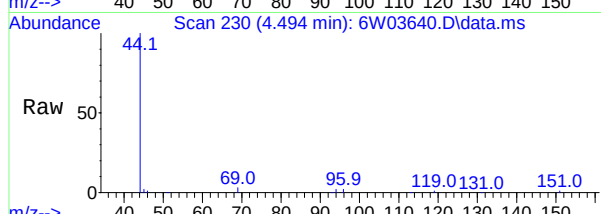
#13
n-Butane
Concen: 0.53 ppb(v)
RT: 4.304 min Scan# 199
Delta R.T. -0.012 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

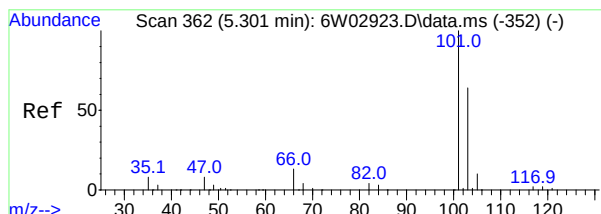
Tgt Ion: 58 Resp: 1875
Ion Ratio Lower Upper
58 100
43 688.7 499.8 928.2
44 4769.1 21.1 39.1#



#14
Bromomethane
Concen: 0.11 ppb(v)
RT: 4.494 min Scan# 230
Delta R.T. -0.006 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

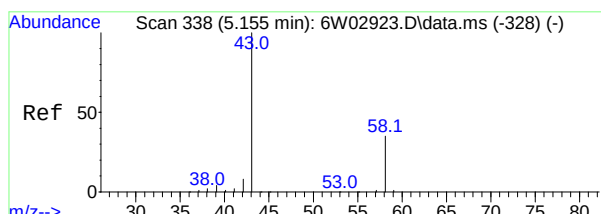
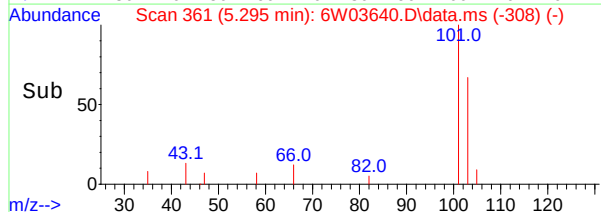
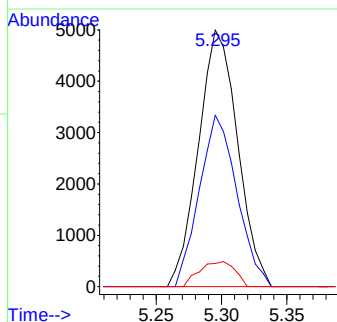
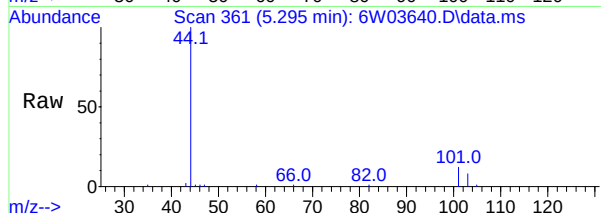
Tgt Ion: 94 Resp: 1942
Ion Ratio Lower Upper
94 100
96 86.6 65.7 121.9
93 22.0 13.9 25.7
95 0.0 9.7 17.9#





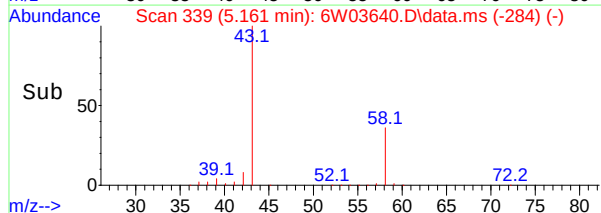
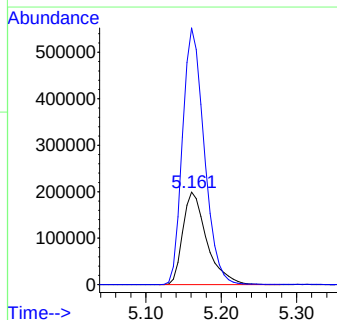
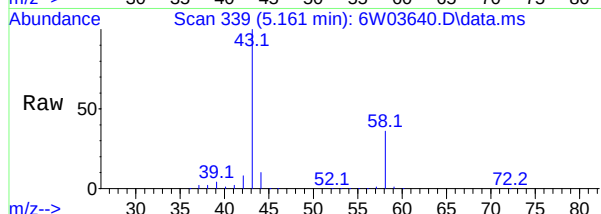
#21
Trichlorofluoromethane
Concen: 0.21 ppb(v)
RT: 5.295 min Scan# 361
Delta R.T. -0.006 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

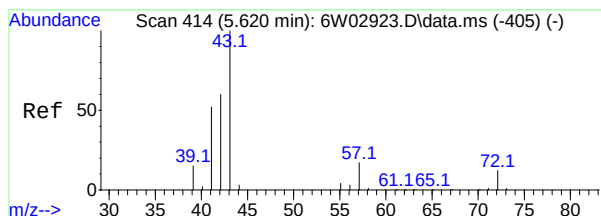
Tgt Ion: 101 Resp: 10447
Ion Ratio Lower Upper
101 100
103 66.8 45.1 83.9
105 9.0 7.3 13.5



#22
Acetone
Concen: 40.84 ppb(v)
RT: 5.161 min Scan# 339
Delta R.T. 0.006 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

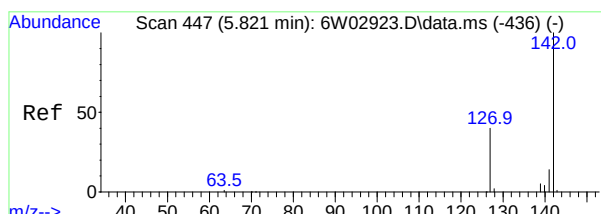
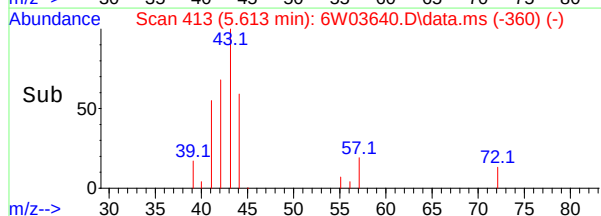
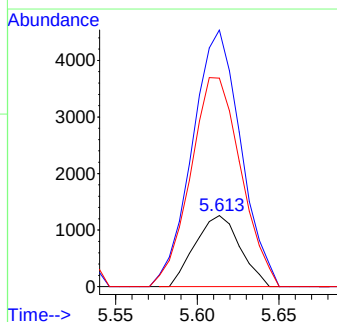
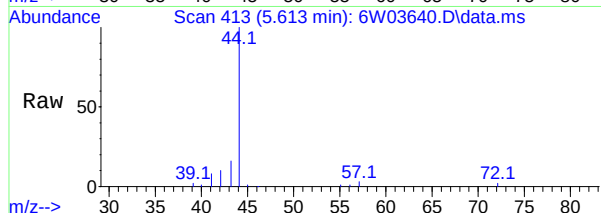
Tgt Ion: 58 Resp: 441795
Ion Ratio Lower Upper
58 100
43 277.5 202.4 375.8





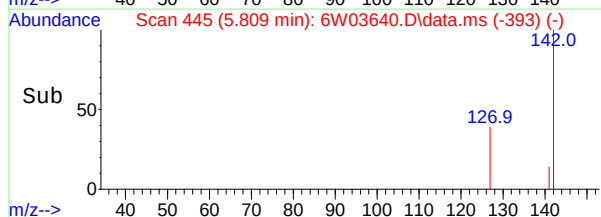
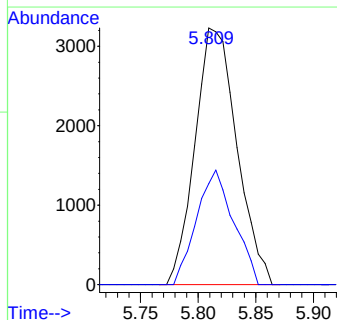
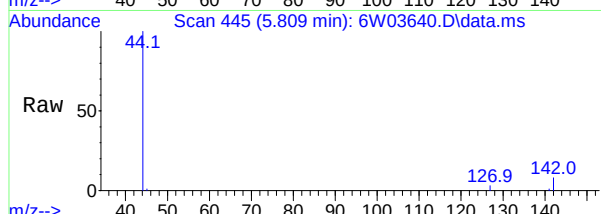
#23
Pentane
Concen: 0.48 ppb(v)
RT: 5.613 min Scan# 413
Delta R.T. -0.006 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

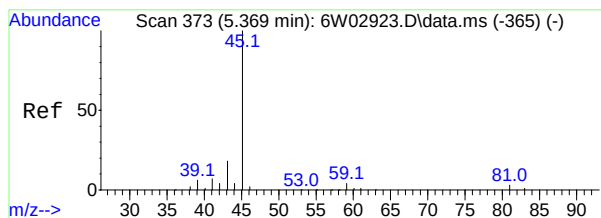
Tgt Ion: 57 Resp: 2413
Ion Ratio Lower Upper
57 100
42 360.6 252.4 468.8
41 292.9 218.7 406.1



#25
Iodomethane
Concen: 0.14 ppb(v)
RT: 5.809 min Scan# 445
Delta R.T. -0.012 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

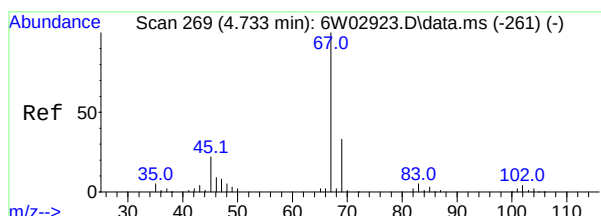
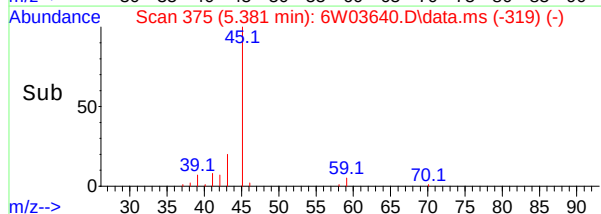
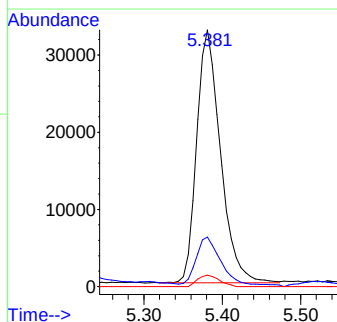
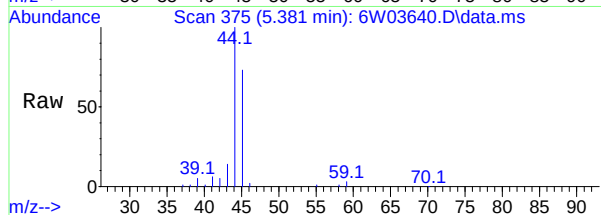
Tgt Ion:142 Resp: 8156
Ion Ratio Lower Upper
142 100
127 39.4 28.2 52.4





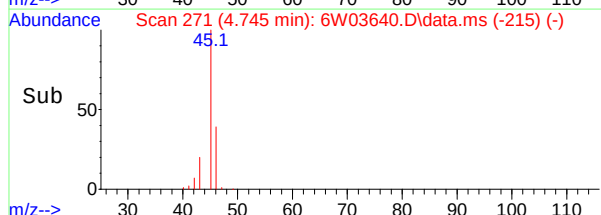
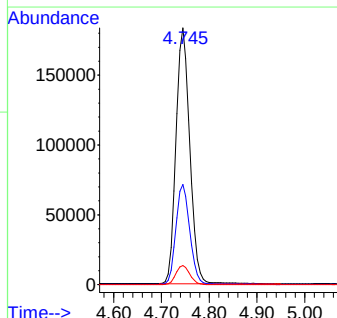
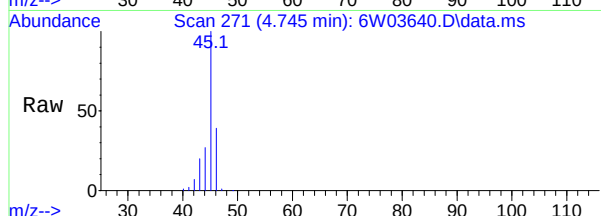
#26
Isopropyl Alcohol
Concen: 1.61 ppb(v)
RT: 5.381 min Scan# 375
Delta R.T. 0.012 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

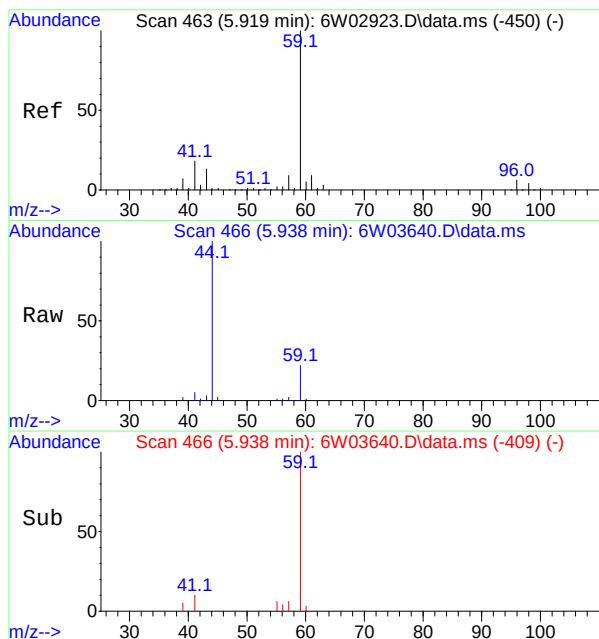
Tgt Ion: 45 Resp: 69126
Ion Ratio Lower Upper
45 100
43 19.4 12.8 23.8
59 4.4 3.0 5.6



#31
Ethanol
Concen: 60.46 ppb(v)
RT: 4.745 min Scan# 271
Delta R.T. 0.012 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

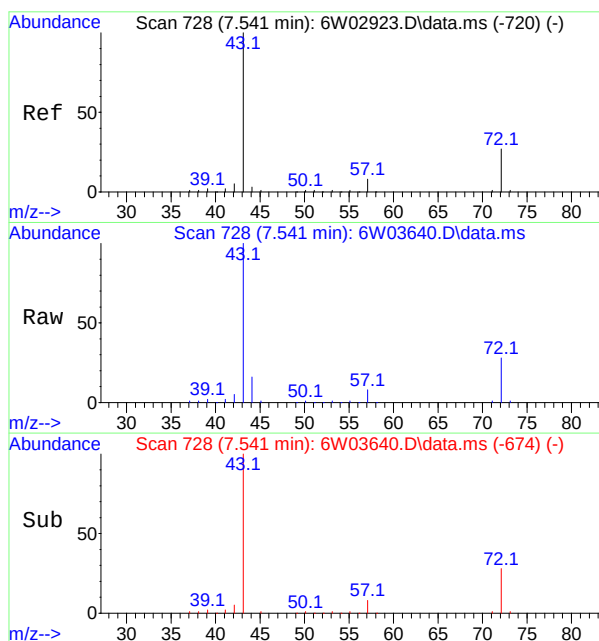
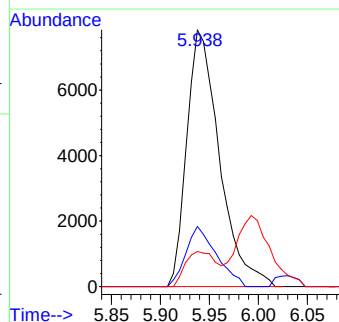
Tgt Ion: 45 Resp: 368548
Ion Ratio Lower Upper
45 100
46 39.0 27.2 50.4
42 7.4 5.6 10.4





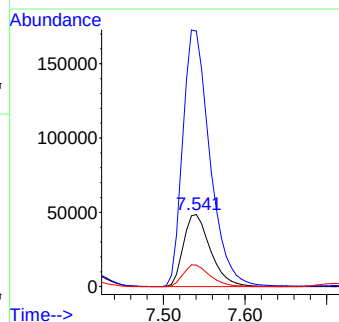
#35
tert-Butyl Alcohol
Concen: 0.44 ppb(v)
RT: 5.938 min Scan# 466
Delta R.T. 0.018 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

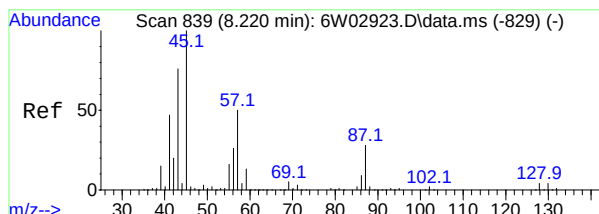
Tgt Ion:	59	Resp:	18221
Ion Ratio	100	Lower	Upper
59	100		
41	23.4	12.7	23.7
43	13.7	8.8	16.4



#39
2-Butanone
Concen: 10.10 ppb(v)
RT: 7.541 min Scan# 728
Delta R.T. -0.000 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

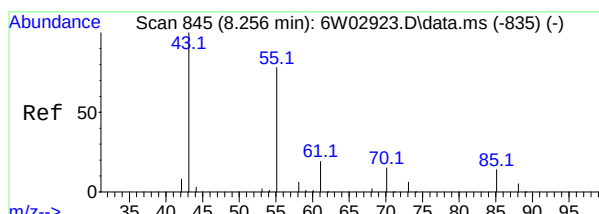
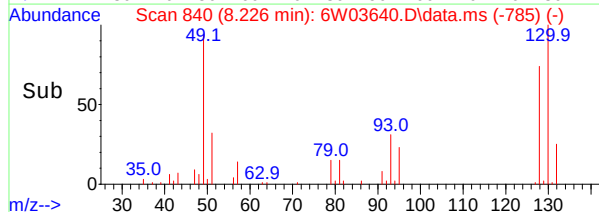
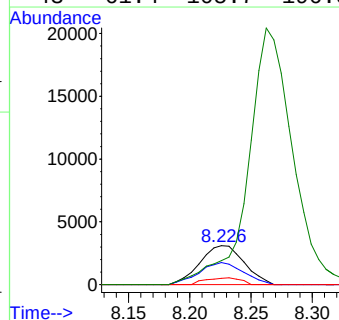
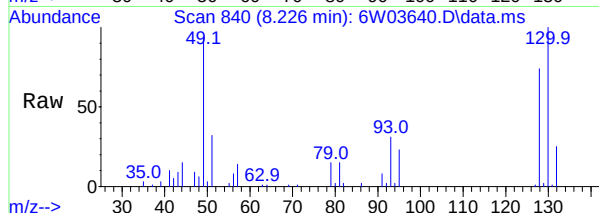
Tgt Ion:	72	Resp:	112228
Ion Ratio	100	Lower	Upper
72	100		
43	354.0	257.4	478.0
57	29.9	21.0	39.0





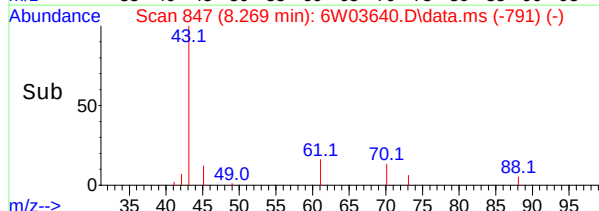
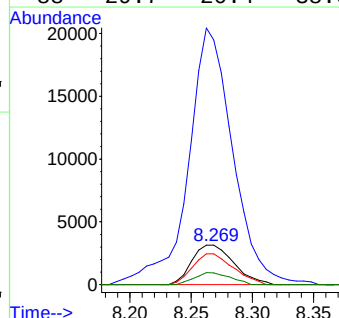
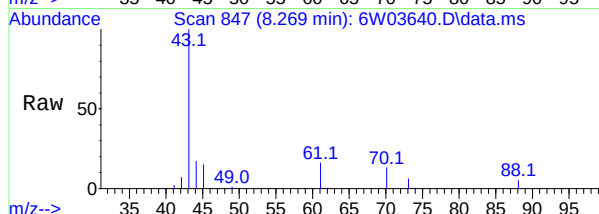
#40
Hexane
Concen: 0.23 ppb(v)
RT: 8.226 min Scan# 840
Delta R.T. 0.006 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

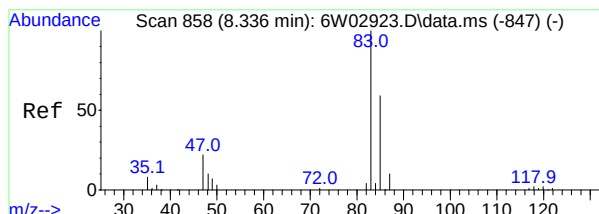
Tgt Ion: 57 Resp: 7804
Ion Ratio Lower Upper
57 100
56 56.7 36.0 67.0
86 16.4 12.1 22.5
43 61.4 105.7 196.3#



#43
Ethyl Acetate
Concen: 1.06 ppb(v)
RT: 8.269 min Scan# 847
Delta R.T. 0.012 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

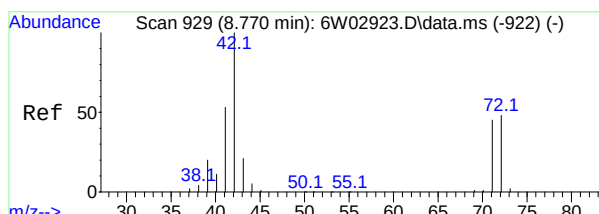
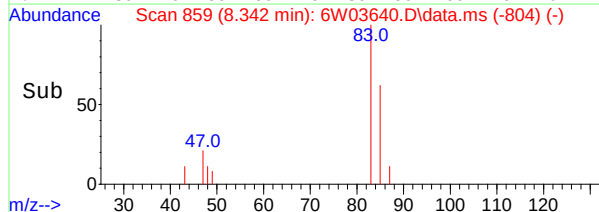
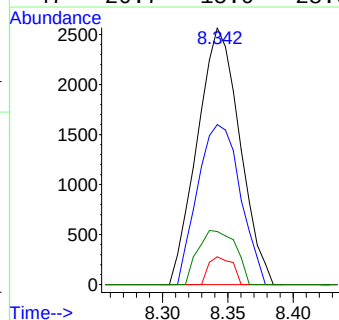
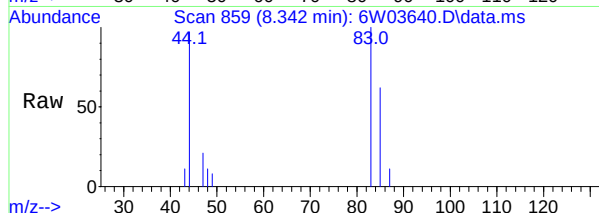
Tgt Ion: 61 Resp: 7504
Ion Ratio Lower Upper
61 100
43 618.1 488.5 907.1
70 77.5 54.9 101.9
88 29.7 20.4 38.0





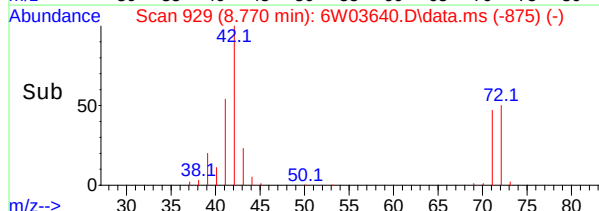
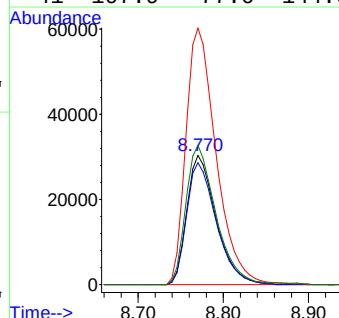
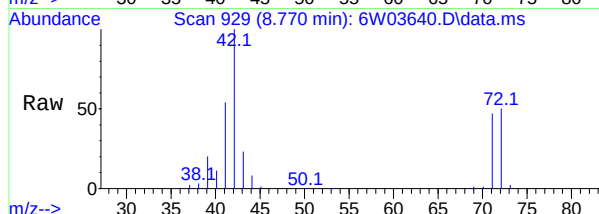
#45
Chloroform
Concen: 0.13 ppb(v)
RT: 8.342 min Scan# 859
Delta R.T. 0.006 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

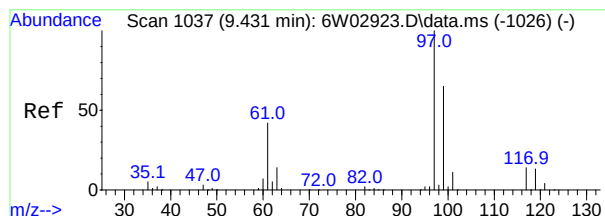
Tgt Ion: 83 Resp: 5810
Ion Ratio Lower Upper
83 100
85 62.3 45.2 84.0
87 10.9 7.3 13.7
47 20.7 15.0 28.0



#47
Tetrahydrofuran
Concen: 7.36 ppb(v)
RT: 8.770 min Scan# 929
Delta R.T. -0.000 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

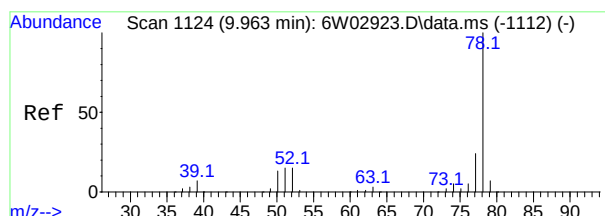
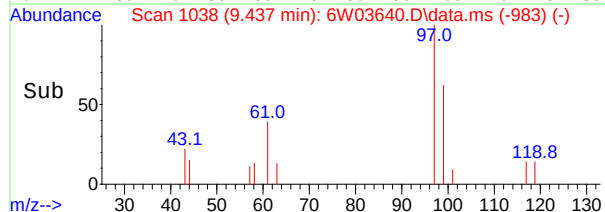
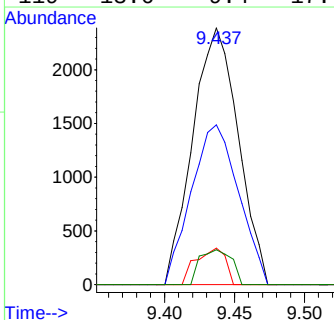
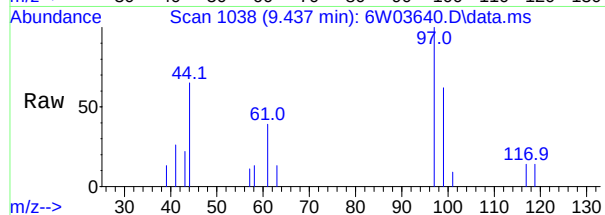
Tgt Ion: 72 Resp: 72883
Ion Ratio Lower Upper
72 100
71 94.4 65.4 121.4
42 198.8 146.4 271.8
41 107.9 77.6 144.0





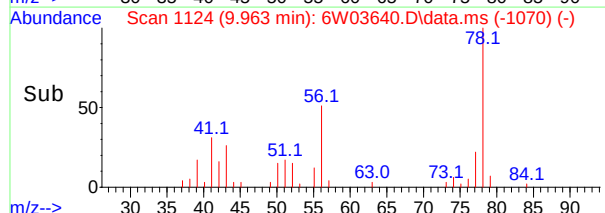
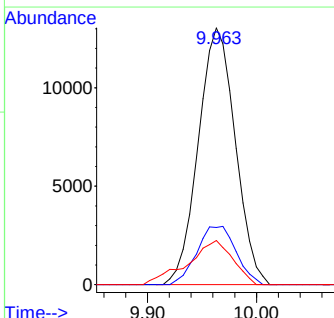
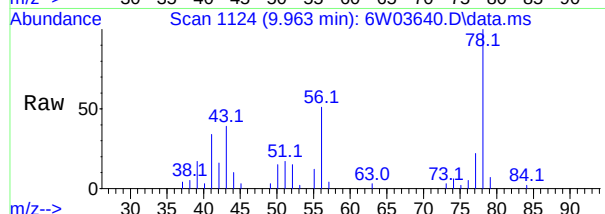
#48
 1,1,1-Trichloroethane
 Concen: 0.13 ppb(v)
 RT: 9.437 min Scan# 1038
 Delta R.T. 0.006 min
 Lab File: 6W03640.D
 Acq: 20 Dec 2017 7:22 pm

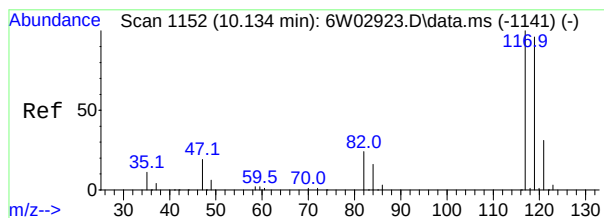
Tgt Ion:	97	Resp:	5422
Ion Ratio	100	Lower	Upper
99	62.2	45.4	84.2
117	14.2	9.9	18.3
119	13.6	9.4	17.4



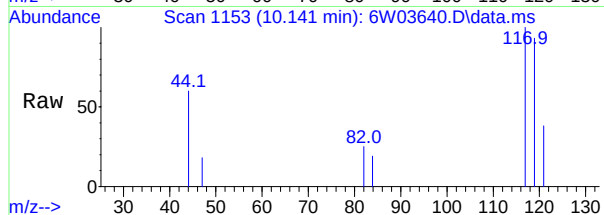
#50
 Benzene
 Concen: 0.43 ppb(v)
 RT: 9.963 min Scan# 1124
 Delta R.T. -0.000 min
 Lab File: 6W03640.D
 Acq: 20 Dec 2017 7:22 pm

Tgt Ion:	78	Resp:	30818
Ion Ratio	100	Lower	Upper
77	22.3	16.6	30.8
51	17.2	10.6	19.6

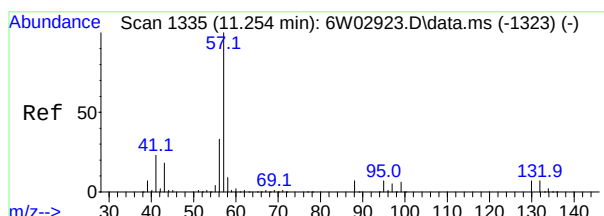
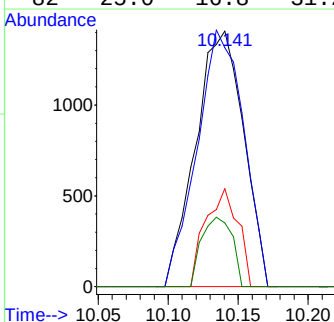
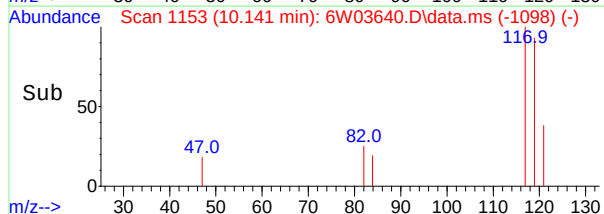




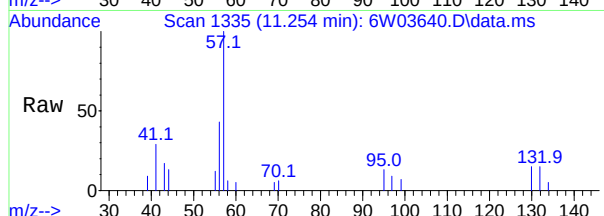
#51
Carbon Tetrachloride
Concen: 0.07 ppb(v)
RT: 10.141 min Scan# 1153
Delta R.T. 0.006 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm



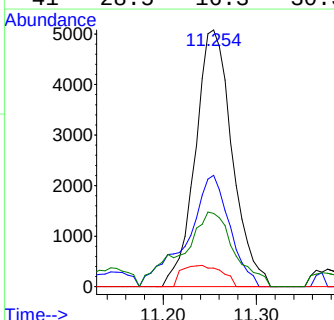
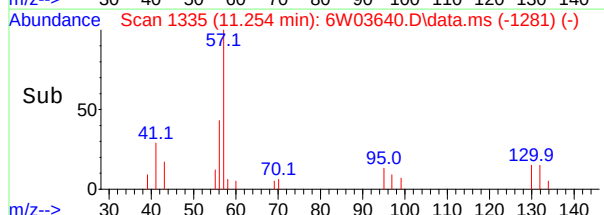
Tgt Ion: 117 Resp: 3360
Ion Ratio Lower Upper
117 100
119 93.5 67.4 125.2
121 38.4 21.9 40.7
82 25.0 16.8 31.2

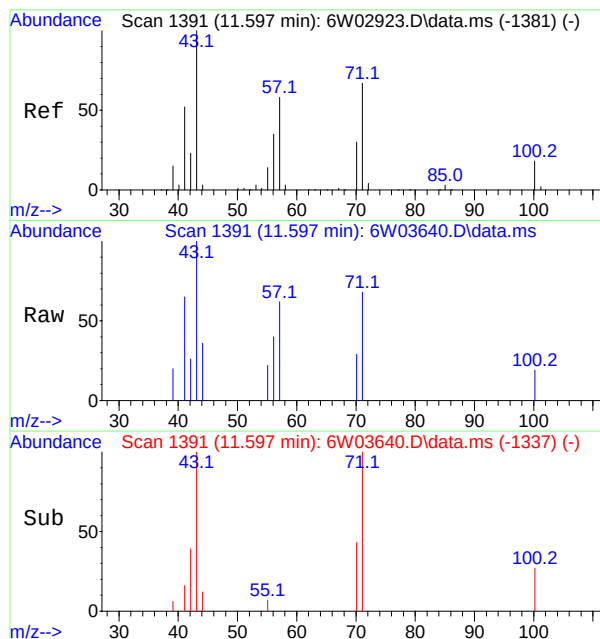


#55
2,2,4-Trimethylpentane
Concen: 0.13 ppb(v)
RT: 11.254 min Scan# 1335
Delta R.T. -0.000 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm



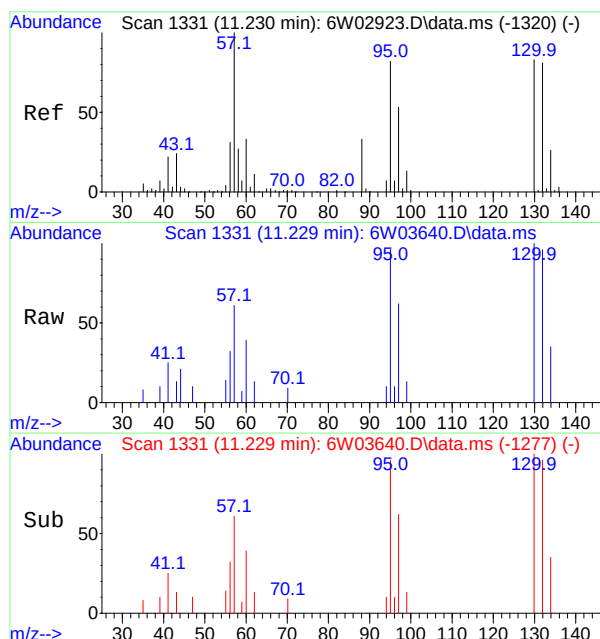
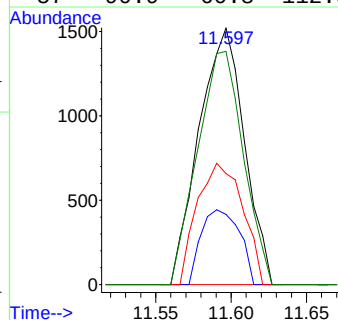
Tgt Ion: 57 Resp: 13995
Ion Ratio Lower Upper
57 100
56 43.4 23.0 42.8#
99 7.2 4.5 8.3
41 28.5 16.3 30.3





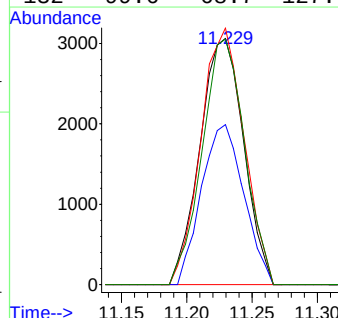
#56
Heptane
Concen: 0.13 ppb(v)
RT: 11.597 min Scan# 1391
Delta R.T. -0.000 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

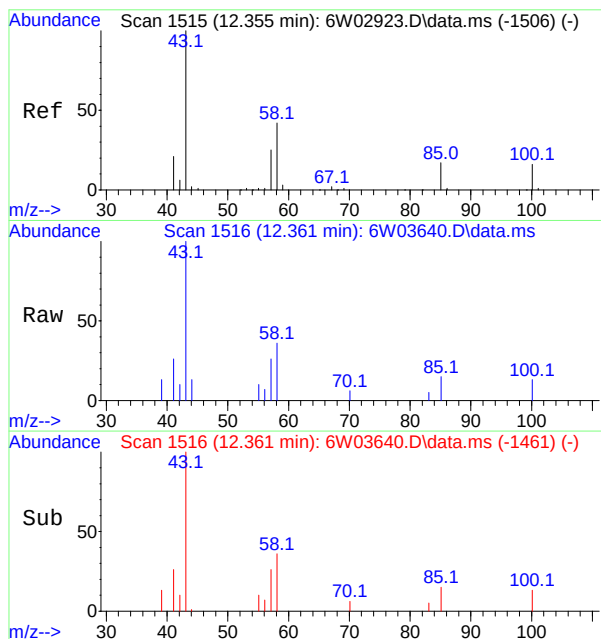
Tgt Ion: 71 Resp: 3176
Ion Ratio Lower Upper
71 100
100 27.4 20.9 38.7
70 43.2 32.1 59.5
57 90.9 60.8 112.8



#57
Trichloroethene
Concen: 0.23 ppb(v)
RT: 11.229 min Scan# 1331
Delta R.T. -0.000 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

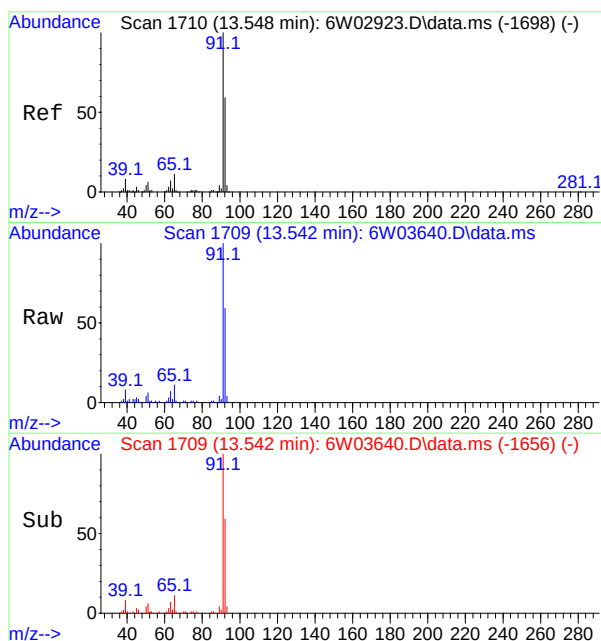
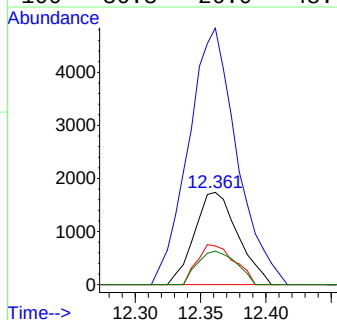
Tgt Ion: 95 Resp: 7141
Ion Ratio Lower Upper
95 100
97 64.9 45.5 84.5
130 104.2 71.0 131.8
132 99.6 68.7 127.7





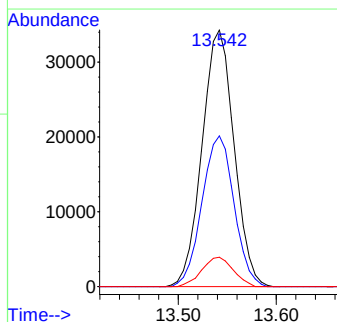
#65
4-Methyl-2-pentanone
Concen: 0.21 ppb(v)
RT: 12.361 min Scan# 1516
Delta R.T. 0.006 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

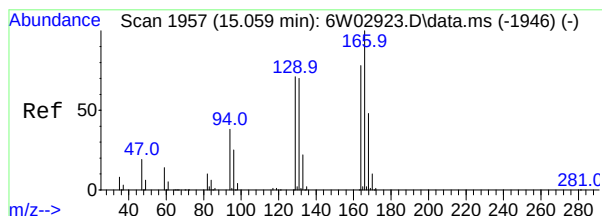
Tgt Ion: 58 Resp: 4008
Ion Ratio Lower Upper
58 100
43 278.4 165.6 307.6
85 42.1 30.2 56.0
100 36.3 26.0 48.4



#67
Toluene
Concen: 0.90 ppb(v)
RT: 13.542 min Scan# 1709
Delta R.T. -0.006 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

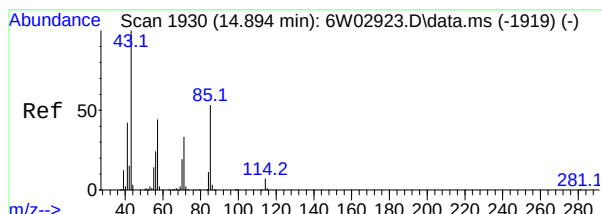
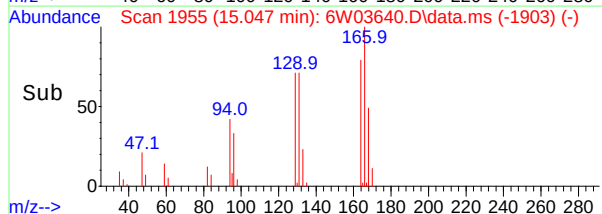
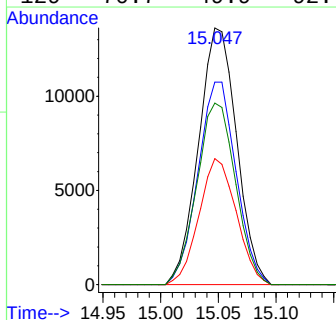
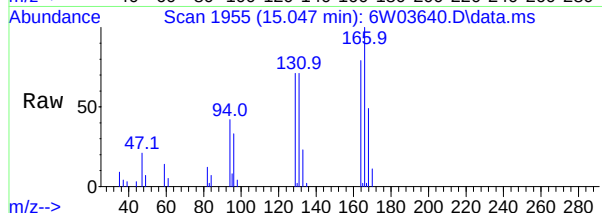
Tgt Ion: 91 Resp: 77994
Ion Ratio Lower Upper
91 100
92 58.7 41.0 76.2
65 11.4 7.8 14.4





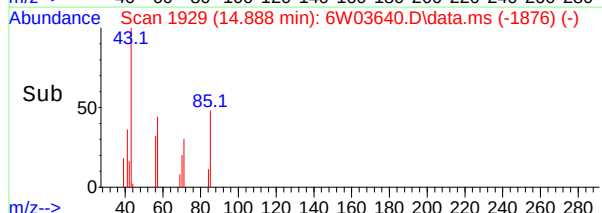
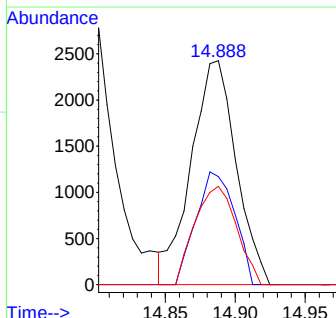
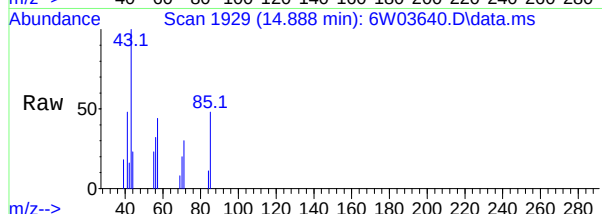
#73
Tetrachloroethene
Concen: 0.72 ppb(v)
RT: 15.047 min Scan# 1955
Delta R.T. -0.012 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

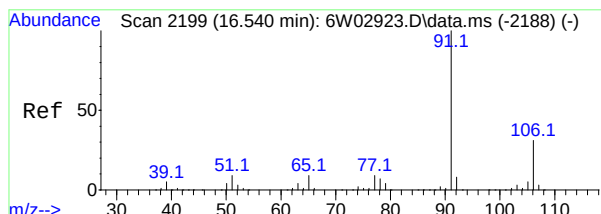
Tgt Ion: 166 Resp: 31315
Ion Ratio Lower Upper
166 100
164 78.8 54.5 101.1
168 49.1 33.9 62.9
129 70.7 49.9 92.7



#75
Octane
Concen: 0.11 ppb(v)
RT: 14.888 min Scan# 1929
Delta R.T. -0.006 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

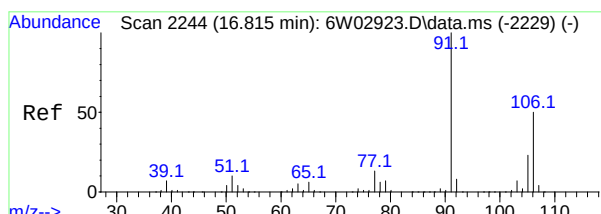
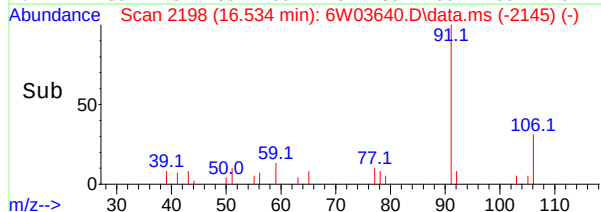
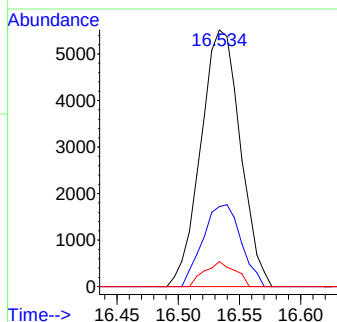
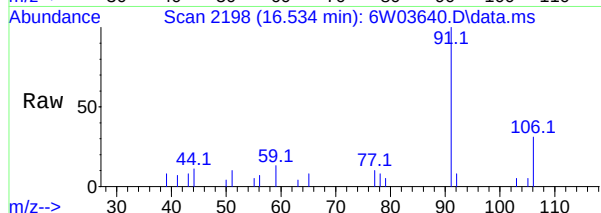
Tgt Ion: 43 Resp: 5439
Ion Ratio Lower Upper
43 100
85 48.2 36.8 68.4
57 43.9 30.7 56.9





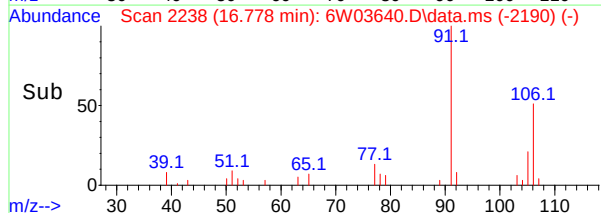
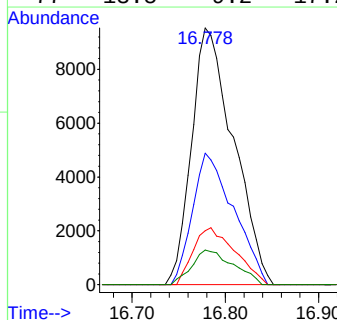
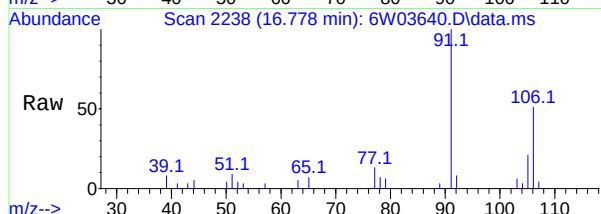
#79
Ethylbenzene
Concen: 0.12 ppb(v)
RT: 16.534 min Scan# 2198
Delta R.T. -0.006 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

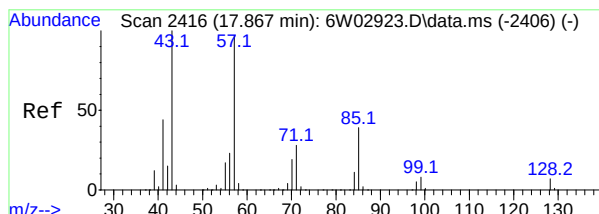
Tgt Ion: 91 Resp: 12363
Ion Ratio Lower Upper
91 100
106 31.2 22.0 41.0
77 9.8 6.0 11.2



#80
m,p-Xylene
Concen: 0.38 ppb(v)
RT: 16.778 min Scan# 2238
Delta R.T. -0.037 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

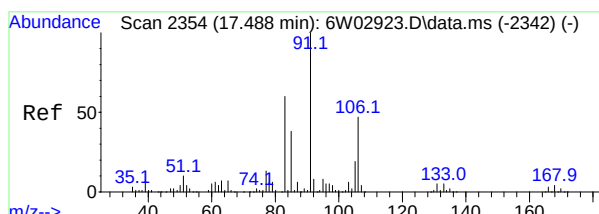
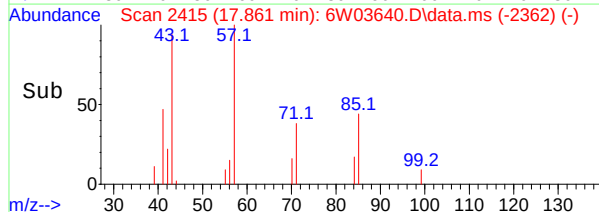
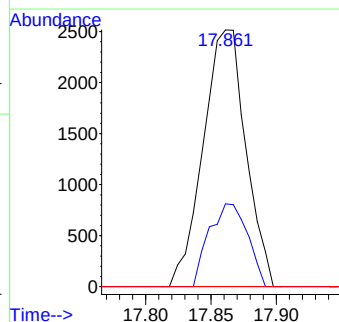
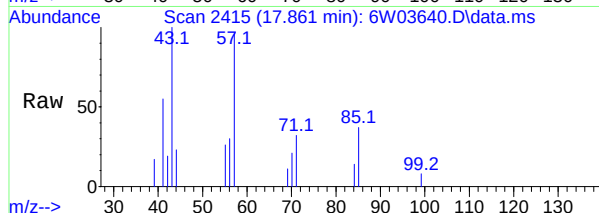
Tgt Ion: 91 Resp: 29862
Ion Ratio Lower Upper
91 100
106 51.2 35.1 65.3
105 21.0 16.0 29.8
77 13.5 9.2 17.2





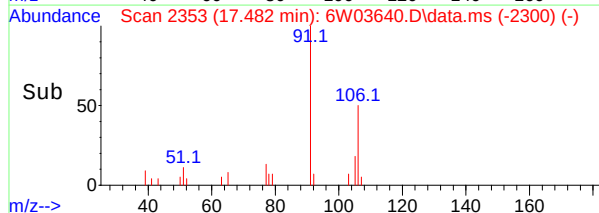
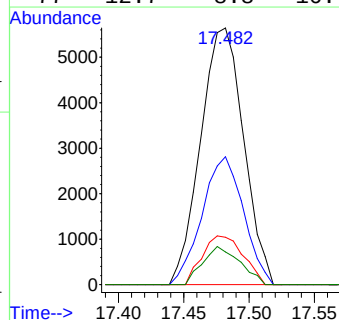
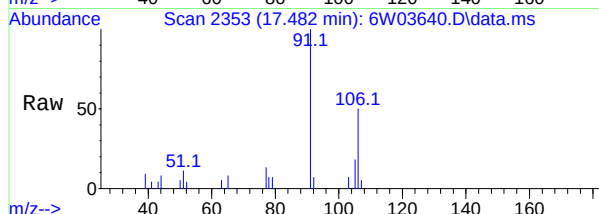
#82
Nonane
Concen: 0.11 ppb(v)
RT: 17.861 min Scan# 2415
Delta R.T. -0.006 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

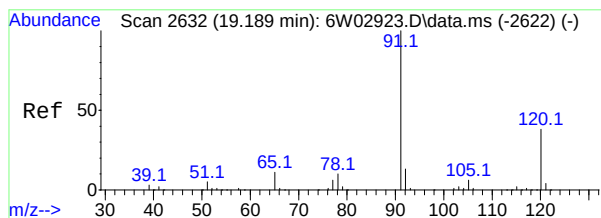
Tgt Ion: 43 Resp: 5726
Ion Ratio Lower Upper
43 100
71 32.2 19.5 36.3
128 0.0 4.6 8.6#



#83
o-Xylene
Concen: 0.17 ppb(v)
RT: 17.482 min Scan# 2353
Delta R.T. -0.006 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

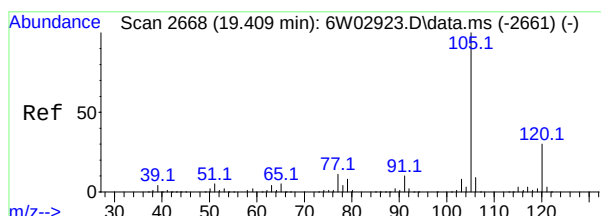
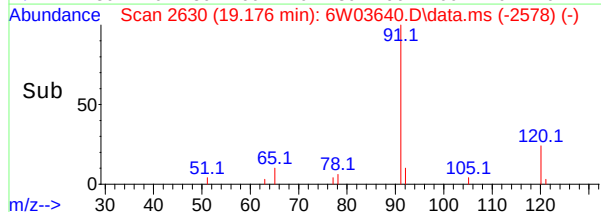
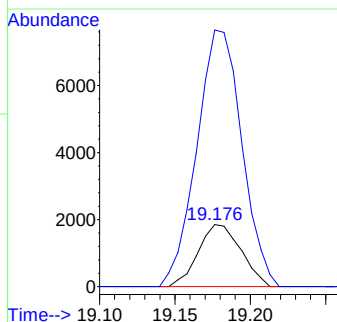
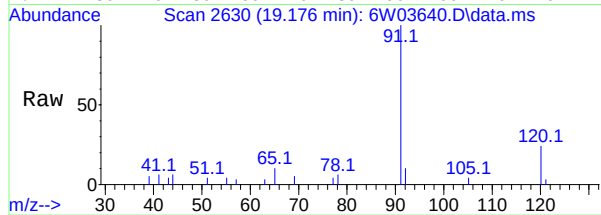
Tgt Ion: 91 Resp: 12933
Ion Ratio Lower Upper
91 100
106 49.8 33.2 61.6
105 18.4 13.4 25.0
77 12.7 8.8 16.4





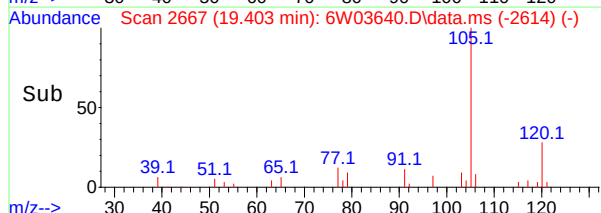
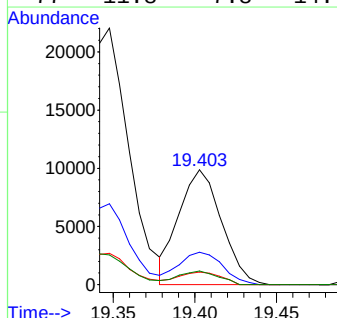
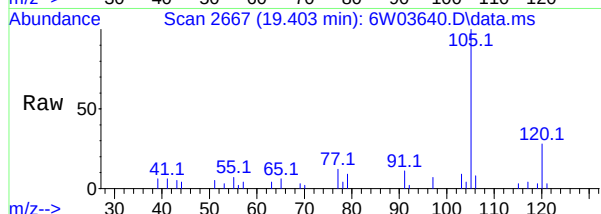
#90
n-Propylbenzene
Concen: 0.13 ppb(v)
RT: 19.176 min Scan# 2630
Delta R.T. -0.012 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

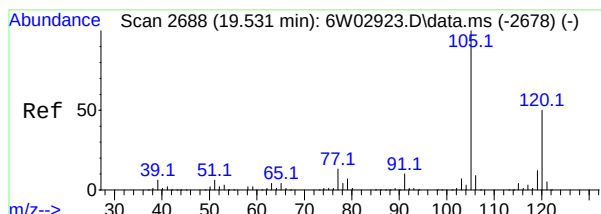
Tgt Ion:120 Resp: 3650
Ion Ratio Lower Upper
120 100
91 412.8 300.0 557.2



#92
4-Ethyltoluene
Concen: 0.18 ppb(v)
RT: 19.403 min Scan# 2667
Delta R.T. -0.006 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

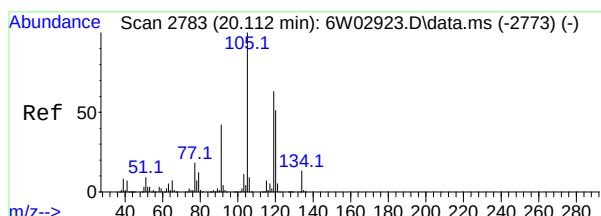
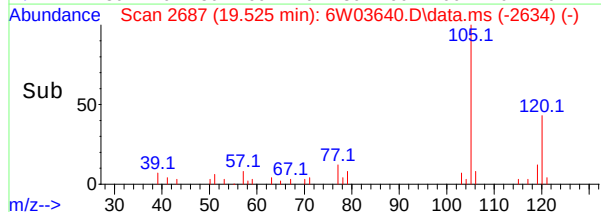
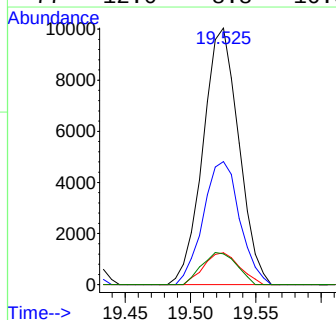
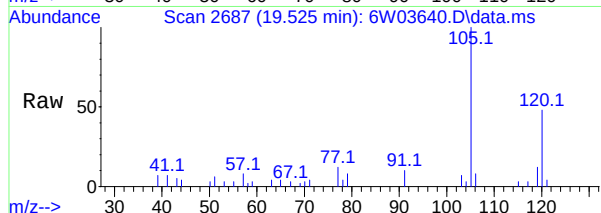
Tgt Ion:105 Resp: 18015
Ion Ratio Lower Upper
105 100
120 28.3 20.6 38.4
91 11.0 7.3 13.7
77 11.8 7.8 14.4





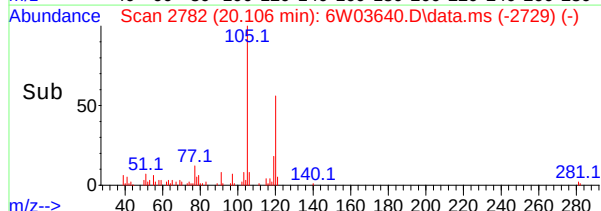
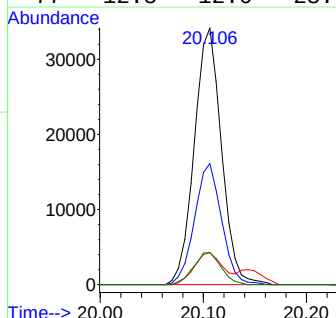
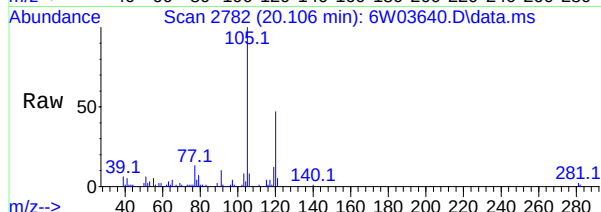
#93
1,3,5-Trimethylbenzene
Concen: 0.23 ppb(v)
RT: 19.525 min Scan# 2687
Delta R.T. -0.006 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

Tgt Ion:	105	Resp:	19123
Ion Ratio	Lower	Upper	
105	100		
120	48.0	34.9	64.9
119	12.4	8.6	16.0
77	12.0	8.8	16.3



#96
1,2,4-Trimethylbenzene
Concen: 0.79 ppb(v)
RT: 20.106 min Scan# 2782
Delta R.T. -0.006 min
Lab File: 6W03640.D
Acq: 20 Dec 2017 7:22 pm

Tgt Ion:	105	Resp:	62667
Ion Ratio	Lower	Upper	
105	100		
120	47.2	35.7	66.3
119	12.4	44.4	82.4#
77	12.5	12.6	23.4#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03665.D
 Acq On : 21 Dec 2017 8:08 pm
 Operator : DANAT
 Sample : jc56815-4
 Misc : MS22955,V6W106,100,,,1.7
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 22 11:13:39 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.201	130	229207	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.398	114	850296	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.928	82	378596	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.201	130	229207	10.00	ppb(v	0.00
System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.173	95	492993	10.10	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	101.00%
Target Compounds						
					Qvalue	
22) Acetone	5.173	58	71451	6.14	ppb(v	93
26) Isopropyl Alcohol	5.387	45	11550	0.25	ppb(v#	97
31) Ethanol	4.751	45	58789	8.97	ppb(v	99
39) 2-Butanone	7.553	72	16682	1.40	ppb(v	97
47) Tetrahydrofuran	8.789	72	10414	0.98	ppb(v	96
67) Toluene	13.542	91	11900	0.13	ppb(v	97
73) Tetrachloroethene	15.053	166	5104	0.11	ppb(v	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

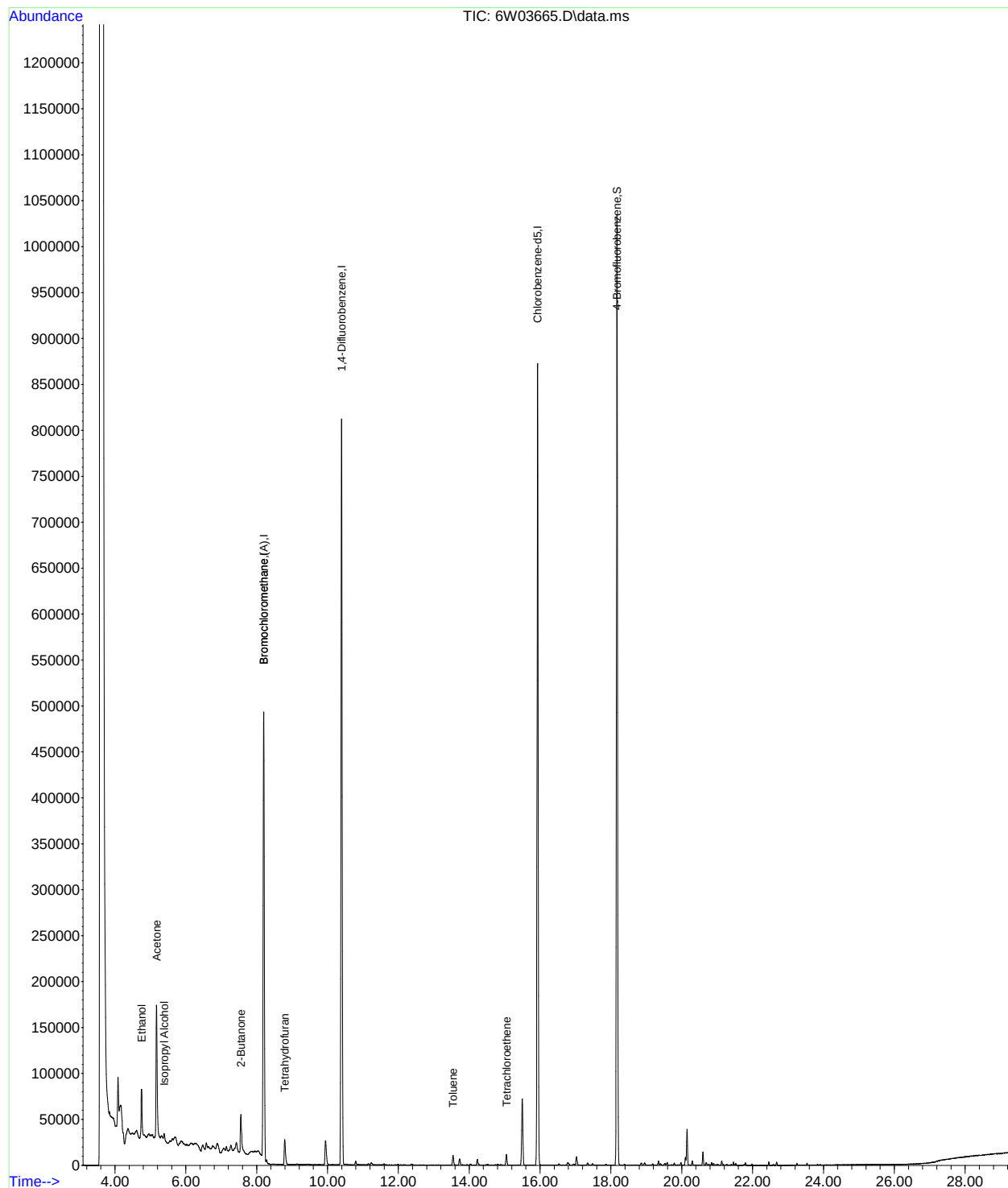
7.1.6
7

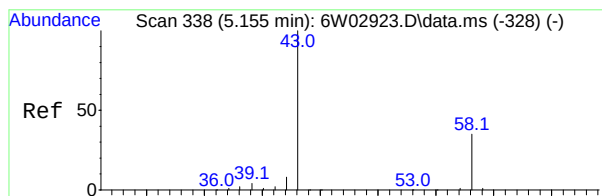


Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W03665.D
Acq On : 21 Dec 2017 8:08 pm
Operator : DANAT
Sample : jc56815-4
Misc : MS22955,V6W106,100,,,1.7
ALS Vial : 8 Sample Multiplier: 1

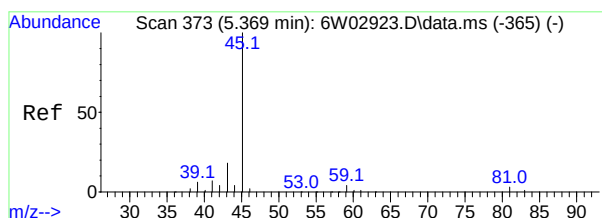
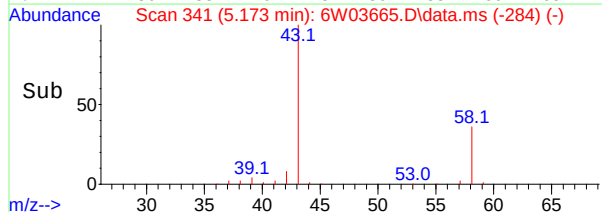
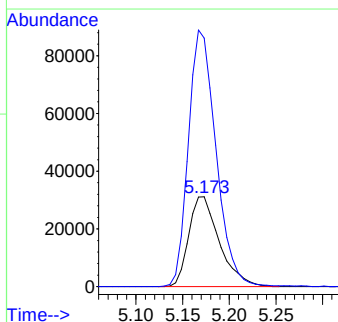
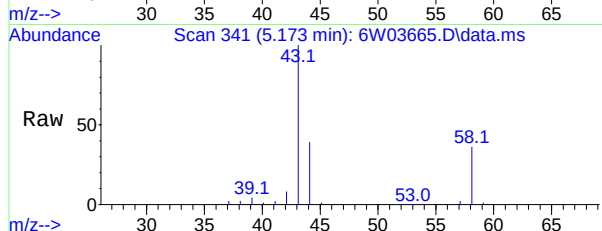
Quant Time: Dec 22 11:13:39 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration





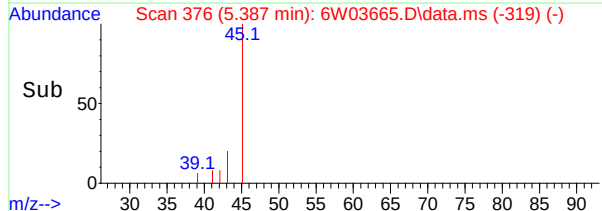
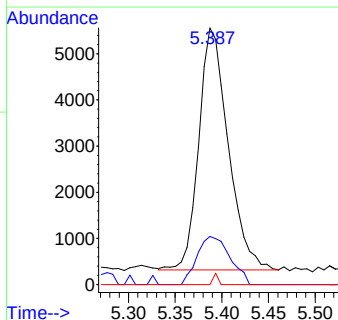
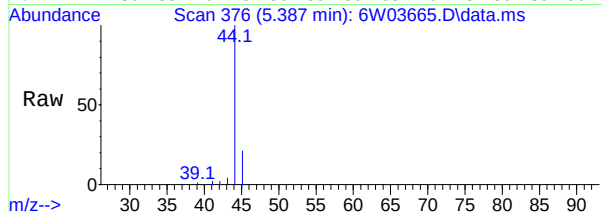
#22
Acetone
Concen: 6.14 ppb(v)
RT: 5.173 min Scan# 341
Delta R.T. 0.018 min
Lab File: 6W03665.D
Acq: 21 Dec 2017 8:08 pm

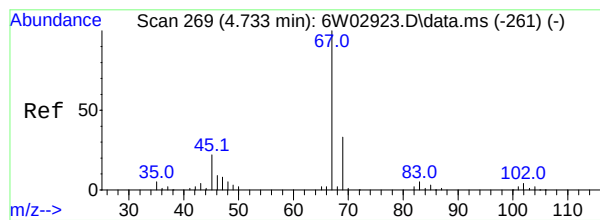
Tgt Ion: 58 Resp: 71451
Ion Ratio Lower Upper
58 100
43 276.5 202.4 375.8



#26
Isopropyl Alcohol
Concen: 0.25 ppb(v)
RT: 5.387 min Scan# 376
Delta R.T. 0.018 min
Lab File: 6W03665.D
Acq: 21 Dec 2017 8:08 pm

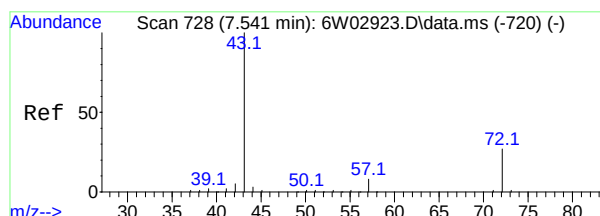
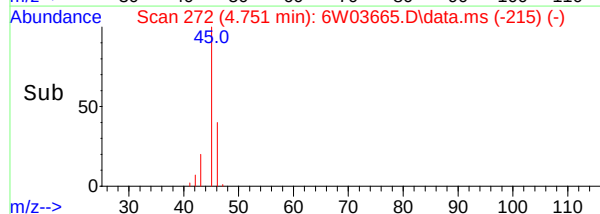
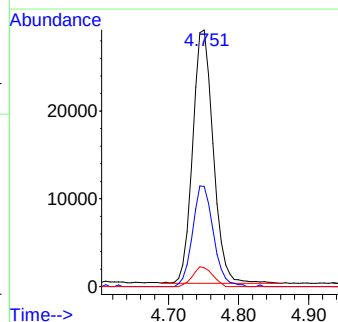
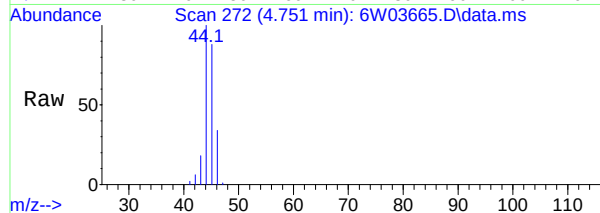
Tgt Ion: 45 Resp: 11550
Ion Ratio Lower Upper
45 100
43 18.8 12.8 23.8
59 0.0 3.0 5.6#





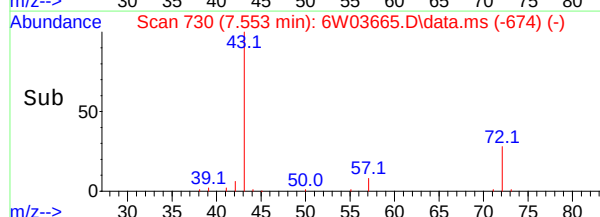
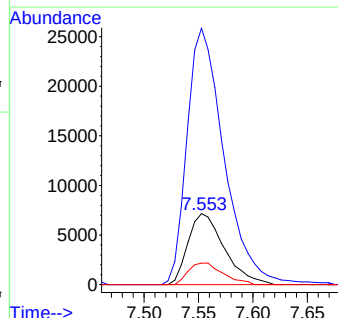
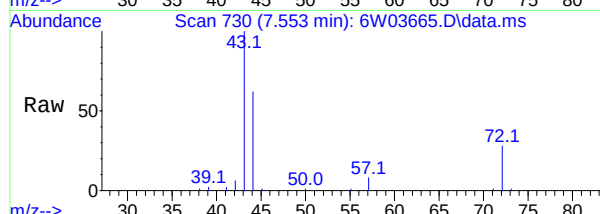
#31
Ethanol
Concen: 8.97 ppb(v)
RT: 4.751 min Scan# 272
Delta R.T. 0.018 min
Lab File: 6W03665.D
Acq: 21 Dec 2017 8:08 pm

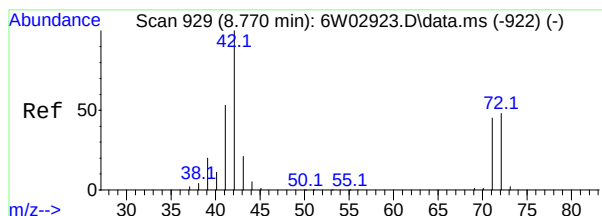
Tgt Ion: 45 Resp: 58789
Ion Ratio Lower Upper
45 100
46 39.0 27.2 50.4
42 7.3 5.6 10.4



#39
2-Butanone
Concen: 1.40 ppb(v)
RT: 7.553 min Scan# 730
Delta R.T. 0.012 min
Lab File: 6W03665.D
Acq: 21 Dec 2017 8:08 pm

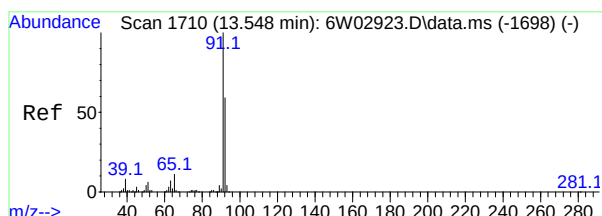
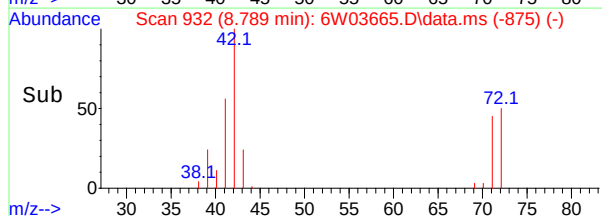
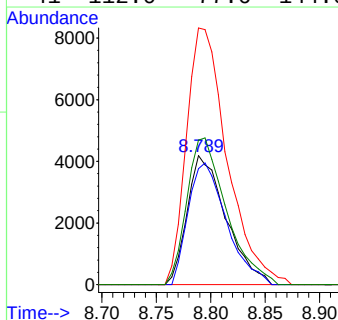
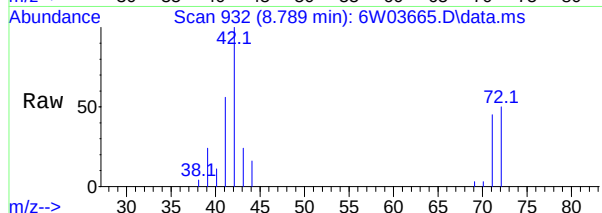
Tgt Ion: 72 Resp: 16682
Ion Ratio Lower Upper
72 100
43 361.2 257.4 478.0
57 30.3 21.0 39.0





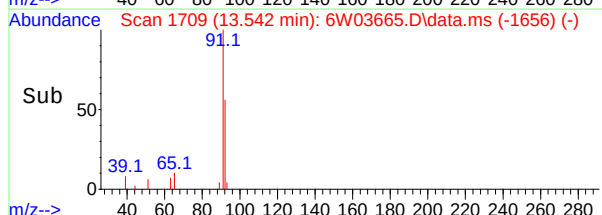
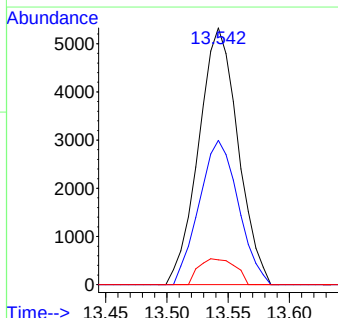
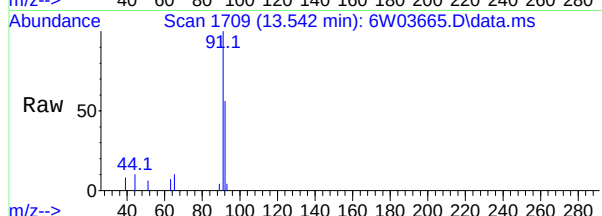
#47
Tetrahydrofuran
Concen: 0.98 ppb(v)
RT: 8.789 min Scan# 932
Delta R.T. 0.018 min
Lab File: 6W03665.D
Acq: 21 Dec 2017 8:08 pm

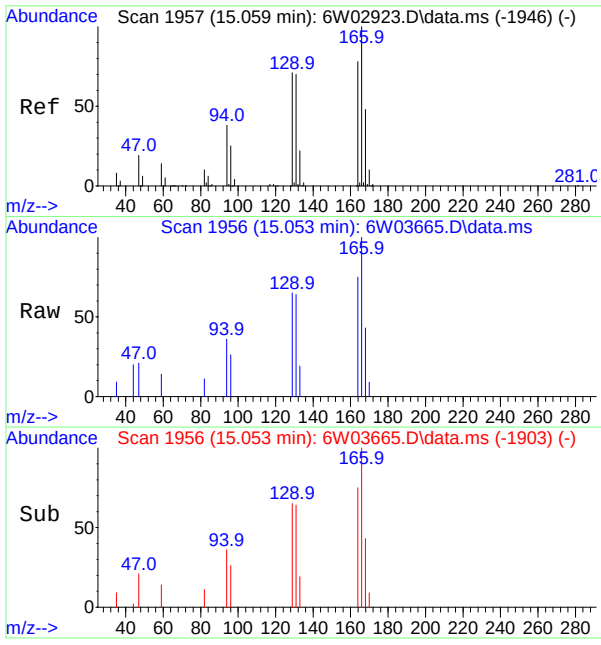
Tgt Ion: 72 Resp: 10414
Ion Ratio Lower Upper
72 100
71 89.9 65.4 121.4
42 198.9 146.4 271.8
41 112.0 77.6 144.0



#67
Toluene
Concen: 0.13 ppb(v)
RT: 13.542 min Scan# 1709
Delta R.T. -0.006 min
Lab File: 6W03665.D
Acq: 21 Dec 2017 8:08 pm

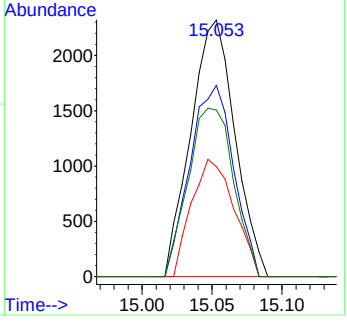
Tgt Ion: 91 Resp: 11900
Ion Ratio Lower Upper
91 100
92 56.2 41.0 76.2
65 9.6 7.8 14.4





#73
Tetrachloroethene
Concen: 0.11 ppb(v)
RT: 15.053 min Scan# 1956
Delta R.T. -0.006 min
Lab File: 6W03665.D
Acq: 21 Dec 2017 8:08 pm

Tgt Ion:166	Resp:	5104
Ion Ratio	Lower	Upper
166	100	
164	74.5	54.5 101.1
168	42.8	33.9 62.9
129	64.9	49.9 92.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03647.D
 Acq On : 21 Dec 2017 2:33 am
 Operator : DANAT
 Sample : jc56815-5
 Misc : MS22955,V6W105,800,,,1.7
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Dec 21 17:25:44 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.189	130	219306	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.391	114	812314	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.928	82	371124	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.189	130	219306	10.00	ppb(v	0.00

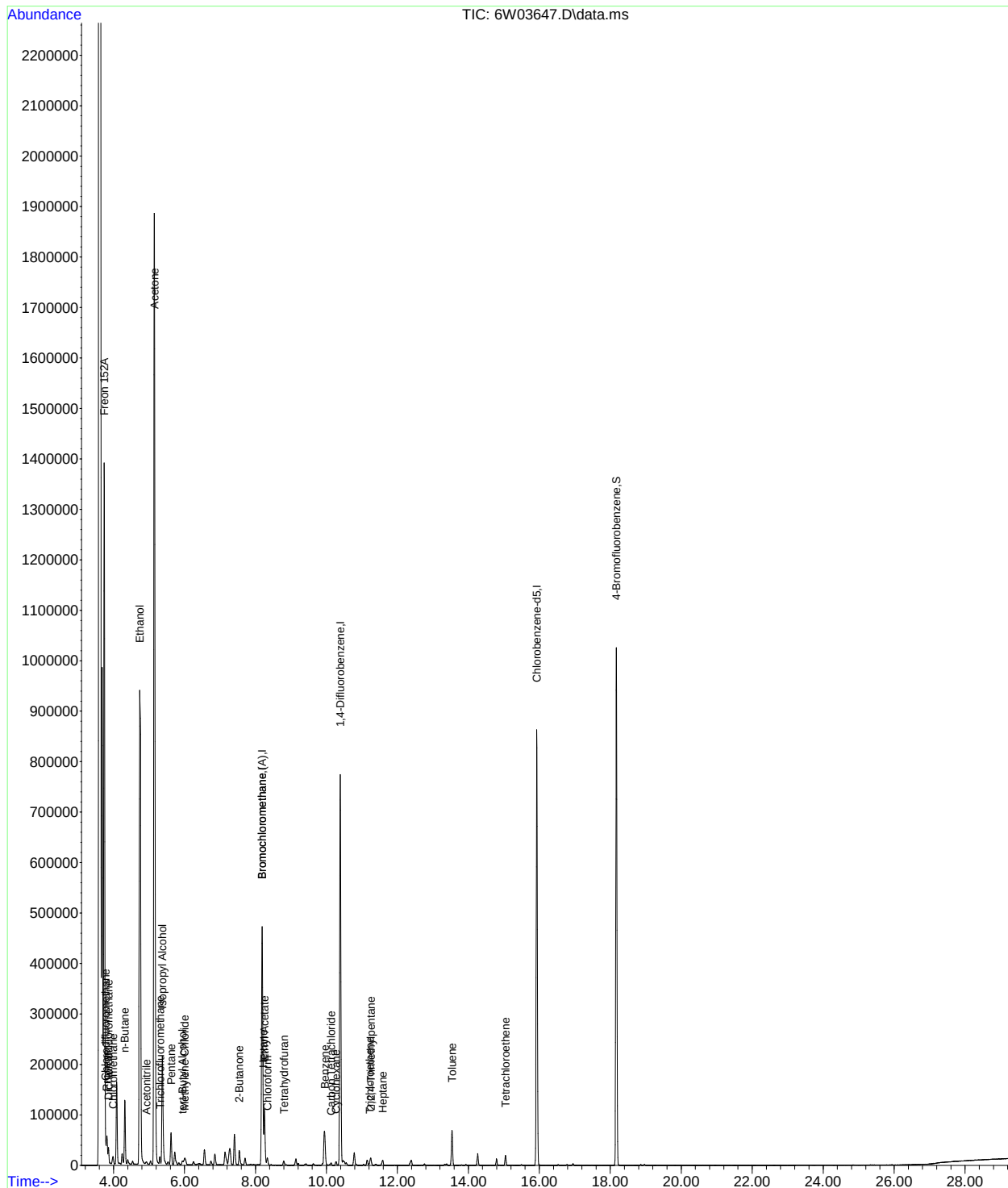
System Monitoring Compounds
 91) 4-Bromofluorobenzene 18.173 95 487013 10.18 ppb(v 0.00
 Spiked Amount 10.000 Range 65 - 128 Recovery = 101.80%

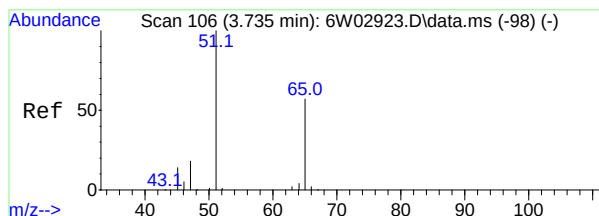
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) Freon 152A	3.735	65	731372	51.37	ppb(v	100
4) Chlorodifluoromethane	3.772	67	4971	1.00	ppb(v#	68
5) Propene	3.802	41	21541	1.38	ppb(v	91
7) Dichlorodifluoromethane	3.857	85	30278	0.55	ppb(v	100
9) Chloromethane	3.986	50	14376	0.81	ppb(v	99
13) n-Butane	4.316	58	17386	4.81	ppb(v#	92
17) Acetonitrile	4.928	41	5139	0.31	ppb(v	93
21) Trichlorofluoromethane	5.307	101	14896	0.29	ppb(v	96
22) Acetone	5.148	58	994585	89.36	ppb(v	90
23) Pentane	5.619	57	8087	1.55	ppb(v	94
26) Isopropyl Alcohol	5.375	45	330273	7.49	ppb(v	100
29) Methylene Chloride	6.005	84	6775	0.30	ppb(v	94
31) Ethanol	4.738	45	1646347	262.53	ppb(v	98
35) tert-Butyl Alcohol	5.944	59	9251	0.22	ppb(v#	82
39) 2-Butanone	7.540	72	12749	1.12	ppb(v	97
40) Hexane	8.219	57	12759	0.36	ppb(v#	66
43) Ethyl Acetate	8.250	61	23868	3.29	ppb(v	82
45) Chloroform	8.336	83	14153	0.30	ppb(v	99
47) Tetrahydrofuran	8.807	72	1703	0.17	ppb(v#	50
50) Benzene	9.957	78	37685	0.51	ppb(v	100
51) Carbon Tetrachloride	10.128	117	3707	0.08	ppb(v	95
52) Cyclohexane	10.263	56	4804	0.14	ppb(v	90
55) 2,2,4-Trimethylpentane	11.248	57	14386	0.13	ppb(v#	86
56) Heptane	11.590	71	2808	0.12	ppb(v	96
57) Trichloroethene	11.223	95	1798	0.06	ppb(v	95
67) Toluene	13.536	91	68453	0.77	ppb(v	98
73) Tetrachloroethene	15.047	166	8486	0.19	ppb(v	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\
Data File : 6W03647.D
Acq On : 21 Dec 2017 2:33 am
Operator : DANAT
Sample : jc56815-5
Misc : MS22955,V6W105,800,,,,1.7
ALS Vial : 13 Sample Multiplier: 1

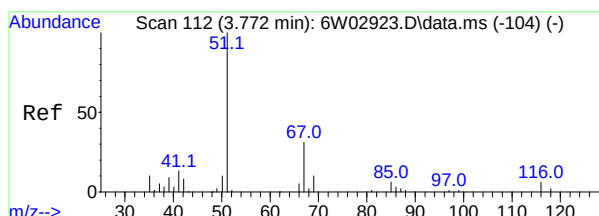
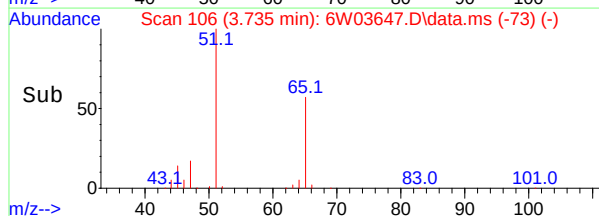
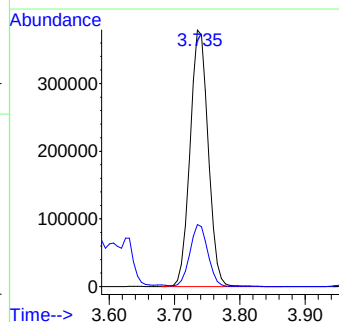
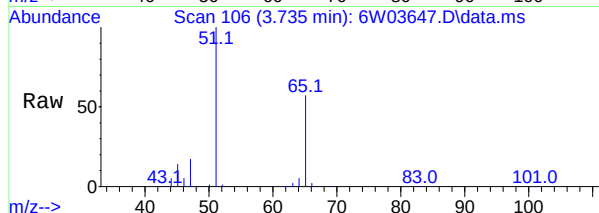
Quant Time: Dec 21 17:25:44 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration





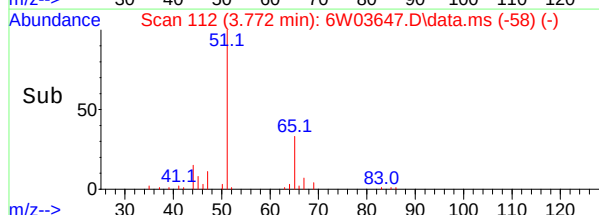
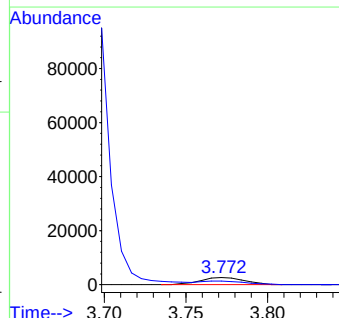
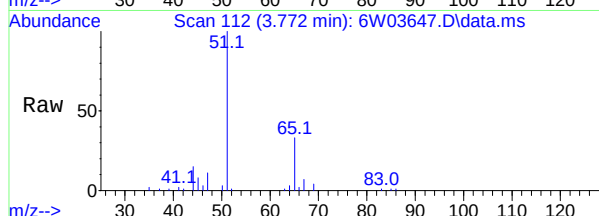
#3
 Freon 152A
 Concen: 51.37 ppb(v)
 RT: 3.735 min Scan# 106
 Delta R.T. -0.000 min
 Lab File: 6W03647.D
 Acq: 21 Dec 2017 2:33 am

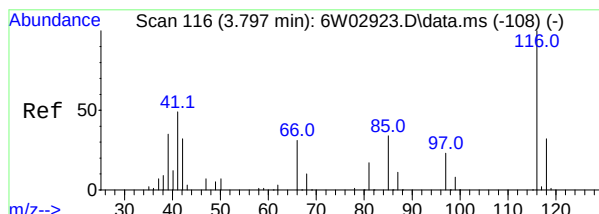
Tgt Ion: 65 Resp: 731372
 Ion Ratio Lower Upper
 65 100
 45 24.2 16.9 31.5



#4
 Chlorodifluoromethane
 Concen: 1.00 ppb(v)
 RT: 3.772 min Scan# 112
 Delta R.T. -0.000 min
 Lab File: 6W03647.D
 Acq: 21 Dec 2017 2:33 am

Tgt Ion: 67 Resp: 4971
 Ion Ratio Lower Upper
 67 100
 69 50.4 22.7 42.1#

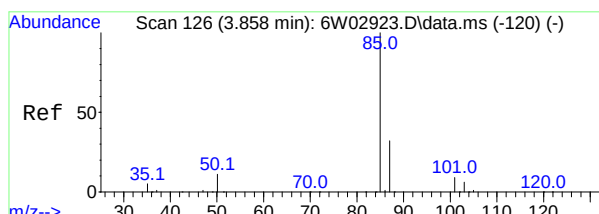
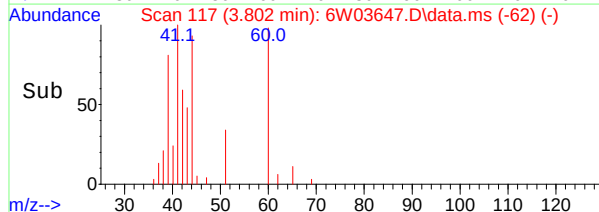
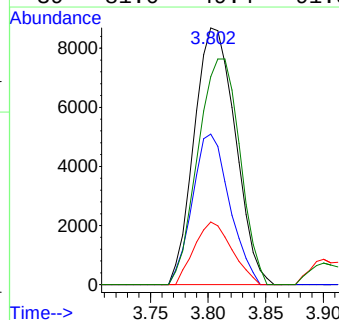
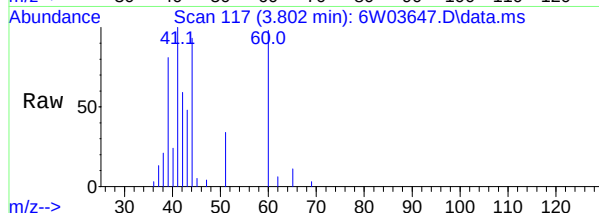




#5
Propene
Concen: 1.38 ppb(v)
RT: 3.802 min Scan# 117
Delta R.T. 0.006 min
Lab File: 6W03647.D
Acq: 21 Dec 2017 2:33 am

Tgt Ion: 41 Resp: 21541

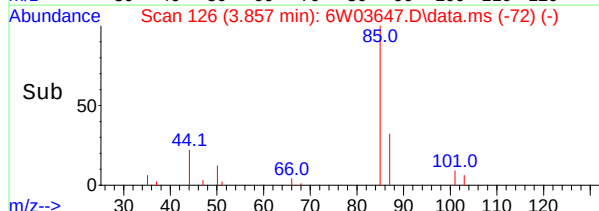
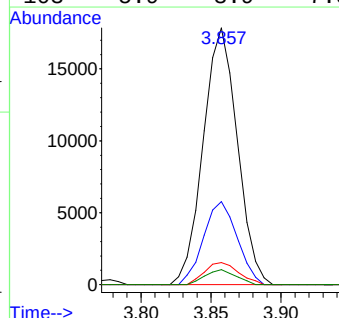
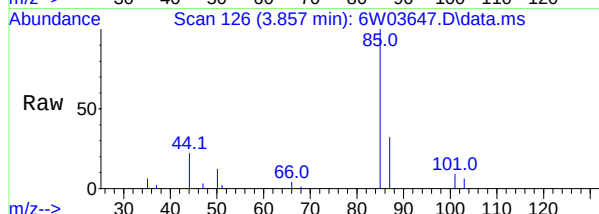
Ion	Ratio	Lower	Upper
41	100		
42	58.6	45.4	84.4
40	24.4	17.4	32.2
39	81.0	49.4	91.8

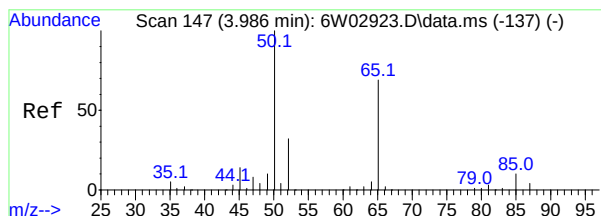


#7
Dichlorodifluoromethane
Concen: 0.55 ppb(v)
RT: 3.857 min Scan# 126
Delta R.T. -0.000 min
Lab File: 6W03647.D
Acq: 21 Dec 2017 2:33 am

Tgt Ion: 85 Resp: 30278

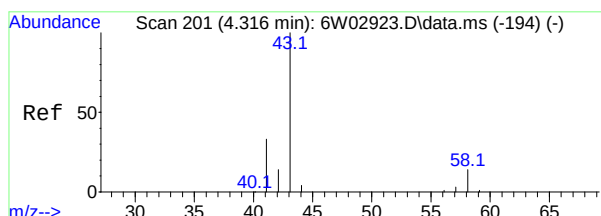
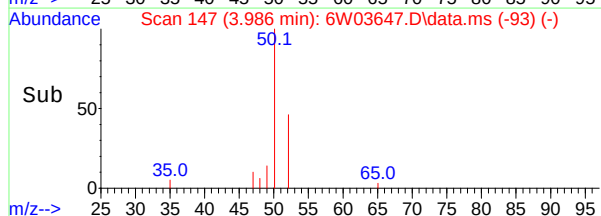
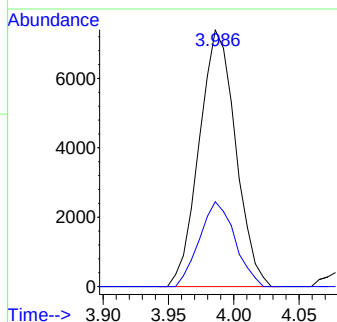
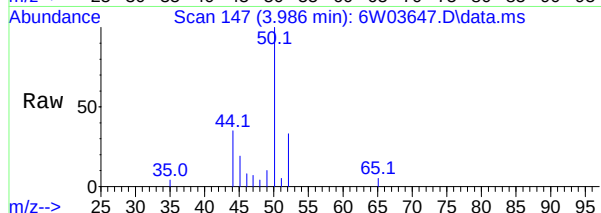
Ion	Ratio	Lower	Upper
85	100		
87	32.3	22.7	42.3
101	8.6	5.9	11.1
103	5.9	3.9	7.3





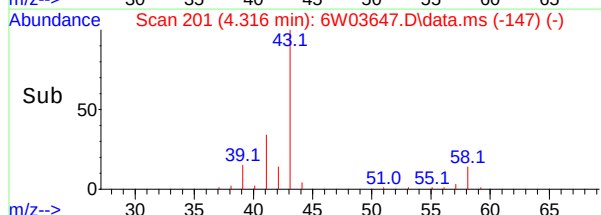
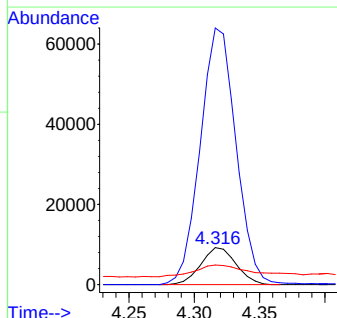
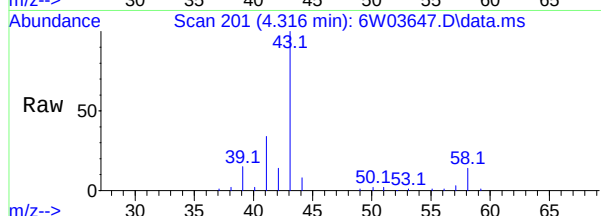
#9
Chloromethane
Concen: 0.81 ppb(v)
RT: 3.986 min Scan# 147
Delta R.T. -0.000 min
Lab File: 6W03647.D
Acq: 21 Dec 2017 2:33 am

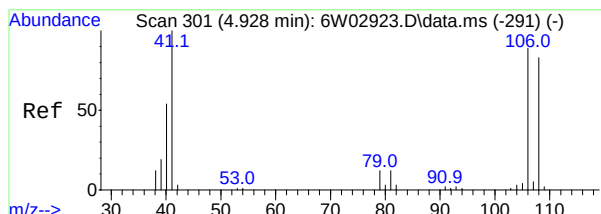
Tgt Ion: 50 Resp: 14376
Ion Ratio Lower Upper
50 100
52 33.1 22.7 42.1



#13
n-Butane
Concen: 4.81 ppb(v)
RT: 4.316 min Scan# 201
Delta R.T. -0.000 min
Lab File: 6W03647.D
Acq: 21 Dec 2017 2:33 am

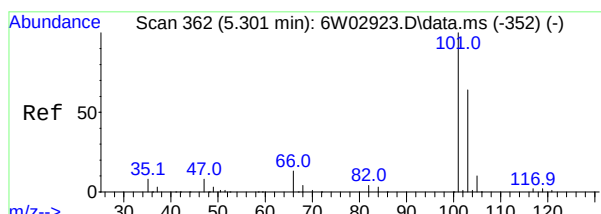
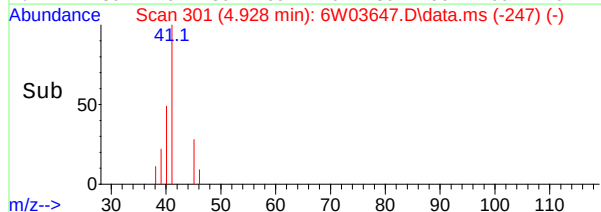
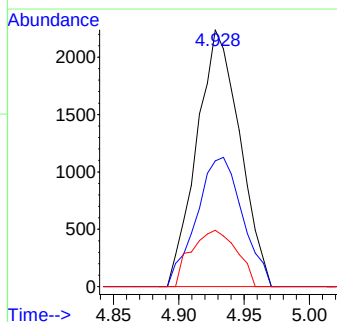
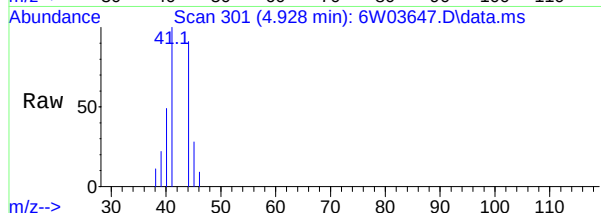
Tgt Ion: 58 Resp: 17386
Ion Ratio Lower Upper
58 100
43 691.7 499.8 928.2
44 53.2 21.1 39.1#





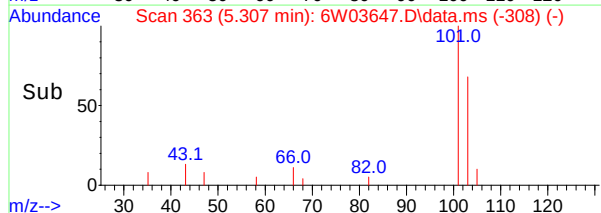
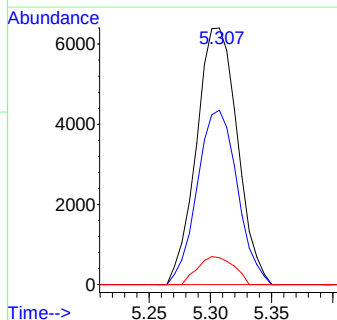
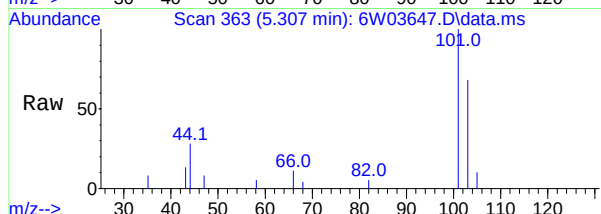
#17
Acetonitrile
Concen: 0.31 ppb(v)
RT: 4.928 min Scan# 301
Delta R.T. -0.000 min
Lab File: 6W03647.D
Acq: 21 Dec 2017 2:33 am

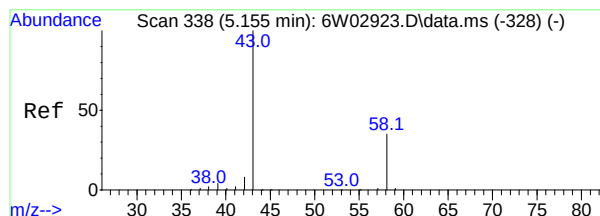
Tgt Ion: 41 Resp: 5139
Ion Ratio Lower Upper
41 100
40 49.0 37.6 69.8
39 22.0 13.4 24.8



#21
Trichlorofluoromethane
Concen: 0.29 ppb(v)
RT: 5.307 min Scan# 363
Delta R.T. 0.006 min
Lab File: 6W03647.D
Acq: 21 Dec 2017 2:33 am

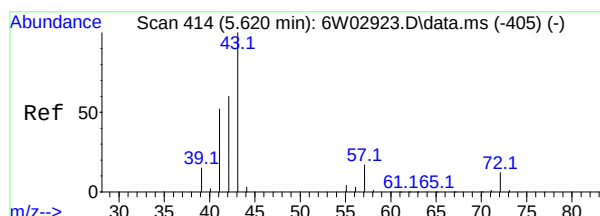
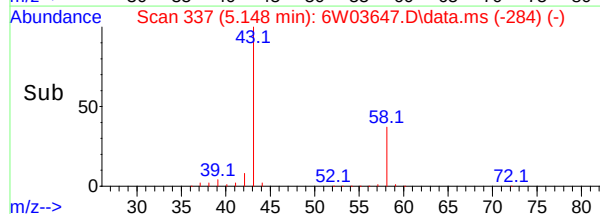
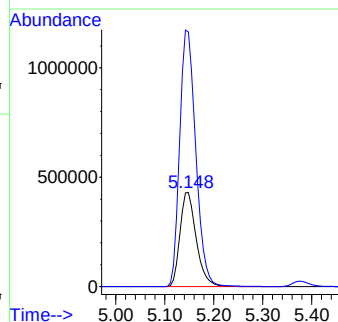
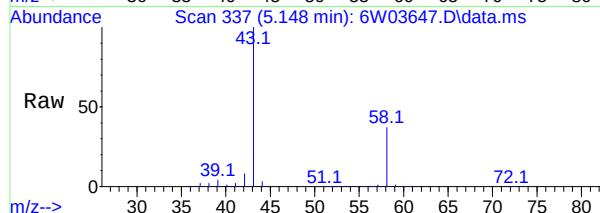
Tgt Ion: 101 Resp: 14896
Ion Ratio Lower Upper
101 100
103 67.9 45.1 83.9
105 10.5 7.3 13.5





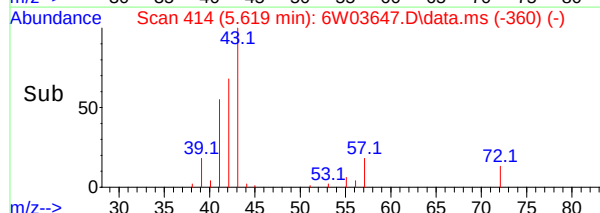
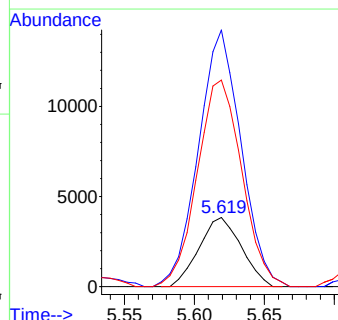
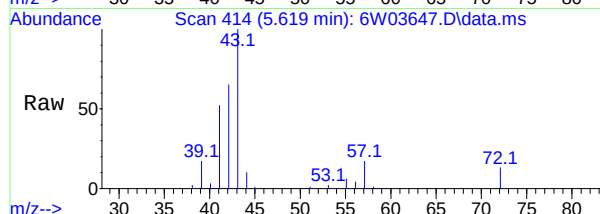
#22
Acetone
Concen: 89.36 ppb(v)
RT: 5.148 min Scan# 337
Delta R.T. -0.006 min
Lab File: 6W03647.D
Acq: 21 Dec 2017 2:33 am

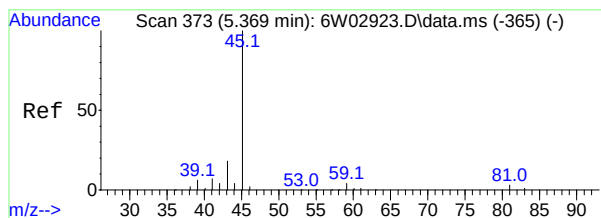
Tgt Ion: 58 Resp: 994585
Ion Ratio Lower Upper
58 100
43 269.9 202.4 375.8



#23
Pentane
Concen: 1.55 ppb(v)
RT: 5.619 min Scan# 414
Delta R.T. -0.000 min
Lab File: 6W03647.D
Acq: 21 Dec 2017 2:33 am

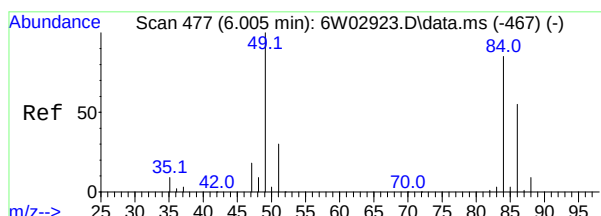
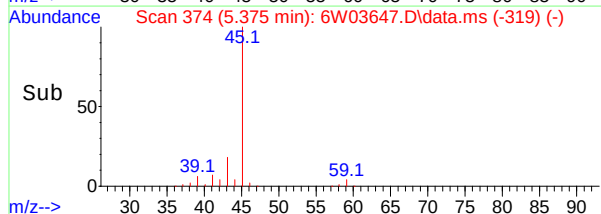
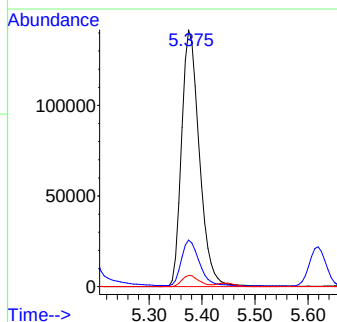
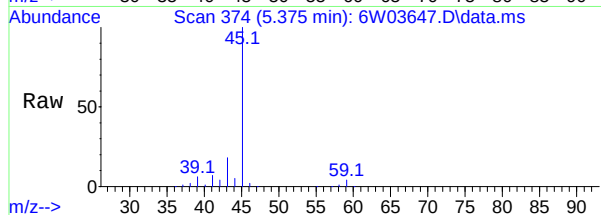
Tgt Ion: 57 Resp: 8087
Ion Ratio Lower Upper
57 100
42 371.5 252.4 468.8
41 298.8 218.7 406.1





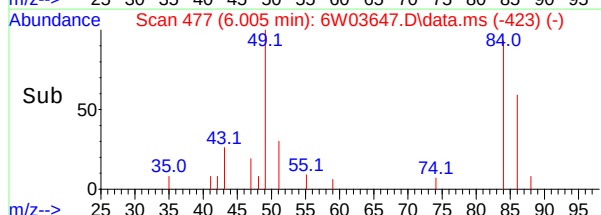
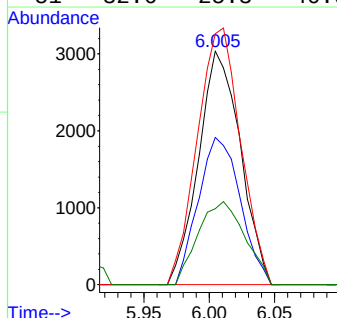
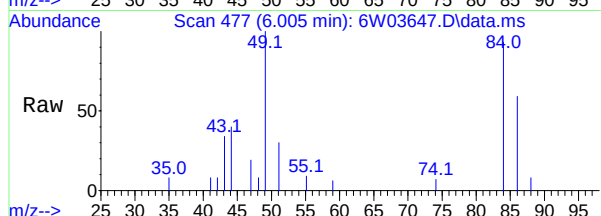
#26
Isopropyl Alcohol
Concen: 7.49 ppb(v)
RT: 5.375 min Scan# 374
Delta R.T. 0.006 min
Lab File: 6W03647.D
Acq: 21 Dec 2017 2:33 am

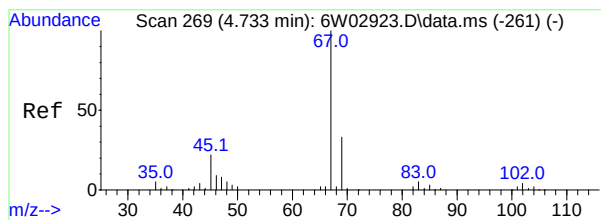
Tgt Ion: 45 Resp: 330273
Ion Ratio Lower Upper
45 100
43 18.1 12.8 23.8
59 4.4 3.0 5.6



#29
Methylene Chloride
Concen: 0.30 ppb(v)
RT: 6.005 min Scan# 477
Delta R.T. -0.000 min
Lab File: 6W03647.D
Acq: 21 Dec 2017 2:33 am

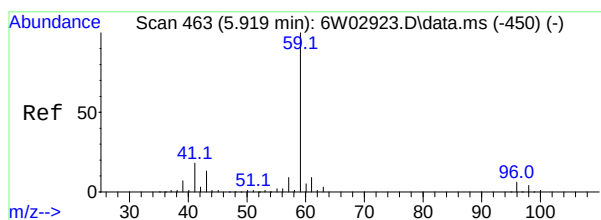
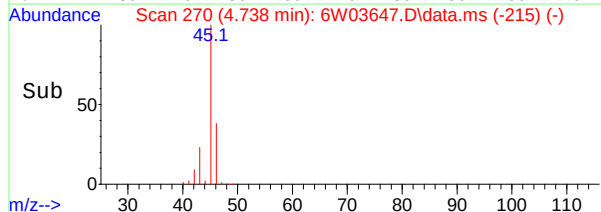
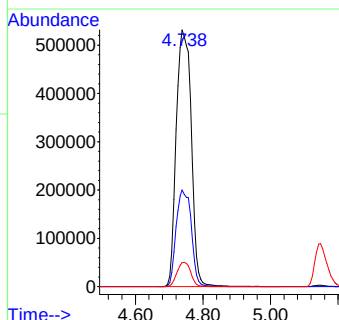
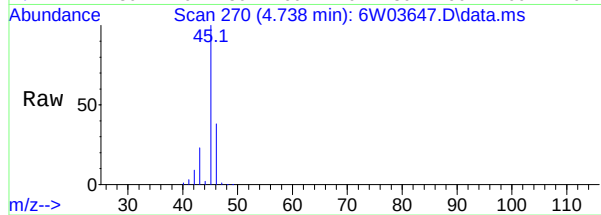
Tgt Ion: 84 Resp: 6775
Ion Ratio Lower Upper
84 100
86 63.0 44.8 83.2
49 107.4 82.1 152.5
51 32.6 25.3 46.9





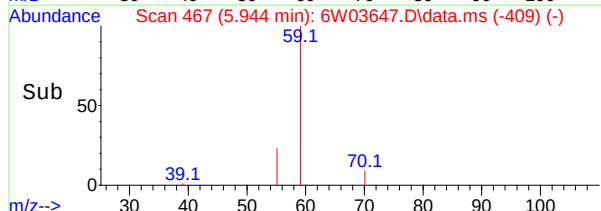
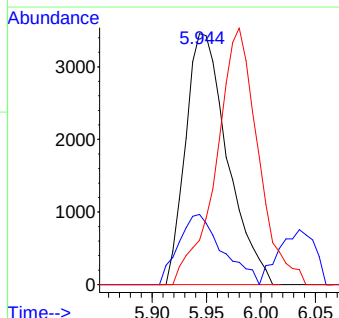
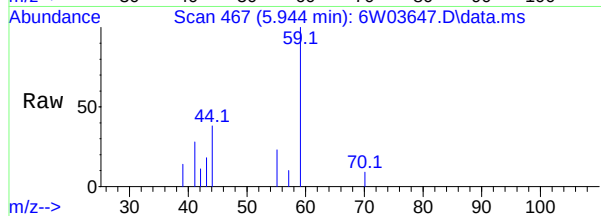
#31
Ethanol
Concen: 262.53 ppb(v)
RT: 4.738 min Scan# 270
Delta R.T. 0.006 min
Lab File: 6W03647.D
Acq: 21 Dec 2017 2:33 am

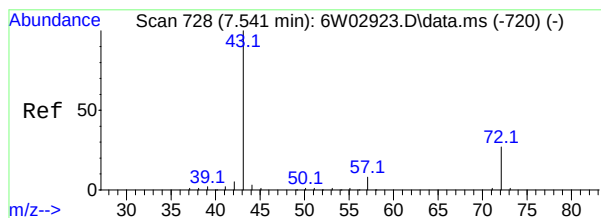
Tgt Ion: 45 Resp: 1646347
Ion Ratio Lower Upper
45 100
46 37.6 27.2 50.4
42 9.3 5.6 10.4



#35
tert-Butyl Alcohol
Concen: 0.22 ppb(v)
RT: 5.944 min Scan# 467
Delta R.T. 0.024 min
Lab File: 6W03647.D
Acq: 21 Dec 2017 2:33 am

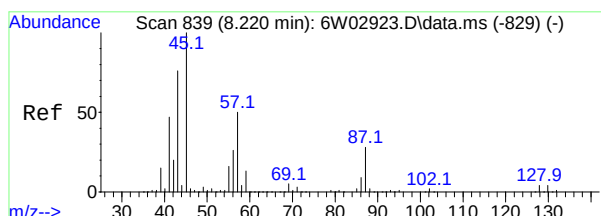
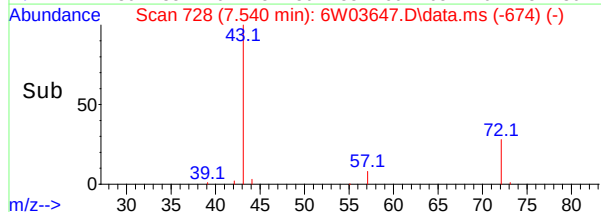
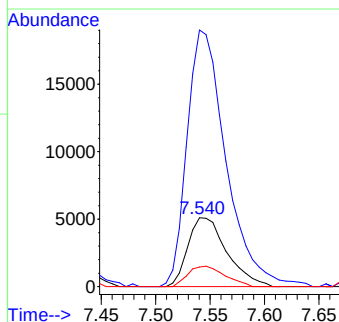
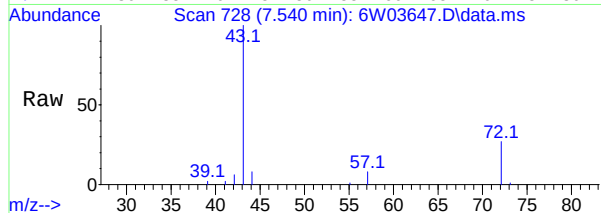
Tgt Ion: 59 Resp: 9251
Ion Ratio Lower Upper
59 100
41 28.0 12.7 23.7#
43 17.7 8.8 16.4#





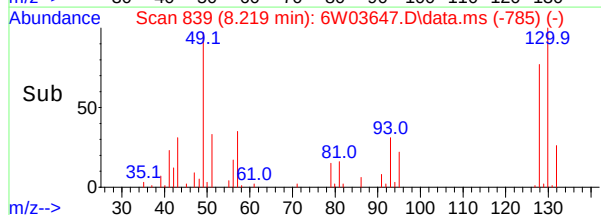
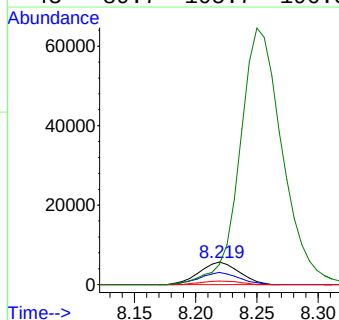
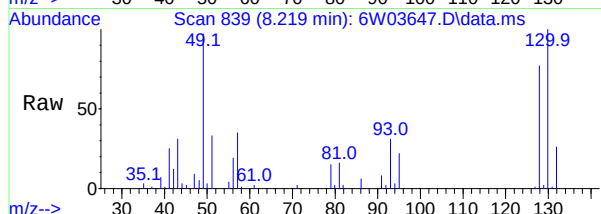
#39
2-Butanone
Concen: 1.12 ppb(v)
RT: 7.540 min Scan# 728
Delta R.T. -0.000 min
Lab File: 6W03647.D
Acq: 21 Dec 2017 2:33 am

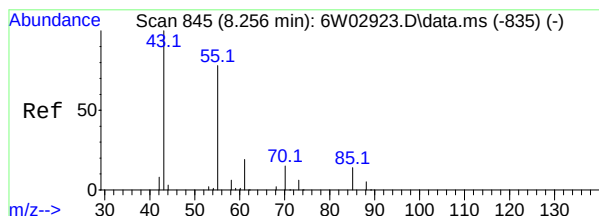
Tgt Ion: 72 Resp: 12749
Ion Ratio Lower Upper
72 100
43 373.4 257.4 478.0
57 28.6 21.0 39.0



#40
Hexane
Concen: 0.36 ppb(v)
RT: 8.219 min Scan# 839
Delta R.T. -0.000 min
Lab File: 6W03647.D
Acq: 21 Dec 2017 2:33 am

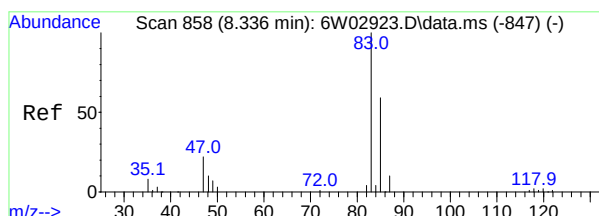
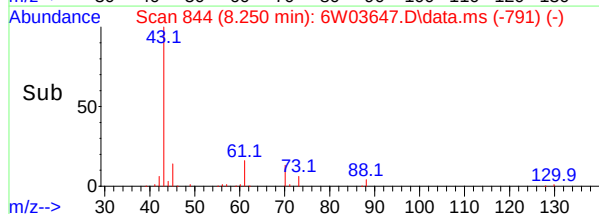
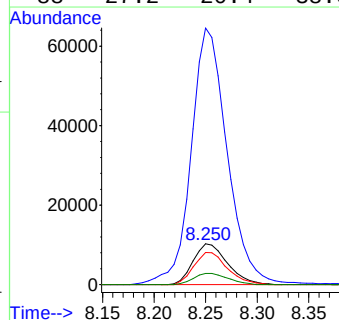
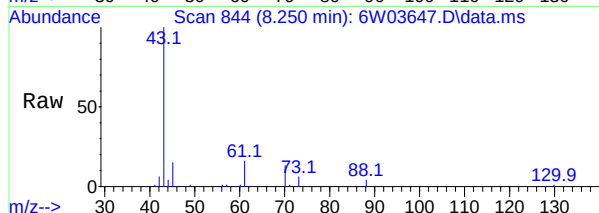
Tgt Ion: 57 Resp: 12759
Ion Ratio Lower Upper
57 100
56 54.2 36.0 67.0
86 16.4 12.1 22.5
43 89.7 105.7 196.3#





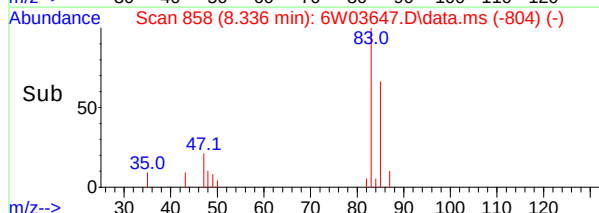
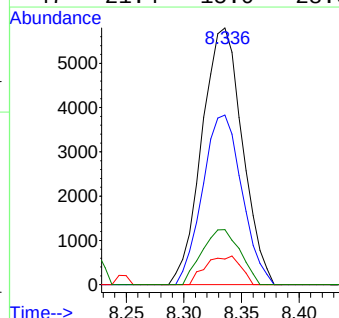
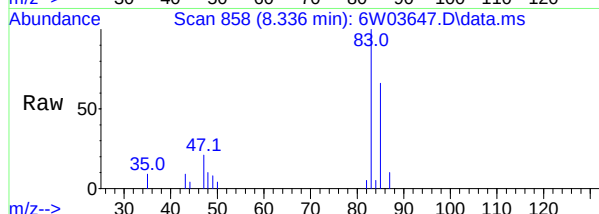
#43
Ethyl Acetate
Concen: 3.29 ppb(v)
RT: 8.250 min Scan# 844
Delta R.T. -0.006 min
Lab File: 6W03647.D
Acq: 21 Dec 2017 2:33 am

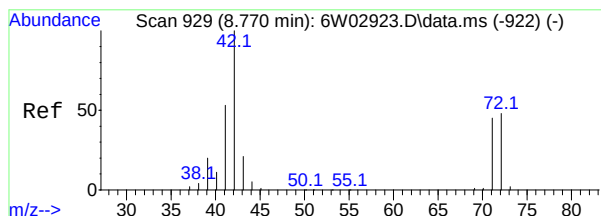
Tgt Ion: 61 Resp: 23868
Ion Ratio Lower Upper
61 100
43 626.7 488.5 907.1
70 78.5 54.9 101.9
88 27.2 20.4 38.0



#45
Chloroform
Concen: 0.30 ppb(v)
RT: 8.336 min Scan# 858
Delta R.T. -0.000 min
Lab File: 6W03647.D
Acq: 21 Dec 2017 2:33 am

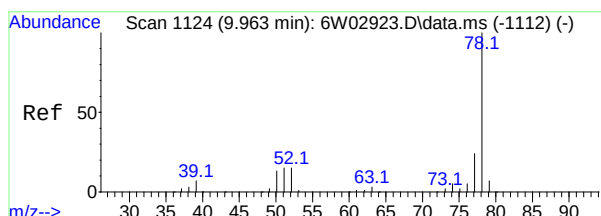
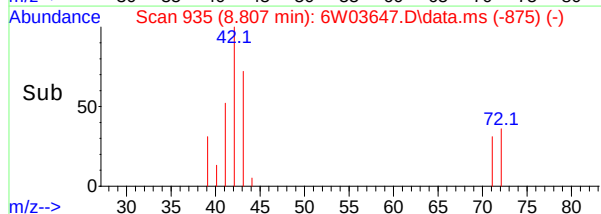
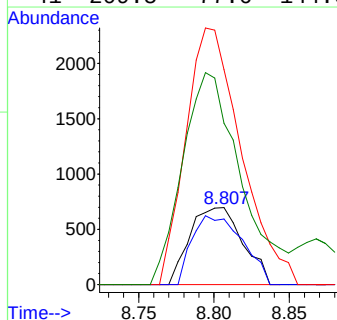
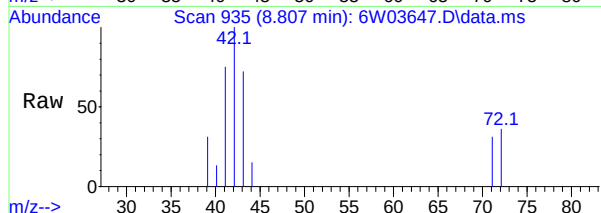
Tgt Ion: 83 Resp: 14153
Ion Ratio Lower Upper
83 100
85 66.1 45.2 84.0
87 10.0 7.3 13.7
47 21.4 15.0 28.0





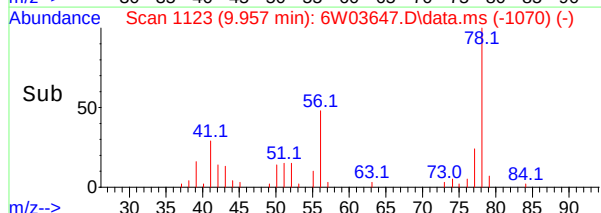
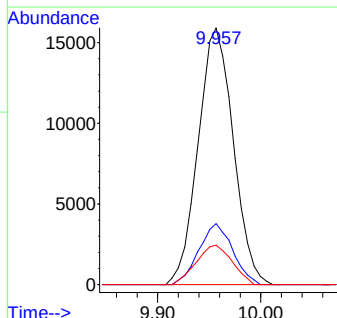
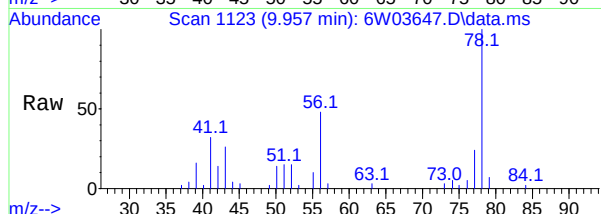
#47
Tetrahydrofuran
Concen: 0.17 ppb(v)
RT: 8.807 min Scan# 935
Delta R.T. 0.036 min
Lab File: 6W03647.D
Acq: 21 Dec 2017 2:33 am

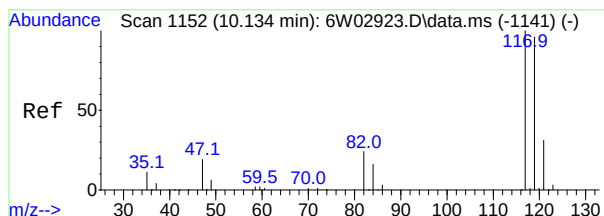
Tgt Ion: 72 Resp: 1703
Ion Ratio Lower Upper
72 100
71 85.2 65.4 121.4
42 279.1 146.4 271.8#
41 209.5 77.6 144.0#



#50
Benzene
Concen: 0.51 ppb(v)
RT: 9.957 min Scan# 1123
Delta R.T. -0.006 min
Lab File: 6W03647.D
Acq: 21 Dec 2017 2:33 am

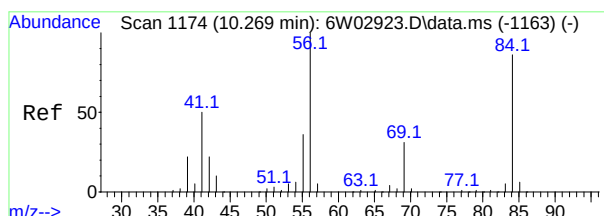
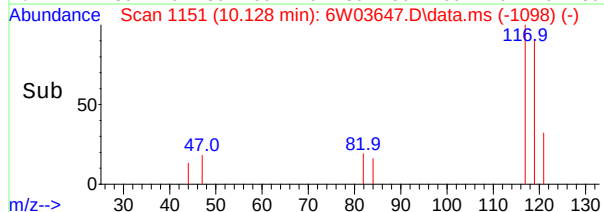
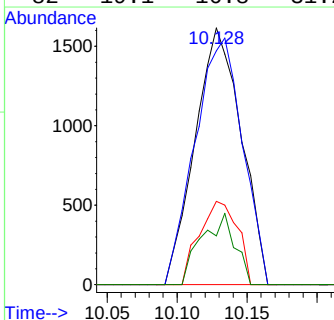
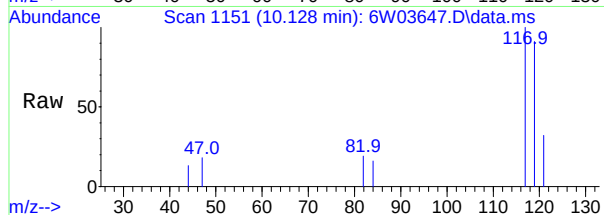
Tgt Ion: 78 Resp: 37685
Ion Ratio Lower Upper
78 100
77 23.7 16.6 30.8
51 15.4 10.6 19.6





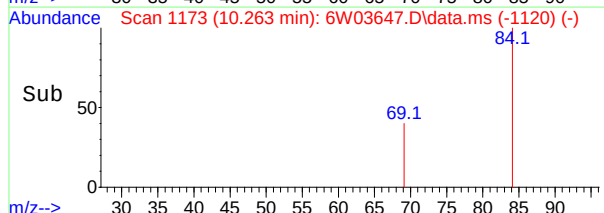
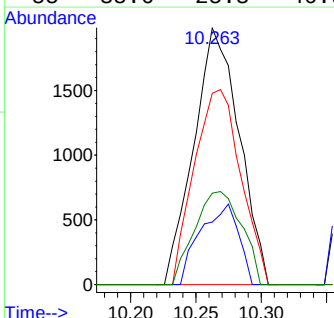
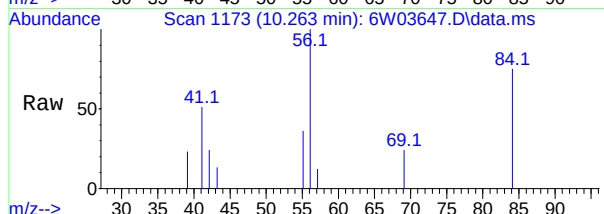
#51
Carbon Tetrachloride
Concen: 0.08 ppb(v)
RT: 10.128 min Scan# 1151
Delta R.T. -0.006 min
Lab File: 6W03647.D
Acq: 21 Dec 2017 2:33 am

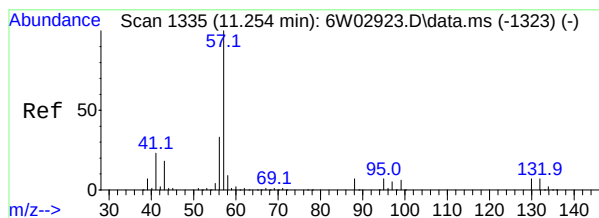
Tgt Ion:117	Resp:	3707
Ion Ratio	Lower	Upper
117	100	
119	91.0	67.4 125.2
121	32.4	21.9 40.7
82	19.1	16.8 31.2



#52
Cyclohexane
Concen: 0.14 ppb(v)
RT: 10.263 min Scan# 1173
Delta R.T. -0.006 min
Lab File: 6W03647.D
Acq: 21 Dec 2017 2:33 am

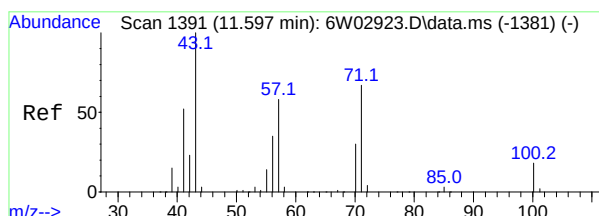
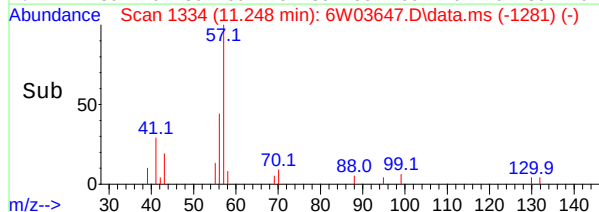
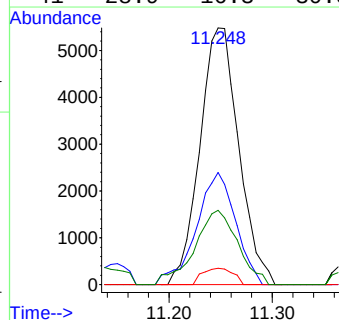
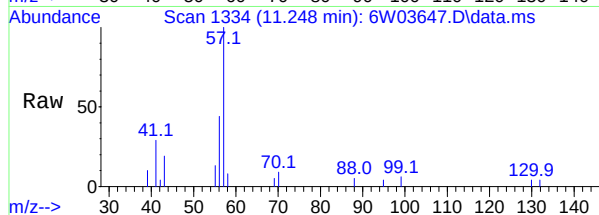
Tgt Ion: 56	Resp:	4804
Ion Ratio	Lower	Upper
56	100	
69	24.3	22.0 40.8
84	74.5	60.5 112.3
55	35.6	25.3 46.9





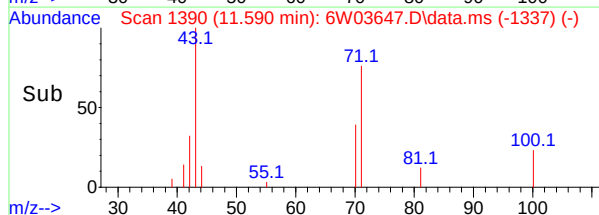
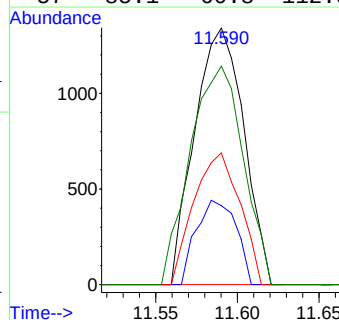
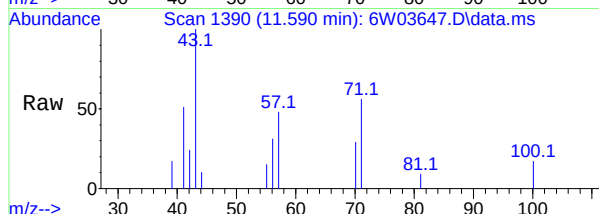
#55
2,2,4-Trimethylpentane
Concen: 0.13 ppb(v)
RT: 11.248 min Scan# 1334
Delta R.T. -0.006 min
Lab File: 6W03647.D
Acq: 21 Dec 2017 2:33 am

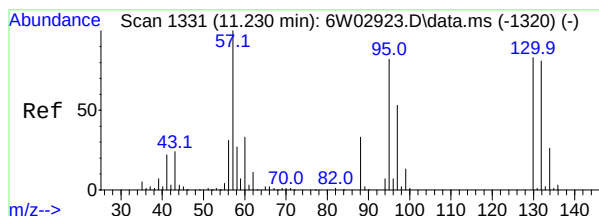
Tgt Ion:	57	Resp:	14386
Ion Ratio	Lower	Upper	
57	100		
56	43.7	23.0	42.8#
99	6.4	4.5	8.3
41	28.9	16.3	30.3



#56
Heptane
Concen: 0.12 ppb(v)
RT: 11.590 min Scan# 1390
Delta R.T. -0.006 min
Lab File: 6W03647.D
Acq: 21 Dec 2017 2:33 am

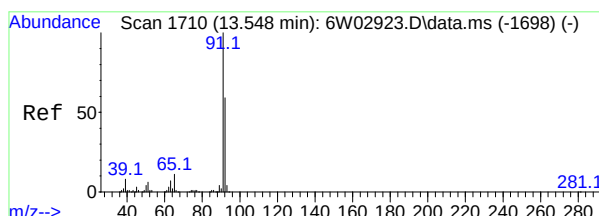
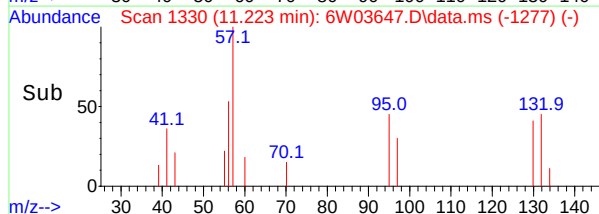
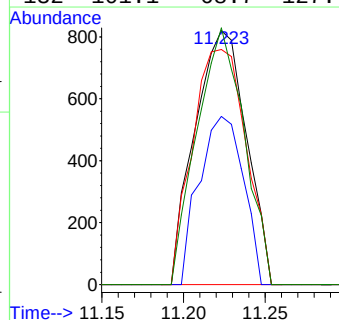
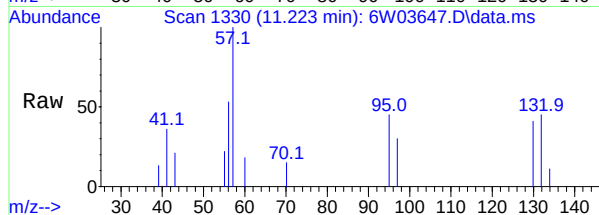
Tgt Ion:	71	Resp:	2808
Ion Ratio	Lower	Upper	
71	100		
100	30.8	20.9	38.7
70	51.3	32.1	59.5
57	85.1	60.8	112.8





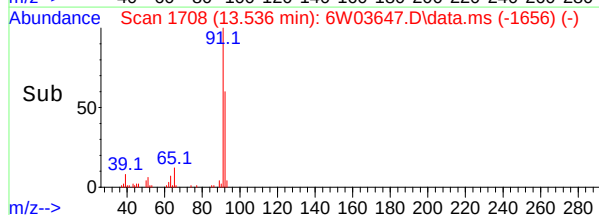
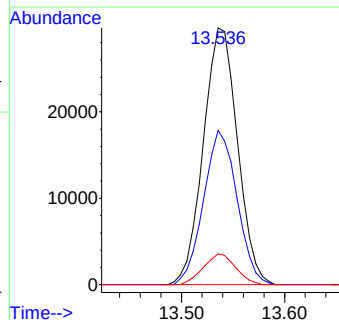
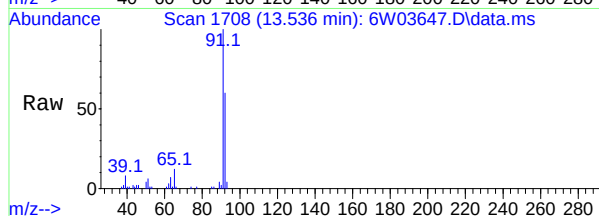
#57
Trichloroethene
Concen: 0.06 ppb(v)
RT: 11.223 min Scan# 1330
Delta R.T. -0.006 min
Lab File: 6W03647.D
Acq: 21 Dec 2017 2:33 am

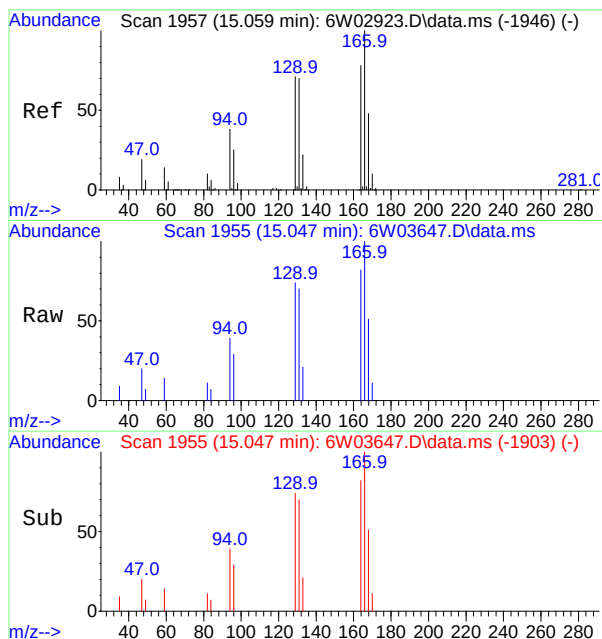
Tgt Ion:	95	Resp:	1798
Ion Ratio	Lower	Upper	
95	100		
97	66.2	45.5	84.5
130	92.6	71.0	131.8
132	101.1	68.7	127.7



#67
Toluene
Concen: 0.77 ppb(v)
RT: 13.536 min Scan# 1708
Delta R.T. -0.013 min
Lab File: 6W03647.D
Acq: 21 Dec 2017 2:33 am

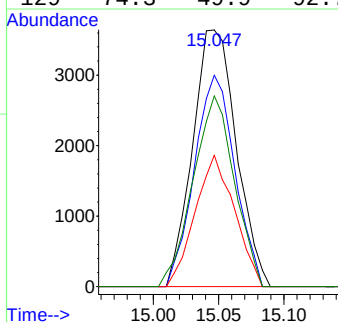
Tgt Ion:	91	Resp:	68453
Ion Ratio	Lower	Upper	
91	100		
92	60.1	41.0	76.2
65	12.0	7.8	14.4





#73
Tetrachloroethene
Concen: 0.19 ppb(v)
RT: 15.047 min Scan# 1955
Delta R.T. -0.013 min
Lab File: 6W03647.D
Acq: 21 Dec 2017 2:33 am

Tgt Ion:166 Resp: 8486
Ion Ratio Lower Upper
166 100
164 82.3 54.5 101.1
168 51.2 33.9 62.9
129 74.3 49.9 92.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03670.D
 Acq On : 22 Dec 2017 12:43 am
 Operator : DANAT
 Sample : jc56815-5
 Misc : MS22955,V6W106,100,,,,1.7
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Dec 22 14:56:09 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : TO-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

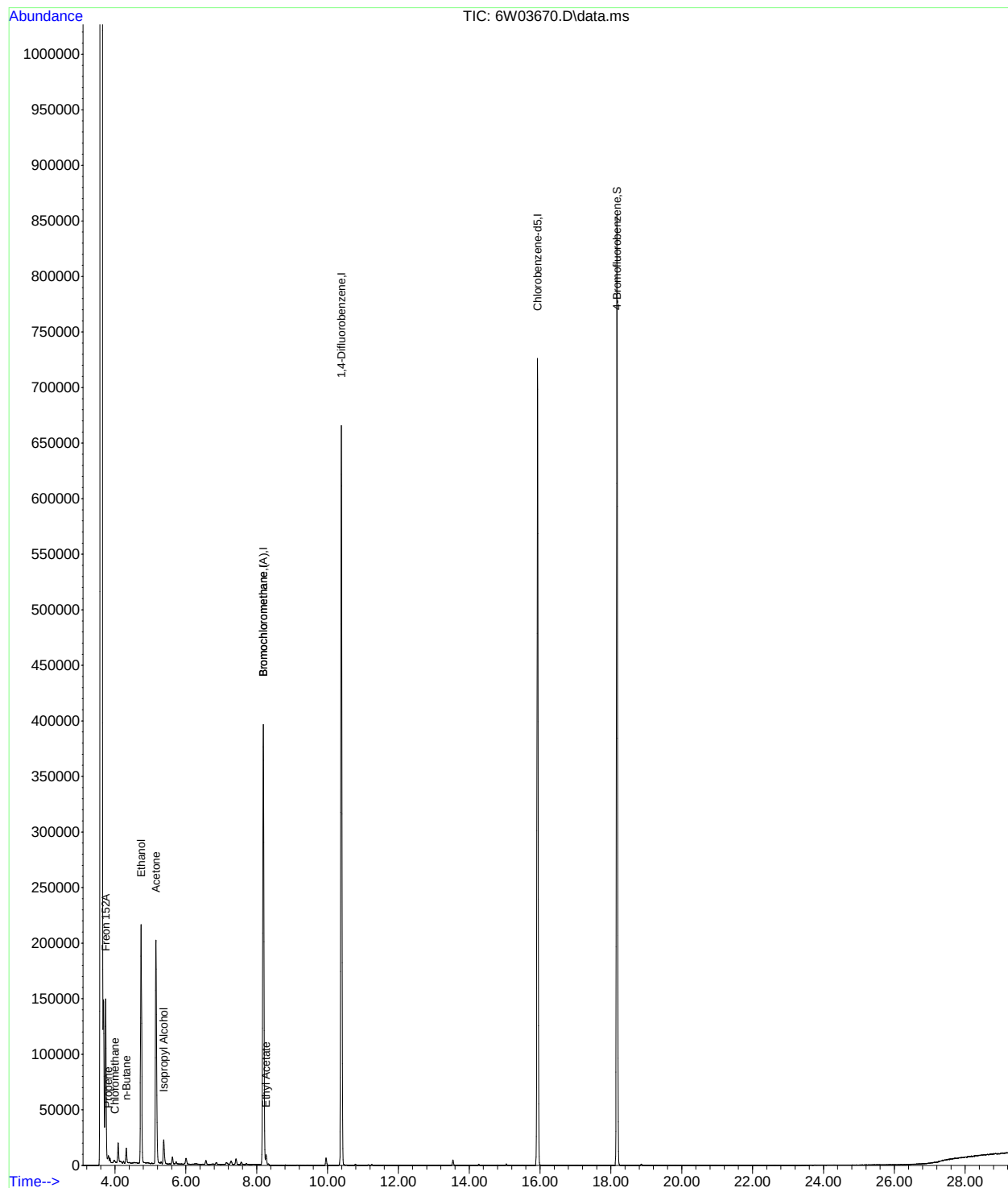
Internal Standards						
1) Bromochloromethane	8.189	130	193814	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.392	114	712171	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.928	82	308032	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.189	130	193814	10.00	ppb(v	0.00
System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.173	95	402972	10.15	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	101.50%
Target Compounds						
					Qvalue	
3) Freon 152A	3.735	65	76156	6.05	ppb(v	97
5) Propene	3.809	41	2229	0.16	ppb(v	87
9) Chloromethane	3.992	50	1548	0.10	ppb(v	100
13) n-Butane	4.323	58	1924	0.60	ppb(v#	64
22) Acetone	5.155	58	104010	10.57	ppb(v	93
26) Isopropyl Alcohol	5.375	45	33313	0.85	ppb(v	96
31) Ethanol	4.733	45	281693	50.83	ppb(v	99
43) Ethyl Acetate	8.263	61	1932	0.30	ppb(v	83

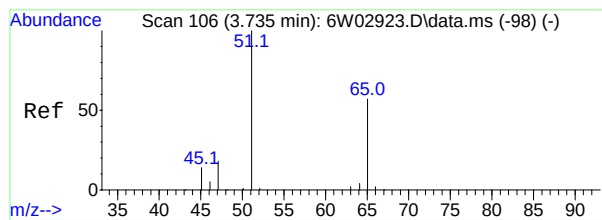
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W03670.D
Acq On : 22 Dec 2017 12:43 am
Operator : DANAT
Sample : jc56815-5
Misc : MS22955,V6W106,100,,,1.7
ALS Vial : 13 Sample Multiplier: 1

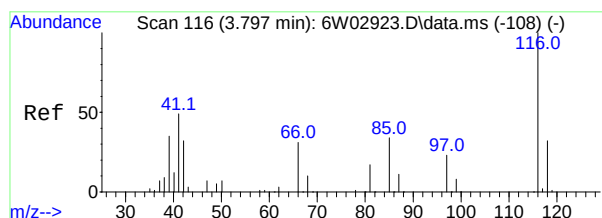
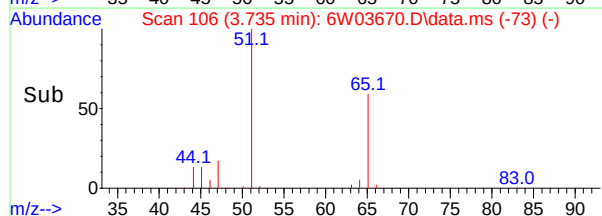
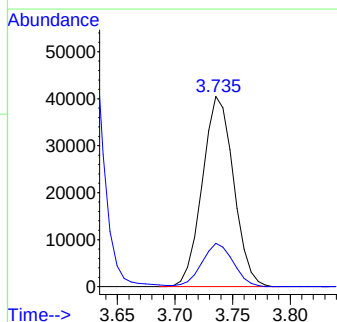
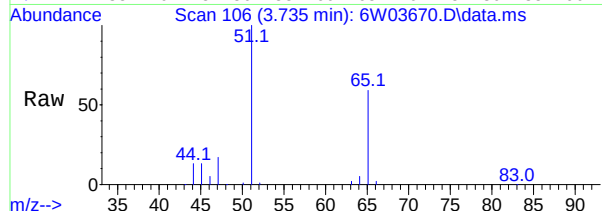
Quant Time: Dec 22 14:56:09 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration





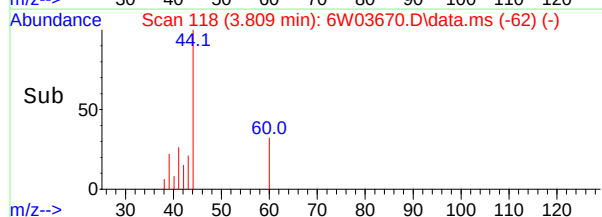
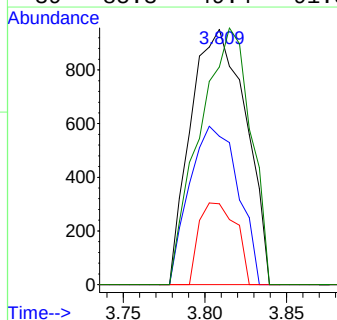
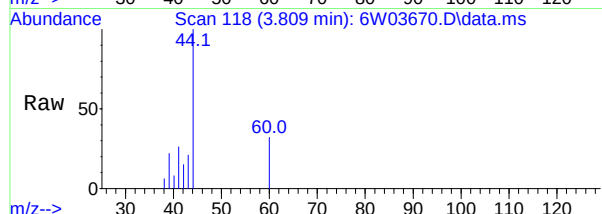
#3
Freon 152A
Concen: 6.05 ppb(v)
RT: 3.735 min Scan# 106
Delta R.T. 0.000 min
Lab File: 6W03670.D
Acq: 22 Dec 2017 12:43 am

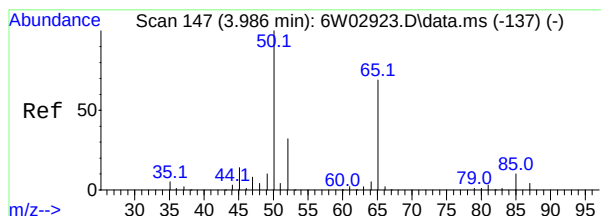
Tgt Ion: 65 Resp: 76156
Ion Ratio Lower Upper
65 100
45 22.8 16.9 31.5



#5
Propene
Concen: 0.16 ppb(v)
RT: 3.809 min Scan# 118
Delta R.T. 0.012 min
Lab File: 6W03670.D
Acq: 22 Dec 2017 12:43 am

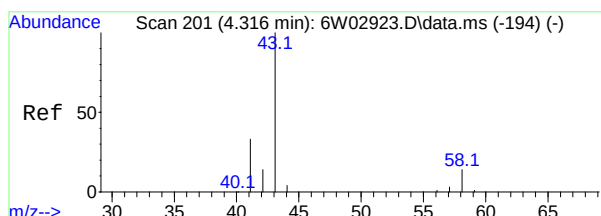
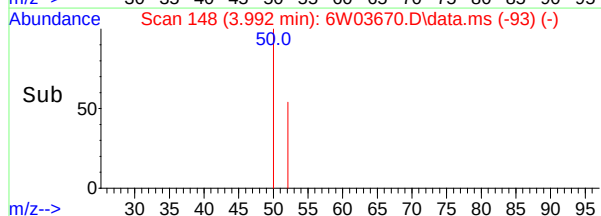
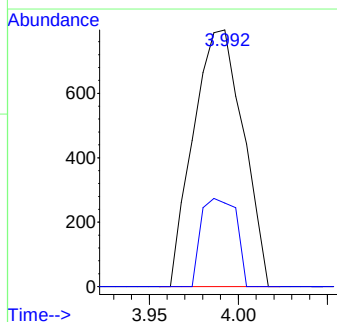
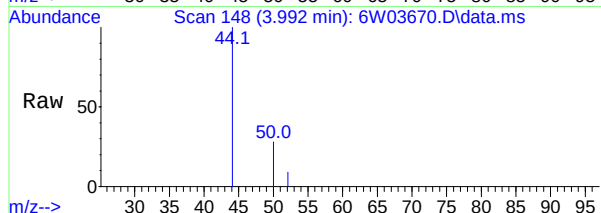
Tgt Ion: 41 Resp: 2229
Ion Ratio Lower Upper
41 100
42 58.1 45.4 84.4
40 31.7 17.4 32.2
39 85.3 49.4 91.8





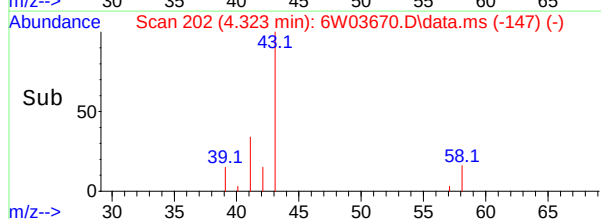
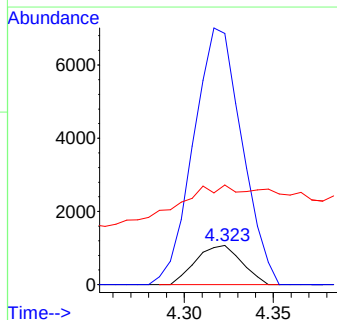
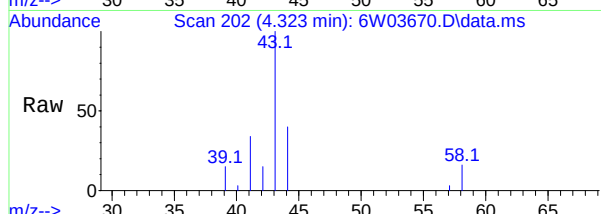
#9
Chloromethane
Concen: 0.10 ppb(v)
RT: 3.992 min Scan# 148
Delta R.T. 0.006 min
Lab File: 6W03670.D
Acq: 22 Dec 2017 12:43 am

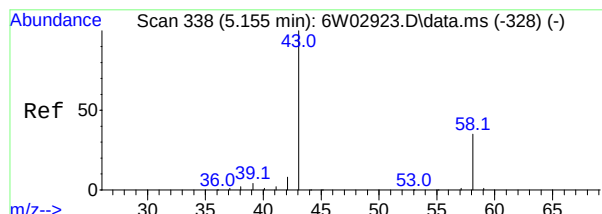
Tgt Ion: 50 Resp: 1548
Ion Ratio Lower Upper
50 100
52 32.5 22.7 42.1



#13
n-Butane
Concen: 0.60 ppb(v)
RT: 4.323 min Scan# 202
Delta R.T. 0.006 min
Lab File: 6W03670.D
Acq: 22 Dec 2017 12:43 am

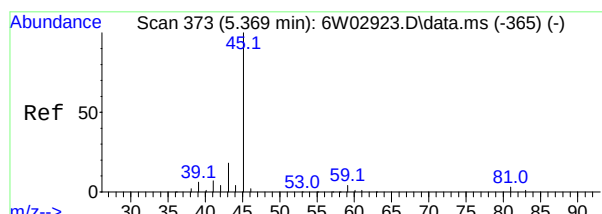
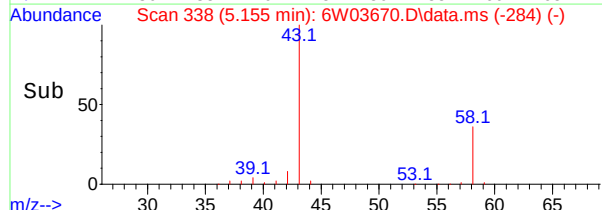
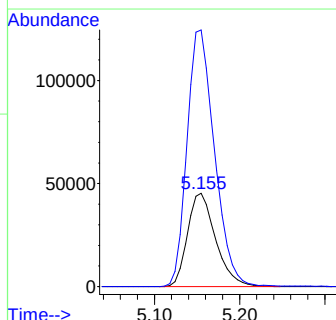
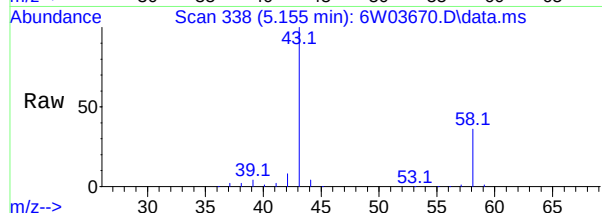
Tgt Ion: 58 Resp: 1924
Ion Ratio Lower Upper
58 100
43 641.5 499.8 928.2
44 254.1 21.1 39.1#





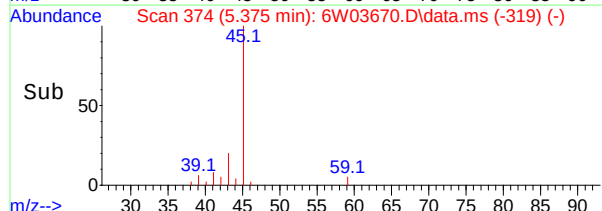
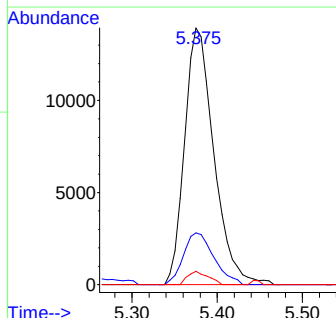
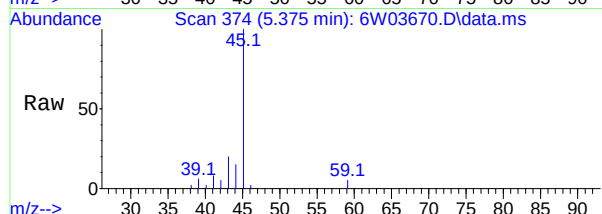
#22
Acetone
Concen: 10.57 ppb(v)
RT: 5.155 min Scan# 338
Delta R.T. 0.000 min
Lab File: 6W03670.D
Acq: 22 Dec 2017 12:43 am

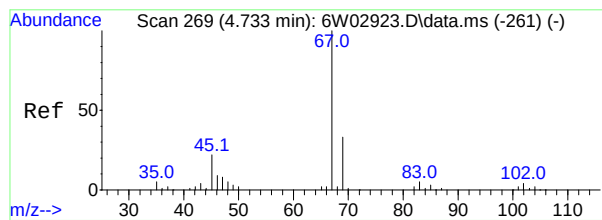
Tgt Ion: 58 Resp: 104010
Ion Ratio Lower Upper
58 100
43 275.3 202.4 375.8



#26
Isopropyl Alcohol
Concen: 0.85 ppb(v)
RT: 5.375 min Scan# 374
Delta R.T. 0.006 min
Lab File: 6W03670.D
Acq: 22 Dec 2017 12:43 am

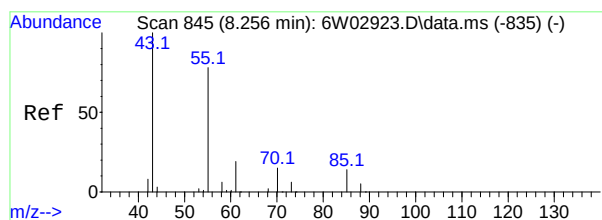
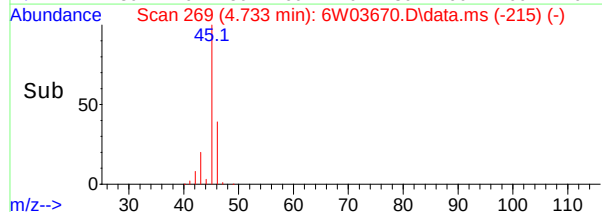
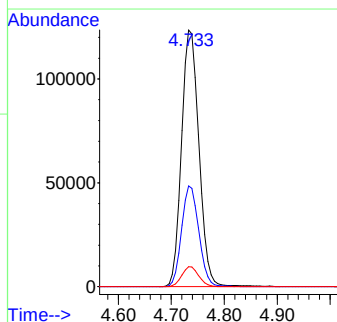
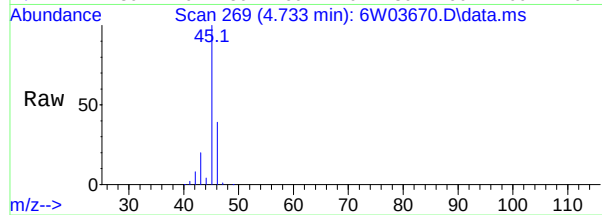
Tgt Ion: 45 Resp: 33313
Ion Ratio Lower Upper
45 100
43 20.2 12.8 23.8
59 5.2 3.0 5.6





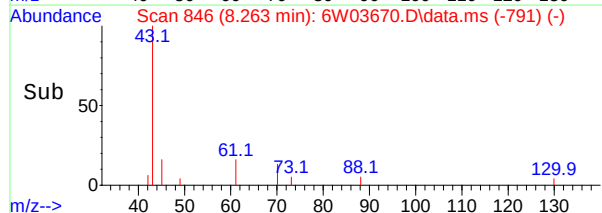
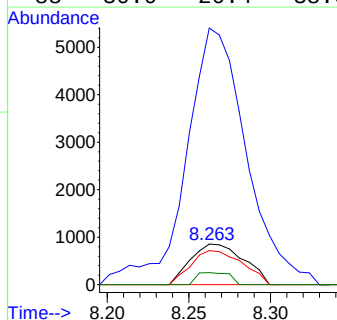
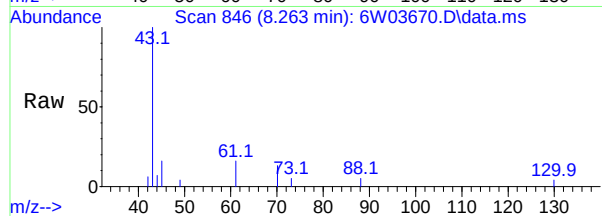
#31
Ethanol
Concen: 50.83 ppb(v)
RT: 4.733 min Scan# 269
Delta R.T. 0.000 min
Lab File: 6W03670.D
Acq: 22 Dec 2017 12:43 am

Tgt Ion: 45 Resp: 281693
Ion Ratio Lower Upper
45 100
46 39.3 27.2 50.4
42 7.8 5.6 10.4



#43
Ethyl Acetate
Concen: 0.30 ppb(v)
RT: 8.263 min Scan# 846
Delta R.T. 0.006 min
Lab File: 6W03670.D
Acq: 22 Dec 2017 12:43 am

Tgt Ion: 61 Resp: 1932
Ion Ratio Lower Upper
61 100
43 633.1 488.5 907.1
70 84.0 54.9 101.9
88 30.0 20.4 38.0



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03641.D
 Acq On : 20 Dec 2017 8:20 pm
 Operator : DANAT
 Sample : jc56815-6
 Misc : MS22955,V6W105,400,,,1
 ALS Vial : 7 Sample Multiplier: 1

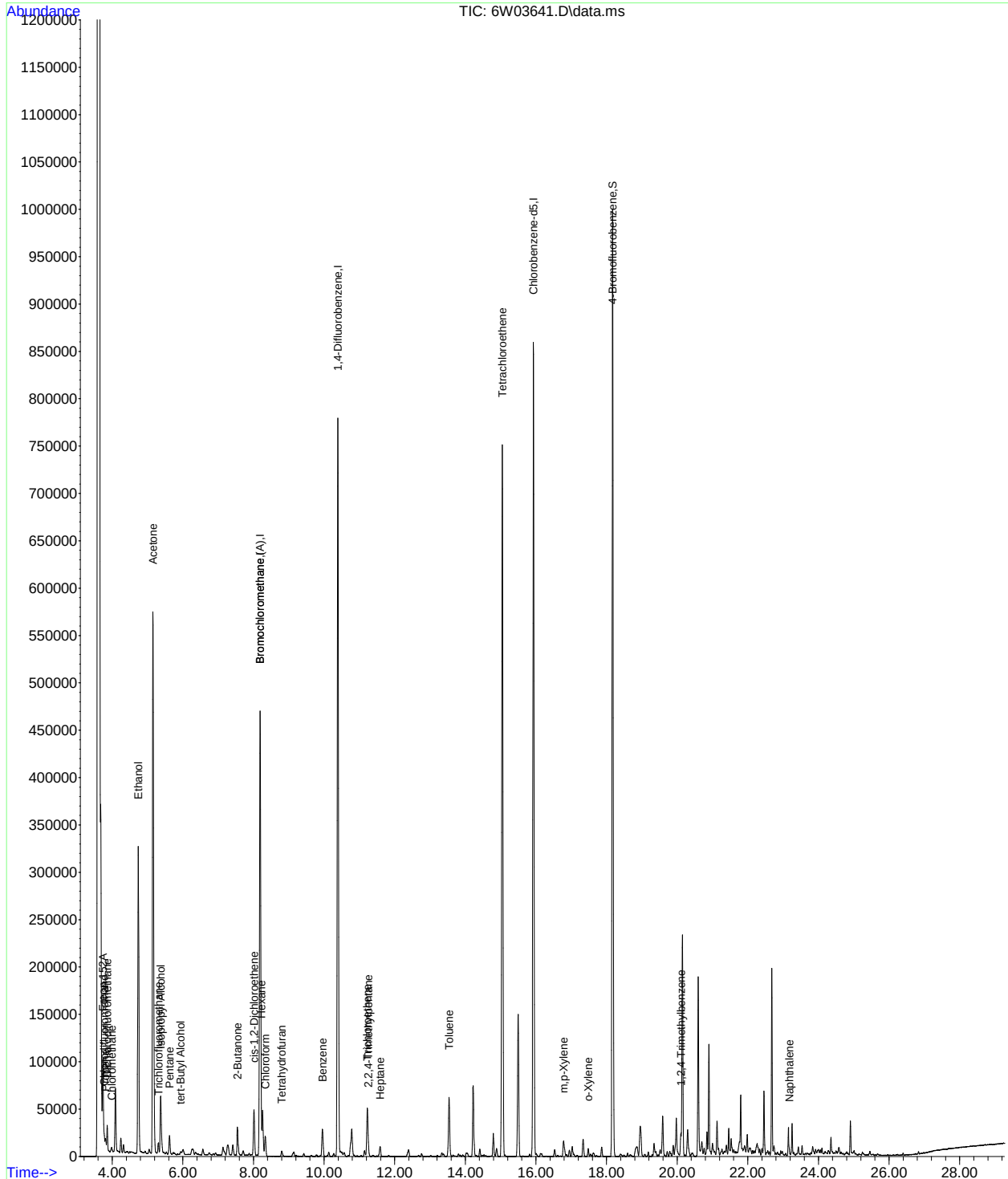
Quant Time: Dec 21 17:05:15 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

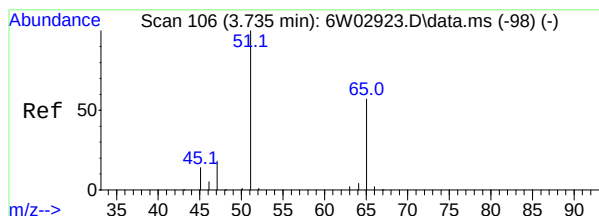
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.189	130	219300	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.391	114	810810	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.928	82	373839	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.189	130	219300	10.00	ppb(v	0.00
System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.173	95	479647	9.96	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	99.60%
Target Compounds						
					Qvalue	
3) Freon 152A	3.735	65	45461	3.19	ppb(v	99
4) Chlorodifluoromethane	3.772	67	2787	0.56	ppb(v	92
5) Propene	3.809	41	5223	0.33	ppb(v	86
7) Dichlorodifluoromethane	3.858	85	26783	0.49	ppb(v	99
9) Chloromethane	3.986	50	4475	0.25	ppb(v	98
21) Trichlorofluoromethane	5.307	101	12097	0.23	ppb(v	98
22) Acetone	5.148	58	294558	26.47	ppb(v	95
23) Pentane	5.619	57	2464	0.47	ppb(v	97
26) Isopropyl Alcohol	5.375	45	94023	2.13	ppb(v	99
31) Ethanol	4.739	45	417661	66.60	ppb(v	99
35) tert-Butyl Alcohol	5.938	59	4790	0.11	ppb(v#	86
39) 2-Butanone	7.547	72	12690	1.11	ppb(v	93
40) Hexane	8.220	57	5619	0.16	ppb(v#	50
41) cis-1,2-Dichloroethene	8.012	61	34100	1.14	ppb(v	99
45) Chloroform	8.336	83	21253	0.45	ppb(v	99
47) Tetrahydrofuran	8.801	72	1584	0.16	ppb(v#	82
50) Benzene	9.957	78	21934	0.30	ppb(v	97
55) 2,2,4-Trimethylpentane	11.248	57	11191	0.10	ppb(v#	84
56) Heptane	11.590	71	2944	0.12	ppb(v	95
57) Trichloroethene	11.223	95	20643	0.65	ppb(v	98
67) Toluene	13.536	91	60998	0.69	ppb(v	99
73) Tetrachloroethene	15.047	166	301594	6.79	ppb(v	99
80) m,p-Xylene	16.784	91	19578	0.25	ppb(v	98
83) o-Xylene	17.482	91	8051	0.10	ppb(v	99
96) 1,2,4-Trimethylbenzene	20.106	105	15028	0.19	ppb(v#	65
106) Naphthalene	23.177	128	3950	0.10	ppb(v	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

```
Data Path : C:\msdchem\1\data\  
Data File : 6W03641.D  
Acq On : 20 Dec 2017      8:20 pm  
Operator : DANAT  
Sample : jc56815-6  
Misc : MS22955,V6W105,400,,,,,1  
ALS Vial : 7      Sample Multiplier: 1
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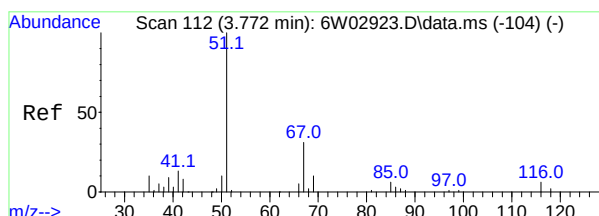
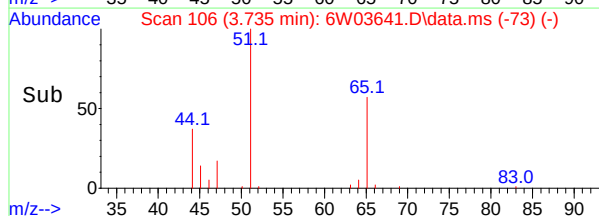
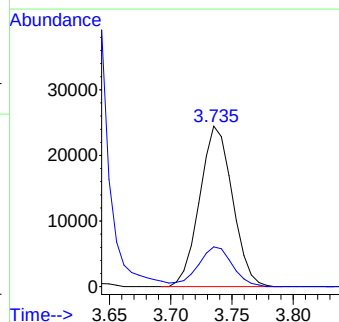
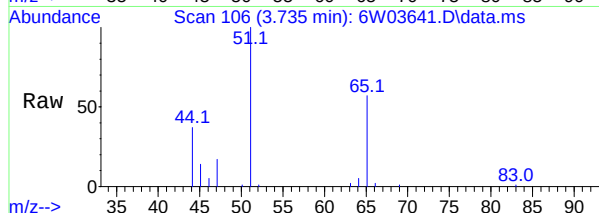
Quant Time: Dec 21 17:05:15 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration





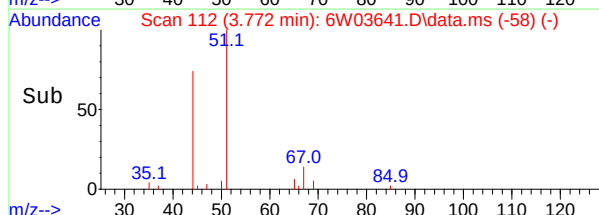
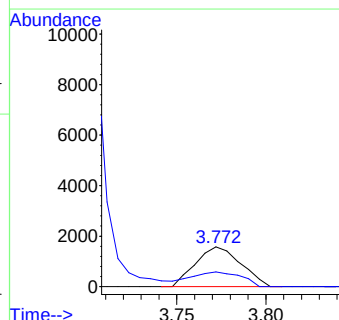
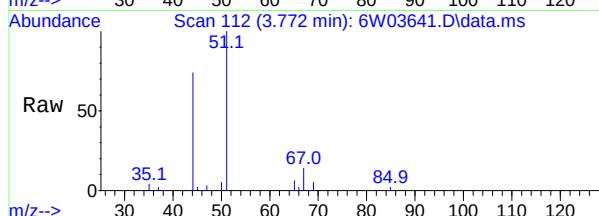
#3
Freon 152A
Concen: 3.19 ppb(v)
RT: 3.735 min Scan# 106
Delta R.T. -0.000 min
Lab File: 6W03641.D
Acq: 20 Dec 2017 8:20 pm

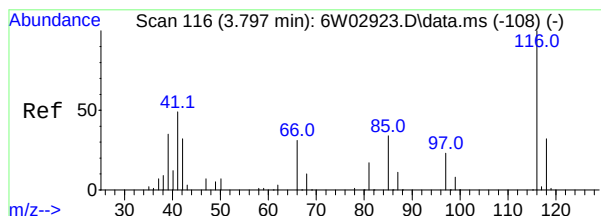
Tgt Ion: 65 Resp: 45461
Ion Ratio Lower Upper
65 100
45 24.8 16.9 31.5



#4
Chlorodifluoromethane
Concen: 0.56 ppb(v)
RT: 3.772 min Scan# 112
Delta R.T. -0.000 min
Lab File: 6W03641.D
Acq: 20 Dec 2017 8:20 pm

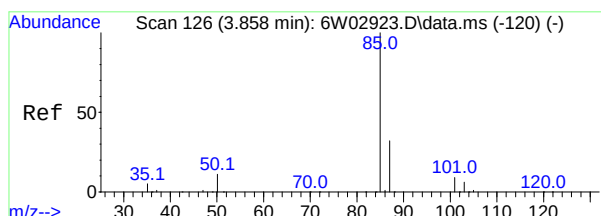
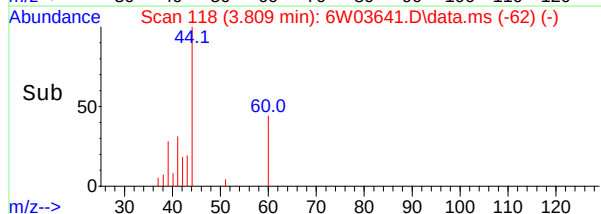
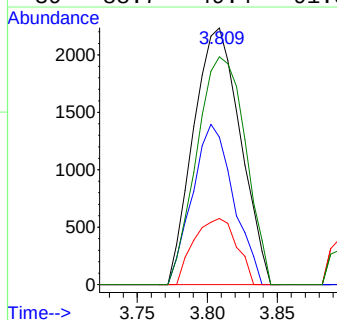
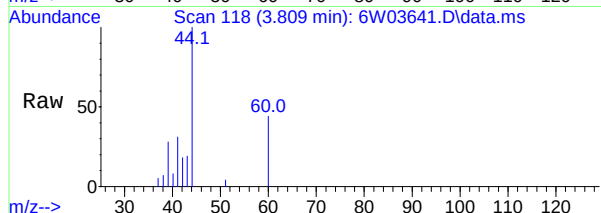
Tgt Ion: 67 Resp: 2787
Ion Ratio Lower Upper
67 100
69 36.8 22.7 42.1





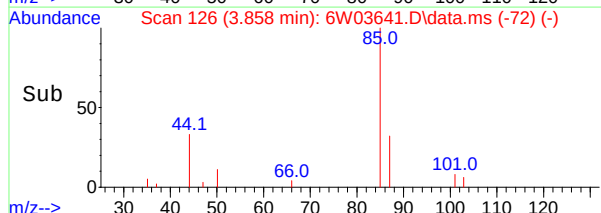
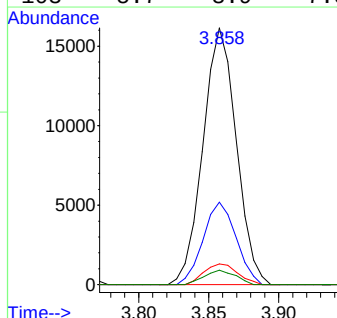
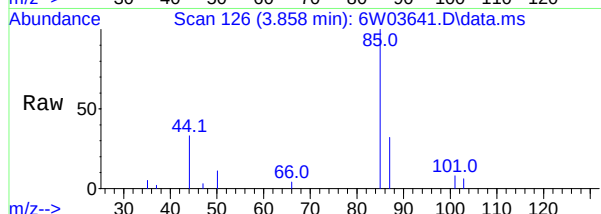
#5
Propene
Concen: 0.33 ppb(v)
RT: 3.809 min Scan# 118
Delta R.T. 0.012 min
Lab File: 6W03641.D
Acq: 20 Dec 2017 8:20 pm

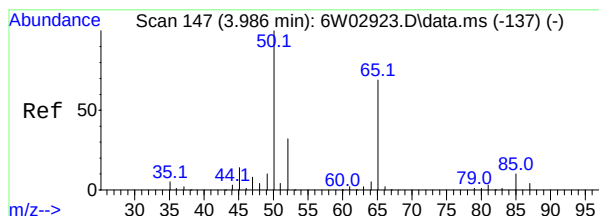
Tgt Ion: 41 Resp: 5223
Ion Ratio Lower Upper
41 100
42 57.4 45.4 84.4
40 25.7 17.4 32.2
39 88.7 49.4 91.8



#7
Dichlorodifluoromethane
Concen: 0.49 ppb(v)
RT: 3.858 min Scan# 126
Delta R.T. -0.000 min
Lab File: 6W03641.D
Acq: 20 Dec 2017 8:20 pm

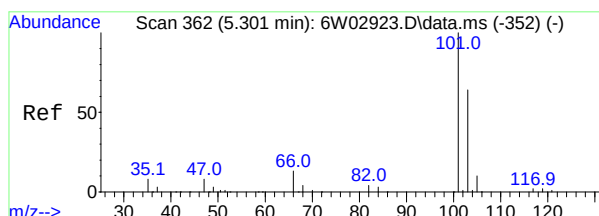
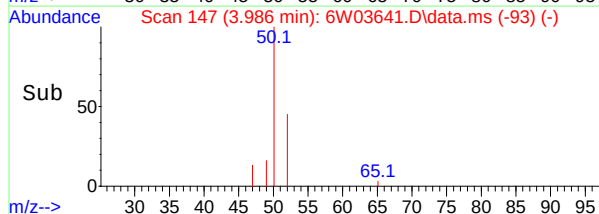
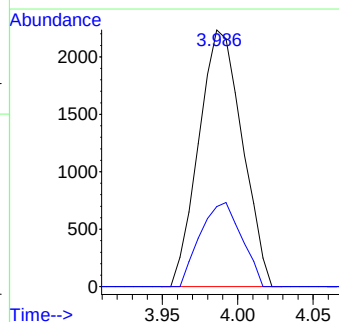
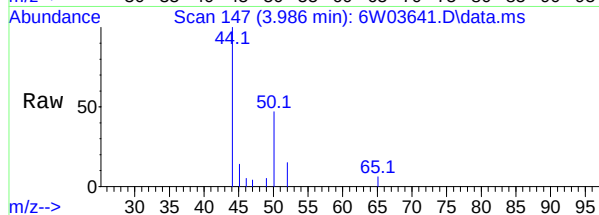
Tgt Ion: 85 Resp: 26783
Ion Ratio Lower Upper
85 100
87 32.1 22.7 42.3
101 8.0 5.9 11.1
103 5.7 3.9 7.3





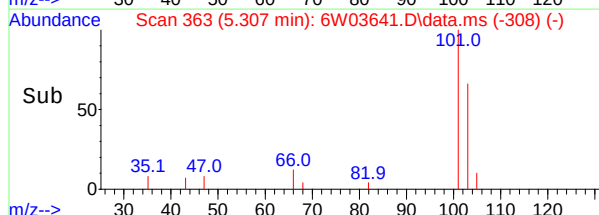
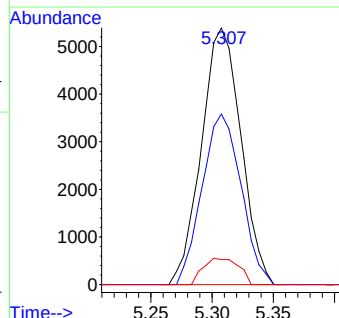
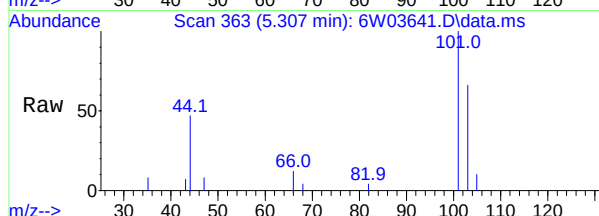
#9
Chloromethane
Concen: 0.25 ppb(v)
RT: 3.986 min Scan# 147
Delta R.T. -0.000 min
Lab File: 6W03641.D
Acq: 20 Dec 2017 8:20 pm

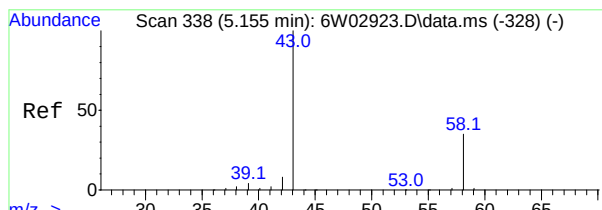
Tgt Ion: 50 Resp: 4475
Ion Ratio Lower Upper
50 100
52 31.1 22.7 42.1



#21
Trichlorofluoromethane
Concen: 0.23 ppb(v)
RT: 5.307 min Scan# 363
Delta R.T. 0.006 min
Lab File: 6W03641.D
Acq: 20 Dec 2017 8:20 pm

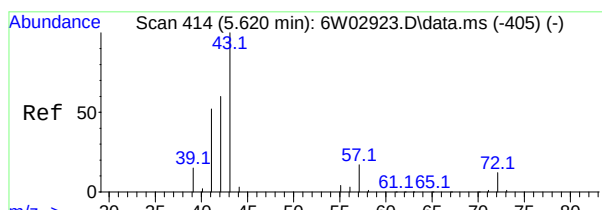
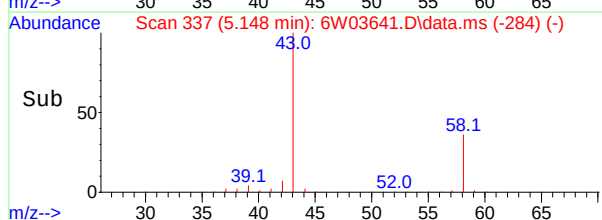
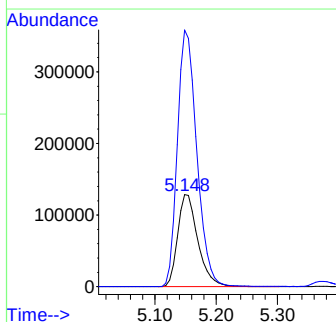
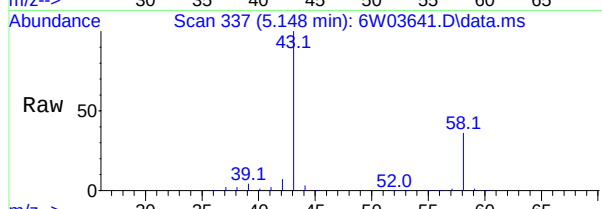
Tgt Ion: 101 Resp: 12097
Ion Ratio Lower Upper
101 100
103 66.5 45.1 83.9
105 9.8 7.3 13.5





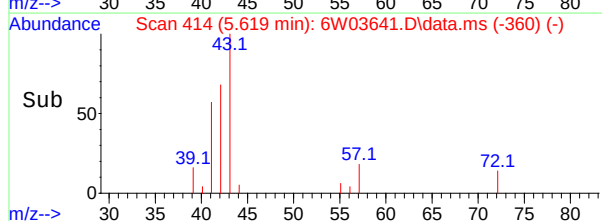
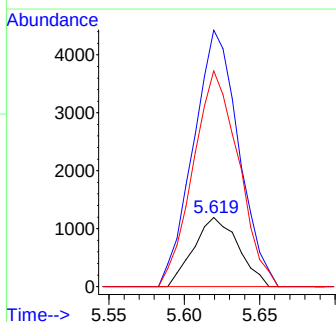
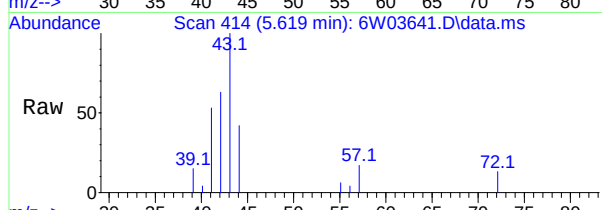
#22
Acetone
Concen: 26.47 ppb(v)
RT: 5.148 min Scan# 337
Delta R.T. -0.006 min
Lab File: 6W03641.D
Acq: 20 Dec 2017 8:20 pm

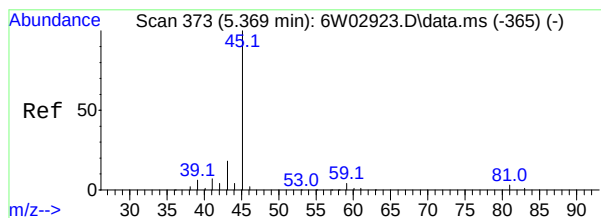
Tgt Ion: 58 Resp: 294558
Ion Ratio Lower Upper
58 100
43 279.0 202.4 375.8



#23
Pentane
Concen: 0.47 ppb(v)
RT: 5.619 min Scan# 414
Delta R.T. -0.000 min
Lab File: 6W03641.D
Acq: 20 Dec 2017 8:20 pm

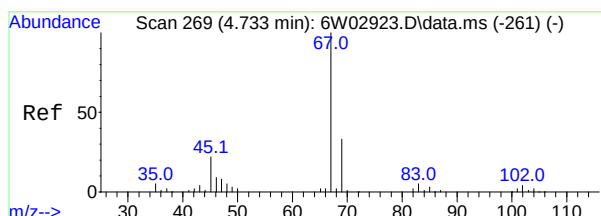
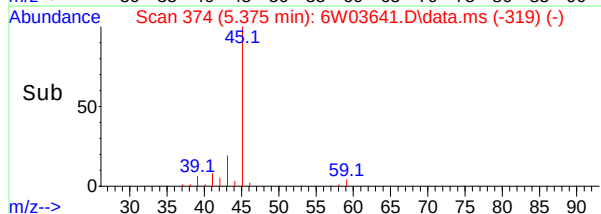
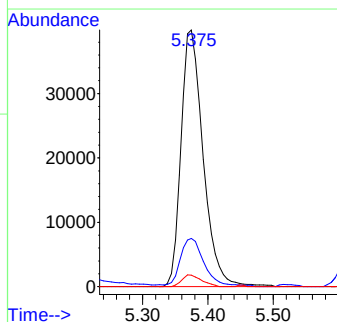
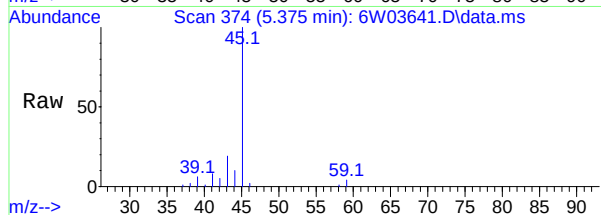
Tgt Ion: 57 Resp: 2464
Ion Ratio Lower Upper
57 100
42 370.8 252.4 468.8
41 311.5 218.7 406.1





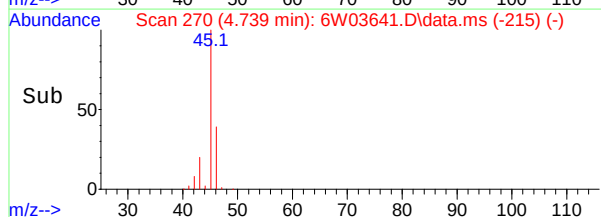
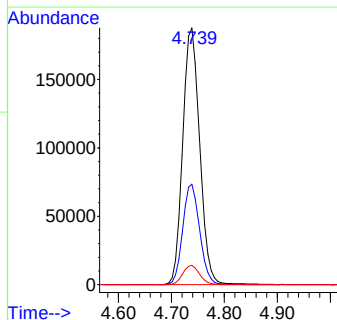
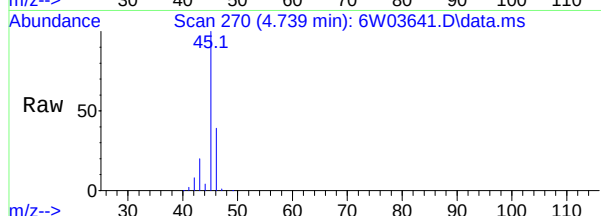
#26
Isopropyl Alcohol
Concen: 2.13 ppb(v)
RT: 5.375 min Scan# 374
Delta R.T. 0.006 min
Lab File: 6W03641.D
Acq: 20 Dec 2017 8:20 pm

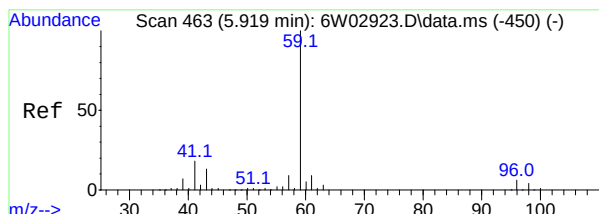
Tgt Ion: 45 Resp: 94023
Ion Ratio Lower Upper
45 100
43 18.8 12.8 23.8
59 4.5 3.0 5.6



#31
Ethanol
Concen: 66.60 ppb(v)
RT: 4.739 min Scan# 270
Delta R.T. 0.006 min
Lab File: 6W03641.D
Acq: 20 Dec 2017 8:20 pm

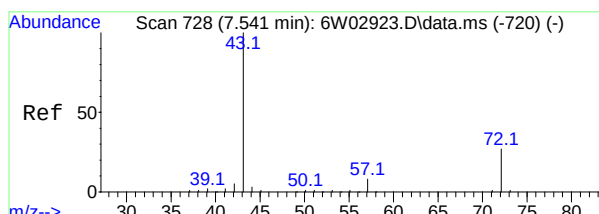
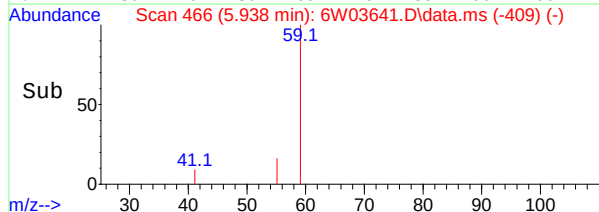
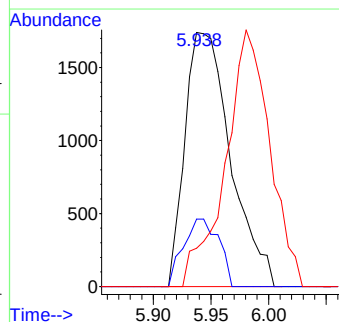
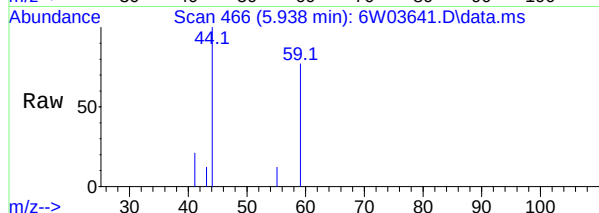
Tgt Ion: 45 Resp: 417661
Ion Ratio Lower Upper
45 100
46 39.1 27.2 50.4
42 7.6 5.6 10.4





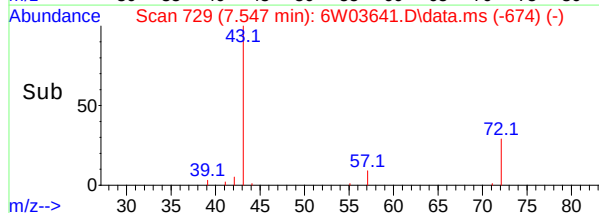
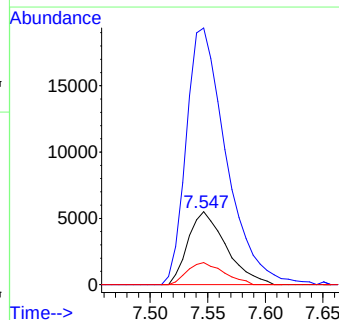
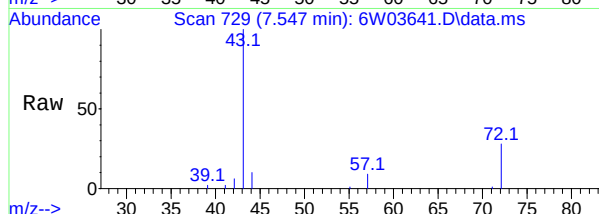
#35
tert-Butyl Alcohol
Concen: 0.11 ppb(v)
RT: 5.938 min Scan# 466
Delta R.T. 0.018 min
Lab File: 6W03641.D
Acq: 20 Dec 2017 8:20 pm

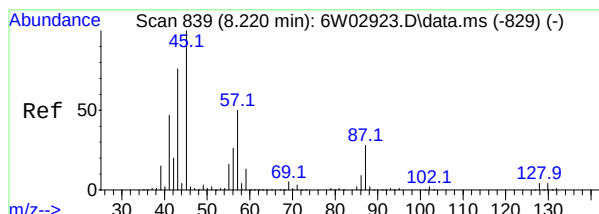
Tgt Ion: 59 Resp: 4790
Ion Ratio Lower Upper
59 100
41 26.6 12.7 23.7#
43 15.1 8.8 16.4



#39
2-Butanone
Concen: 1.11 ppb(v)
RT: 7.547 min Scan# 729
Delta R.T. 0.006 min
Lab File: 6W03641.D
Acq: 20 Dec 2017 8:20 pm

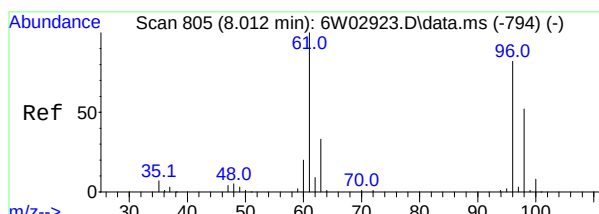
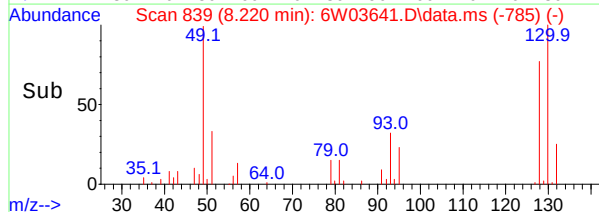
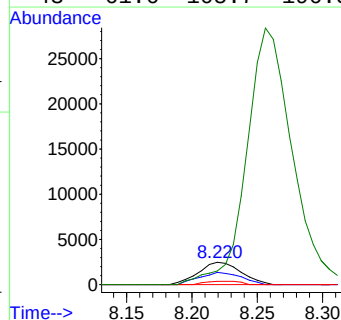
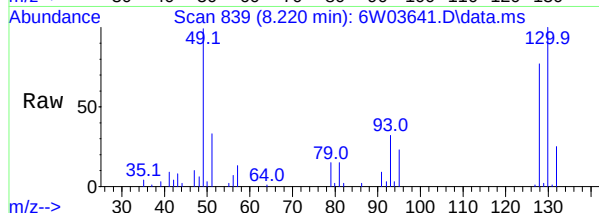
Tgt Ion: 72 Resp: 12690
Ion Ratio Lower Upper
72 100
43 351.3 257.4 478.0
57 30.2 21.0 39.0





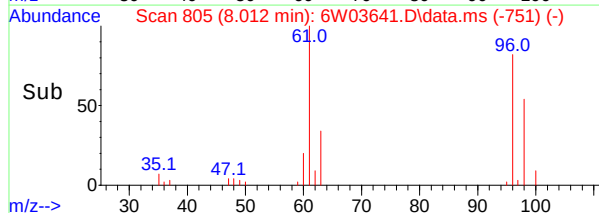
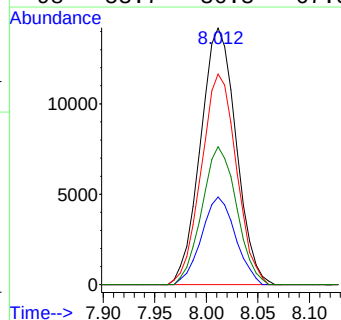
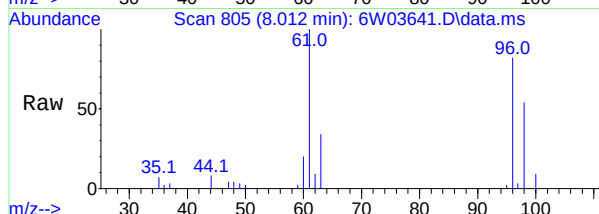
#40
Hexane
Concen: 0.16 ppb(v)
RT: 8.220 min Scan# 839
Delta R.T. -0.000 min
Lab File: 6W03641.D
Acq: 20 Dec 2017 8:20 pm

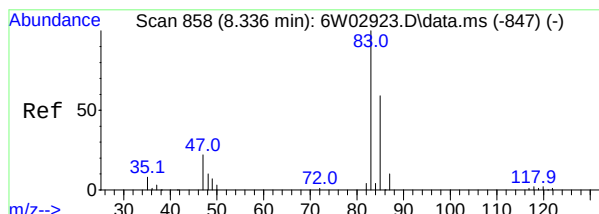
Tgt Ion: 57 Resp: 5619
Ion Ratio Lower Upper
57 100
56 55.1 36.0 67.0
86 14.5 12.1 22.5
43 61.6 105.7 196.3#



#41
cis-1,2-Dichloroethene
Concen: 1.14 ppb(v)
RT: 8.012 min Scan# 805
Delta R.T. -0.000 min
Lab File: 6W03641.D
Acq: 20 Dec 2017 8:20 pm

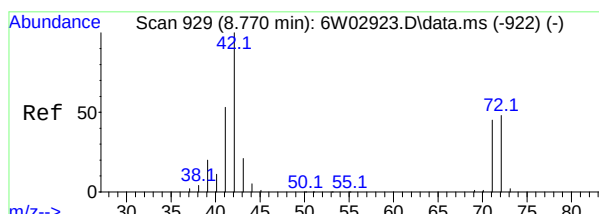
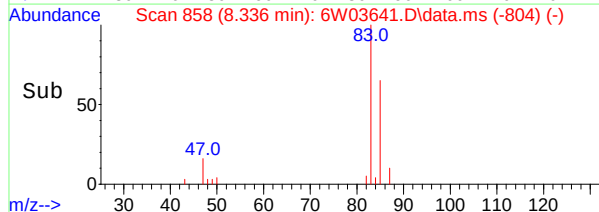
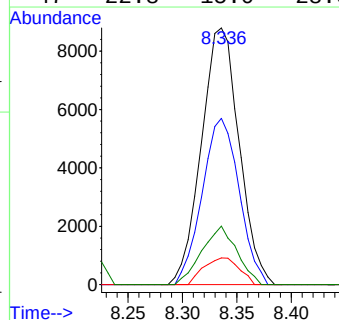
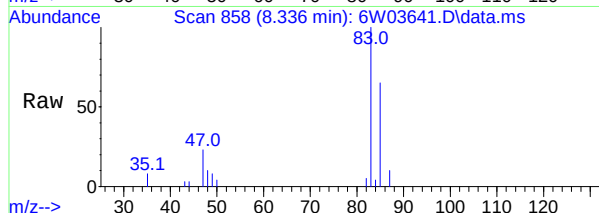
Tgt Ion: 61 Resp: 34100
Ion Ratio Lower Upper
61 100
63 34.1 23.1 42.9
96 82.1 57.4 106.6
98 53.7 36.3 67.3





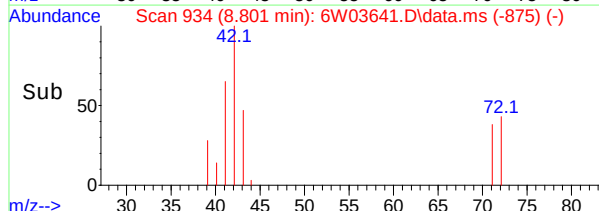
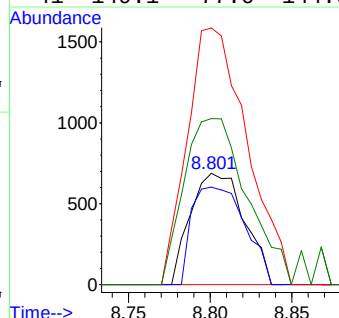
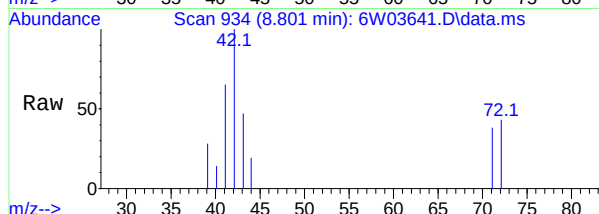
#45
Chloroform
Concen: 0.45 ppb(v)
RT: 8.336 min Scan# 858
Delta R.T. -0.000 min
Lab File: 6W03641.D
Acq: 20 Dec 2017 8:20 pm

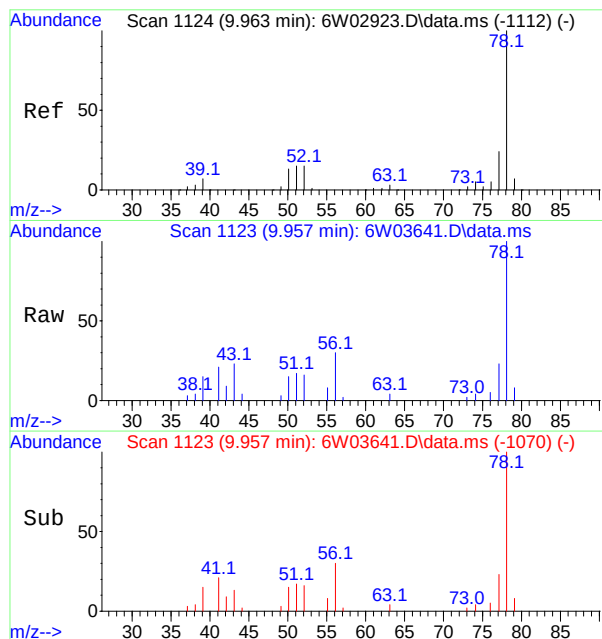
Tgt Ion: 83 Resp: 21253
Ion Ratio Lower Upper
83 100
85 64.7 45.2 84.0
87 10.4 7.3 13.7
47 22.8 15.0 28.0



#47
Tetrahydrofuran
Concen: 0.16 ppb(v)
RT: 8.801 min Scan# 934
Delta R.T. 0.030 min
Lab File: 6W03641.D
Acq: 20 Dec 2017 8:20 pm

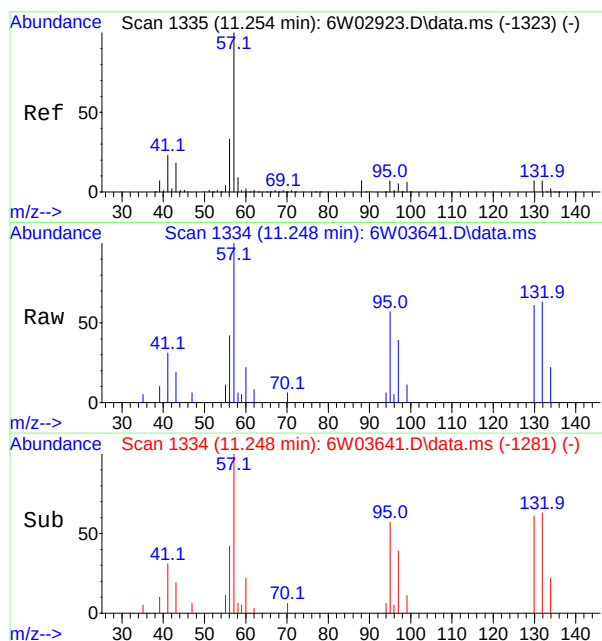
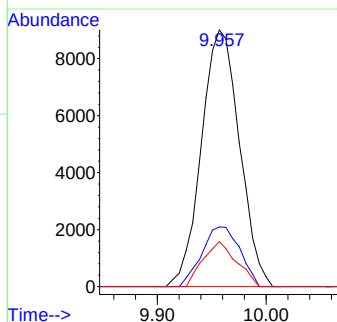
Tgt Ion: 72 Resp: 1584
Ion Ratio Lower Upper
72 100
71 87.6 65.4 121.4
42 230.7 146.4 271.8
41 149.1 77.6 144.0#





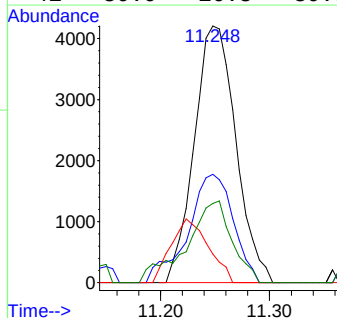
#50
Benzene
Concen: 0.30 ppb(v)
RT: 9.957 min Scan# 1123
Delta R.T. -0.006 min
Lab File: 6W03641.D
Acq: 20 Dec 2017 8:20 pm

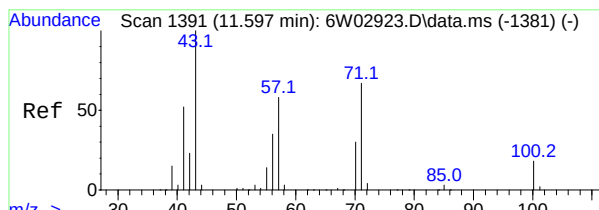
Tgt Ion: 78 Resp: 21934
Ion Ratio Lower Upper
78 100
77 23.3 16.6 30.8
51 17.5 10.6 19.6



#55
2,2,4-Trimethylpentane
Concen: 0.10 ppb(v)
RT: 11.248 min Scan# 1334
Delta R.T. -0.006 min
Lab File: 6W03641.D
Acq: 20 Dec 2017 8:20 pm

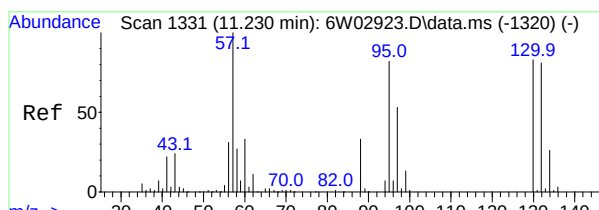
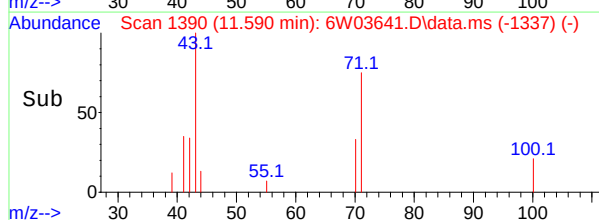
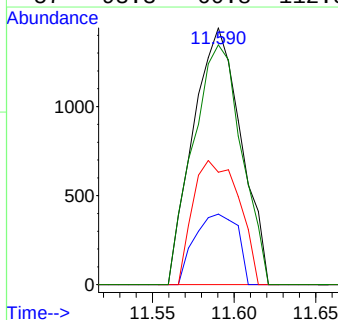
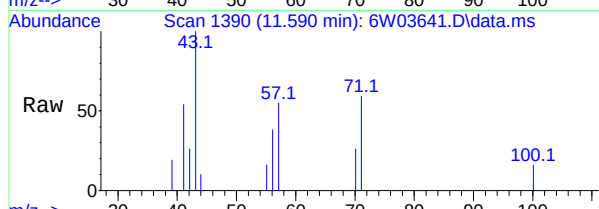
Tgt Ion: 57 Resp: 11191
Ion Ratio Lower Upper
57 100
56 42.2 23.0 42.8
99 11.2 4.5 8.3#
41 30.9 16.3 30.3#





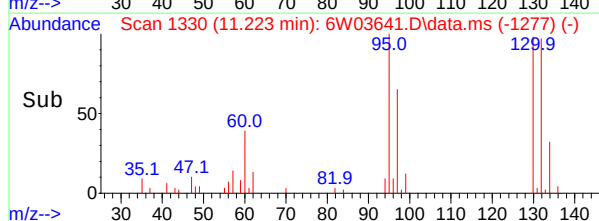
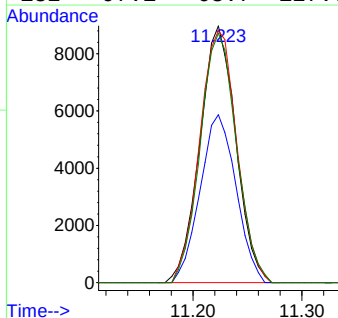
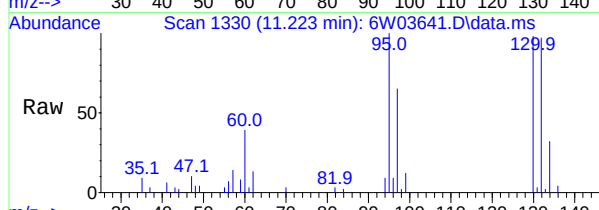
#56
Heptane
Concen: 0.12 ppb(v)
RT: 11.590 min Scan# 1390
Delta R.T. -0.006 min
Lab File: 6W03641.D
Acq: 20 Dec 2017 8:20 pm

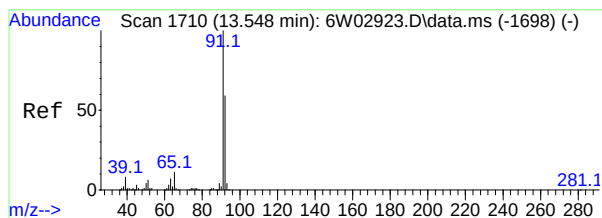
Tgt Ion: 71	Resp: 2944
Ion Ratio	Lower Upper
71	100
100	27.5 20.9 38.7
70	43.8 32.1 59.5
57	93.3 60.8 112.8



#57
Trichloroethene
Concen: 0.65 ppb(v)
RT: 11.223 min Scan# 1330
Delta R.T. -0.006 min
Lab File: 6W03641.D
Acq: 20 Dec 2017 8:20 pm

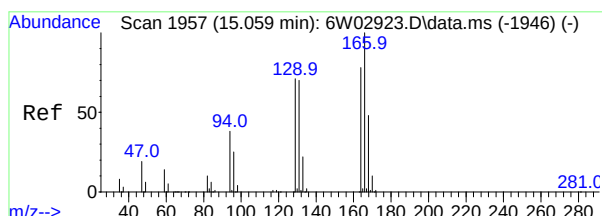
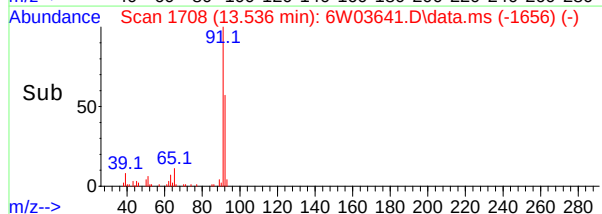
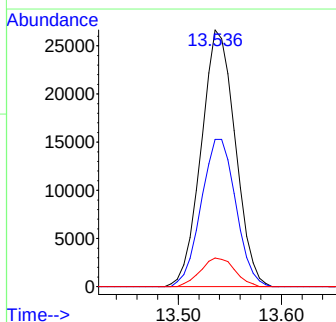
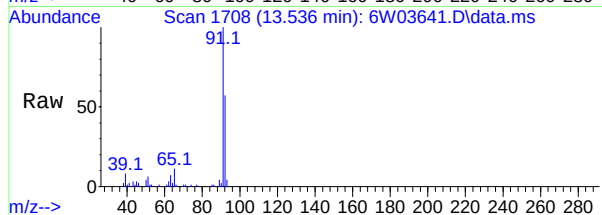
Tgt Ion: 95	Resp: 20643
Ion Ratio	Lower Upper
95	100
97	65.4 45.5 84.5
130	98.1 71.0 131.8
132	97.1 68.7 127.7





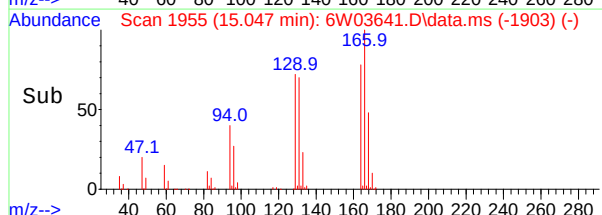
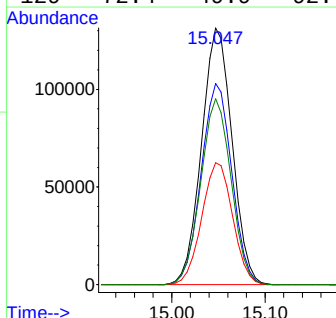
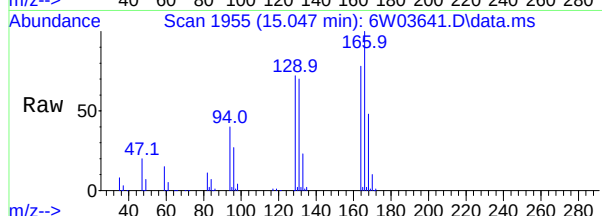
#67
Toluene
Concen: 0.69 ppb(v)
RT: 13.536 min Scan# 1708
Delta R.T. -0.012 min
Lab File: 6W03641.D
Acq: 20 Dec 2017 8:20 pm

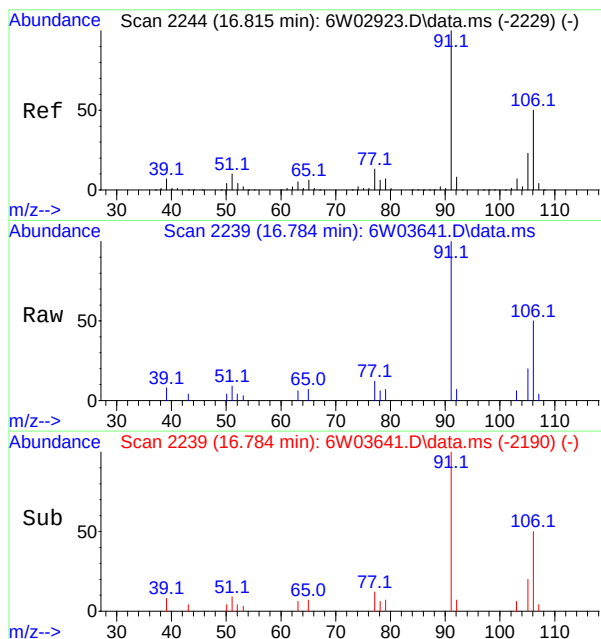
Tgt Ion: 91 Resp: 60998
Ion Ratio Lower Upper
91 100
92 57.3 41.0 76.2
65 11.1 7.8 14.4



#73
Tetrachloroethene
Concen: 6.79 ppb(v)
RT: 15.047 min Scan# 1955
Delta R.T. -0.012 min
Lab File: 6W03641.D
Acq: 20 Dec 2017 8:20 pm

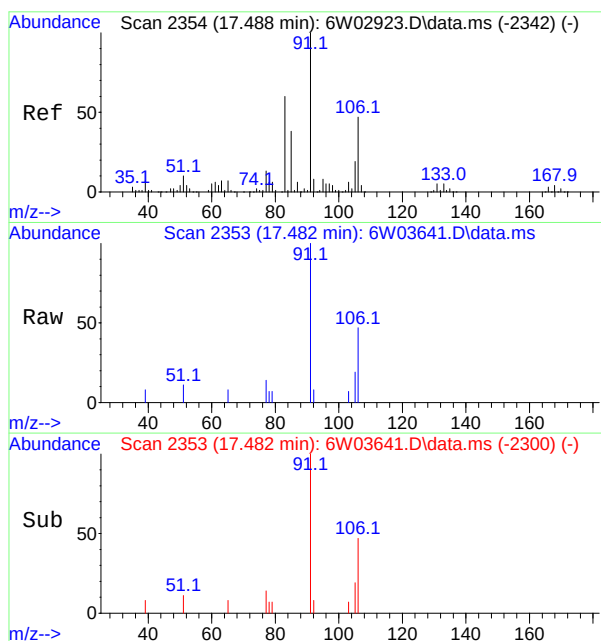
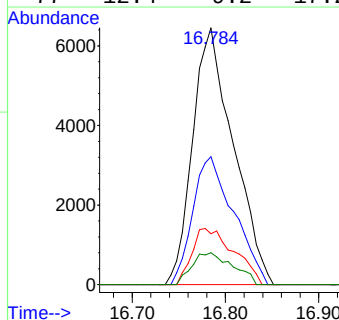
Tgt Ion: 166 Resp: 301594
Ion Ratio Lower Upper
166 100
164 78.3 54.5 101.1
168 47.5 33.9 62.9
129 72.4 49.9 92.7





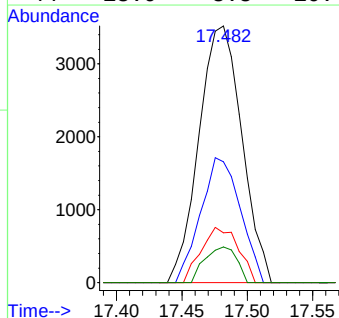
#80
m,p-Xylene
Concen: 0.25 ppb(v)
RT: 16.784 min Scan# 2239
Delta R.T. -0.031 min
Lab File: 6W03641.D
Acq: 20 Dec 2017 8:20 pm

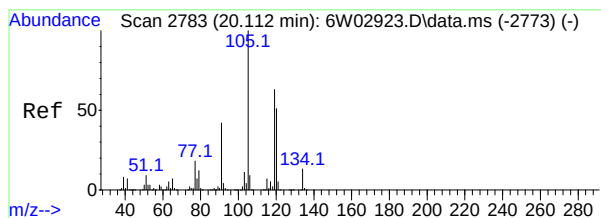
Tgt Ion: 91	Resp: 19578
Ion Ratio	Lower Upper
91	100
106	49.9 35.1 65.3
105	19.8 16.0 29.8
77	12.4 9.2 17.2



#83
o-Xylene
Concen: 0.10 ppb(v)
RT: 17.482 min Scan# 2353
Delta R.T. -0.006 min
Lab File: 6W03641.D
Acq: 20 Dec 2017 8:20 pm

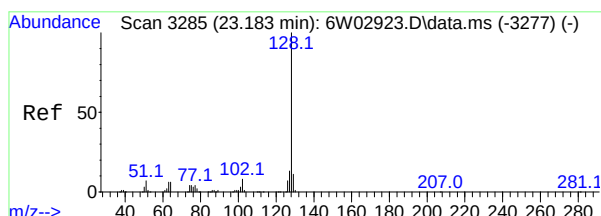
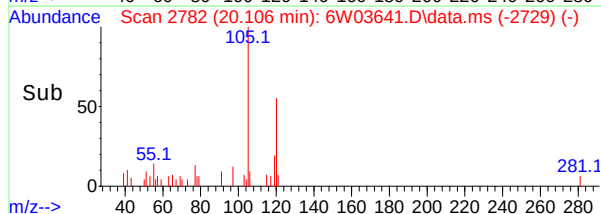
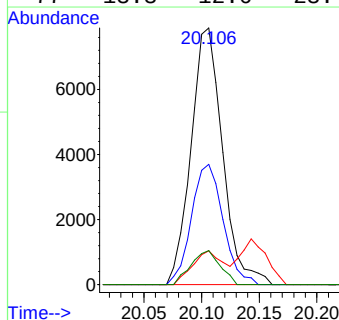
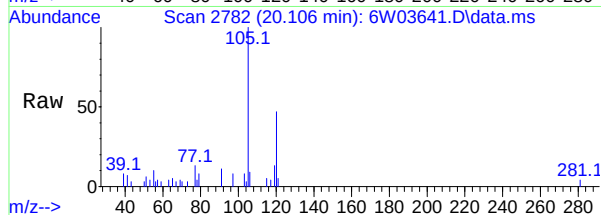
Tgt Ion: 91	Resp: 8051
Ion Ratio	Lower Upper
91	100
106	47.1 33.2 61.6
105	19.5 13.4 25.0
77	13.9 8.8 16.4





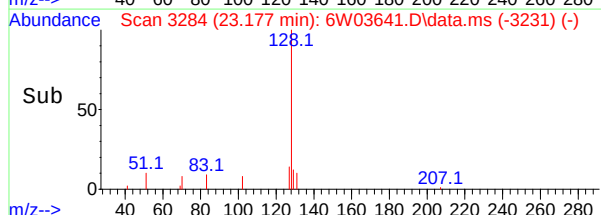
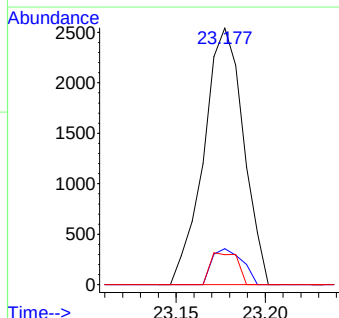
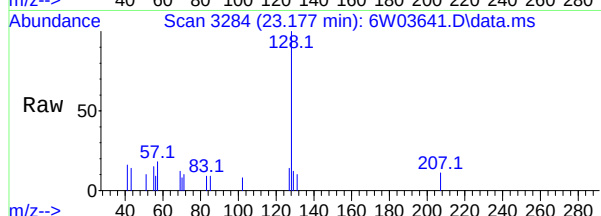
#96
1,2,4-Trimethylbenzene
Concen: 0.19 ppb(v)
RT: 20.106 min Scan# 2782
Delta R.T. -0.006 min
Lab File: 6W03641.D
Acq: 20 Dec 2017 8:20 pm

Tgt Ion:105	Resp:	15028
Ion Ratio	Lower	Upper
105	100	
120	46.9	35.7 66.3
119	13.2	44.4 82.4#
77	13.3	12.6 23.4



#106
Naphthalene
Concen: 0.10 ppb(v)
RT: 23.177 min Scan# 3284
Delta R.T. -0.006 min
Lab File: 6W03641.D
Acq: 20 Dec 2017 8:20 pm

Tgt Ion:128	Resp:	3950
Ion Ratio	Lower	Upper
128	100	
127	14.1	8.8 16.3
129	11.7	7.6 14.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03671.D
 Acq On : 22 Dec 2017 1:50 am
 Operator : DANAT
 Sample : jc56815-7
 Misc : MS22955,V6W106,800,,,1
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Dec 22 15:07:31 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.189	130	193221	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.391	114	710966	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.928	82	315702	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.189	130	193221	10.00	ppb(v	0.00

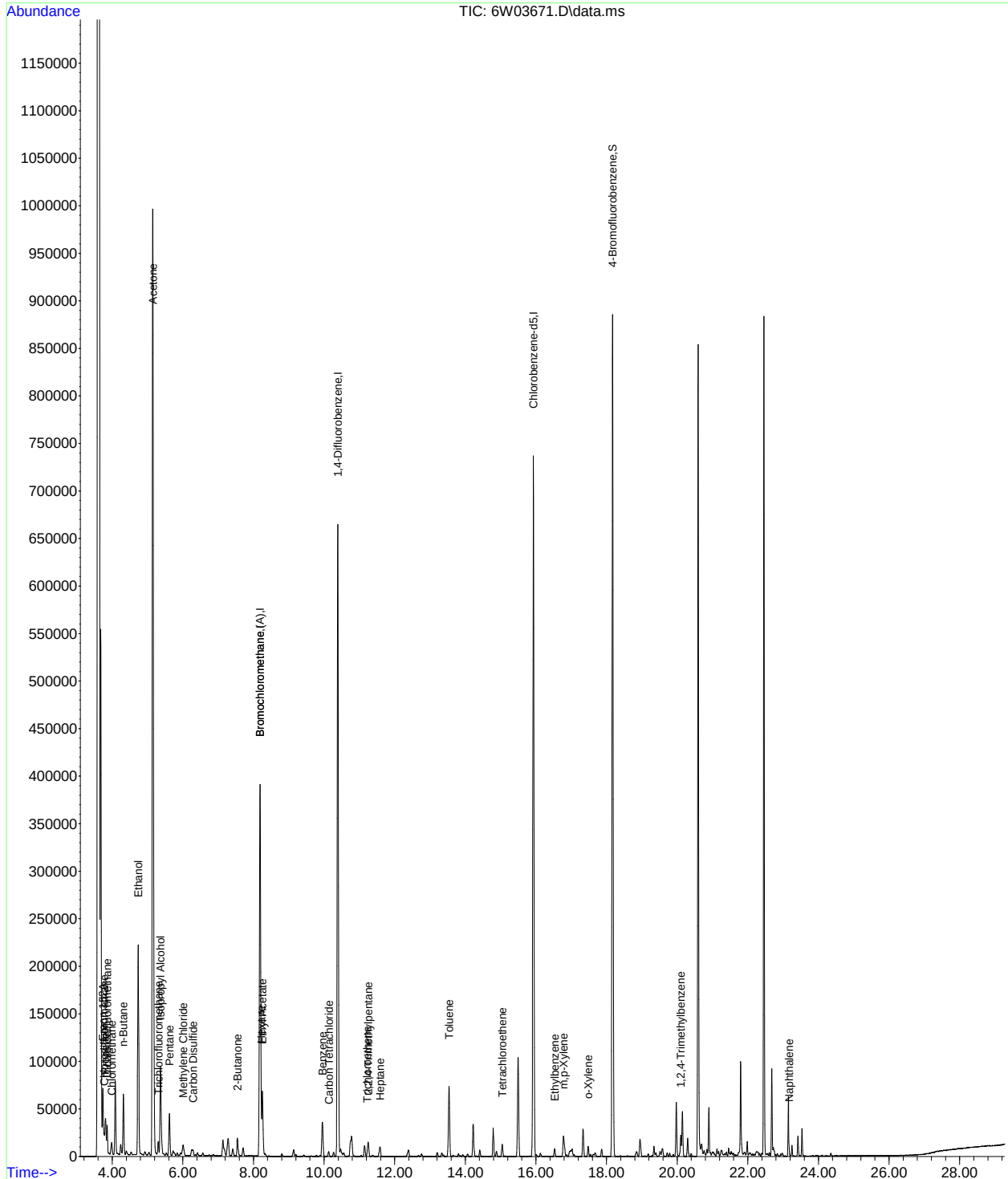
System Monitoring Compounds
 91) 4-Bromofluorobenzene 18.173 95 424899 10.44 ppb(v 0.00
 Spiked Amount 10.000 Range 65 - 128 Recovery = 104.40%

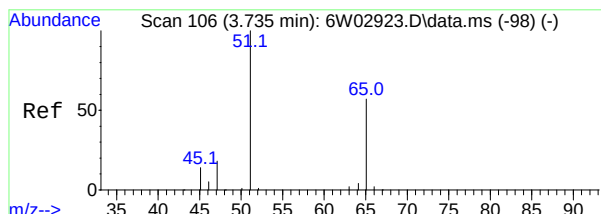
Target Compounds					Qvalue	
3) Freon 152A	3.735	65	34589	2.76	ppb(v	98
4) Chlorodifluoromethane	3.772	67	3709	0.84	ppb(v	84
5) Propene	3.803	41	13439	0.97	ppb(v	86
7) Dichlorodifluoromethane	3.858	85	29817	0.62	ppb(v	98
9) Chloromethane	3.986	50	12831	0.82	ppb(v	98
13) n-Butane	4.317	58	8811	2.76	ppb(v#	88
21) Trichlorofluoromethane	5.308	101	14719	0.32	ppb(v	98
22) Acetone	5.149	58	535805	54.64	ppb(v	86
23) Pentane	5.620	57	5944	1.29	ppb(v	88
26) Isopropyl Alcohol	5.369	45	139737	3.60	ppb(v	98
29) Methylene Chloride	6.011	84	6625	0.33	ppb(v	93
30) Carbon Disulfide	6.286	76	11221	0.18	ppb(v	96
31) Ethanol	4.733	45	285187	51.62	ppb(v	99
39) 2-Butanone	7.547	72	8847	0.88	ppb(v	85
40) Hexane	8.220	57	8994	0.29	ppb(v#	61
43) Ethyl Acetate	8.250	61	15447	2.41	ppb(v	74
50) Benzene	9.957	78	30445	0.47	ppb(v	98
51) Carbon Tetrachloride	10.134	117	4193	0.10	ppb(v	94
55) 2,2,4-Trimethylpentane	11.248	57	16502	0.17	ppb(v	91
56) Heptane	11.590	71	3092	0.15	ppb(v	97
57) Trichloroethene	11.223	95	1052	0.04	ppb(v	91
67) Toluene	13.536	91	73789	0.95	ppb(v	99
73) Tetrachloroethene	15.047	166	5001	0.13	ppb(v	94
79) Ethylbenzene	16.534	91	9355	0.11	ppb(v	96
80) m,p-Xylene	16.784	91	25669	0.38	ppb(v	99
83) o-Xylene	17.476	91	10059	0.15	ppb(v	97
96) 1,2,4-Trimethylbenzene	20.100	105	15205	0.22	ppb(v#	64
106) Naphthalene	23.171	128	3630	0.11	ppb(v	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Acq On : 22 Dec 2017 1:50 am  
Operator : DANAT  
Sample : jc56815-7  
Misc : MS22955,V6W106,800,,,,1  
ALS Vial : 14 Sample Multiplier: 1
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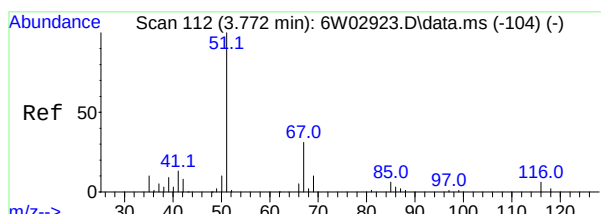
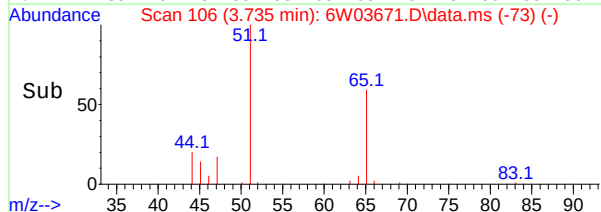
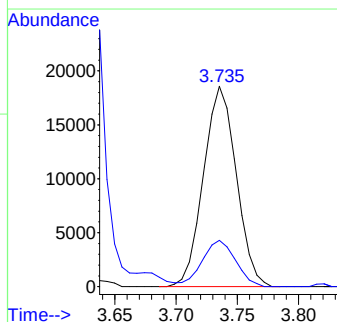
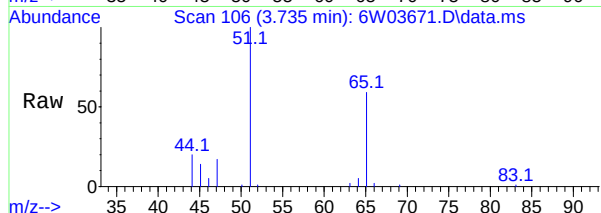
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QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration





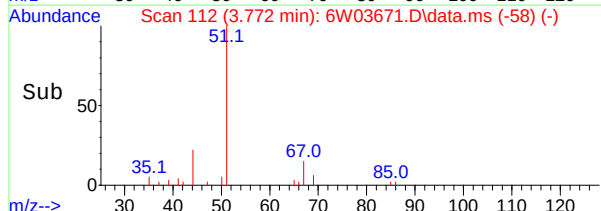
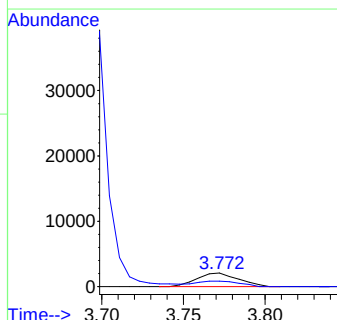
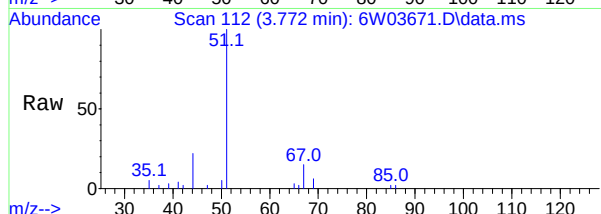
#3
Freon 152A
Concen: 2.76 ppb(v)
RT: 3.735 min Scan# 106
Delta R.T. 0.000 min
Lab File: 6W03671.D
Acq: 22 Dec 2017 1:50 am

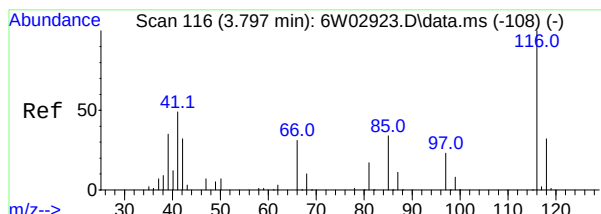
Tgt Ion: 65 Resp: 34589
Ion Ratio Lower Upper
65 100
45 23.1 16.9 31.5



#4
Chlorodifluoromethane
Concen: 0.84 ppb(v)
RT: 3.772 min Scan# 112
Delta R.T. 0.000 min
Lab File: 6W03671.D
Acq: 22 Dec 2017 1:50 am

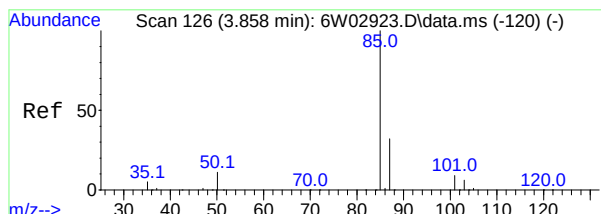
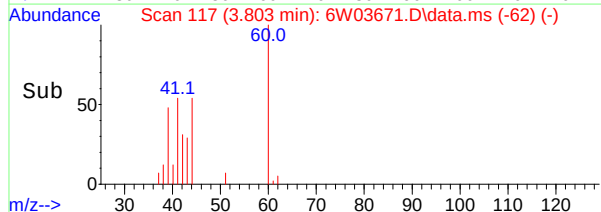
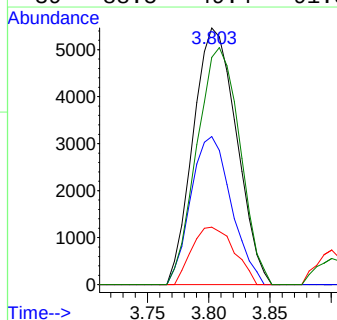
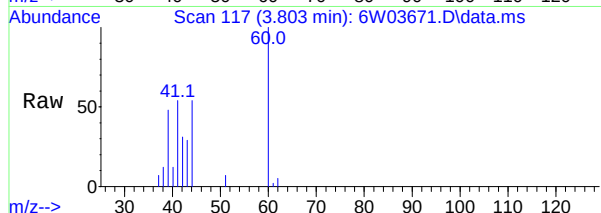
Tgt Ion: 67 Resp: 3709
Ion Ratio Lower Upper
67 100
69 41.1 22.7 42.1





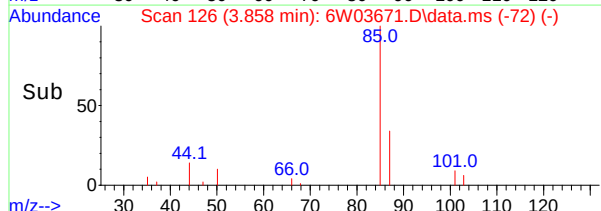
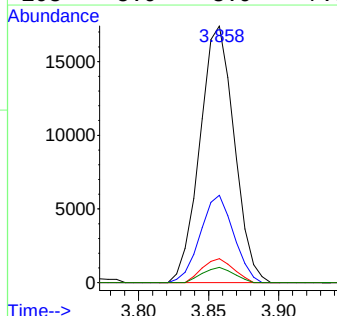
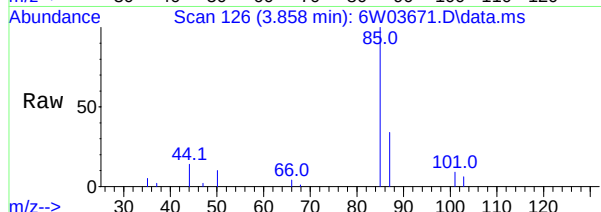
#5
 Propene
 Concen: 0.97 ppb(v)
 RT: 3.803 min Scan# 117
 Delta R.T. 0.006 min
 Lab File: 6W03671.D
 Acq: 22 Dec 2017 1:50 am

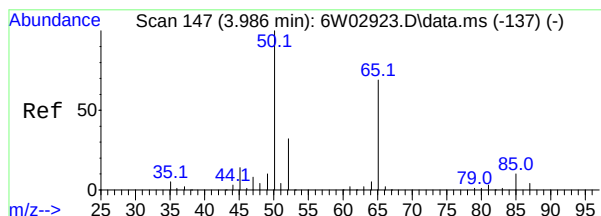
Tgt Ion: 41 Resp: 13439
 Ion Ratio Lower Upper
 41 100
 42 57.7 45.4 84.4
 40 22.4 17.4 32.2
 39 88.5 49.4 91.8



#7
 Dichlorodifluoromethane
 Concen: 0.62 ppb(v)
 RT: 3.858 min Scan# 126
 Delta R.T. 0.000 min
 Lab File: 6W03671.D
 Acq: 22 Dec 2017 1:50 am

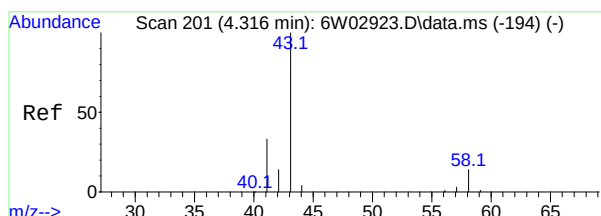
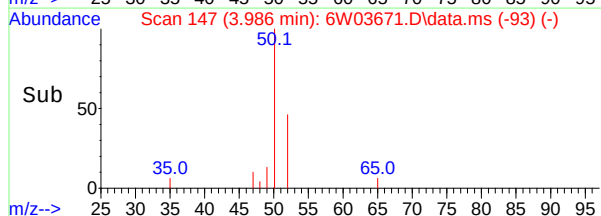
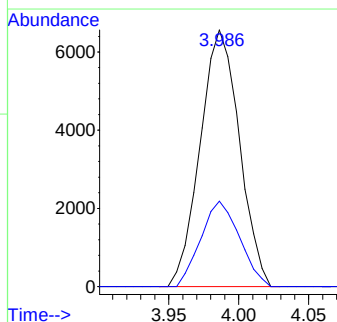
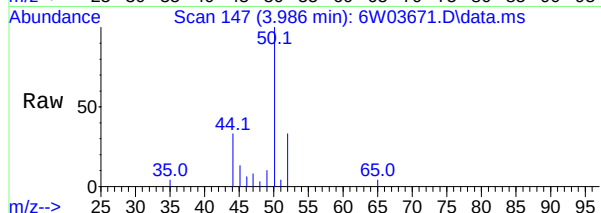
Tgt Ion: 85 Resp: 29817
 Ion Ratio Lower Upper
 85 100
 87 34.0 22.7 42.3
 101 9.4 5.9 11.1
 103 5.9 3.9 7.3





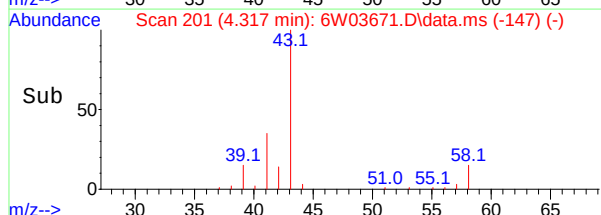
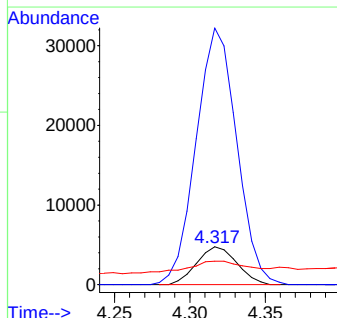
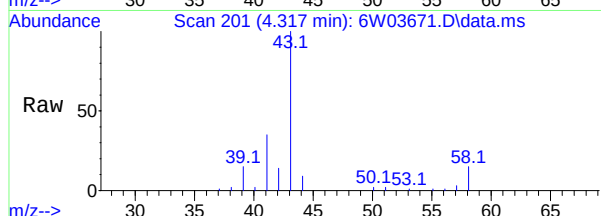
#9
Chloromethane
Concen: 0.82 ppb(v)
RT: 3.986 min Scan# 147
Delta R.T. 0.000 min
Lab File: 6W03671.D
Acq: 22 Dec 2017 1:50 am

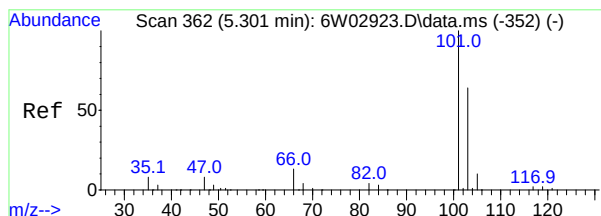
Tgt Ion: 50 Resp: 12831
Ion Ratio Lower Upper
50 100
52 33.3 22.7 42.1



#13
n-Butane
Concen: 2.76 ppb(v)
RT: 4.317 min Scan# 201
Delta R.T. 0.000 min
Lab File: 6W03671.D
Acq: 22 Dec 2017 1:50 am

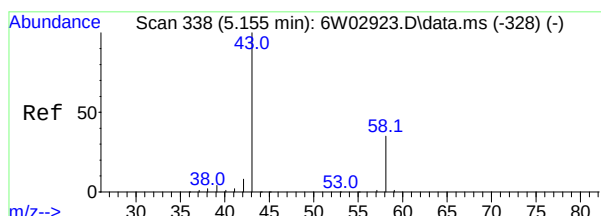
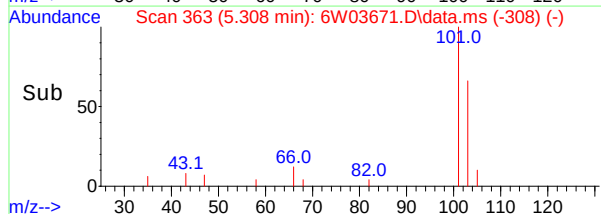
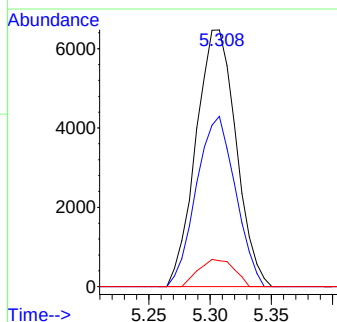
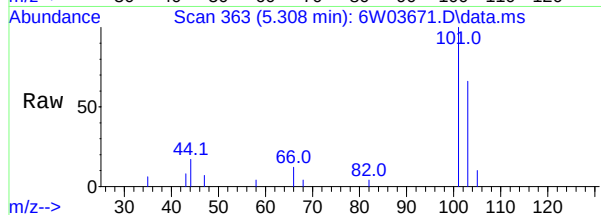
Tgt Ion: 58 Resp: 8811
Ion Ratio Lower Upper
58 100
43 680.2 499.8 928.2
44 62.2 21.1 39.1#





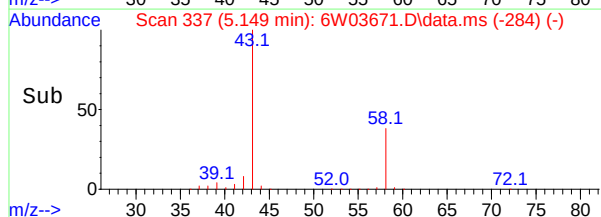
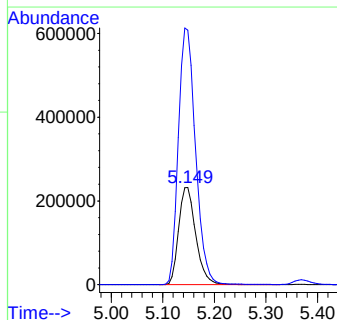
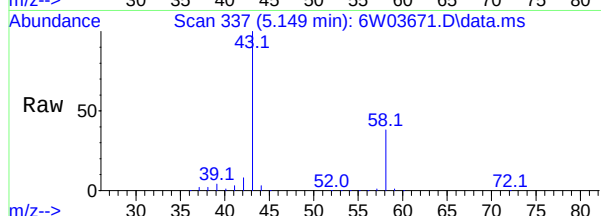
#21
Trichlorofluoromethane
Concen: 0.32 ppb(v)
RT: 5.308 min Scan# 363
Delta R.T. 0.006 min
Lab File: 6W03671.D
Acq: 22 Dec 2017 1:50 am

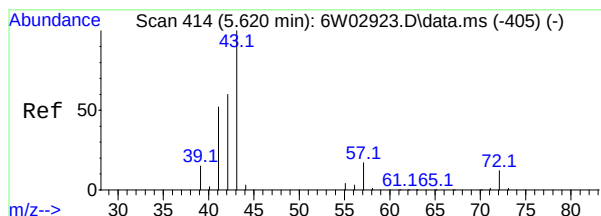
Tgt Ion: 101 Resp: 14719
Ion Ratio Lower Upper
101 100
103 66.4 45.1 83.9
105 10.1 7.3 13.5



#22
Acetone
Concen: 54.64 ppb(v)
RT: 5.149 min Scan# 337
Delta R.T. -0.006 min
Lab File: 6W03671.D
Acq: 22 Dec 2017 1:50 am

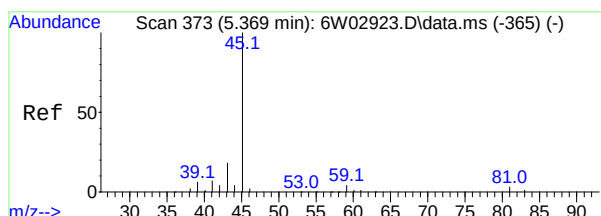
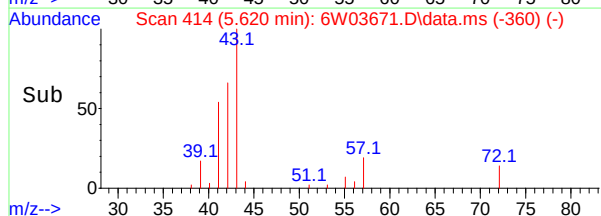
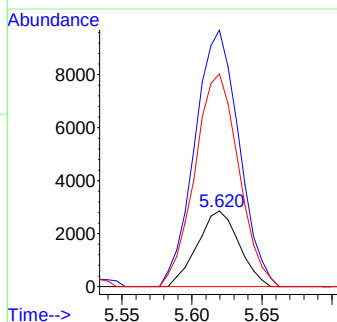
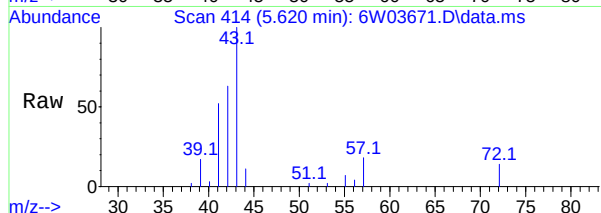
Tgt Ion: 58 Resp: 535805
Ion Ratio Lower Upper
58 100
43 261.7 202.4 375.8





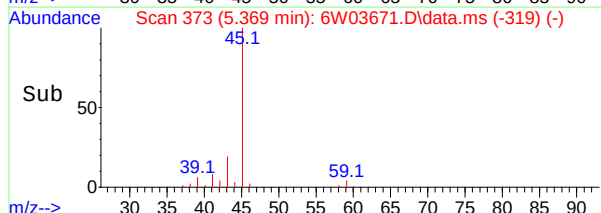
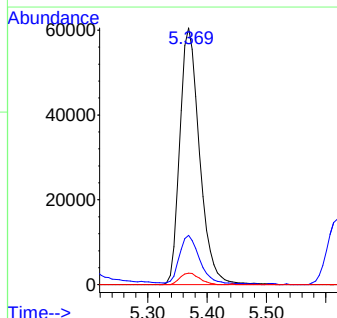
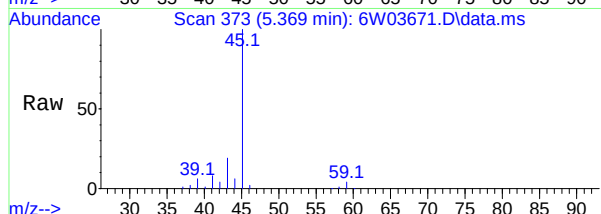
#23
Pentane
Concen: 1.29 ppb(v)
RT: 5.620 min Scan# 414
Delta R.T. 0.000 min
Lab File: 6W03671.D
Acq: 22 Dec 2017 1:50 am

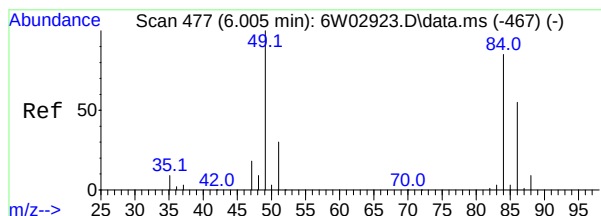
Tgt Ion: 57 Resp: 5944
Ion Ratio Lower Upper
57 100
42 339.7 252.4 468.8
41 281.5 218.7 406.1



#26
Isopropyl Alcohol
Concen: 3.60 ppb(v)
RT: 5.369 min Scan# 373
Delta R.T. 0.000 min
Lab File: 6W03671.D
Acq: 22 Dec 2017 1:50 am

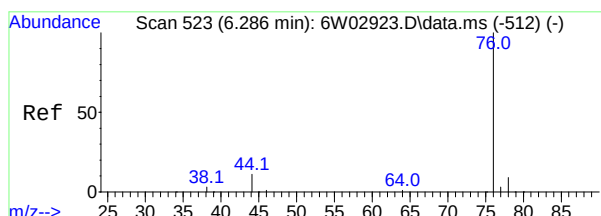
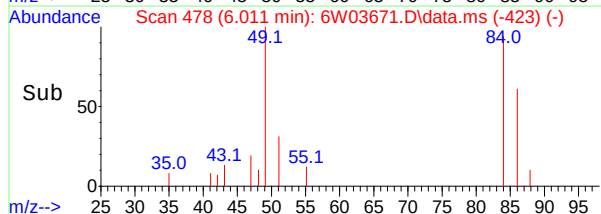
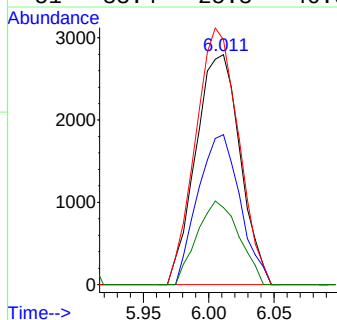
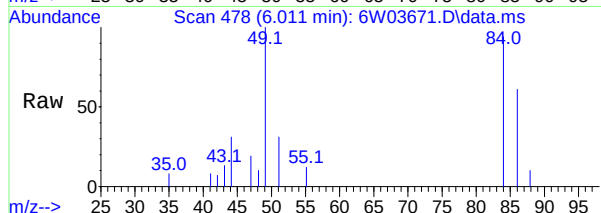
Tgt Ion: 45 Resp: 139737
Ion Ratio Lower Upper
45 100
43 19.2 12.8 23.8
59 4.5 3.0 5.6





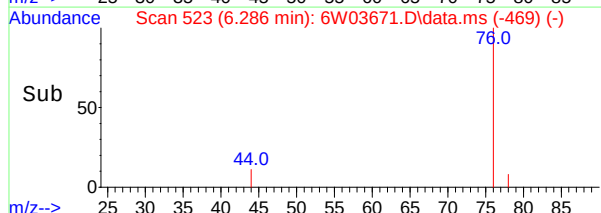
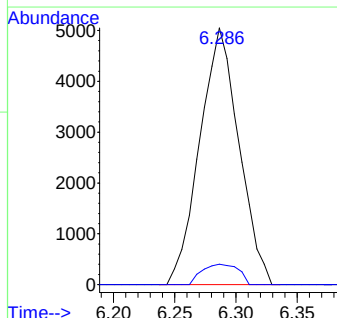
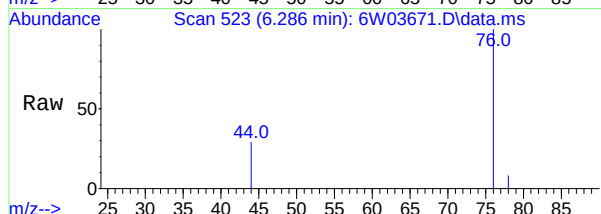
#29
Methylene Chloride
Concen: 0.33 ppb(v)
RT: 6.011 min Scan# 478
Delta R.T. 0.006 min
Lab File: 6W03671.D
Acq: 22 Dec 2017 1:50 am

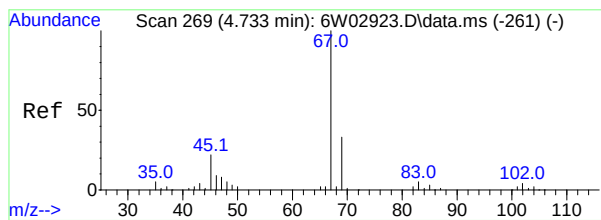
Tgt Ion: 84 Resp: 6625
Ion Ratio Lower Upper
84 100
86 65.2 44.8 83.2
49 106.5 82.1 152.5
51 33.4 25.3 46.9



#30
Carbon Disulfide
Concen: 0.18 ppb(v)
RT: 6.286 min Scan# 523
Delta R.T. 0.000 min
Lab File: 6W03671.D
Acq: 22 Dec 2017 1:50 am

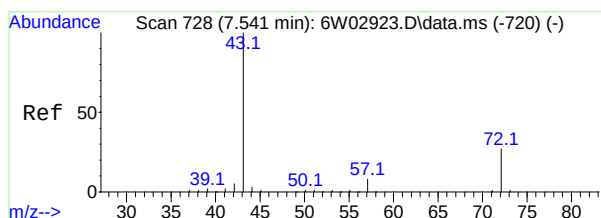
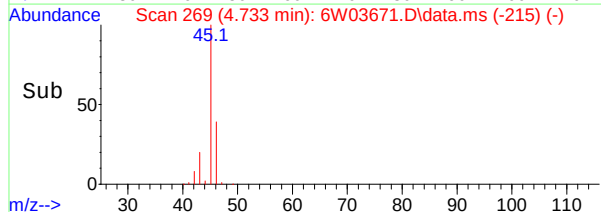
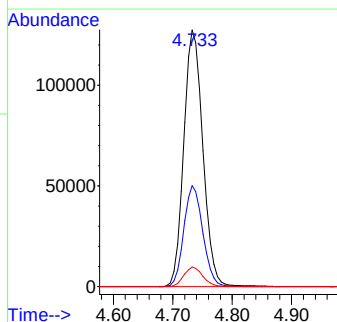
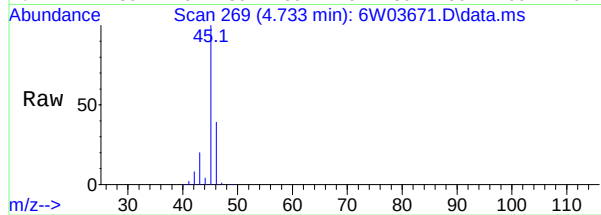
Tgt Ion: 76 Resp: 11221
Ion Ratio Lower Upper
76 100
78 8.0 6.5 12.1





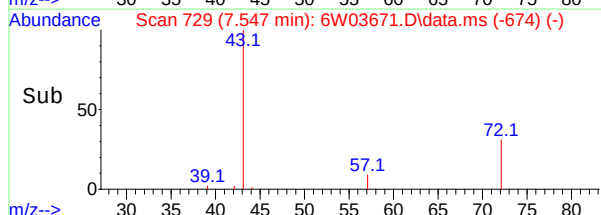
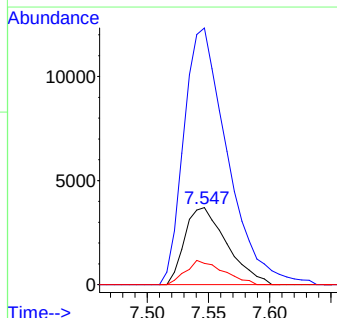
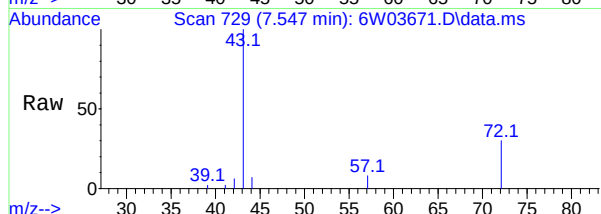
#31
Ethanol
Concen: 51.62 ppb(v)
RT: 4.733 min Scan# 269
Delta R.T. 0.000 min
Lab File: 6W03671.D
Acq: 22 Dec 2017 1:50 am

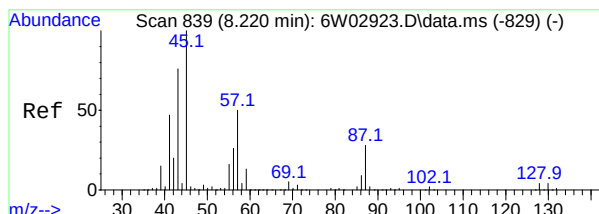
Tgt Ion: 45 Resp: 285187
Ion Ratio Lower Upper
45 100
46 39.3 27.2 50.4
42 7.6 5.6 10.4



#39
2-Butanone
Concen: 0.88 ppb(v)
RT: 7.547 min Scan# 729
Delta R.T. 0.006 min
Lab File: 6W03671.D
Acq: 22 Dec 2017 1:50 am

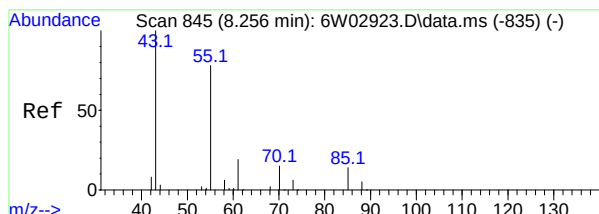
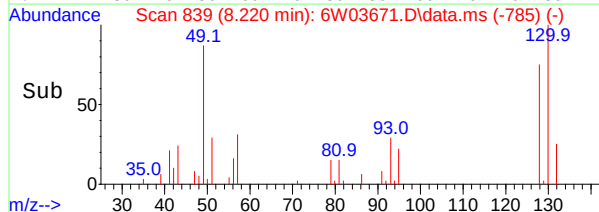
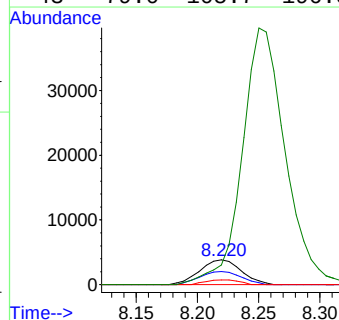
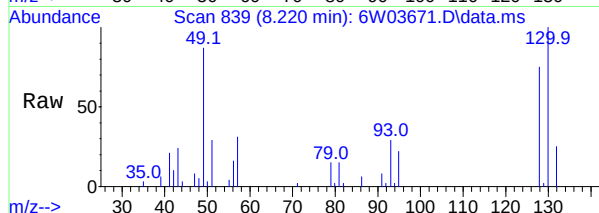
Tgt Ion: 72 Resp: 8847
Ion Ratio Lower Upper
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43 333.3 257.4 478.0
57 27.8 21.0 39.0





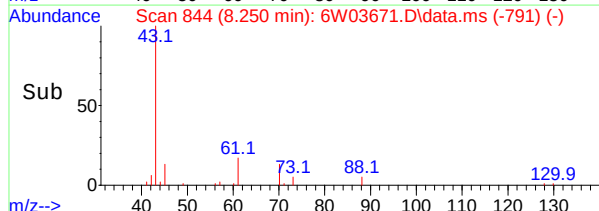
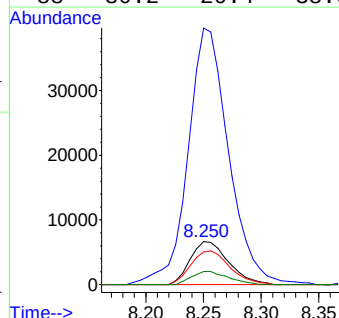
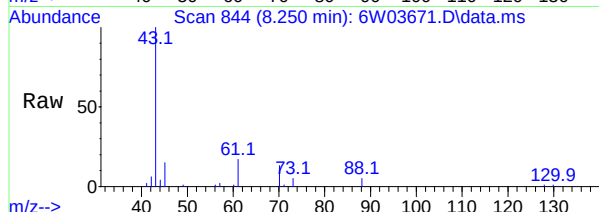
#40
Hexane
Concen: 0.29 ppb(v)
RT: 8.220 min Scan# 839
Delta R.T. 0.000 min
Lab File: 6W03671.D
Acq: 22 Dec 2017 1:50 am

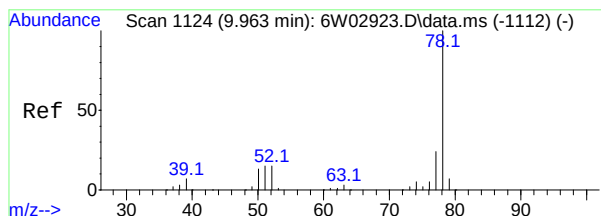
Tgt Ion: 57 Resp: 8994
Ion Ratio Lower Upper
57 100
56 52.6 36.0 67.0
86 18.9 12.1 22.5
43 79.0 105.7 196.3#



#43
Ethyl Acetate
Concen: 2.41 ppb(v)
RT: 8.250 min Scan# 844
Delta R.T. -0.006 min
Lab File: 6W03671.D
Acq: 22 Dec 2017 1:50 am

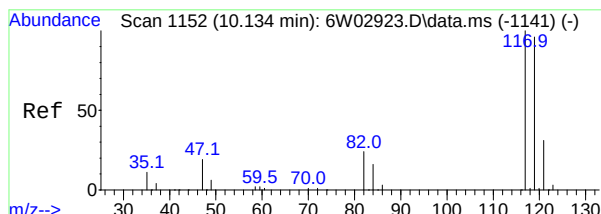
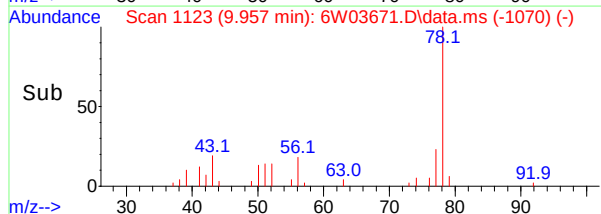
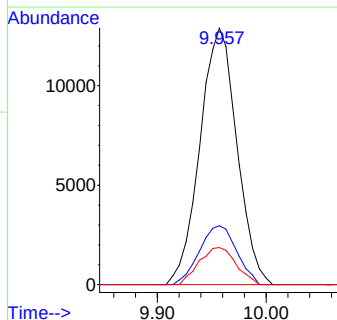
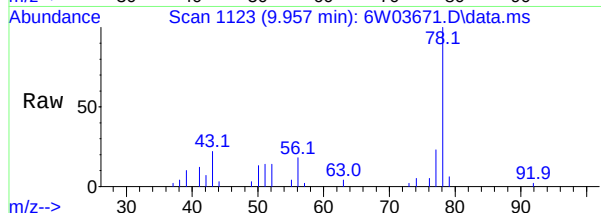
Tgt Ion: 61 Resp: 15447
Ion Ratio Lower Upper
61 100
43 594.5 488.5 907.1
70 76.0 54.9 101.9
88 30.2 20.4 38.0





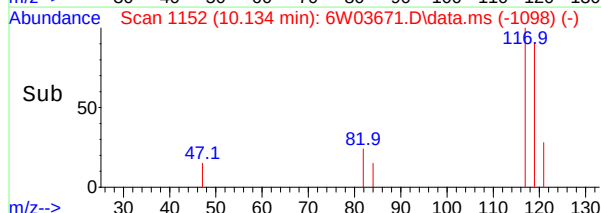
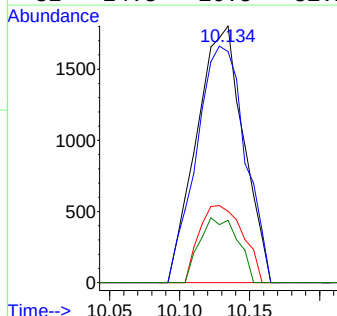
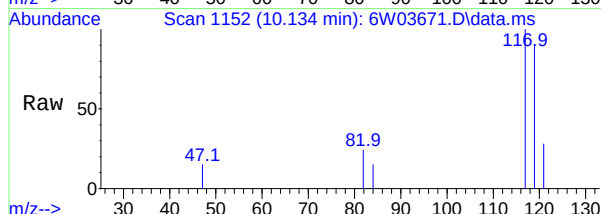
#50
Benzene
Concen: 0.47 ppb(v)
RT: 9.957 min Scan# 1123
Delta R.T. -0.006 min
Lab File: 6W03671.D
Acq: 22 Dec 2017 1:50 am

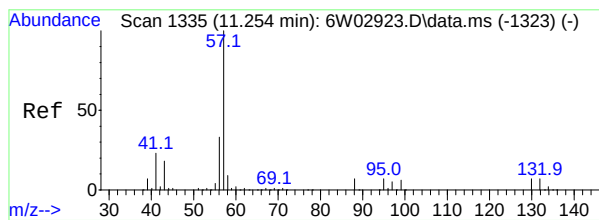
Tgt Ion: 78 Resp: 30445
Ion Ratio Lower Upper
78 100
77 22.9 16.6 30.8
51 14.5 10.6 19.6



#51
Carbon Tetrachloride
Concen: 0.10 ppb(v)
RT: 10.134 min Scan# 1152
Delta R.T. 0.000 min
Lab File: 6W03671.D
Acq: 22 Dec 2017 1:50 am

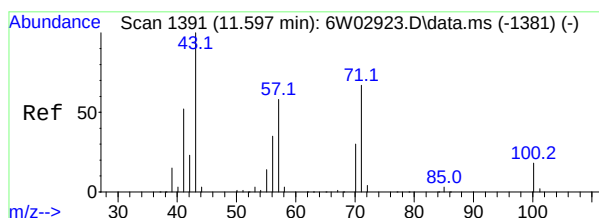
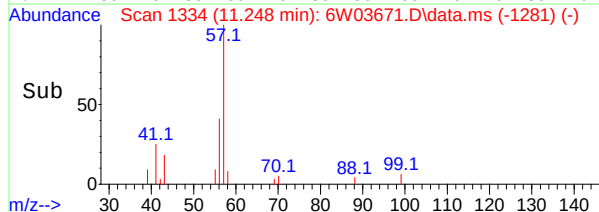
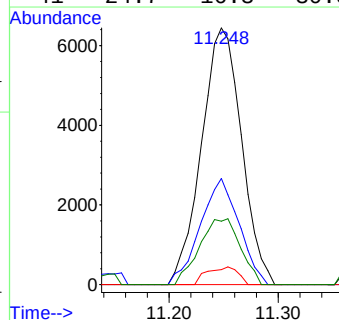
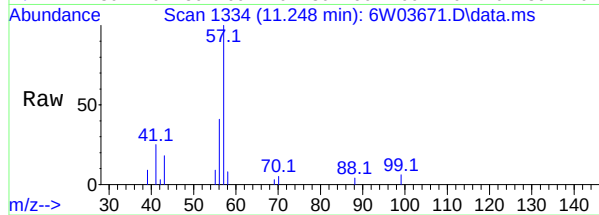
Tgt Ion: 117 Resp: 4193
Ion Ratio Lower Upper
117 100
119 90.0 67.4 125.2
121 27.8 21.9 40.7
82 24.3 16.8 31.2





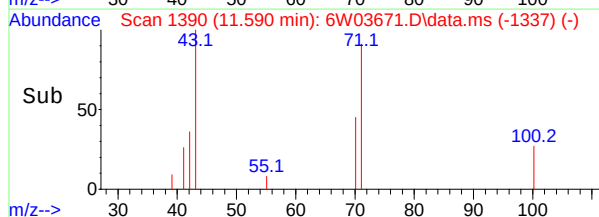
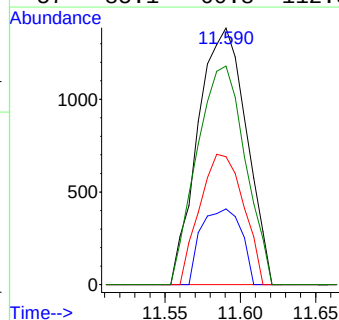
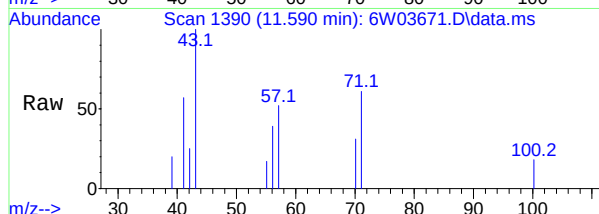
#55
2,2,4-Trimethylpentane
Concen: 0.17 ppb(v)
RT: 11.248 min Scan# 1334
Delta R.T. -0.006 min
Lab File: 6W03671.D
Acq: 22 Dec 2017 1:50 am

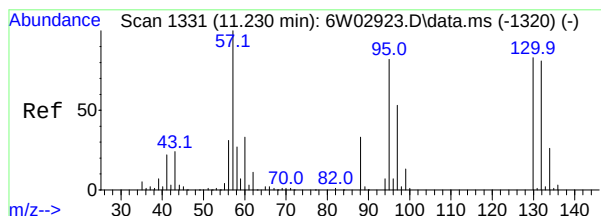
Tgt Ion:	57	Resp:	16502
Ion Ratio	Lower	Upper	
57	100		
56	41.3	23.0	42.8
99	5.8	4.5	8.3
41	24.7	16.3	30.3



#56
Heptane
Concen: 0.15 ppb(v)
RT: 11.590 min Scan# 1390
Delta R.T. -0.006 min
Lab File: 6W03671.D
Acq: 22 Dec 2017 1:50 am

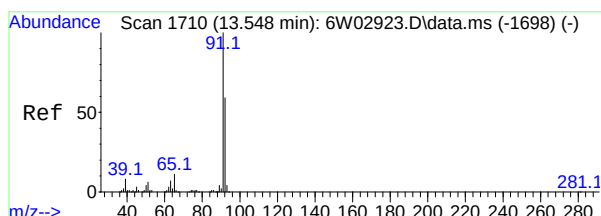
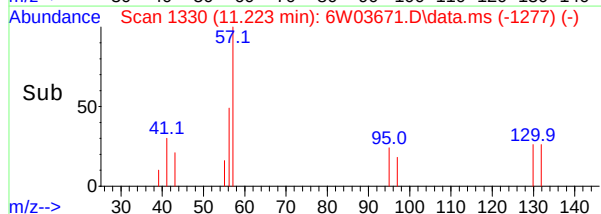
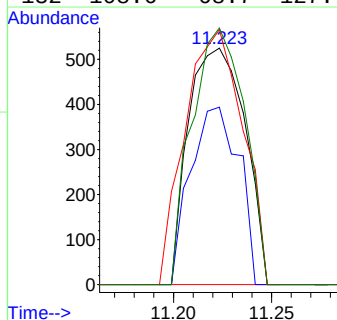
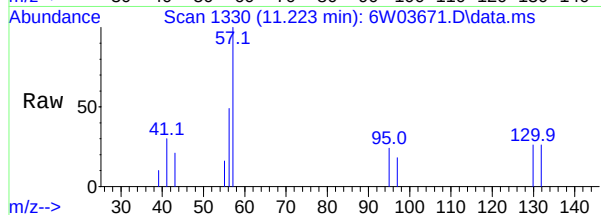
Tgt Ion:	71	Resp:	3092
Ion Ratio	Lower	Upper	
71	100		
100	29.5	20.9	38.7
70	49.9	32.1	59.5
57	85.1	60.8	112.8





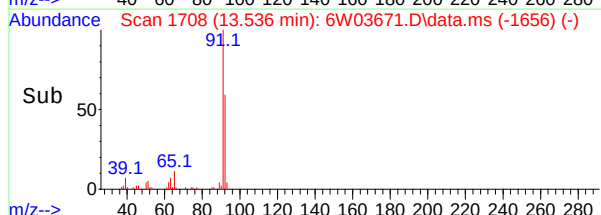
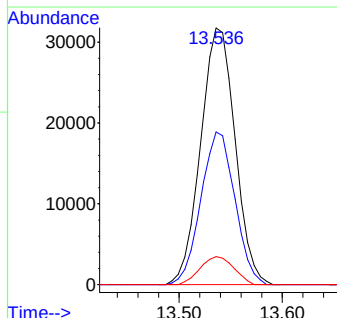
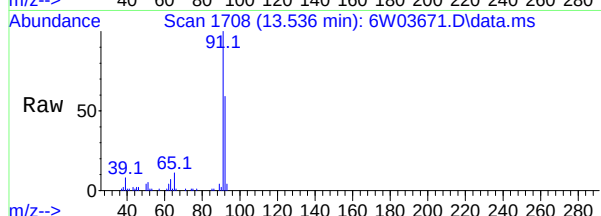
#57
Trichloroethene
Concen: 0.04 ppb(v)
RT: 11.223 min Scan# 1330
Delta R.T. -0.006 min
Lab File: 6W03671.D
Acq: 22 Dec 2017 1:50 am

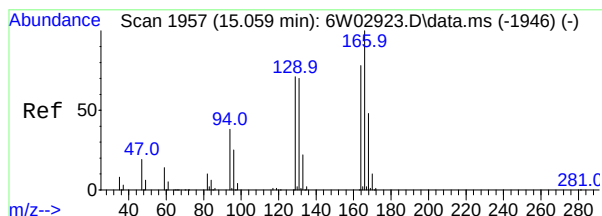
Tgt Ion: 95 Resp: 1052
Ion Ratio Lower Upper
95 100
97 75.0 45.5 84.5
130 107.8 71.0 131.8
132 108.6 68.7 127.7



#67
Toluene
Concen: 0.95 ppb(v)
RT: 13.536 min Scan# 1708
Delta R.T. -0.012 min
Lab File: 6W03671.D
Acq: 22 Dec 2017 1:50 am

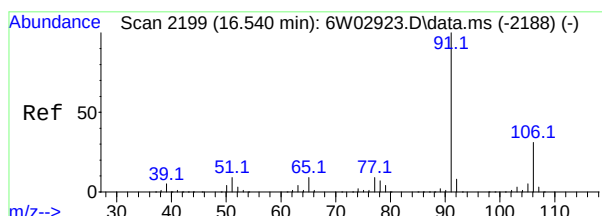
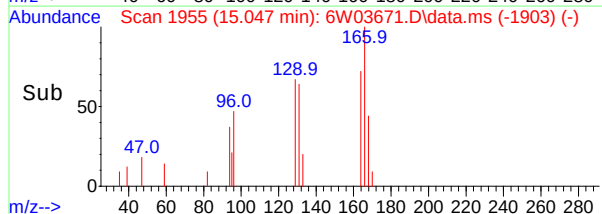
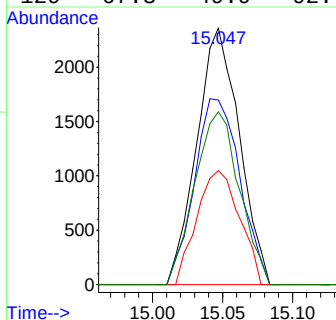
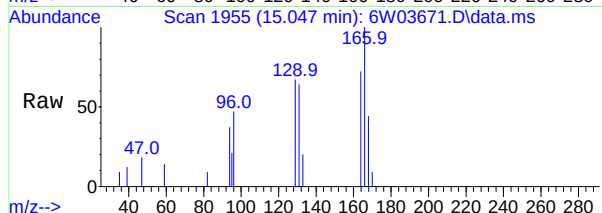
Tgt Ion: 91 Resp: 73789
Ion Ratio Lower Upper
91 100
92 59.4 41.0 76.2
65 11.0 7.8 14.4





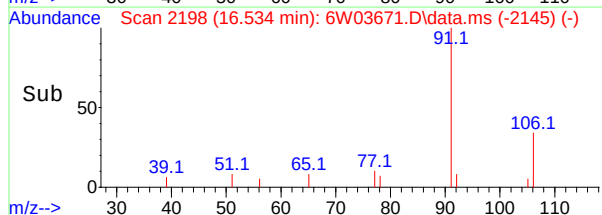
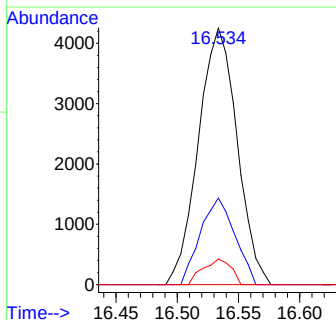
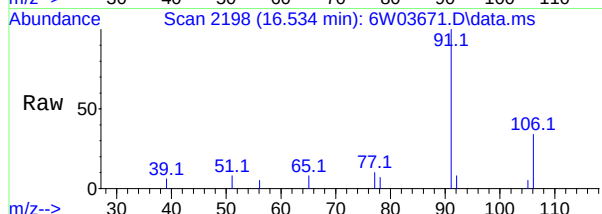
#73
Tetrachloroethene
Concen: 0.13 ppb(v)
RT: 15.047 min Scan# 1955
Delta R.T. -0.012 min
Lab File: 6W03671.D
Acq: 22 Dec 2017 1:50 am

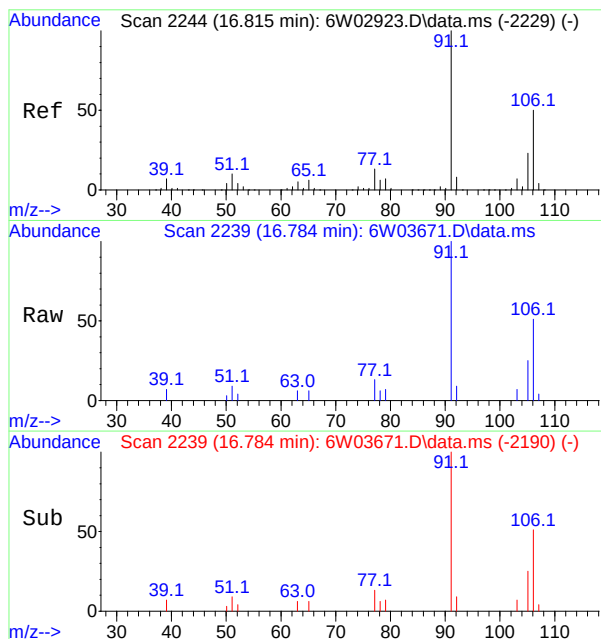
Tgt Ion: 166 Resp: 5001
Ion Ratio Lower Upper
166 100
164 71.9 54.5 101.1
168 44.5 33.9 62.9
129 67.3 49.9 92.7



#79
Ethylbenzene
Concen: 0.11 ppb(v)
RT: 16.534 min Scan# 2198
Delta R.T. -0.006 min
Lab File: 6W03671.D
Acq: 22 Dec 2017 1:50 am

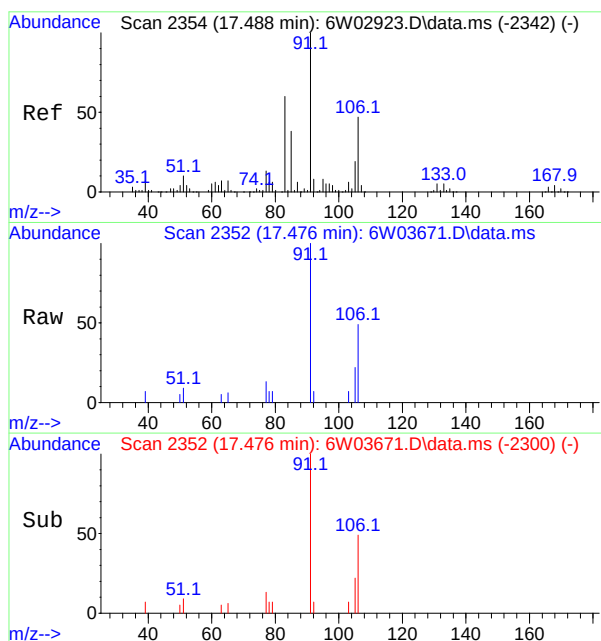
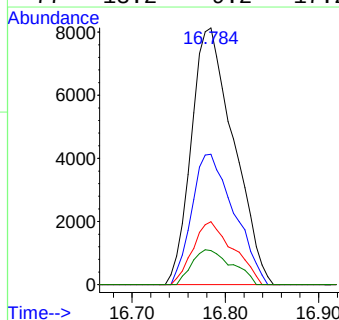
Tgt Ion: 91 Resp: 9355
Ion Ratio Lower Upper
91 100
106 33.8 22.0 41.0
77 10.0 6.0 11.2





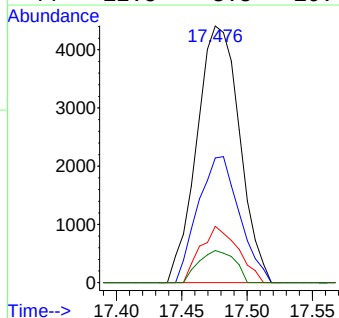
#80
m,p-Xylene
Concen: 0.38 ppb(v)
RT: 16.784 min Scan# 2239
Delta R.T. -0.031 min
Lab File: 6W03671.D
Acq: 22 Dec 2017 1:50 am

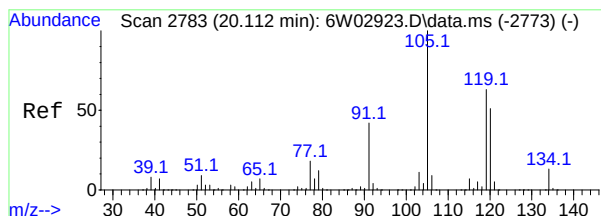
Tgt Ion: 91 Resp: 25669
Ion Ratio Lower Upper
91 100
106 50.8 35.1 65.3
105 24.5 16.0 29.8
77 13.2 9.2 17.2



#83
o-Xylene
Concen: 0.15 ppb(v)
RT: 17.476 min Scan# 2352
Delta R.T. -0.012 min
Lab File: 6W03671.D
Acq: 22 Dec 2017 1:50 am

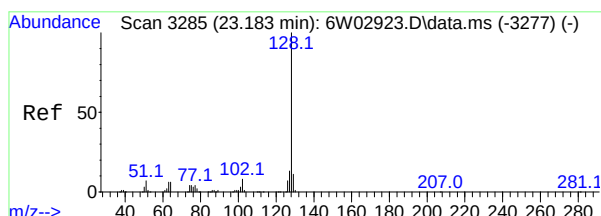
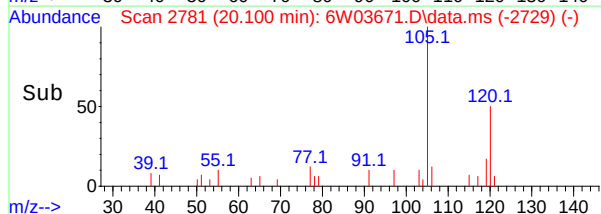
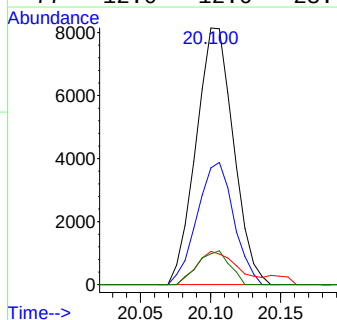
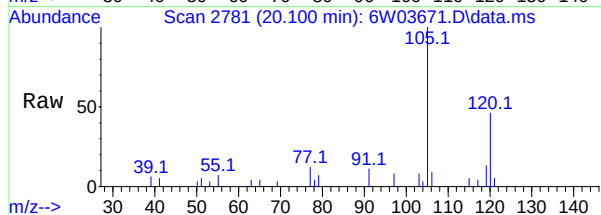
Tgt Ion: 91 Resp: 10059
Ion Ratio Lower Upper
91 100
106 48.5 33.2 61.6
105 22.0 13.4 25.0
77 12.5 8.8 16.4





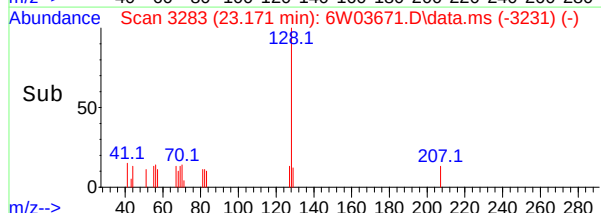
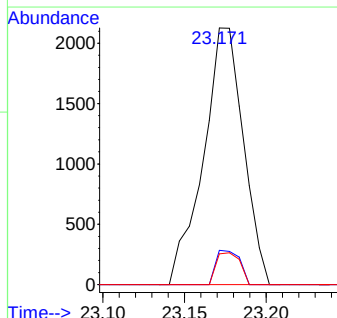
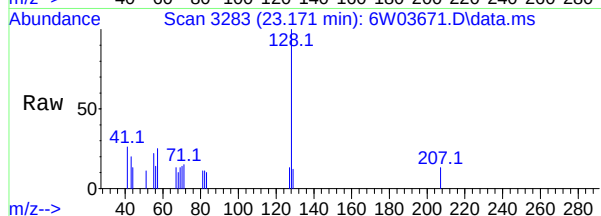
#96
1,2,4-Trimethylbenzene
Concen: 0.22 ppb(v)
RT: 20.100 min Scan# 2781
Delta R.T. -0.012 min
Lab File: 6W03671.D
Acq: 22 Dec 2017 1:50 am

Tgt Ion:105	Resp:	15205
Ion Ratio	Lower	Upper
105	100	
120	45.5	35.7 66.3
119	13.0	44.4 82.4#
77	12.0	12.6 23.4#



#106
Naphthalene
Concen: 0.11 ppb(v)
RT: 23.171 min Scan# 3283
Delta R.T. -0.012 min
Lab File: 6W03671.D
Acq: 22 Dec 2017 1:50 am

Tgt Ion:128	Resp:	3630
Ion Ratio	Lower	Upper
128	100	
127	13.4	8.8 16.3
129	12.0	7.6 14.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03697.D
 Acq On : 23 Dec 2017 2:10 am
 Operator : DANAT
 Sample : jc56815-7
 Misc : MS22955,V6W107,100,,,1
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Dec 23 11:32:53 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : TO-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

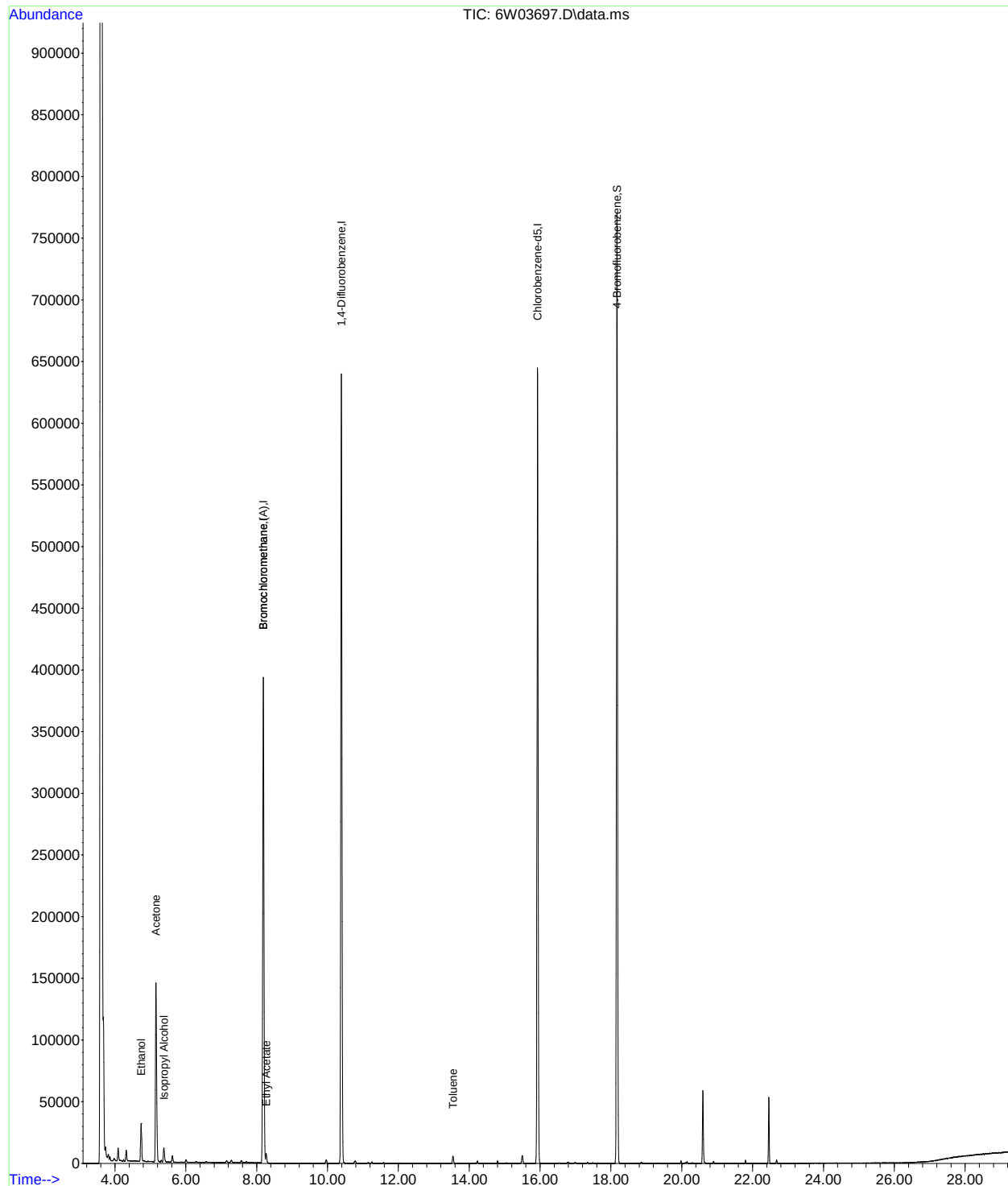
Internal Standards						
1) Bromochloromethane	8.189	130	180222	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.391	114	661233	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.928	82	279190	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.189	130	180222	10.00	ppb(v	0.00
System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.173	95	366723	10.19	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	101.90%
Target Compounds						
					Qvalue	
22) Acetone	5.154	58	71034	7.77	ppb(v	97
26) Isopropyl Alcohol	5.381	45	17943	0.50	ppb(v	92
31) Ethanol	4.738	45	39495	7.66	ppb(v	97
43) Ethyl Acetate	8.268	61	1527	0.26	ppb(v#	74
67) Toluene	13.542	91	7088	0.10	ppb(v	95

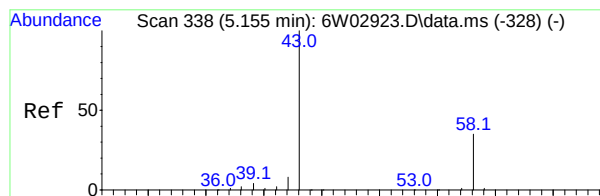
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W03697.D
Acq On : 23 Dec 2017 2:10 am
Operator : DANAT
Sample : jc56815-7
Misc : MS22955,V6W107,100,,,1
ALS Vial : 13 Sample Multiplier: 1

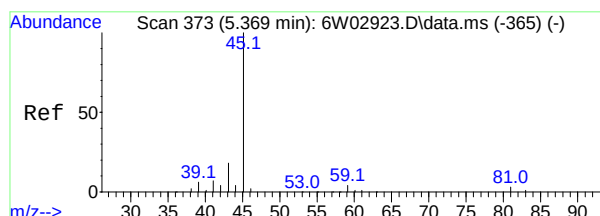
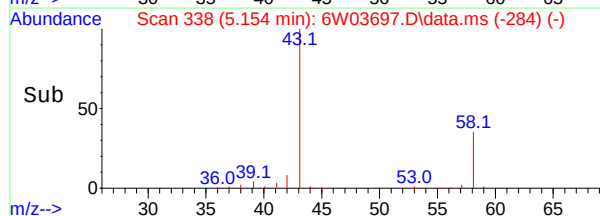
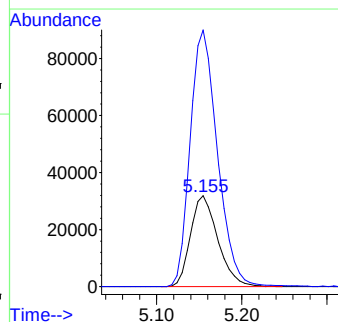
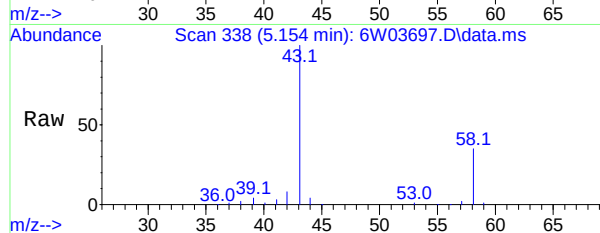
Quant Time: Dec 23 11:32:53 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration





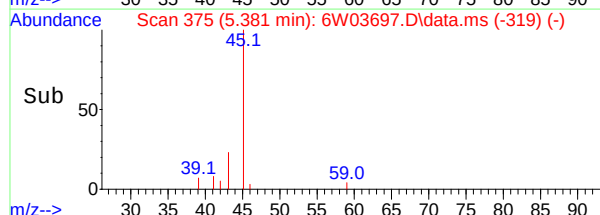
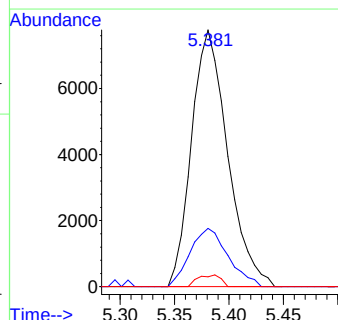
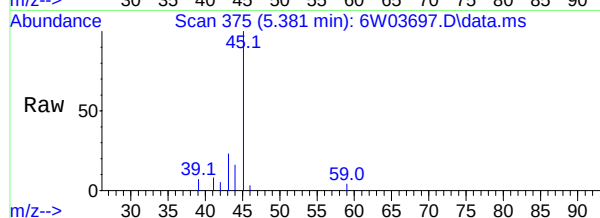
#22
Acetone
Concen: 7.77 ppb(v)
RT: 5.154 min Scan# 338
Delta R.T. -0.000 min
Lab File: 6W03697.D
Acq: 23 Dec 2017 2:10 am

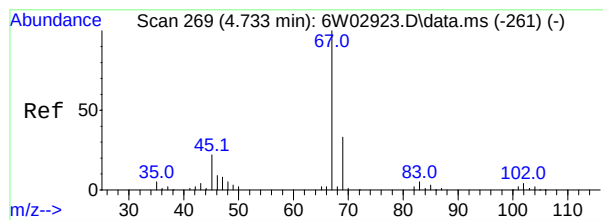
Tgt Ion: 58 Resp: 71034
Ion Ratio Lower Upper
58 100
43 282.5 202.4 375.8



#26
Isopropyl Alcohol
Concen: 0.50 ppb(v)
RT: 5.381 min Scan# 375
Delta R.T. 0.012 min
Lab File: 6W03697.D
Acq: 23 Dec 2017 2:10 am

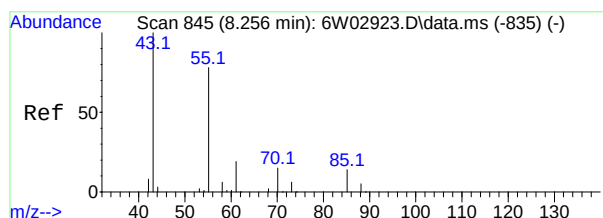
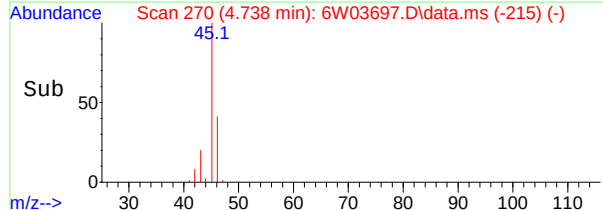
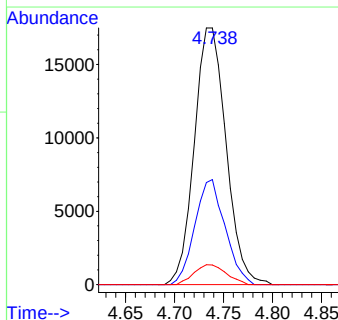
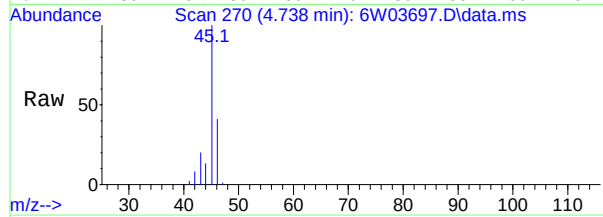
Tgt Ion: 45 Resp: 17943
Ion Ratio Lower Upper
45 100
43 22.7 12.8 23.8
59 3.8 3.0 5.6





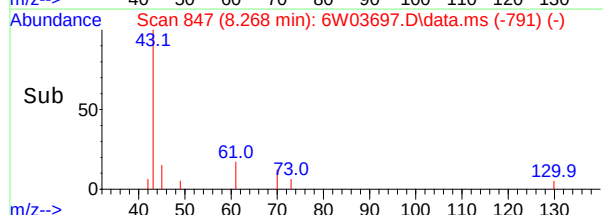
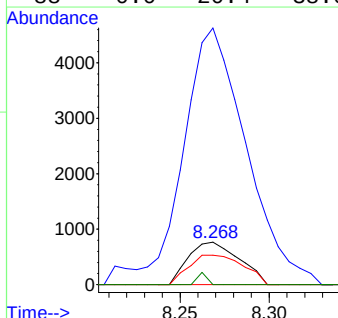
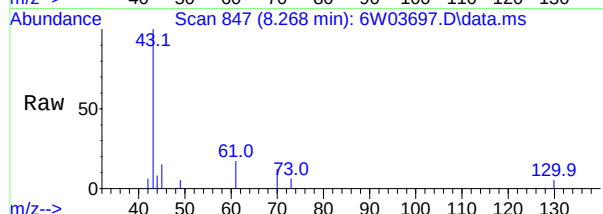
#31
Ethanol
Concen: 7.66 ppb(v)
RT: 4.738 min Scan# 270
Delta R.T. 0.006 min
Lab File: 6W03697.D
Acq: 23 Dec 2017 2:10 am

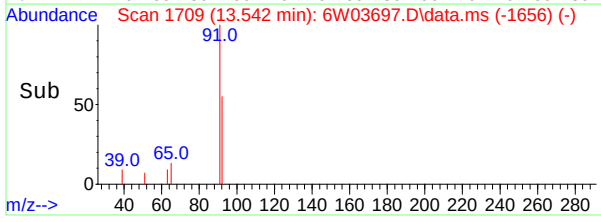
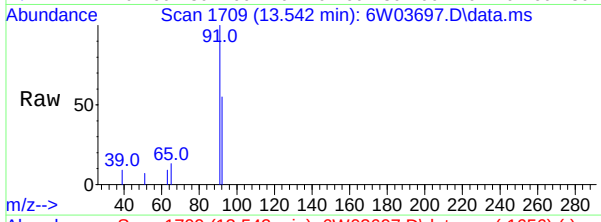
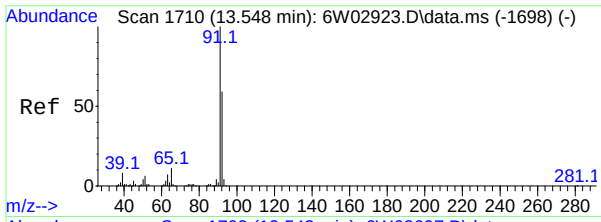
Tgt Ion: 45 Resp: 39495
Ion Ratio Lower Upper
45 100
46 40.9 27.2 50.4
42 7.7 5.6 10.4



#43
Ethyl Acetate
Concen: 0.26 ppb(v)
RT: 8.268 min Scan# 847
Delta R.T. 0.012 min
Lab File: 6W03697.D
Acq: 23 Dec 2017 2:10 am

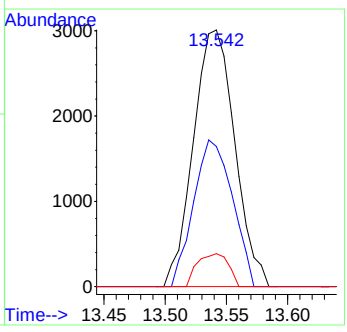
Tgt Ion: 61 Resp: 1527
Ion Ratio Lower Upper
61 100
43 604.4 488.5 907.1
70 69.6 54.9 101.9
88 0.0 20.4 38.0#





#67
Toluene
Concen: 0.10 ppb(v)
RT: 13.542 min Scan# 1709
Delta R.T. -0.006 min
Lab File: 6W03697.D
Acq: 23 Dec 2017 2:10 am

Tgt Ion:	91	Resp:	7088
Ion Ratio		Lower	Upper
91	100		
92	54.6	41.0	76.2
65	12.9	7.8	14.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03642.D
 Acq On : 20 Dec 2017 9:17 pm
 Operator : DANAT
 Sample : jc56815-8
 Misc : MS22955,V6W105,400,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 21 17:07:16 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.189	130	217703	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.391	114	811923	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.928	82	372167	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.189	130	217703	10.00	ppb(v	0.00

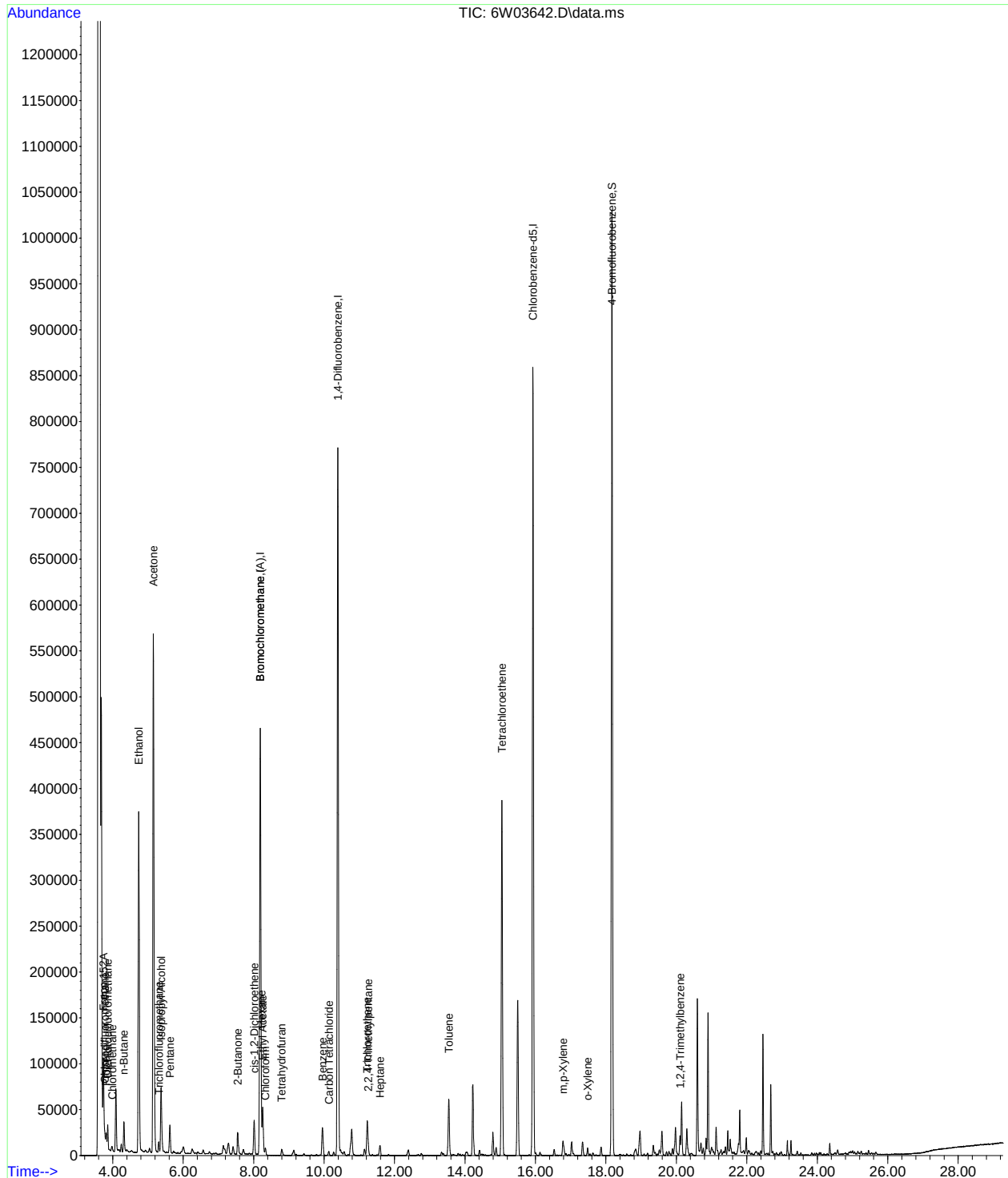
System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.173	95	493012	10.28	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	102.80%

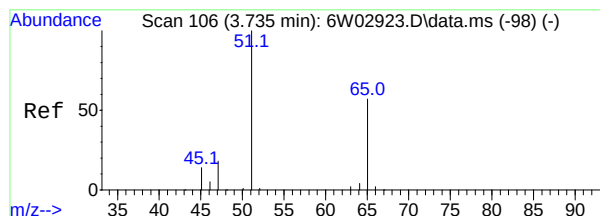
Target Compounds					Qvalue	
3) Freon 152A	3.735	65	46163	3.27	ppb(v	100
4) Chlorodifluoromethane	3.772	67	3255	0.66	ppb(v#	79
5) Propene	3.809	41	7315	0.47	ppb(v#	79
7) Dichlorodifluoromethane	3.858	85	26504	0.49	ppb(v	99
9) Chloromethane	3.986	50	3598	0.21	ppb(v	100
13) n-Butane	4.316	58	4052	1.13	ppb(v#	76
21) Trichlorofluoromethane	5.308	101	12319	0.24	ppb(v	99
22) Acetone	5.148	58	286179	25.90	ppb(v	95
23) Pentane	5.620	57	3832	0.74	ppb(v	95
26) Isopropyl Alcohol	5.375	45	109070	2.49	ppb(v	98
31) Ethanol	4.739	45	491146	78.90	ppb(v	100
39) 2-Butanone	7.547	72	10433	0.92	ppb(v	98
40) Hexane	8.220	57	6520	0.19	ppb(v#	55
41) cis-1,2-Dichloroethene	8.012	61	26132	0.88	ppb(v	98
43) Ethyl Acetate	8.256	61	11401	1.58	ppb(v	79
45) Chloroform	8.330	83	7657	0.16	ppb(v	97
47) Tetrahydrofuran	8.795	72	1970	0.19	ppb(v#	85
50) Benzene	9.957	78	22502	0.31	ppb(v	99
51) Carbon Tetrachloride	10.134	117	3583	0.08	ppb(v	92
55) 2,2,4-Trimethylpentane	11.248	57	11640	0.10	ppb(v#	89
56) Heptane	11.590	71	3318	0.14	ppb(v	93
57) Trichloroethene	11.223	95	14865	0.47	ppb(v	98
67) Toluene	13.542	91	61078	0.69	ppb(v	99
73) Tetrachloroethene	15.047	166	154389	3.47	ppb(v	99
80) m,p-Xylene	16.784	91	18733	0.24	ppb(v	99
83) o-Xylene	17.476	91	7853	0.10	ppb(v	97
96) 1,2,4-Trimethylbenzene	20.106	105	13872	0.17	ppb(v#	64

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\
Data File : 6W03642.D
Acq On : 20 Dec 2017 9:17 pm
Operator : DANAT
Sample : jc56815-8
Misc : MS22955,V6W105,400,,,1
ALS Vial : 8 Sample Multiplier: 1

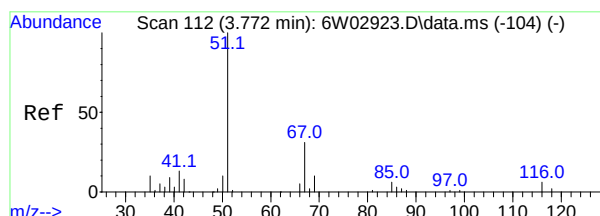
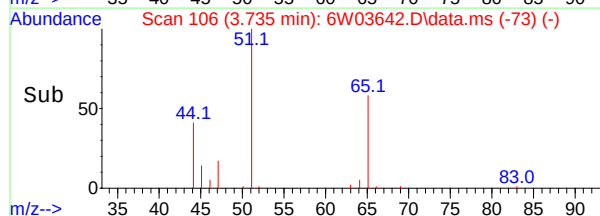
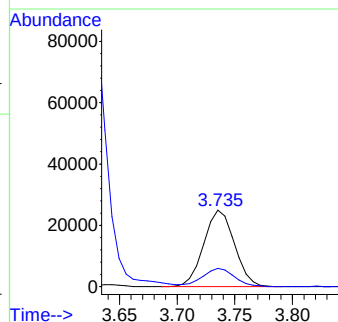
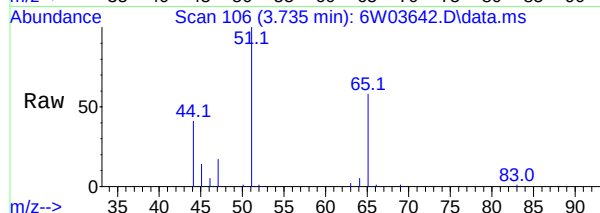
Quant Time: Dec 21 17:07:16 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration





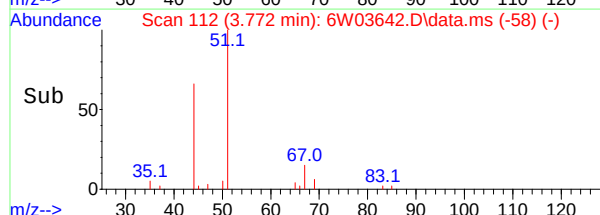
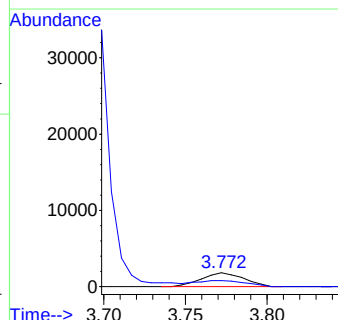
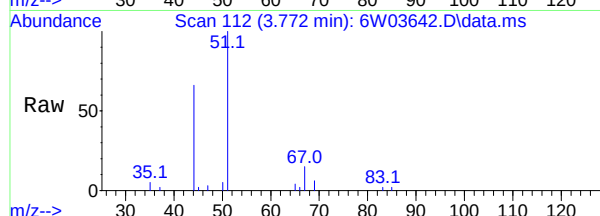
#3
 Freon 152A
 Concen: 3.27 ppb(v)
 RT: 3.735 min Scan# 106
 Delta R.T. -0.000 min
 Lab File: 6W03642.D
 Acq: 20 Dec 2017 9:17 pm

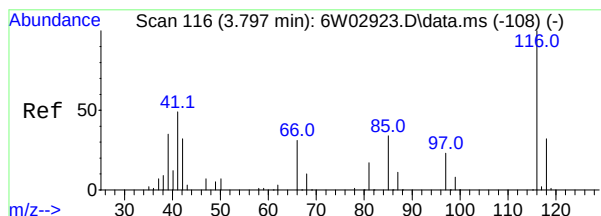
Tgt Ion: 65 Resp: 46163
 Ion Ratio Lower Upper
 65 100
 45 24.1 16.9 31.5



#4
 Chlorodifluoromethane
 Concen: 0.66 ppb(v)
 RT: 3.772 min Scan# 112
 Delta R.T. -0.000 min
 Lab File: 6W03642.D
 Acq: 20 Dec 2017 9:17 pm

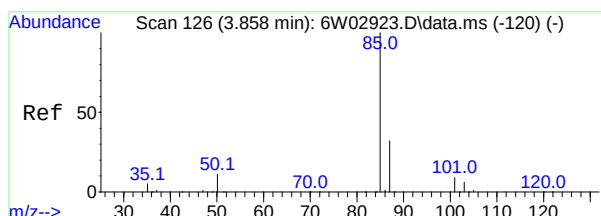
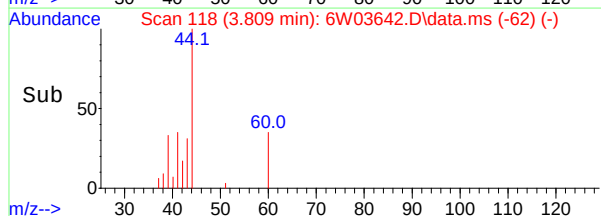
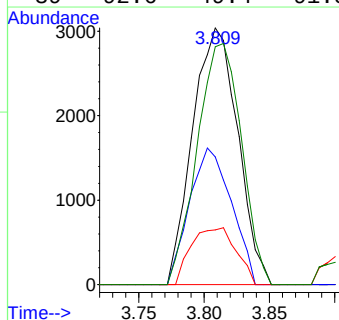
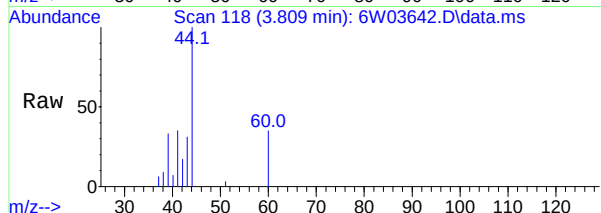
Tgt Ion: 67 Resp: 3255
 Ion Ratio Lower Upper
 67 100
 69 43.9 22.7 42.1#





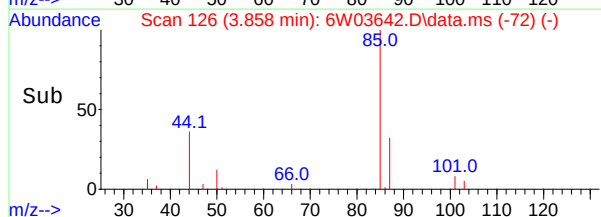
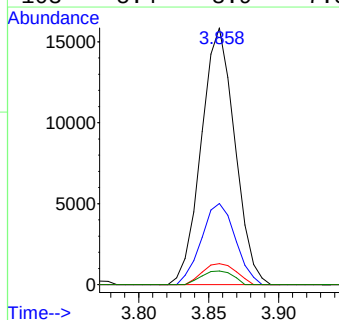
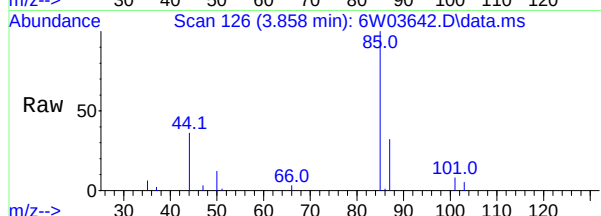
#5
Propene
Concen: 0.47 ppb(v)
RT: 3.809 min Scan# 118
Delta R.T. 0.012 min
Lab File: 6W03642.D
Acq: 20 Dec 2017 9:17 pm

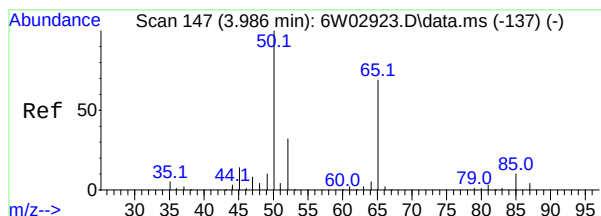
Tgt Ion: 41 Resp: 7315
Ion Ratio Lower Upper
41 100
42 49.7 45.4 84.4
40 21.3 17.4 32.2
39 92.6 49.4 91.8#



#7
Dichlorodifluoromethane
Concen: 0.49 ppb(v)
RT: 3.858 min Scan# 126
Delta R.T. -0.000 min
Lab File: 6W03642.D
Acq: 20 Dec 2017 9:17 pm

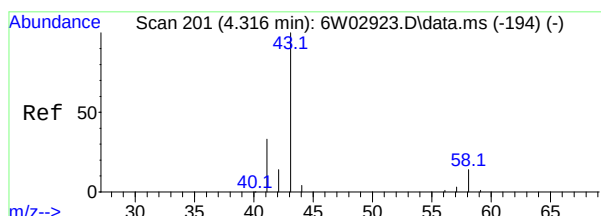
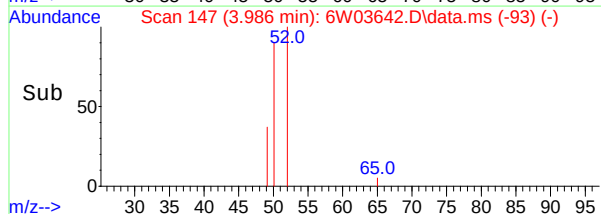
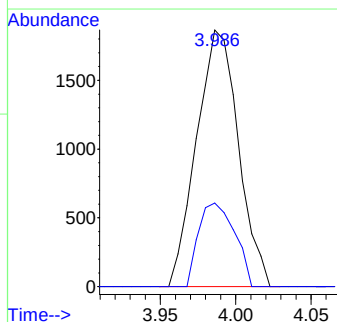
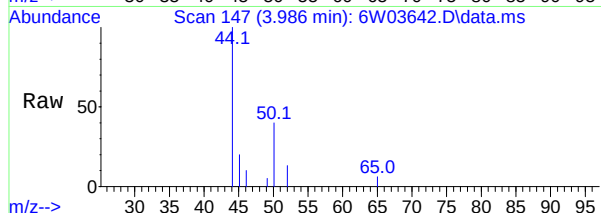
Tgt Ion: 85 Resp: 26504
Ion Ratio Lower Upper
85 100
87 31.6 22.7 42.3
101 8.2 5.9 11.1
103 5.4 3.9 7.3





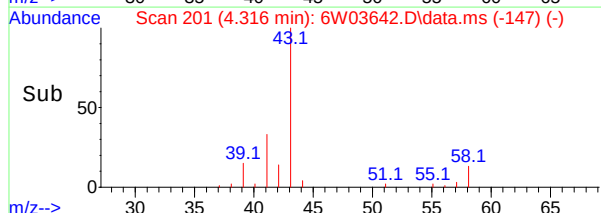
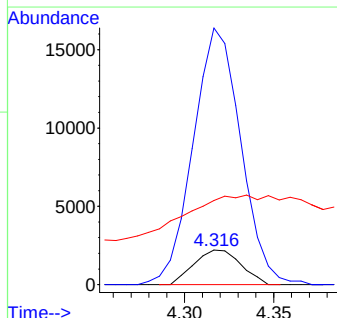
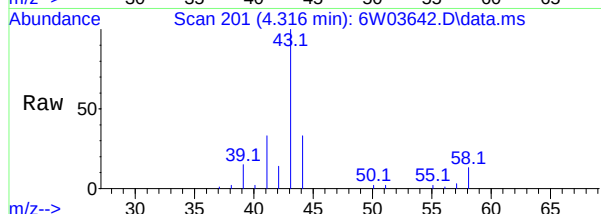
#9
Chloromethane
Concen: 0.21 ppb(v)
RT: 3.986 min Scan# 147
Delta R.T. -0.000 min
Lab File: 6W03642.D
Acq: 20 Dec 2017 9:17 pm

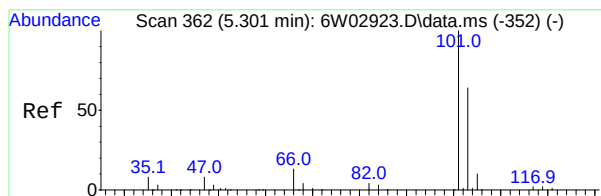
Tgt Ion: 50 Resp: 3598
Ion Ratio Lower Upper
50 100
52 32.5 22.7 42.1



#13
n-Butane
Concen: 1.13 ppb(v)
RT: 4.316 min Scan# 201
Delta R.T. -0.000 min
Lab File: 6W03642.D
Acq: 20 Dec 2017 9:17 pm

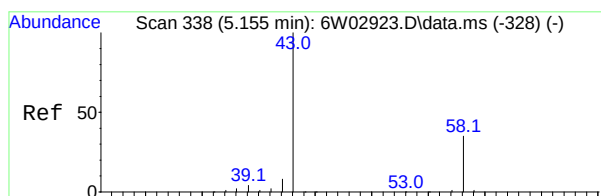
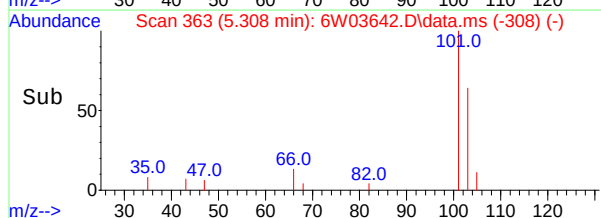
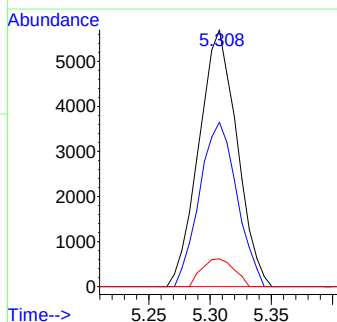
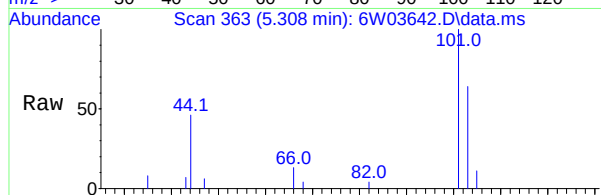
Tgt Ion: 58 Resp: 4052
Ion Ratio Lower Upper
58 100
43 744.1 499.8 928.2
44 243.9 21.1 39.1#





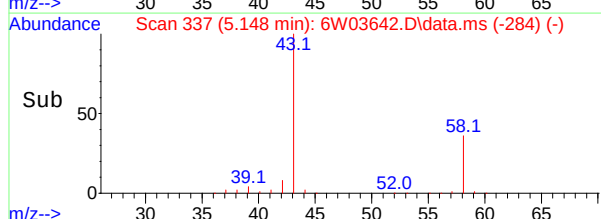
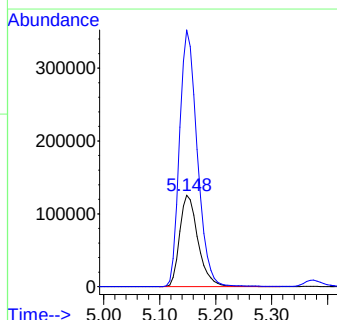
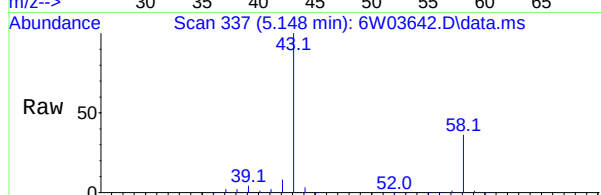
#21
Trichlorofluoromethane
Concen: 0.24 ppb(v)
RT: 5.308 min Scan# 363
Delta R.T. 0.006 min
Lab File: 6W03642.D
Acq: 20 Dec 2017 9:17 pm

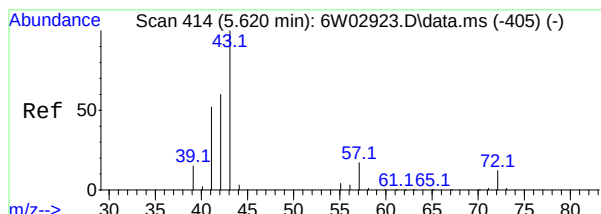
Tgt Ion: 101 Resp: 12319
Ion Ratio Lower Upper
101 100
103 64.0 45.1 83.9
105 10.9 7.3 13.5



#22
Acetone
Concen: 25.90 ppb(v)
RT: 5.148 min Scan# 337
Delta R.T. -0.006 min
Lab File: 6W03642.D
Acq: 20 Dec 2017 9:17 pm

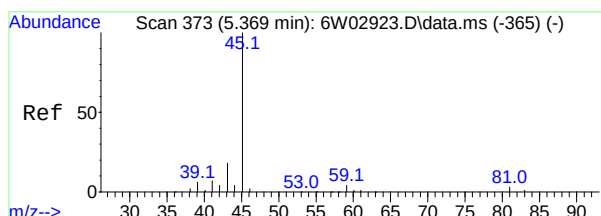
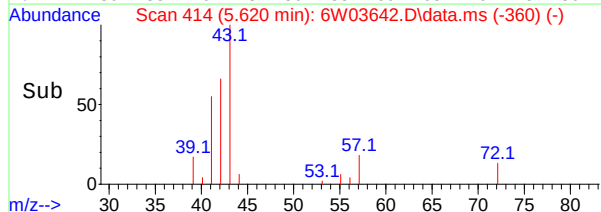
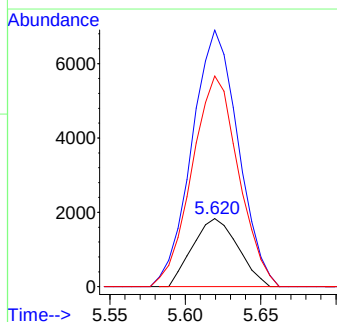
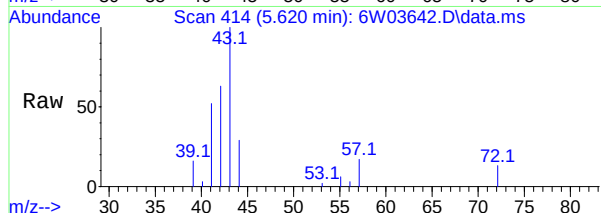
Tgt Ion: 58 Resp: 286179
Ion Ratio Lower Upper
58 100
43 280.4 202.4 375.8





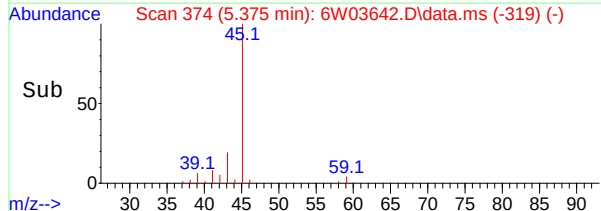
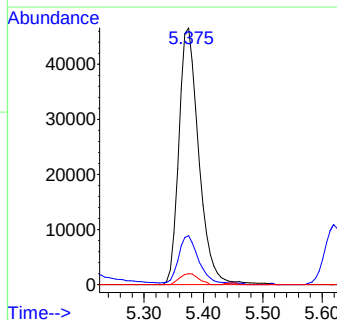
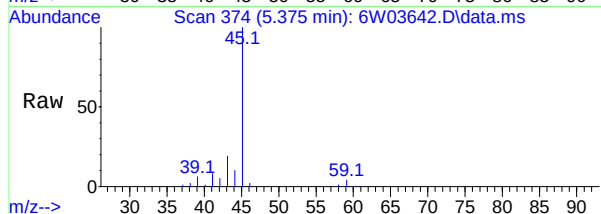
#23
 Pentane
 Concen: 0.74 ppb(v)
 RT: 5.620 min Scan# 414
 Delta R.T. -0.000 min
 Lab File: 6W03642.D
 Acq: 20 Dec 2017 9:17 pm

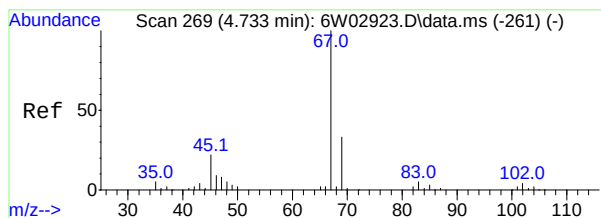
Tgt Ion: 57 Resp: 3832
 Ion Ratio Lower Upper
 57 100
 42 376.5 252.4 468.8
 41 308.9 218.7 406.1



#26
 Isopropyl Alcohol
 Concen: 2.49 ppb(v)
 RT: 5.375 min Scan# 374
 Delta R.T. 0.006 min
 Lab File: 6W03642.D
 Acq: 20 Dec 2017 9:17 pm

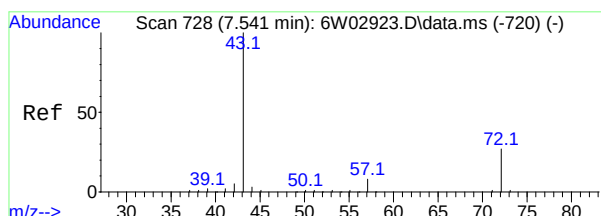
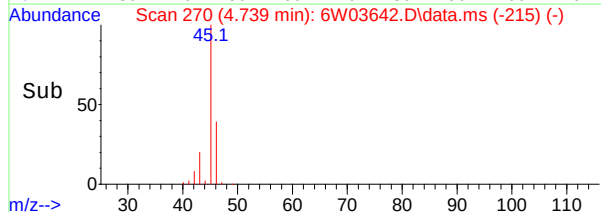
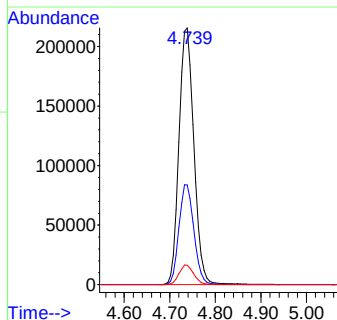
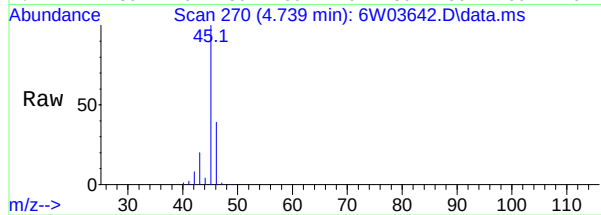
Tgt Ion: 45 Resp: 109070
 Ion Ratio Lower Upper
 45 100
 43 19.1 12.8 23.8
 59 4.2 3.0 5.6





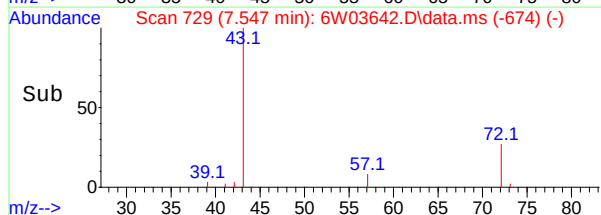
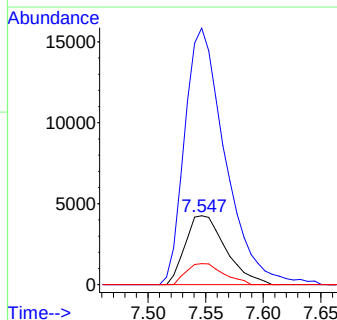
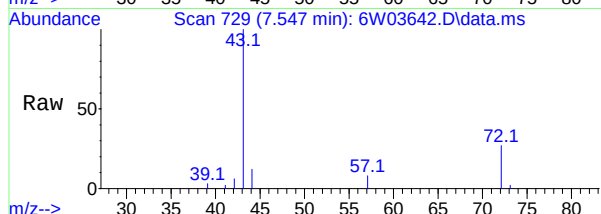
#31
Ethanol
Concen: 78.90 ppb(v)
RT: 4.739 min Scan# 270
Delta R.T. 0.006 min
Lab File: 6W03642.D
Acq: 20 Dec 2017 9:17 pm

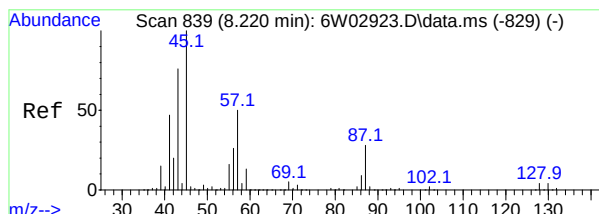
Tgt Ion: 45 Resp: 491146
Ion Ratio Lower Upper
45 100
46 38.8 27.2 50.4
42 7.6 5.6 10.4



#39
2-Butanone
Concen: 0.92 ppb(v)
RT: 7.547 min Scan# 729
Delta R.T. 0.006 min
Lab File: 6W03642.D
Acq: 20 Dec 2017 9:17 pm

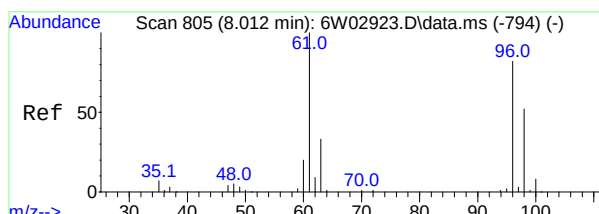
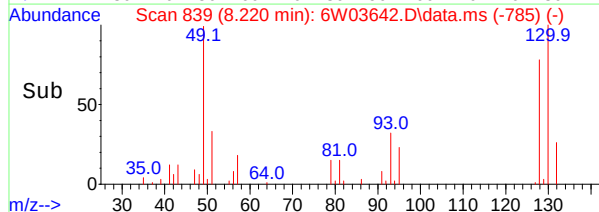
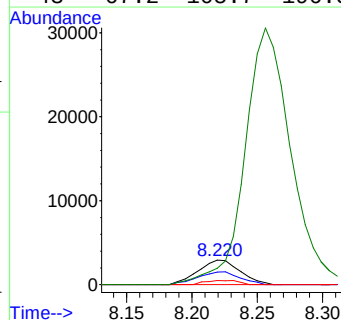
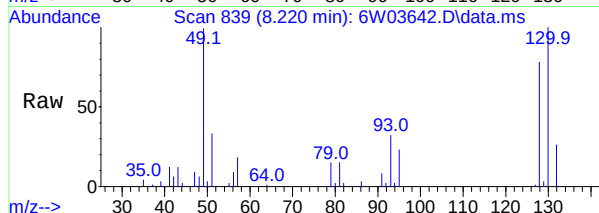
Tgt Ion: 72 Resp: 10433
Ion Ratio Lower Upper
72 100
43 372.3 257.4 478.0
57 30.5 21.0 39.0





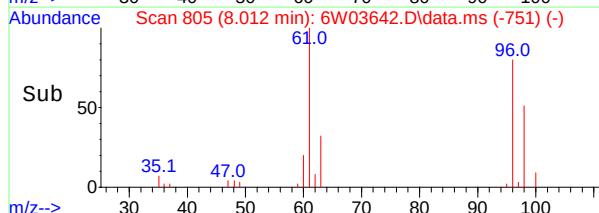
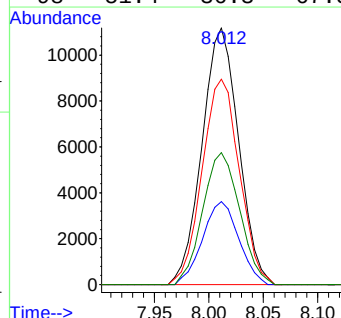
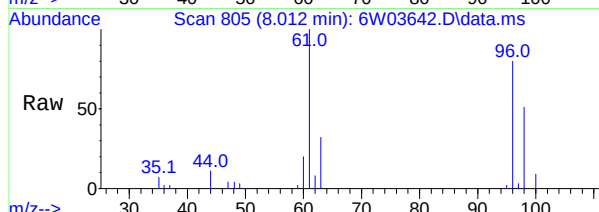
#40
Hexane
Concen: 0.19 ppb(v)
RT: 8.220 min Scan# 839
Delta R.T. -0.000 min
Lab File: 6W03642.D
Acq: 20 Dec 2017 9:17 pm

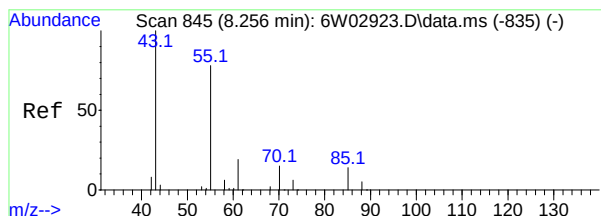
Tgt Ion: 57 Resp: 6520
Ion Ratio Lower Upper
57 100
56 51.1 36.0 67.0
86 17.1 12.1 22.5
43 67.2 105.7 196.3#



#41
cis-1,2-Dichloroethene
Concen: 0.88 ppb(v)
RT: 8.012 min Scan# 805
Delta R.T. -0.000 min
Lab File: 6W03642.D
Acq: 20 Dec 2017 9:17 pm

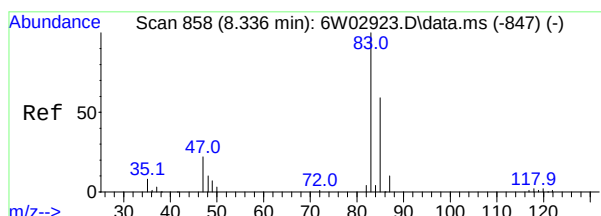
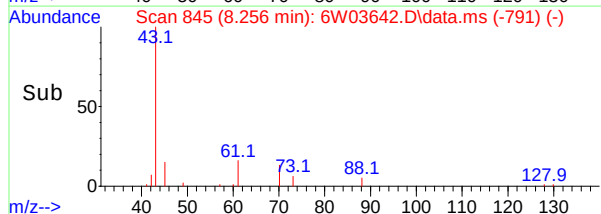
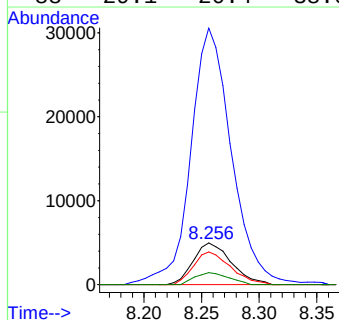
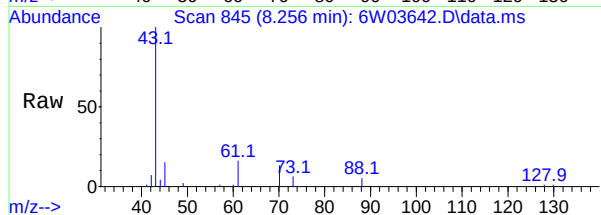
Tgt Ion: 61 Resp: 26132
Ion Ratio Lower Upper
61 100
63 32.3 23.1 42.9
96 80.0 57.4 106.6
98 51.4 36.3 67.3





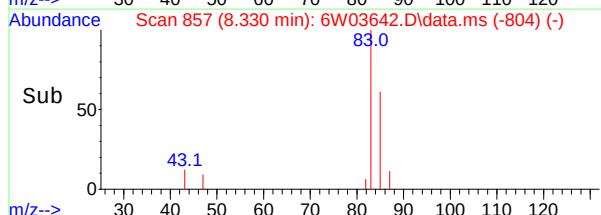
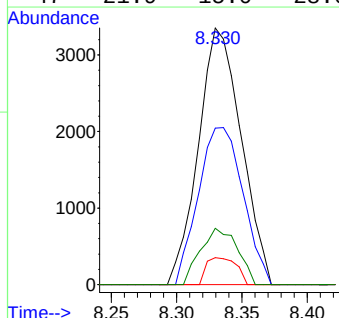
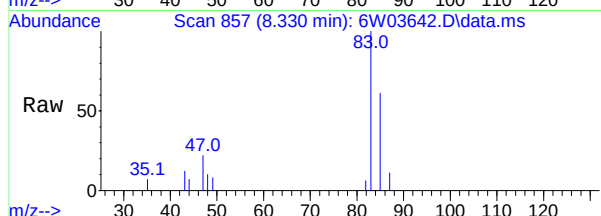
#43
Ethyl Acetate
Concen: 1.58 ppb(v)
RT: 8.256 min Scan# 845
Delta R.T. -0.000 min
Lab File: 6W03642.D
Acq: 20 Dec 2017 9:17 pm

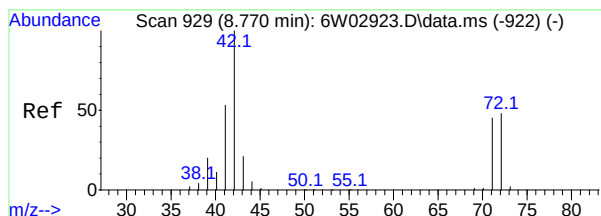
Tgt Ion: 61 Resp: 11401
Ion Ratio Lower Upper
61 100
43 615.6 488.5 907.1
70 78.6 54.9 101.9
88 29.1 20.4 38.0



#45
Chloroform
Concen: 0.16 ppb(v)
RT: 8.330 min Scan# 857
Delta R.T. -0.006 min
Lab File: 6W03642.D
Acq: 20 Dec 2017 9:17 pm

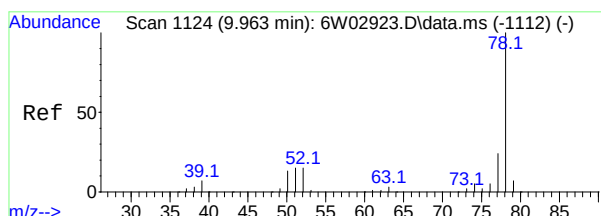
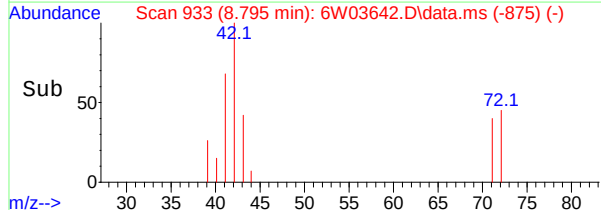
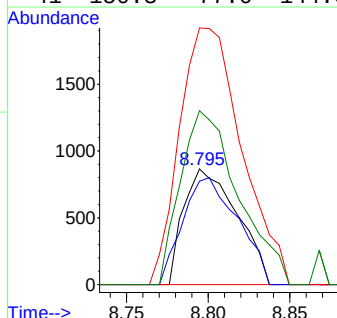
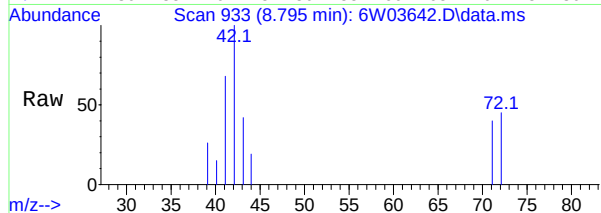
Tgt Ion: 83 Resp: 7657
Ion Ratio Lower Upper
83 100
85 61.0 45.2 84.0
87 10.5 7.3 13.7
47 21.9 15.0 28.0





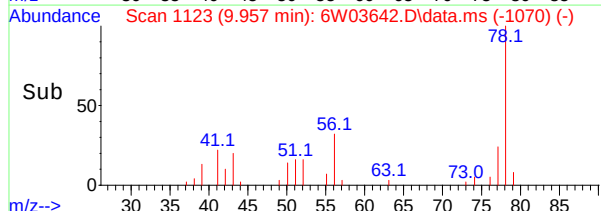
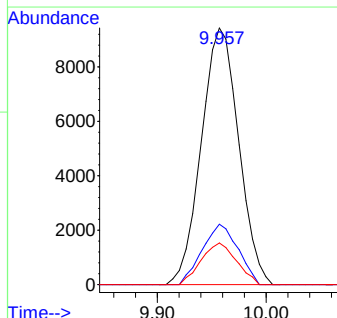
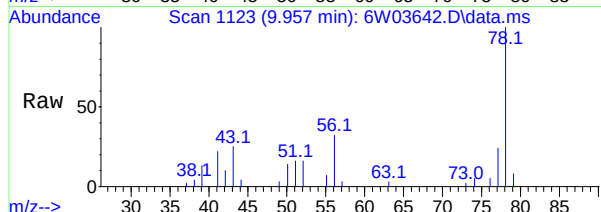
#47
Tetrahydrofuran
Concen: 0.19 ppb(v)
RT: 8.795 min Scan# 933
Delta R.T. 0.024 min
Lab File: 6W03642.D
Acq: 20 Dec 2017 9:17 pm

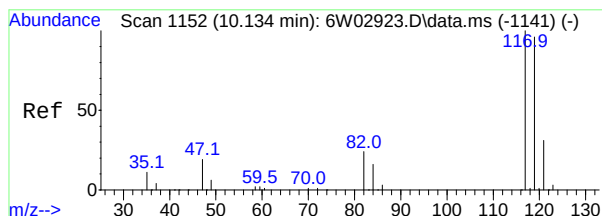
Tgt Ion: 72 Resp: 1970
Ion Ratio Lower Upper
72 100
71 89.5 65.4 121.4
42 221.9 146.4 271.8
41 150.3 77.6 144.0#



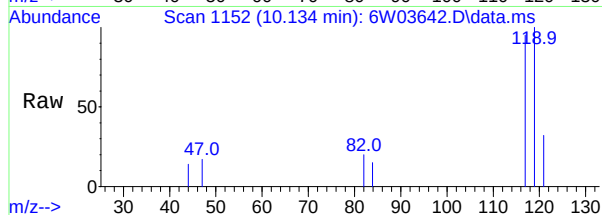
#50
Benzene
Concen: 0.31 ppb(v)
RT: 9.957 min Scan# 1123
Delta R.T. -0.006 min
Lab File: 6W03642.D
Acq: 20 Dec 2017 9:17 pm

Tgt Ion: 78 Resp: 22502
Ion Ratio Lower Upper
78 100
77 23.6 16.6 30.8
51 16.2 10.6 19.6

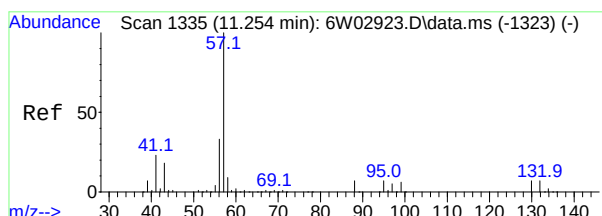
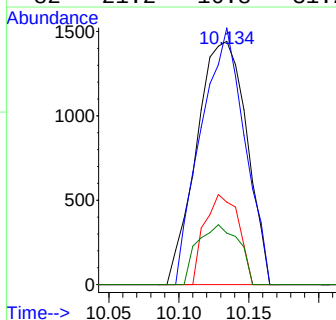
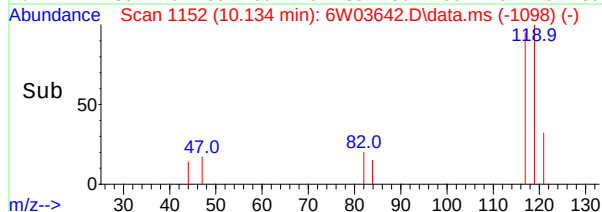




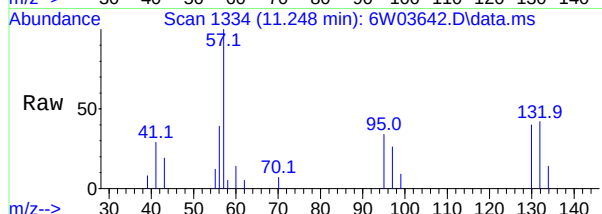
#51
Carbon Tetrachloride
Concen: 0.08 ppb(v)
RT: 10.134 min Scan# 1152
Delta R.T. -0.000 min
Lab File: 6W03642.D
Acq: 20 Dec 2017 9:17 pm



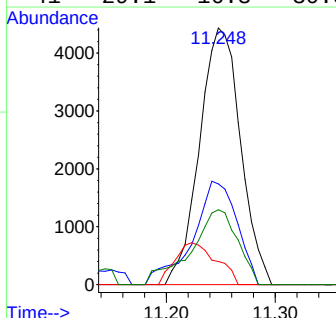
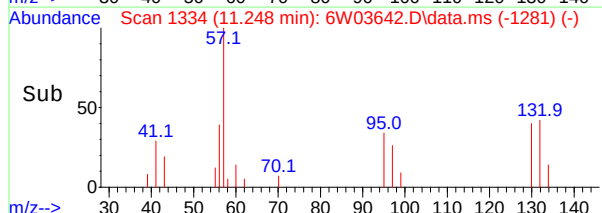
Tgt Ion: 117 Resp: 3583
Ion Ratio Lower Upper
117 100
119 105.6 67.4 125.2
121 33.9 21.9 40.7
82 21.2 16.8 31.2

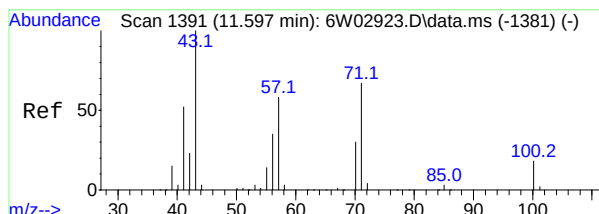


#55
2,2,4-Trimethylpentane
Concen: 0.10 ppb(v)
RT: 11.248 min Scan# 1334
Delta R.T. -0.006 min
Lab File: 6W03642.D
Acq: 20 Dec 2017 9:17 pm



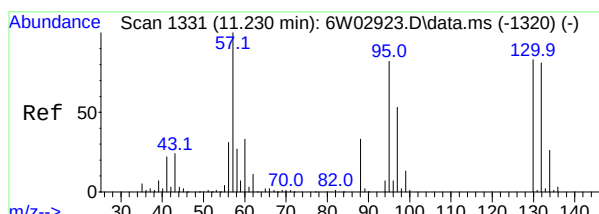
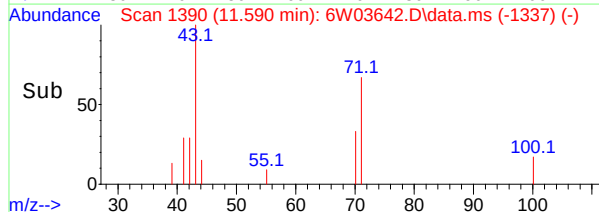
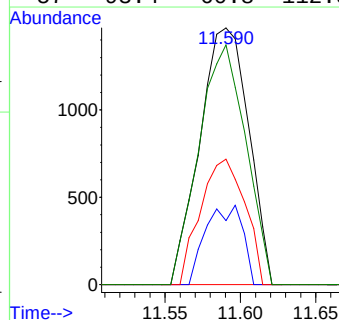
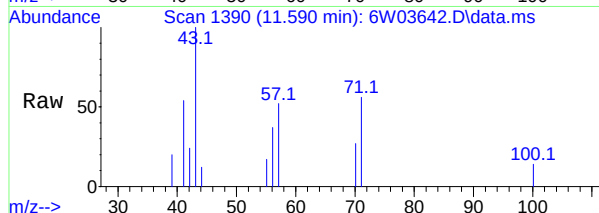
Tgt Ion: 57 Resp: 11640
Ion Ratio Lower Upper
57 100
56 39.2 23.0 42.8
99 9.1 4.5 8.3#
41 29.1 16.3 30.3





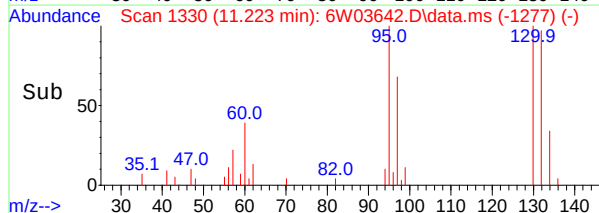
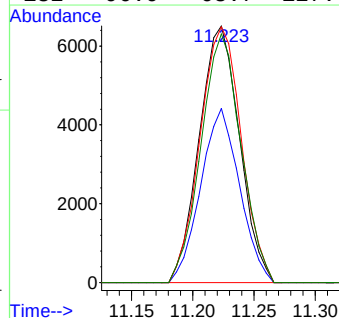
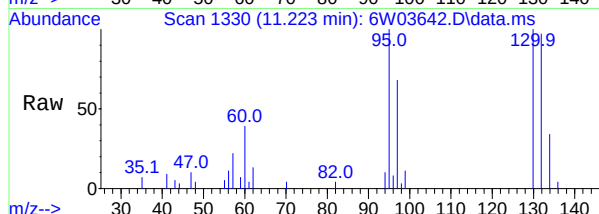
#56
Heptane
Concen: 0.14 ppb(v)
RT: 11.590 min Scan# 1390
Delta R.T. -0.006 min
Lab File: 6W03642.D
Acq: 20 Dec 2017 9:17 pm

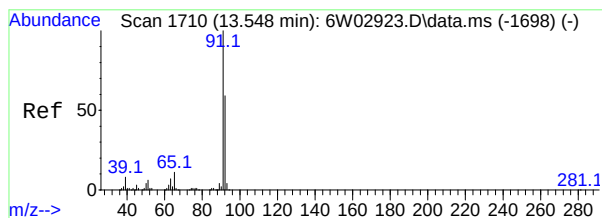
Tgt Ion: 71 Resp: 3318
Ion Ratio Lower Upper
71 100
100 25.0 20.9 38.7
70 48.9 32.1 59.5
57 93.4 60.8 112.8



#57
Trichloroethene
Concen: 0.47 ppb(v)
RT: 11.223 min Scan# 1330
Delta R.T. -0.006 min
Lab File: 6W03642.D
Acq: 20 Dec 2017 9:17 pm

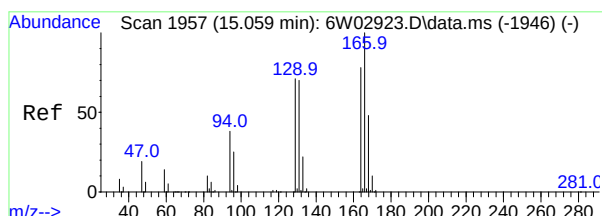
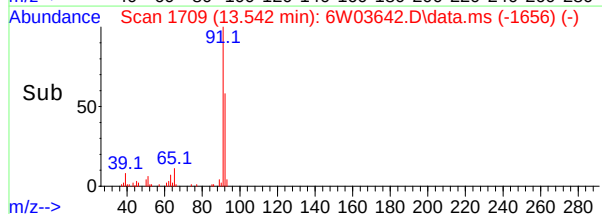
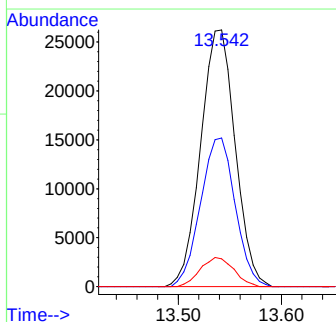
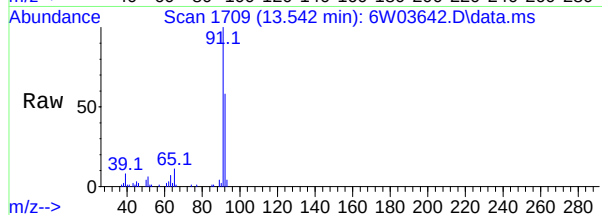
Tgt Ion: 95 Resp: 14865
Ion Ratio Lower Upper
95 100
97 67.9 45.5 84.5
130 99.6 71.0 131.8
132 96.9 68.7 127.7





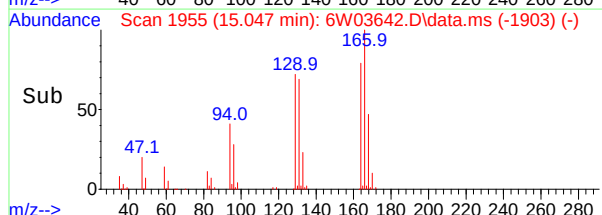
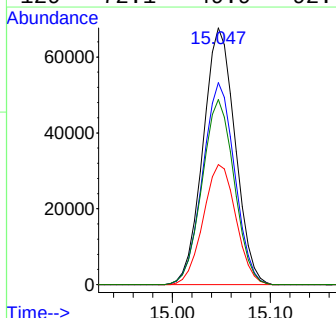
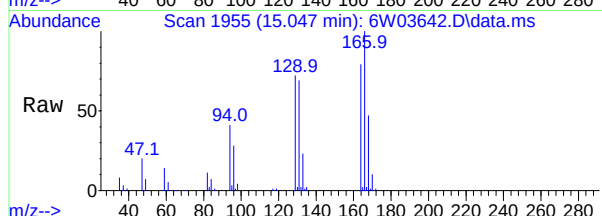
#67
Toluene
Concen: 0.69 ppb(v)
RT: 13.542 min Scan# 1709
Delta R.T. -0.006 min
Lab File: 6W03642.D
Acq: 20 Dec 2017 9:17 pm

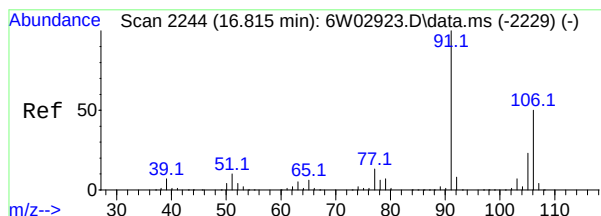
Tgt Ion: 91 Resp: 61078
Ion Ratio Lower Upper
91 100
92 57.9 41.0 76.2
65 10.9 7.8 14.4



#73
Tetrachloroethene
Concen: 3.47 ppb(v)
RT: 15.047 min Scan# 1955
Delta R.T. -0.012 min
Lab File: 6W03642.D
Acq: 20 Dec 2017 9:17 pm

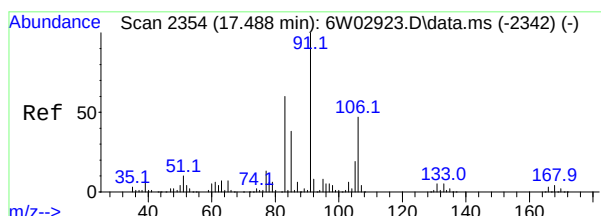
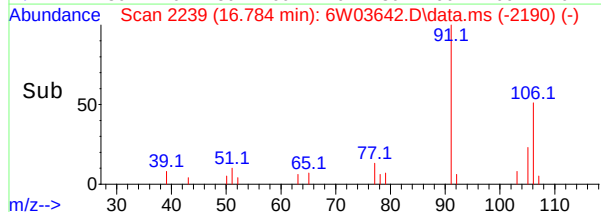
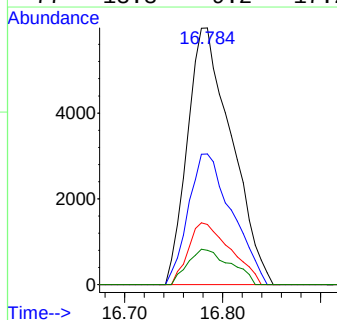
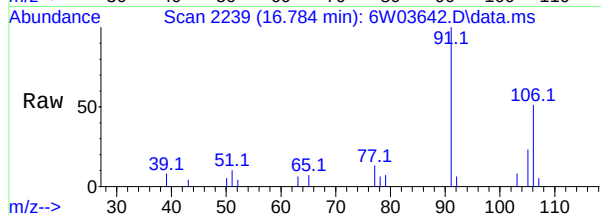
Tgt Ion: 166 Resp: 154389
Ion Ratio Lower Upper
166 100
164 78.6 54.5 101.1
168 46.8 33.9 62.9
129 72.1 49.9 92.7





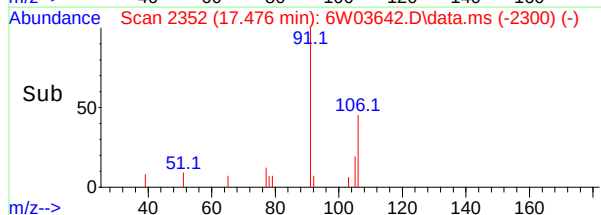
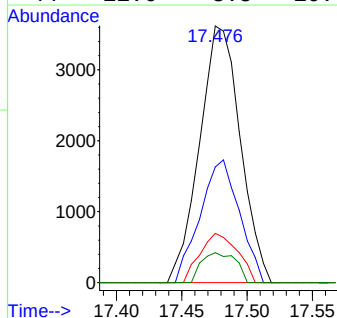
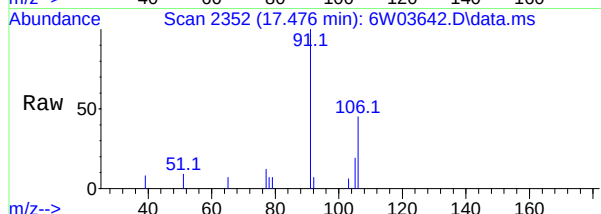
#80
m,p-Xylene
Concen: 0.24 ppb(v)
RT: 16.784 min Scan# 2239
Delta R.T. -0.031 min
Lab File: 6W03642.D
Acq: 20 Dec 2017 9:17 pm

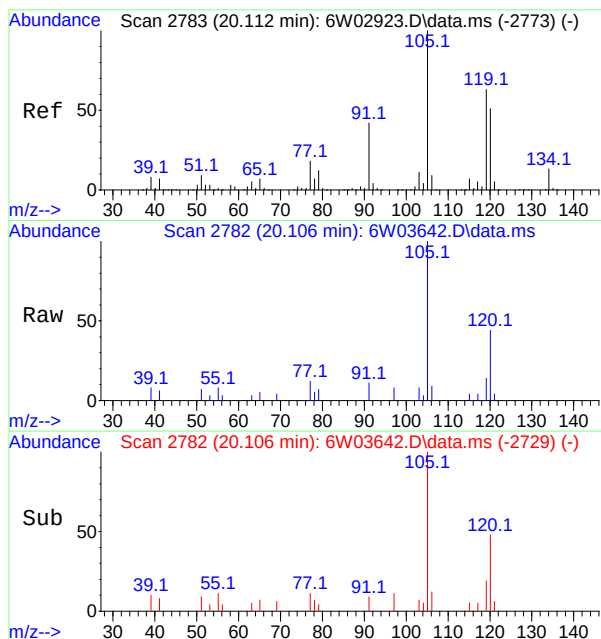
Tgt Ion:	91	Resp:	18733
Ion Ratio	Lower	Upper	
91	100		
106	50.8	35.1	65.3
105	23.4	16.0	29.8
77	13.3	9.2	17.2



#83
o-Xylene
Concen: 0.10 ppb(v)
RT: 17.476 min Scan# 2352
Delta R.T. -0.012 min
Lab File: 6W03642.D
Acq: 20 Dec 2017 9:17 pm

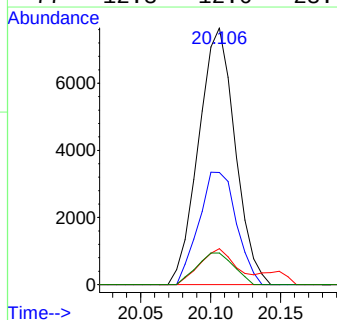
Tgt Ion:	91	Resp:	7853
Ion Ratio	Lower	Upper	
91	100		
106	45.0	33.2	61.6
105	19.2	13.4	25.0
77	11.6	8.8	16.4





#96
1,2,4-Trimethylbenzene
Concen: 0.17 ppb(v)
RT: 20.106 min Scan# 2782
Delta R.T. -0.006 min
Lab File: 6W03642.D
Acq: 20 Dec 2017 9:17 pm

Tgt Ion:105 Resp: 13872
Ion Ratio Lower Upper
105 100
120 43.7 35.7 66.3
119 14.0 44.4 82.4#
77 12.3 12.6 23.4#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03672.D
 Acq On : 22 Dec 2017 2:56 am
 Operator : DANAT
 Sample : jc56815-9
 Misc : MS22955,V6W106,800,,,1
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Dec 22 15:09:23 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.189	130	193060	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.391	114	718591	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.928	82	321740	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.189	130	193060	10.00	ppb(v	0.00

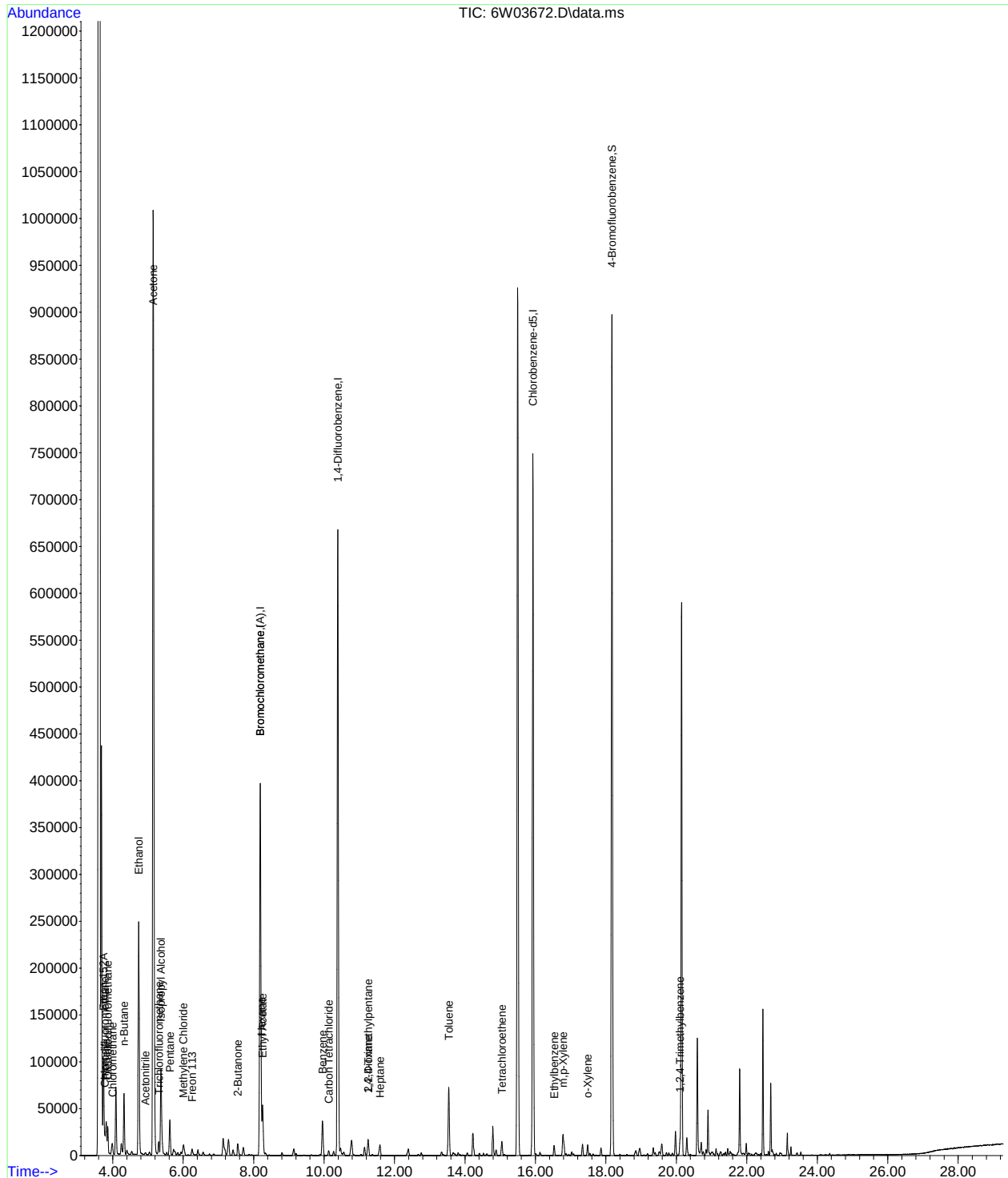
System Monitoring Compounds
 91) 4-Bromofluorobenzene 18.173 95 424216 10.23 ppb(v 0.00
 Spiked Amount 10.000 Range 65 - 128 Recovery = 102.30%

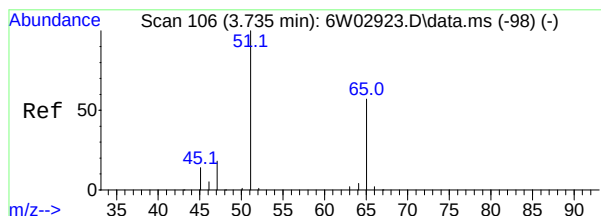
Target Compounds					Qvalue	
3) Freon 152A	3.735	65	55089	4.40	ppb(v	97
4) Chlorodifluoromethane	3.772	67	3562	0.81	ppb(v	90
5) Propene	3.803	41	13865	1.01	ppb(v	91
7) Dichlorodifluoromethane	3.858	85	29330	0.61	ppb(v	98
9) Chloromethane	3.992	50	12357	0.79	ppb(v	96
13) n-Butane	4.323	58	9132	2.87	ppb(v#	80
17) Acetonitrile	4.928	41	2725	0.18	ppb(v	88
21) Trichlorofluoromethane	5.308	101	14382	0.31	ppb(v	99
22) Acetone	5.142	58	558963	57.05	ppb(v	88
23) Pentane	5.620	57	5010	1.09	ppb(v	84
26) Isopropyl Alcohol	5.369	45	139969	3.61	ppb(v	97
28) Freon 113	6.250	101	4084	0.10	ppb(v	99
29) Methylene Chloride	6.005	84	6391	0.32	ppb(v	96
31) Ethanol	4.733	45	324468	58.77	ppb(v	99
39) 2-Butanone	7.547	72	5752	0.57	ppb(v	92
40) Hexane	8.220	57	11782	0.38	ppb(v#	53
43) Ethyl Acetate	8.256	61	12095	1.89	ppb(v	75
50) Benzene	9.957	78	35129	0.54	ppb(v	99
51) Carbon Tetrachloride	10.128	117	4134	0.10	ppb(v	94
55) 2,2,4-Trimethylpentane	11.248	57	17431	0.17	ppb(v	92
56) Heptane	11.591	71	3375	0.16	ppb(v	98
62) 1,4-Dioxane	11.254	88	2314	0.19	ppb(v#	75
67) Toluene	13.536	91	71446	0.91	ppb(v	99
73) Tetrachloroethene	15.047	166	5719	0.15	ppb(v	95
79) Ethylbenzene	16.534	91	11136	0.12	ppb(v#	95
80) m,p-Xylene	16.784	91	26681	0.39	ppb(v	99
83) o-Xylene	17.482	91	10146	0.15	ppb(v	97
96) 1,2,4-Trimethylbenzene	20.100	105	12937	0.19	ppb(v#	65

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\
Data File : 6W03672.D
Acq On : 22 Dec 2017 2:56 am
Operator : DANAT
Sample : jc56815-9
Misc : MS22955,V6W106,800,,,1
ALS Vial : 15 Sample Multiplier: 1

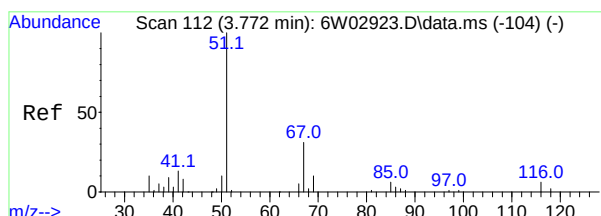
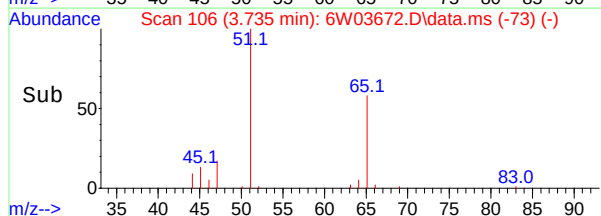
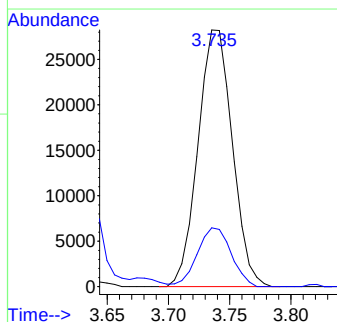
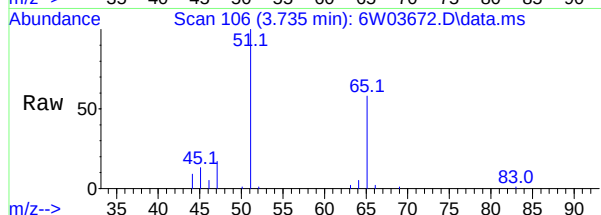
Quant Time: Dec 22 15:09:23 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration





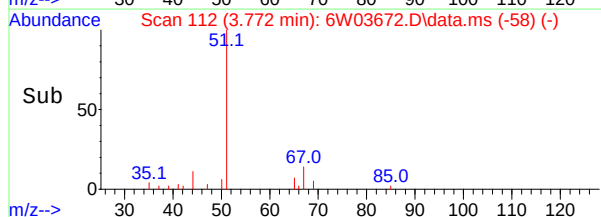
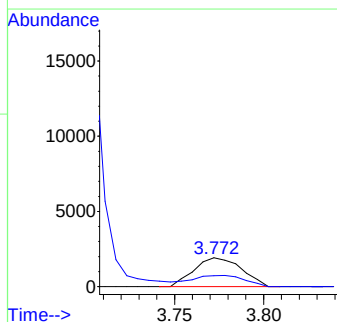
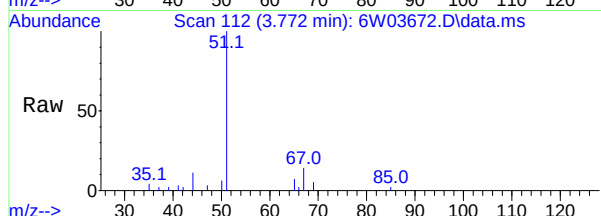
#3
 Freon 152A
 Concen: 4.40 ppb(v)
 RT: 3.735 min Scan# 106
 Delta R.T. 0.000 min
 Lab File: 6W03672.D
 Acq: 22 Dec 2017 2:56 am

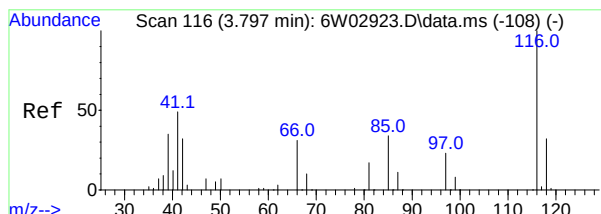
Tgt Ion: 65 Resp: 55089
 Ion Ratio Lower Upper
 65 100
 45 22.9 16.9 31.5



#4
 Chlorodifluoromethane
 Concen: 0.81 ppb(v)
 RT: 3.772 min Scan# 112
 Delta R.T. 0.000 min
 Lab File: 6W03672.D
 Acq: 22 Dec 2017 2:56 am

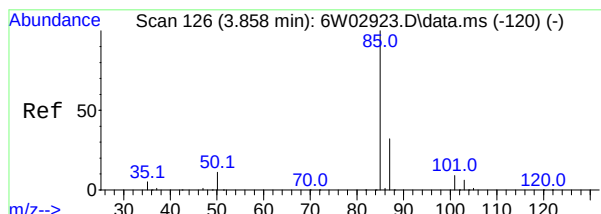
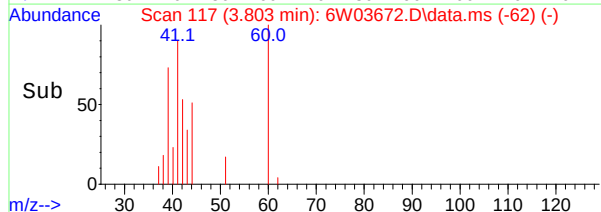
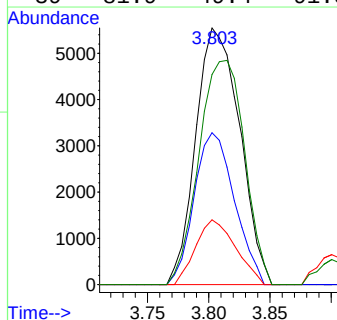
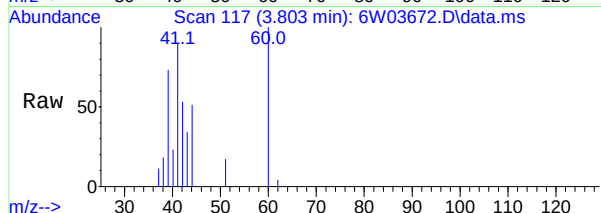
Tgt Ion: 67 Resp: 3562
 Ion Ratio Lower Upper
 67 100
 69 37.8 22.7 42.1





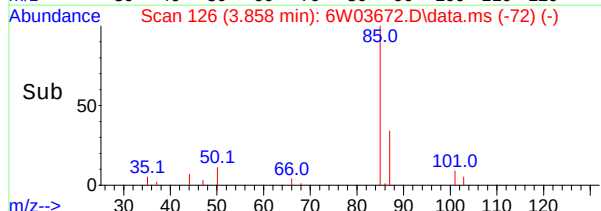
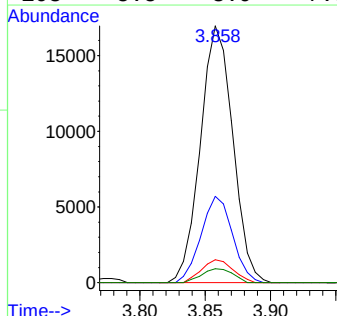
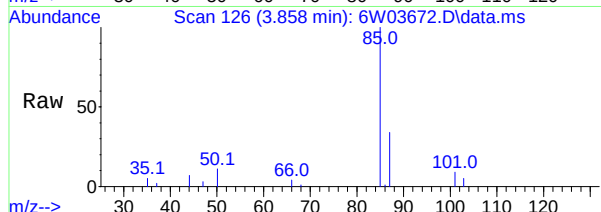
#5
Propene
Concen: 1.01 ppb(v)
RT: 3.803 min Scan# 117
Delta R.T. 0.006 min
Lab File: 6W03672.D
Acq: 22 Dec 2017 2:56 am

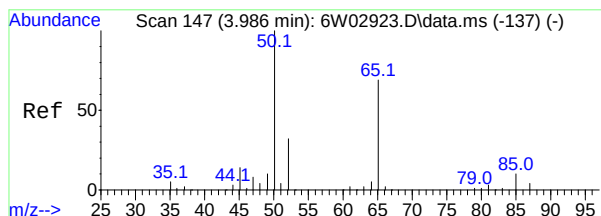
Tgt Ion: 41 Resp: 13865
Ion Ratio Lower Upper
41 100
42 59.1 45.4 84.4
40 25.2 17.4 32.2
39 81.9 49.4 91.8



#7
Dichlorodifluoromethane
Concen: 0.61 ppb(v)
RT: 3.858 min Scan# 126
Delta R.T. 0.000 min
Lab File: 6W03672.D
Acq: 22 Dec 2017 2:56 am

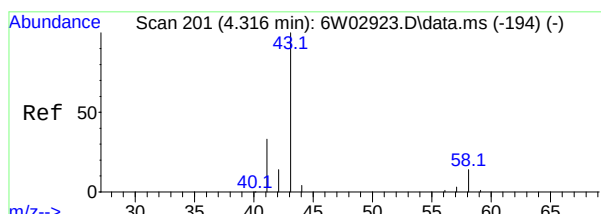
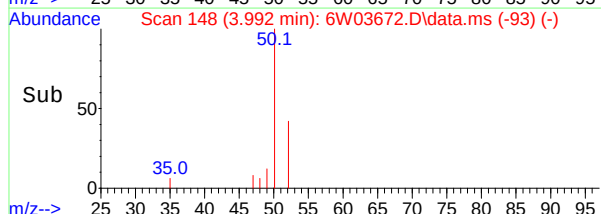
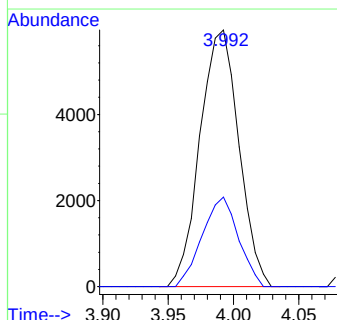
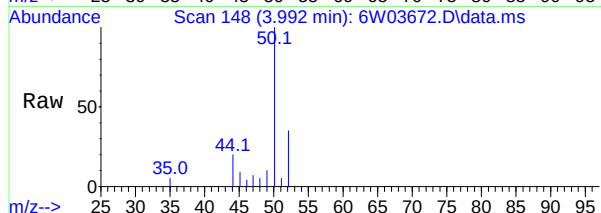
Tgt Ion: 85 Resp: 29330
Ion Ratio Lower Upper
85 100
87 33.6 22.7 42.3
101 8.9 5.9 11.1
103 5.5 3.9 7.3





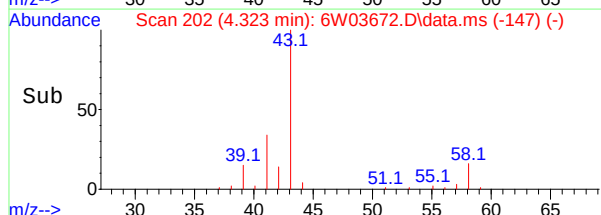
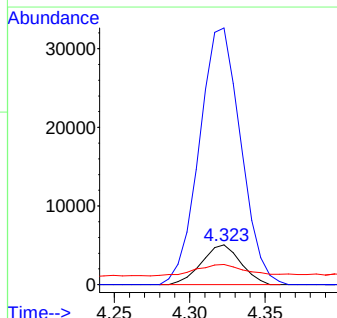
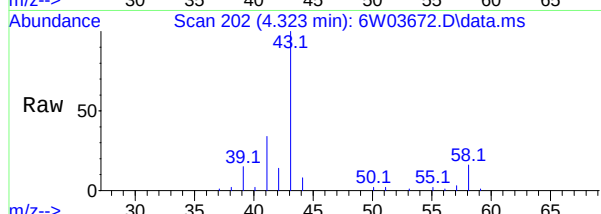
#9
Chloromethane
Concen: 0.79 ppb(v)
RT: 3.992 min Scan# 148
Delta R.T. 0.006 min
Lab File: 6W03672.D
Acq: 22 Dec 2017 2:56 am

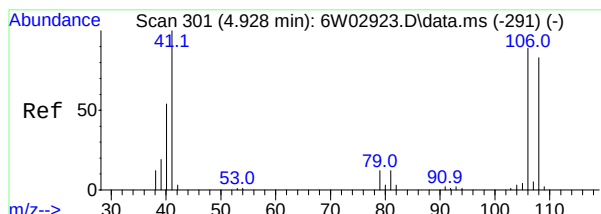
Tgt Ion: 50 Resp: 12357
Ion Ratio Lower Upper
50 100
52 34.9 22.7 42.1



#13
n-Butane
Concen: 2.87 ppb(v)
RT: 4.323 min Scan# 202
Delta R.T. 0.006 min
Lab File: 6W03672.D
Acq: 22 Dec 2017 2:56 am

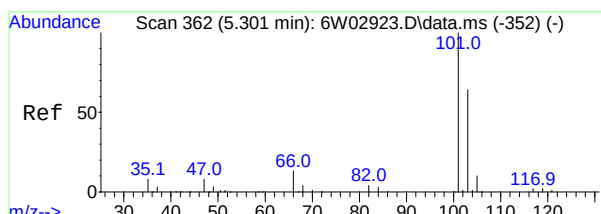
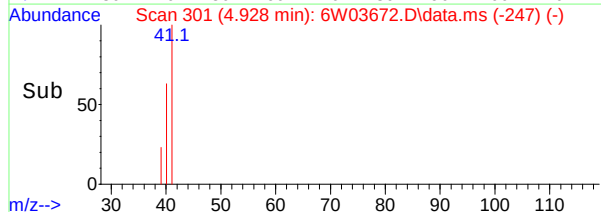
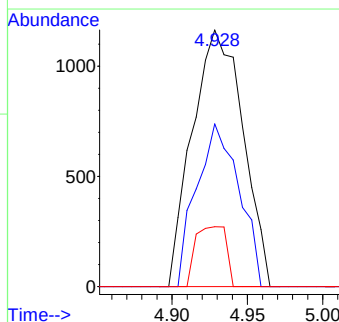
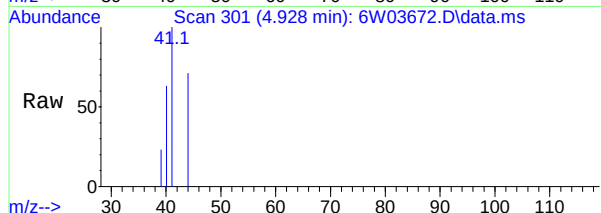
Tgt Ion: 58 Resp: 9132
Ion Ratio Lower Upper
58 100
43 645.1 499.8 928.2
44 50.7 21.1 39.1#





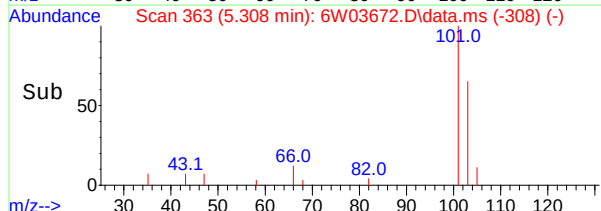
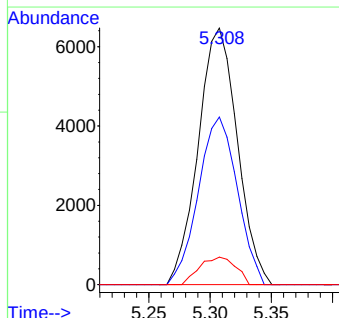
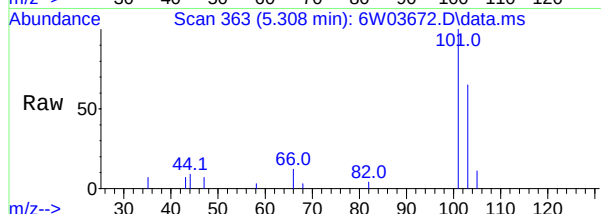
#17
Acetonitrile
Concen: 0.18 ppb(v)
RT: 4.928 min Scan# 301
Delta R.T. 0.000 min
Lab File: 6W03672.D
Acq: 22 Dec 2017 2:56 am

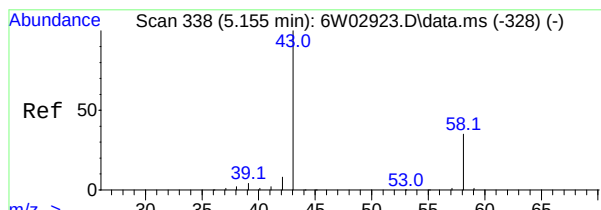
Tgt Ion: 41 Resp: 2725
Ion Ratio Lower Upper
41 100
40 63.3 37.6 69.8
39 23.3 13.4 24.8



#21
Trichlorofluoromethane
Concen: 0.31 ppb(v)
RT: 5.308 min Scan# 363
Delta R.T. 0.006 min
Lab File: 6W03672.D
Acq: 22 Dec 2017 2:56 am

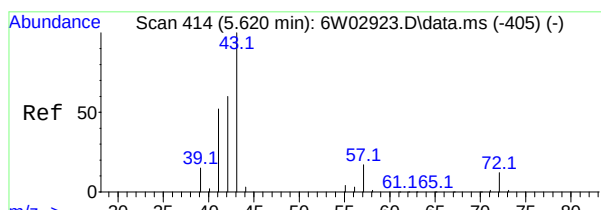
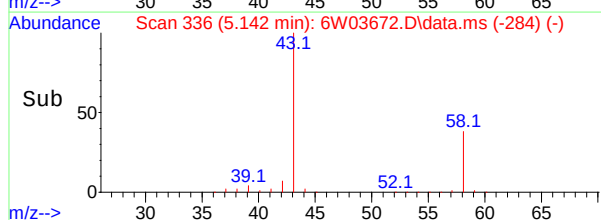
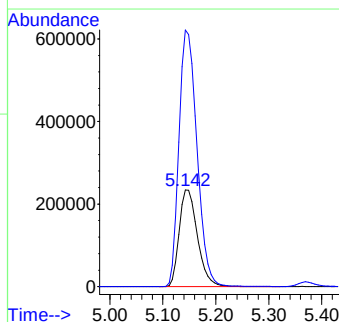
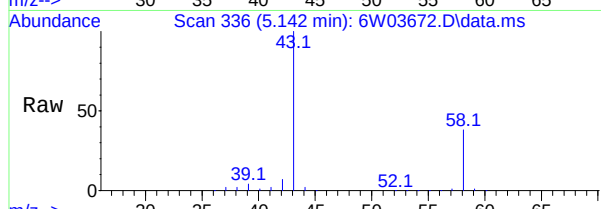
Tgt Ion: 101 Resp: 14382
Ion Ratio Lower Upper
101 100
103 65.3 45.1 83.9
105 10.7 7.3 13.5





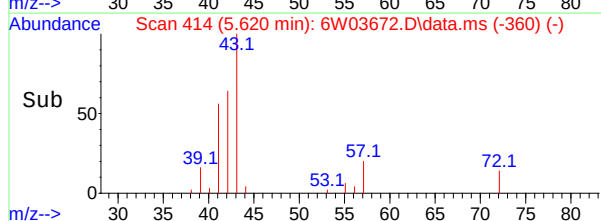
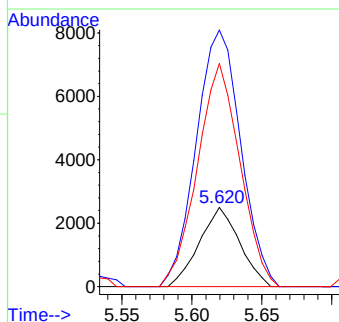
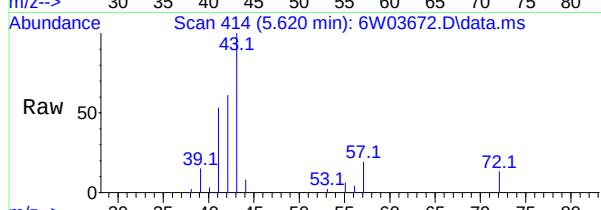
#22
Acetone
Concen: 57.05 ppb(v)
RT: 5.142 min Scan# 336
Delta R.T. -0.012 min
Lab File: 6W03672.D
Acq: 22 Dec 2017 2:56 am

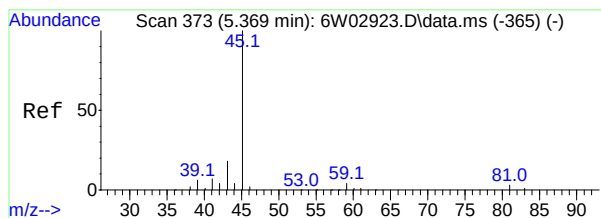
Tgt Ion: 58 Resp: 558963
Ion Ratio Lower Upper
58 100
43 265.4 202.4 375.8



#23
Pentane
Concen: 1.09 ppb(v)
RT: 5.620 min Scan# 414
Delta R.T. 0.000 min
Lab File: 6W03672.D
Acq: 22 Dec 2017 2:56 am

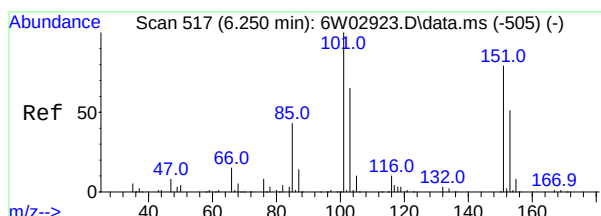
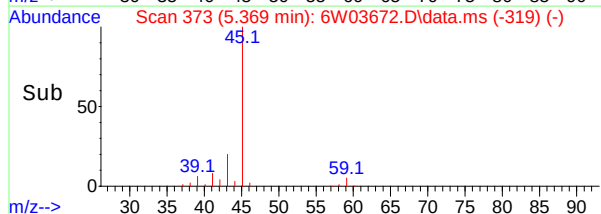
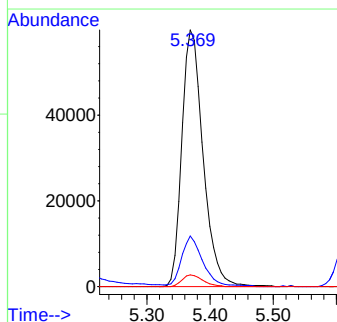
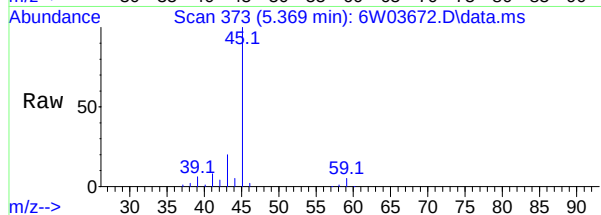
Tgt Ion: 57 Resp: 5010
Ion Ratio Lower Upper
57 100
42 324.2 252.4 468.8
41 281.7 218.7 406.1





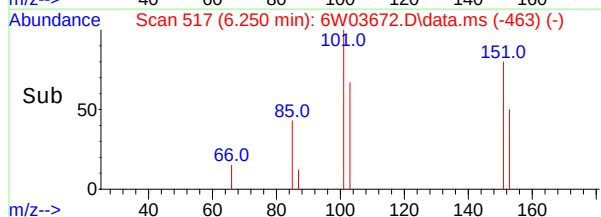
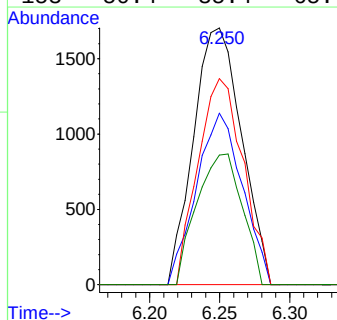
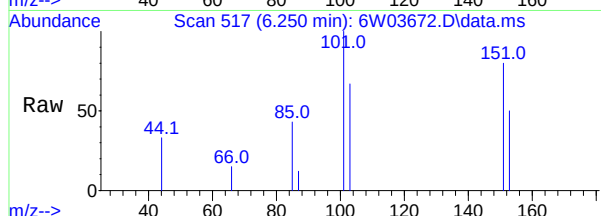
#26
Isopropyl Alcohol
Concen: 3.61 ppb(v)
RT: 5.369 min Scan# 373
Delta R.T. 0.000 min
Lab File: 6W03672.D
Acq: 22 Dec 2017 2:56 am

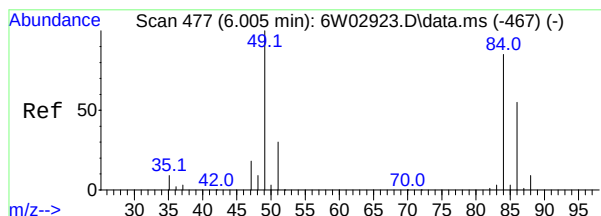
Tgt Ion:	45	Resp:	139969
Ion Ratio	100	Lower	Upper
43	19.7	12.8	23.8
59	4.6	3.0	5.6



#28
Freon 113
Concen: 0.10 ppb(v)
RT: 6.250 min Scan# 517
Delta R.T. 0.000 min
Lab File: 6W03672.D
Acq: 22 Dec 2017 2:56 am

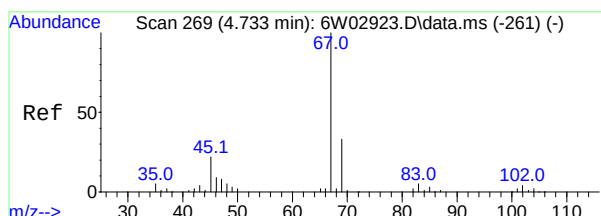
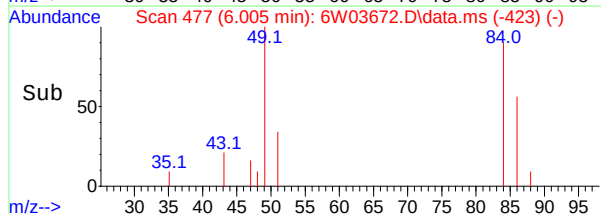
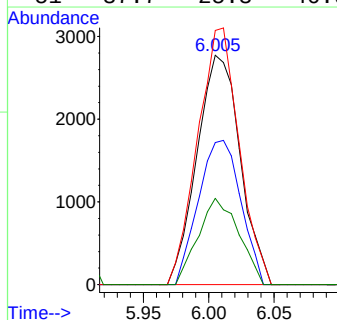
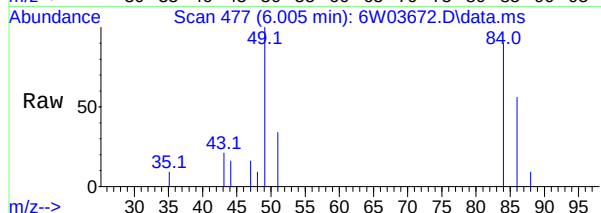
Tgt Ion:	101	Resp:	4084
Ion Ratio	100	Lower	Upper
101	100	45.4	84.4
103	66.8	55.3	102.7
151	80.3	35.4	65.7
153	50.4		





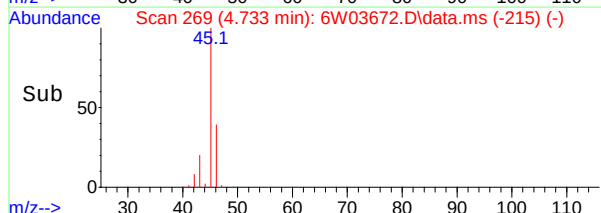
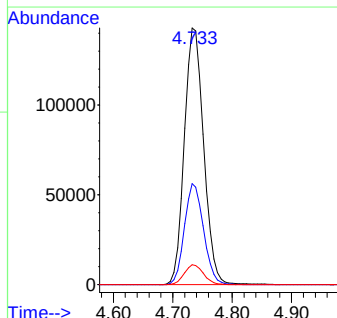
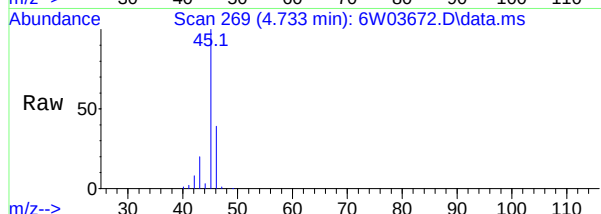
#29
Methylene Chloride
Concen: 0.32 ppb(v)
RT: 6.005 min Scan# 477
Delta R.T. 0.000 min
Lab File: 6W03672.D
Acq: 22 Dec 2017 2:56 am

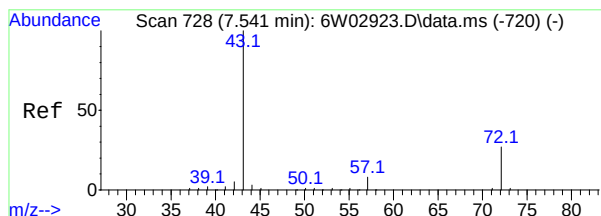
Tgt Ion:	84	Resp:	6391
Ion Ratio	Lower	Upper	
84	100		
86	61.9	44.8	83.2
49	110.9	82.1	152.5
51	37.7	25.3	46.9



#31
Ethanol
Concen: 58.77 ppb(v)
RT: 4.733 min Scan# 269
Delta R.T. 0.000 min
Lab File: 6W03672.D
Acq: 22 Dec 2017 2:56 am

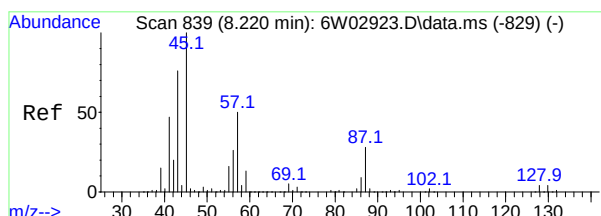
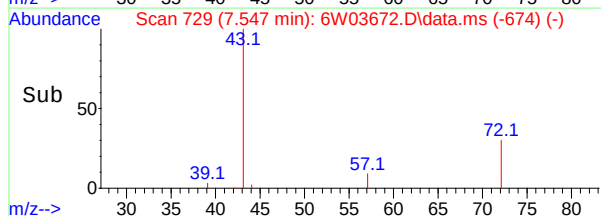
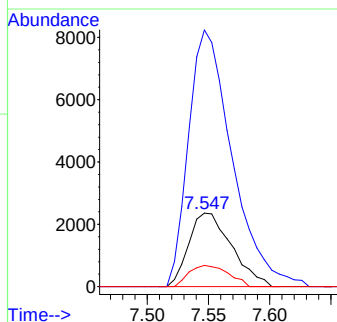
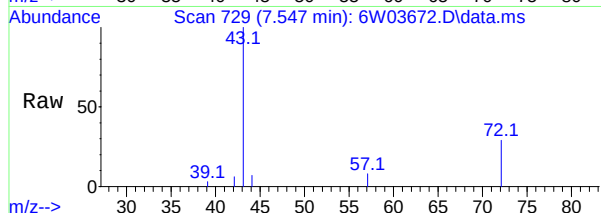
Tgt Ion:	45	Resp:	324468
Ion Ratio	Lower	Upper	
45	100		
46	39.4	27.2	50.4
42	7.7	5.6	10.4





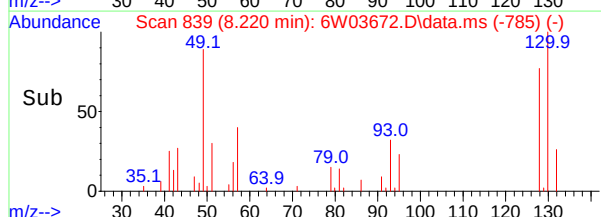
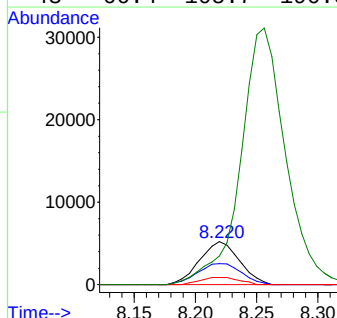
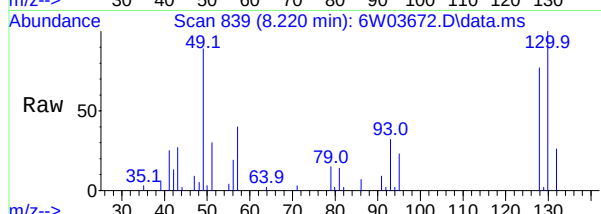
#39
2-Butanone
Concen: 0.57 ppb(v)
RT: 7.547 min Scan# 729
Delta R.T. 0.006 min
Lab File: 6W03672.D
Acq: 22 Dec 2017 2:56 am

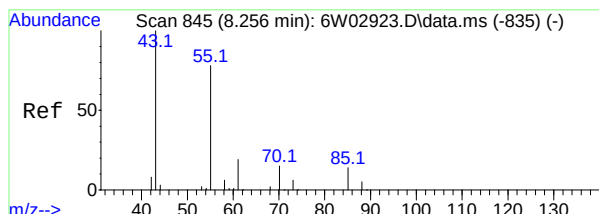
Tgt Ion: 72 Resp: 5752
Ion Ratio Lower Upper
72 100
43 349.5 257.4 478.0
57 28.9 21.0 39.0



#40
Hexane
Concen: 0.38 ppb(v)
RT: 8.220 min Scan# 839
Delta R.T. 0.000 min
Lab File: 6W03672.D
Acq: 22 Dec 2017 2:56 am

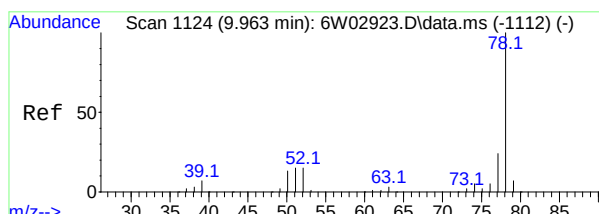
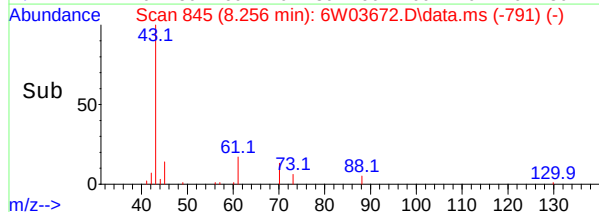
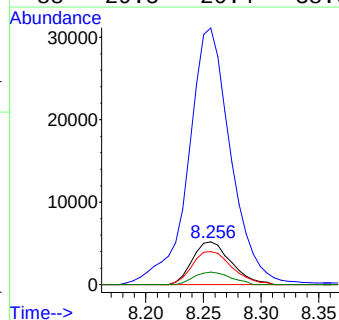
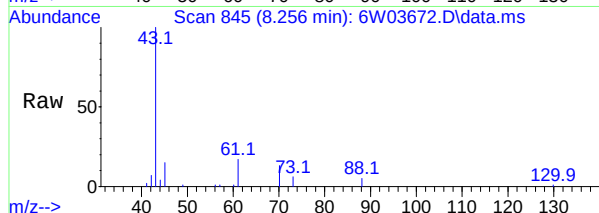
Tgt Ion: 57 Resp: 11782
Ion Ratio Lower Upper
57 100
56 48.8 36.0 67.0
86 16.6 12.1 22.5
43 66.4 105.7 196.3#





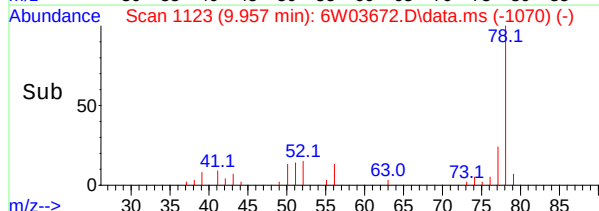
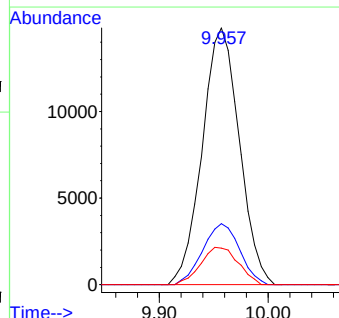
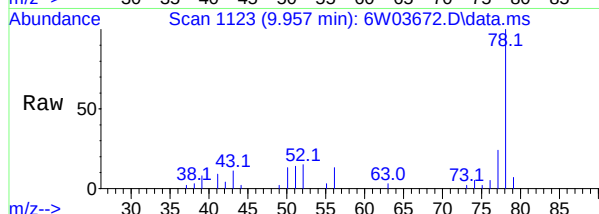
#43
Ethyl Acetate
Concen: 1.89 ppb(v)
RT: 8.256 min Scan# 845
Delta R.T. 0.000 min
Lab File: 6W03672.D
Acq: 22 Dec 2017 2:56 am

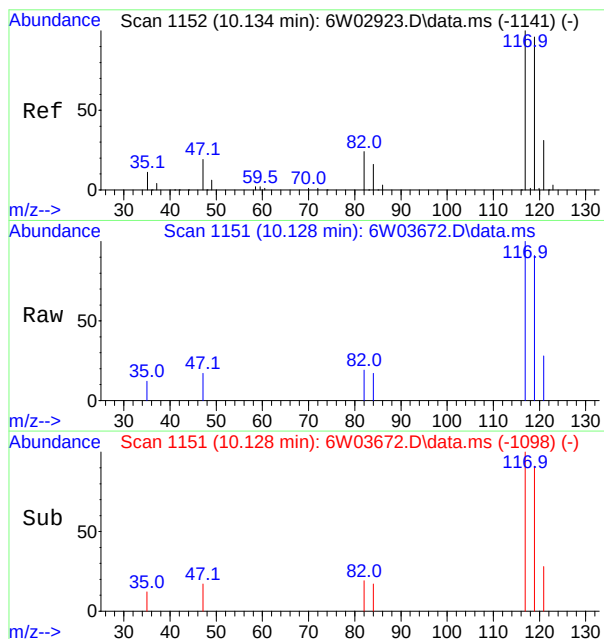
Tgt Ion: 61 Resp: 12095
Ion Ratio Lower Upper
61 100
43 600.5 488.5 907.1
70 77.0 54.9 101.9
88 29.5 20.4 38.0



#50
Benzene
Concen: 0.54 ppb(v)
RT: 9.957 min Scan# 1123
Delta R.T. -0.006 min
Lab File: 6W03672.D
Acq: 22 Dec 2017 2:56 am

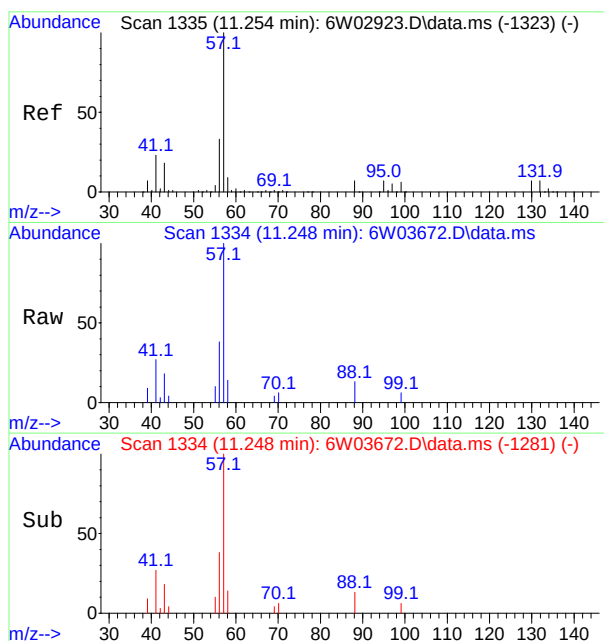
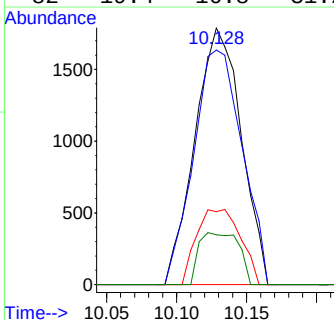
Tgt Ion: 78 Resp: 35129
Ion Ratio Lower Upper
78 100
77 23.7 16.6 30.8
51 14.2 10.6 19.6





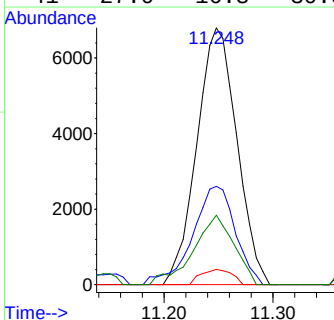
#51
Carbon Tetrachloride
Concen: 0.10 ppb(v)
RT: 10.128 min Scan# 1151
Delta R.T. -0.006 min
Lab File: 6W03672.D
Acq: 22 Dec 2017 2:56 am

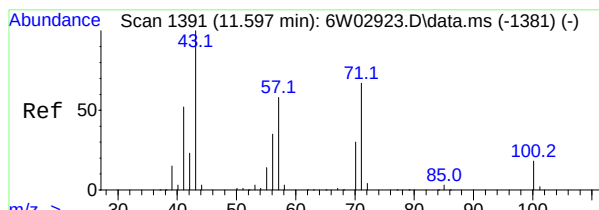
Tgt Ion: 117 Resp: 4134
Ion Ratio Lower Upper
117 100
119 91.3 67.4 125.2
121 28.4 21.9 40.7
82 19.4 16.8 31.2



#55
2,2,4-Trimethylpentane
Concen: 0.17 ppb(v)
RT: 11.248 min Scan# 1334
Delta R.T. -0.006 min
Lab File: 6W03672.D
Acq: 22 Dec 2017 2:56 am

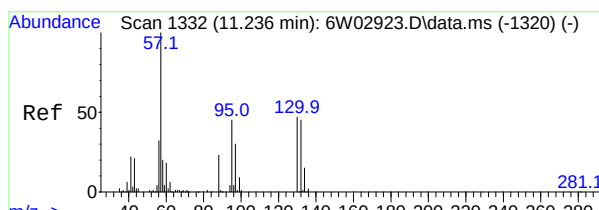
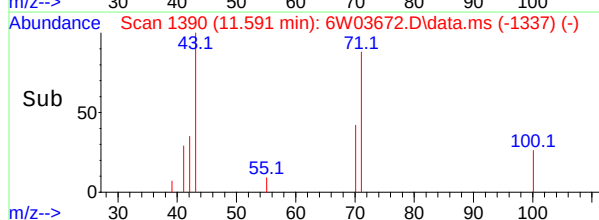
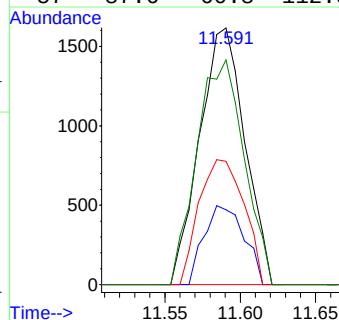
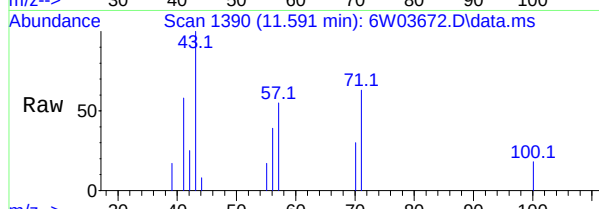
Tgt Ion: 57 Resp: 17431
Ion Ratio Lower Upper
57 100
56 38.3 23.0 42.8
99 5.9 4.5 8.3
41 27.0 16.3 30.3





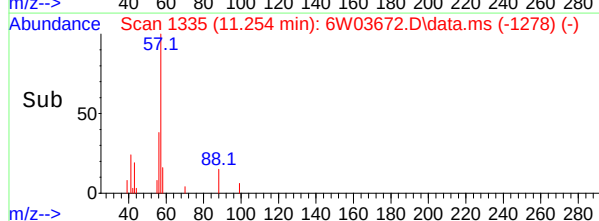
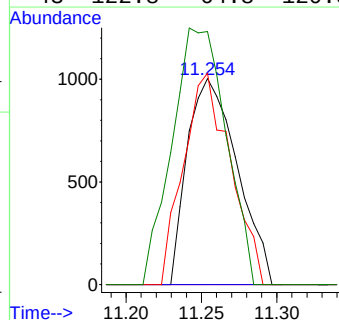
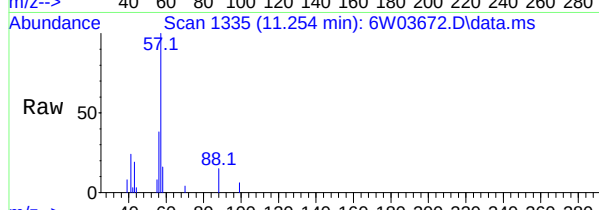
#56
Heptane
Concen: 0.16 ppb(v)
RT: 11.591 min Scan# 1390
Delta R.T. -0.006 min
Lab File: 6W03672.D
Acq: 22 Dec 2017 2:56 am

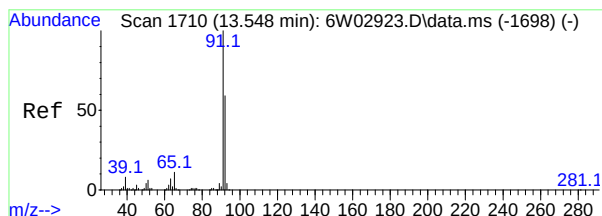
Tgt Ion: 71	Resp: 3375
Ion Ratio	Lower Upper
71	100
100	29.2 20.9 38.7
70	48.0 32.1 59.5
57	87.6 60.8 112.8



#62
1,4-Dioxane
Concen: 0.19 ppb(v)
RT: 11.254 min Scan# 1335
Delta R.T. 0.018 min
Lab File: 6W03672.D
Acq: 22 Dec 2017 2:56 am

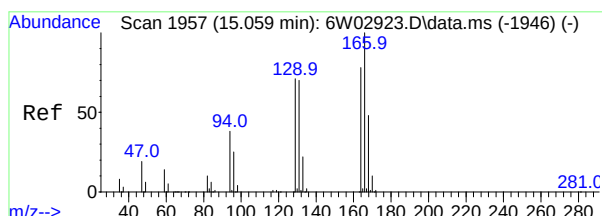
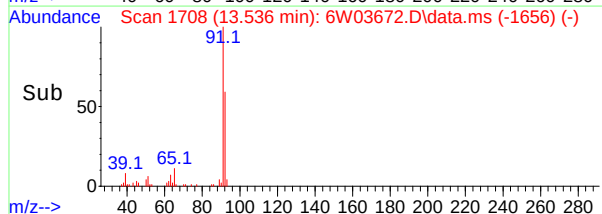
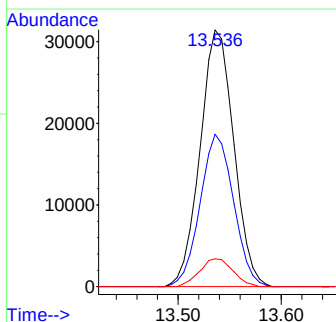
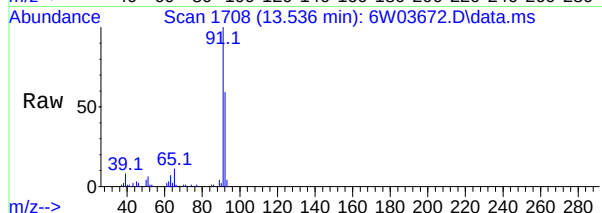
Tgt Ion: 88	Resp: 2314
Ion Ratio	Lower Upper
88	100
87	0.0 6.6 12.2#
58	102.7 60.7 112.7
43	122.8 64.8 120.3#





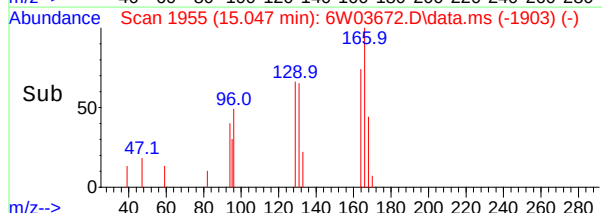
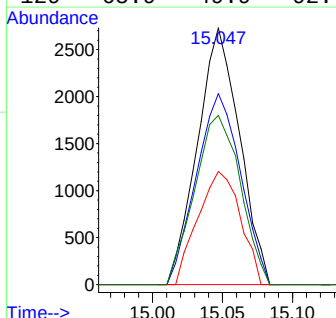
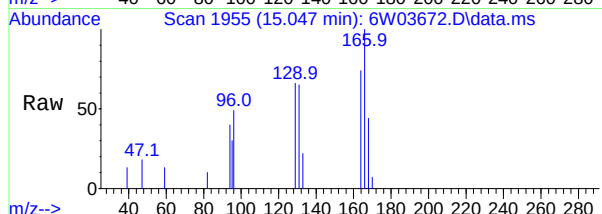
#67
Toluene
Concen: 0.91 ppb(v)
RT: 13.536 min Scan# 1708
Delta R.T. -0.012 min
Lab File: 6W03672.D
Acq: 22 Dec 2017 2:56 am

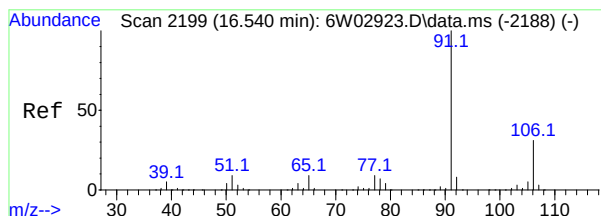
Tgt Ion: 91 Resp: 71446
Ion Ratio Lower Upper
91 100
92 59.4 41.0 76.2
65 10.9 7.8 14.4



#73
Tetrachloroethene
Concen: 0.15 ppb(v)
RT: 15.047 min Scan# 1955
Delta R.T. -0.012 min
Lab File: 6W03672.D
Acq: 22 Dec 2017 2:56 am

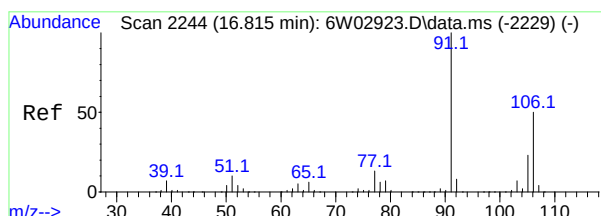
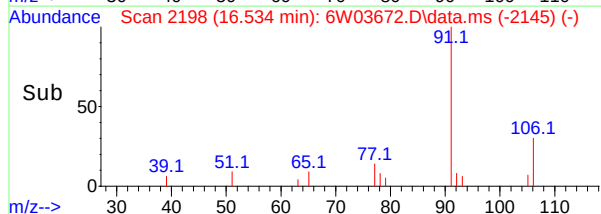
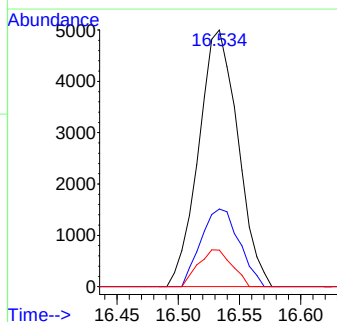
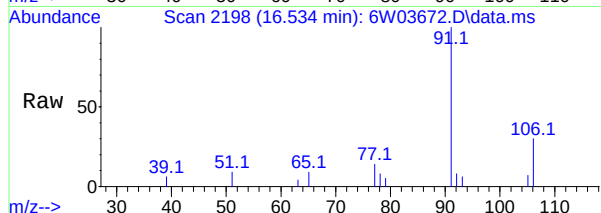
Tgt Ion: 166 Resp: 5719
Ion Ratio Lower Upper
166 100
164 74.4 54.5 101.1
168 44.1 33.9 62.9
129 65.9 49.9 92.7





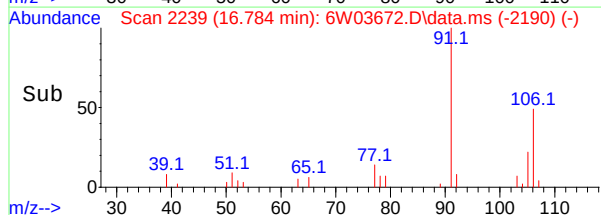
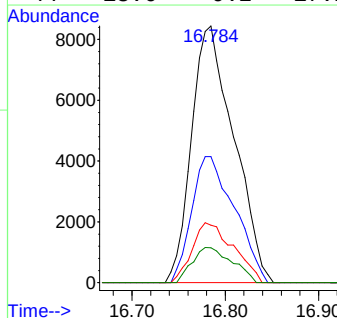
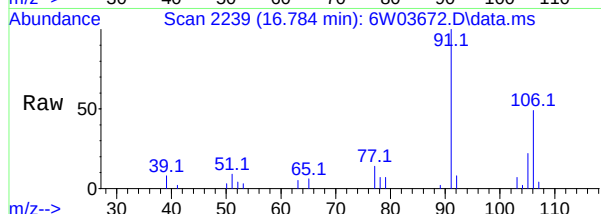
#79
Ethylbenzene
Concen: 0.12 ppb(v)
RT: 16.534 min Scan# 2198
Delta R.T. -0.006 min
Lab File: 6W03672.D
Acq: 22 Dec 2017 2:56 am

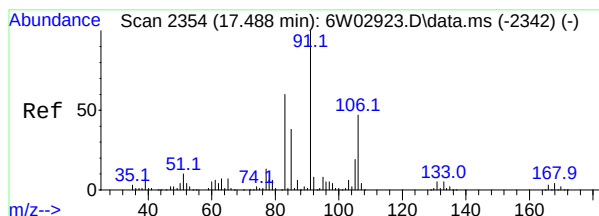
Tgt Ion: 91 Resp: 11136
Ion Ratio Lower Upper
91 100
106 30.2 22.0 41.0
77 14.2 6.0 11.2#



#80
m,p-Xylene
Concen: 0.39 ppb(v)
RT: 16.784 min Scan# 2239
Delta R.T. -0.031 min
Lab File: 6W03672.D
Acq: 22 Dec 2017 2:56 am

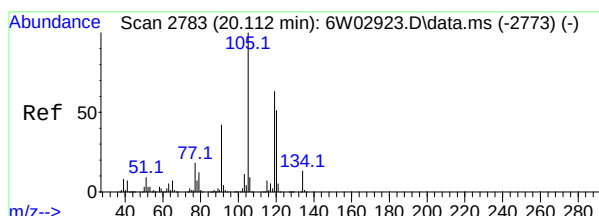
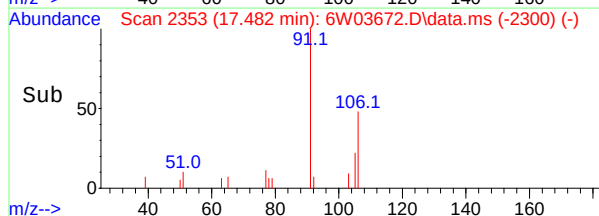
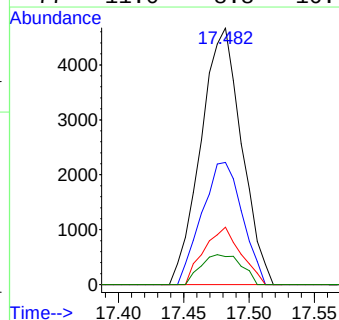
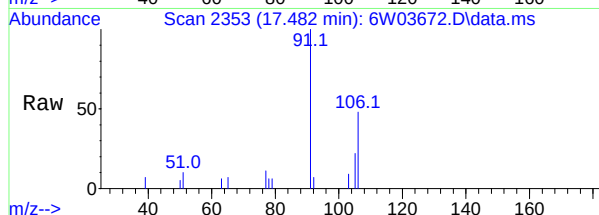
Tgt Ion: 91 Resp: 26681
Ion Ratio Lower Upper
91 100
106 49.1 35.1 65.3
105 22.4 16.0 29.8
77 13.6 9.2 17.2





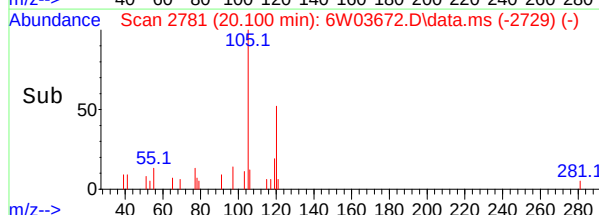
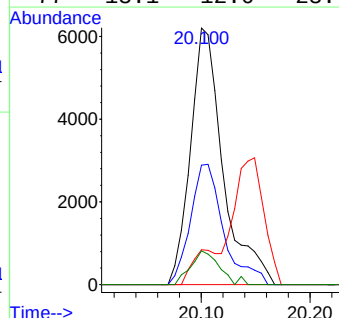
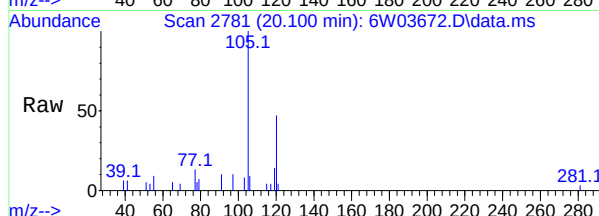
#83
o-Xylene
Concen: 0.15 ppb(v)
RT: 17.482 min Scan# 2353
Delta R.T. -0.006 min
Lab File: 6W03672.D
Acq: 22 Dec 2017 2:56 am

Tgt Ion:	91	Resp:	10146
Ion Ratio	Lower	Upper	
91	100		
106	47.6	33.2	61.6
105	22.4	13.4	25.0
77	11.0	8.8	16.4



#96
1,2,4-Trimethylbenzene
Concen: 0.19 ppb(v)
RT: 20.100 min Scan# 2781
Delta R.T. -0.012 min
Lab File: 6W03672.D
Acq: 22 Dec 2017 2:56 am

Tgt Ion:	105	Resp:	12937
Ion Ratio	Lower	Upper	
105	100		
120	46.6	35.7	66.3
119	13.6	44.4	82.4#
77	13.1	12.6	23.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03698.D
 Acq On : 23 Dec 2017 3:02 am
 Operator : DANAT
 Sample : jc56815-9
 Misc : MS22955,V6W107,100,,,1
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Dec 23 11:34:14 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.189	130	184513	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.391	114	685088	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.928	82	316293	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.189	130	184513	10.00	ppb(v	0.00
System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.173	95	379017	9.30	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	93.00%
Target Compounds						
					Qvalue	
3) Freon 152A	3.735	65	6497	0.54	ppb(v	99
5) Propene	3.809	41	1756	0.13	ppb(v	84
9) Chloromethane	3.986	50	1510	0.10	ppb(v	99
13) n-Butane	4.317	58	1143	0.38	ppb(v#	51
22) Acetone	5.155	58	73221	7.82	ppb(v	98
26) Isopropyl Alcohol	5.381	45	17286	0.47	ppb(v#	90
31) Ethanol	4.739	45	44506	8.44	ppb(v	97
43) Ethyl Acetate	8.269	61	999	0.16	ppb(v#	63

(#) = qualifier out of range (m) = manual integration (+) = signals summed

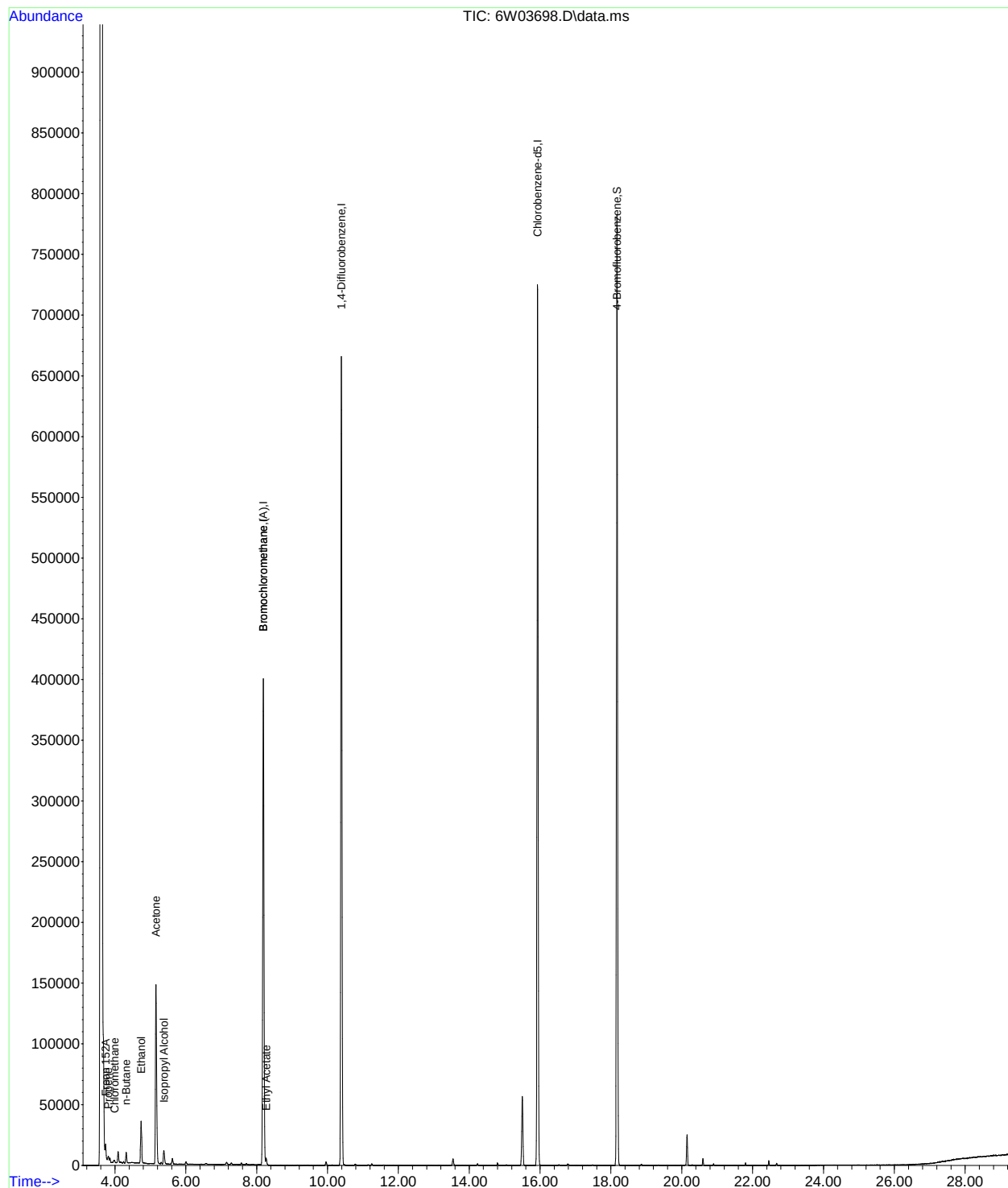
7.1.14
7

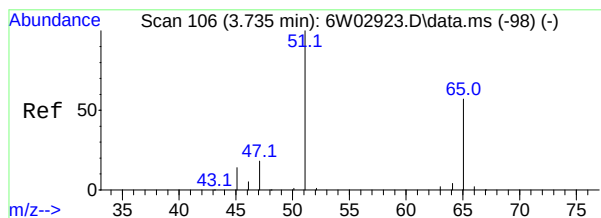


Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W03698.D
Acq On : 23 Dec 2017 3:02 am
Operator : DANAT
Sample : jc56815-9
Misc : MS22955,V6W107,100,,,1
ALS Vial : 14 Sample Multiplier: 1

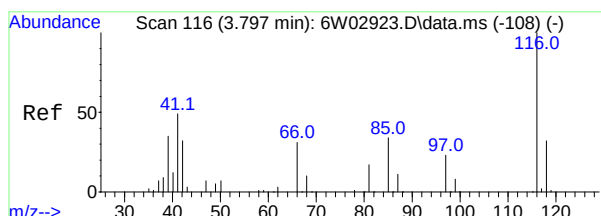
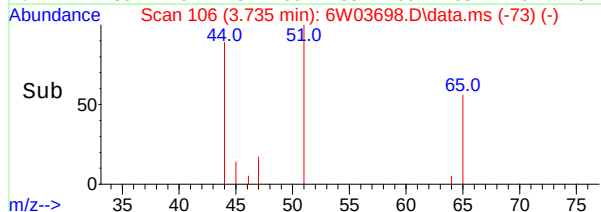
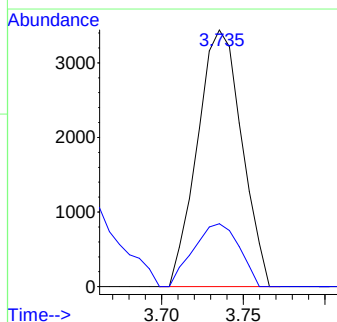
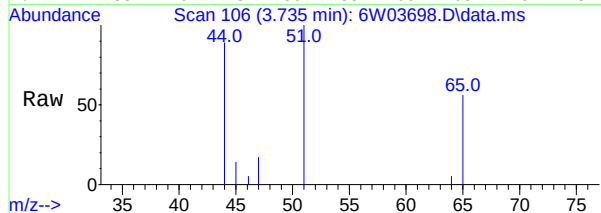
Quant Time: Dec 23 11:34:14 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration





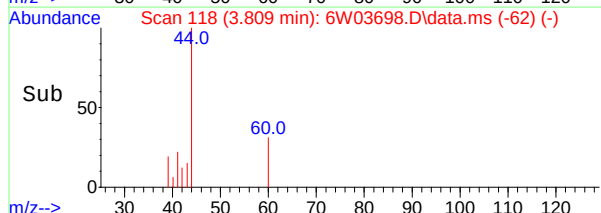
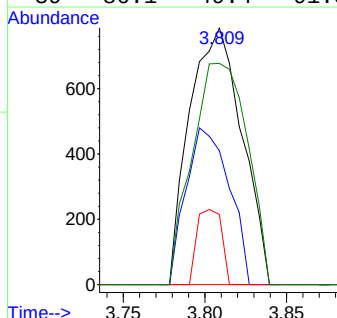
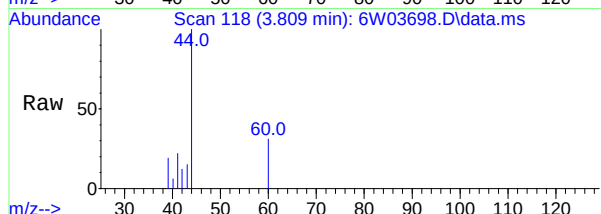
#3
Freon 152A
Concen: 0.54 ppb(v)
RT: 3.735 min Scan# 106
Delta R.T. 0.000 min
Lab File: 6W03698.D
Acq: 23 Dec 2017 3:02 am

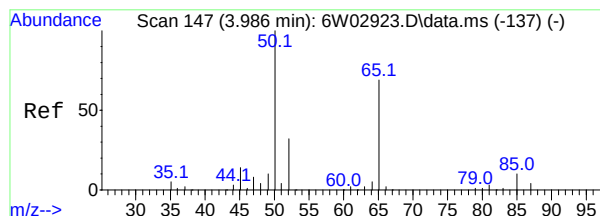
Tgt Ion: 65 Resp: 6497
Ion Ratio Lower Upper
65 100
45 24.5 16.9 31.5



#5
Propene
Concen: 0.13 ppb(v)
RT: 3.809 min Scan# 118
Delta R.T. 0.012 min
Lab File: 6W03698.D
Acq: 23 Dec 2017 3:02 am

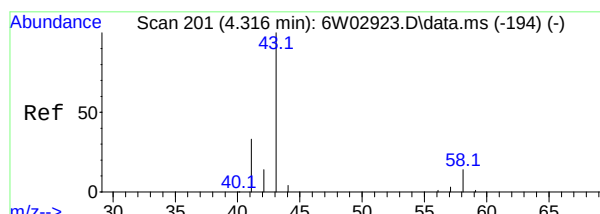
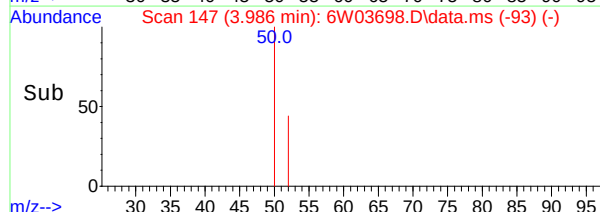
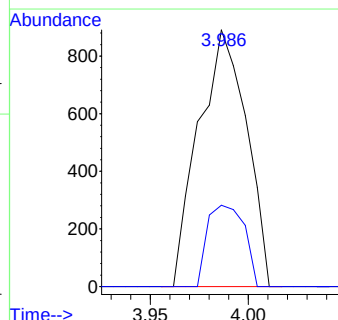
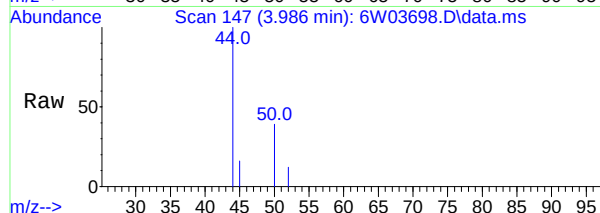
Tgt Ion: 41 Resp: 1756
Ion Ratio Lower Upper
41 100
42 52.2 45.4 84.4
40 27.4 17.4 32.2
39 86.1 49.4 91.8





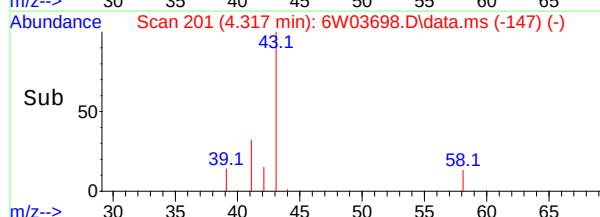
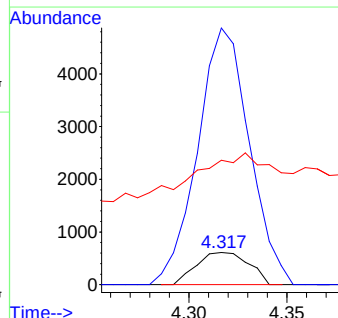
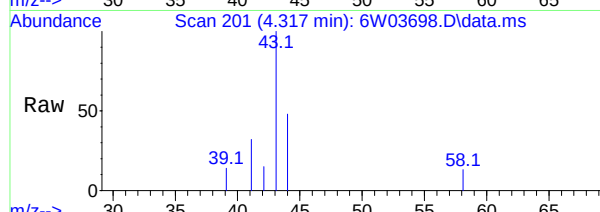
#9
Chloromethane
Concen: 0.10 ppb(v)
RT: 3.986 min Scan# 147
Delta R.T. 0.000 min
Lab File: 6W03698.D
Acq: 23 Dec 2017 3:02 am

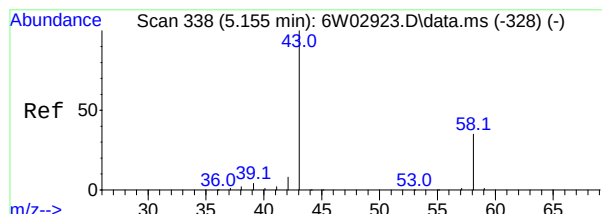
Tgt Ion: 50 Resp: 1510
Ion Ratio Lower Upper
50 100
52 31.6 22.7 42.1



#13
n-Butane
Concen: 0.38 ppb(v)
RT: 4.317 min Scan# 201
Delta R.T. 0.000 min
Lab File: 6W03698.D
Acq: 23 Dec 2017 3:02 am

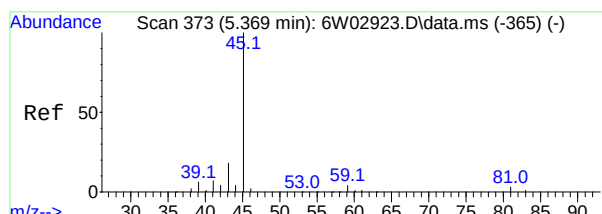
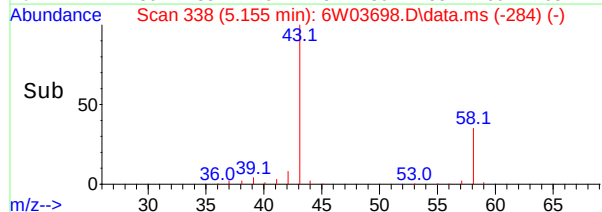
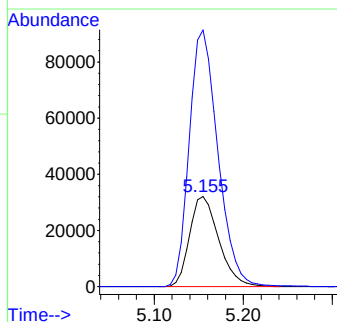
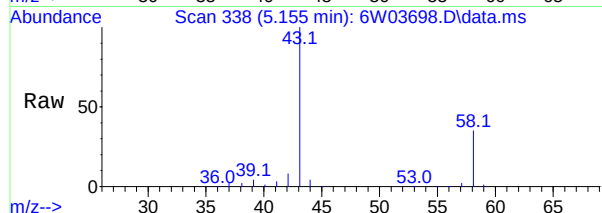
Tgt Ion: 58 Resp: 1143
Ion Ratio Lower Upper
58 100
43 796.2 499.8 928.2
44 386.1 21.1 39.1#





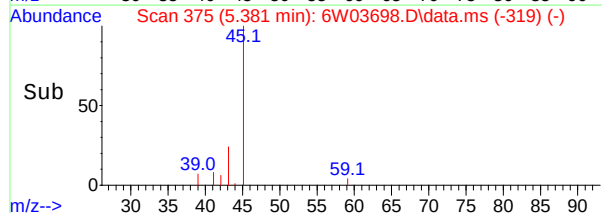
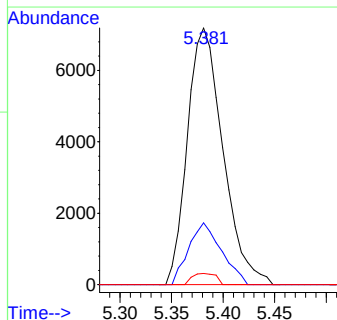
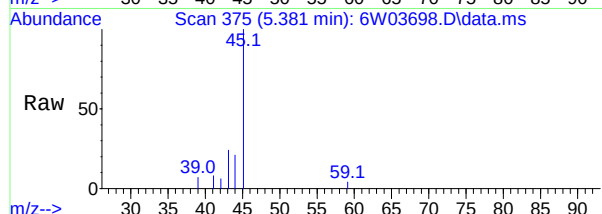
#22
Acetone
Concen: 7.82 ppb(v)
RT: 5.155 min Scan# 338
Delta R.T. 0.000 min
Lab File: 6W03698.D
Acq: 23 Dec 2017 3:02 am

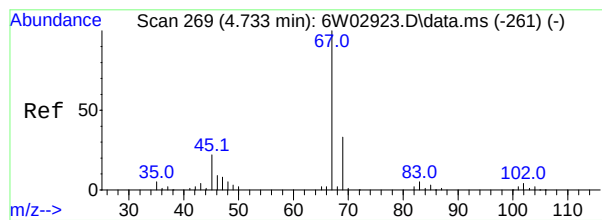
Tgt Ion: 58 Resp: 73221
Ion Ratio Lower Upper
58 100
43 284.8 202.4 375.8



#26
Isopropyl Alcohol
Concen: 0.47 ppb(v)
RT: 5.381 min Scan# 375
Delta R.T. 0.012 min
Lab File: 6W03698.D
Acq: 23 Dec 2017 3:02 am

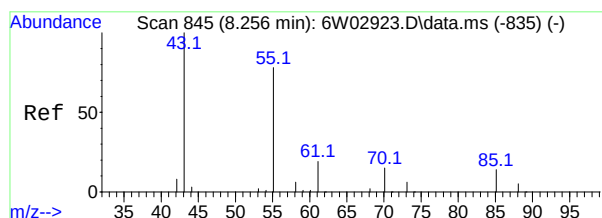
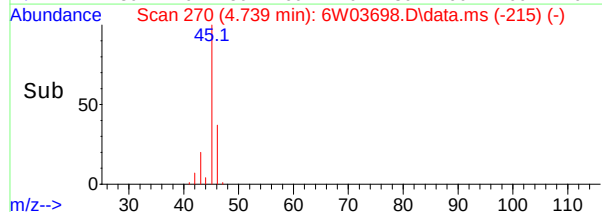
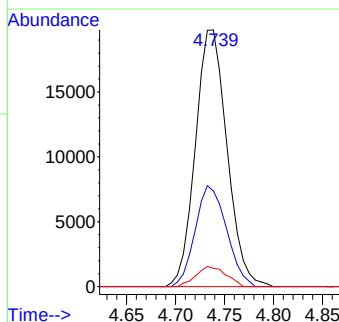
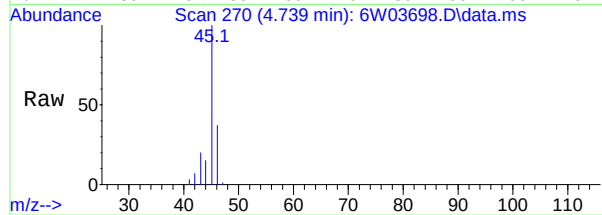
Tgt Ion: 45 Resp: 17286
Ion Ratio Lower Upper
45 100
43 24.0 12.8 23.8#
59 4.4 3.0 5.6





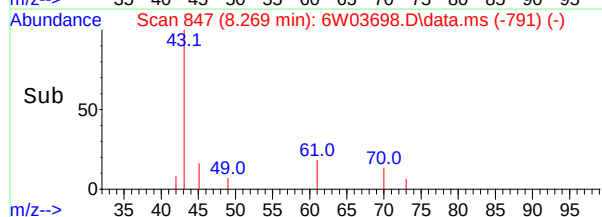
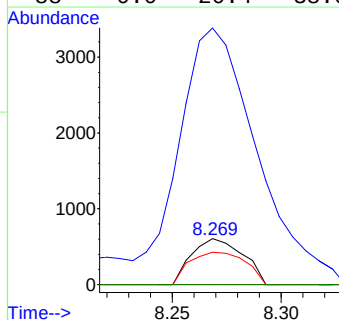
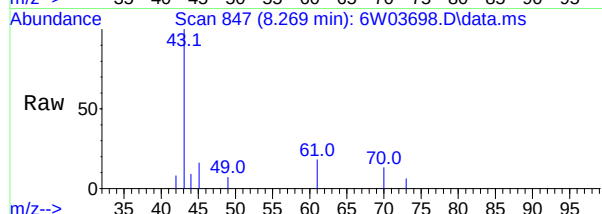
#31
Ethanol
Concen: 8.44 ppb(v)
RT: 4.739 min Scan# 270
Delta R.T. 0.006 min
Lab File: 6W03698.D
Acq: 23 Dec 2017 3:02 am

Tgt Ion: 45 Resp: 44506
Ion Ratio Lower Upper
45 100
46 37.2 27.2 50.4
42 7.2 5.6 10.4



#43
Ethyl Acetate
Concen: 0.16 ppb(v)
RT: 8.269 min Scan# 847
Delta R.T. 0.012 min
Lab File: 6W03698.D
Acq: 23 Dec 2017 3:02 am

Tgt Ion: 61 Resp: 999
Ion Ratio Lower Upper
61 100
43 559.5 488.5 907.1
70 70.9 54.9 101.9
88 0.0 20.4 38.0#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03643.D
 Acq On : 20 Dec 2017 10:15 pm
 Operator : DANAT
 Sample : jc56815-10
 Misc : MS22955,V6W105,400,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 21 17:15:13 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.189	130	216274	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.391	114	803351	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.928	82	353224	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.189	130	216274	10.00	ppb(v	0.00

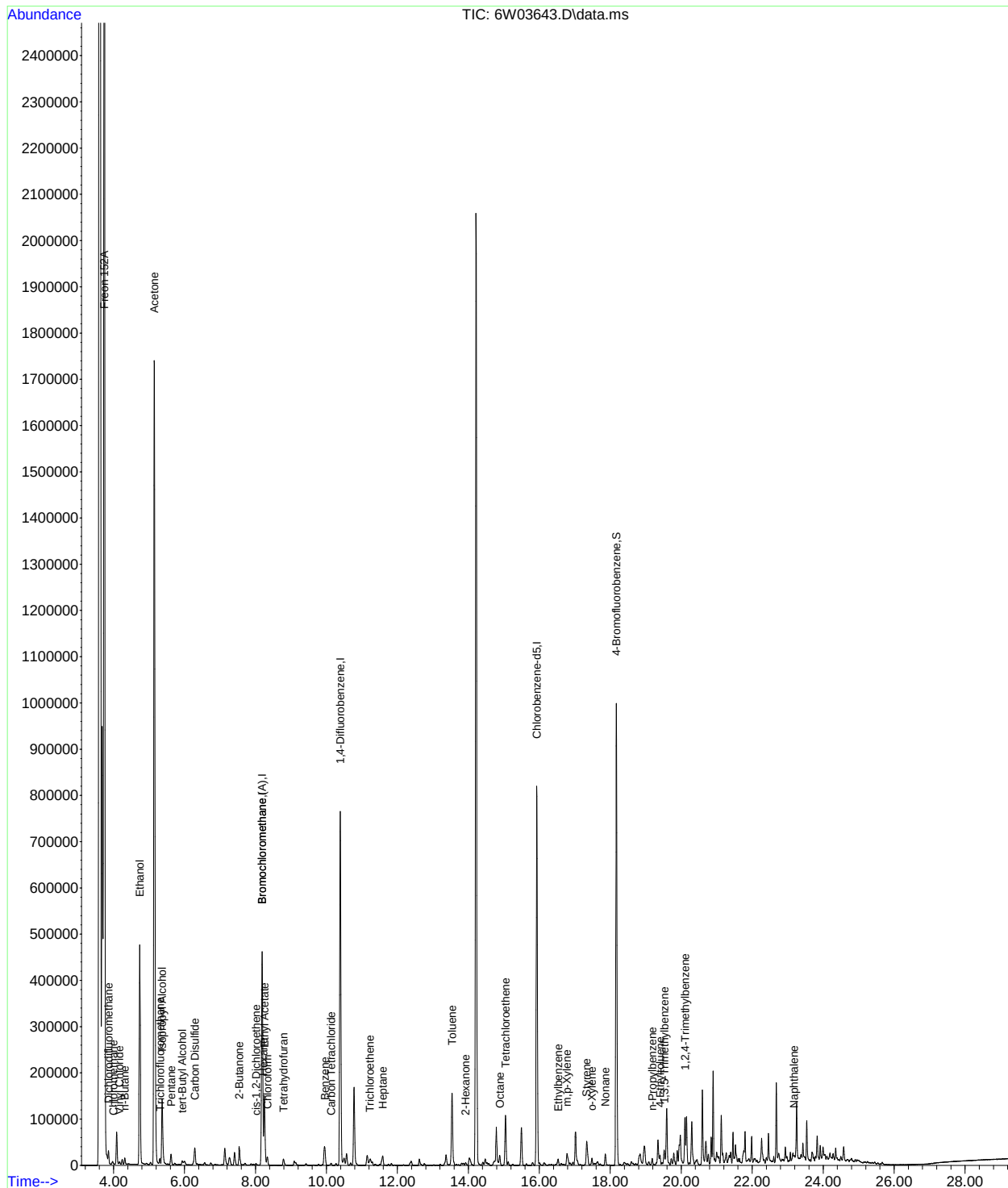
System Monitoring Compounds
 91) 4-Bromofluorobenzene 18.173 95 473451 10.40 ppb(v 0.00
 Spiked Amount 10.000 Range 65 - 128 Recovery = 104.00%

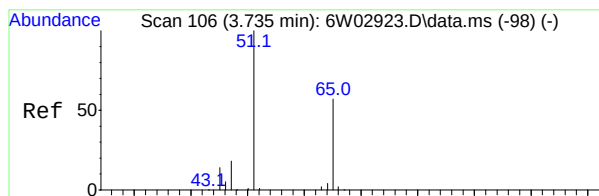
Target Compounds					Qvalue	
3) Freon 152A	3.735	65	2073181	147.65	ppb(v	100
7) Dichlorodifluoromethane	3.858	85	26400	0.49	ppb(v	99
9) Chloromethane	3.992	50	2143	0.12	ppb(v	94
11) Vinyl Chloride	4.164	62	5241	0.26	ppb(v#	97
13) n-Butane	4.317	58	1673	0.47	ppb(v#	61
21) Trichlorofluoromethane	5.308	101	12314	0.24	ppb(v	99
22) Acetone	5.142	58	933171	85.02	ppb(v	91
23) Pentane	5.620	57	2817	0.55	ppb(v	96
26) Isopropyl Alcohol	5.369	45	214681	4.94	ppb(v	100
30) Carbon Disulfide	6.286	76	69037	0.97	ppb(v	99
31) Ethanol	4.739	45	631872	102.17	ppb(v	100
35) tert-Butyl Alcohol	5.938	59	12663	0.30	ppb(v	90
39) 2-Butanone	7.541	72	16744	1.49	ppb(v	100
40) Hexane	8.220	57	6087	0.17	ppb(v	87
41) cis-1,2-Dichloroethene	8.012	61	2348	0.08	ppb(v	95
43) Ethyl Acetate	8.250	61	32536	4.54	ppb(v	79
45) Chloroform	8.336	83	18100	0.39	ppb(v	98
47) Tetrahydrofuran	8.795	72	4420	0.44	ppb(v	94
50) Benzene	9.957	78	27379	0.37	ppb(v	98
51) Carbon Tetrachloride	10.128	117	3712	0.08	ppb(v	93
56) Heptane	11.590	71	6121	0.26	ppb(v	96
57) Trichloroethene	11.217	95	4243	0.14	ppb(v	95
67) Toluene	13.536	91	154819	1.77	ppb(v	100
70) 2-Hexanone	13.921	58	3251	0.12	ppb(v#	90
73) Tetrachloroethene	15.047	166	43021	0.98	ppb(v	97
75) Octane	14.888	43	11708	0.24	ppb(v	96
79) Ethylbenzene	16.534	91	12565	0.13	ppb(v	98
80) m,p-Xylene	16.778	91	28794	0.38	ppb(v	99
81) Styrene	17.329	104	4712	0.09	ppb(v	95
82) Nonane	17.861	43	11576	0.24	ppb(v	98
83) o-Xylene	17.476	91	12575	0.17	ppb(v	98
90) n-Propylbenzene	19.183	120	3233	0.12	ppb(v	99
92) 4-Ethyltoluene	19.403	105	17132	0.18	ppb(v	99
93) 1,3,5-Trimethylbenzene	19.525	105	19004	0.24	ppb(v	99
96) 1,2,4-Trimethylbenzene	20.106	105	60079	0.79	ppb(v#	65
106) Naphthalene	23.177	128	6256	0.16	ppb(v	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Data File : 6W03643.D
Acq On : 20 Dec 2017 10:15 pm
Operator : DANAT
Sample : jc56815-10
Misc : MS22955,V6W105,400,,,1
ALS Vial : 9 Sample Multiplier: 1

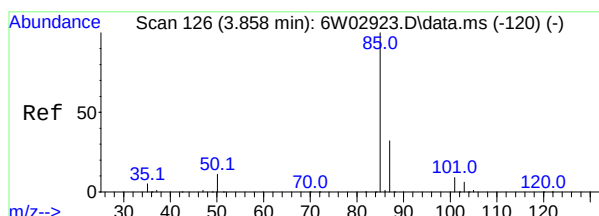
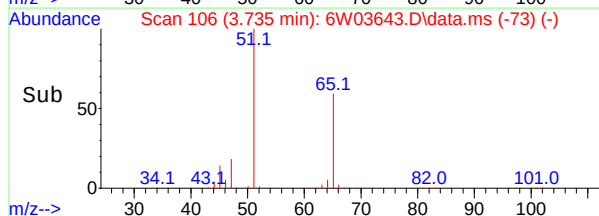
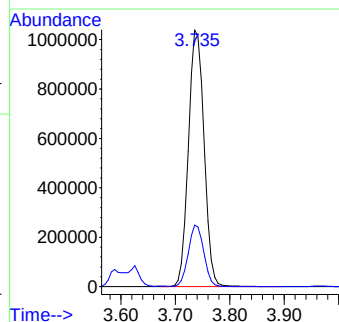
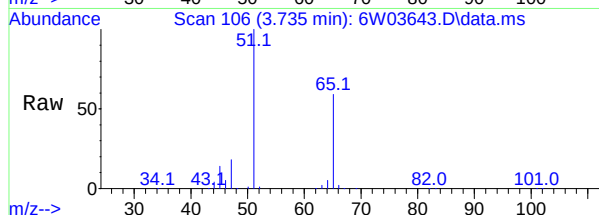
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Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration





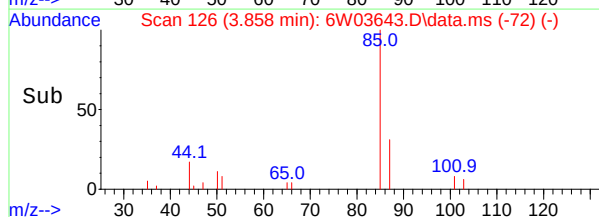
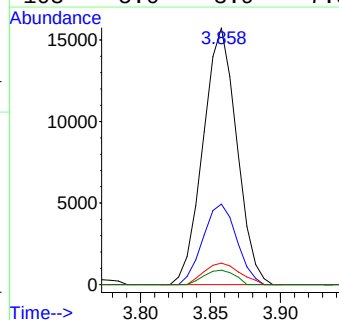
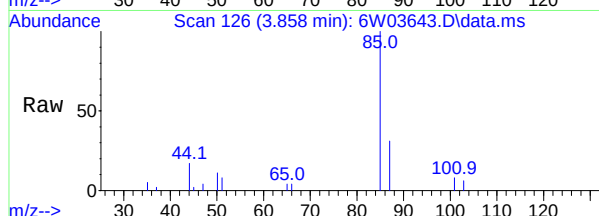
#3
 Freon 152A
 Concen: 147.65 ppb(v)
 RT: 3.735 min Scan# 106
 Delta R.T. 0.000 min
 Lab File: 6W03643.D
 Acq: 20 Dec 2017 10:15 pm

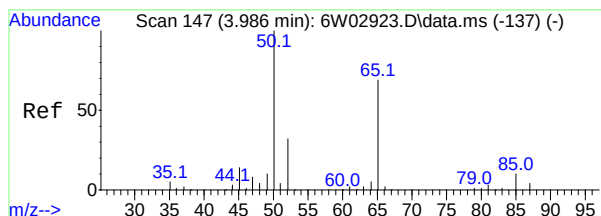
Tgt Ion: 65 Resp: 2073181
 Ion Ratio Lower Upper
 65 100
 45 24.0 16.9 31.5



#7
 Dichlorodifluoromethane
 Concen: 0.49 ppb(v)
 RT: 3.858 min Scan# 126
 Delta R.T. 0.000 min
 Lab File: 6W03643.D
 Acq: 20 Dec 2017 10:15 pm

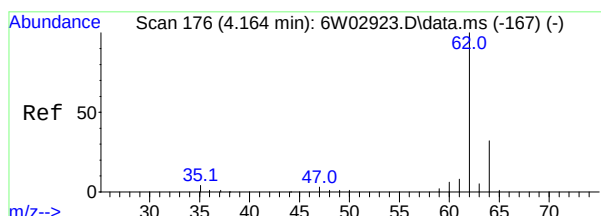
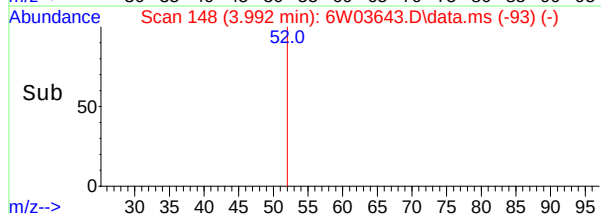
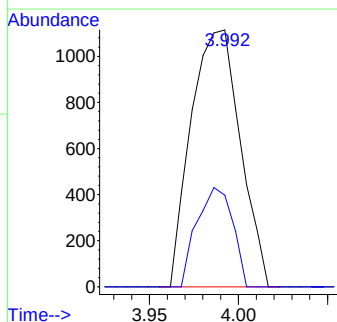
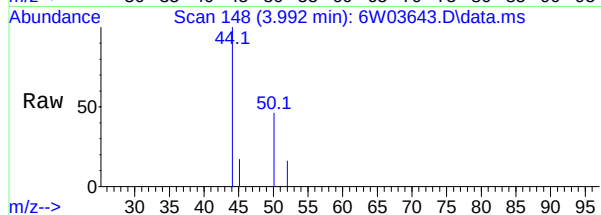
Tgt Ion: 85 Resp: 26400
 Ion Ratio Lower Upper
 85 100
 87 31.4 22.7 42.3
 101 8.4 5.9 11.1
 103 5.6 3.9 7.3





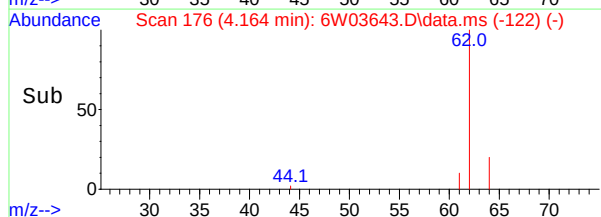
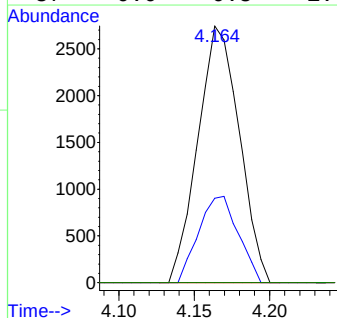
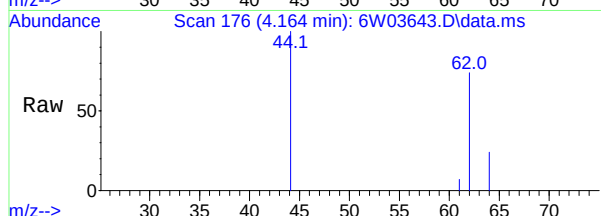
#9
Chloromethane
Concen: 0.12 ppb(v)
RT: 3.992 min Scan# 148
Delta R.T. 0.006 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

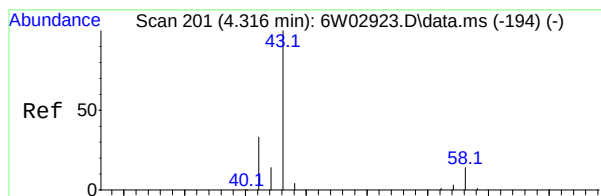
Tgt Ion: 50 Resp: 2143
Ion Ratio Lower Upper
50 100
52 35.6 22.7 42.1



#11
Vinyl Chloride
Concen: 0.26 ppb(v)
RT: 4.164 min Scan# 176
Delta R.T. 0.000 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

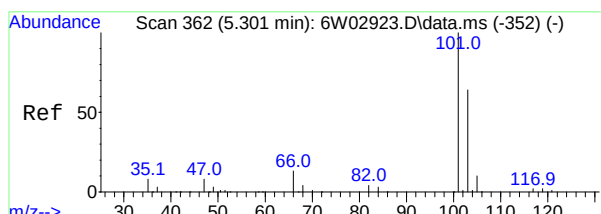
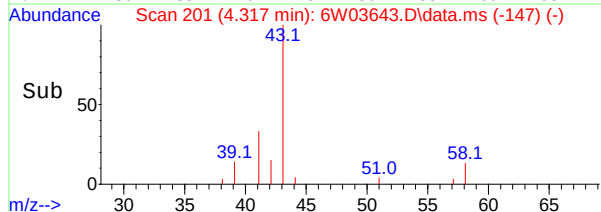
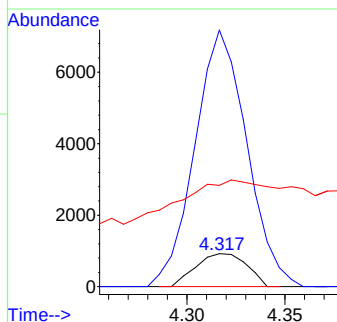
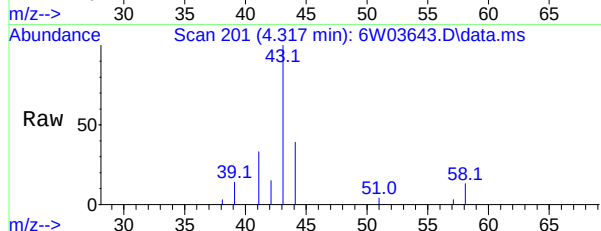
Tgt Ion: 62 Resp: 5241
Ion Ratio Lower Upper
62 100
64 32.9 22.5 41.7
35 0.0 2.7 4.9#
37 0.0 0.8 1.6#





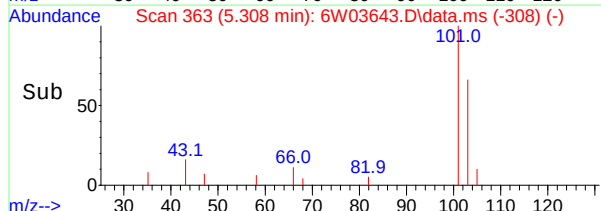
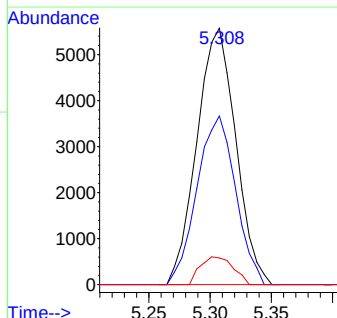
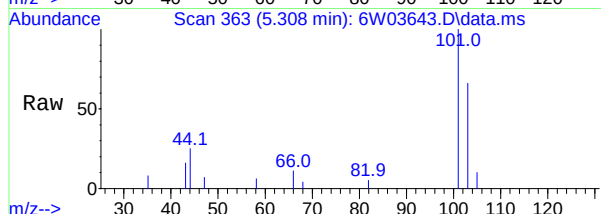
#13
n-Butane
Concen: 0.47 ppb(v)
RT: 4.317 min Scan# 201
Delta R.T. 0.000 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

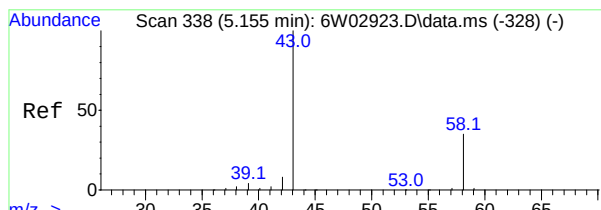
Tgt Ion: 58 Resp: 1673
Ion Ratio Lower Upper
58 100
43 779.6 499.8 928.2
44 307.8 21.1 39.1#



#21
Trichlorofluoromethane
Concen: 0.24 ppb(v)
RT: 5.308 min Scan# 363
Delta R.T. 0.006 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

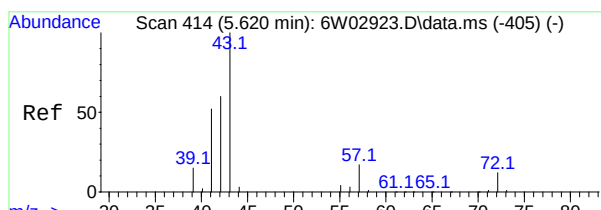
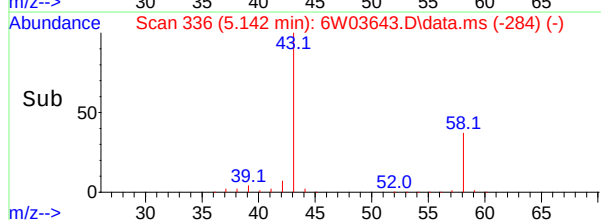
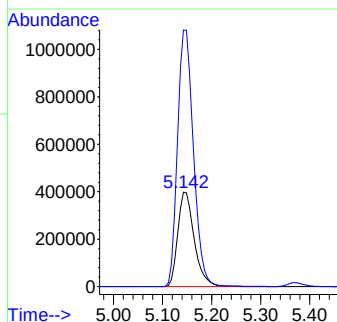
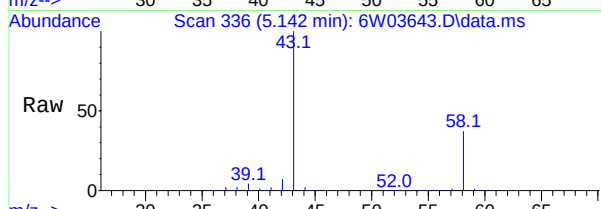
Tgt Ion: 101 Resp: 12314
Ion Ratio Lower Upper
101 100
103 65.7 45.1 83.9
105 10.4 7.3 13.5





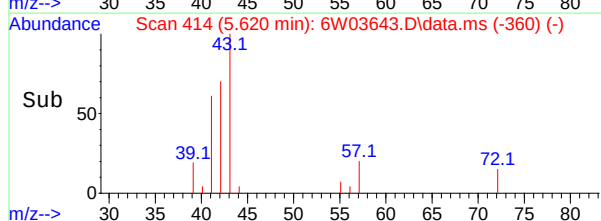
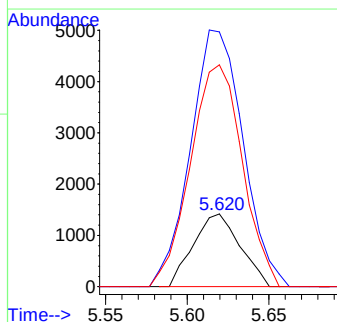
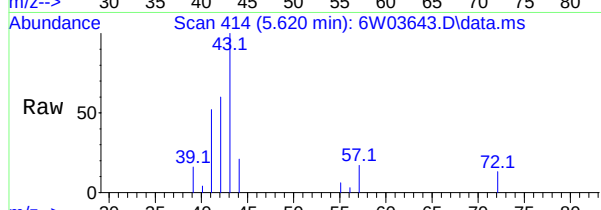
#22
Acetone
Concen: 85.02 ppb(v)
RT: 5.142 min Scan# 336
Delta R.T. -0.012 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

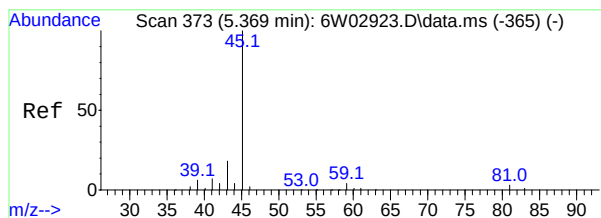
Tgt Ion: 58 Resp: 933171
Ion Ratio Lower Upper
58 100
43 271.6 202.4 375.8



#23
Pentane
Concen: 0.55 ppb(v)
RT: 5.620 min Scan# 414
Delta R.T. 0.000 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

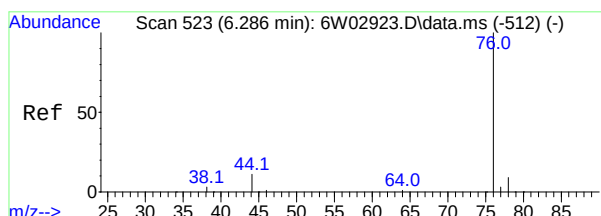
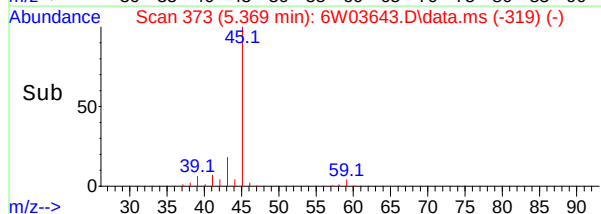
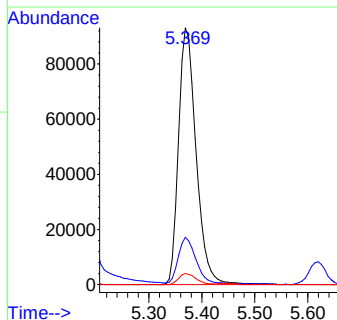
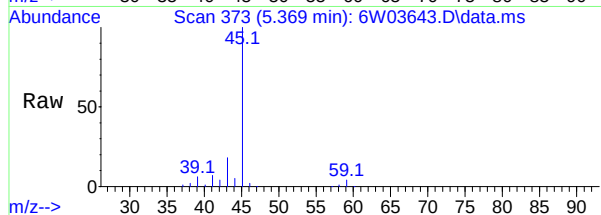
Tgt Ion: 57 Resp: 2817
Ion Ratio Lower Upper
57 100
42 349.9 252.4 468.8
41 304.4 218.7 406.1





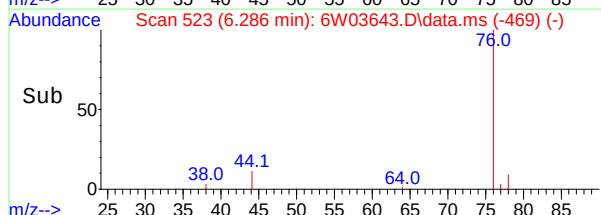
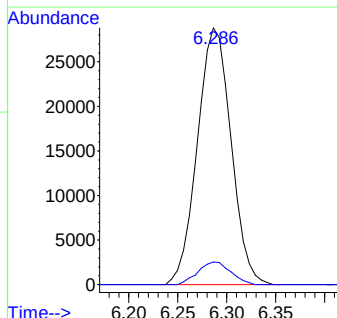
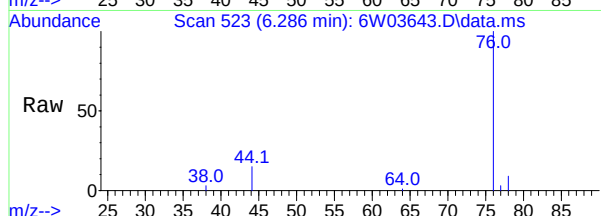
#26
Isopropyl Alcohol
Concen: 4.94 ppb(v)
RT: 5.369 min Scan# 373
Delta R.T. 0.000 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

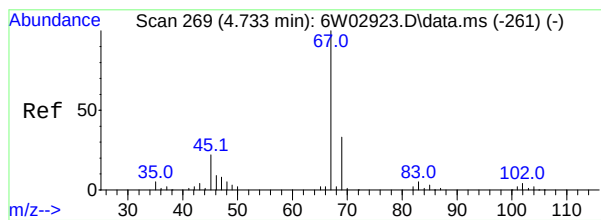
Tgt Ion: 45 Resp: 214681
Ion Ratio Lower Upper
45 100
43 18.4 12.8 23.8
59 4.4 3.0 5.6



#30
Carbon Disulfide
Concen: 0.97 ppb(v)
RT: 6.286 min Scan# 523
Delta R.T. 0.000 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

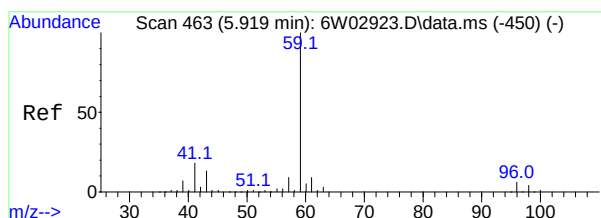
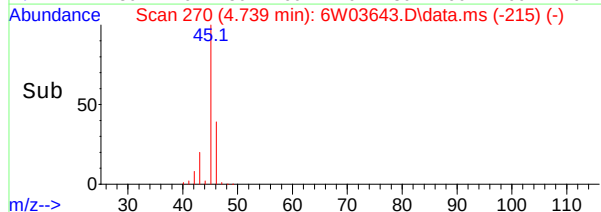
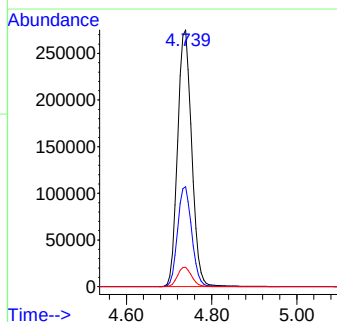
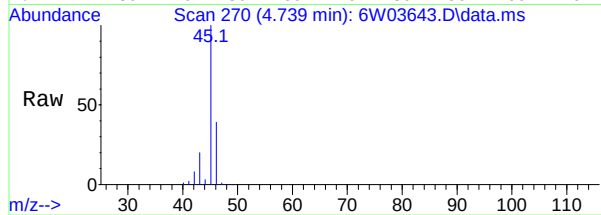
Tgt Ion: 76 Resp: 69037
Ion Ratio Lower Upper
76 100
78 8.8 6.5 12.1





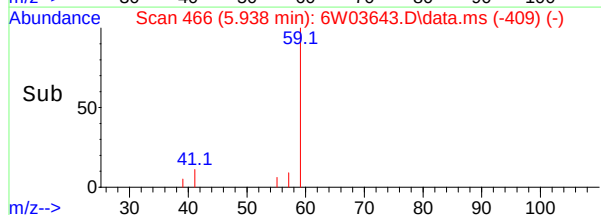
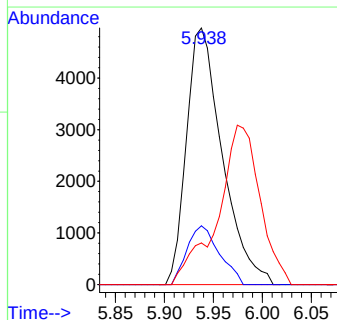
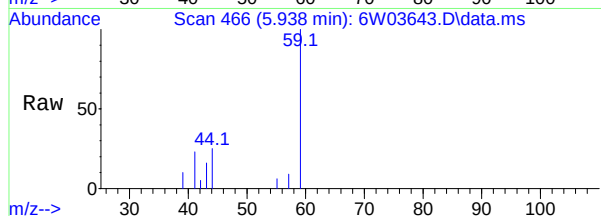
#31
Ethanol
Concen: 102.17 ppb(v)
RT: 4.739 min Scan# 270
Delta R.T. 0.006 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

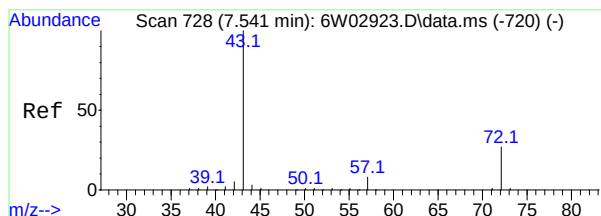
Tgt Ion: 45 Resp: 631872
Ion Ratio Lower Upper
45 100
46 38.9 27.2 50.4
42 7.6 5.6 10.4



#35
tert-Butyl Alcohol
Concen: 0.30 ppb(v)
RT: 5.938 min Scan# 466
Delta R.T. 0.018 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

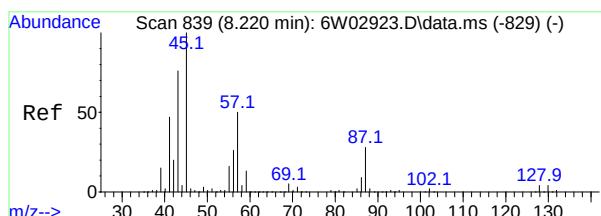
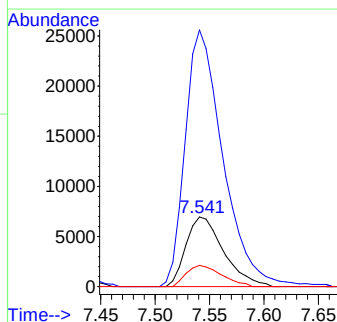
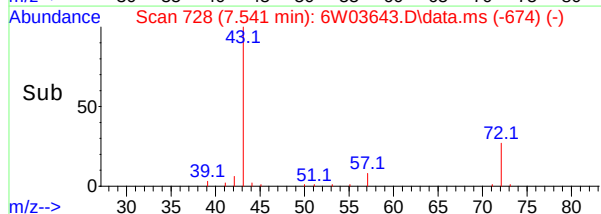
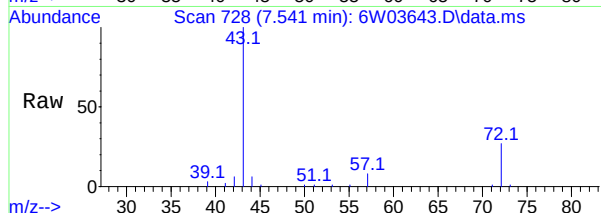
Tgt Ion: 59 Resp: 12663
Ion Ratio Lower Upper
59 100
41 22.9 12.7 23.7
43 16.2 8.8 16.4





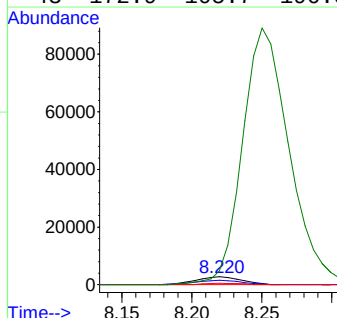
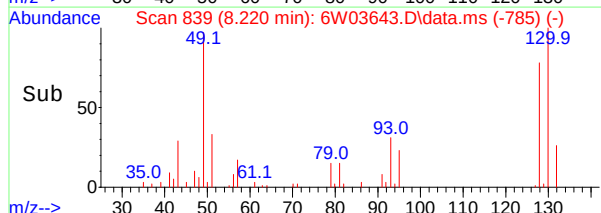
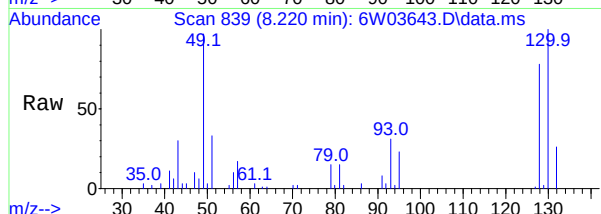
#39
2-Butanone
Concen: 1.49 ppb(v)
RT: 7.541 min Scan# 728
Delta R.T. 0.000 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

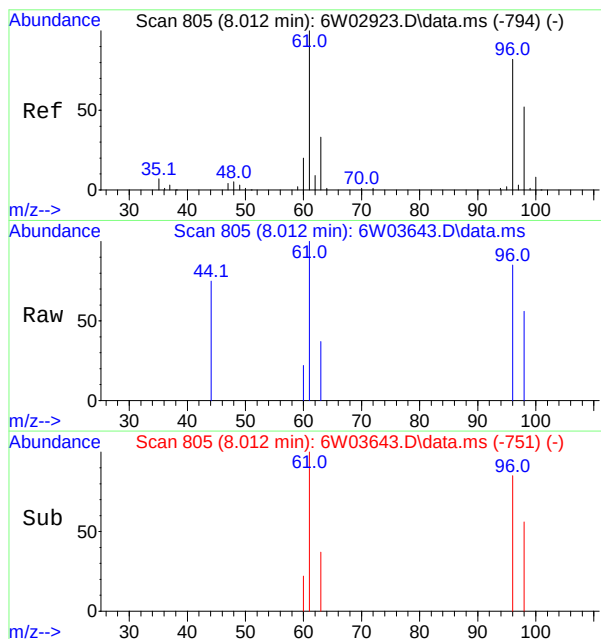
Tgt Ion: 72 Resp: 16744
Ion Ratio Lower Upper
72 100
43 367.8 257.4 478.0
57 30.4 21.0 39.0



#40
Hexane
Concen: 0.17 ppb(v)
RT: 8.220 min Scan# 839
Delta R.T. 0.000 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

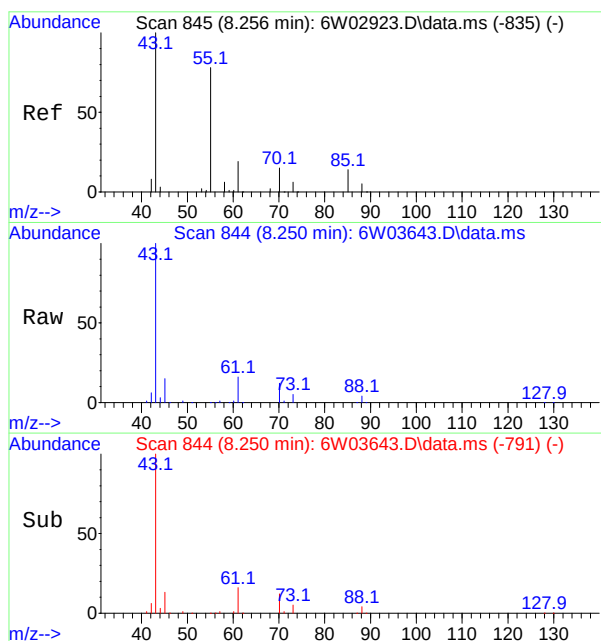
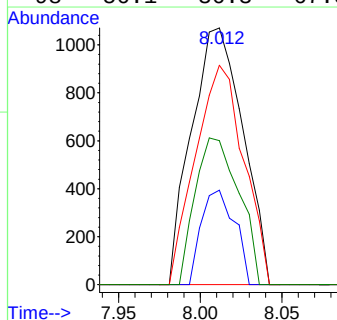
Tgt Ion: 57 Resp: 6087
Ion Ratio Lower Upper
57 100
56 55.5 36.0 67.0
86 17.6 12.1 22.5
43 172.9 105.7 196.3





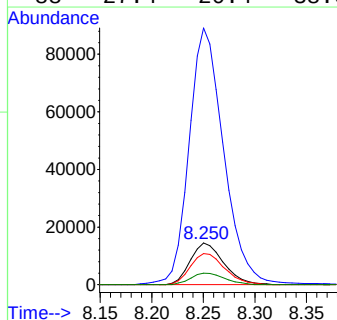
#41
cis-1,2-Dichloroethene
Concen: 0.08 ppb(v)
RT: 8.012 min Scan# 805
Delta R.T. 0.000 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

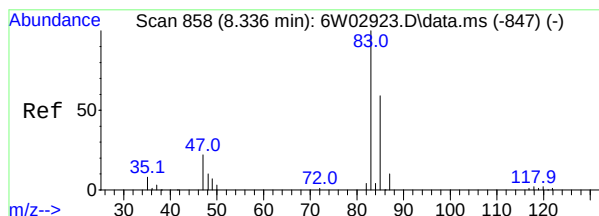
Tgt Ion: 61	Resp: 2348
Ion Ratio	Lower Upper
61	100
63	36.8 23.1 42.9
96	85.4 57.4 106.6
98	56.1 36.3 67.3



#43
Ethyl Acetate
Concen: 4.54 ppb(v)
RT: 8.250 min Scan# 844
Delta R.T. -0.006 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

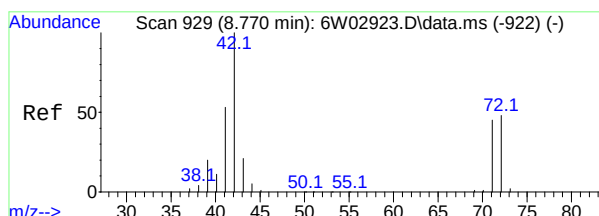
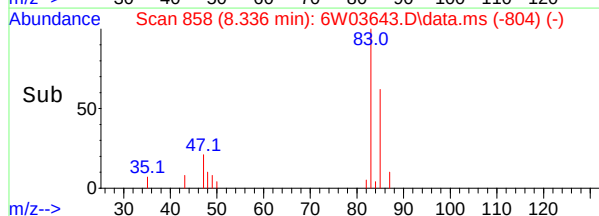
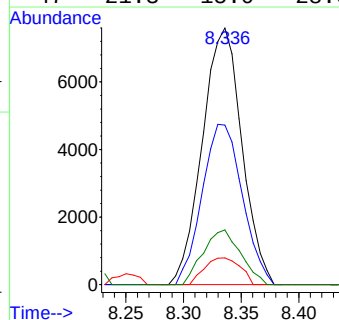
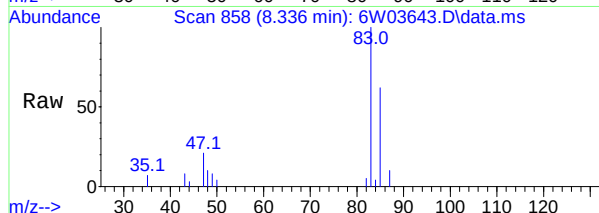
Tgt Ion: 61	Resp: 32536
Ion Ratio	Lower Upper
61	100
43	615.2 488.5 907.1
70	74.6 54.9 101.9
88	27.4 20.4 38.0





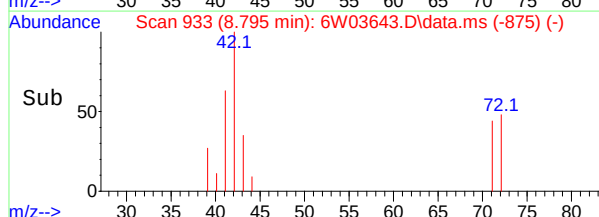
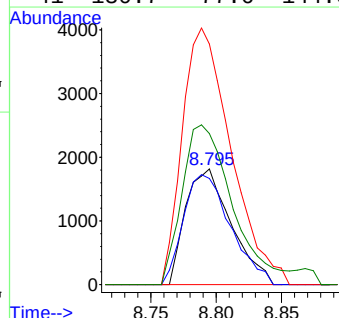
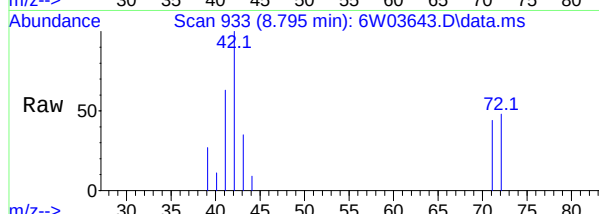
#45
Chloroform
Concen: 0.39 ppb(v)
RT: 8.336 min Scan# 858
Delta R.T. 0.000 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

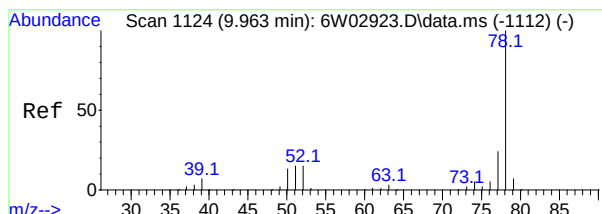
Tgt Ion: 83 Resp: 18100
Ion Ratio Lower Upper
83 100
85 62.1 45.2 84.0
87 10.4 7.3 13.7
47 21.3 15.0 28.0



#47
Tetrahydrofuran
Concen: 0.44 ppb(v)
RT: 8.795 min Scan# 933
Delta R.T. 0.024 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

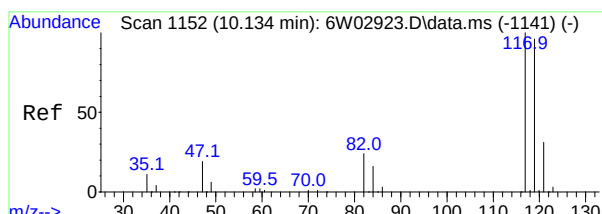
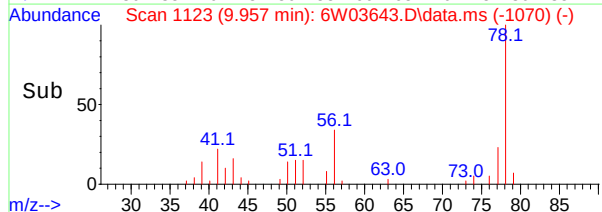
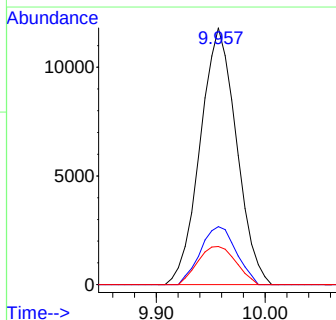
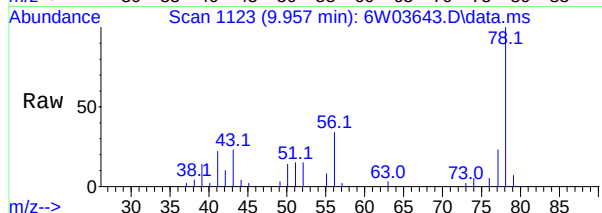
Tgt Ion: 72 Resp: 4420
Ion Ratio Lower Upper
72 100
71 91.8 65.4 121.4
42 208.2 146.4 271.8
41 130.7 77.6 144.0





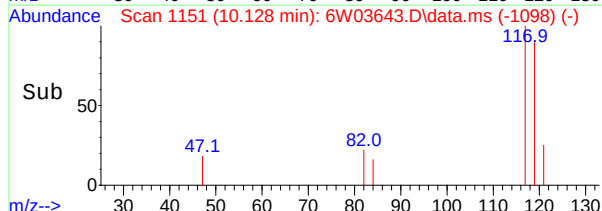
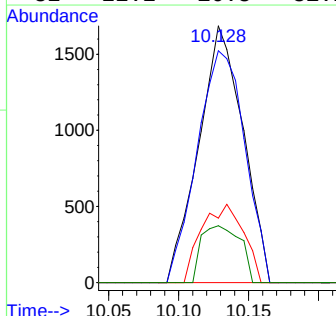
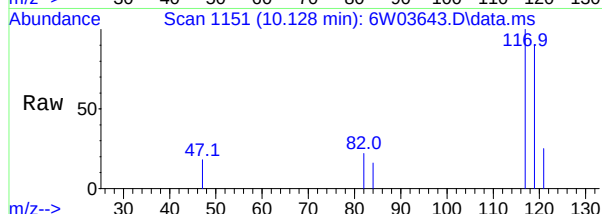
#50
Benzene
Concen: 0.37 ppb(v)
RT: 9.957 min Scan# 1123
Delta R.T. -0.006 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

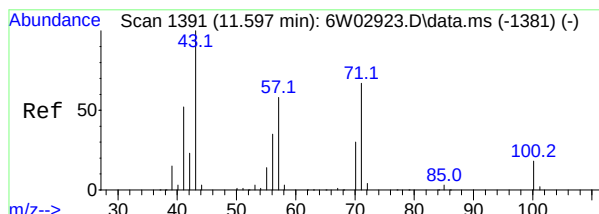
Tgt Ion:	78	Resp:	27379
Ion Ratio	Lower	Upper	
78	100		
77	22.6	16.6	30.8
51	14.8	10.6	19.6



#51
Carbon Tetrachloride
Concen: 0.08 ppb(v)
RT: 10.128 min Scan# 1151
Delta R.T. -0.006 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

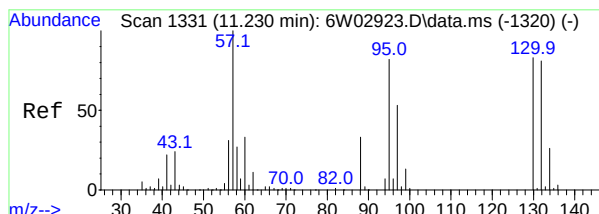
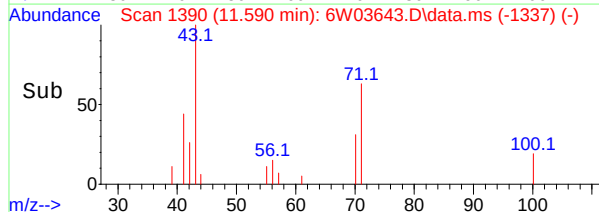
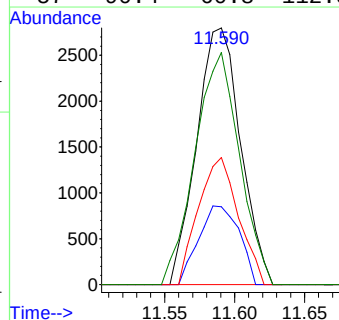
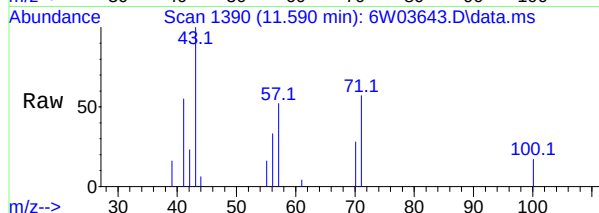
Tgt Ion:	117	Resp:	3712
Ion Ratio	Lower	Upper	
117	100		
119	90.3	67.4	125.2
121	25.1	21.9	40.7
82	22.2	16.8	31.2





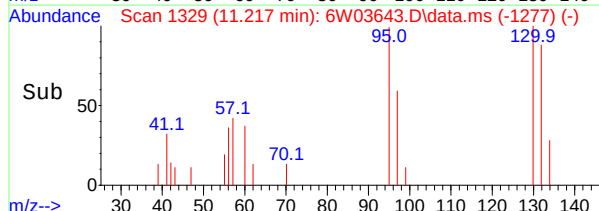
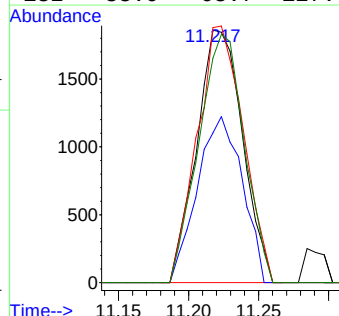
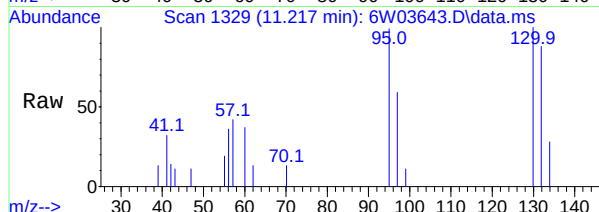
#56
Heptane
Concen: 0.26 ppb(v)
RT: 11.590 min Scan# 1390
Delta R.T. -0.006 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

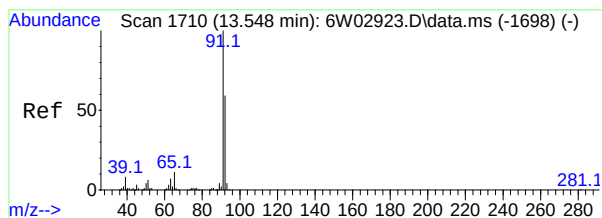
Tgt Ion: 71 Resp: 6121
Ion Ratio Lower Upper
71 100
100 30.4 20.9 38.7
70 49.5 32.1 59.5
57 90.4 60.8 112.8



#57
Trichloroethene
Concen: 0.14 ppb(v)
RT: 11.217 min Scan# 1329
Delta R.T. -0.012 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

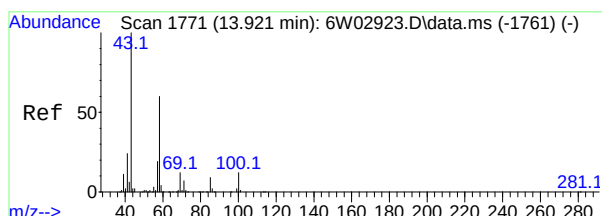
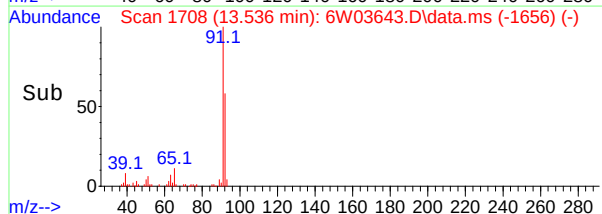
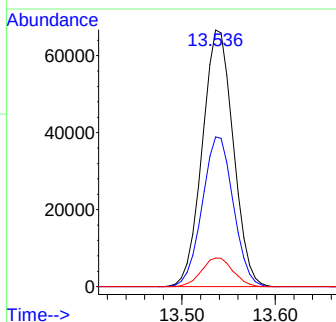
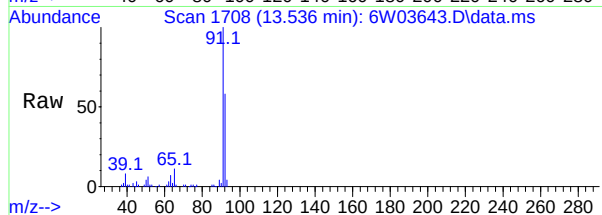
Tgt Ion: 95 Resp: 4243
Ion Ratio Lower Upper
95 100
97 59.2 45.5 84.5
130 101.0 71.0 131.8
132 88.9 68.7 127.7





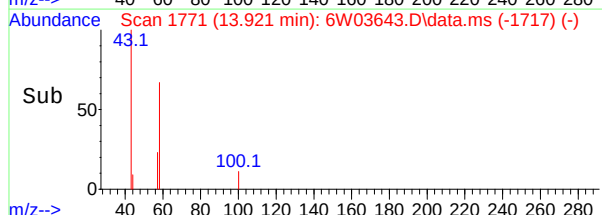
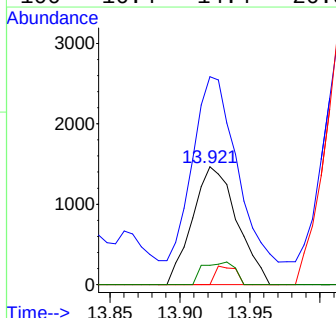
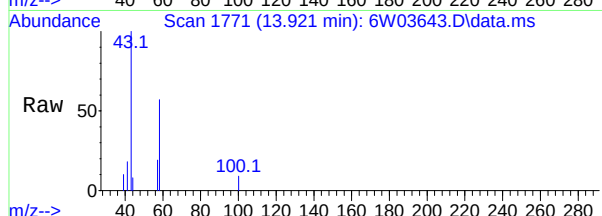
#67
Toluene
Concen: 1.77 ppb(v)
RT: 13.536 min Scan# 1708
Delta R.T. -0.012 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

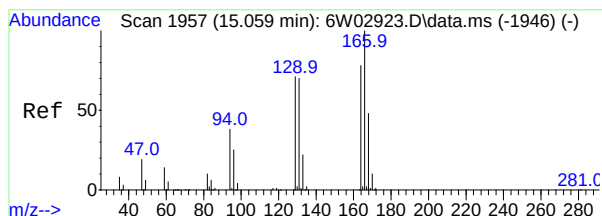
Tgt Ion: 91 Resp: 154819
Ion Ratio Lower Upper
91 100
92 58.4 41.0 76.2
65 11.1 7.8 14.4



#70
2-Hexanone
Concen: 0.12 ppb(v)
RT: 13.921 min Scan# 1771
Delta R.T. 0.000 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

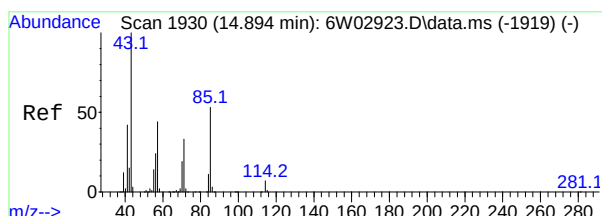
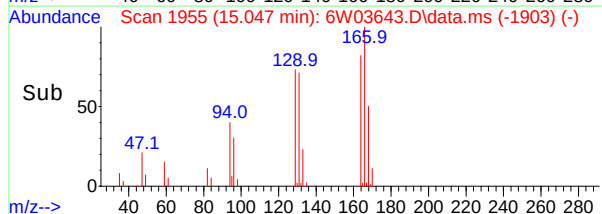
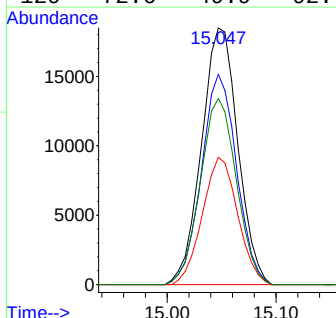
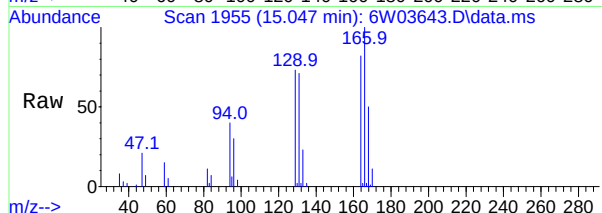
Tgt Ion: 58 Resp: 3251
Ion Ratio Lower Upper
58 100
43 176.5 116.8 217.0
85 0.0 11.1 20.5#
100 16.4 14.4 26.8





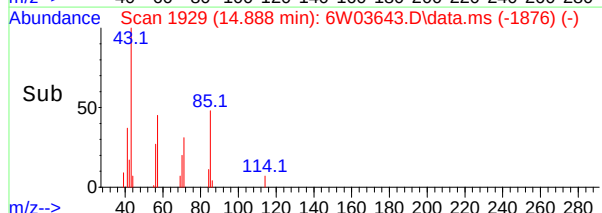
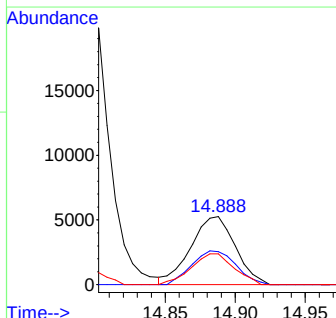
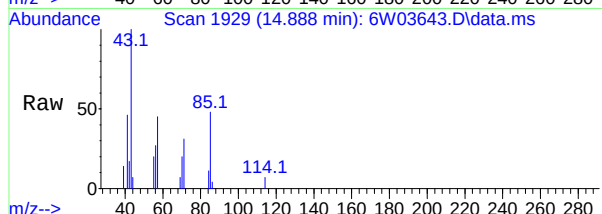
#73
Tetrachloroethene
Concen: 0.98 ppb(v)
RT: 15.047 min Scan# 1955
Delta R.T. -0.012 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

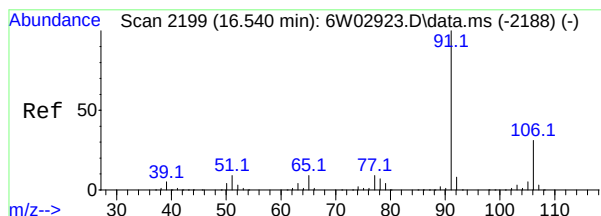
Tgt Ion: 166 Resp: 43021
Ion Ratio Lower Upper
166 100
164 81.9 54.5 101.1
168 49.6 33.9 62.9
129 72.6 49.9 92.7



#75
Octane
Concen: 0.24 ppb(v)
RT: 14.888 min Scan# 1929
Delta R.T. -0.006 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

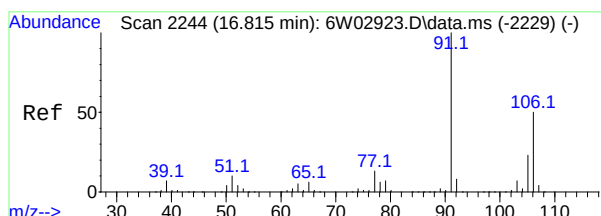
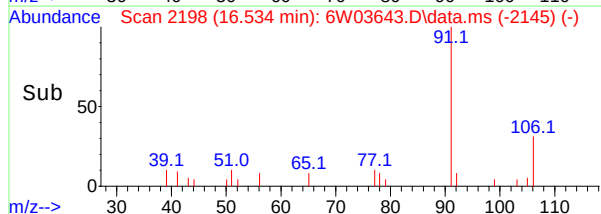
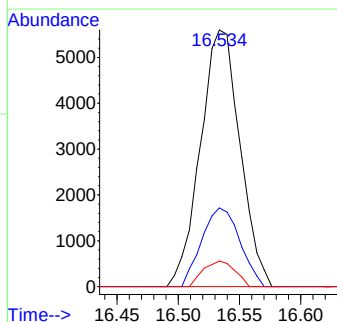
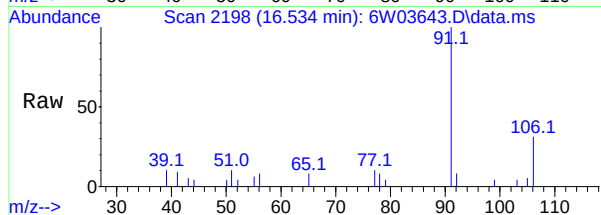
Tgt Ion: 43 Resp: 11708
Ion Ratio Lower Upper
43 100
85 48.4 36.8 68.4
57 45.0 30.7 56.9





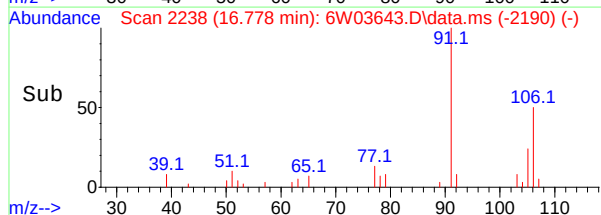
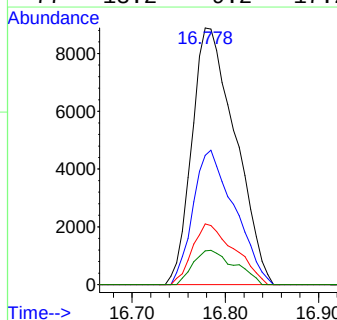
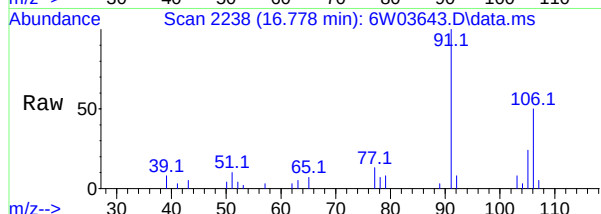
#79
Ethylbenzene
Concen: 0.13 ppb(v)
RT: 16.534 min Scan# 2198
Delta R.T. -0.006 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

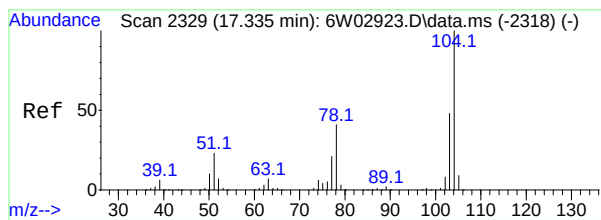
Tgt Ion: 91 Resp: 12565
Ion Ratio Lower Upper
91 100
106 30.7 22.0 41.0
77 9.9 6.0 11.2



#80
m,p-Xylene
Concen: 0.38 ppb(v)
RT: 16.778 min Scan# 2238
Delta R.T. -0.037 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

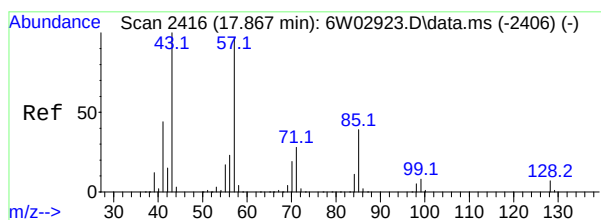
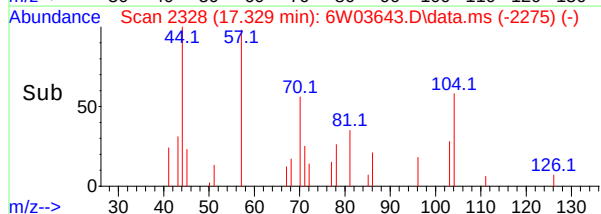
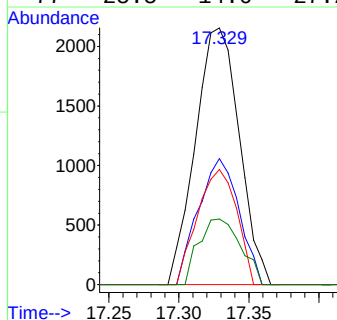
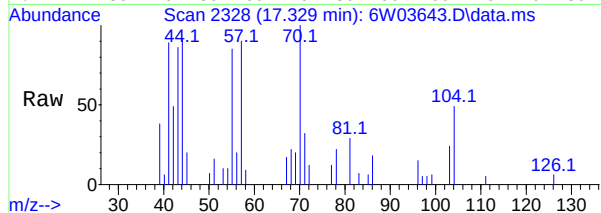
Tgt Ion: 91 Resp: 28794
Ion Ratio Lower Upper
91 100
106 50.4 35.1 65.3
105 23.6 16.0 29.8
77 13.2 9.2 17.2





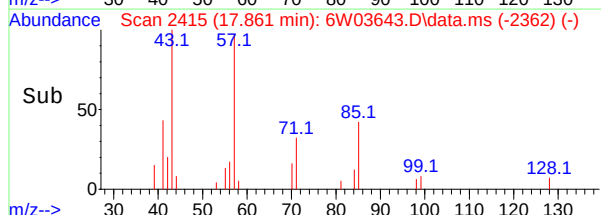
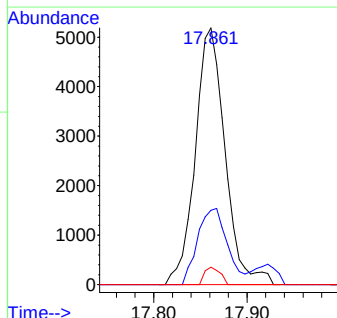
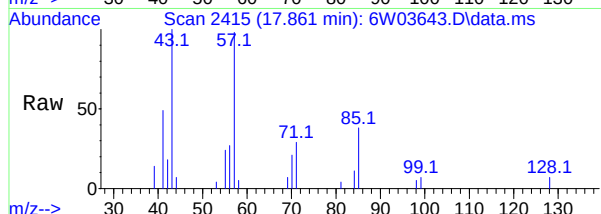
#81
Styrene
Concen: 0.09 ppb(v)
RT: 17.329 min Scan# 2328
Delta R.T. -0.006 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

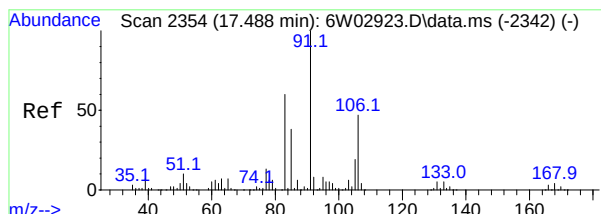
Tgt Ion: 104 Resp: 4712
Ion Ratio Lower Upper
104 100
103 49.1 33.4 62.0
78 44.9 28.8 53.4
77 25.5 14.6 27.2



#82
Nonane
Concen: 0.24 ppb(v)
RT: 17.861 min Scan# 2415
Delta R.T. -0.006 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

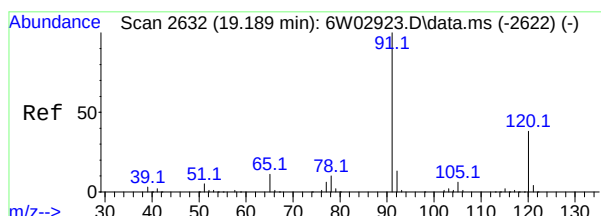
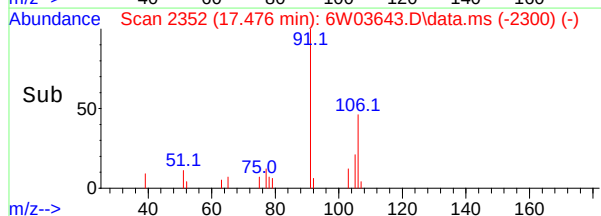
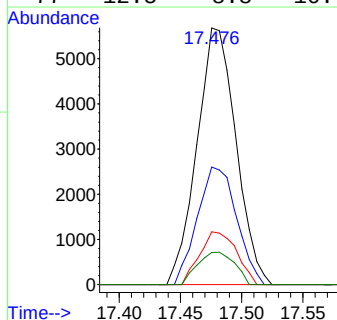
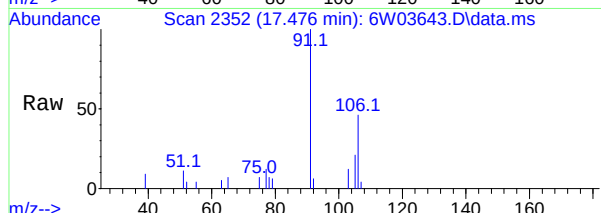
Tgt Ion: 43 Resp: 11576
Ion Ratio Lower Upper
43 100
71 29.0 19.5 36.3
128 6.8 4.6 8.6





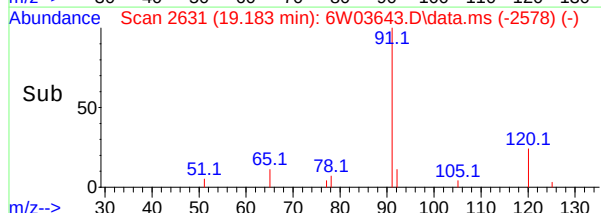
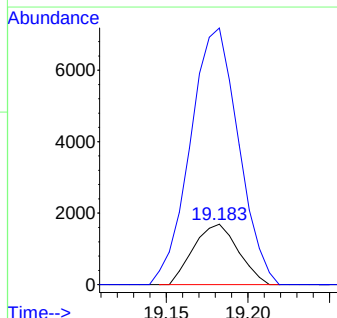
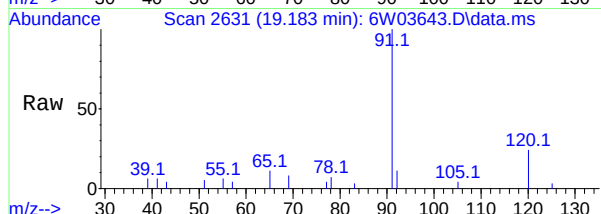
#83
o-Xylene
Concen: 0.17 ppb(v)
RT: 17.476 min Scan# 2352
Delta R.T. -0.012 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

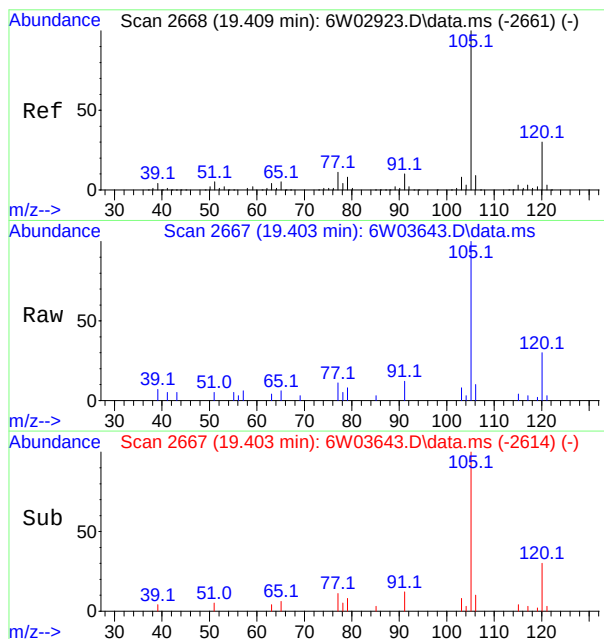
Tgt Ion: 91 Resp: 12575
Ion Ratio Lower Upper
91 100
106 45.8 33.2 61.6
105 20.6 13.4 25.0
77 12.5 8.8 16.4



#90
n-Propylbenzene
Concen: 0.12 ppb(v)
RT: 19.183 min Scan# 2631
Delta R.T. -0.006 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

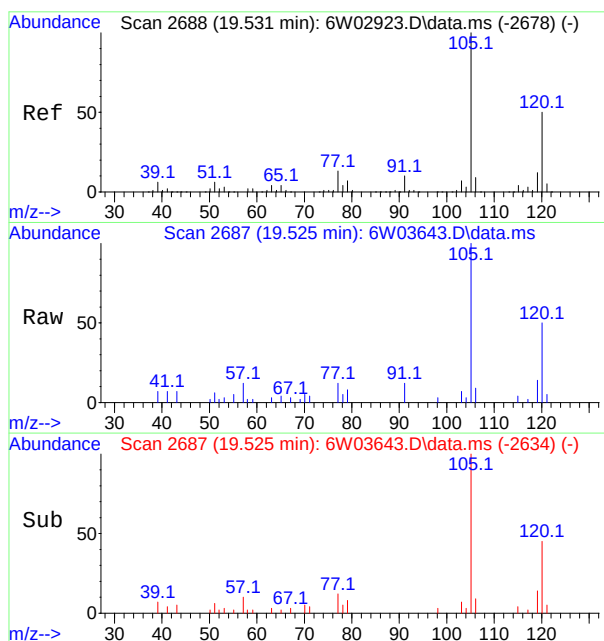
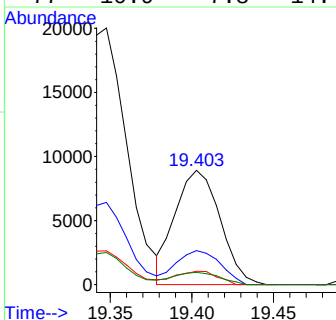
Tgt Ion: 120 Resp: 3233
Ion Ratio Lower Upper
120 100
91 425.1 300.0 557.2





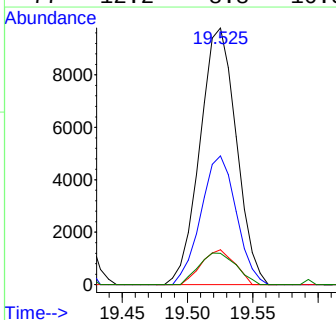
#92
4-Ethyltoluene
Concen: 0.18 ppb(v)
RT: 19.403 min Scan# 2667
Delta R.T. -0.006 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

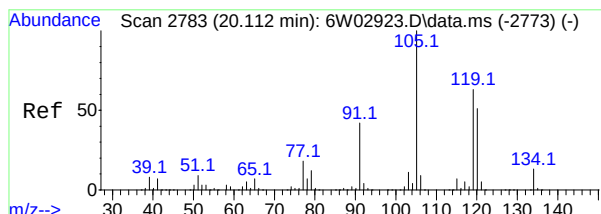
Tgt Ion:	105	Resp:	17132
Ion Ratio	100	Lower	Upper
105	100		
120	29.8	20.6	38.4
91	11.7	7.3	13.7
77	10.9	7.8	14.4



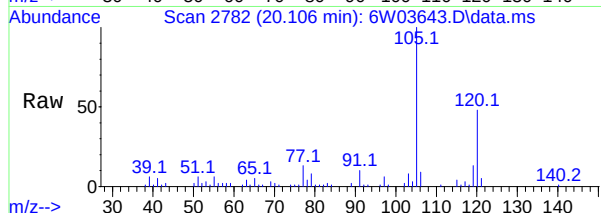
#93
1,3,5-Trimethylbenzene
Concen: 0.24 ppb(v)
RT: 19.525 min Scan# 2687
Delta R.T. -0.006 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm

Tgt Ion:	105	Resp:	19004
Ion Ratio	100	Lower	Upper
105	100		
120	50.1	34.9	64.9
119	13.6	8.6	16.0
77	12.2	8.8	16.3

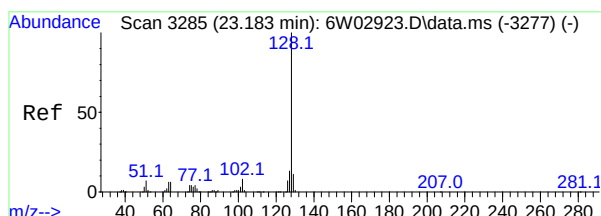
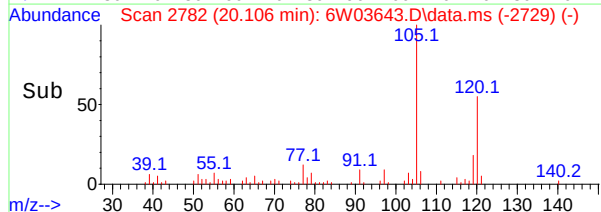
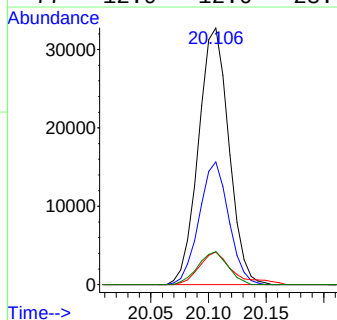




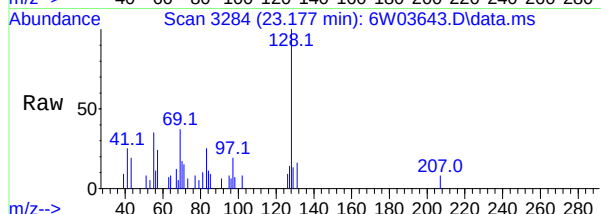
#96
1,2,4-Trimethylbenzene
Concen: 0.79 ppb(v)
RT: 20.106 min Scan# 2782
Delta R.T. -0.006 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm



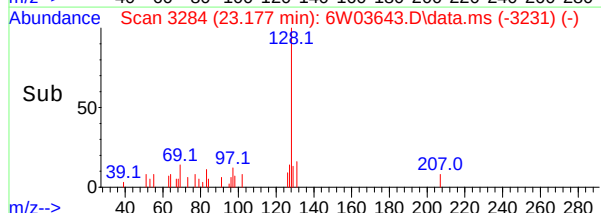
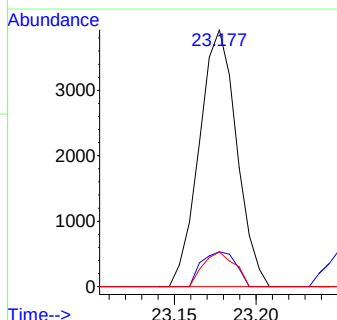
Tgt Ion:105 Resp: 60079
Ion Ratio Lower Upper
105 100
120 47.8 35.7 66.3
119 12.7 44.4 82.4#
77 12.9 12.6 23.4



#106
Naphthalene
Concen: 0.16 ppb(v)
RT: 23.177 min Scan# 3284
Delta R.T. -0.006 min
Lab File: 6W03643.D
Acq: 20 Dec 2017 10:15 pm



Tgt Ion:128 Resp: 6256
Ion Ratio Lower Upper
128 100
127 13.6 8.8 16.3
129 13.4 7.6 14.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03666.D
 Acq On : 21 Dec 2017 8:59 pm
 Operator : DANAT
 Sample : jc56815-10
 Misc : MS22955,V6W106,40,,,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 22 11:15:20 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

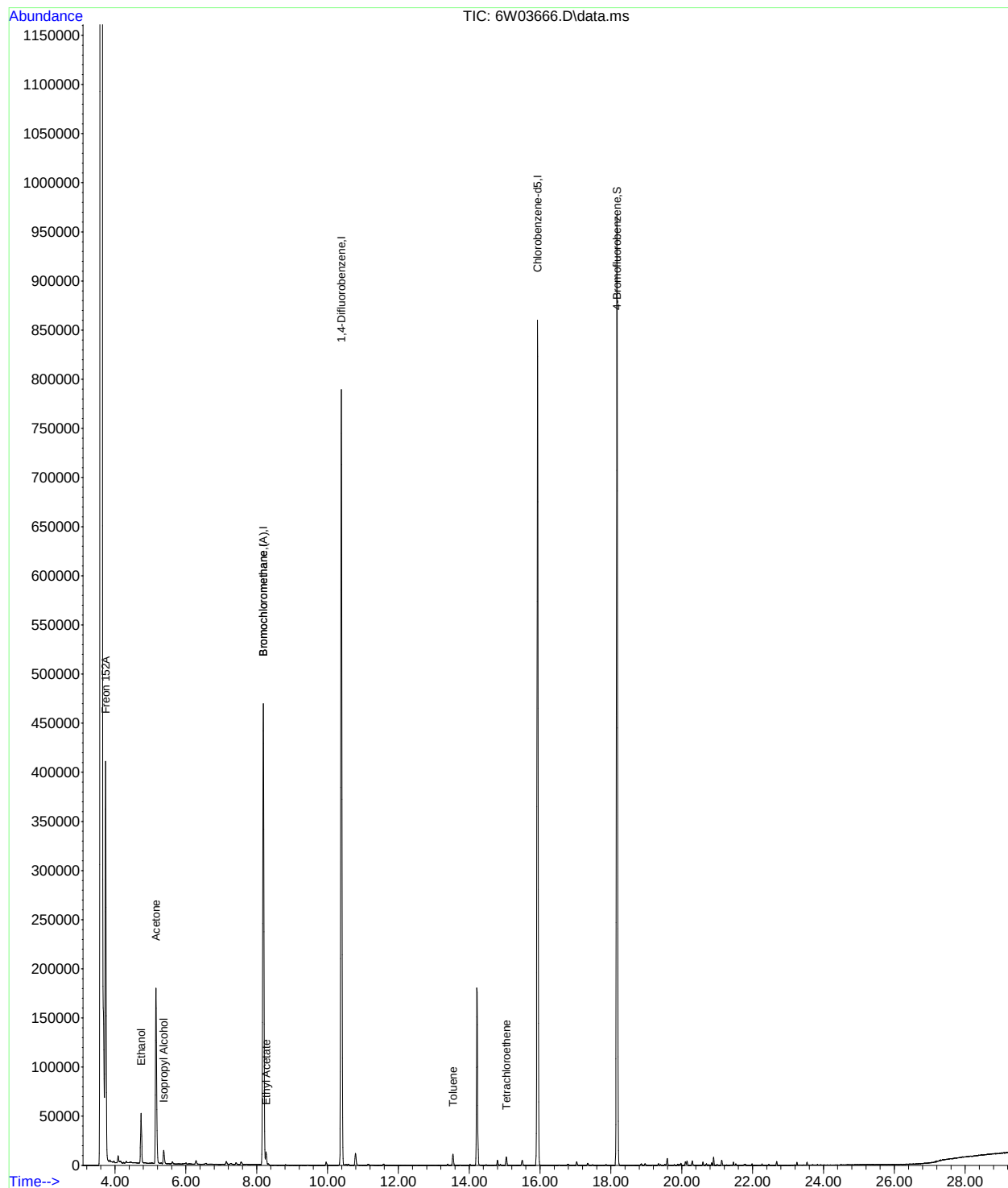
Internal Standards						
1) Bromochloromethane	8.189	130	224159	10.00	ppb(v)	0.00
54) 1,4-Difluorobenzene	10.391	114	834283	10.00	ppb(v)	0.00
77) Chlorobenzene-d5	15.928	82	367308	10.00	ppb(v)	0.00
108) Bromochloromethane (A)	8.189	130	224159	10.00	ppb(v)	0.00
System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.173	95	467731	9.88	ppb(v)	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	98.80%
Target Compounds						
					Qvalue	
3) Freon 152A	3.735	65	209558	14.40	ppb(v)	99
22) Acetone	5.155	58	91190	8.02	ppb(v)	94
26) Isopropyl Alcohol	5.375	45	21199	0.47	ppb(v)	96
31) Ethanol	4.732	45	63162	9.85	ppb(v)	98
43) Ethyl Acetate	8.268	61	2685	0.36	ppb(v)	69
67) Toluene	13.536	91	12844	0.14	ppb(v)	98
73) Tetrachloroethene	15.047	166	4043	0.09	ppb(v)	95

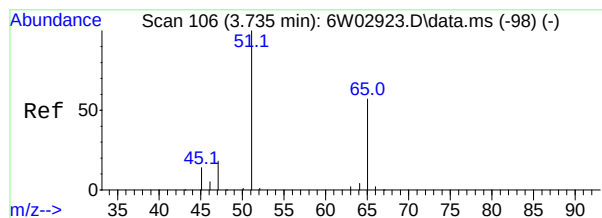
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W03666.D
Acq On : 21 Dec 2017 8:59 pm
Operator : DANAT
Sample : jc56815-10
Misc : MS22955,V6W106,40,,,,,1
ALS Vial : 9 Sample Multiplier: 1

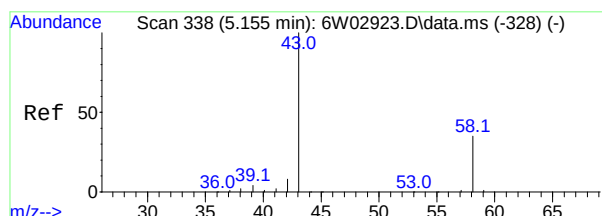
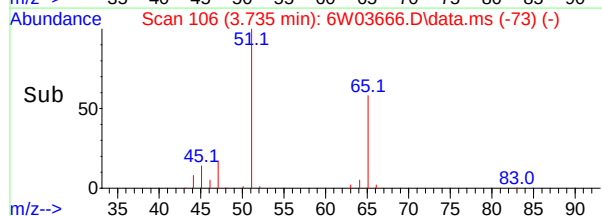
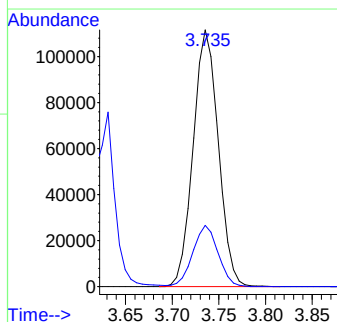
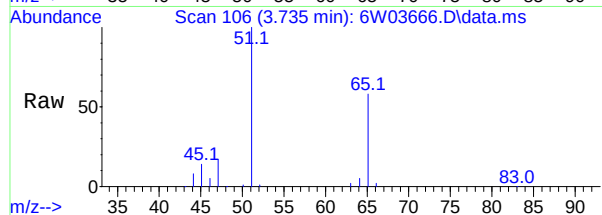
Quant Time: Dec 22 11:15:20 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration





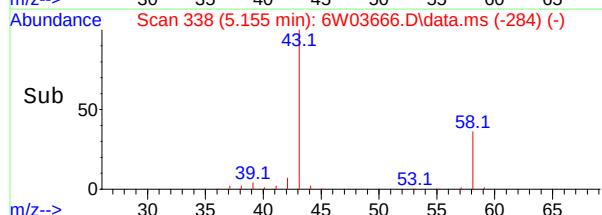
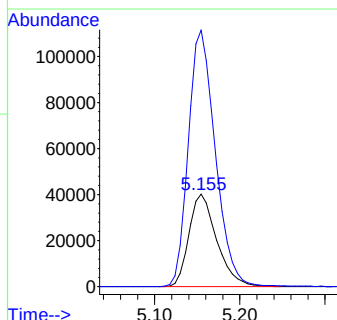
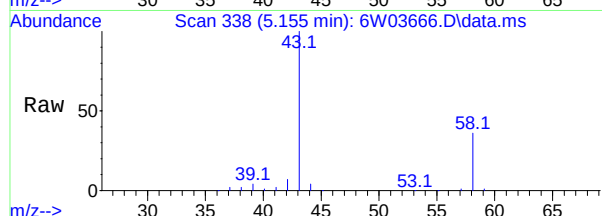
#3
Freon 152A
Concen: 14.40 ppb(v)
RT: 3.735 min Scan# 106
Delta R.T. -0.000 min
Lab File: 6W03666.D
Acq: 21 Dec 2017 8:59 pm

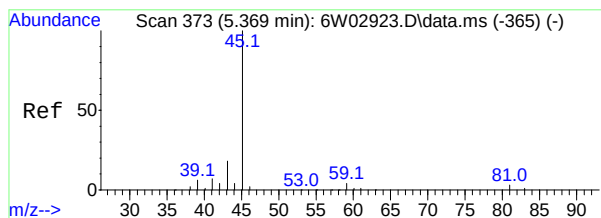
Tgt Ion: 65 Resp: 209558
Ion Ratio Lower Upper
65 100
45 23.9 16.9 31.5



#22
Acetone
Concen: 8.02 ppb(v)
RT: 5.155 min Scan# 338
Delta R.T. -0.000 min
Lab File: 6W03666.D
Acq: 21 Dec 2017 8:59 pm

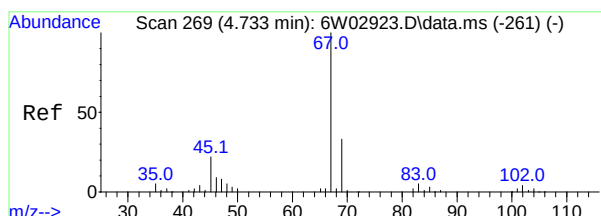
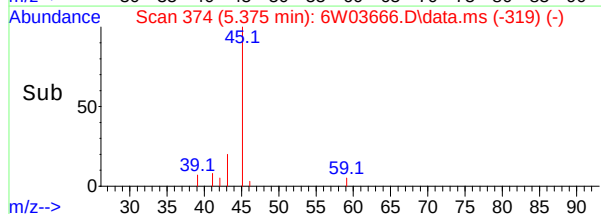
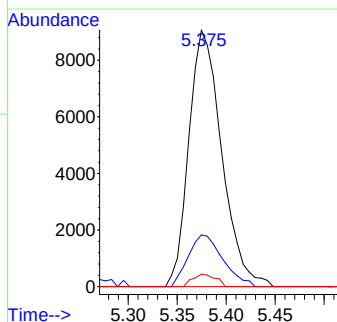
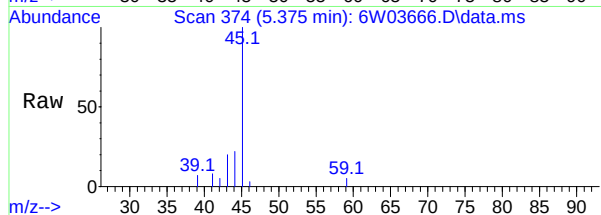
Tgt Ion: 58 Resp: 91190
Ion Ratio Lower Upper
58 100
43 277.0 202.4 375.8





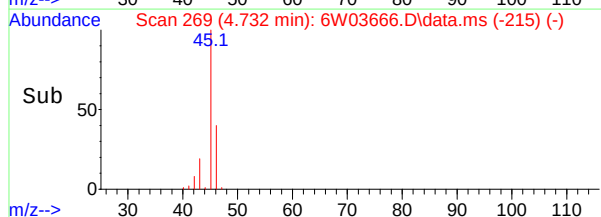
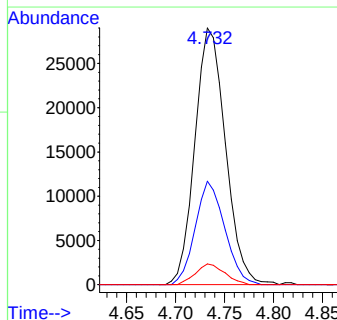
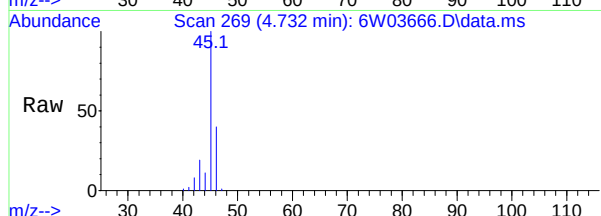
#26
Isopropyl Alcohol
Concen: 0.47 ppb(v)
RT: 5.375 min Scan# 374
Delta R.T. 0.006 min
Lab File: 6W03666.D
Acq: 21 Dec 2017 8:59 pm

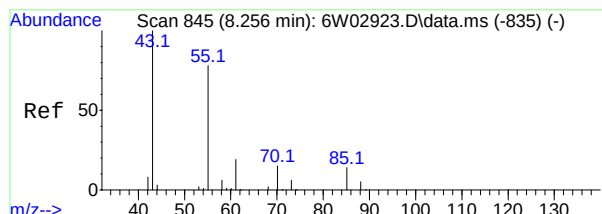
Tgt Ion: 45 Resp: 21199
Ion Ratio Lower Upper
45 100
43 20.1 12.8 23.8
59 4.9 3.0 5.6



#31
Ethanol
Concen: 9.85 ppb(v)
RT: 4.732 min Scan# 269
Delta R.T. -0.000 min
Lab File: 6W03666.D
Acq: 21 Dec 2017 8:59 pm

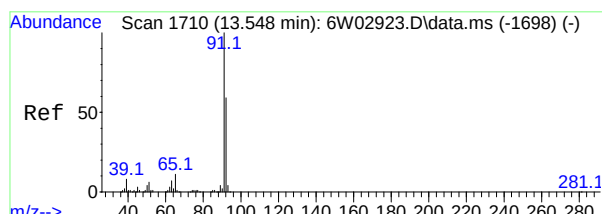
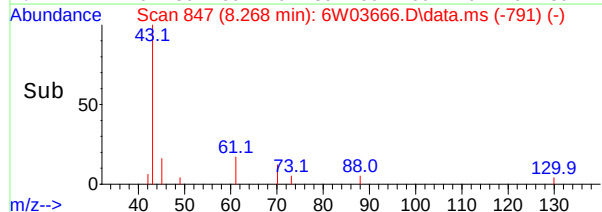
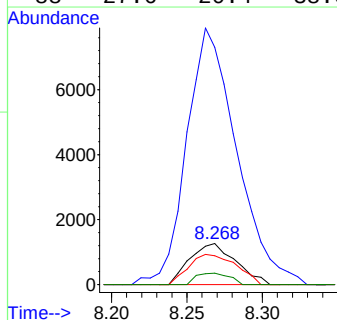
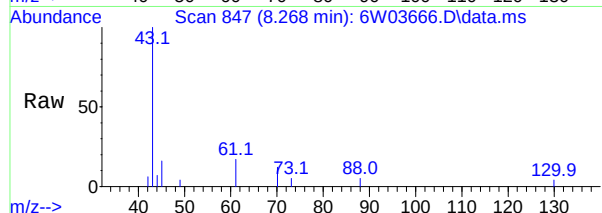
Tgt Ion: 45 Resp: 63162
Ion Ratio Lower Upper
45 100
46 40.2 27.2 50.4
42 8.1 5.6 10.4





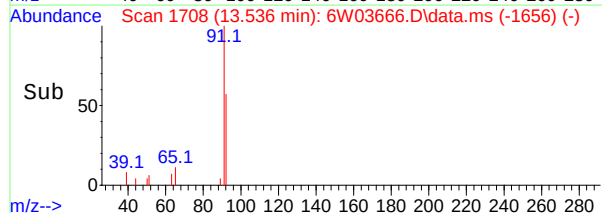
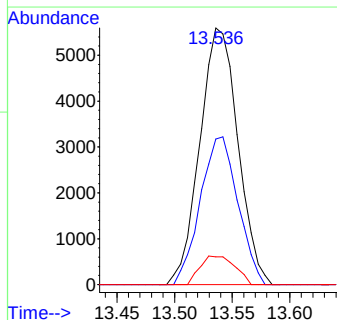
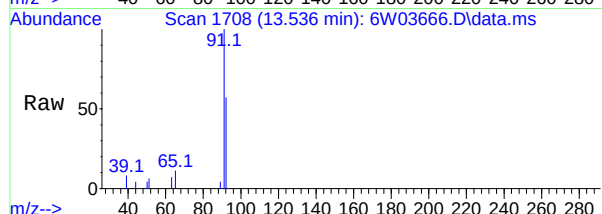
#43
Ethyl Acetate
Concen: 0.36 ppb(v)
RT: 8.268 min Scan# 847
Delta R.T. 0.012 min
Lab File: 6W03666.D
Acq: 21 Dec 2017 8:59 pm

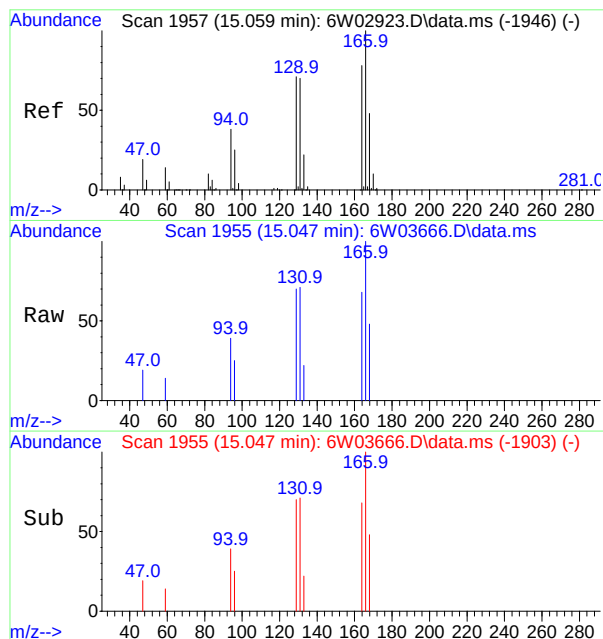
Tgt Ion: 61 Resp: 2685
Ion Ratio Lower Upper
61 100
43 576.6 488.5 907.1
70 69.9 54.9 101.9
88 27.6 20.4 38.0



#67
Toluene
Concen: 0.14 ppb(v)
RT: 13.536 min Scan# 1708
Delta R.T. -0.012 min
Lab File: 6W03666.D
Acq: 21 Dec 2017 8:59 pm

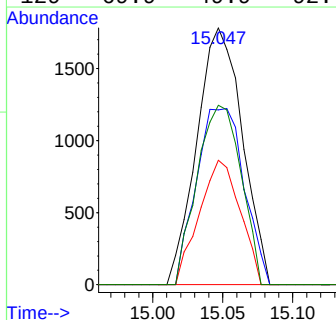
Tgt Ion: 91 Resp: 12844
Ion Ratio Lower Upper
91 100
92 56.7 41.0 76.2
65 10.8 7.8 14.4





#73
Tetrachloroethene
Concen: 0.09 ppb(v)
RT: 15.047 min Scan# 1955
Delta R.T. -0.012 min
Lab File: 6W03666.D
Acq: 21 Dec 2017 8:59 pm

Tgt Ion:166 Resp: 4043
Ion Ratio Lower Upper
166 100
164 68.1 54.5 101.1
168 48.5 33.9 62.9
129 69.9 49.9 92.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03650.D
 Acq On : 21 Dec 2017 6:06 am
 Operator : DANAT
 Sample : jc56815-11
 Misc : MS22955,V6W105,800,,,1
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Dec 22 09:23:51 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.195	130	222972	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.397	114	833484	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.928	82	377257	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.195	130	222972	10.00	ppb(v	0.00

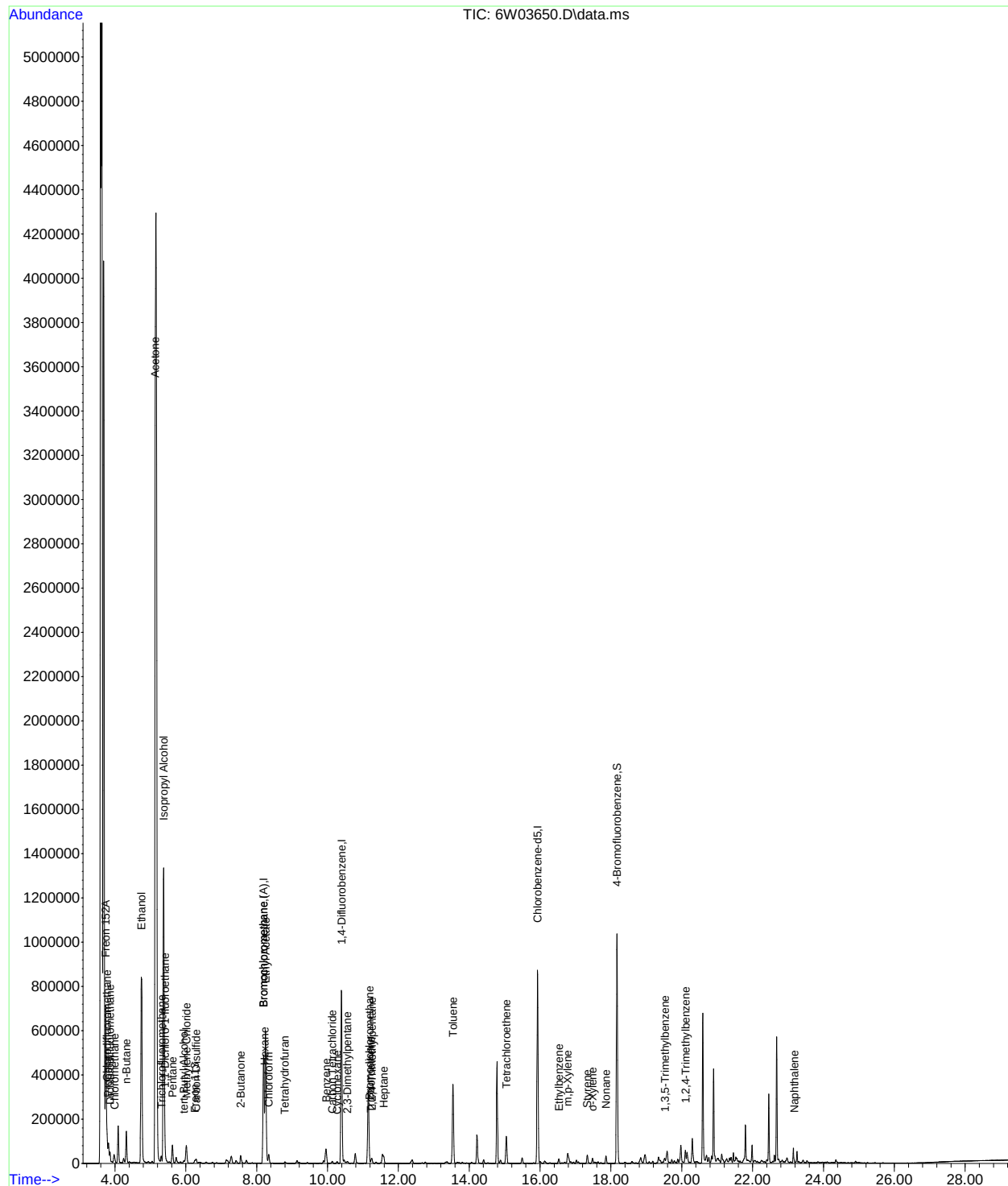
System Monitoring Compounds
 91) 4-Bromofluorobenzene 18.173 95 499848 10.28 ppb(v 0.00
 Spiked Amount 10.000 Range 65 - 128 Recovery = 102.80%

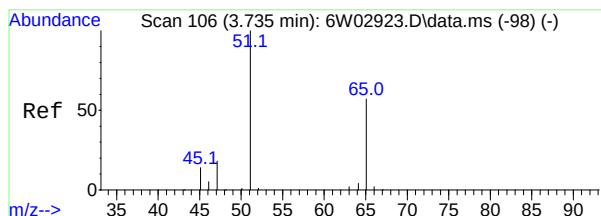
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) Freon 152A	3.741	65	363396	25.10	ppb(v	100
4) Chlorodifluoromethane	3.772	67	23946	4.72	ppb(v#	80
5) Propene	3.809	41	30657	1.93	ppb(v	80
7) Dichlorodifluoromethane	3.858	85	46056	0.83	ppb(v	99
9) Chloromethane	3.986	50	22006	1.22	ppb(v	97
13) n-Butane	4.322	58	19601	5.33	ppb(v#	98
21) Trichlorofluoromethane	5.307	101	27367	0.52	ppb(v	97
22) Acetone	5.130	58	2742601	242.38	ppb(v	87
23) Pentane	5.619	57	10509	1.98	ppb(v	97
24) 1,1-Dichloro-1-fluoroe...	5.411	81	7545	0.16	ppb(v#	84
26) Isopropyl Alcohol	5.375	45	2027159	45.22	ppb(v	98
28) Freon 113	6.250	101	6825	0.14	ppb(v	98
29) Methylene Chloride	6.017	84	45785	1.99	ppb(v	97
30) Carbon Disulfide	6.286	76	33721	0.46	ppb(v	98
31) Ethanol	4.745	45	1333092	209.08	ppb(v	99
35) tert-Butyl Alcohol	5.944	59	14082	0.33	ppb(v#	89
39) 2-Butanone	7.547	72	14593	1.26	ppb(v	98
40) Hexane	8.219	57	30294	0.84	ppb(v#	66
43) Ethyl Acetate	8.250	61	132782	17.98	ppb(v	77
45) Chloroform	8.336	83	38075	0.79	ppb(v	99
47) Tetrahydrofuran	8.795	72	1515	0.15	ppb(v#	58
50) Benzene	9.963	78	60153	0.80	ppb(v	99
51) Carbon Tetrachloride	10.128	117	7332	0.15	ppb(v	98
52) Cyclohexane	10.263	56	4668	0.14	ppb(v	94
53) 2,3-Dimethylpentane	10.556	71	1975	0.13	ppb(v#	84
55) 2,2,4-Trimethylpentane	11.248	57	24438	0.21	ppb(v	90
56) Heptane	11.584	71	9627	0.39	ppb(v	99
57) Trichloroethene	11.223	95	1879	0.06	ppb(v	96
63) Bromodichloromethane	11.180	83	6930	0.13	ppb(v	93
67) Toluene	13.536	91	353445	3.89	ppb(v	99
73) Tetrachloroethene	15.047	166	49765	1.09	ppb(v	98
79) Ethylbenzene	16.533	91	19892	0.19	ppb(v	97
80) m,p-Xylene	16.778	91	49614	0.62	ppb(v	99
81) Styrene	17.329	104	5956	0.11	ppb(v	94
82) Nonane	17.861	43	15153	0.30	ppb(v	93
83) o-Xylene	17.482	91	20632	0.26	ppb(v	100
93) 1,3,5-Trimethylbenzene	19.525	105	10883	0.13	ppb(v	98
96) 1,2,4-Trimethylbenzene	20.106	105	31808	0.39	ppb(v#	65
106) Naphthalene	23.177	128	4166	0.10	ppb(v	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\
Data File : 6W03650.D
Acq On : 21 Dec 2017 6:06 am
Operator : DANAT
Sample : jc56815-11
Misc : MS22955,V6W105,800,,,,,1
ALS Vial : 16 Sample Multiplier: 1

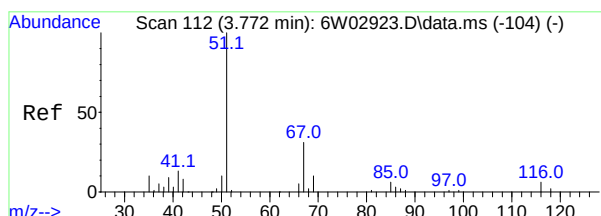
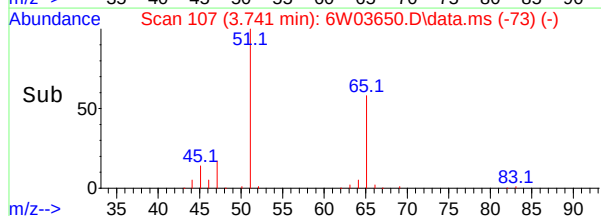
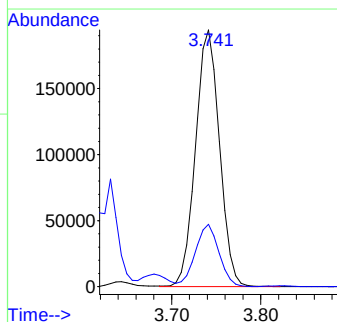
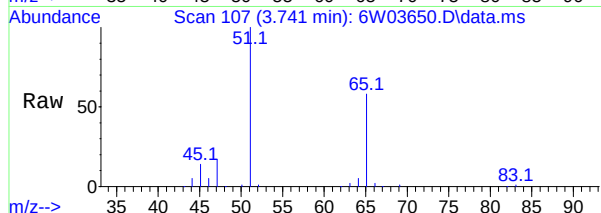
Quant Time: Dec 22 09:23:51 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration





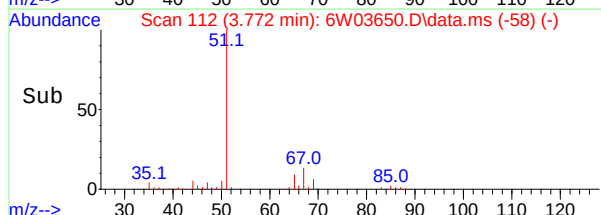
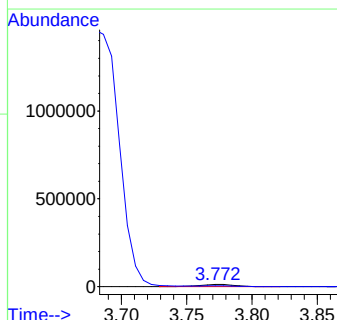
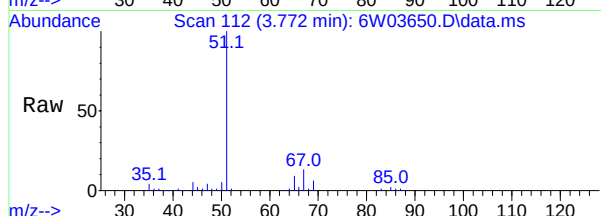
#3
Freon 152A
Concen: 25.10 ppb(v)
RT: 3.741 min Scan# 107
Delta R.T. 0.006 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

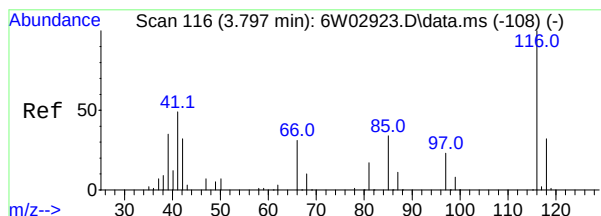
Tgt Ion: 65 Resp: 363396
Ion Ratio Lower Upper
65 100
45 24.3 16.9 31.5



#4
Chlorodifluoromethane
Concen: 4.72 ppb(v)
RT: 3.772 min Scan# 112
Delta R.T. -0.000 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

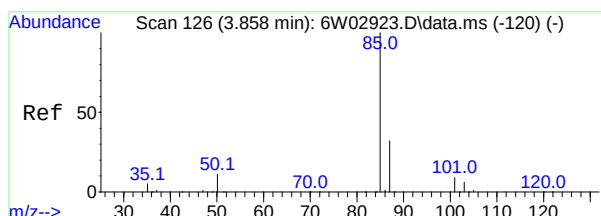
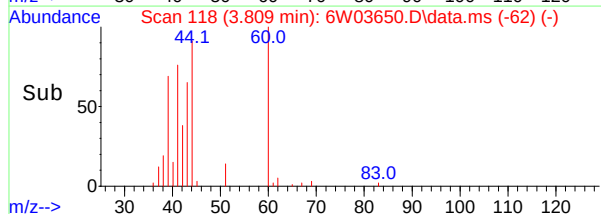
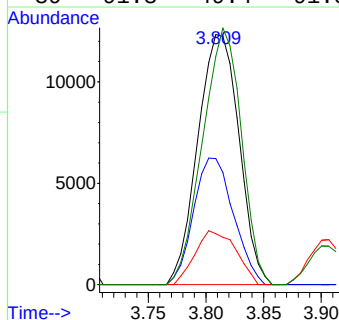
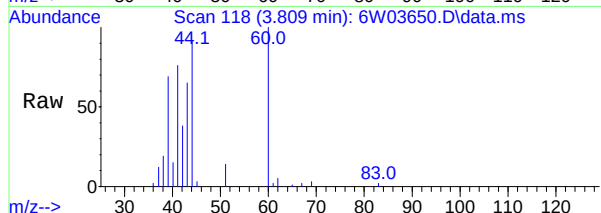
Tgt Ion: 67 Resp: 23946
Ion Ratio Lower Upper
67 100
69 43.7 22.7 42.1#





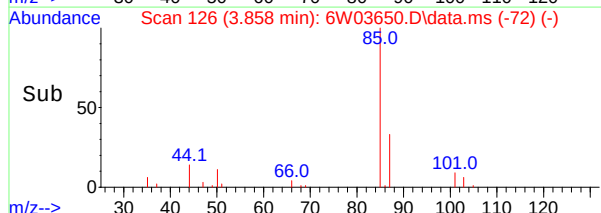
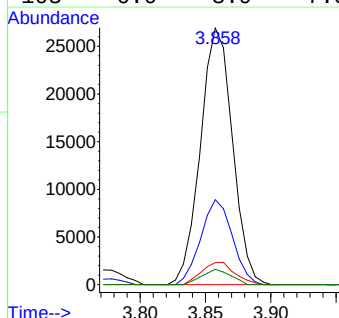
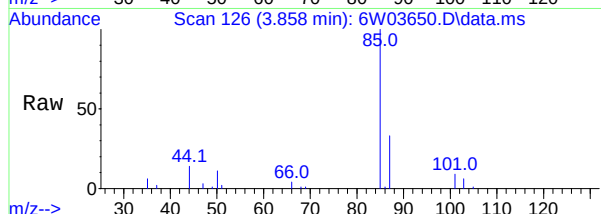
#5
Propene
Concen: 1.93 ppb(v)
RT: 3.809 min Scan# 118
Delta R.T. 0.012 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

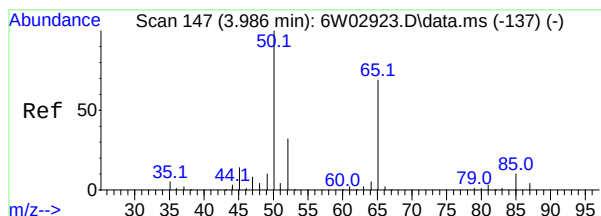
Tgt Ion: 41 Resp: 30657
Ion Ratio Lower Upper
41 100
42 50.4 45.4 84.4
40 20.4 17.4 32.2
39 91.3 49.4 91.8



#7
Dichlorodifluoromethane
Concen: 0.83 ppb(v)
RT: 3.858 min Scan# 126
Delta R.T. -0.000 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

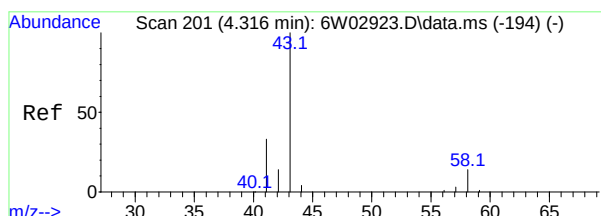
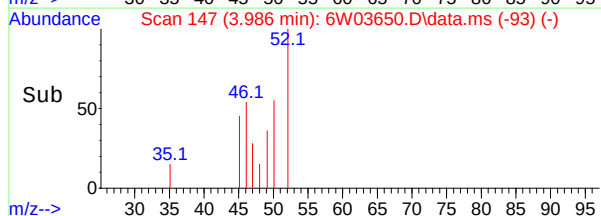
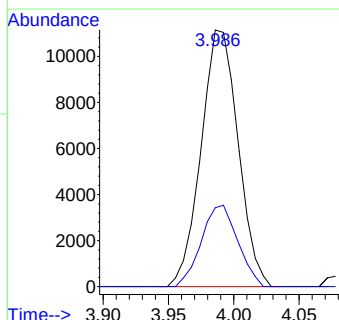
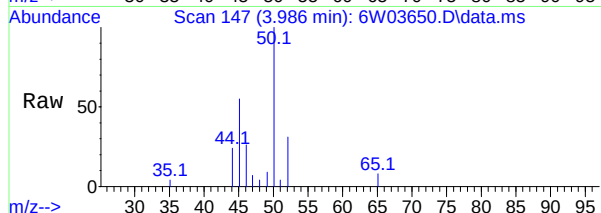
Tgt Ion: 85 Resp: 46056
Ion Ratio Lower Upper
85 100
87 33.1 22.7 42.3
101 8.6 5.9 11.1
103 6.0 3.9 7.3





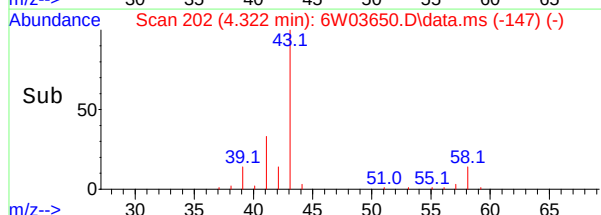
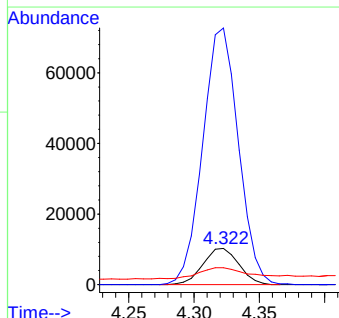
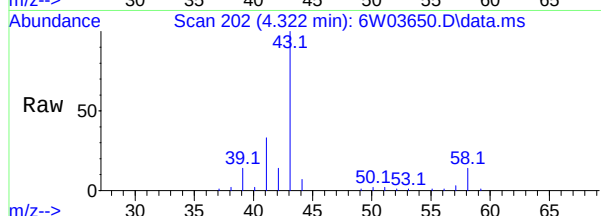
#9
Chloromethane
Concen: 1.22 ppb(v)
RT: 3.986 min Scan# 147
Delta R.T. -0.000 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

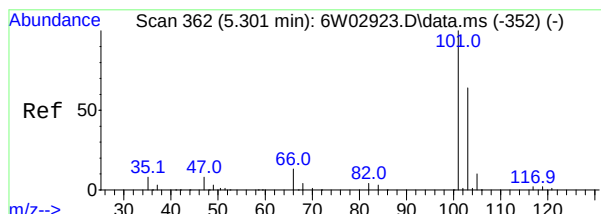
Tgt Ion: 50 Resp: 22006
Ion Ratio Lower Upper
50 100
52 30.7 22.7 42.1



#13
n-Butane
Concen: 5.33 ppb(v)
RT: 4.322 min Scan# 202
Delta R.T. 0.006 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

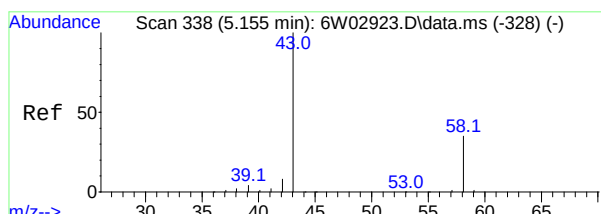
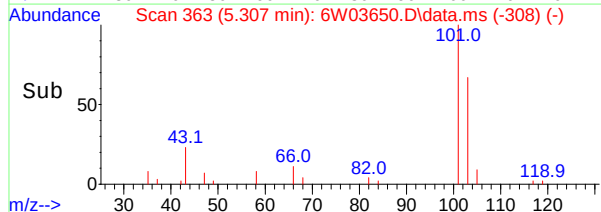
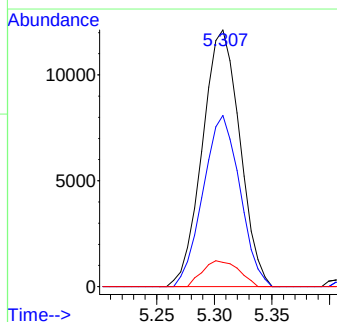
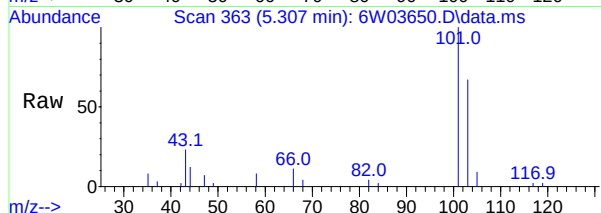
Tgt Ion: 58 Resp: 19601
Ion Ratio Lower Upper
58 100
43 710.8 499.8 928.2
44 46.9 21.1 39.1#





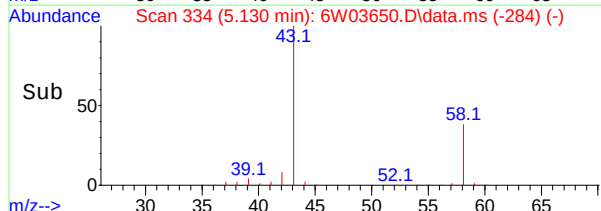
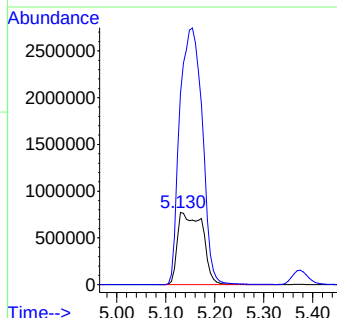
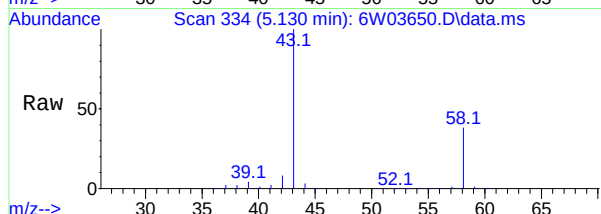
#21
 Trichlorofluoromethane
 Concen: 0.52 ppb(v)
 RT: 5.307 min Scan# 363
 Delta R.T. 0.006 min
 Lab File: 6W03650.D
 Acq: 21 Dec 2017 6:06 am

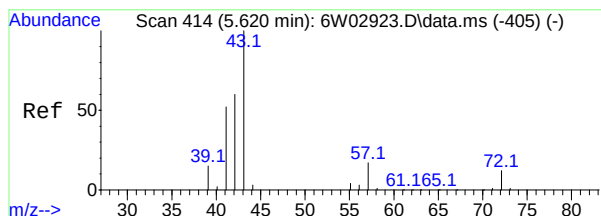
Tgt Ion: 101 Resp: 27367
 Ion Ratio Lower Upper
 101 100
 103 66.6 45.1 83.9
 105 9.5 7.3 13.5



#22
 Acetone
 Concen: 242.38 ppb(v)
 RT: 5.130 min Scan# 334
 Delta R.T. -0.025 min
 Lab File: 6W03650.D
 Acq: 21 Dec 2017 6:06 am

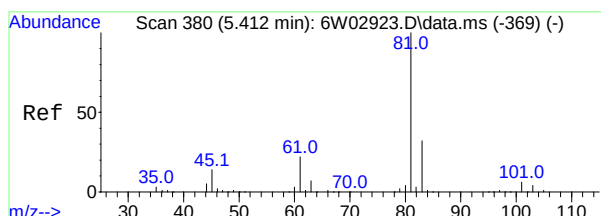
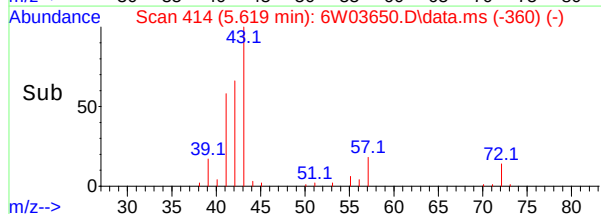
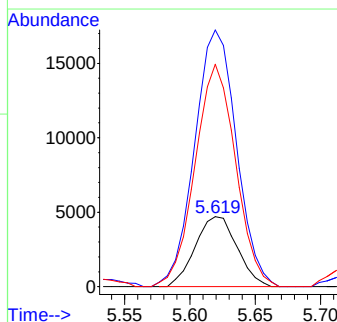
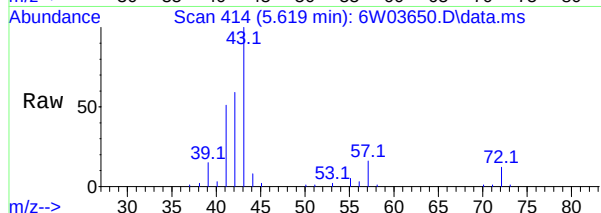
Tgt Ion: 58 Resp: 2742601
 Ion Ratio Lower Upper
 58 100
 43 264.1 202.4 375.8





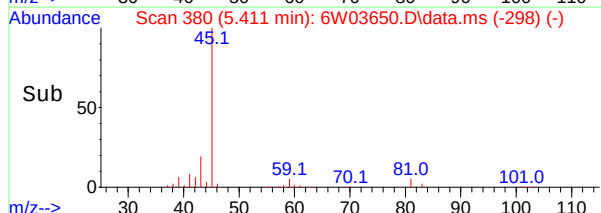
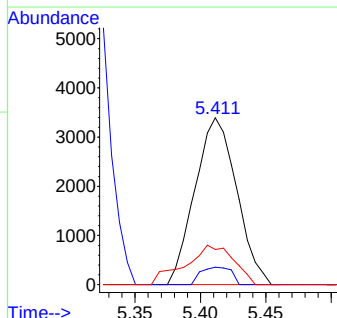
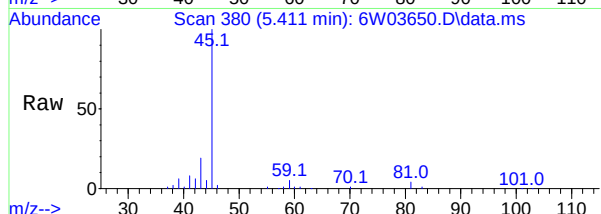
#23
 Pentane
 Concen: 1.98 ppb(v)
 RT: 5.619 min Scan# 414
 Delta R.T. -0.000 min
 Lab File: 6W03650.D
 Acq: 21 Dec 2017 6:06 am

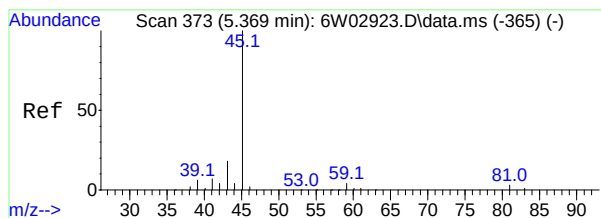
Tgt Ion: 57 Resp: 10509
 Ion Ratio Lower Upper
 57 100
 42 367.1 252.4 468.8
 41 317.8 218.7 406.1



#24
 1,1-Dichloro-1-fluoroethane
 Concen: 0.16 ppb(v)
 RT: 5.411 min Scan# 380
 Delta R.T. -0.000 min
 Lab File: 6W03650.D
 Acq: 21 Dec 2017 6:06 am

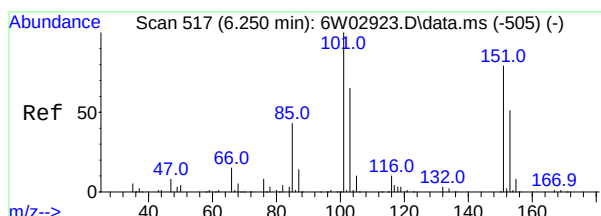
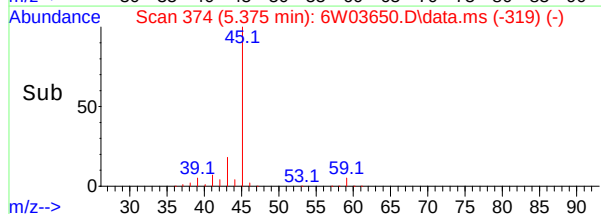
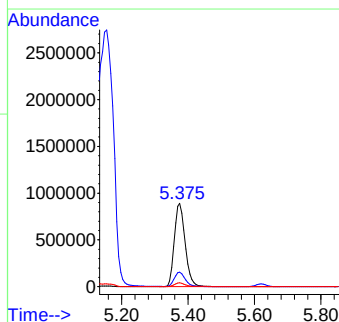
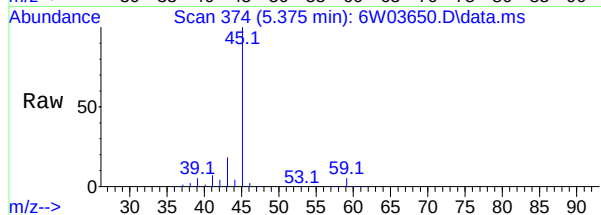
Tgt Ion: 81 Resp: 7545
 Ion Ratio Lower Upper
 81 100
 101 0.0 8.0 12.0#
 61 27.5 17.8 26.6#





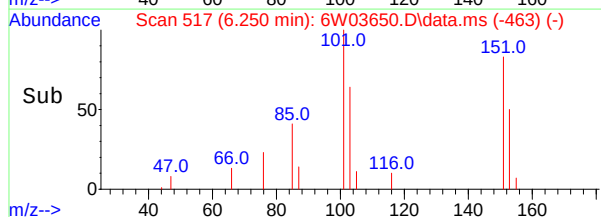
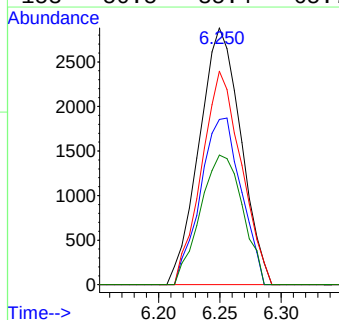
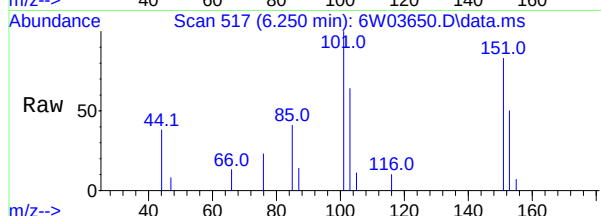
#26
Isopropyl Alcohol
Concen: 45.22 ppb(v)
RT: 5.375 min Scan# 374
Delta R.T. 0.006 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

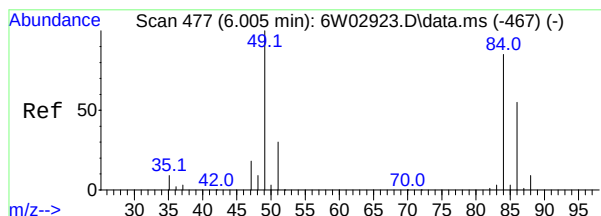
Tgt Ion:	45	Resp:	2027159
Ion Ratio	100	Lower	Upper
43	17.5	12.8	23.8
59	4.5	3.0	5.6



#28
Freon 113
Concen: 0.14 ppb(v)
RT: 6.250 min Scan# 517
Delta R.T. -0.000 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

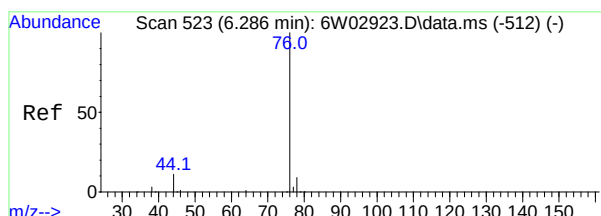
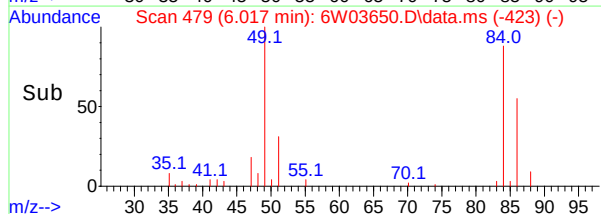
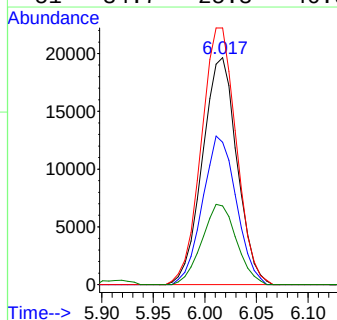
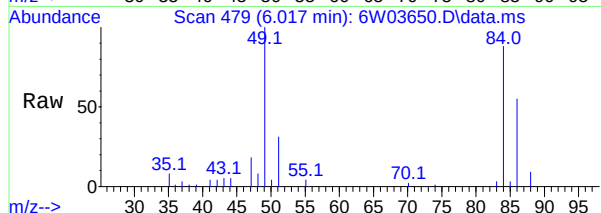
Tgt Ion:	101	Resp:	6825
Ion Ratio	100	Lower	Upper
101	100		
103	64.4	45.4	84.4
151	83.1	55.3	102.7
153	50.5	35.4	65.7





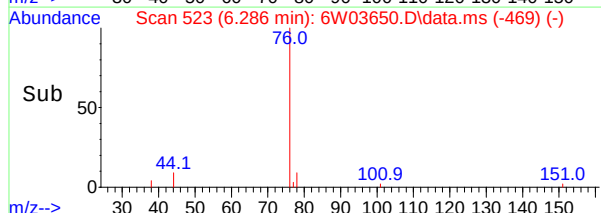
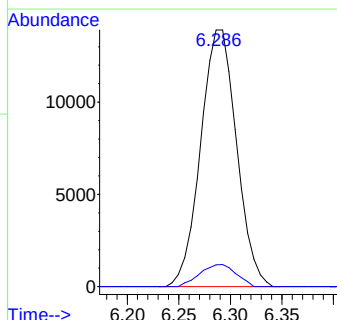
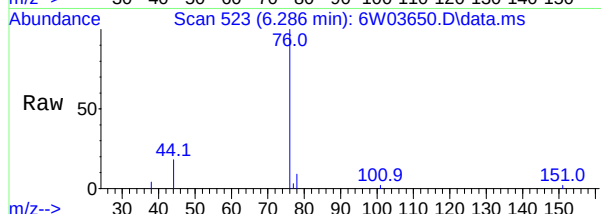
#29
Methylene Chloride
Concen: 1.99 ppb(v)
RT: 6.017 min Scan# 479
Delta R.T. 0.012 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

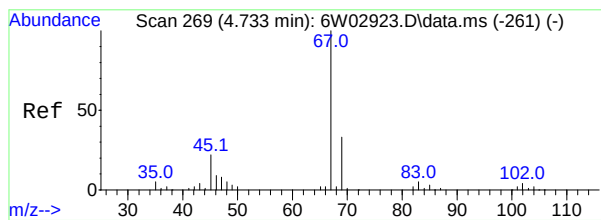
Tgt Ion: 84 Resp: 45785
Ion Ratio Lower Upper
84 100
86 62.7 44.8 83.2
49 113.0 82.1 152.5
51 34.7 25.3 46.9



#30
Carbon Disulfide
Concen: 0.46 ppb(v)
RT: 6.286 min Scan# 523
Delta R.T. -0.000 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

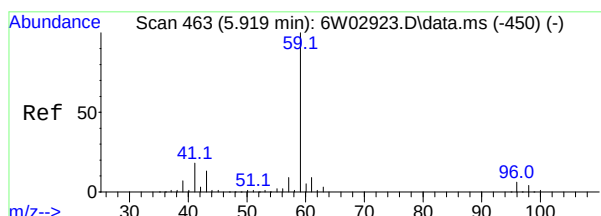
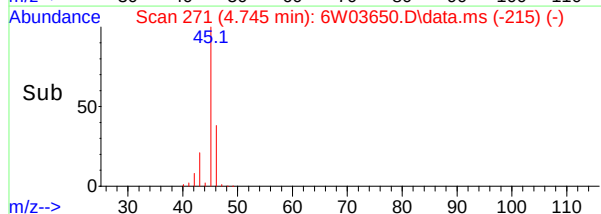
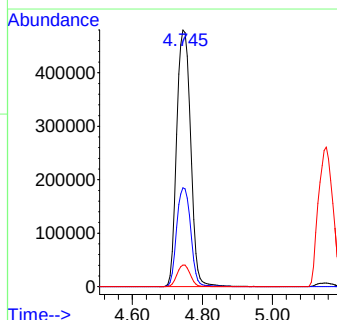
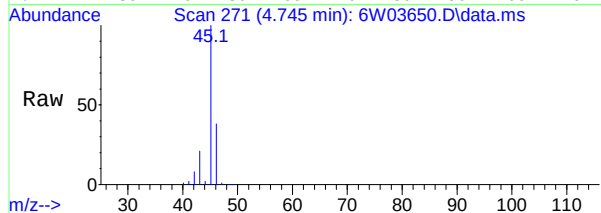
Tgt Ion: 76 Resp: 33721
Ion Ratio Lower Upper
76 100
78 8.5 6.5 12.1





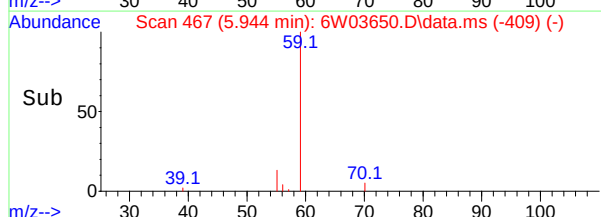
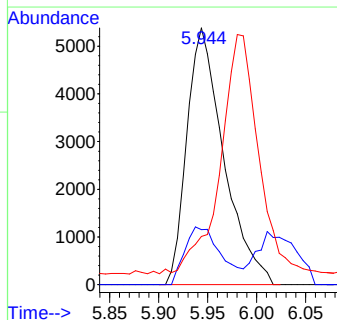
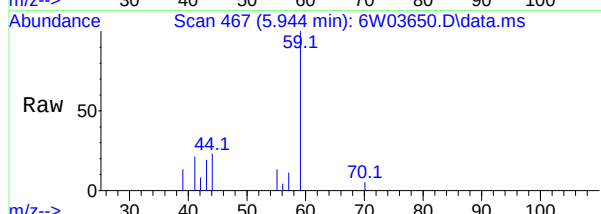
#31
Ethanol
Concen: 209.08 ppb(v)
RT: 4.745 min Scan# 271
Delta R.T. 0.012 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

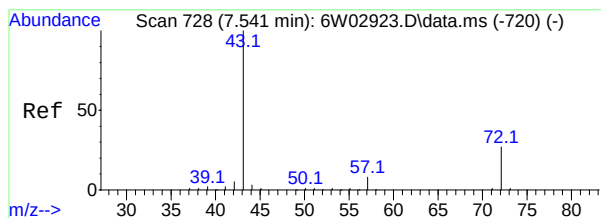
Tgt Ion: 45 Resp: 1333092
Ion Ratio Lower Upper
45 100
46 38.5 27.2 50.4
42 8.3 5.6 10.4



#35
tert-Butyl Alcohol
Concen: 0.33 ppb(v)
RT: 5.944 min Scan# 467
Delta R.T. 0.024 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

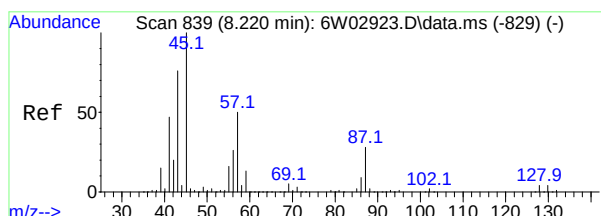
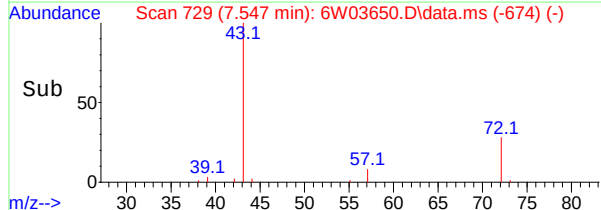
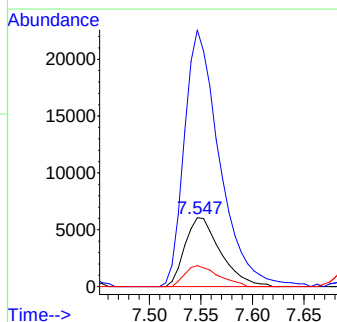
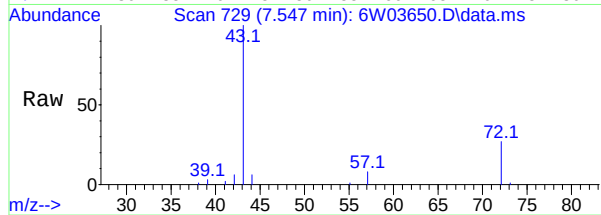
Tgt Ion: 59 Resp: 14082
Ion Ratio Lower Upper
59 100
41 21.4 12.7 23.7
43 18.8 8.8 16.4#





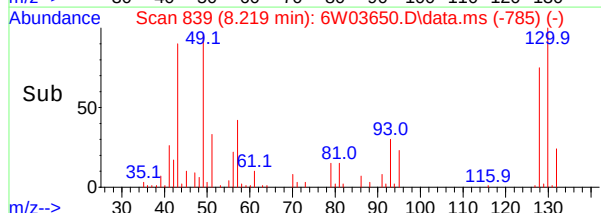
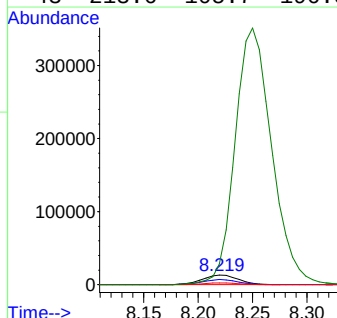
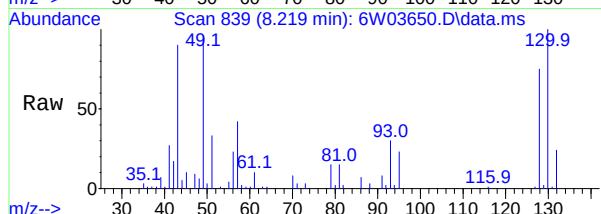
#39
2-Butanone
Concen: 1.26 ppb(v)
RT: 7.547 min Scan# 729
Delta R.T. 0.006 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

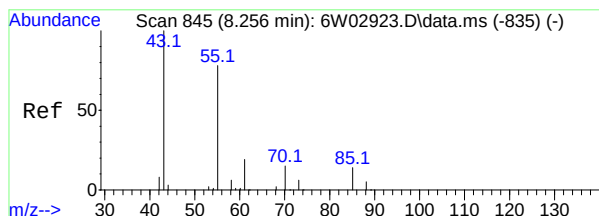
Tgt Ion: 72 Resp: 14593
Ion Ratio Lower Upper
72 100
43 373.2 257.4 478.0
57 30.6 21.0 39.0



#40
Hexane
Concen: 0.84 ppb(v)
RT: 8.219 min Scan# 839
Delta R.T. -0.000 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

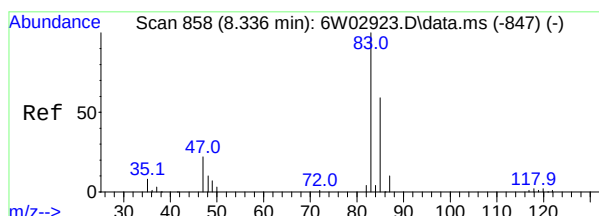
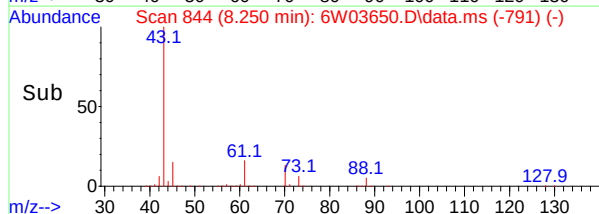
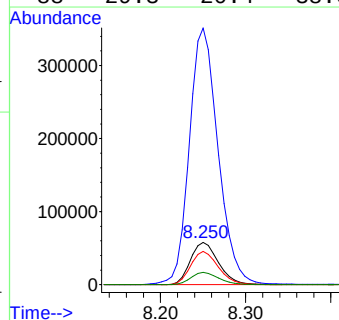
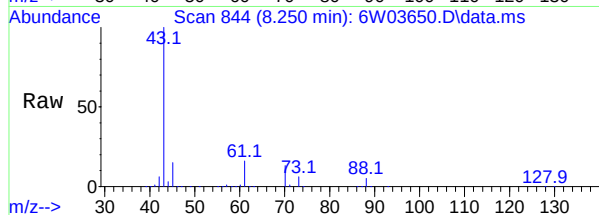
Tgt Ion: 57 Resp: 30294
Ion Ratio Lower Upper
57 100
56 53.3 36.0 67.0
86 16.7 12.1 22.5
43 213.6 105.7 196.3#





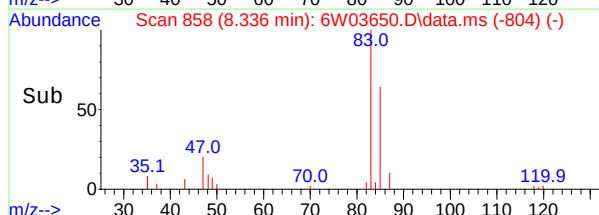
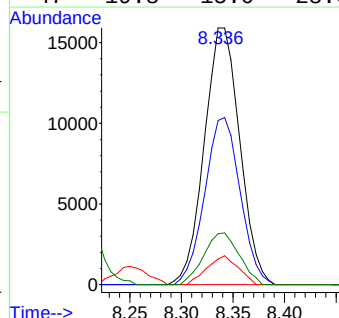
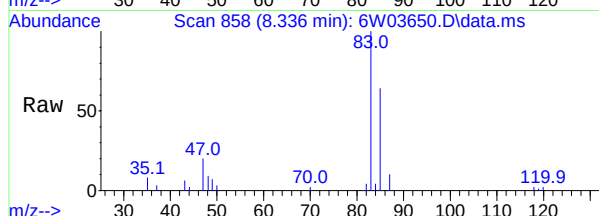
#43
Ethyl Acetate
Concen: 17.98 ppb(v)
RT: 8.250 min Scan# 844
Delta R.T. -0.006 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

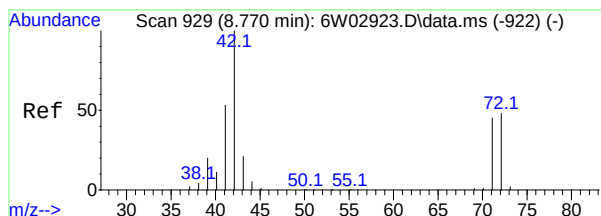
Tgt Ion: 61 Resp: 132782
Ion Ratio Lower Upper
61 100
43 606.2 488.5 907.1
70 78.6 54.9 101.9
88 29.3 20.4 38.0



#45
Chloroform
Concen: 0.79 ppb(v)
RT: 8.336 min Scan# 858
Delta R.T. -0.000 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

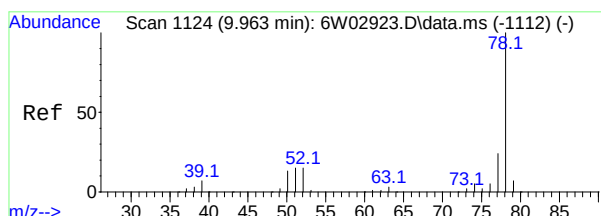
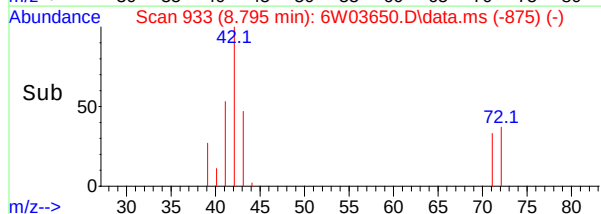
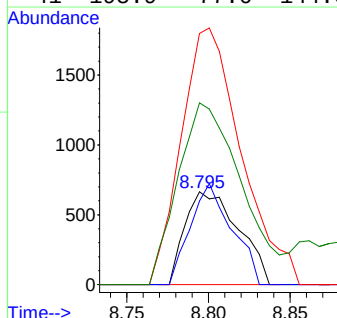
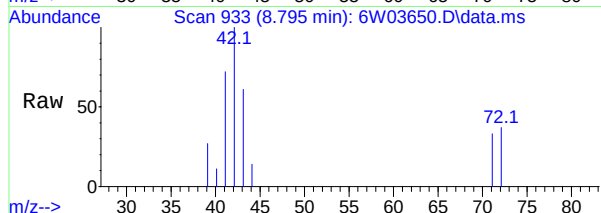
Tgt Ion: 83 Resp: 38075
Ion Ratio Lower Upper
83 100
85 63.9 45.2 84.0
87 10.0 7.3 13.7
47 19.8 15.0 28.0





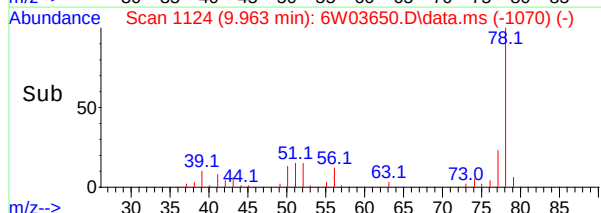
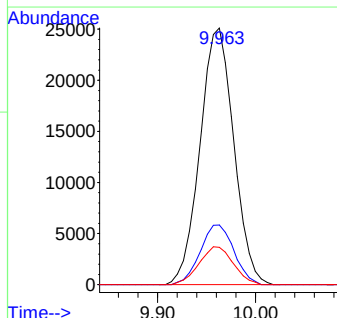
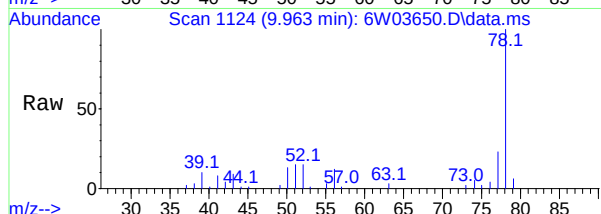
#47
Tetrahydrofuran
Concen: 0.15 ppb(v)
RT: 8.795 min Scan# 933
Delta R.T. 0.024 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

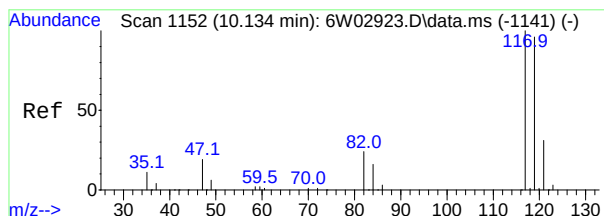
Tgt Ion: 72 Resp: 1515
Ion Ratio Lower Upper
72 100
71 90.2 65.4 121.4
42 270.9 146.4 271.8
41 195.9 77.6 144.0#



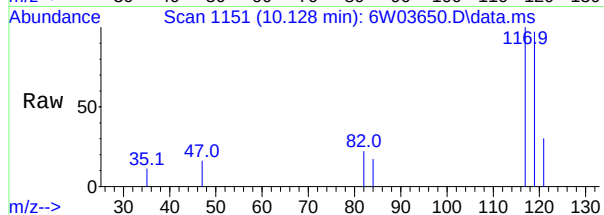
#50
Benzene
Concen: 0.80 ppb(v)
RT: 9.963 min Scan# 1124
Delta R.T. -0.000 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

Tgt Ion: 78 Resp: 60153
Ion Ratio Lower Upper
78 100
77 23.2 16.6 30.8
51 14.5 10.6 19.6

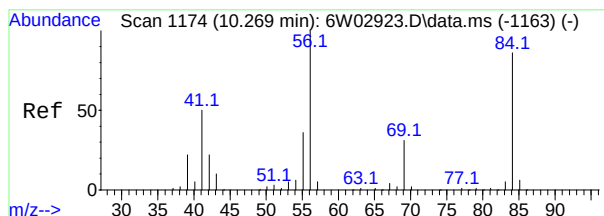
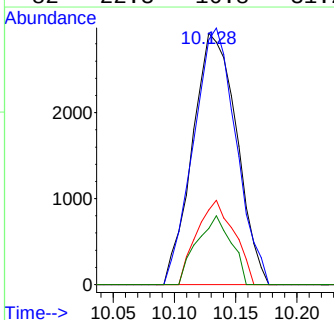
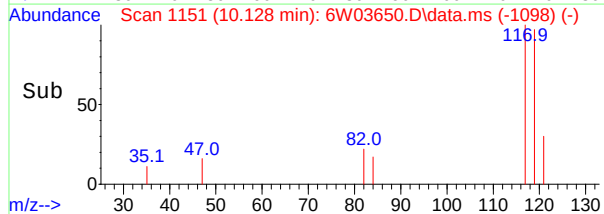




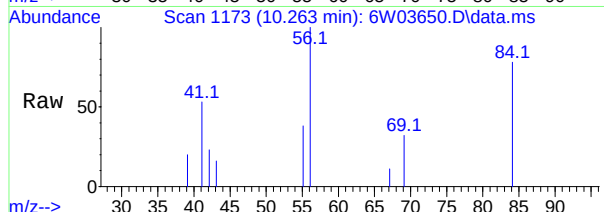
#51
Carbon Tetrachloride
Concen: 0.15 ppb(v)
RT: 10.128 min Scan# 1151
Delta R.T. -0.006 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am



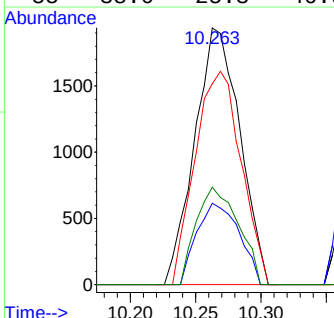
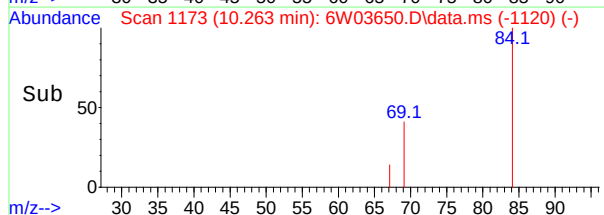
Tgt Ion: 117 Resp: 7332
Ion Ratio Lower Upper
117 100
119 97.2 67.4 125.2
121 29.6 21.9 40.7
82 22.3 16.8 31.2

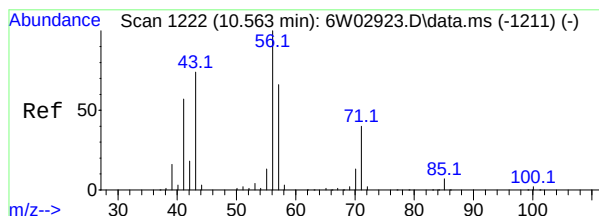


#52
Cyclohexane
Concen: 0.14 ppb(v)
RT: 10.263 min Scan# 1173
Delta R.T. -0.006 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am



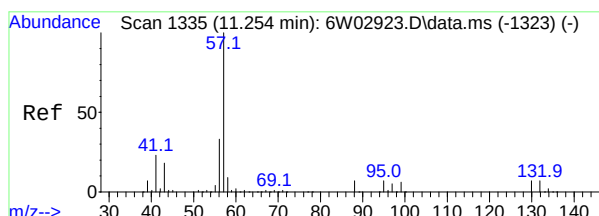
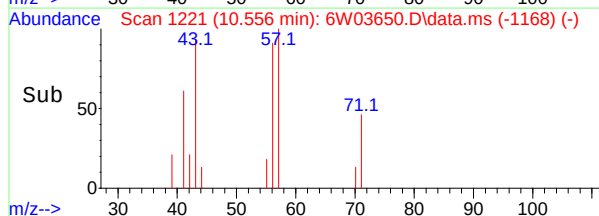
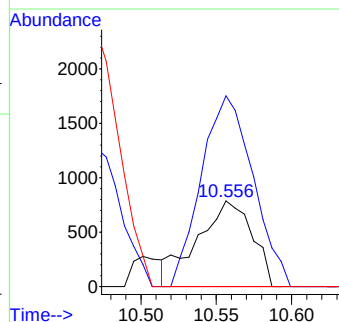
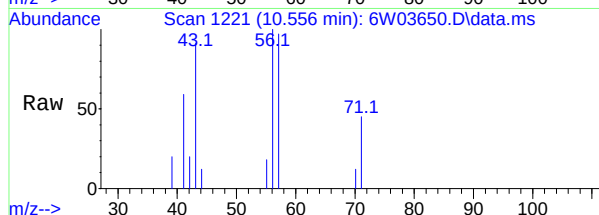
Tgt Ion: 56 Resp: 4668
Ion Ratio Lower Upper
56 100
69 31.7 22.0 40.8
84 78.2 60.5 112.3
55 38.0 25.3 46.9





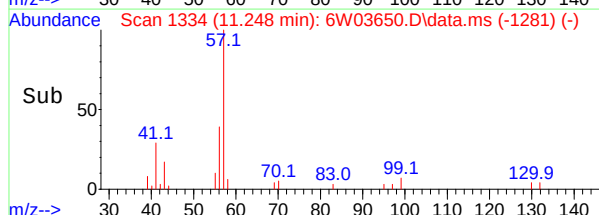
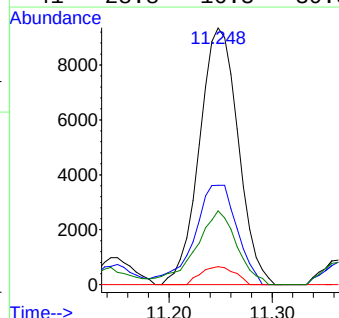
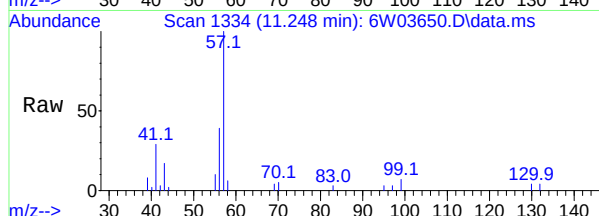
#53
2,3-Dimethylpentane
Concen: 0.13 ppb(v)
RT: 10.556 min Scan# 1221
Delta R.T. -0.006 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

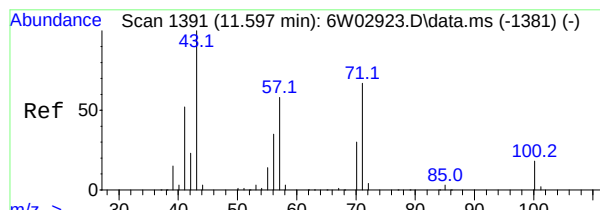
Tgt Ion: 71 Resp: 1975
Ion Ratio Lower Upper
71 100
56 222.6 173.9 323.1
85 0.0 11.5 21.3#



#55
2,2,4-Trimethylpentane
Concen: 0.21 ppb(v)
RT: 11.248 min Scan# 1334
Delta R.T. -0.006 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

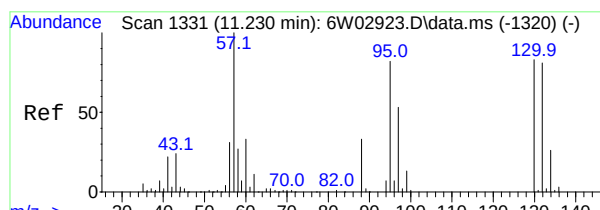
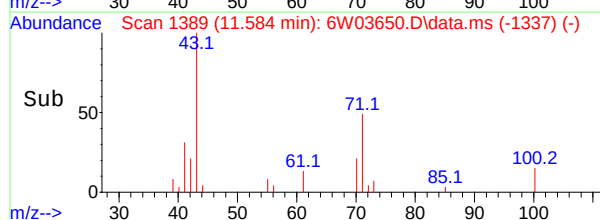
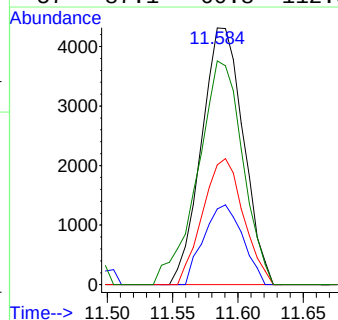
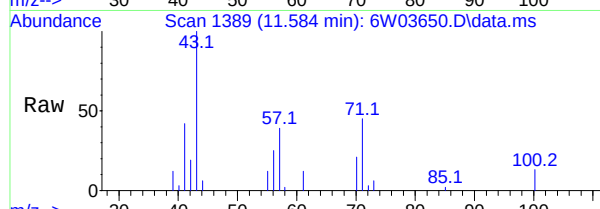
Tgt Ion: 57 Resp: 24438
Ion Ratio Lower Upper
57 100
56 38.7 23.0 42.8
99 7.0 4.5 8.3
41 28.8 16.3 30.3





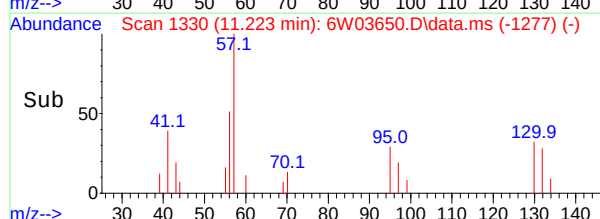
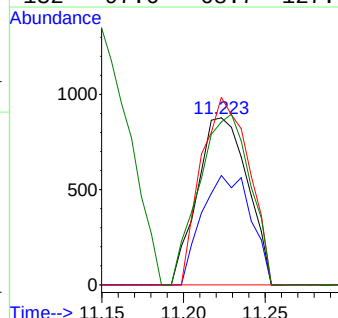
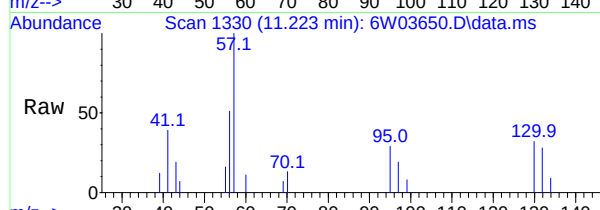
#56
Heptane
Concen: 0.39 ppb(v)
RT: 11.584 min Scan# 1389
Delta R.T. -0.012 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

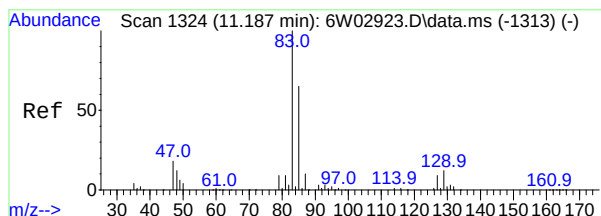
Tgt Ion: 71 Resp: 9627
Ion Ratio Lower Upper
71 100
100 29.4 20.9 38.7
70 46.6 32.1 59.5
57 87.1 60.8 112.8



#57
Trichloroethene
Concen: 0.06 ppb(v)
RT: 11.223 min Scan# 1330
Delta R.T. -0.006 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

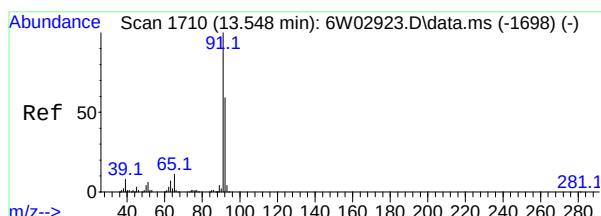
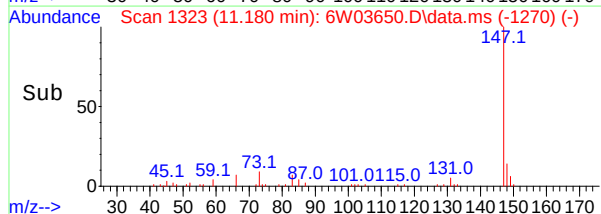
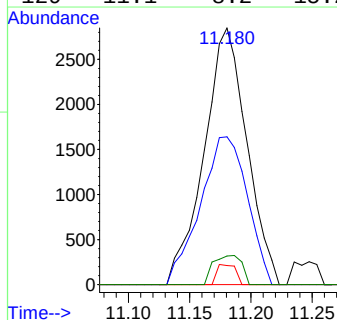
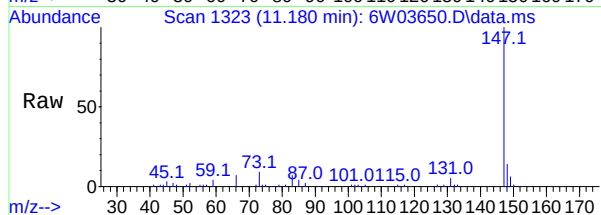
Tgt Ion: 95 Resp: 1879
Ion Ratio Lower Upper
95 100
97 65.5 45.5 84.5
130 112.2 71.0 131.8
132 97.6 68.7 127.7





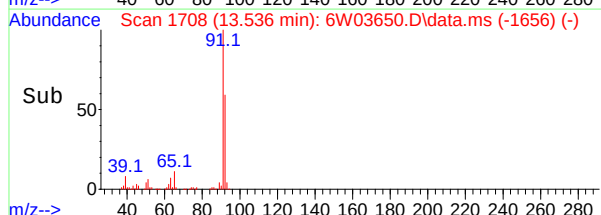
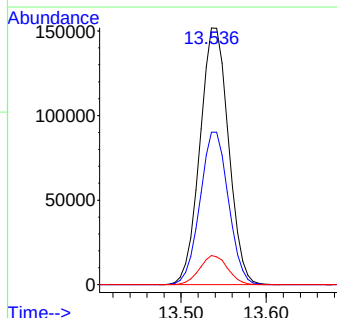
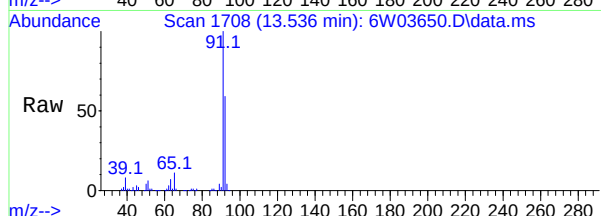
#63
Bromodichloromethane
Concen: 0.13 ppb(v)
RT: 11.180 min Scan# 1323
Delta R.T. -0.006 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

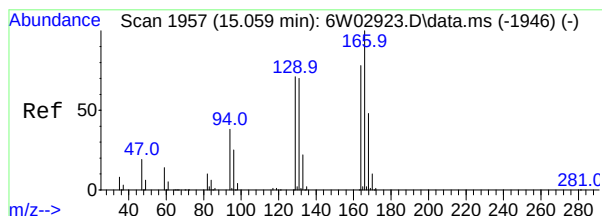
Tgt Ion:	83	Resp:	6930
Ion Ratio	Lower	Upper	
83	100		
85	57.5	45.2	84.0
127	7.4	6.2	11.4
129	11.1	8.2	15.2



#67
Toluene
Concen: 3.89 ppb(v)
RT: 13.536 min Scan# 1708
Delta R.T. -0.012 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

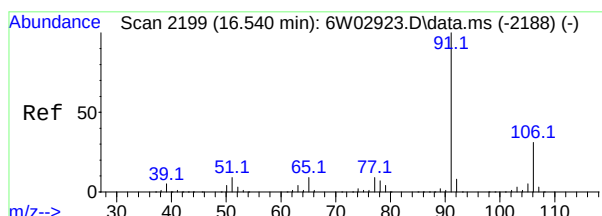
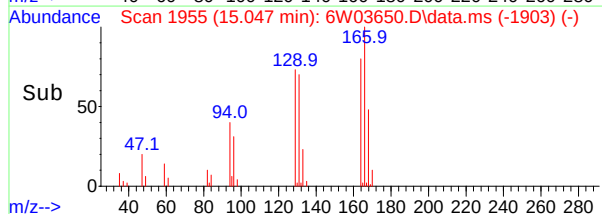
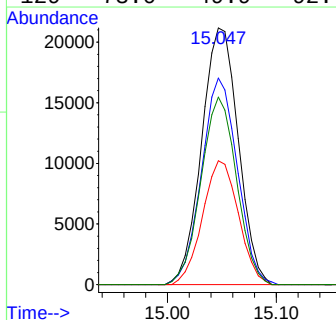
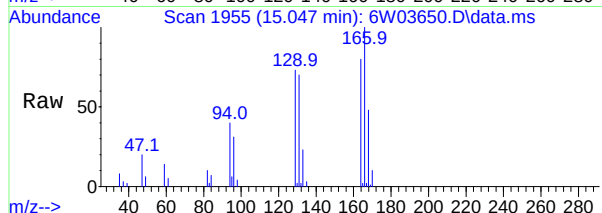
Tgt Ion:	91	Resp:	353445
Ion Ratio	Lower	Upper	
91	100		
92	59.4	41.0	76.2
65	11.3	7.8	14.4





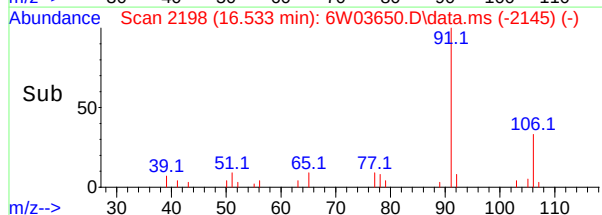
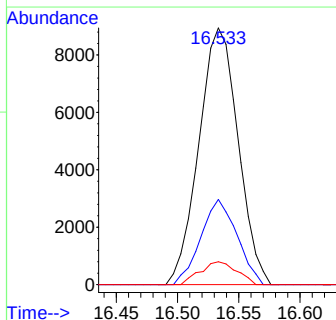
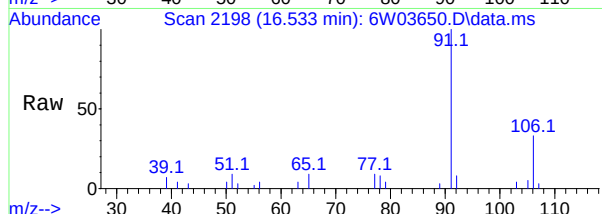
#73
Tetrachloroethene
Concen: 1.09 ppb(v)
RT: 15.047 min Scan# 1955
Delta R.T. -0.012 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

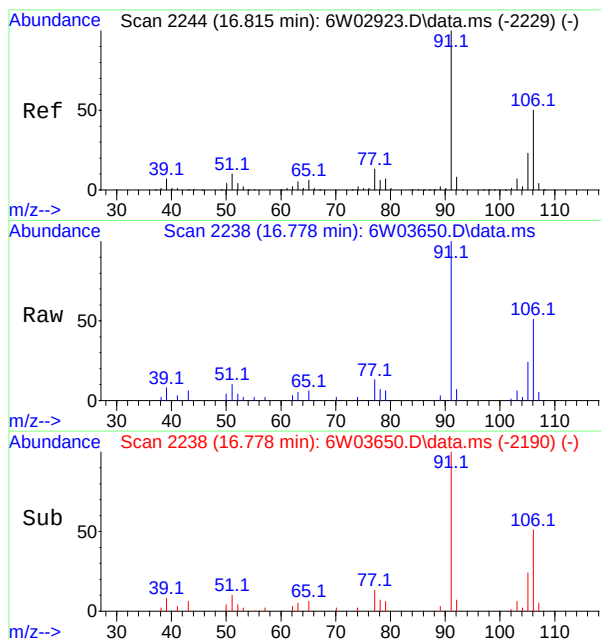
Tgt Ion: 166 Resp: 49765
Ion Ratio Lower Upper
166 100
164 80.4 54.5 101.1
168 48.3 33.9 62.9
129 73.0 49.9 92.7



#79
Ethylbenzene
Concen: 0.19 ppb(v)
RT: 16.533 min Scan# 2198
Delta R.T. -0.006 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

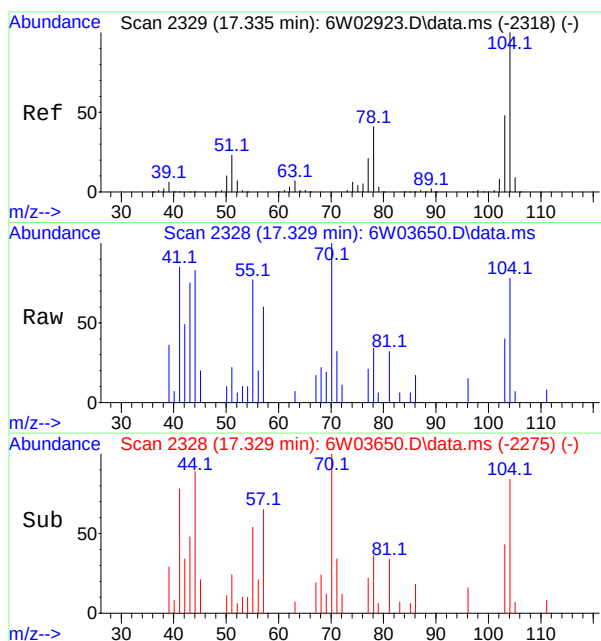
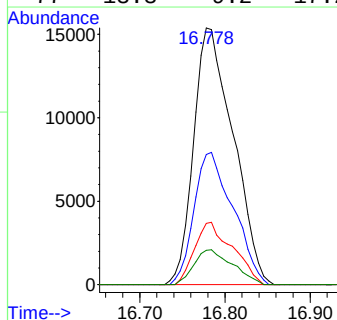
Tgt Ion: 91 Resp: 19892
Ion Ratio Lower Upper
91 100
106 33.2 22.0 41.0
77 8.9 6.0 11.2





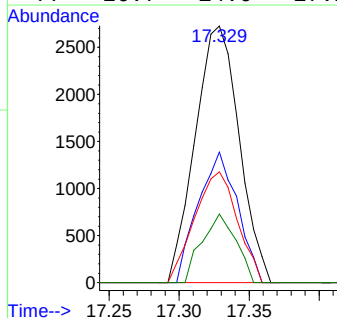
#80
m,p-Xylene
Concen: 0.62 ppb(v)
RT: 16.778 min Scan# 2238
Delta R.T. -0.037 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

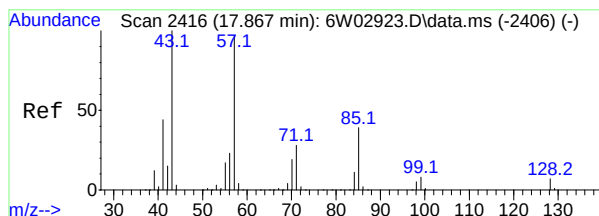
Tgt Ion: 91 Resp: 49614
Ion Ratio Lower Upper
91 100
106 50.7 35.1 65.3
105 23.8 16.0 29.8
77 13.3 9.2 17.2



#81
Styrene
Concen: 0.11 ppb(v)
RT: 17.329 min Scan# 2328
Delta R.T. -0.006 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

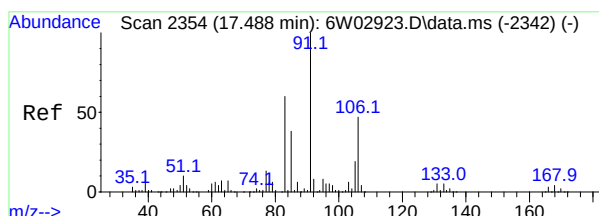
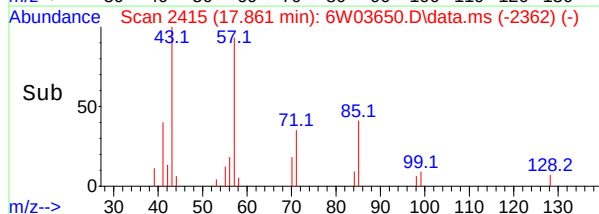
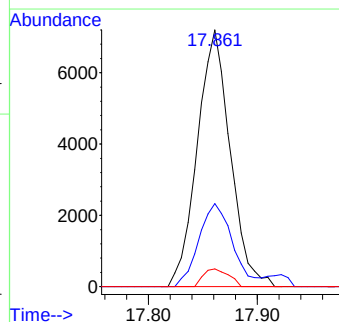
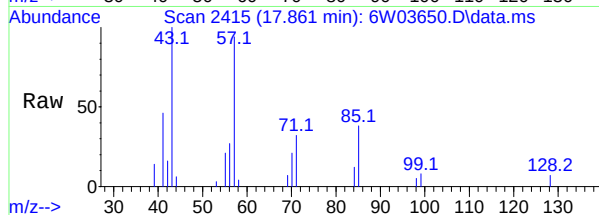
Tgt Ion: 104 Resp: 5956
Ion Ratio Lower Upper
104 100
103 50.9 33.4 62.0
78 43.1 28.8 53.4
77 26.7 14.6 27.2





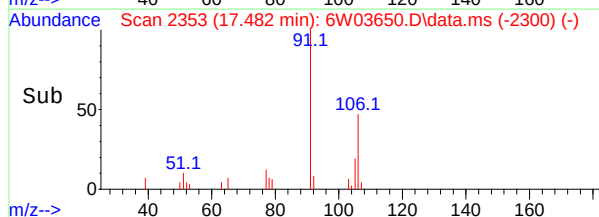
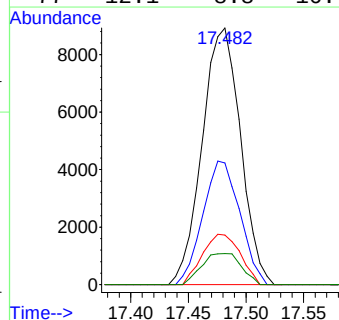
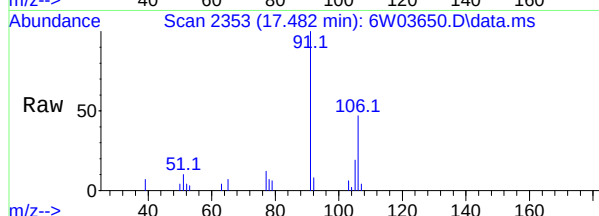
#82
Nonane
Concen: 0.30 ppb(v)
RT: 17.861 min Scan# 2415
Delta R.T. -0.006 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

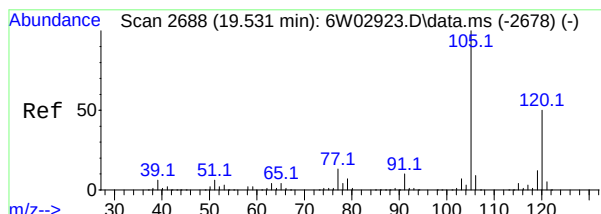
Tgt Ion: 43 Resp: 15153
Ion Ratio Lower Upper
43 100
71 32.3 19.5 36.3
128 6.9 4.6 8.6



#83
o-Xylene
Concen: 0.26 ppb(v)
RT: 17.482 min Scan# 2353
Delta R.T. -0.006 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

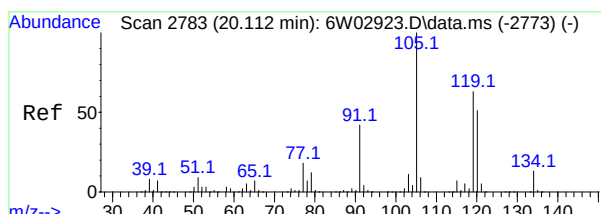
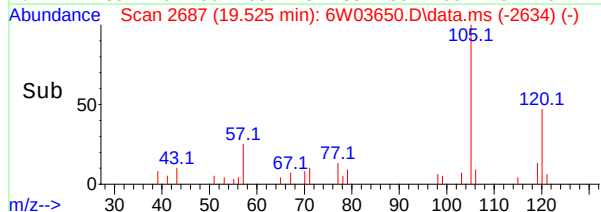
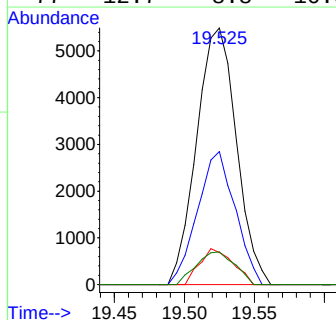
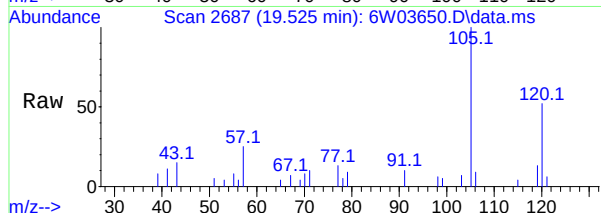
Tgt Ion: 91 Resp: 20632
Ion Ratio Lower Upper
91 100
106 47.4 33.2 61.6
105 19.3 13.4 25.0
77 12.1 8.8 16.4





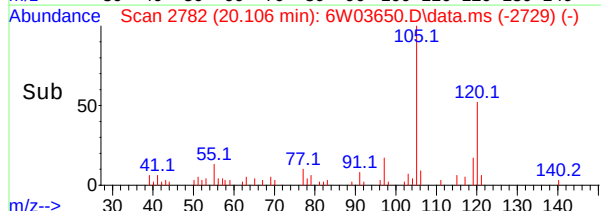
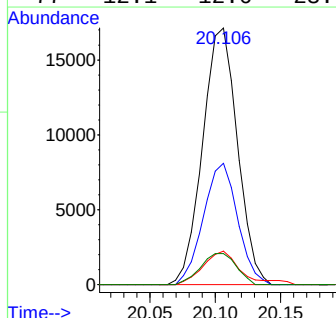
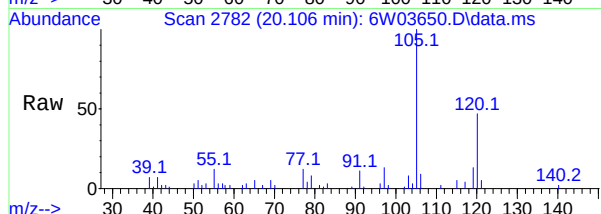
#93
1,3,5-Trimethylbenzene
Concen: 0.13 ppb(v)
RT: 19.525 min Scan# 2687
Delta R.T. -0.006 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

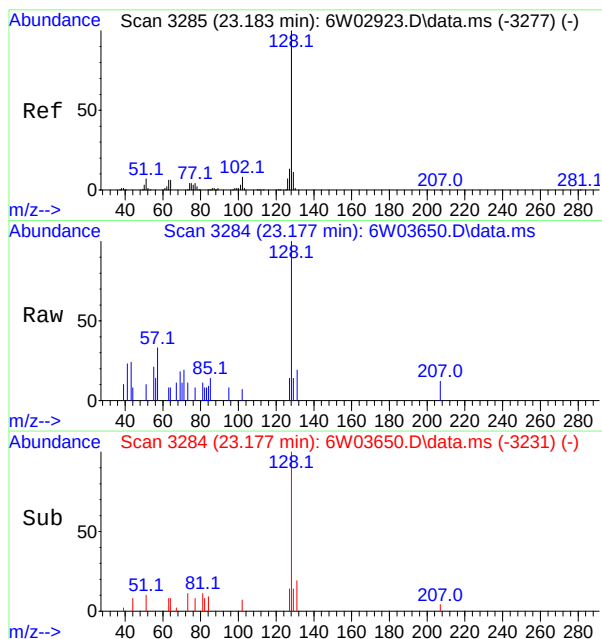
Tgt Ion:	105	Resp:	10883
Ion Ratio	Lower	Upper	
105	100		
120	51.9	34.9	64.9
119	12.6	8.6	16.0
77	12.7	8.8	16.3



#96
1,2,4-Trimethylbenzene
Concen: 0.39 ppb(v)
RT: 20.106 min Scan# 2782
Delta R.T. -0.006 min
Lab File: 6W03650.D
Acq: 21 Dec 2017 6:06 am

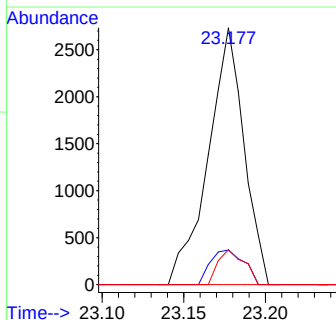
Tgt Ion:	105	Resp:	31808
Ion Ratio	Lower	Upper	
105	100		
120	47.3	35.7	66.3
119	13.1	44.4	82.4#
77	12.1	12.6	23.4#





#106
 Naphthalene
 Concen: 0.10 ppb(v)
 RT: 23.177 min Scan# 3284
 Delta R.T. -0.006 min
 Lab File: 6W03650.D
 Acq: 21 Dec 2017 6:06 am

Tgt Ion	Ratio	Lower	Upper
128	100		
127	13.5	8.8	16.3
129	13.5	7.6	14.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03673.D
 Acq On : 22 Dec 2017 3:47 am
 Operator : DANAT
 Sample : jc56815-11
 Misc : MS22955,V6W106,100,,,1
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Dec 22 15:10:57 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

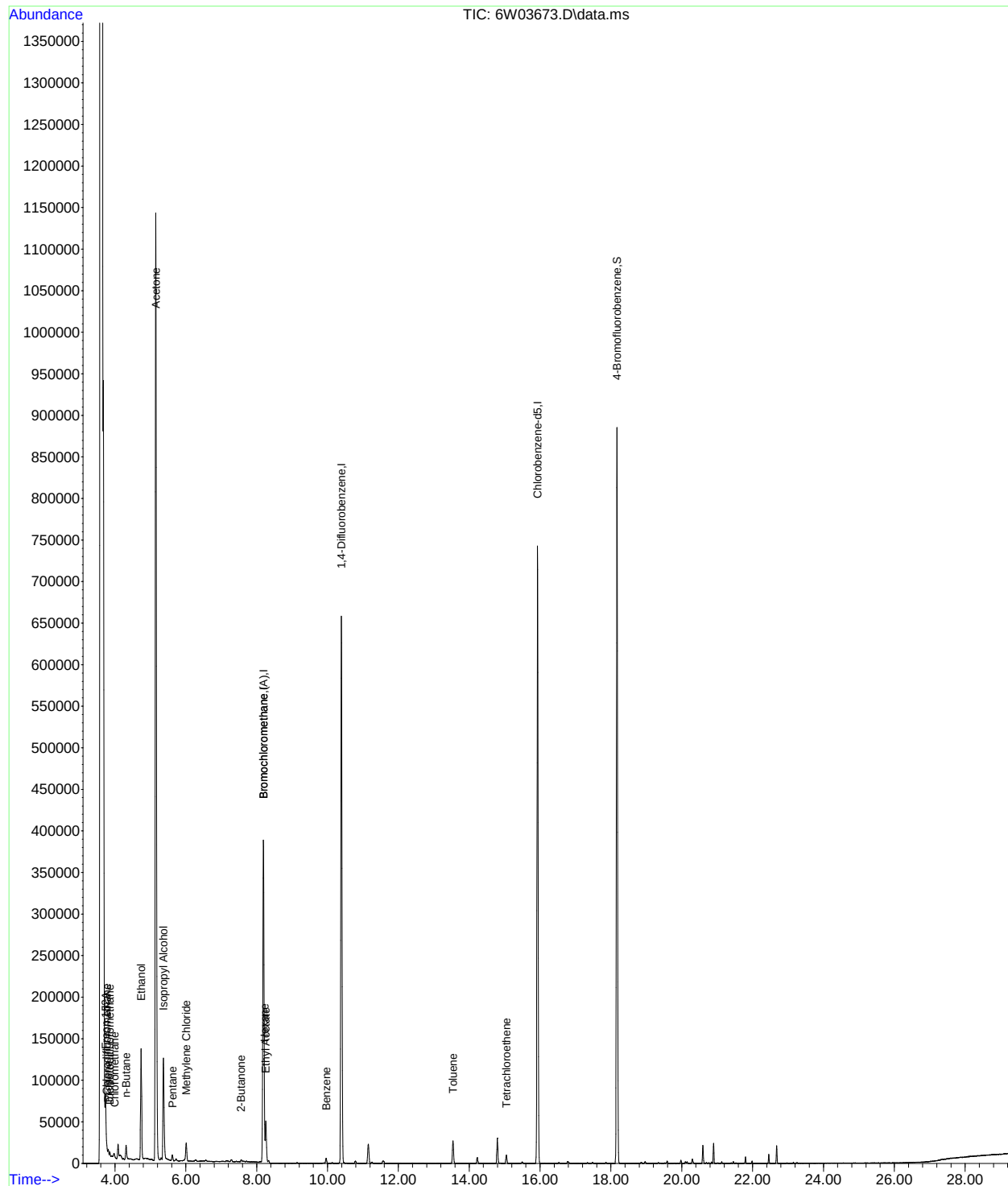
Internal Standards						
1) Bromochloromethane	8.195	130	189365	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.391	114	698803	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.928	82	315410	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.195	130	189365	10.00	ppb(v	0.00
System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.173	95	419173	10.31	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	103.10%
Target Compounds						
					Qvalue	
3) Freon 152A	3.735	65	31608	2.57	ppb(v	96
4) Chlorodifluoromethane	3.766	67	1920	0.45	ppb(v#	57
5) Propene	3.803	41	3085	0.23	ppb(v#	84
7) Dichlorodifluoromethane	3.852	85	6482	0.14	ppb(v	99
9) Chloromethane	3.986	50	2196	0.14	ppb(v	94
13) n-Butane	4.317	58	2110	0.68	ppb(v#	41
22) Acetone	5.149	58	601327	62.57	ppb(v	86
23) Pentane	5.620	57	875	0.19	ppb(v	92
26) Isopropyl Alcohol	5.369	45	185694	4.88	ppb(v	100
29) Methylene Chloride	6.011	84	12831	0.66	ppb(v	98
31) Ethanol	4.733	45	166271	30.71	ppb(v	100
39) 2-Butanone	7.559	72	1038	0.11	ppb(v#	93
40) Hexane	8.220	57	4056	0.13	ppb(v#	54
43) Ethyl Acetate	8.256	61	11444	1.82	ppb(v	76
50) Benzene	9.963	78	6142	0.10	ppb(v	99
67) Toluene	13.542	91	29838	0.39	ppb(v	99
73) Tetrachloroethene	15.047	166	4414	0.12	ppb(v	98

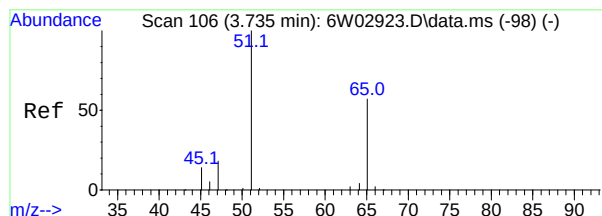
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W03673.D
Acq On : 22 Dec 2017 3:47 am
Operator : DANAT
Sample : jc56815-11
Misc : MS22955,V6W106,100,,,,,1
ALS Vial : 16 Sample Multiplier: 1

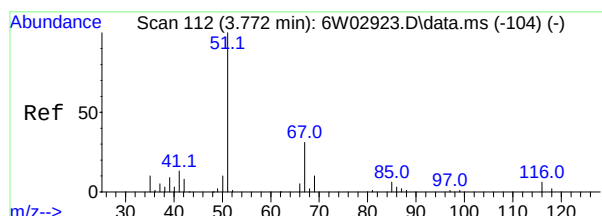
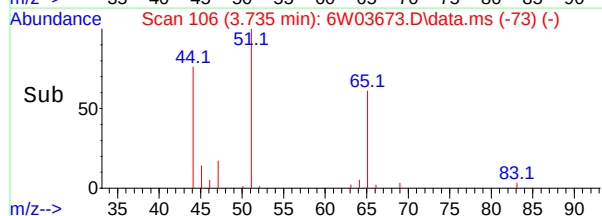
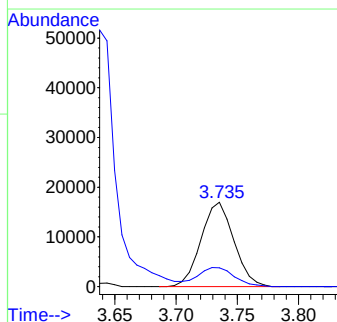
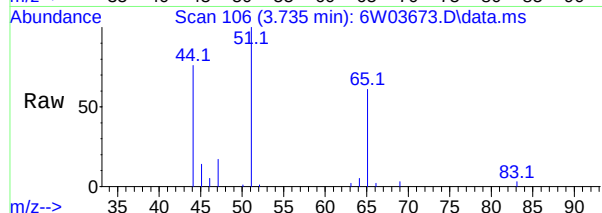
Quant Time: Dec 22 15:10:57 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration





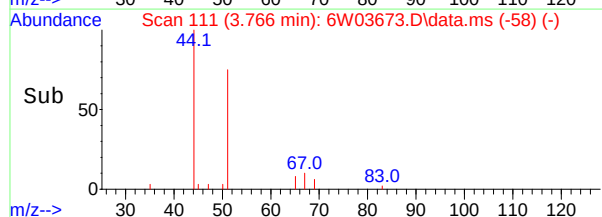
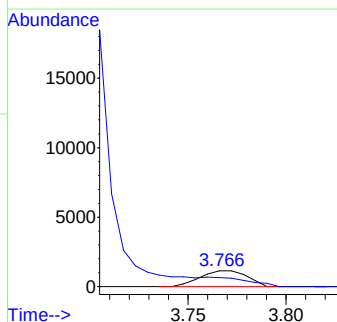
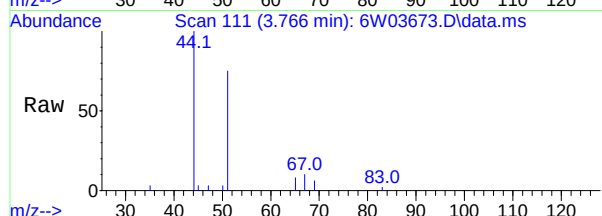
#3
 Freon 152A
 Concen: 2.57 ppb(v)
 RT: 3.735 min Scan# 106
 Delta R.T. 0.000 min
 Lab File: 6W03673.D
 Acq: 22 Dec 2017 3:47 am

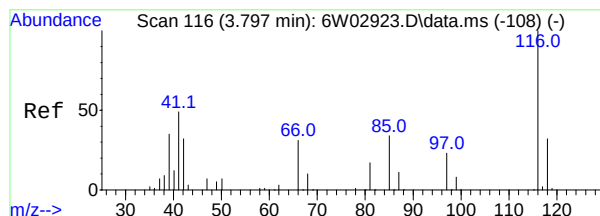
Tgt Ion: 65 Resp: 31608
 Ion Ratio Lower Upper
 65 100
 45 22.2 16.9 31.5



#4
 Chlorodifluoromethane
 Concen: 0.45 ppb(v)
 RT: 3.766 min Scan# 111
 Delta R.T. -0.006 min
 Lab File: 6W03673.D
 Acq: 22 Dec 2017 3:47 am

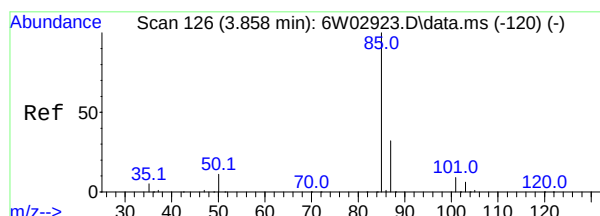
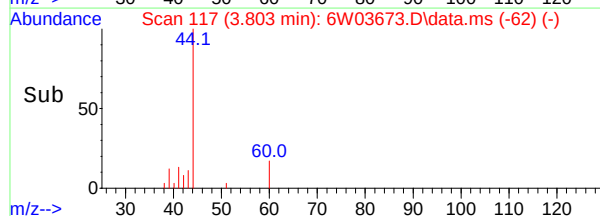
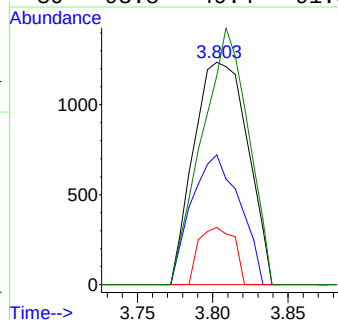
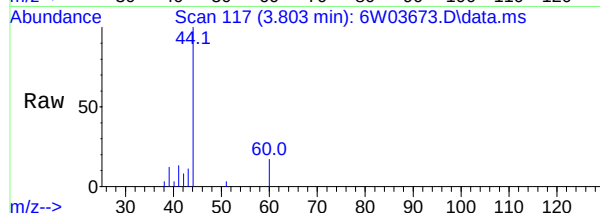
Tgt Ion: 67 Resp: 1920
 Ion Ratio Lower Upper
 67 100
 69 56.6 22.7 42.1#





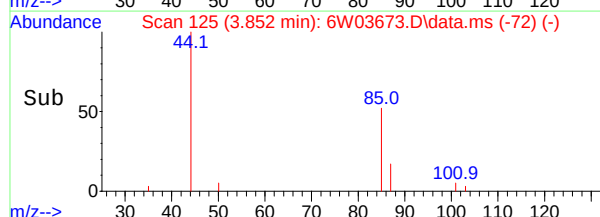
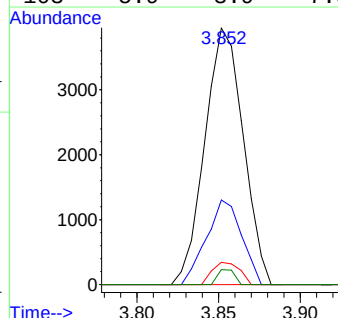
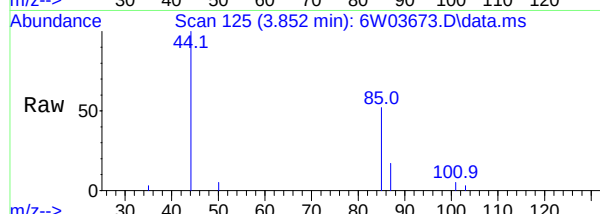
#5
Propene
Concen: 0.23 ppb(v)
RT: 3.803 min Scan# 117
Delta R.T. 0.006 min
Lab File: 6W03673.D
Acq: 22 Dec 2017 3:47 am

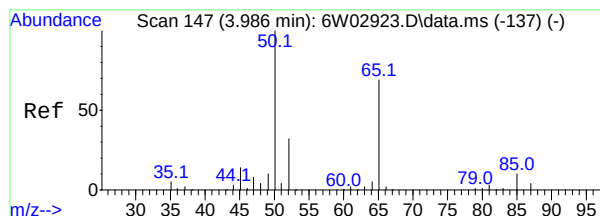
Tgt Ion: 41 Resp: 3085
Ion Ratio Lower Upper
41 100
42 58.4 45.4 84.4
40 25.7 17.4 32.2
39 93.8 49.4 91.8#



#7
Dichlorodifluoromethane
Concen: 0.14 ppb(v)
RT: 3.852 min Scan# 125
Delta R.T. -0.006 min
Lab File: 6W03673.D
Acq: 22 Dec 2017 3:47 am

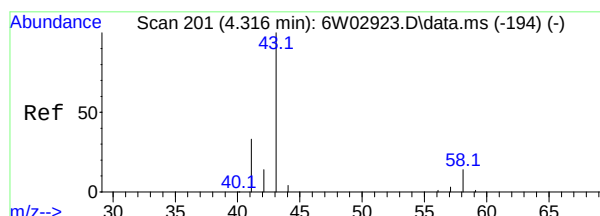
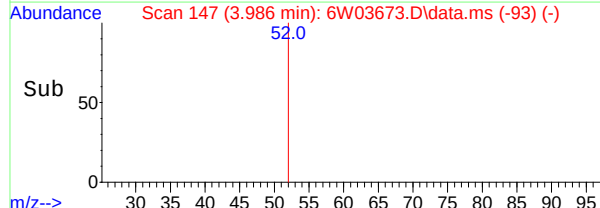
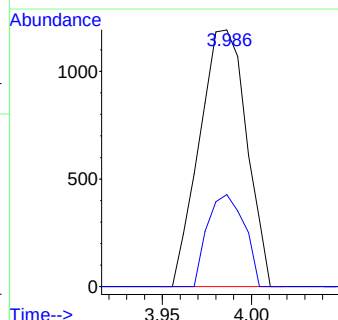
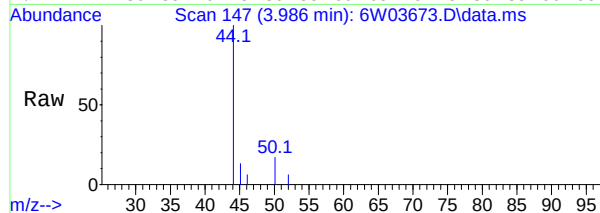
Tgt Ion: 85 Resp: 6482
Ion Ratio Lower Upper
85 100
87 33.0 22.7 42.3
101 8.7 5.9 11.1
103 5.9 3.9 7.3





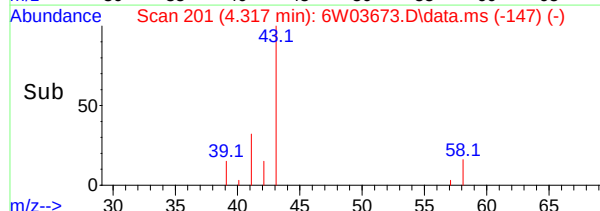
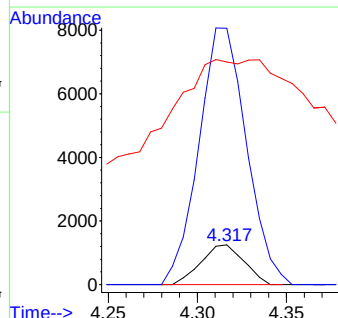
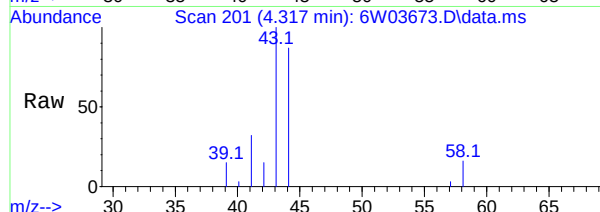
#9
Chloromethane
Concen: 0.14 ppb(v)
RT: 3.986 min Scan# 147
Delta R.T. 0.000 min
Lab File: 6W03673.D
Acq: 22 Dec 2017 3:47 am

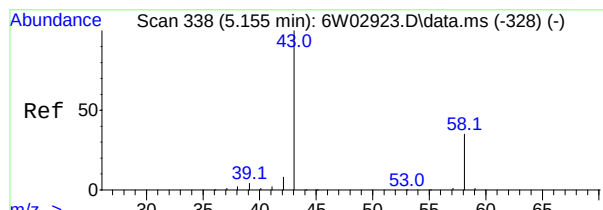
Tgt Ion: 50 Resp: 2196
Ion Ratio Lower Upper
50 100
52 35.9 22.7 42.1



#13
n-Butane
Concen: 0.68 ppb(v)
RT: 4.317 min Scan# 201
Delta R.T. 0.000 min
Lab File: 6W03673.D
Acq: 22 Dec 2017 3:47 am

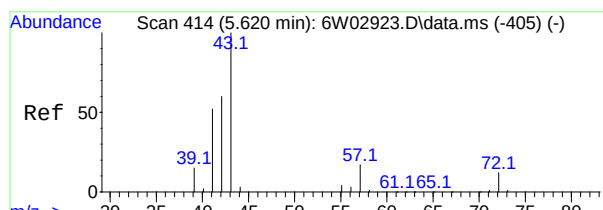
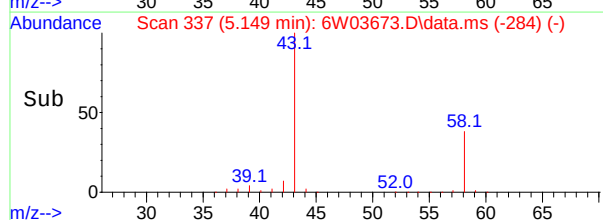
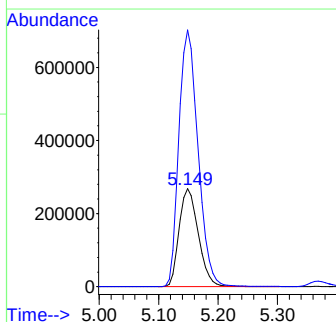
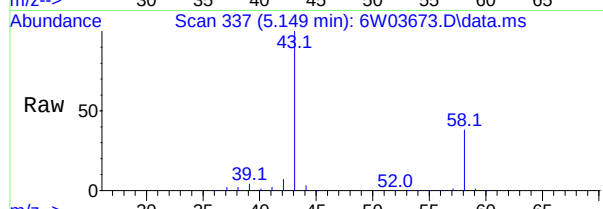
Tgt Ion: 58 Resp: 2110
Ion Ratio Lower Upper
58 100
43 643.8 499.8 928.2
44 559.0 21.1 39.1#





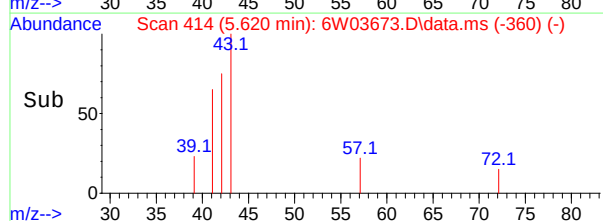
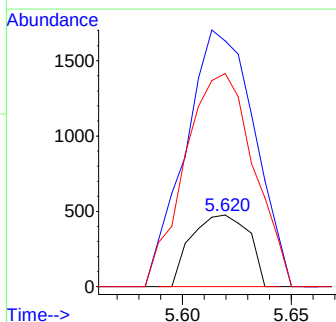
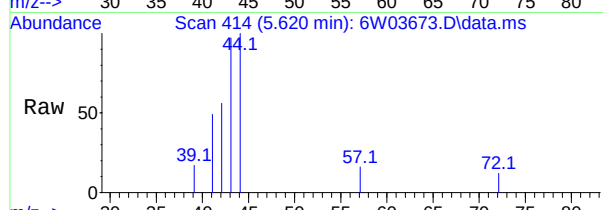
#22
Acetone
Concen: 62.57 ppb(v)
RT: 5.149 min Scan# 337
Delta R.T. -0.006 min
Lab File: 6W03673.D
Acq: 22 Dec 2017 3:47 am

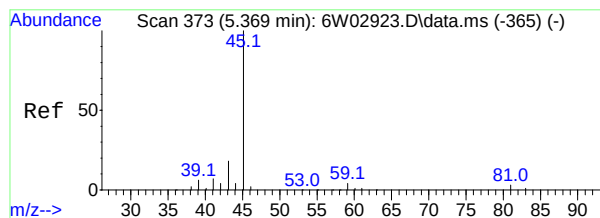
Tgt Ion: 58 Resp: 601327
Ion Ratio Lower Upper
58 100
43 261.7 202.4 375.8



#23
Pentane
Concen: 0.19 ppb(v)
RT: 5.620 min Scan# 414
Delta R.T. 0.000 min
Lab File: 6W03673.D
Acq: 22 Dec 2017 3:47 am

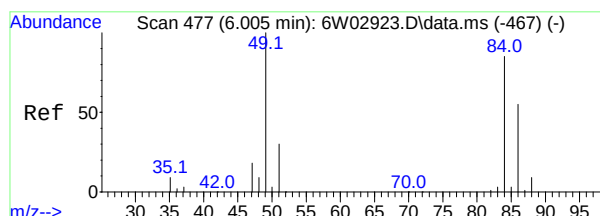
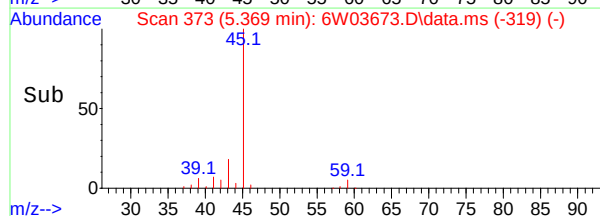
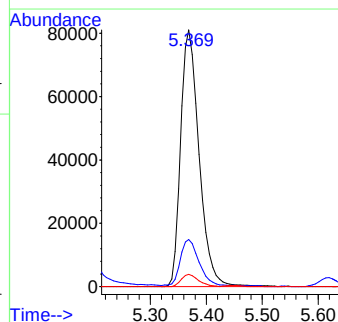
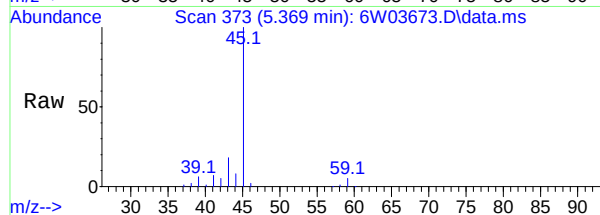
Tgt Ion: 57 Resp: 875
Ion Ratio Lower Upper
57 100
42 342.6 252.4 468.8
41 297.5 218.7 406.1





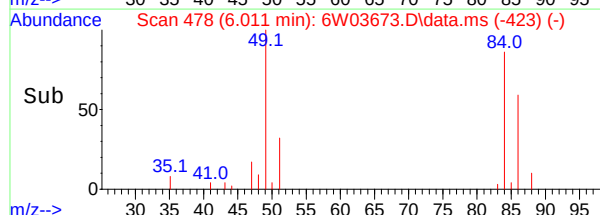
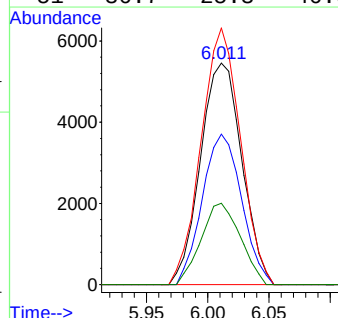
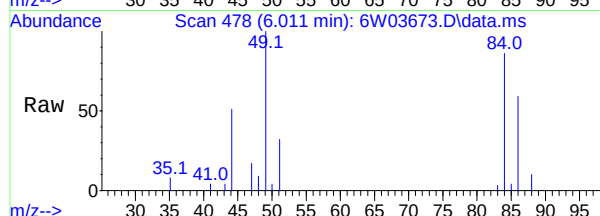
#26
Isopropyl Alcohol
Concen: 4.88 ppb(v)
RT: 5.369 min Scan# 373
Delta R.T. 0.000 min
Lab File: 6W03673.D
Acq: 22 Dec 2017 3:47 am

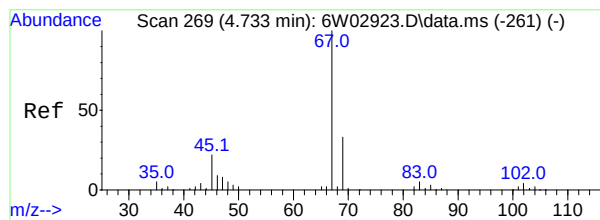
Tgt Ion: 45 Resp: 185694
Ion Ratio Lower Upper
45 100
43 18.3 12.8 23.8
59 4.8 3.0 5.6



#29
Methylene Chloride
Concen: 0.66 ppb(v)
RT: 6.011 min Scan# 478
Delta R.T. 0.006 min
Lab File: 6W03673.D
Acq: 22 Dec 2017 3:47 am

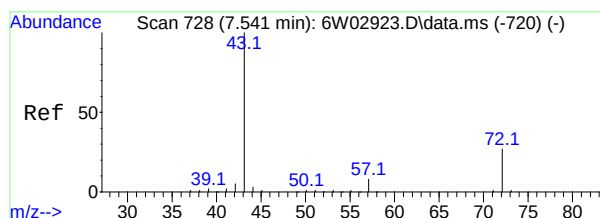
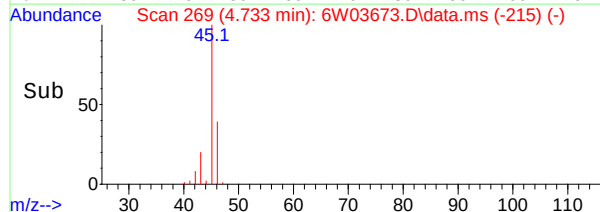
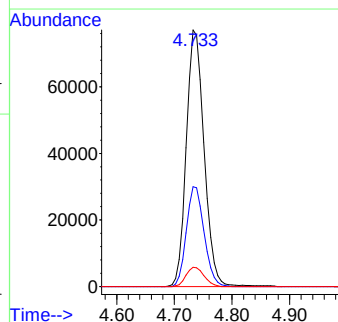
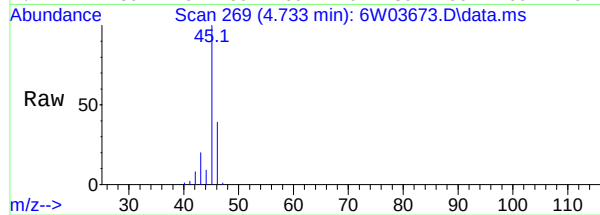
Tgt Ion: 84 Resp: 12831
Ion Ratio Lower Upper
84 100
86 67.9 44.8 83.2
49 115.9 82.1 152.5
51 36.7 25.3 46.9





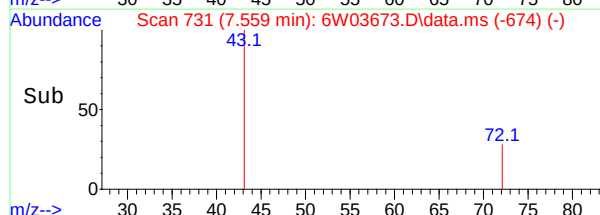
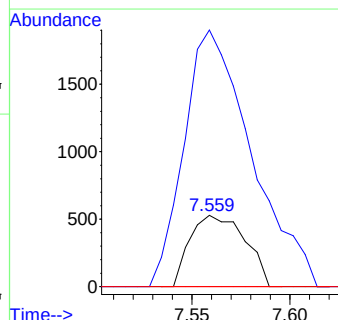
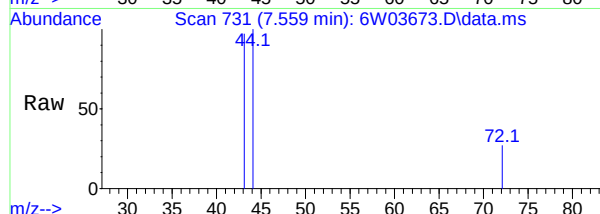
#31
Ethanol
Concen: 30.71 ppb(v)
RT: 4.733 min Scan# 269
Delta R.T. 0.000 min
Lab File: 6W03673.D
Acq: 22 Dec 2017 3:47 am

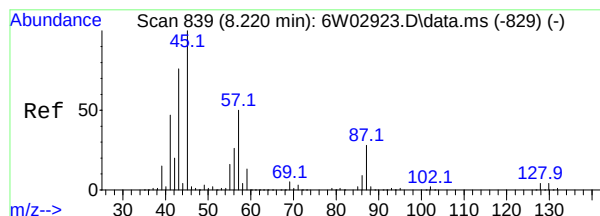
Tgt Ion: 45 Resp: 166271
Ion Ratio Lower Upper
45 100
46 39.0 27.2 50.4
42 7.5 5.6 10.4



#39
2-Butanone
Concen: 0.11 ppb(v)
RT: 7.559 min Scan# 731
Delta R.T. 0.018 min
Lab File: 6W03673.D
Acq: 22 Dec 2017 3:47 am

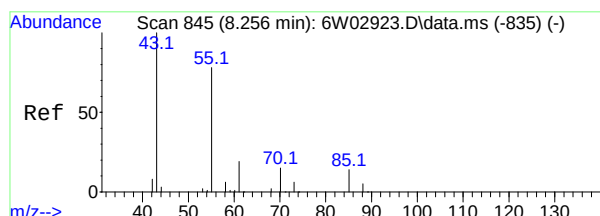
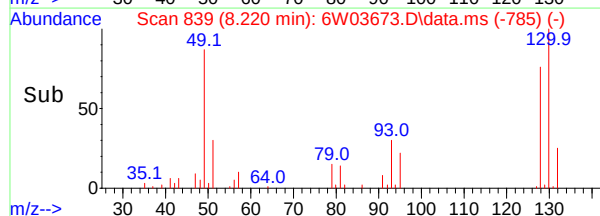
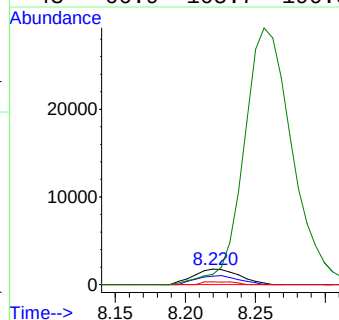
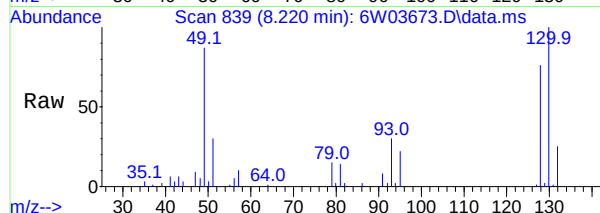
Tgt Ion: 72 Resp: 1038
Ion Ratio Lower Upper
72 100
43 359.7 257.4 478.0
57 0.0 21.0 39.0#





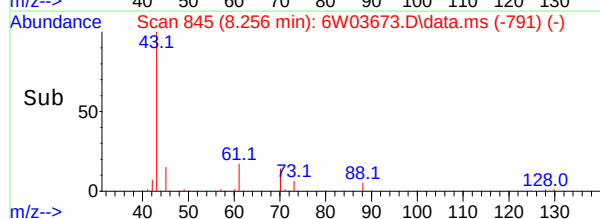
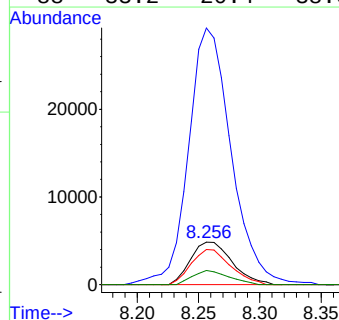
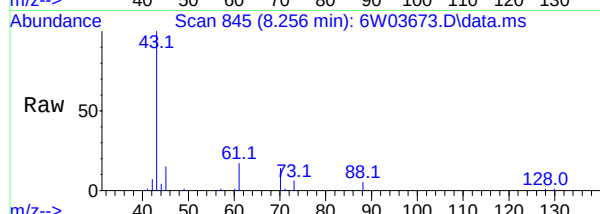
#40
Hexane
Concen: 0.13 ppb(v)
RT: 8.220 min Scan# 839
Delta R.T. 0.000 min
Lab File: 6W03673.D
Acq: 22 Dec 2017 3:47 am

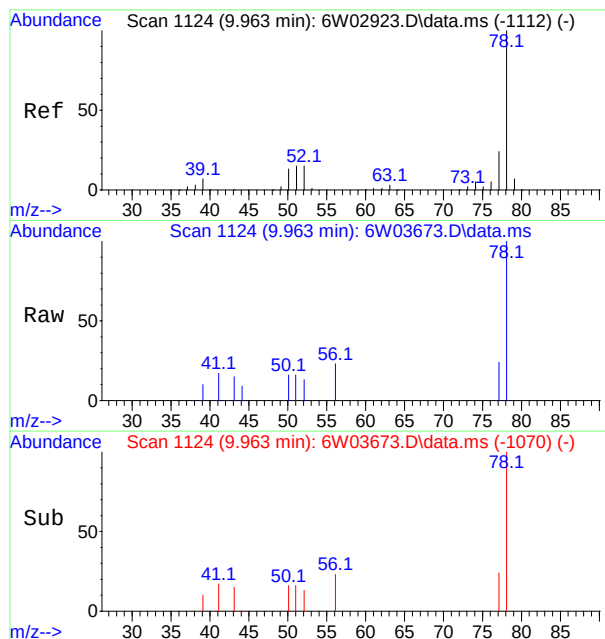
Tgt Ion: 57 Resp: 4056
Ion Ratio Lower Upper
57 100
56 54.0 36.0 67.0
86 17.5 12.1 22.5
43 66.9 105.7 196.3#



#43
Ethyl Acetate
Concen: 1.82 ppb(v)
RT: 8.256 min Scan# 845
Delta R.T. 0.000 min
Lab File: 6W03673.D
Acq: 22 Dec 2017 3:47 am

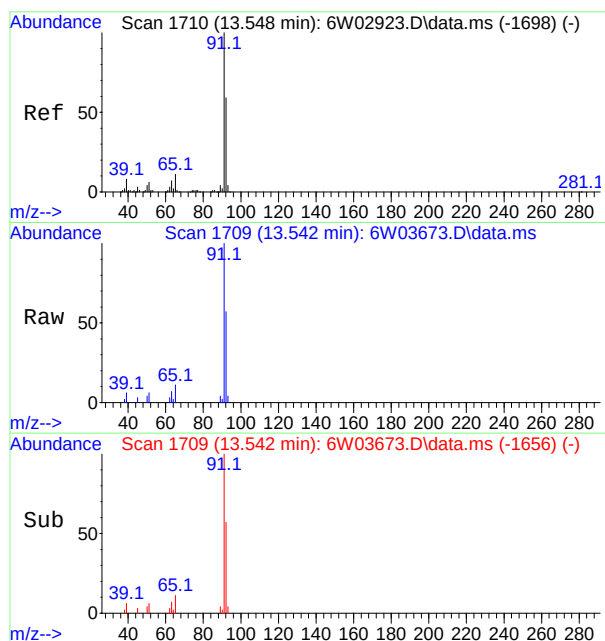
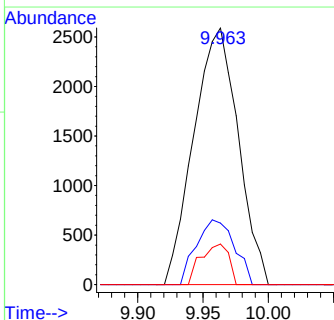
Tgt Ion: 61 Resp: 11444
Ion Ratio Lower Upper
61 100
43 604.1 488.5 907.1
70 82.5 54.9 101.9
88 33.2 20.4 38.0





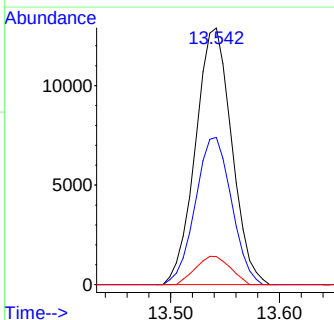
#50
Benzene
Concen: 0.10 ppb(v)
RT: 9.963 min Scan# 1124
Delta R.T. 0.000 min
Lab File: 6W03673.D
Acq: 22 Dec 2017 3:47 am

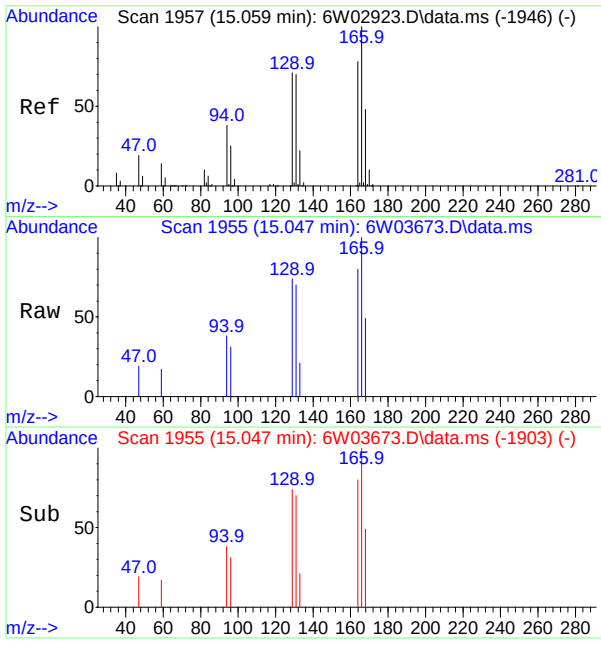
Tgt Ion: 78 Resp: 6142
Ion Ratio Lower Upper
78 100
77 23.9 16.6 30.8
51 15.9 10.6 19.6



#67
Toluene
Concen: 0.39 ppb(v)
RT: 13.542 min Scan# 1709
Delta R.T. -0.006 min
Lab File: 6W03673.D
Acq: 22 Dec 2017 3:47 am

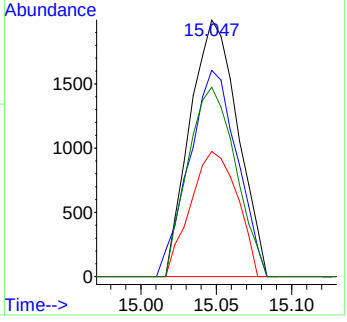
Tgt Ion: 91 Resp: 29838
Ion Ratio Lower Upper
91 100
92 57.4 41.0 76.2
65 10.9 7.8 14.4





#73
Tetrachloroethene
Concen: 0.12 ppb(v)
RT: 15.047 min Scan# 1955
Delta R.T. -0.012 min
Lab File: 6W03673.D
Acq: 22 Dec 2017 3:47 am

Tgt Ion:	166	Resp:	4414
Ion Ratio	Lower	Upper	
166	100		
164	80.3	54.5	101.1
168	48.7	33.9	62.9
129	73.7	49.9	92.7



7.1.18
7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W03699.D
Acq On : 23 Dec 2017 3:53 am
Operator : DANAT
Sample : jc56815-11
Misc : MS22955,V6W107,20,,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Dec 23 11:35:12 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.189	130	176092	10.00	ppb(v)	0.00
54) 1,4-Difluorobenzene	10.391	114	656555	10.00	ppb(v)	0.00
77) Chlorobenzene-d5	15.928	82	299916	10.00	ppb(v)	0.00
108) Bromochloromethane (A)	8.189	130	176092	10.00	ppb(v)	0.00
System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.173	95	378652	9.80	ppb(v)	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	98.00%
Target Compounds						
					Qvalue	
3) Freon 152A	3.741	65	5795	0.51	ppb(v)	98
22) Acetone	5.154	58	119906	13.42	ppb(v)	93
26) Isopropyl Alcohol	5.381	45	33498	0.95	ppb(v)	94
31) Ethanol	4.738	45	33358	6.62	ppb(v)	98
43) Ethyl Acetate	8.268	61	1590	0.27	ppb(v)	67

(#) = qualifier out of range (m) = manual integration (+) = signals summed

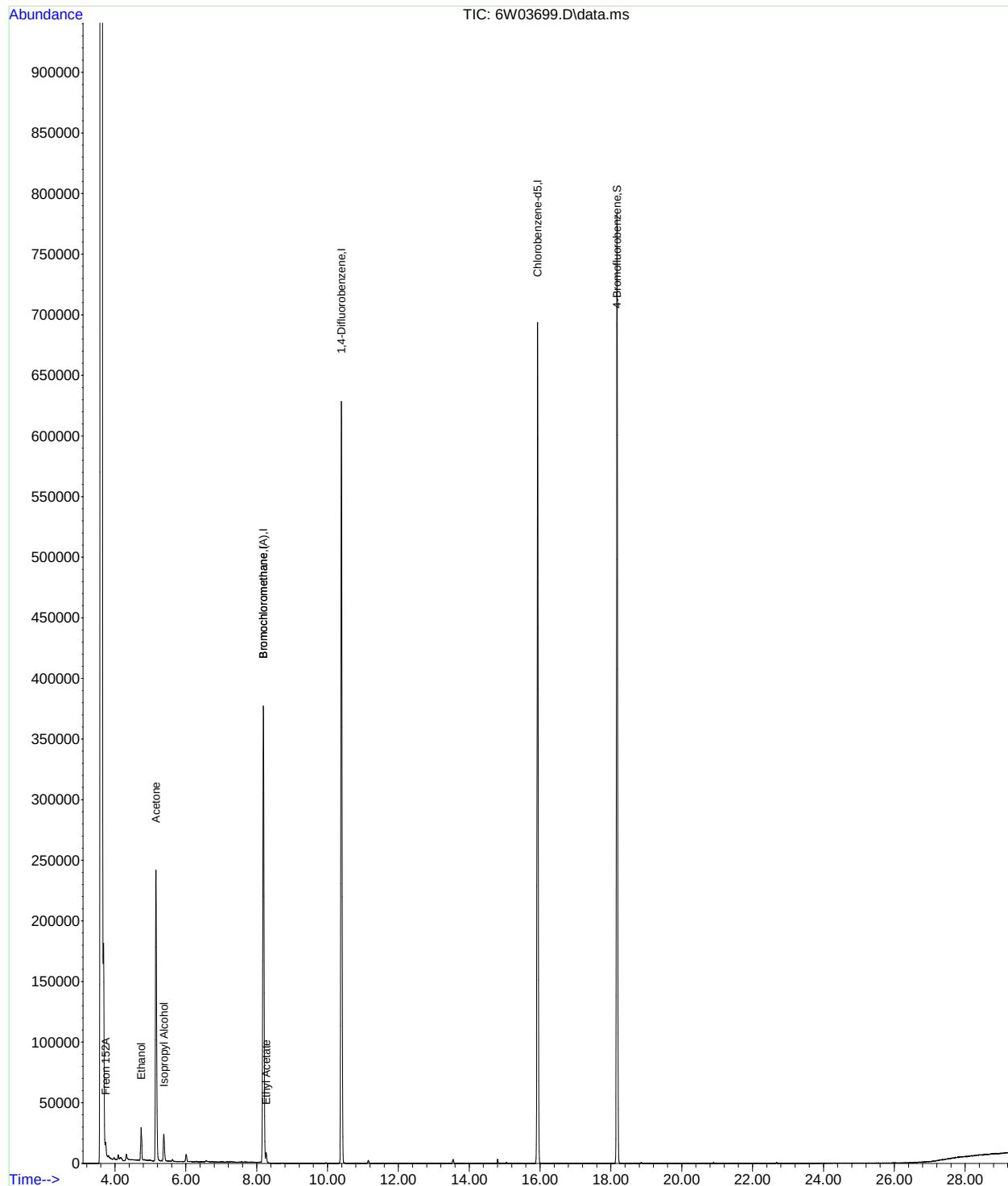
7.1.19
7

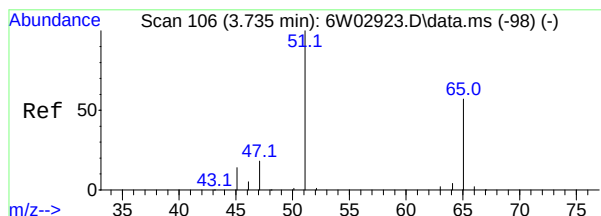


Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W03699.D
Acq On : 23 Dec 2017 3:53 am
Operator : DANAT
Sample : jc56815-11
Misc : MS22955,V6W107,20,,,1
ALS Vial : 15 Sample Multiplier: 1

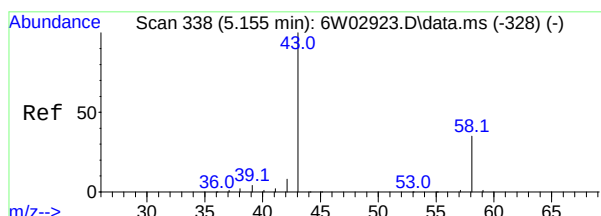
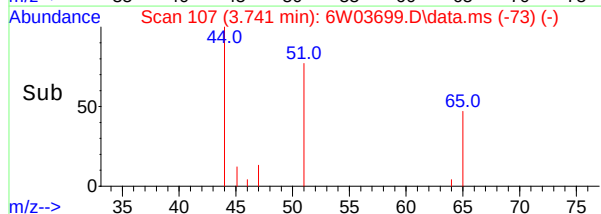
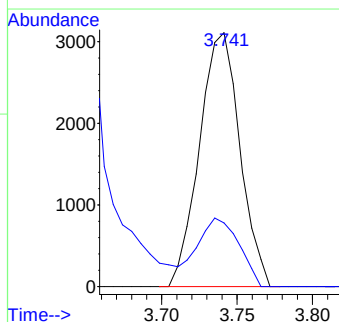
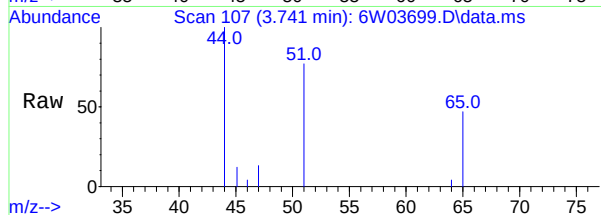
Quant Time: Dec 23 11:35:12 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration





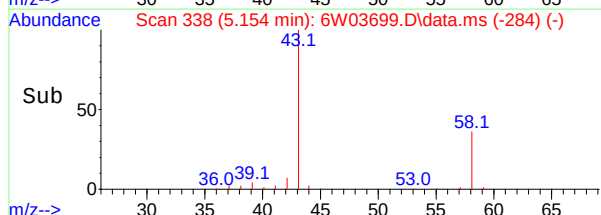
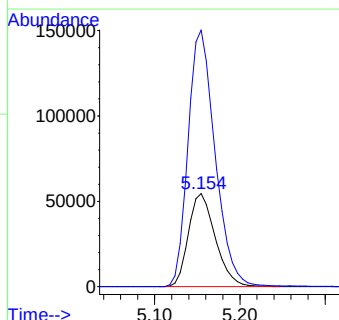
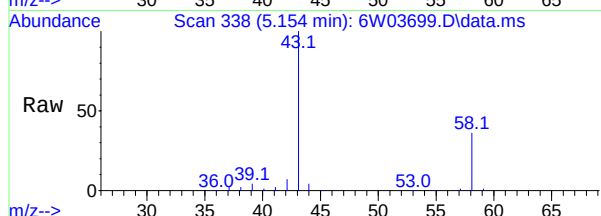
#3
Freon 152A
Concen: 0.51 ppb(v)
RT: 3.741 min Scan# 107
Delta R.T. 0.006 min
Lab File: 6W03699.D
Acq: 23 Dec 2017 3:53 am

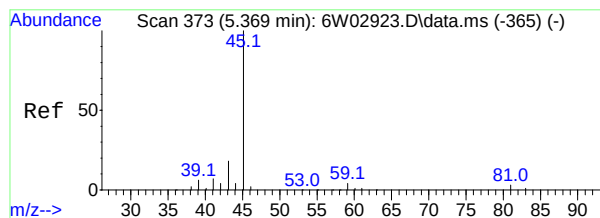
Tgt Ion: 65 Resp: 5795
Ion Ratio Lower Upper
65 100
45 25.1 16.9 31.5



#22
Acetone
Concen: 13.42 ppb(v)
RT: 5.154 min Scan# 338
Delta R.T. -0.000 min
Lab File: 6W03699.D
Acq: 23 Dec 2017 3:53 am

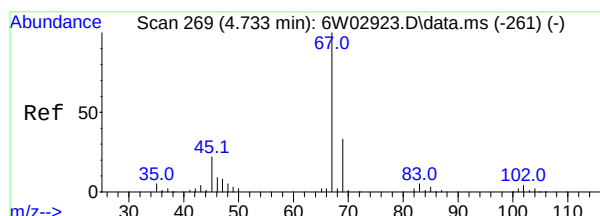
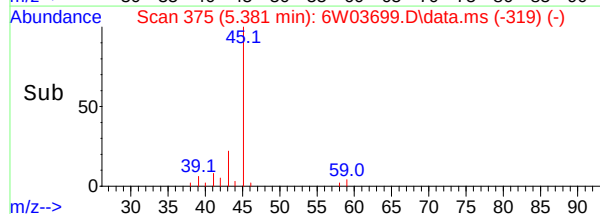
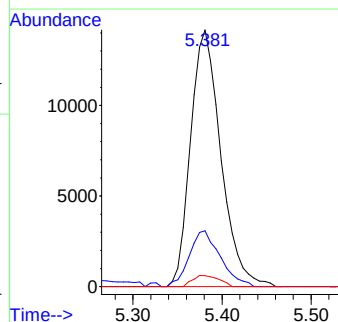
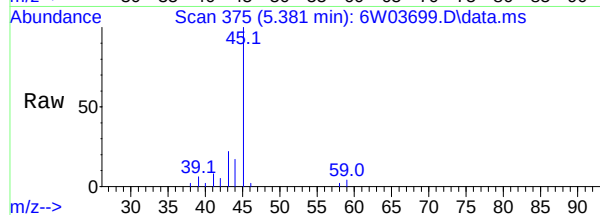
Tgt Ion: 58 Resp: 119906
Ion Ratio Lower Upper
58 100
43 275.6 202.4 375.8





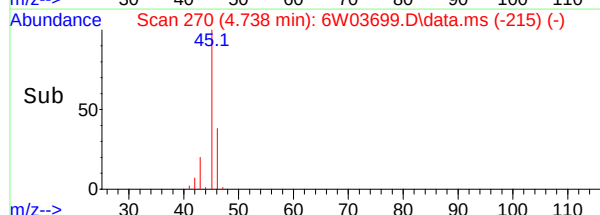
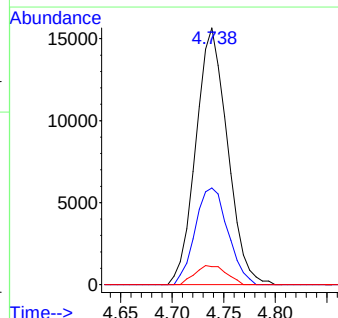
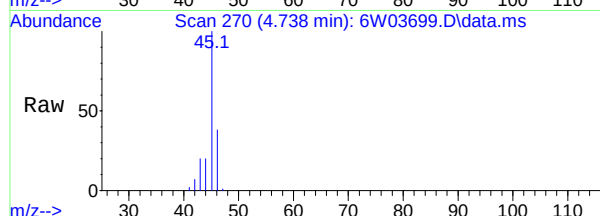
#26
Isopropyl Alcohol
Concen: 0.95 ppb(v)
RT: 5.381 min Scan# 375
Delta R.T. 0.012 min
Lab File: 6W03699.D
Acq: 23 Dec 2017 3:53 am

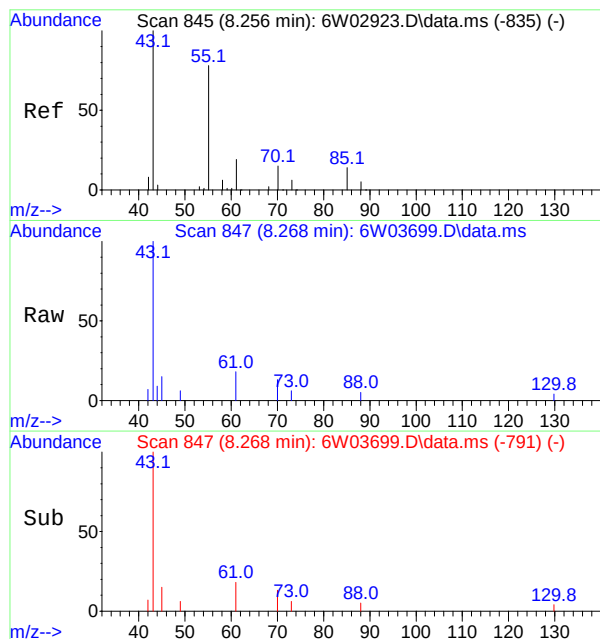
Tgt Ion: 45 Resp: 33498
Ion Ratio Lower Upper
45 100
43 21.7 12.8 23.8
59 4.2 3.0 5.6



#31
Ethanol
Concen: 6.62 ppb(v)
RT: 4.738 min Scan# 270
Delta R.T. 0.006 min
Lab File: 6W03699.D
Acq: 23 Dec 2017 3:53 am

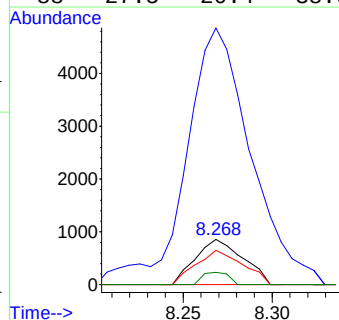
Tgt Ion: 45 Resp: 33358
Ion Ratio Lower Upper
45 100
46 37.6 27.2 50.4
42 7.1 5.6 10.4





#43
 Ethyl Acetate
 Concen: 0.27 ppb(v)
 RT: 8.268 min Scan# 847
 Delta R.T. 0.012 min
 Lab File: 6W03699.D
 Acq: 23 Dec 2017 3:53 am

Tgt Ion:	61	Resp:	1590
Ion Ratio	Lower	Upper	
61	100		
43	568.8	488.5	907.1
70	75.9	54.9	101.9
88	27.5	20.4	38.0



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03644.D
 Acq On : 20 Dec 2017 11:15 pm
 Operator : DANAT
 Sample : jc56815-12
 Misc : MS22955,V6W105,592,,,1.48
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Dec 21 17:17:41 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.189	130	218766	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.392	114	815391	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.928	82	368867	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.189	130	218766	10.00	ppb(v	0.00

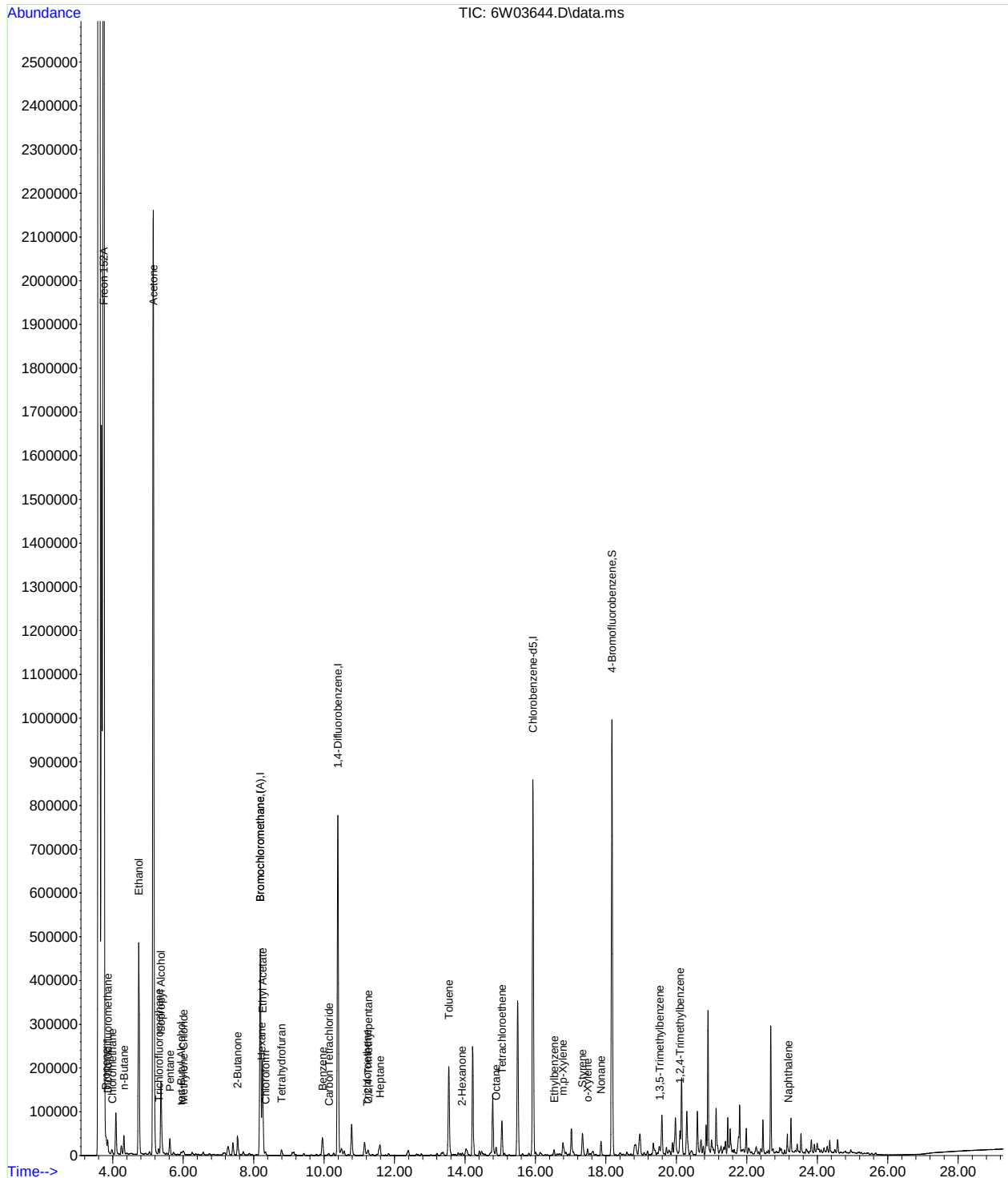
System Monitoring Compounds
 91) 4-Bromofluorobenzene 18.173 95 484743 10.20 ppb(v 0.00
 Spiked Amount 10.000 Range 65 - 128 Recovery = 102.00%

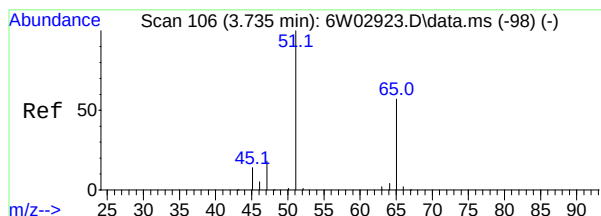
Target Compounds					Qvalue	
3) Freon 152A	3.748	65	3119722	219.66	ppb(v	93
5) Propene	3.803	41	9765	0.63	ppb(v	89
7) Dichlorodifluoromethane	3.858	85	27068	0.50	ppb(v	99
9) Chloromethane	3.986	50	5000	0.28	ppb(v	97
13) n-Butane	4.323	58	5524	1.53	ppb(v#	81
21) Trichlorofluoromethane	5.308	101	13263	0.26	ppb(v	100
22) Acetone	5.149	58	1119426	100.83	ppb(v	91
23) Pentane	5.620	57	4710	0.91	ppb(v	93
26) Isopropyl Alcohol	5.369	45	253529	5.76	ppb(v	100
29) Methylene Chloride	6.011	84	4580	0.20	ppb(v	92
31) Ethanol	4.739	45	637596	101.92	ppb(v	100
35) tert-Butyl Alcohol	5.944	59	8261	0.19	ppb(v#	83
39) 2-Butanone	7.541	72	18784	1.65	ppb(v	95
40) Hexane	8.220	57	9328	0.27	ppb(v	74
43) Ethyl Acetate	8.250	61	46912	6.47	ppb(v	82
45) Chloroform	8.336	83	7806	0.17	ppb(v	94
47) Tetrahydrofuran	8.789	72	4057	0.40	ppb(v	88
50) Benzene	9.957	78	31735	0.43	ppb(v	99
51) Carbon Tetrachloride	10.135	117	4044	0.09	ppb(v	97
55) 2,2,4-Trimethylpentane	11.248	57	13290	0.12	ppb(v#	86
56) Heptane	11.591	71	7558	0.31	ppb(v	98
57) Trichloroethene	11.217	95	864	0.03	ppb(v	91
67) Toluene	13.536	91	199724	2.25	ppb(v	99
70) 2-Hexanone	13.915	58	2825	0.10	ppb(v#	94
73) Tetrachloroethene	15.047	166	31037	0.69	ppb(v	99
75) Octane	14.882	43	10660	0.21	ppb(v	98
79) Ethylbenzene	16.534	91	12925	0.13	ppb(v	99
80) m,p-Xylene	16.778	91	31293	0.40	ppb(v	99
81) Styrene	17.329	104	5368	0.10	ppb(v	96
82) Nonane	17.861	43	15561	0.31	ppb(v	97
83) o-Xylene	17.482	91	13332	0.17	ppb(v	96
93) 1,3,5-Trimethylbenzene	19.525	105	9897	0.12	ppb(v	98
96) 1,2,4-Trimethylbenzene	20.100	105	29722	0.37	ppb(v#	65
106) Naphthalene	23.178	128	4096	0.10	ppb(v	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\
Data File : 6W03644.D
Acq On : 20 Dec 2017 11:15 pm
Operator : DANAT
Sample : jc56815-12
Misc : MS22955,V6W105,592,,,,1.48
ALS Vial : 10 Sample Multiplier: 1

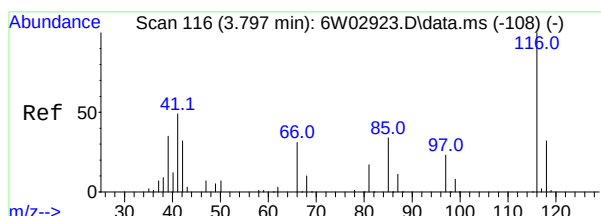
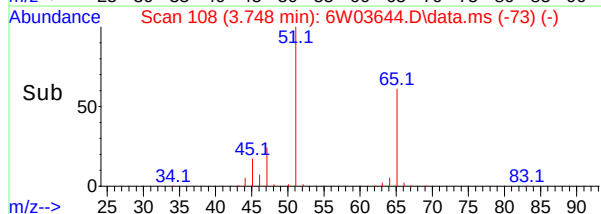
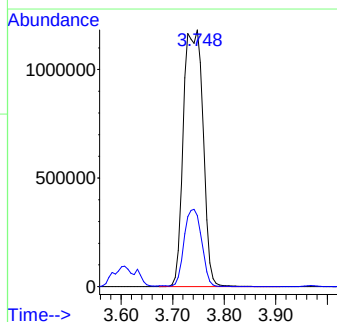
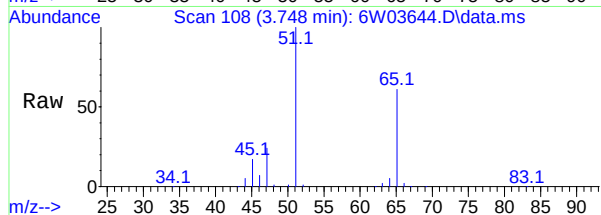
Quant Time: Dec 21 17:17:41 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration





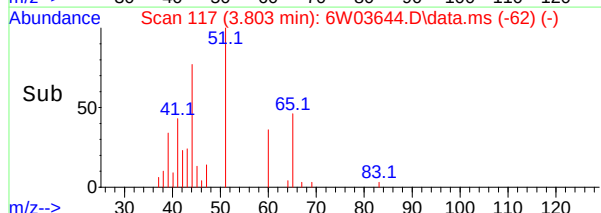
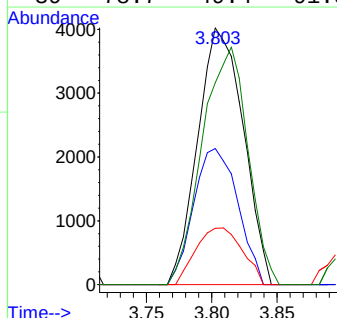
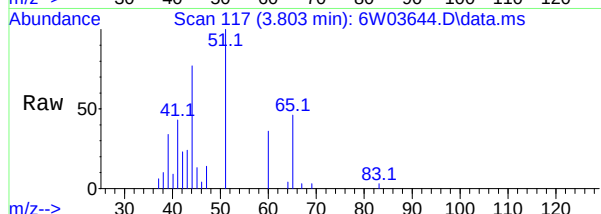
#3
Freon 152A
Concen: 219.66 ppb(v)
RT: 3.748 min Scan# 108
Delta R.T. 0.012 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

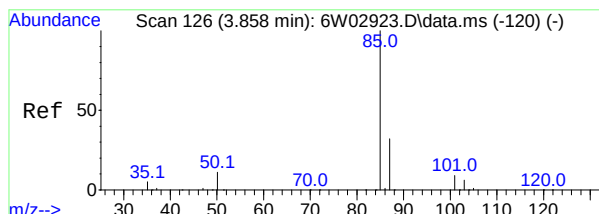
Tgt Ion: 65 Resp: 3119722
Ion Ratio Lower Upper
65 100
45 27.7 16.9 31.5



#5
Propene
Concen: 0.63 ppb(v)
RT: 3.803 min Scan# 117
Delta R.T. 0.006 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

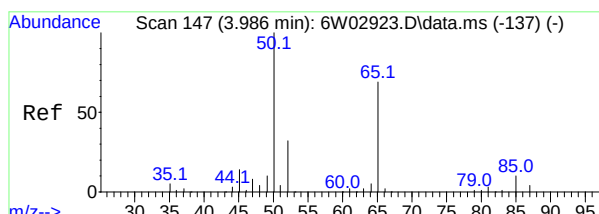
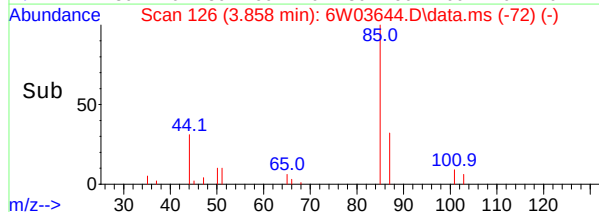
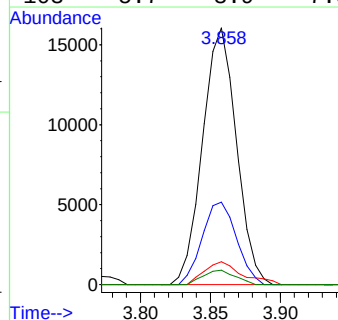
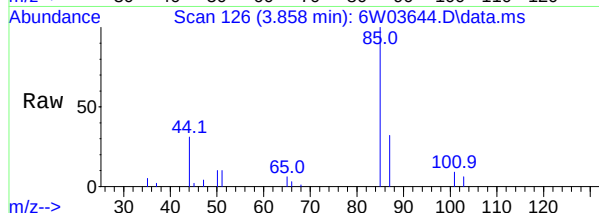
Tgt Ion: 41 Resp: 9765
Ion Ratio Lower Upper
41 100
42 53.0 45.4 84.4
40 22.0 17.4 32.2
39 78.7 49.4 91.8





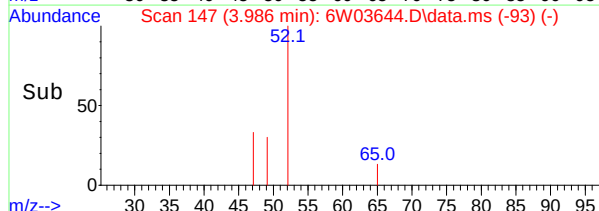
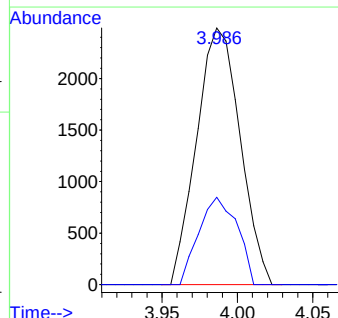
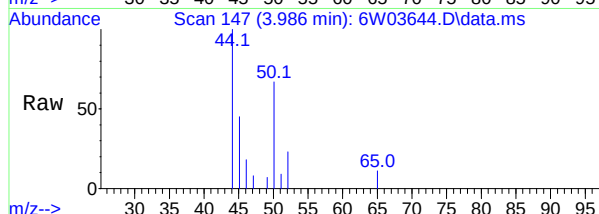
#7
 Dichlorodifluoromethane
 Concen: 0.50 ppb(v)
 RT: 3.858 min Scan# 126
 Delta R.T. 0.000 min
 Lab File: 6W03644.D
 Acq: 20 Dec 2017 11:15 pm

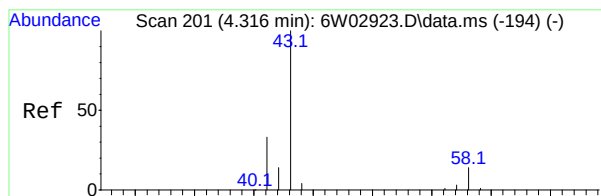
Tgt Ion: 85 Resp: 27068
 Ion Ratio Lower Upper
 85 100
 87 32.2 22.7 42.3
 101 8.9 5.9 11.1
 103 5.7 3.9 7.3



#9
 Chloromethane
 Concen: 0.28 ppb(v)
 RT: 3.986 min Scan# 147
 Delta R.T. 0.000 min
 Lab File: 6W03644.D
 Acq: 20 Dec 2017 11:15 pm

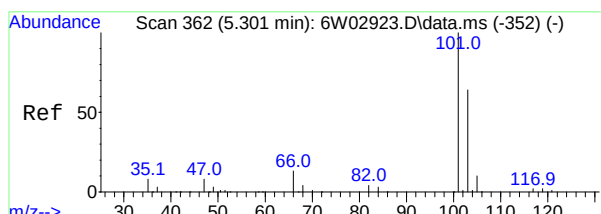
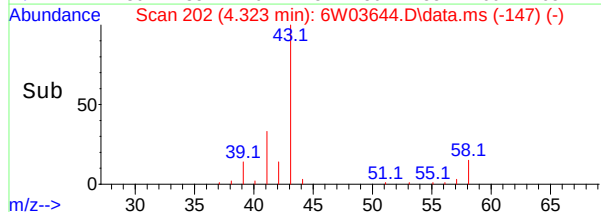
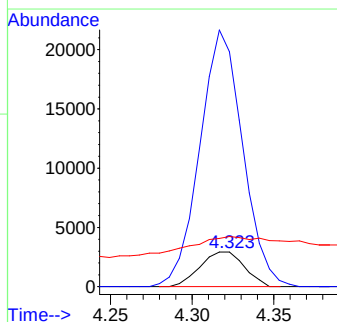
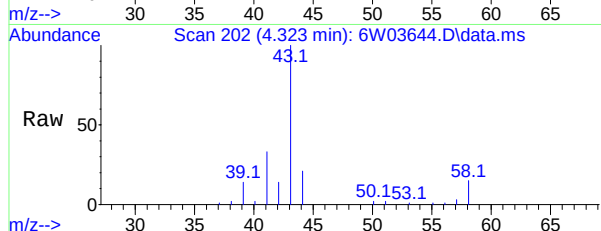
Tgt Ion: 50 Resp: 5000
 Ion Ratio Lower Upper
 50 100
 52 34.0 22.7 42.1





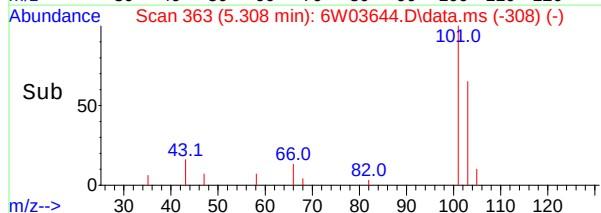
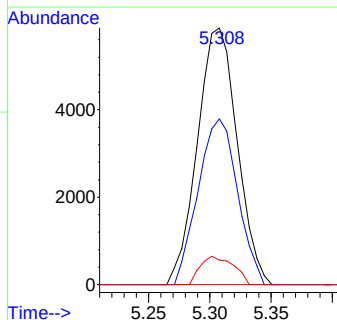
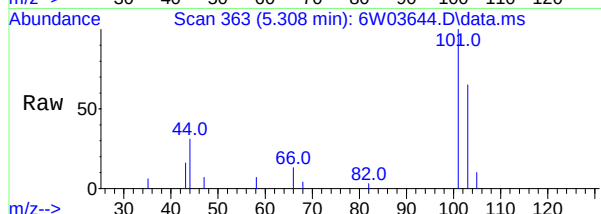
#13
n-Butane
Concen: 1.53 ppb(v)
RT: 4.323 min Scan# 202
Delta R.T. 0.006 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

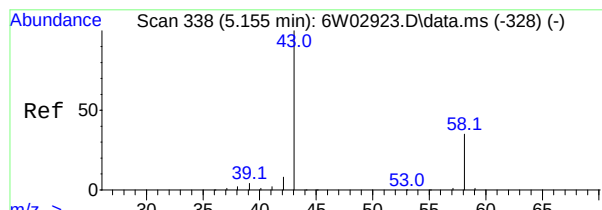
Tgt Ion: 58 Resp: 5524
Ion Ratio Lower Upper
58 100
43 677.3 499.8 928.2
44 144.9 21.1 39.1#



#21
Trichlorofluoromethane
Concen: 0.26 ppb(v)
RT: 5.308 min Scan# 363
Delta R.T. 0.006 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

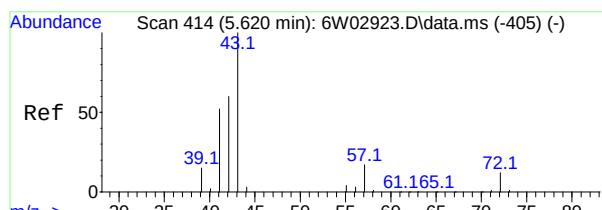
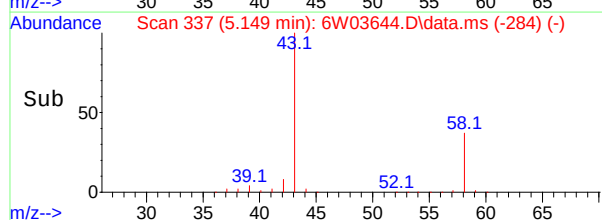
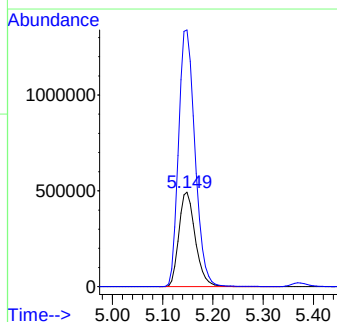
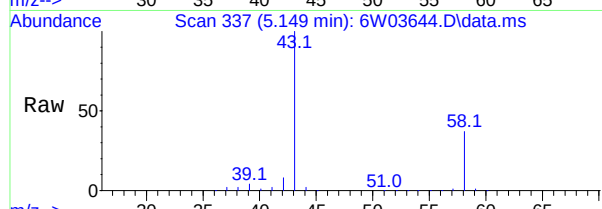
Tgt Ion: 101 Resp: 13263
Ion Ratio Lower Upper
101 100
103 64.6 45.1 83.9
105 9.6 7.3 13.5





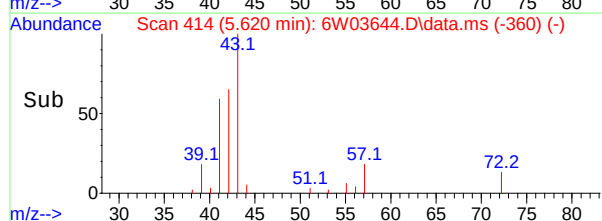
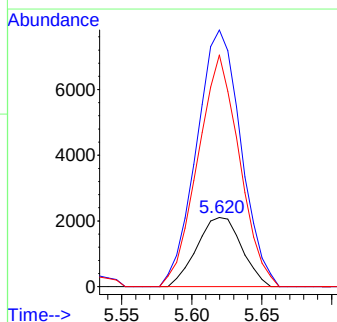
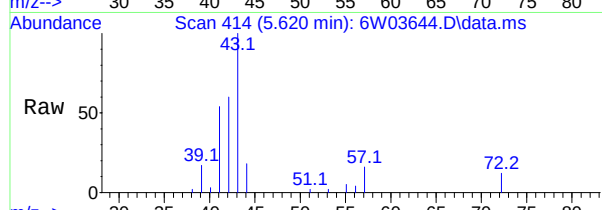
#22
Acetone
Concen: 100.83 ppb(v)
RT: 5.149 min Scan# 337
Delta R.T. -0.006 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

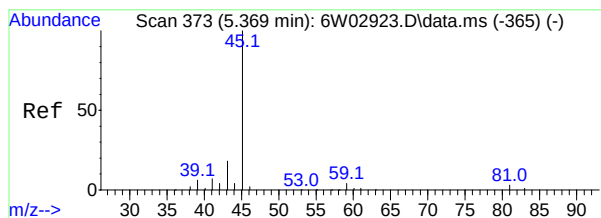
Tgt Ion: 58 Resp: 1119426
Ion Ratio Lower Upper
58 100
43 271.9 202.4 375.8



#23
Pentane
Concen: 0.91 ppb(v)
RT: 5.620 min Scan# 414
Delta R.T. 0.000 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

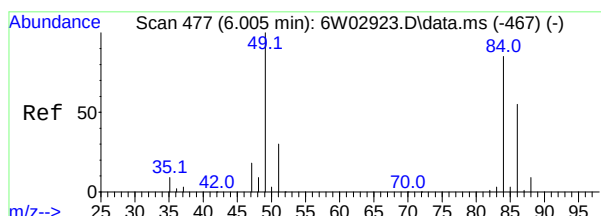
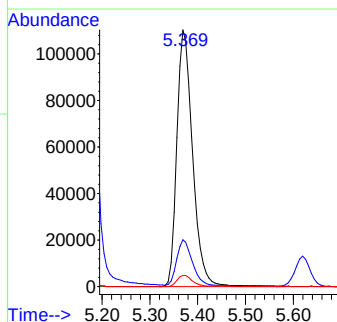
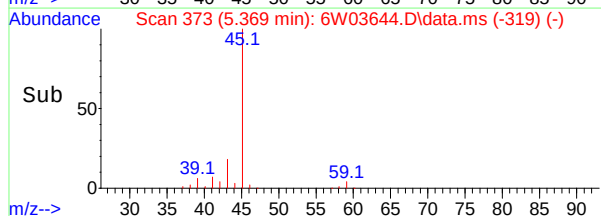
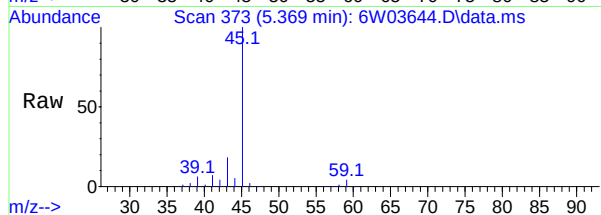
Tgt Ion: 57 Resp: 4710
Ion Ratio Lower Upper
57 100
42 370.6 252.4 468.8
41 334.4 218.7 406.1





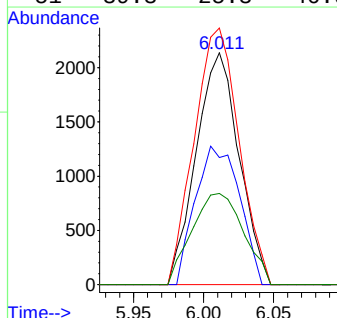
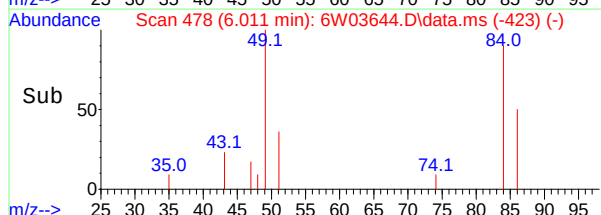
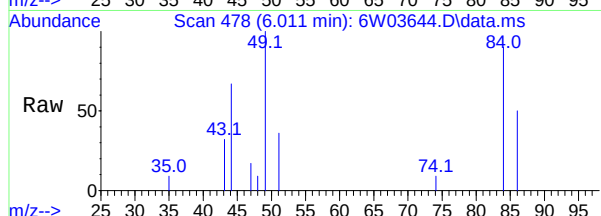
#26
Isopropyl Alcohol
Concen: 5.76 ppb(v)
RT: 5.369 min Scan# 373
Delta R.T. 0.000 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

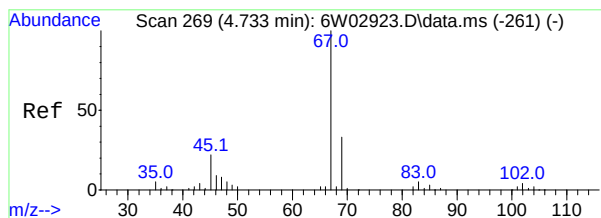
Tgt Ion: 45 Resp: 253529
Ion Ratio Lower Upper
45 100
43 18.3 12.8 23.8
59 4.3 3.0 5.6



#29
Methylene Chloride
Concen: 0.20 ppb(v)
RT: 6.011 min Scan# 478
Delta R.T. 0.006 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

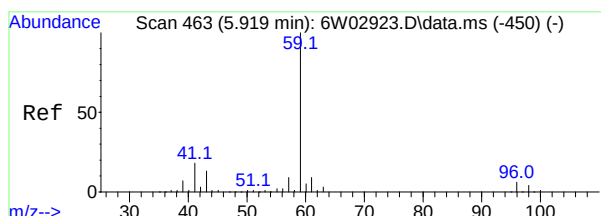
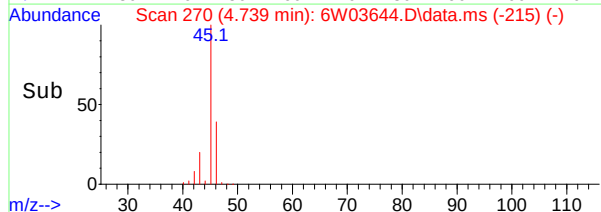
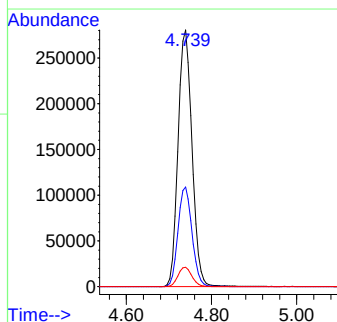
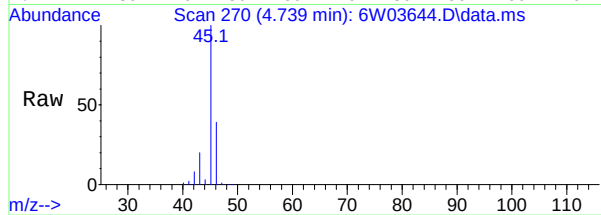
Tgt Ion: 84 Resp: 4580
Ion Ratio Lower Upper
84 100
86 54.9 44.8 83.2
49 110.7 82.1 152.5
51 39.3 25.3 46.9





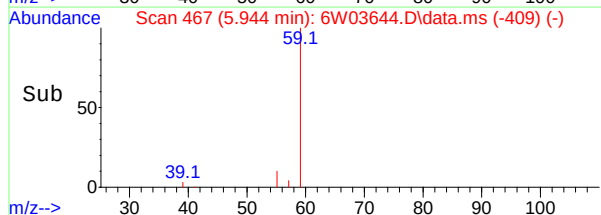
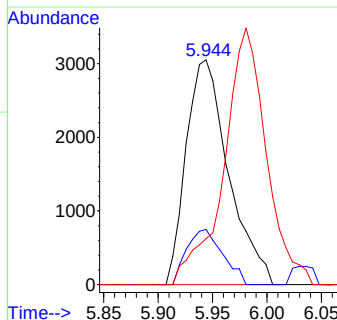
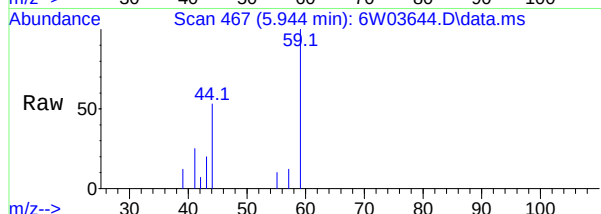
#31
Ethanol
Concen: 101.92 ppb(v)
RT: 4.739 min Scan# 270
Delta R.T. 0.006 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

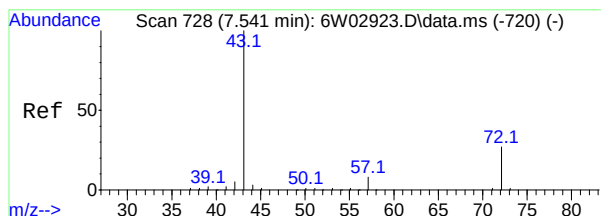
Tgt Ion: 45 Resp: 637596
Ion Ratio Lower Upper
45 100
46 38.9 27.2 50.4
42 7.5 5.6 10.4



#35
tert-Butyl Alcohol
Concen: 0.19 ppb(v)
RT: 5.944 min Scan# 467
Delta R.T. 0.025 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

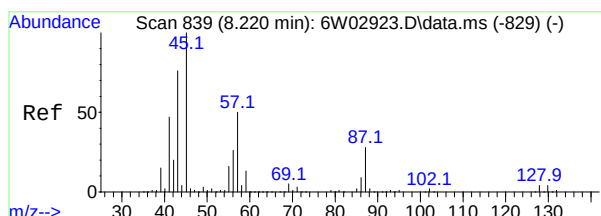
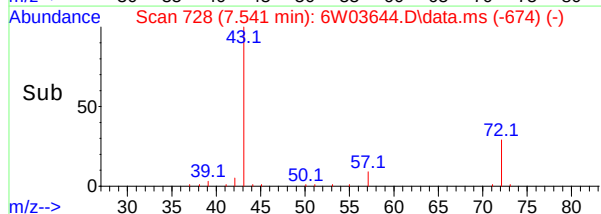
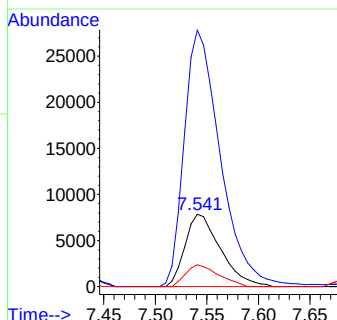
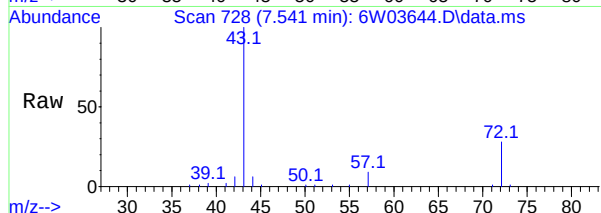
Tgt Ion: 59 Resp: 8261
Ion Ratio Lower Upper
59 100
41 24.5 12.7 23.7#
43 20.5 8.8 16.4#





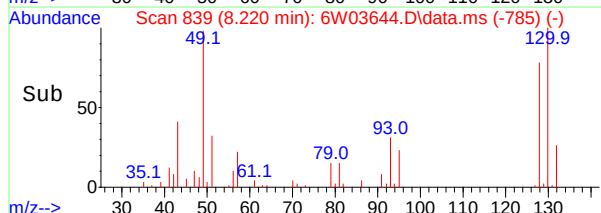
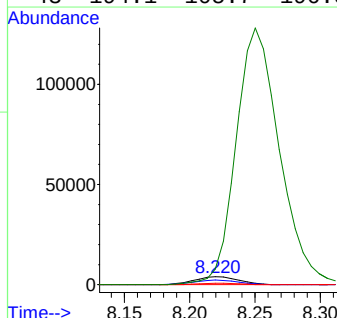
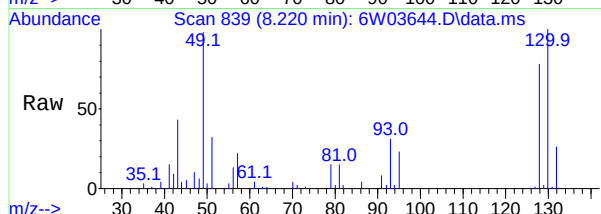
#39
2-Butanone
Concen: 1.65 ppb(v)
RT: 7.541 min Scan# 728
Delta R.T. 0.000 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

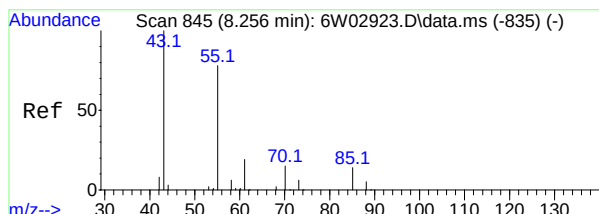
Tgt Ion: 72 Resp: 18784
Ion Ratio Lower Upper
72 100
43 354.9 257.4 478.0
57 30.2 21.0 39.0



#40
Hexane
Concen: 0.27 ppb(v)
RT: 8.220 min Scan# 839
Delta R.T. 0.000 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

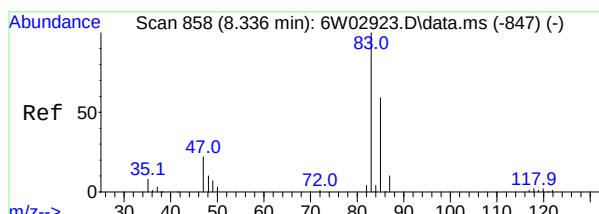
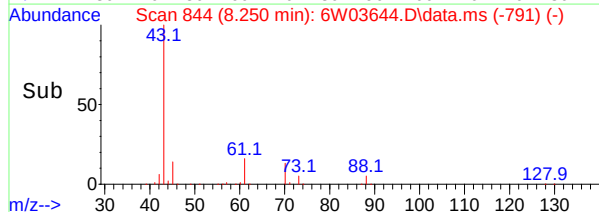
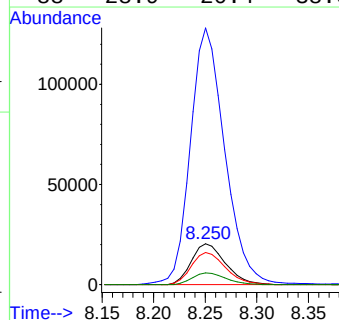
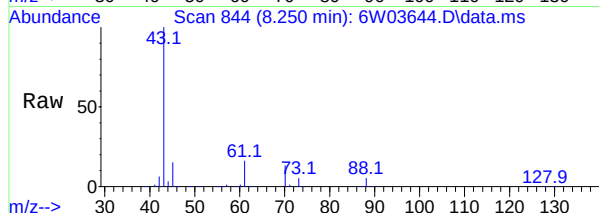
Tgt Ion: 57 Resp: 9328
Ion Ratio Lower Upper
57 100
56 57.6 36.0 67.0
86 19.2 12.1 22.5
43 194.1 105.7 196.3





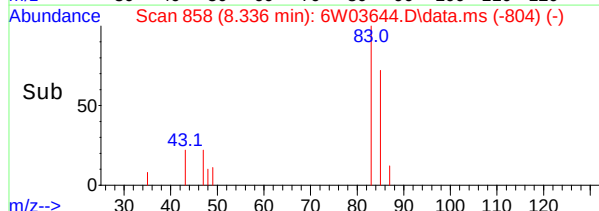
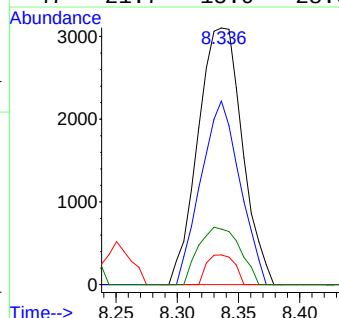
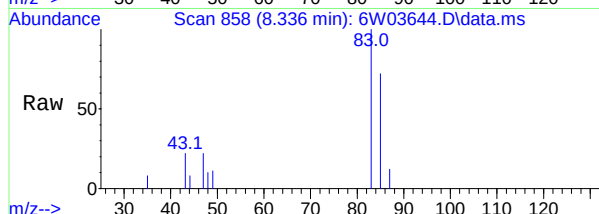
#43
Ethyl Acetate
Concen: 6.47 ppb(v)
RT: 8.250 min Scan# 844
Delta R.T. -0.006 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

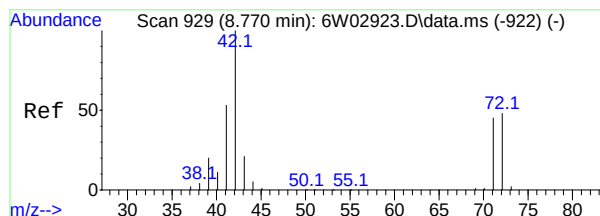
Tgt Ion: 61 Resp: 46912
Ion Ratio Lower Upper
61 100
43 626.1 488.5 907.1
70 78.5 54.9 101.9
88 28.9 20.4 38.0



#45
Chloroform
Concen: 0.17 ppb(v)
RT: 8.336 min Scan# 858
Delta R.T. 0.000 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

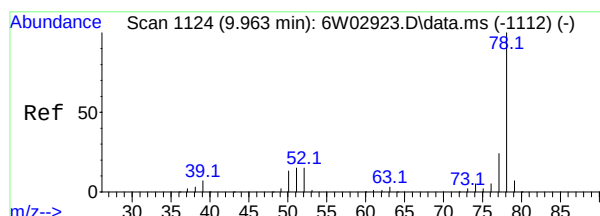
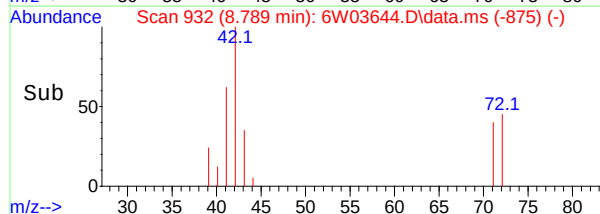
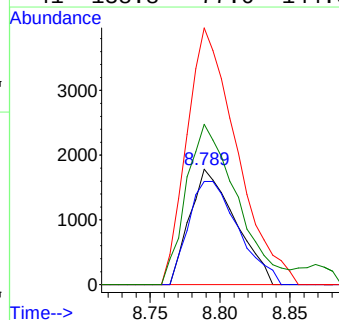
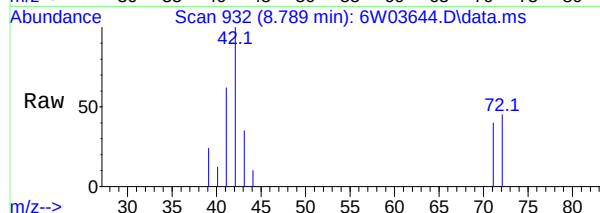
Tgt Ion: 83 Resp: 7806
Ion Ratio Lower Upper
83 100
85 71.5 45.2 84.0
87 11.6 7.3 13.7
47 21.7 15.0 28.0





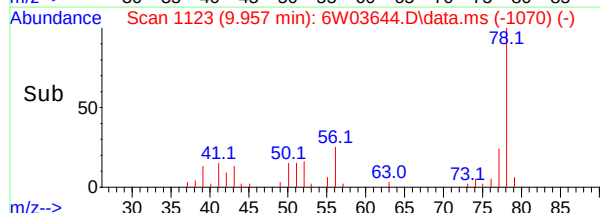
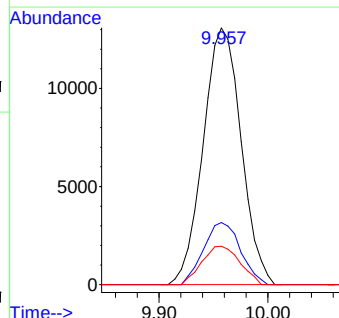
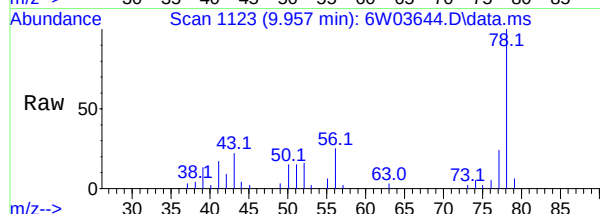
#47
Tetrahydrofuran
Concen: 0.40 ppb(v)
RT: 8.789 min Scan# 932
Delta R.T. 0.018 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

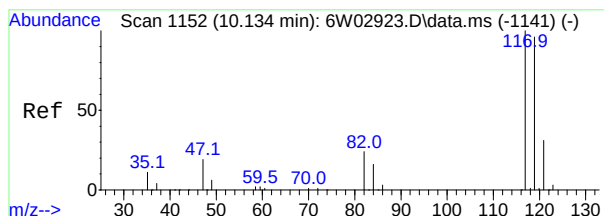
Tgt Ion: 72 Resp: 4057
Ion Ratio Lower Upper
72 100
71 89.3 65.4 121.4
42 222.3 146.4 271.8
41 138.8 77.6 144.0



#50
Benzene
Concen: 0.43 ppb(v)
RT: 9.957 min Scan# 1123
Delta R.T. -0.006 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

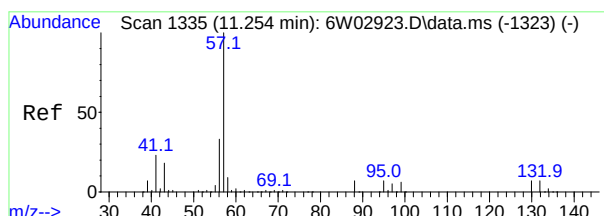
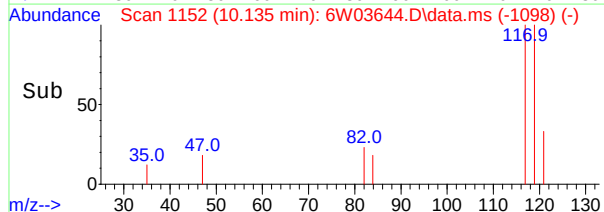
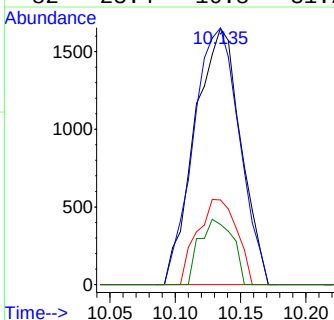
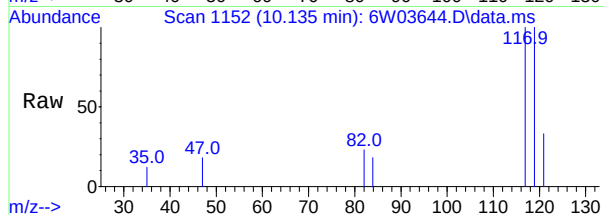
Tgt Ion: 78 Resp: 31735
Ion Ratio Lower Upper
78 100
77 24.2 16.6 30.8
51 15.0 10.6 19.6





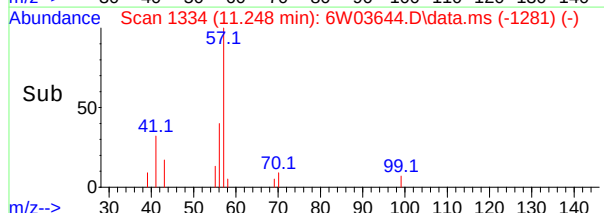
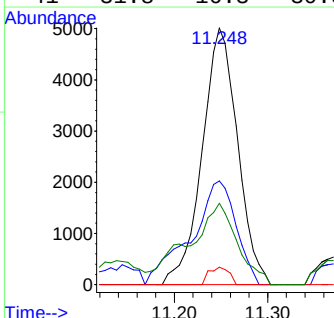
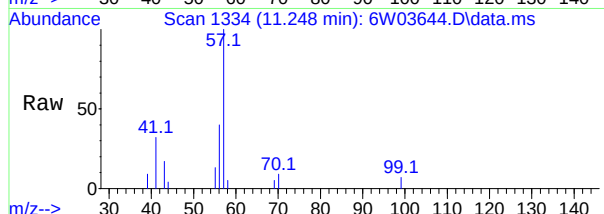
#51
Carbon Tetrachloride
Concen: 0.09 ppb(v)
RT: 10.135 min Scan# 1152
Delta R.T. 0.000 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

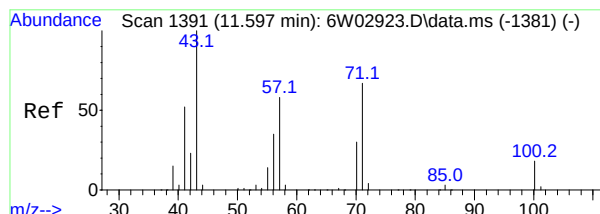
Tgt Ion:	117	Resp:	4044
Ion Ratio	Lower	Upper	
117	100		
119	100.1	67.4	125.2
121	33.0	21.9	40.7
82	23.4	16.8	31.2



#55
2,2,4-Trimethylpentane
Concen: 0.12 ppb(v)
RT: 11.248 min Scan# 1334
Delta R.T. -0.006 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

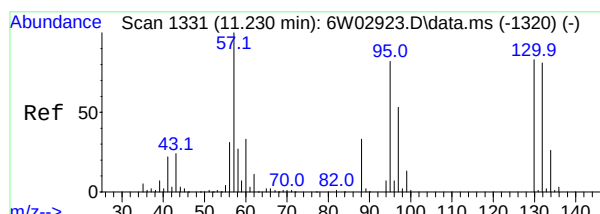
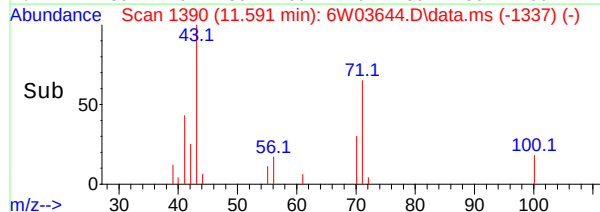
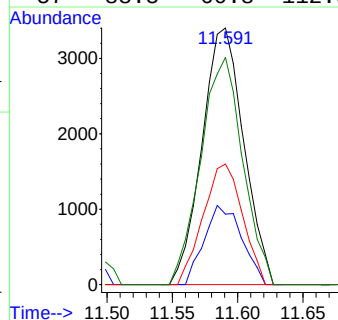
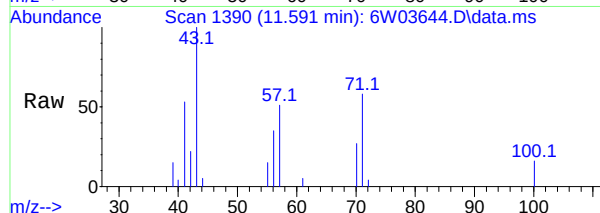
Tgt Ion:	57	Resp:	13290
Ion Ratio	Lower	Upper	
57	100		
56	40.4	23.0	42.8
99	6.8	4.5	8.3
41	31.8	16.3	30.3#





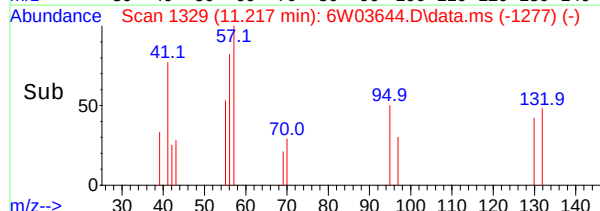
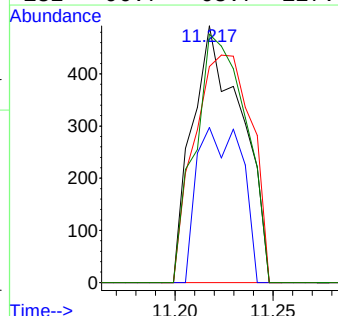
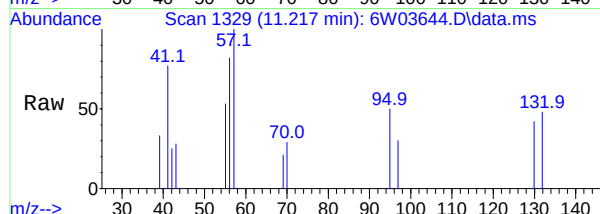
#56
Heptane
Concen: 0.31 ppb(v)
RT: 11.591 min Scan# 1390
Delta R.T. -0.006 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

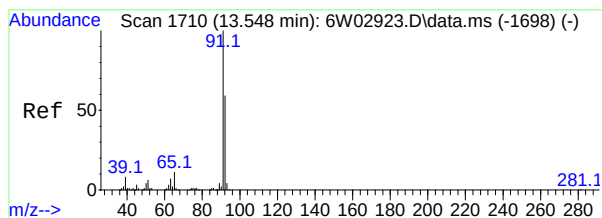
Tgt Ion: 71 Resp: 7558
Ion Ratio Lower Upper
71 100
100 27.4 20.9 38.7
70 47.0 32.1 59.5
57 88.5 60.8 112.8



#57
Trichloroethene
Concen: 0.03 ppb(v)
RT: 11.217 min Scan# 1329
Delta R.T. -0.012 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

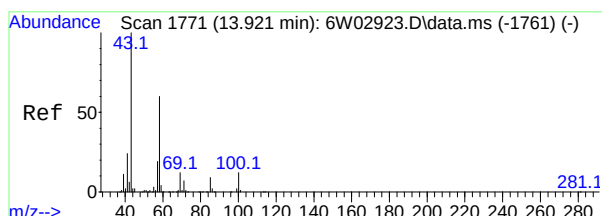
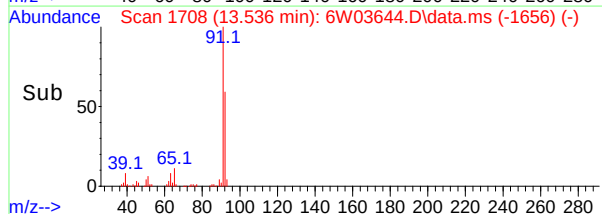
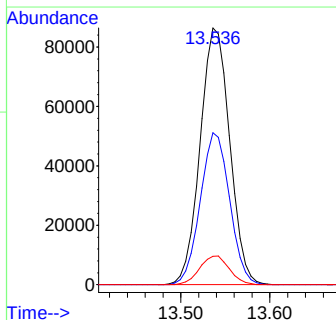
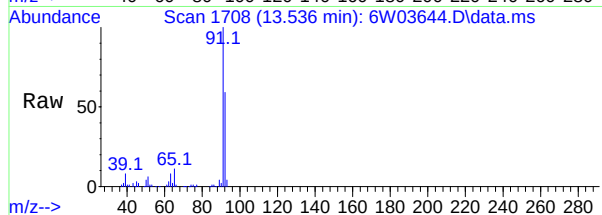
Tgt Ion: 95 Resp: 864
Ion Ratio Lower Upper
95 100
97 60.4 45.5 84.5
130 84.1 71.0 131.8
132 96.7 68.7 127.7





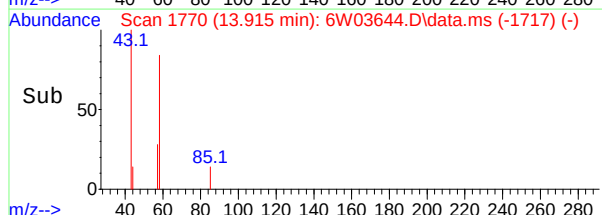
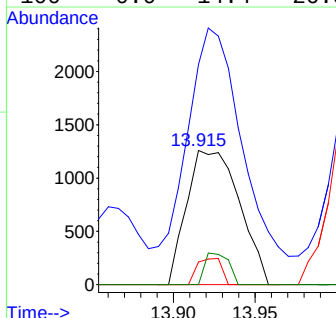
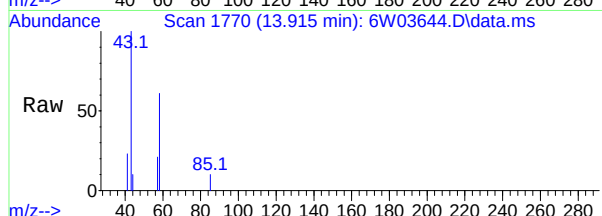
#67
Toluene
Concen: 2.25 ppb(v)
RT: 13.536 min Scan# 1708
Delta R.T. -0.012 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

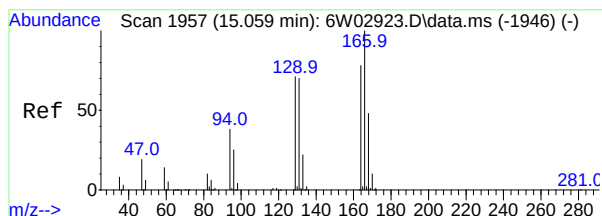
Tgt Ion: 91 Resp: 199724
Ion Ratio Lower Upper
91 100
92 59.1 41.0 76.2
65 11.0 7.8 14.4



#70
2-Hexanone
Concen: 0.10 ppb(v)
RT: 13.915 min Scan# 1770
Delta R.T. -0.006 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

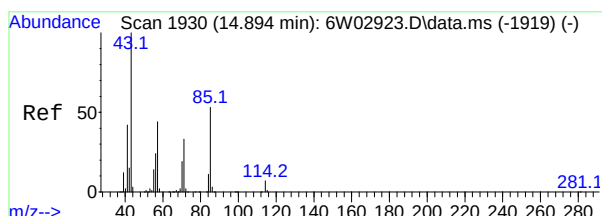
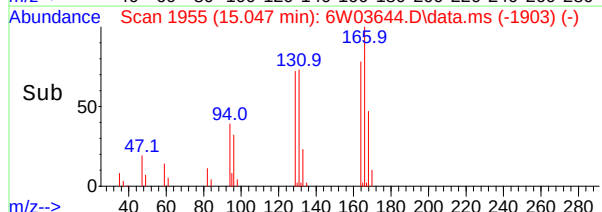
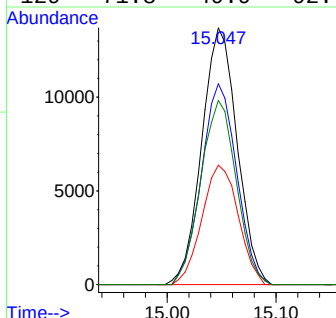
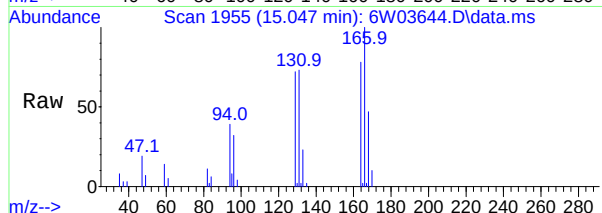
Tgt Ion: 58 Resp: 2825
Ion Ratio Lower Upper
58 100
43 164.2 116.8 217.0
85 16.9 11.1 20.5
100 0.0 14.4 26.8#





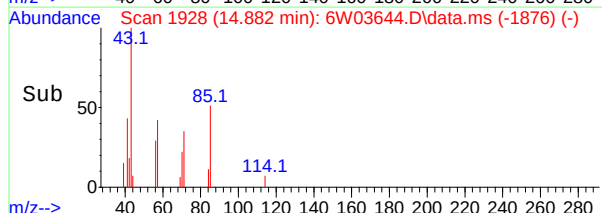
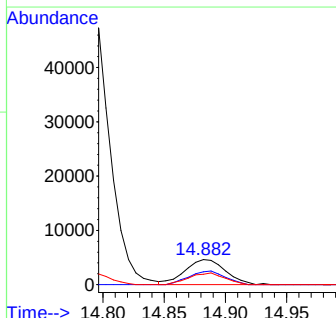
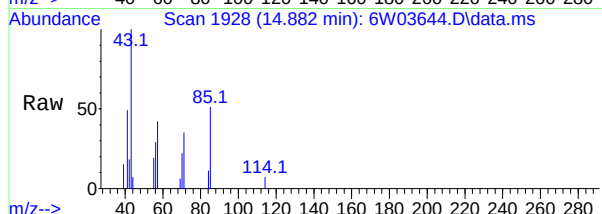
#73
Tetrachloroethene
Concen: 0.69 ppb(v)
RT: 15.047 min Scan# 1955
Delta R.T. -0.012 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

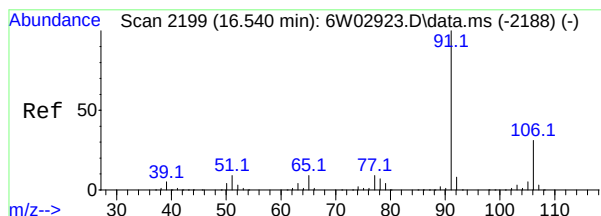
Tgt Ion: 166 Resp: 31037
Ion Ratio Lower Upper
166 100
164 78.2 54.5 101.1
168 46.6 33.9 62.9
129 71.8 49.9 92.7



#75
Octane
Concen: 0.21 ppb(v)
RT: 14.882 min Scan# 1928
Delta R.T. -0.012 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

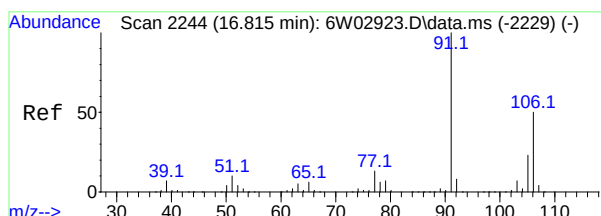
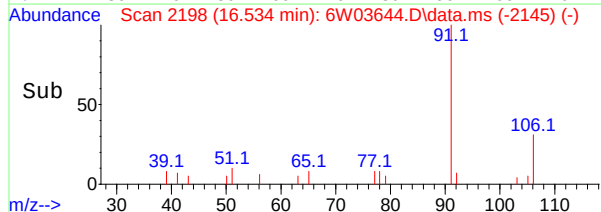
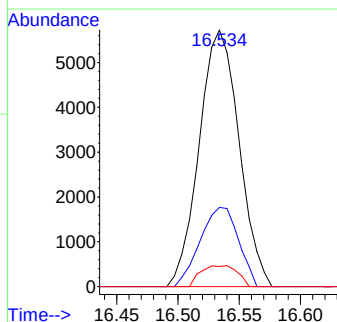
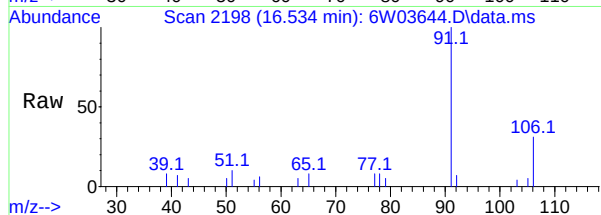
Tgt Ion: 43 Resp: 10660
Ion Ratio Lower Upper
43 100
85 51.4 36.8 68.4
57 41.7 30.7 56.9





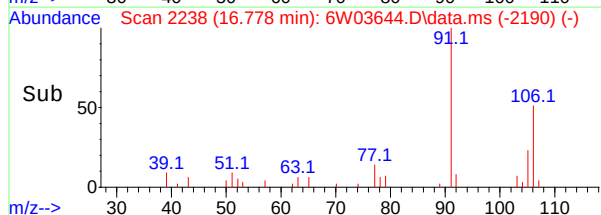
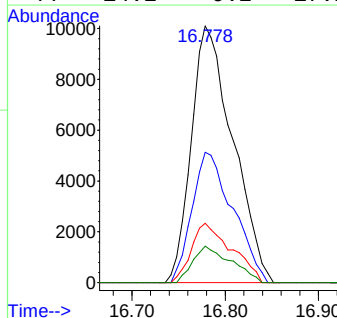
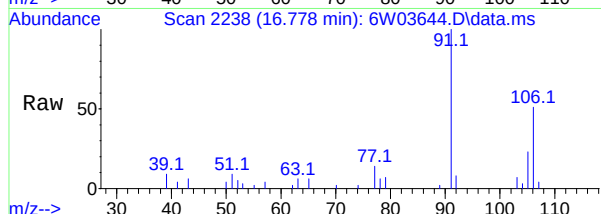
#79
Ethylbenzene
Concen: 0.13 ppb(v)
RT: 16.534 min Scan# 2198
Delta R.T. -0.006 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

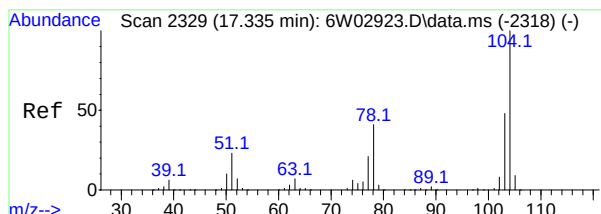
Tgt Ion: 91 Resp: 12925
Ion Ratio Lower Upper
91 100
106 30.8 22.0 41.0
77 7.9 6.0 11.2



#80
m,p-Xylene
Concen: 0.40 ppb(v)
RT: 16.778 min Scan# 2238
Delta R.T. -0.037 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

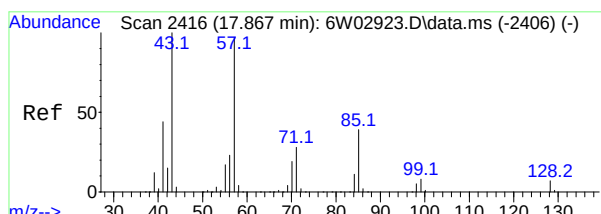
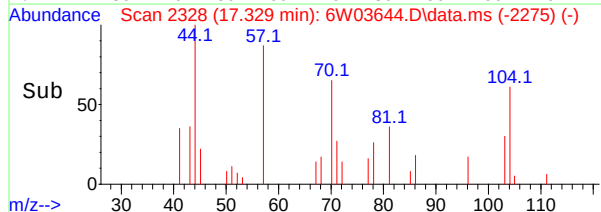
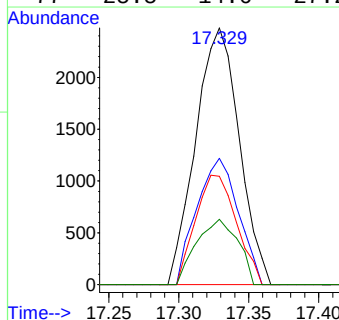
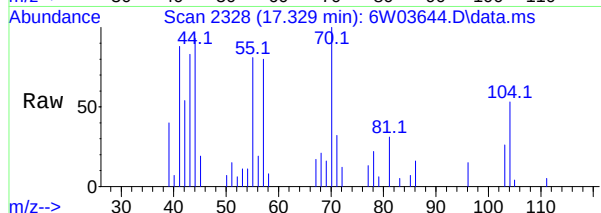
Tgt Ion: 91 Resp: 31293
Ion Ratio Lower Upper
91 100
106 50.8 35.1 65.3
105 23.1 16.0 29.8
77 14.2 9.2 17.2





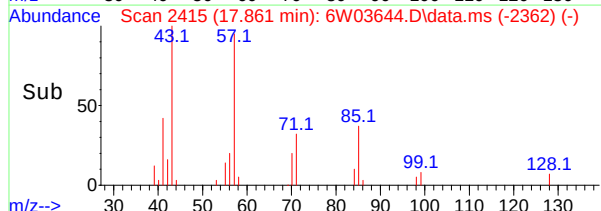
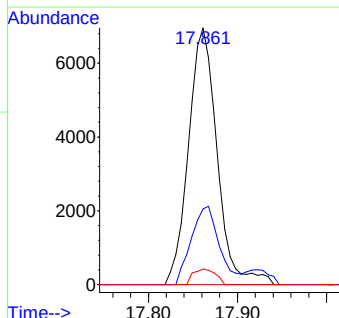
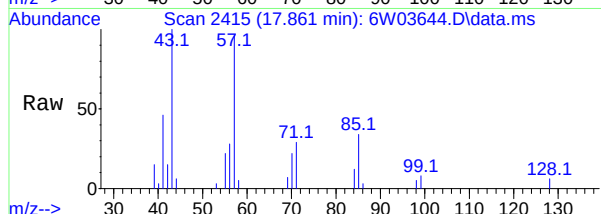
#81
Styrene
Concen: 0.10 ppb(v)
RT: 17.329 min Scan# 2328
Delta R.T. -0.006 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

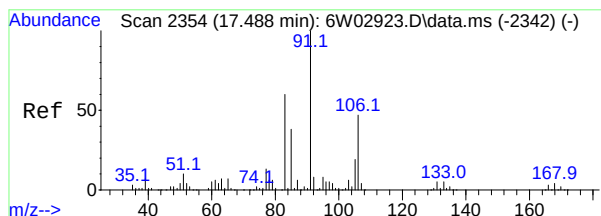
Tgt Ion:	104	Resp:	5368
Ion Ratio	100	Lower	Upper
104	100		
103	49.2	33.4	62.0
78	42.3	28.8	53.4
77	25.5	14.6	27.2



#82
Nonane
Concen: 0.31 ppb(v)
RT: 17.861 min Scan# 2415
Delta R.T. -0.006 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

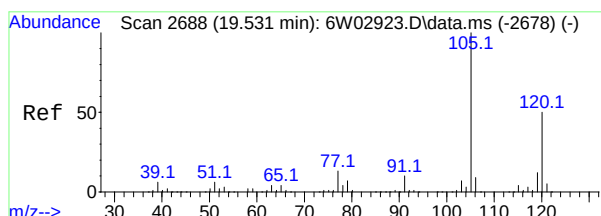
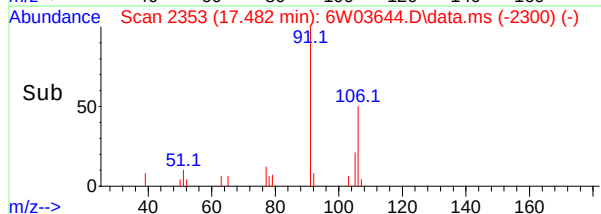
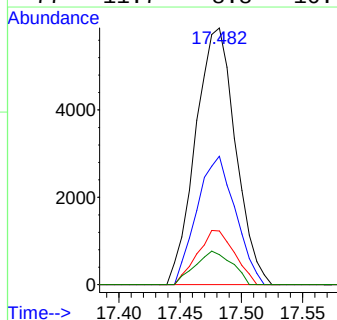
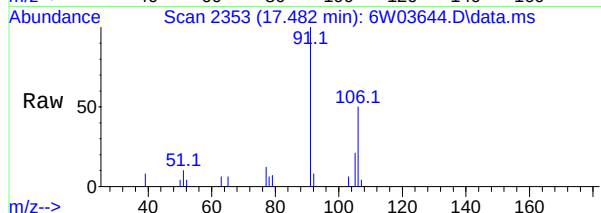
Tgt Ion:	43	Resp:	15561
Ion Ratio	100	Lower	Upper
43	100		
71	29.5	19.5	36.3
128	6.1	4.6	8.6





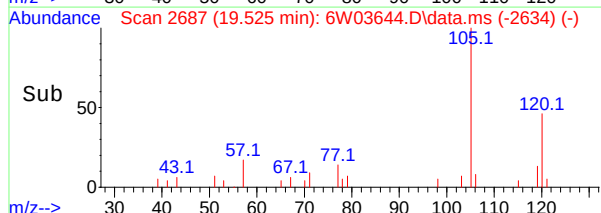
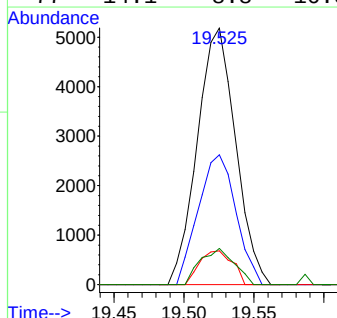
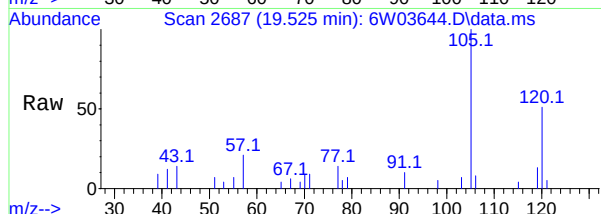
#83
o-Xylene
Concen: 0.17 ppb(v)
RT: 17.482 min Scan# 2353
Delta R.T. -0.006 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

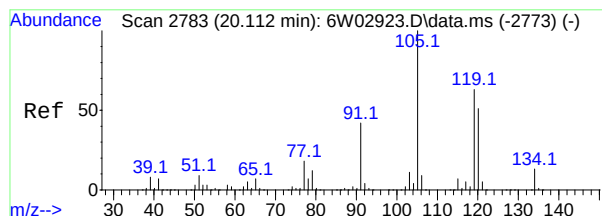
Tgt Ion:	91	Resp:	13332
Ion Ratio	Lower	Upper	
91	100		
106	50.1	33.2	61.6
105	20.9	13.4	25.0
77	11.7	8.8	16.4



#93
1,3,5-Trimethylbenzene
Concen: 0.12 ppb(v)
RT: 19.525 min Scan# 2687
Delta R.T. -0.006 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

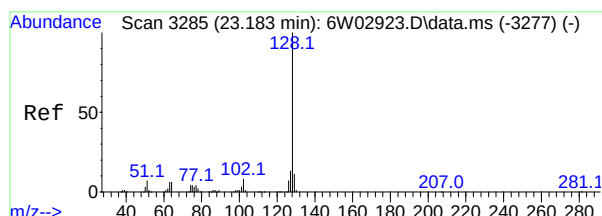
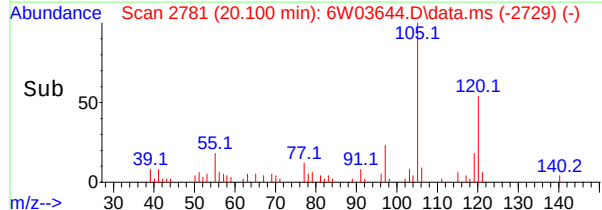
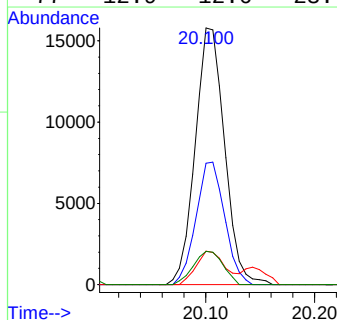
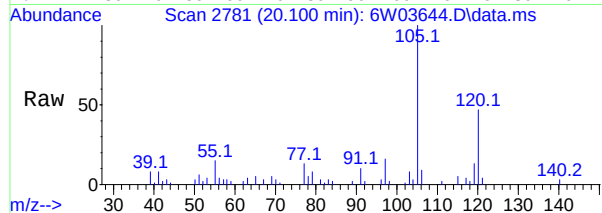
Tgt Ion:	105	Resp:	9897
Ion Ratio	Lower	Upper	
105	100		
120	50.6	34.9	64.9
119	13.1	8.6	16.0
77	14.1	8.8	16.3





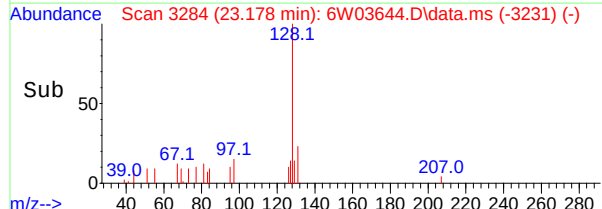
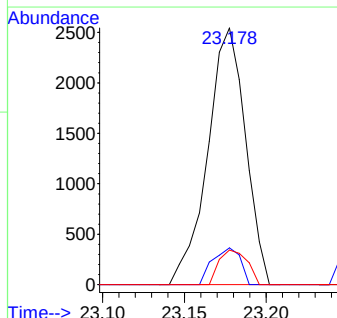
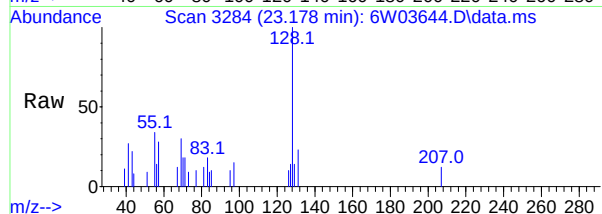
#96
1,2,4-Trimethylbenzene
Concen: 0.37 ppb(v)
RT: 20.100 min Scan# 2781
Delta R.T. -0.012 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

Tgt Ion:105	Resp:	29722
Ion Ratio	Lower	Upper
105	100	
120	47.3	35.7 66.3
119	13.0	44.4 82.4#
77	12.9	12.6 23.4



#106
Naphthalene
Concen: 0.10 ppb(v)
RT: 23.178 min Scan# 3284
Delta R.T. -0.005 min
Lab File: 6W03644.D
Acq: 20 Dec 2017 11:15 pm

Tgt Ion:128	Resp:	4096
Ion Ratio	Lower	Upper
128	100	
127	14.4	8.8 16.3
129	13.5	7.6 14.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W03667.D
Acq On : 21 Dec 2017 9:50 pm
Operator : DANAT
Sample : jc56815-12
Misc : MS22955,V6W106,40,,,,,1.48
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Dec 22 11:21:16 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.189	130	218213	10.00	ppb(v)	0.00
54) 1,4-Difluorobenzene	10.391	114	802789	10.00	ppb(v)	0.00
77) Chlorobenzene-d5	15.928	82	359802	10.00	ppb(v)	0.00
108) Bromochloromethane (A)	8.189	130	218213	10.00	ppb(v)	0.00
System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.173	95	459068	9.90	ppb(v)	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	99.00%
Target Compounds						
					Qvalue	
3) Freon 152A	3.735	65	335171	23.66	ppb(v)	98
22) Acetone	5.155	58	76425	6.90	ppb(v)	95
26) Isopropyl Alcohol	5.381	45	16499	0.38	ppb(v)	96
31) Ethanol	4.739	45	44978	7.21	ppb(v)	99
43) Ethyl Acetate	8.263	61	2579	0.36	ppb(v)	82
67) Toluene	13.536	91	10675	0.12	ppb(v)	97
73) Tetrachloroethene	15.047	166	1849	0.04	ppb(v)	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

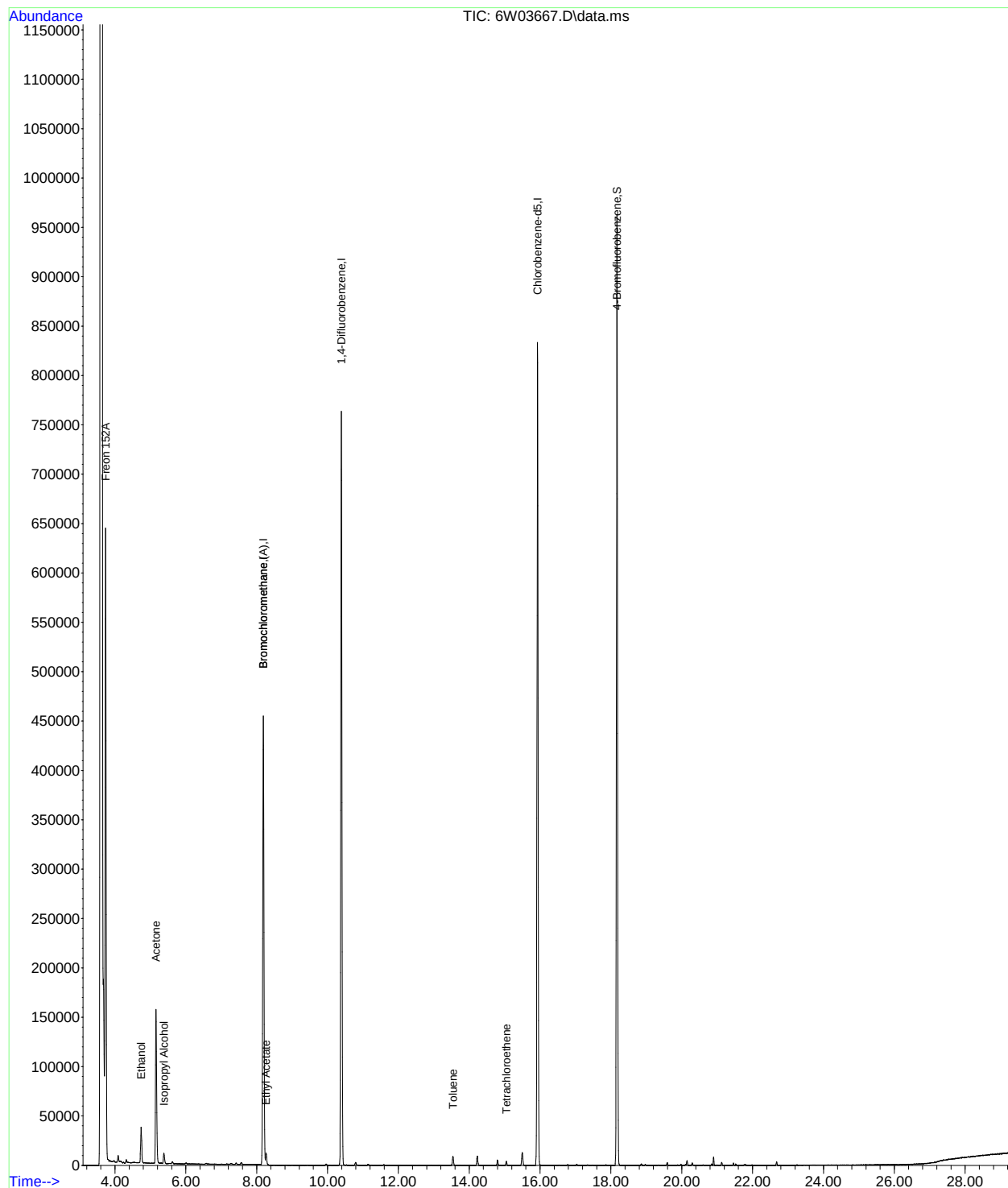
7.1.21
7

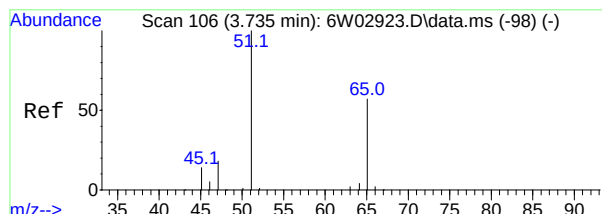


Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W03667.D
Acq On : 21 Dec 2017 9:50 pm
Operator : DANAT
Sample : jc56815-12
Misc : MS22955,V6W106,40,,,,,1.48
ALS Vial : 10 Sample Multiplier: 1

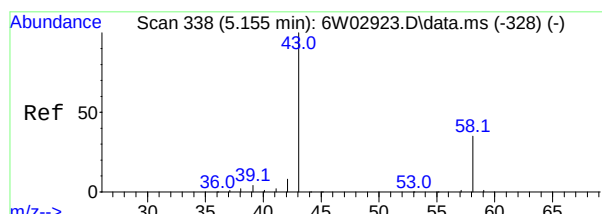
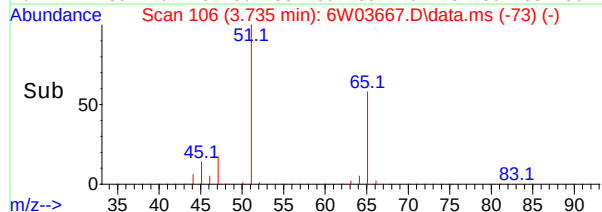
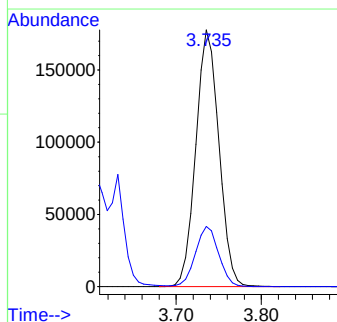
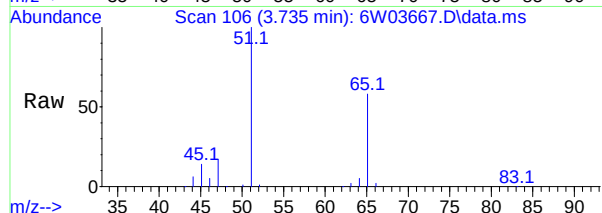
Quant Time: Dec 22 11:21:16 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration





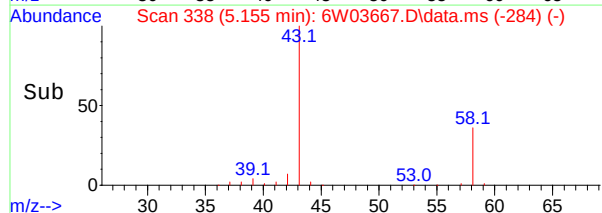
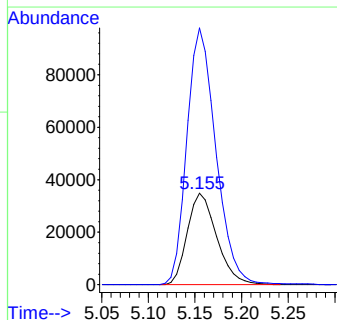
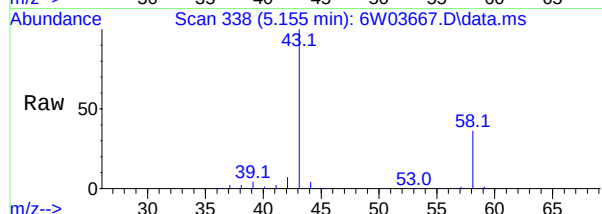
#3
Freon 152A
Concen: 23.66 ppb(v)
RT: 3.735 min Scan# 106
Delta R.T. 0.000 min
Lab File: 6W03667.D
Acq: 21 Dec 2017 9:50 pm

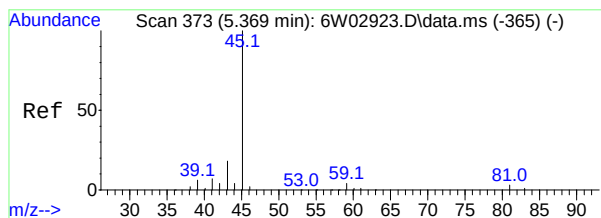
Tgt Ion: 65 Resp: 335171
Ion Ratio Lower Upper
65 100
45 23.4 16.9 31.5



#22
Acetone
Concen: 6.90 ppb(v)
RT: 5.155 min Scan# 338
Delta R.T. 0.000 min
Lab File: 6W03667.D
Acq: 21 Dec 2017 9:50 pm

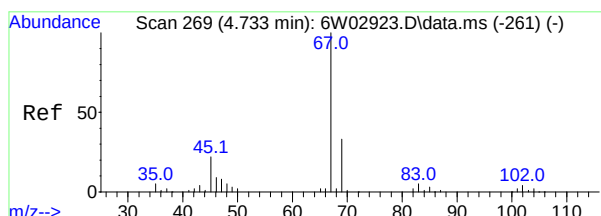
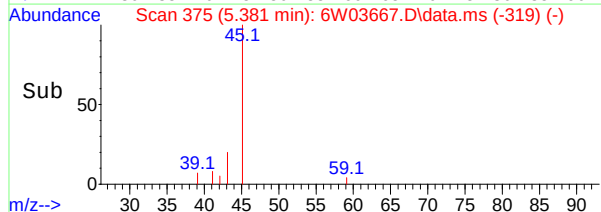
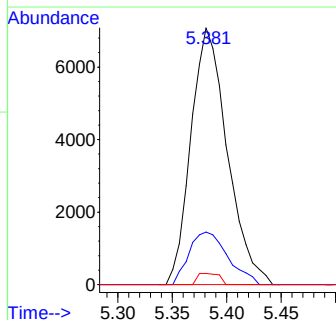
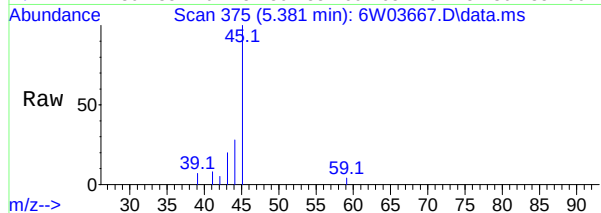
Tgt Ion: 58 Resp: 76425
Ion Ratio Lower Upper
58 100
43 280.3 202.4 375.8





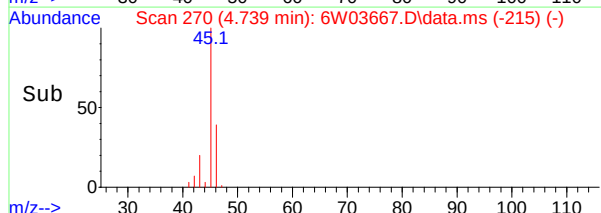
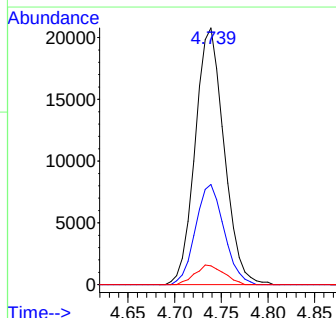
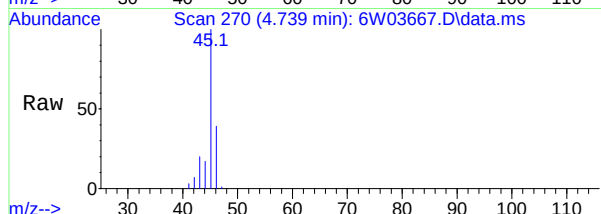
#26
Isopropyl Alcohol
Concen: 0.38 ppb(v)
RT: 5.381 min Scan# 375
Delta R.T. 0.012 min
Lab File: 6W03667.D
Acq: 21 Dec 2017 9:50 pm

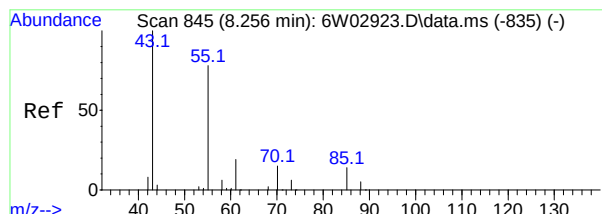
Tgt Ion: 45 Resp: 16499
Ion Ratio Lower Upper
45 100
43 20.4 12.8 23.8
59 4.3 3.0 5.6



#31
Ethanol
Concen: 7.21 ppb(v)
RT: 4.739 min Scan# 270
Delta R.T. 0.006 min
Lab File: 6W03667.D
Acq: 21 Dec 2017 9:50 pm

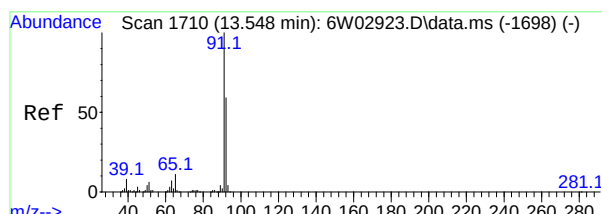
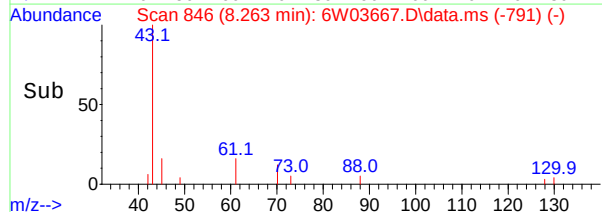
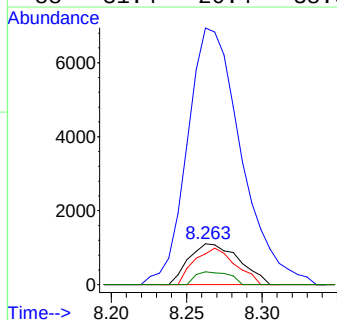
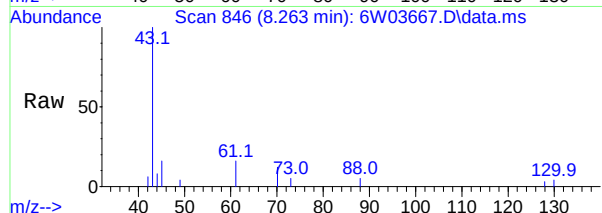
Tgt Ion: 45 Resp: 44978
Ion Ratio Lower Upper
45 100
46 39.0 27.2 50.4
42 7.3 5.6 10.4





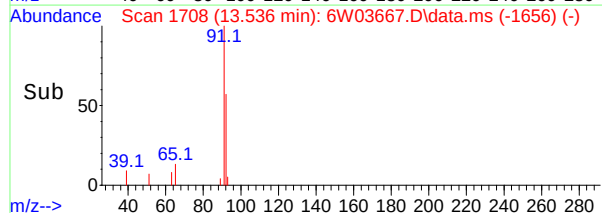
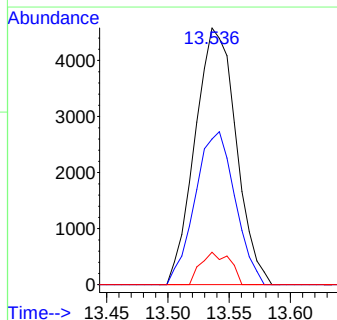
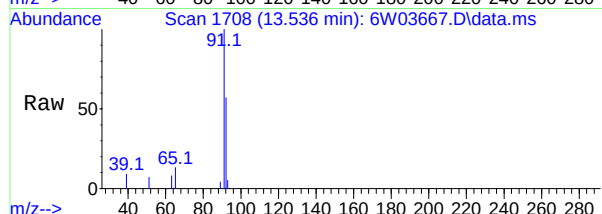
#43
Ethyl Acetate
Concen: 0.36 ppb(v)
RT: 8.263 min Scan# 846
Delta R.T. 0.006 min
Lab File: 6W03667.D
Acq: 21 Dec 2017 9:50 pm

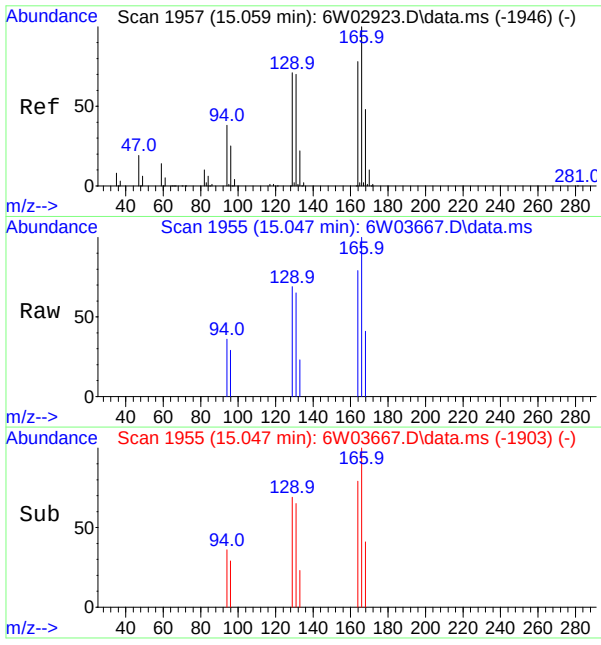
Tgt Ion: 61 Resp: 2579
Ion Ratio Lower Upper
61 100
43 626.1 488.5 907.1
70 75.1 54.9 101.9
88 31.4 20.4 38.0



#67
Toluene
Concen: 0.12 ppb(v)
RT: 13.536 min Scan# 1708
Delta R.T. -0.012 min
Lab File: 6W03667.D
Acq: 21 Dec 2017 9:50 pm

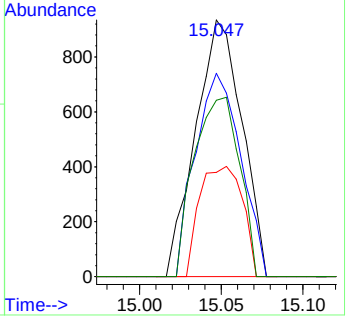
Tgt Ion: 91 Resp: 10675
Ion Ratio Lower Upper
91 100
92 56.7 41.0 76.2
65 12.6 7.8 14.4





#73
Tetrachloroethene
Concen: 0.04 ppb(v)
RT: 15.047 min Scan# 1955
Delta R.T. -0.012 min
Lab File: 6W03667.D
Acq: 21 Dec 2017 9:50 pm

Tgt Ion:166	Resp:	1849
Ion Ratio	Lower	Upper
166	100	
164	79.1	54.5 101.1
168	40.6	33.9 62.9
129	68.7	49.9 92.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03674.D
 Acq On : 22 Dec 2017 4:55 am
 Operator : DANAT
 Sample : jc56815-13
 Misc : MS22955,V6W106,800,,,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 22 15:13:16 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.195	130	192848	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.397	114	715506	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.928	82	321156	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.195	130	192848	10.00	ppb(v	0.00

System Monitoring Compounds
 91) 4-Bromofluorobenzene 18.173 95 429471 10.38 ppb(v 0.00
 Spiked Amount 10.000 Range 65 - 128 Recovery = 103.80%

Target Compounds					Qvalue	
3) Freon 152A	3.741	65	263737	21.07	ppb(v	97
4) Chlorodifluoromethane	3.772	67	20585	4.69	ppb(v#	75
5) Propene	3.809	41	18121	1.32	ppb(v#	80
7) Dichlorodifluoromethane	3.858	85	29914	0.62	ppb(v	100
9) Chloromethane	3.986	50	15577	1.00	ppb(v	98
13) n-Butane	4.316	58	13657	4.29	ppb(v#	90
21) Trichlorofluoromethane	5.307	101	14916	0.33	ppb(v	97
22) Acetone	5.154	58	2458506	251.21	ppb(v#	36
23) Pentane	5.619	57	6457	1.41	ppb(v	91
24) 1,1-Dichloro-1-fluoroe...	5.411	81	4889	0.12	ppb(v#	88
26) Isopropyl Alcohol	5.375	45	1556996	40.16	ppb(v	99
29) Methylene Chloride	6.017	84	6273	0.32	ppb(v	92
31) Ethanol	4.751	45	1158690	210.12	ppb(v	99
35) tert-Butyl Alcohol	5.944	59	10101	0.27	ppb(v#	89
39) 2-Butanone	7.547	72	16632	1.66	ppb(v	89
40) Hexane	8.219	57	8815	0.28	ppb(v#	1
43) Ethyl Acetate	8.250	61	111411	17.44	ppb(v	64
45) Chloroform	8.342	83	7857	0.19	ppb(v	96
47) Tetrahydrofuran	8.807	72	1391	0.16	ppb(v#	78
50) Benzene	9.957	78	42895	0.66	ppb(v	99
51) Carbon Tetrachloride	10.128	117	4195	0.10	ppb(v	96
55) 2,2,4-Trimethylpentane	11.248	57	16506	0.17	ppb(v	91
56) Heptane	11.590	71	7547	0.35	ppb(v	98
65) 4-Methyl-2-pentanone	12.361	58	1770	0.10	ppb(v	84
67) Toluene	13.536	91	317214	4.07	ppb(v	99
73) Tetrachloroethene	15.047	166	10025	0.26	ppb(v	97
79) Ethylbenzene	16.533	91	13317	0.15	ppb(v	99
80) m,p-Xylene	16.778	91	34160	0.50	ppb(v	99
81) Styrene	17.329	104	5469	0.12	ppb(v	97
82) Nonane	17.861	43	11792	0.27	ppb(v	95
83) o-Xylene	17.476	91	14064	0.21	ppb(v	99
92) 4-Ethyltoluene	19.403	105	8813	0.10	ppb(v	95
93) 1,3,5-Trimethylbenzene	19.525	105	10198	0.14	ppb(v	98
94) alpha-Methylstyrene	19.757	118	17772	0.57	ppb(v	97
96) 1,2,4-Trimethylbenzene	20.106	105	30164	0.44	ppb(v#	65
106) Naphthalene	23.177	128	4476	0.13	ppb(v	97

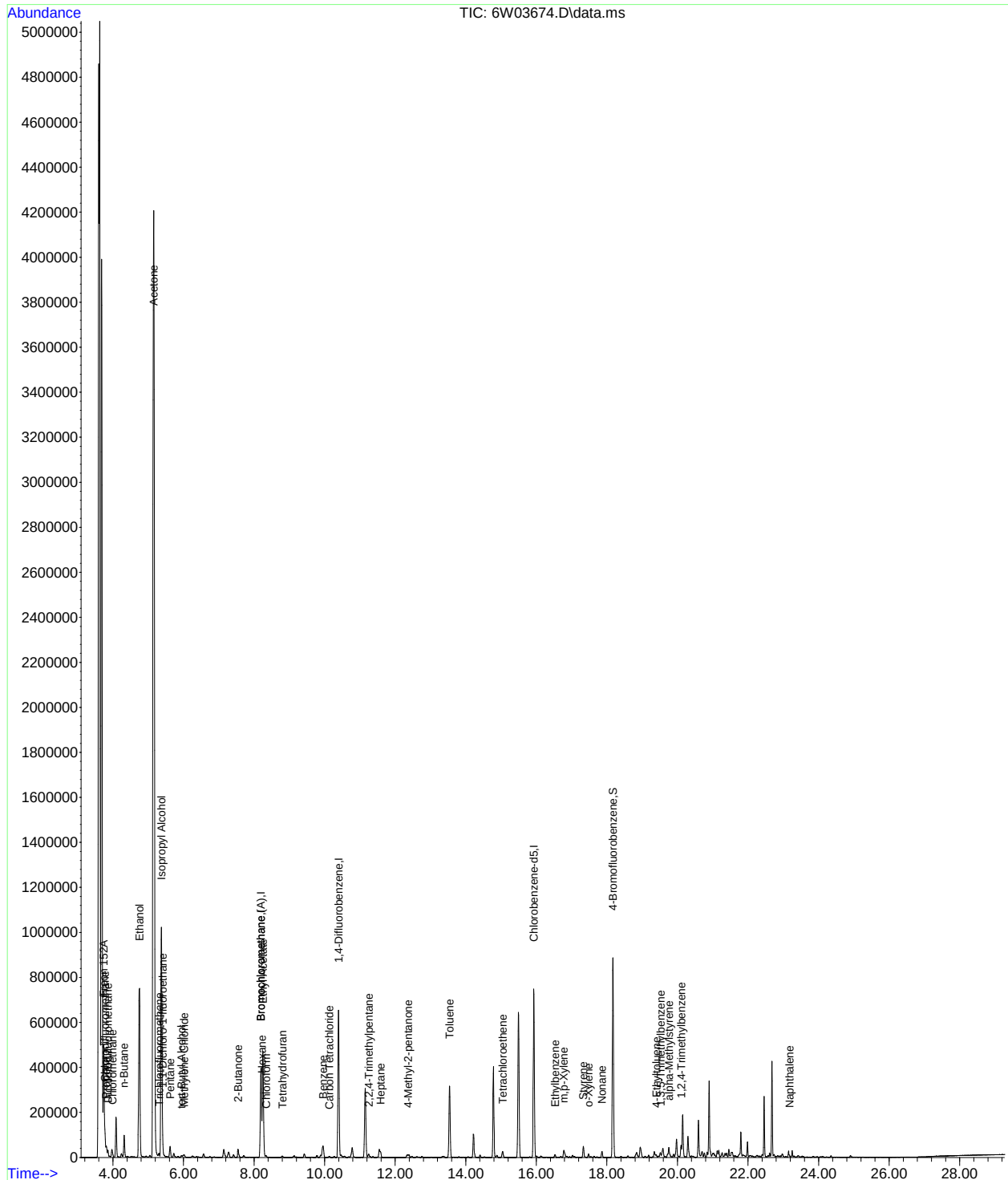
(#) = qualifier out of range (m) = manual integration (+) = signals summed

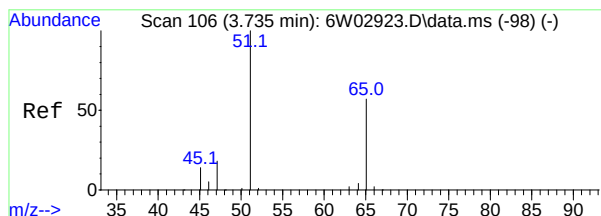
7.1.22

7

Data Path : C:\msdchem\1\data\
Data File : 6W03674.D
Acq On : 22 Dec 2017 4:55 am
Operator : DANAT
Sample : jc56815-13
Misc : MS22955,V6W106,800,,,1
ALS Vial : 1 Sample Multiplier: 1

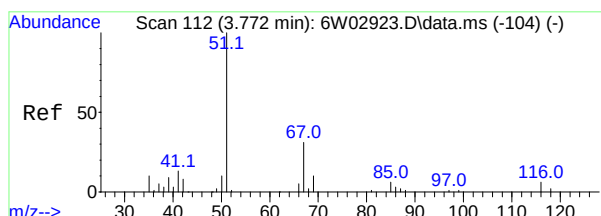
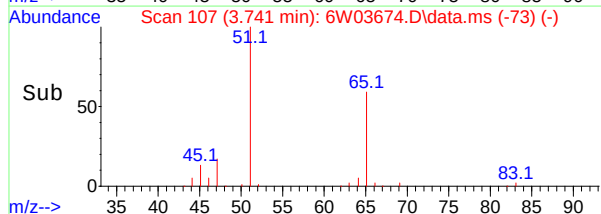
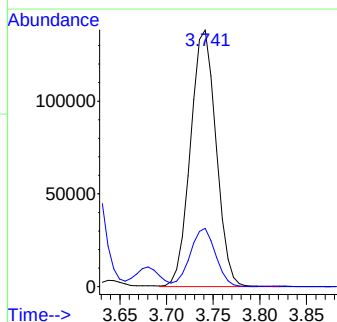
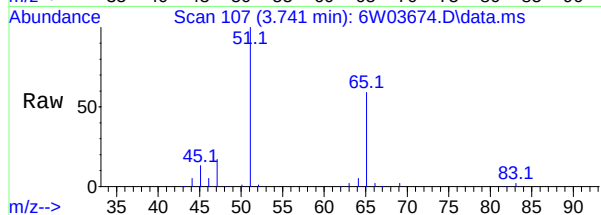
Quant Time: Dec 22 15:13:16 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration





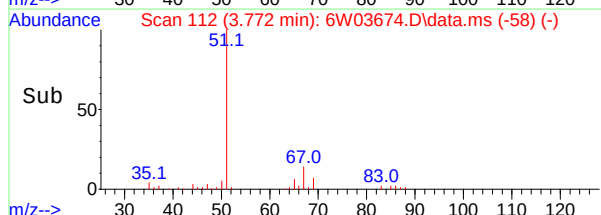
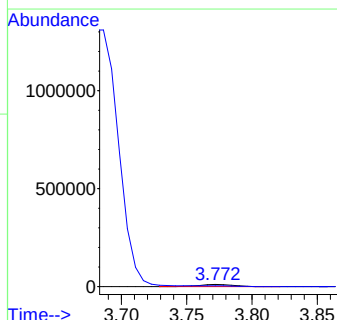
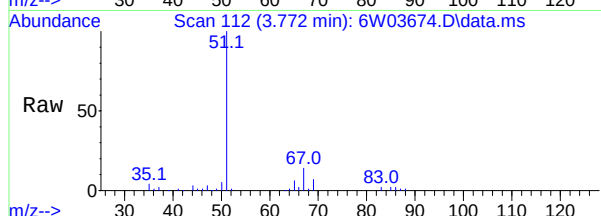
#3
Freon 152A
Concen: 21.07 ppb(v)
RT: 3.741 min Scan# 107
Delta R.T. 0.006 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

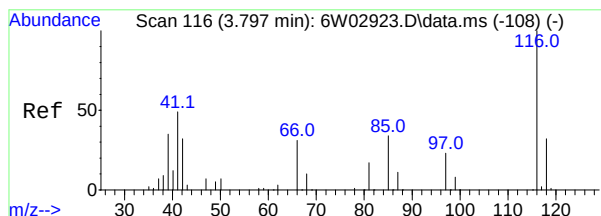
Tgt Ion: 65 Resp: 263737
Ion Ratio Lower Upper
65 100
45 22.7 16.9 31.5



#4
Chlorodifluoromethane
Concen: 4.69 ppb(v)
RT: 3.772 min Scan# 112
Delta R.T. -0.000 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

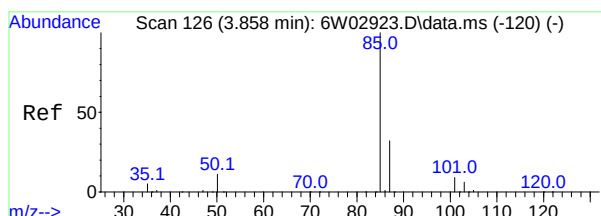
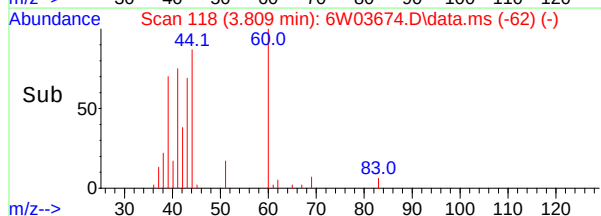
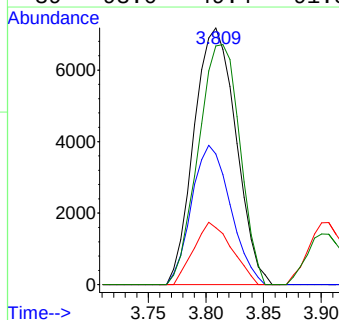
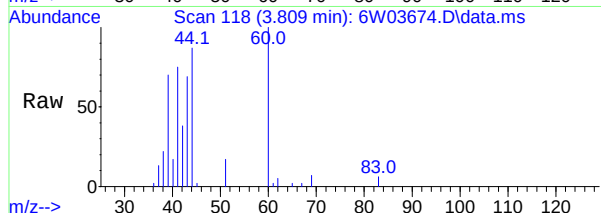
Tgt Ion: 67 Resp: 20585
Ion Ratio Lower Upper
67 100
69 46.3 22.7 42.1#





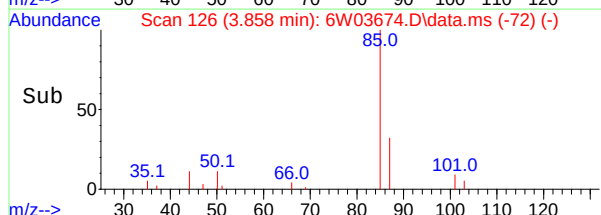
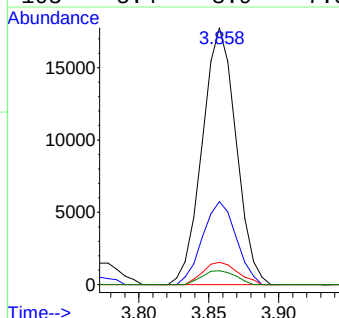
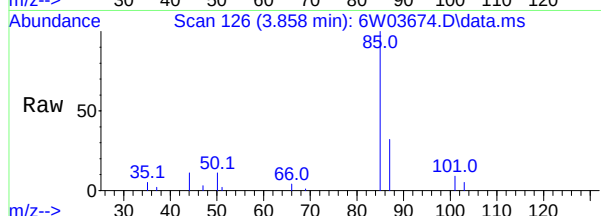
#5
Propene
Concen: 1.32 ppb(v)
RT: 3.809 min Scan# 118
Delta R.T. 0.012 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

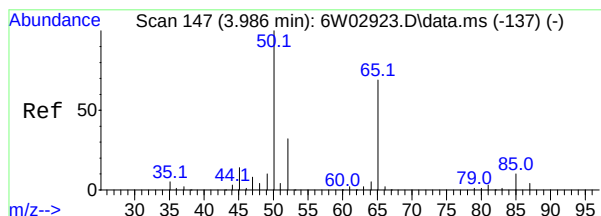
Tgt Ion: 41 Resp: 18121
Ion Ratio Lower Upper
41 100
42 50.9 45.4 84.4
40 22.2 17.4 32.2
39 93.0 49.4 91.8#



#7
Dichlorodifluoromethane
Concen: 0.62 ppb(v)
RT: 3.858 min Scan# 126
Delta R.T. -0.000 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

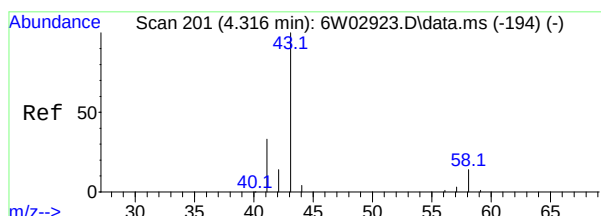
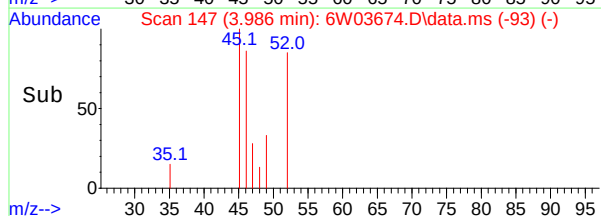
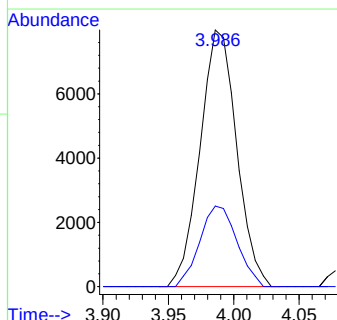
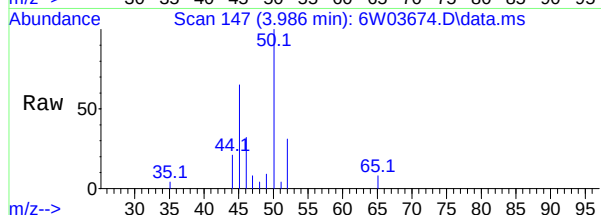
Tgt Ion: 85 Resp: 29914
Ion Ratio Lower Upper
85 100
87 32.3 22.7 42.3
101 8.7 5.9 11.1
103 5.4 3.9 7.3





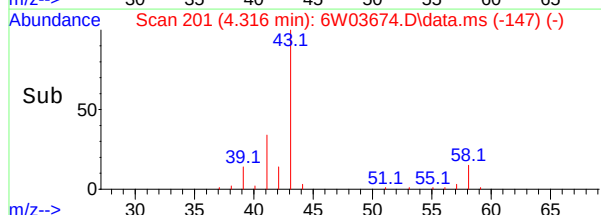
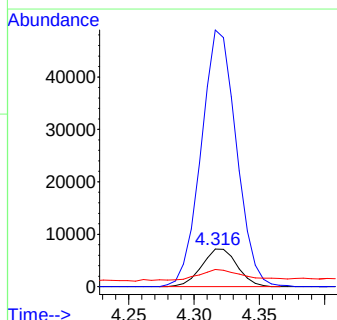
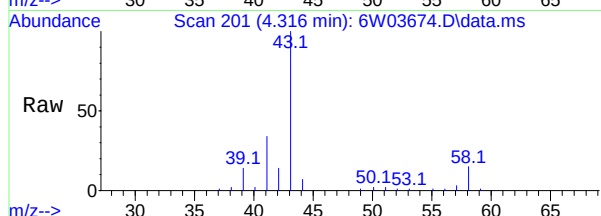
#9
Chloromethane
Concen: 1.00 ppb(v)
RT: 3.986 min Scan# 147
Delta R.T. -0.000 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

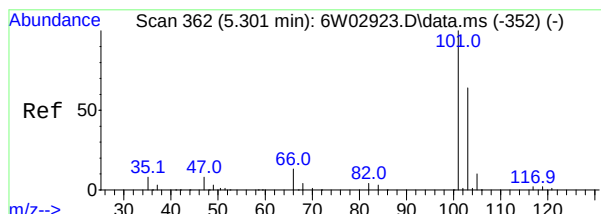
Tgt Ion: 50 Resp: 15577
Ion Ratio Lower Upper
50 100
52 31.4 22.7 42.1



#13
n-Butane
Concen: 4.29 ppb(v)
RT: 4.316 min Scan# 201
Delta R.T. -0.000 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

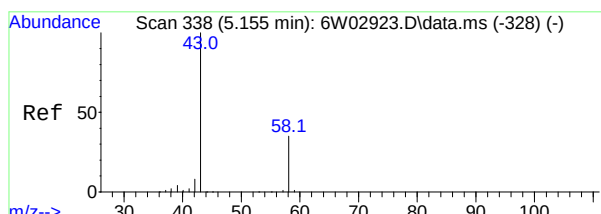
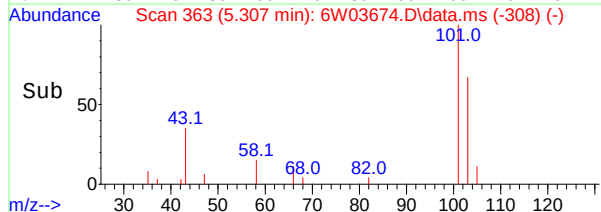
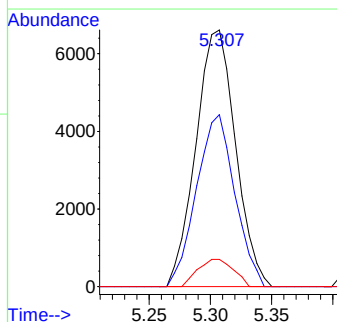
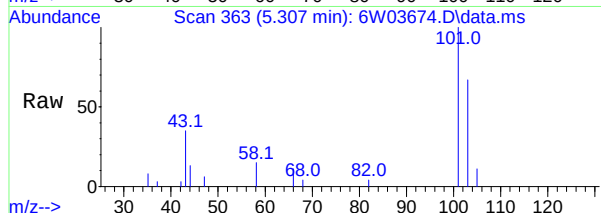
Tgt Ion: 58 Resp: 13657
Ion Ratio Lower Upper
58 100
43 681.6 499.8 928.2
44 45.7 21.1 39.1#





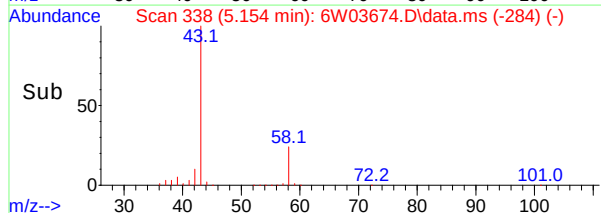
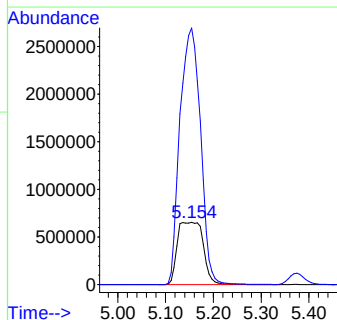
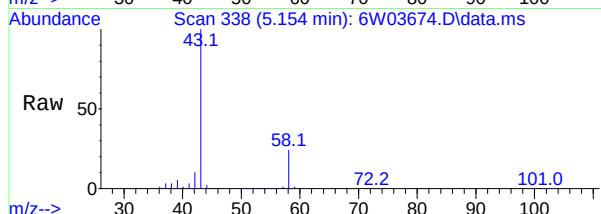
#21
 Trichlorofluoromethane
 Concen: 0.33 ppb(v)
 RT: 5.307 min Scan# 363
 Delta R.T. 0.006 min
 Lab File: 6W03674.D
 Acq: 22 Dec 2017 4:55 am

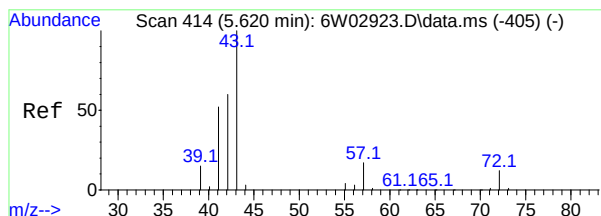
Tgt Ion: 101 Resp: 14916
 Ion Ratio Lower Upper
 101 100
 103 67.0 45.1 83.9
 105 10.7 7.3 13.5



#22
 Acetone
 Concen: 251.21 ppb(v)
 RT: 5.154 min Scan# 338
 Delta R.T. -0.000 min
 Lab File: 6W03674.D
 Acq: 22 Dec 2017 4:55 am

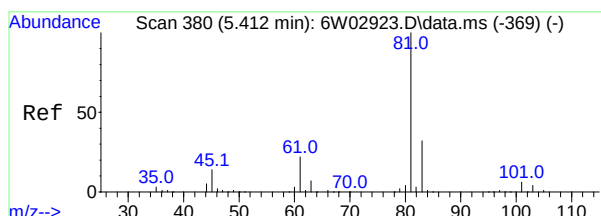
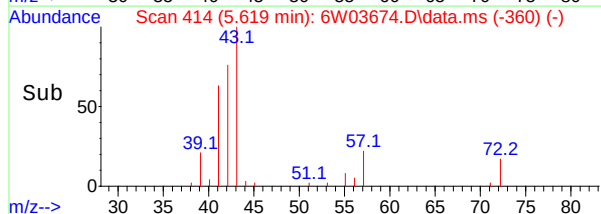
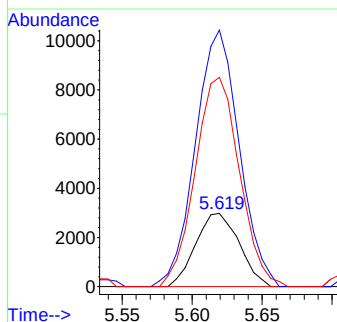
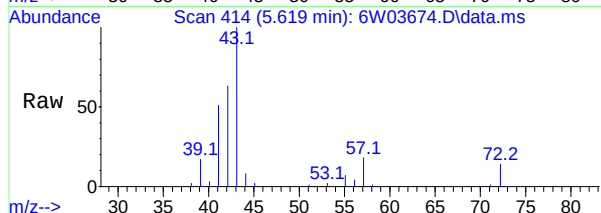
Tgt Ion: 58 Resp: 2458506
 Ion Ratio Lower Upper
 58 100
 43 411.6 202.4 375.8#





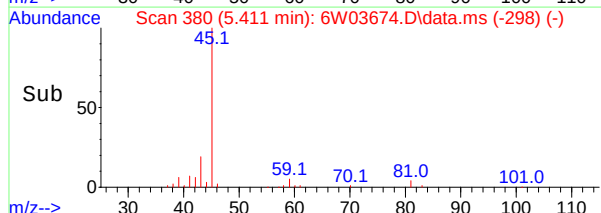
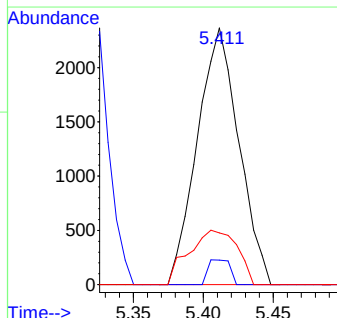
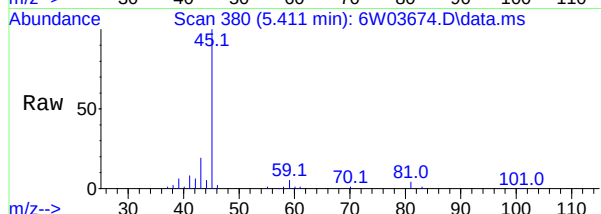
#23
Pentane
Concen: 1.41 ppb(v)
RT: 5.619 min Scan# 414
Delta R.T. -0.000 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

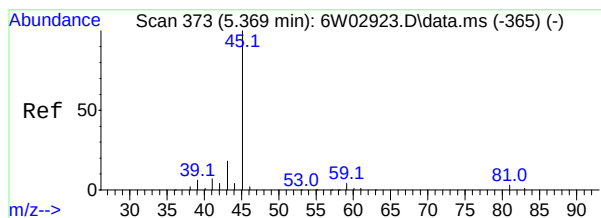
Tgt Ion: 57 Resp: 6457
Ion Ratio Lower Upper
57 100
42 350.4 252.4 468.8
41 285.7 218.7 406.1



#24
1,1-Dichloro-1-fluoroethane
Concen: 0.12 ppb(v)
RT: 5.411 min Scan# 380
Delta R.T. -0.000 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

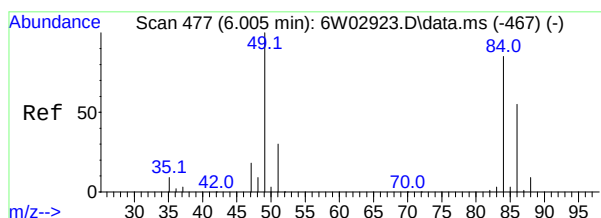
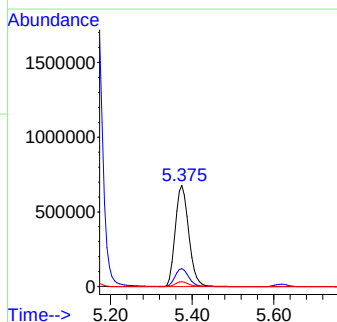
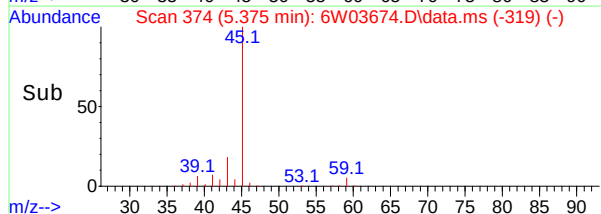
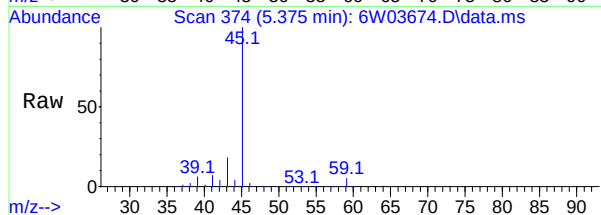
Tgt Ion: 81 Resp: 4889
Ion Ratio Lower Upper
81 100
101 0.0 8.0 12.0#
61 24.6 17.8 26.6





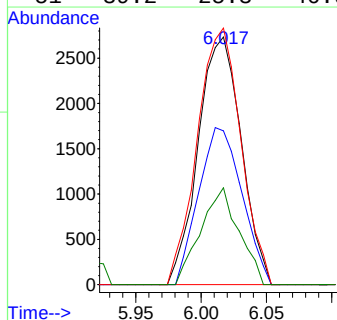
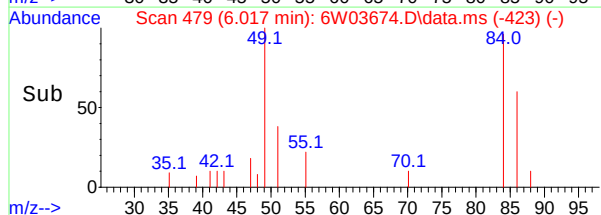
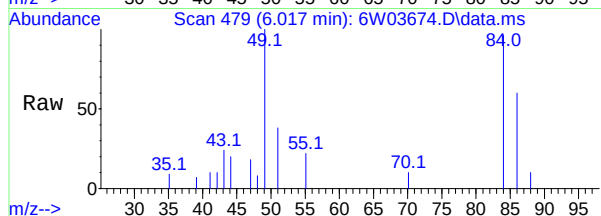
#26
Isopropyl Alcohol
Concen: 40.16 ppb(v)
RT: 5.375 min Scan# 374
Delta R.T. 0.006 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

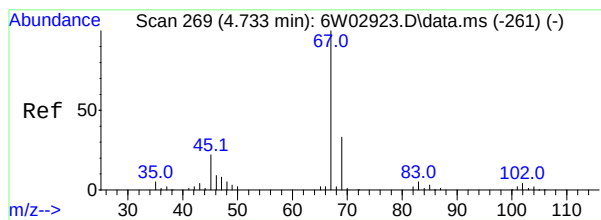
Tgt Ion: 45 Resp: 1556996
Ion Ratio Lower Upper
45 100
43 17.8 12.8 23.8
59 4.8 3.0 5.6



#29
Methylene Chloride
Concen: 0.32 ppb(v)
RT: 6.017 min Scan# 479
Delta R.T. 0.012 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

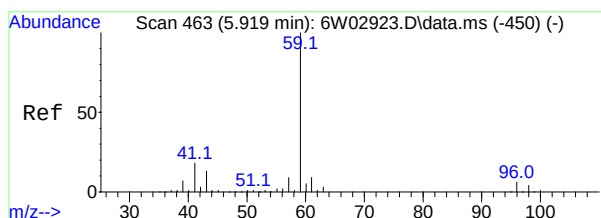
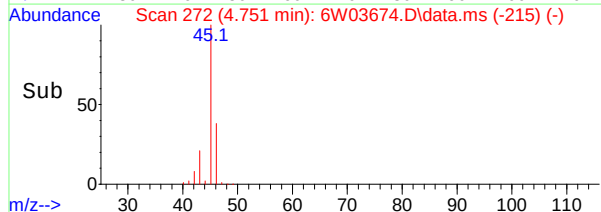
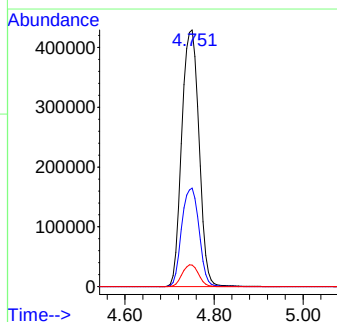
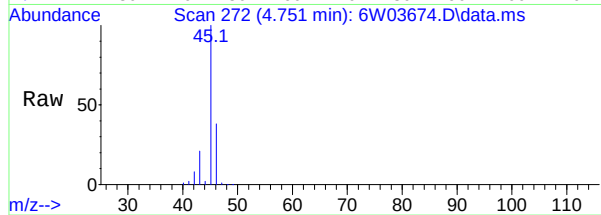
Tgt Ion: 84 Resp: 6273
Ion Ratio Lower Upper
84 100
86 62.1 44.8 83.2
49 103.7 82.1 152.5
51 39.2 25.3 46.9





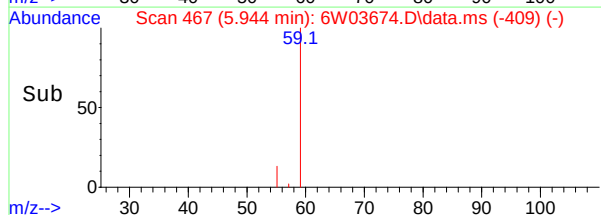
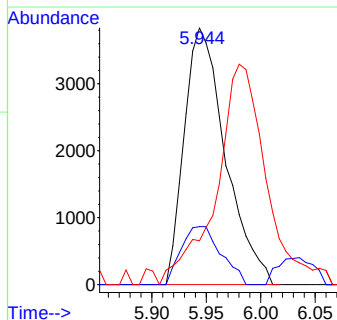
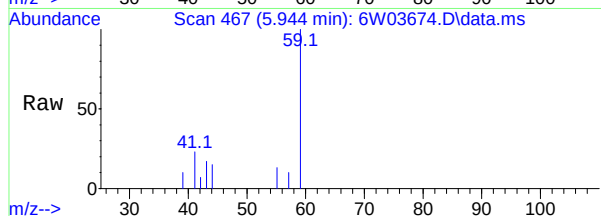
#31
Ethanol
Concen: 210.12 ppb(v)
RT: 4.751 min Scan# 272
Delta R.T. 0.018 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

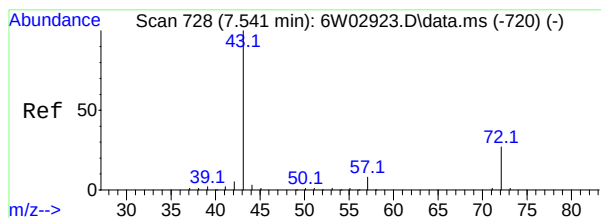
Tgt Ion: 45 Resp: 1158690
Ion Ratio Lower Upper
45 100
46 38.4 27.2 50.4
42 8.4 5.6 10.4



#35
tert-Butyl Alcohol
Concen: 0.27 ppb(v)
RT: 5.944 min Scan# 467
Delta R.T. 0.024 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

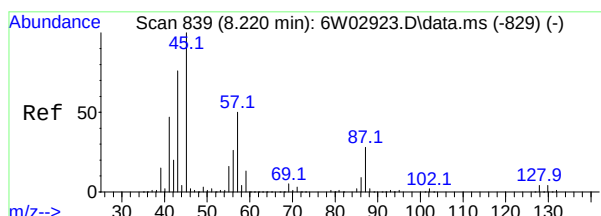
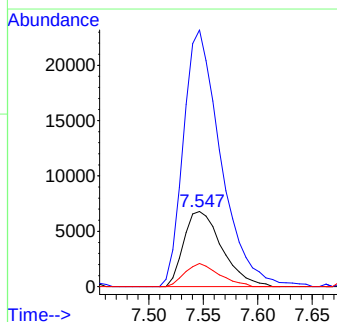
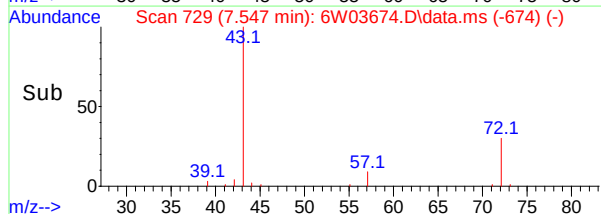
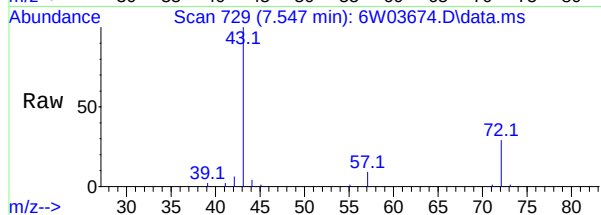
Tgt Ion: 59 Resp: 10101
Ion Ratio Lower Upper
59 100
41 22.6 12.7 23.7
43 17.1 8.8 16.4#





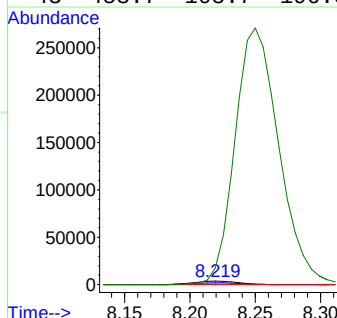
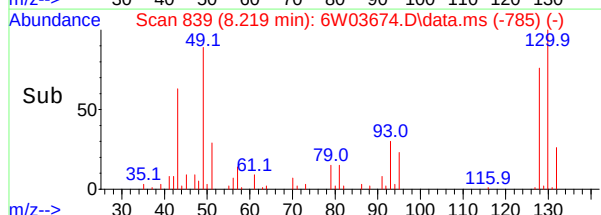
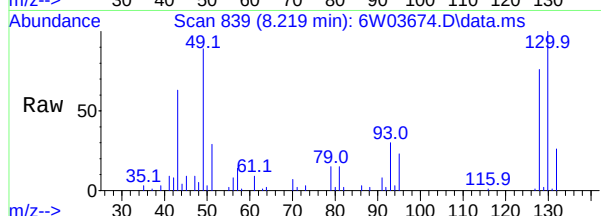
#39
2-Butanone
Concen: 1.66 ppb(v)
RT: 7.547 min Scan# 729
Delta R.T. 0.006 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

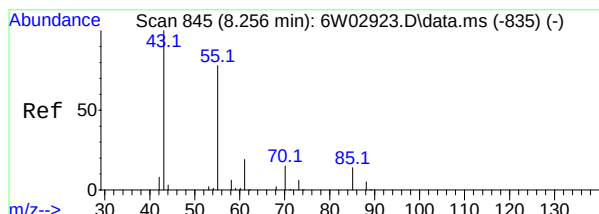
Tgt Ion: 72 Resp: 16632
Ion Ratio Lower Upper
72 100
43 342.0 257.4 478.0
57 30.8 21.0 39.0



#40
Hexane
Concen: 0.28 ppb(v)
RT: 8.219 min Scan# 839
Delta R.T. -0.000 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

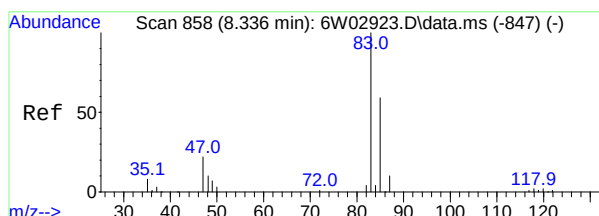
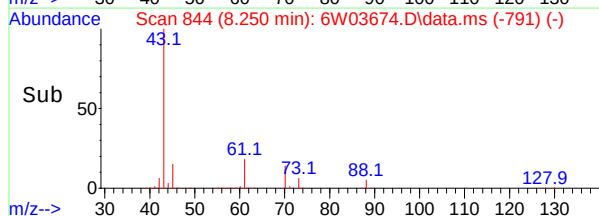
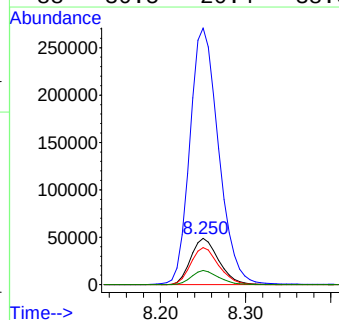
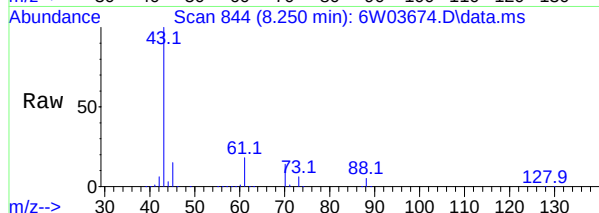
Tgt Ion: 57 Resp: 8815
Ion Ratio Lower Upper
57 100
56 55.3 36.0 67.0
86 19.2 12.1 22.5
43 453.7 105.7 196.3#





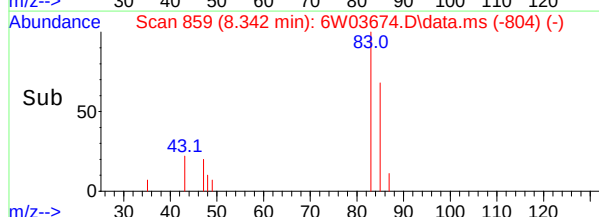
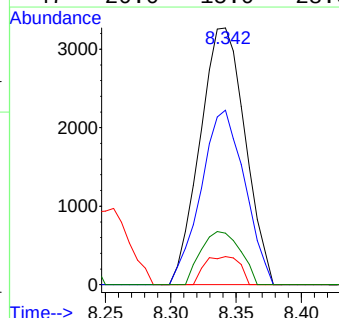
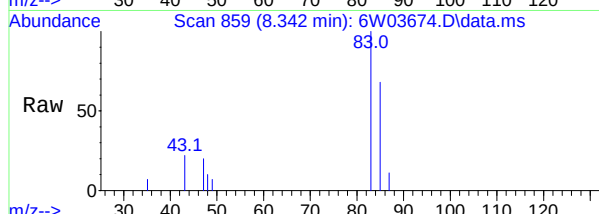
#43
Ethyl Acetate
Concen: 17.44 ppb(v)
RT: 8.250 min Scan# 844
Delta R.T. -0.006 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

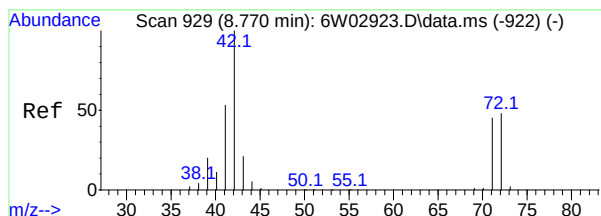
Tgt Ion: 61 Resp: 111411
Ion Ratio Lower Upper
61 100
43 555.5 488.5 907.1
70 80.0 54.9 101.9
88 30.5 20.4 38.0



#45
Chloroform
Concen: 0.19 ppb(v)
RT: 8.342 min Scan# 859
Delta R.T. 0.006 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

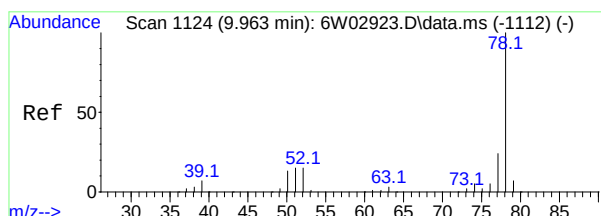
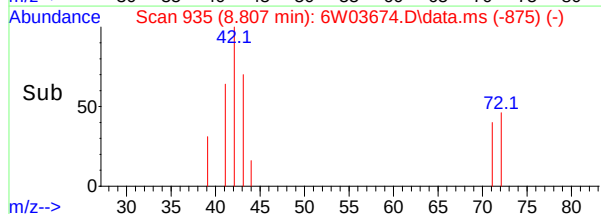
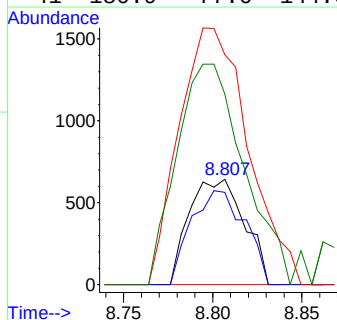
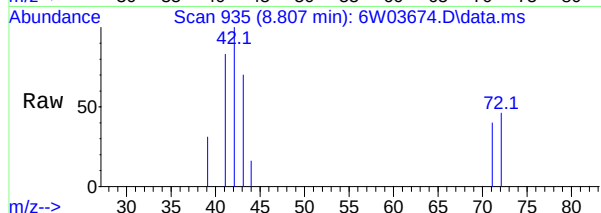
Tgt Ion: 83 Resp: 7857
Ion Ratio Lower Upper
83 100
85 67.9 45.2 84.0
87 11.0 7.3 13.7
47 20.0 15.0 28.0





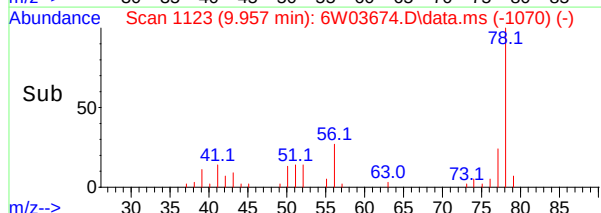
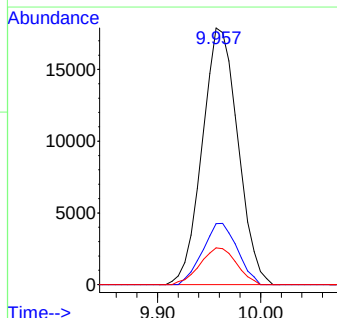
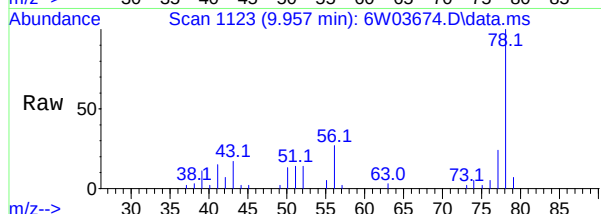
#47
Tetrahydrofuran
Concen: 0.16 ppb(v)
RT: 8.807 min Scan# 935
Delta R.T. 0.037 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

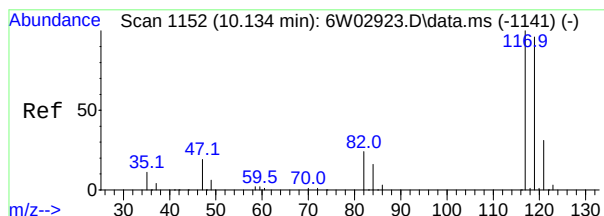
Tgt Ion: 72 Resp: 1391
Ion Ratio Lower Upper
72 100
71 87.7 65.4 121.4
42 218.5 146.4 271.8
41 180.9 77.6 144.0#



#50
Benzene
Concen: 0.66 ppb(v)
RT: 9.957 min Scan# 1123
Delta R.T. -0.006 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

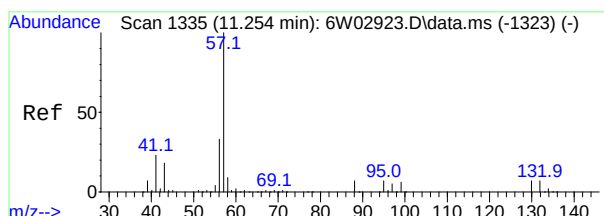
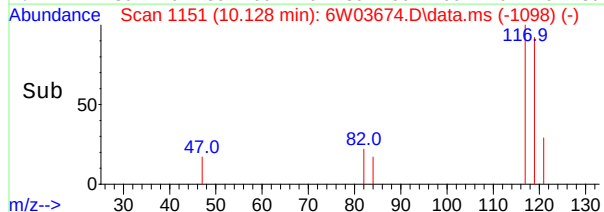
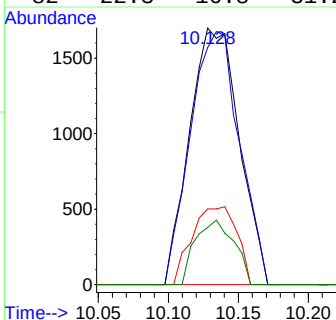
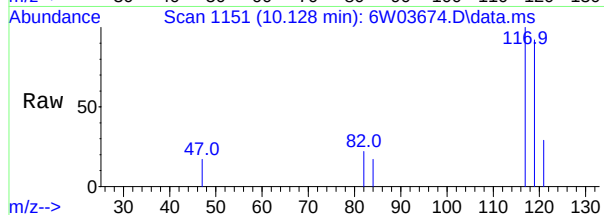
Tgt Ion: 78 Resp: 42895
Ion Ratio Lower Upper
78 100
77 23.8 16.6 30.8
51 14.3 10.6 19.6





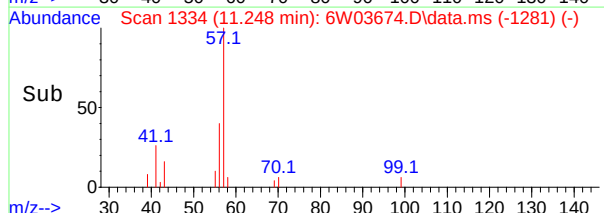
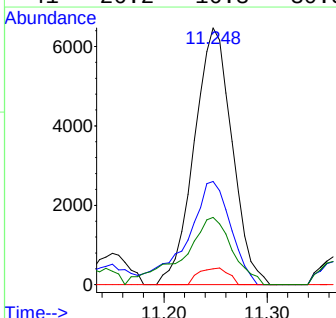
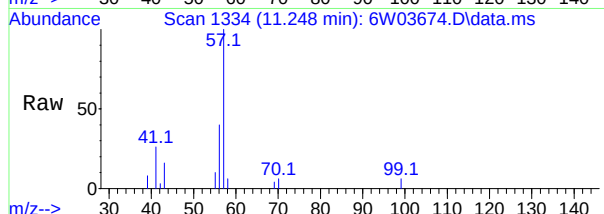
#51
Carbon Tetrachloride
Concen: 0.10 ppb(v)
RT: 10.128 min Scan# 1151
Delta R.T. -0.006 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

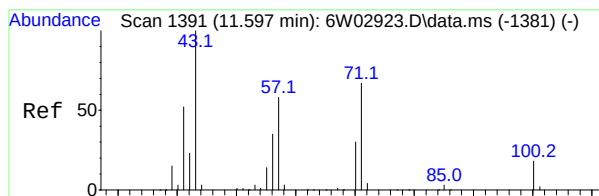
Tgt Ion: 117	Resp: 4195
Ion Ratio	Lower Upper
117	100
119	92.4 67.4 125.2
121	29.5 21.9 40.7
82	22.3 16.8 31.2



#55
2,2,4-Trimethylpentane
Concen: 0.17 ppb(v)
RT: 11.248 min Scan# 1334
Delta R.T. -0.006 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

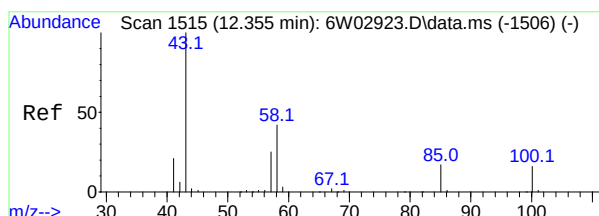
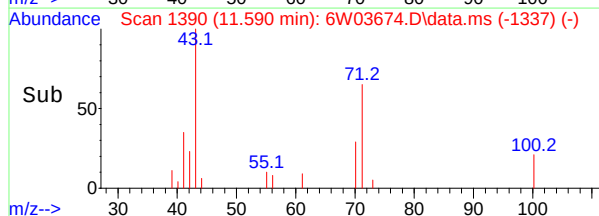
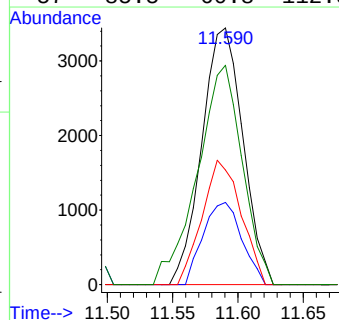
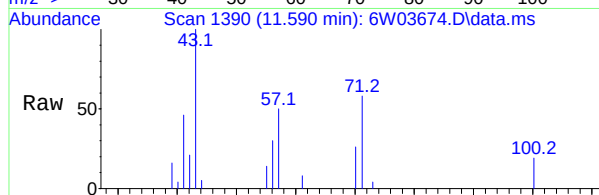
Tgt Ion: 57	Resp: 16506
Ion Ratio	Lower Upper
57	100
56	40.2 23.0 42.8
99	6.1 4.5 8.3
41	26.2 16.3 30.3





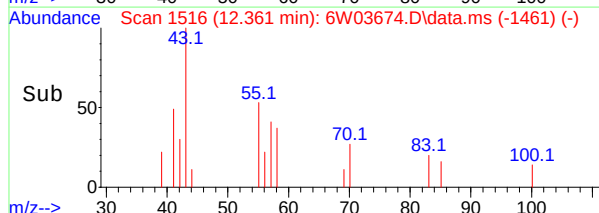
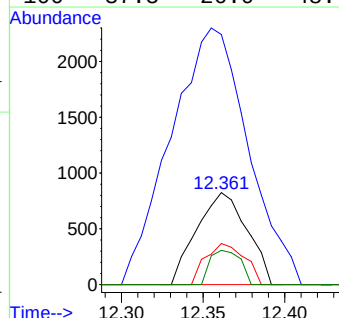
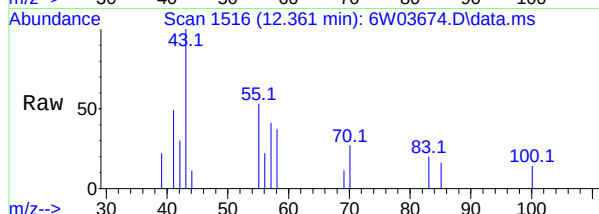
#56
Heptane
Concen: 0.35 ppb(v)
RT: 11.590 min Scan# 1390
Delta R.T. -0.006 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

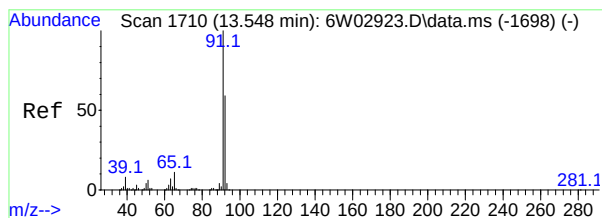
Tgt Ion: 71 Resp: 7547
Ion Ratio Lower Upper
71 100
100 32.0 20.9 38.7
70 44.7 32.1 59.5
57 85.5 60.8 112.8



#65
4-Methyl-2-pentanone
Concen: 0.10 ppb(v)
RT: 12.361 min Scan# 1516
Delta R.T. 0.006 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

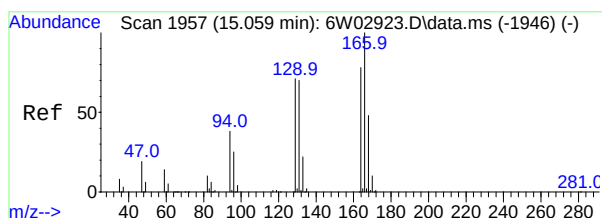
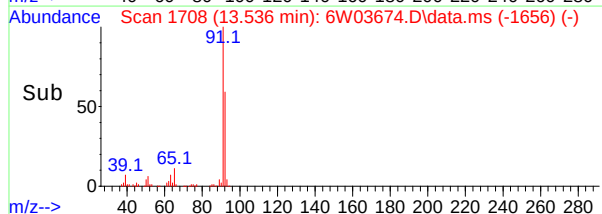
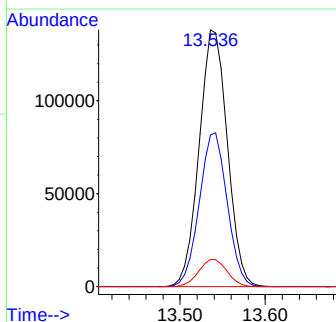
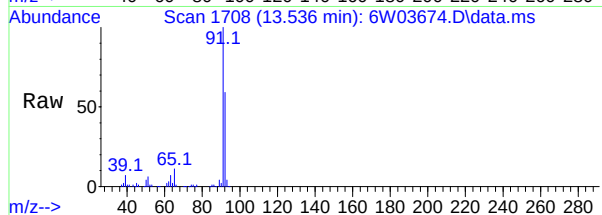
Tgt Ion: 58 Resp: 1770
Ion Ratio Lower Upper
58 100
43 272.1 165.6 307.6
85 44.8 30.2 56.0
100 37.5 26.0 48.4





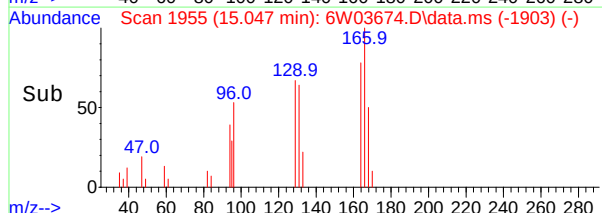
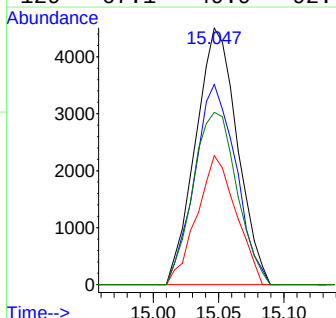
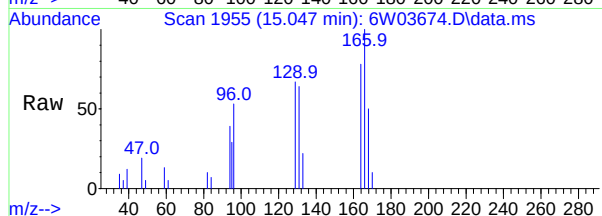
#67
Toluene
Concen: 4.07 ppb(v)
RT: 13.536 min Scan# 1708
Delta R.T. -0.012 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

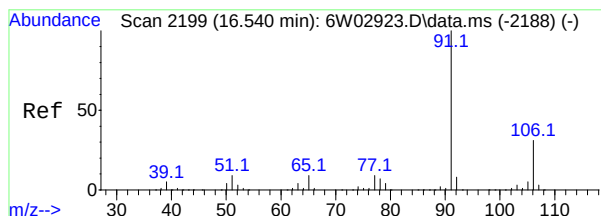
Tgt Ion: 91 Resp: 317214
Ion Ratio Lower Upper
91 100
92 59.1 41.0 76.2
65 10.6 7.8 14.4



#73
Tetrachloroethene
Concen: 0.26 ppb(v)
RT: 15.047 min Scan# 1955
Delta R.T. -0.012 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

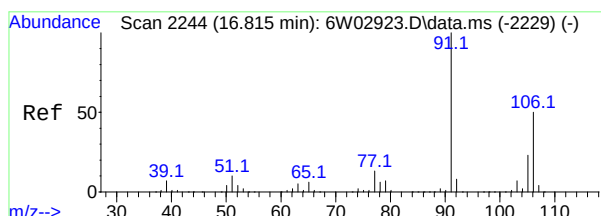
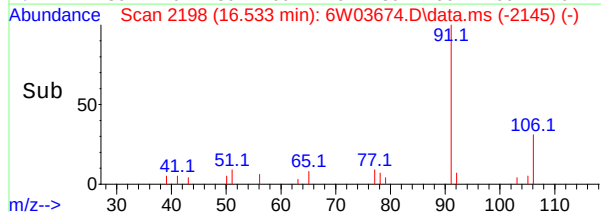
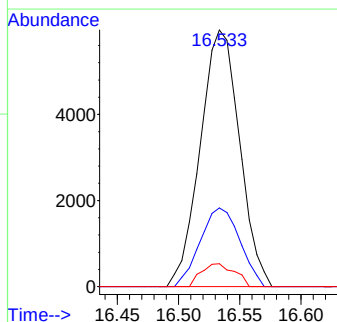
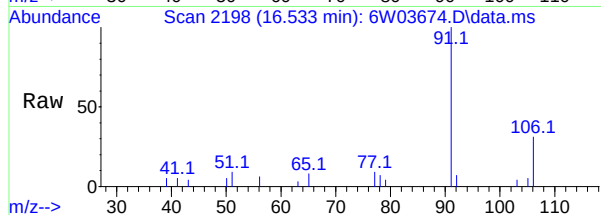
Tgt Ion: 166 Resp: 10025
Ion Ratio Lower Upper
166 100
164 78.0 54.5 101.1
168 50.3 33.9 62.9
129 67.1 49.9 92.7





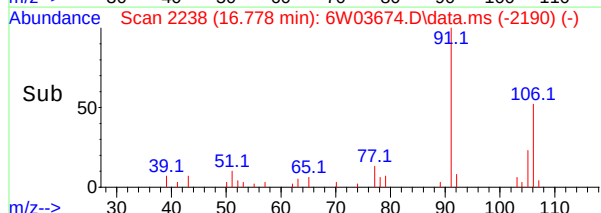
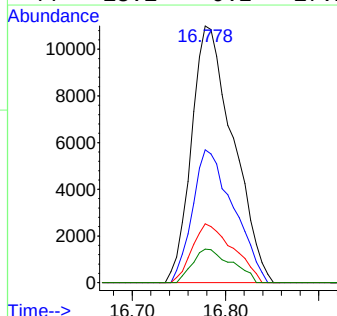
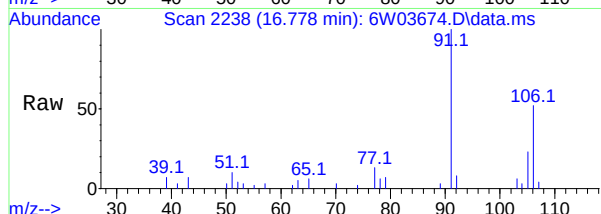
#79
Ethylbenzene
Concen: 0.15 ppb(v)
RT: 16.533 min Scan# 2198
Delta R.T. -0.006 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

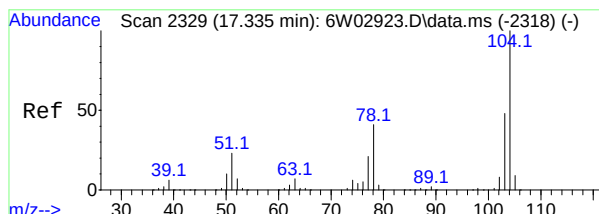
Tgt Ion: 91 Resp: 13317
Ion Ratio Lower Upper
91 100
106 30.7 22.0 41.0
77 8.9 6.0 11.2



#80
m,p-Xylene
Concen: 0.50 ppb(v)
RT: 16.778 min Scan# 2238
Delta R.T. -0.037 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

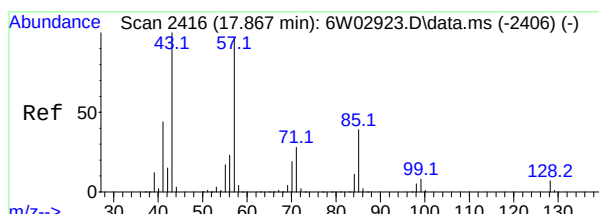
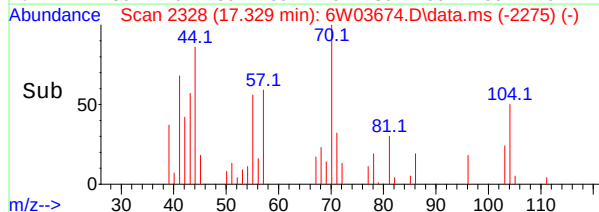
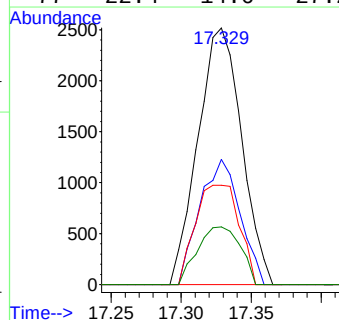
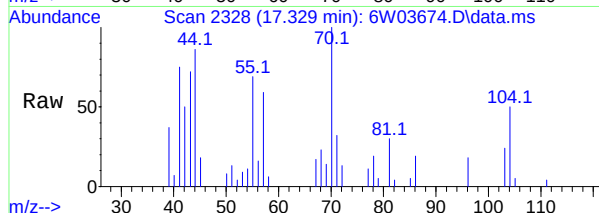
Tgt Ion: 91 Resp: 34160
Ion Ratio Lower Upper
91 100
106 51.7 35.1 65.3
105 22.9 16.0 29.8
77 13.1 9.2 17.2





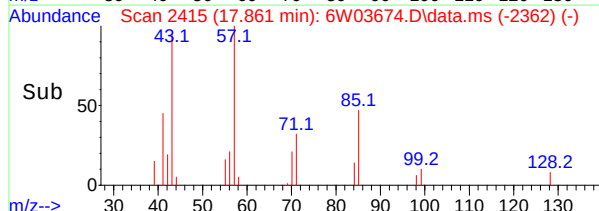
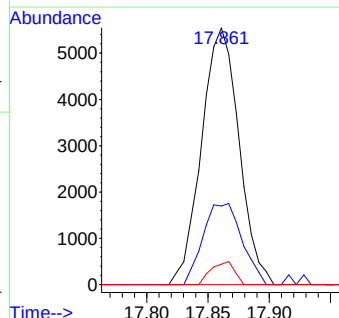
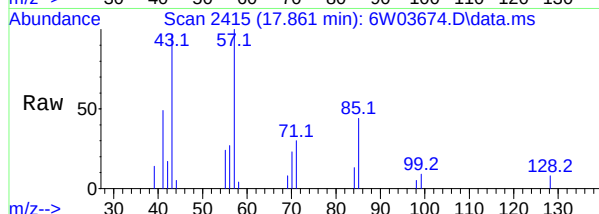
#81
Styrene
Concen: 0.12 ppb(v)
RT: 17.329 min Scan# 2328
Delta R.T. -0.006 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

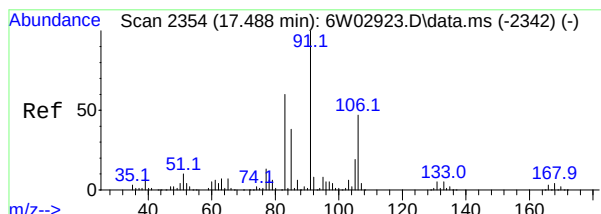
Tgt Ion: 104 Resp: 5469
Ion Ratio Lower Upper
104 100
103 48.7 33.4 62.0
78 38.7 28.8 53.4
77 22.4 14.6 27.2



#82
Nonane
Concen: 0.27 ppb(v)
RT: 17.861 min Scan# 2415
Delta R.T. -0.006 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

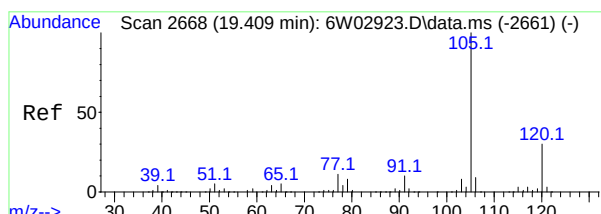
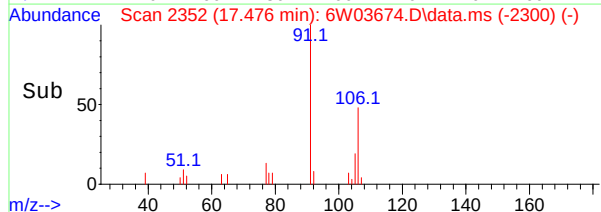
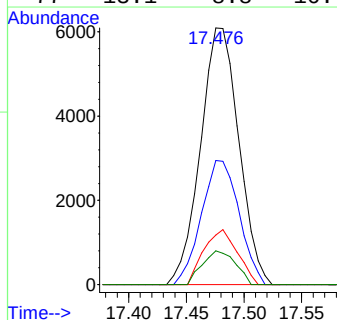
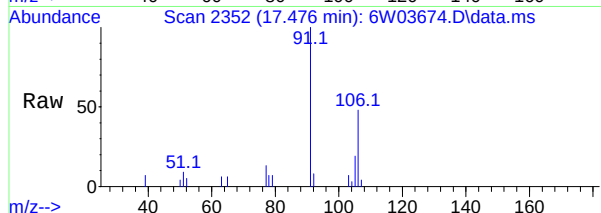
Tgt Ion: 43 Resp: 11792
Ion Ratio Lower Upper
43 100
71 30.6 19.5 36.3
128 8.0 4.6 8.6





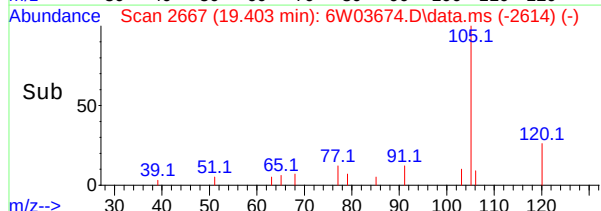
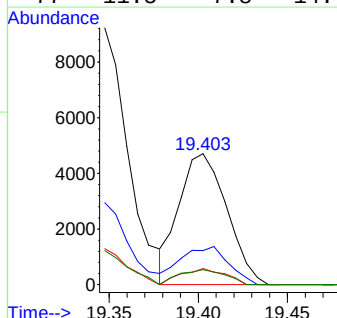
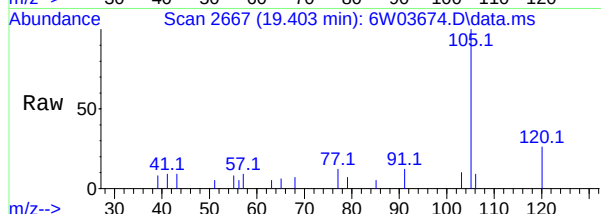
#83
o-Xylene
Concen: 0.21 ppb(v)
RT: 17.476 min Scan# 2352
Delta R.T. -0.012 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

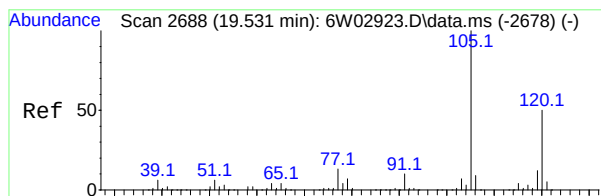
Tgt Ion	Resp	Lower	Upper
91	100		
106	48.3	33.2	61.6
105	19.3	13.4	25.0
77	13.1	8.8	16.4



#92
4-Ethyltoluene
Concen: 0.10 ppb(v)
RT: 19.403 min Scan# 2667
Delta R.T. -0.006 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

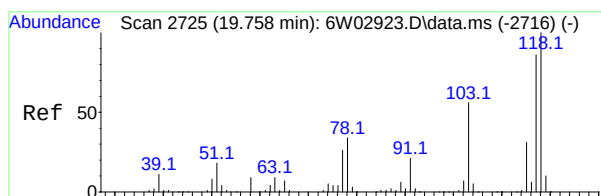
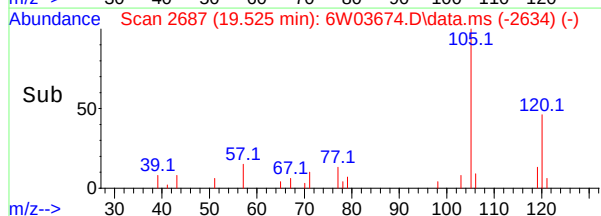
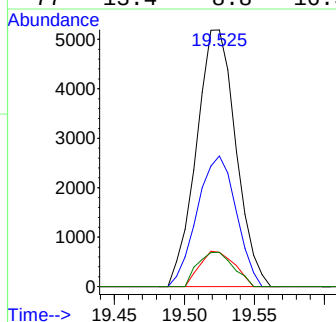
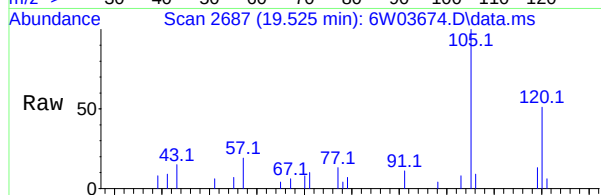
Tgt Ion	Resp	Lower	Upper
105	100		
120	26.0	20.6	38.4
91	12.4	7.3	13.7
77	11.5	7.8	14.4





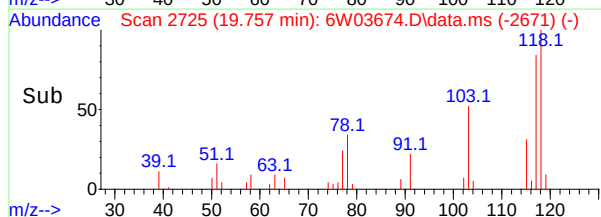
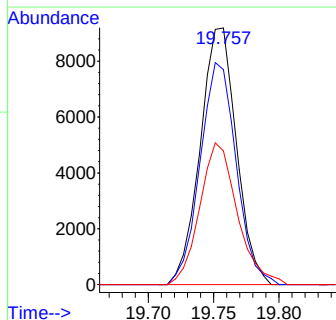
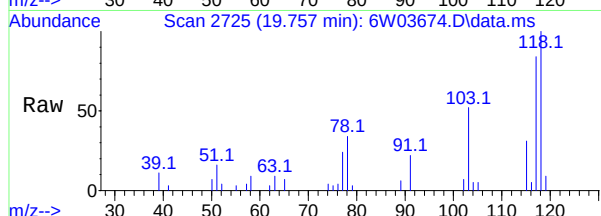
#93
1,3,5-Trimethylbenzene
Concen: 0.14 ppb(v)
RT: 19.525 min Scan# 2687
Delta R.T. -0.006 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

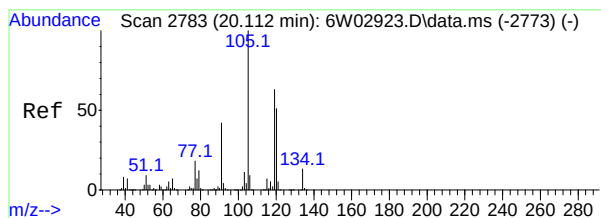
Tgt Ion:	105	Resp:	10198
Ion Ratio	100	Lower	Upper
105	100		
120	50.9	34.9	64.9
119	13.4	8.6	16.0
77	13.4	8.8	16.3



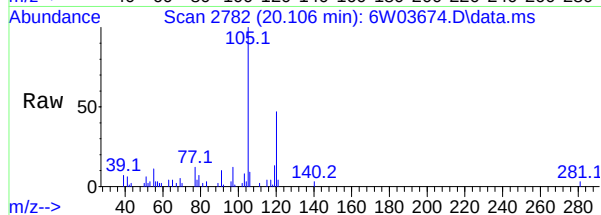
#94
alpha-Methylstyrene
Concen: 0.57 ppb(v)
RT: 19.757 min Scan# 2725
Delta R.T. -0.000 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am

Tgt Ion:	118	Resp:	17772
Ion Ratio	100	Lower	Upper
118	100		
117	83.8	60.1	111.7
103	52.0	39.1	72.5

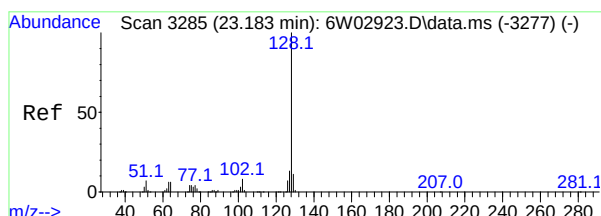
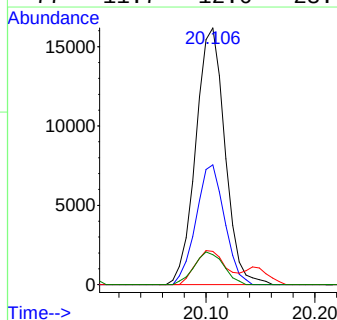
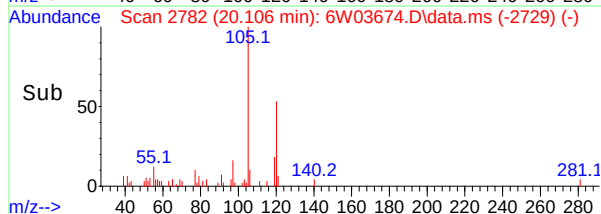




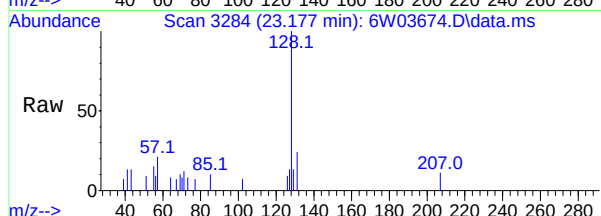
#96
1,2,4-Trimethylbenzene
Concen: 0.44 ppb(v)
RT: 20.106 min Scan# 2782
Delta R.T. -0.006 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am



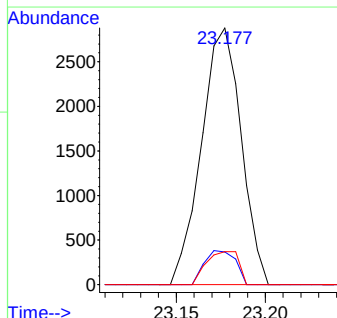
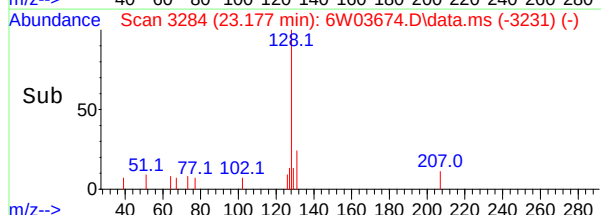
Tgt Ion:105 Resp: 30164
Ion Ratio Lower Upper
105 100
120 46.7 35.7 66.3
119 13.0 44.4 82.4#
77 11.7 12.6 23.4#



#106
Naphthalene
Concen: 0.13 ppb(v)
RT: 23.177 min Scan# 3284
Delta R.T. -0.006 min
Lab File: 6W03674.D
Acq: 22 Dec 2017 4:55 am



Tgt Ion:128 Resp: 4476
Ion Ratio Lower Upper
128 100
127 12.7 8.8 16.3
129 12.8 7.6 14.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03700.D
 Acq On : 23 Dec 2017 4:44 am
 Operator : DANAT
 Sample : jc56815-13
 Misc : MS22955,V6W107,20,,,,,1
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Dec 23 11:35:56 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : TO-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

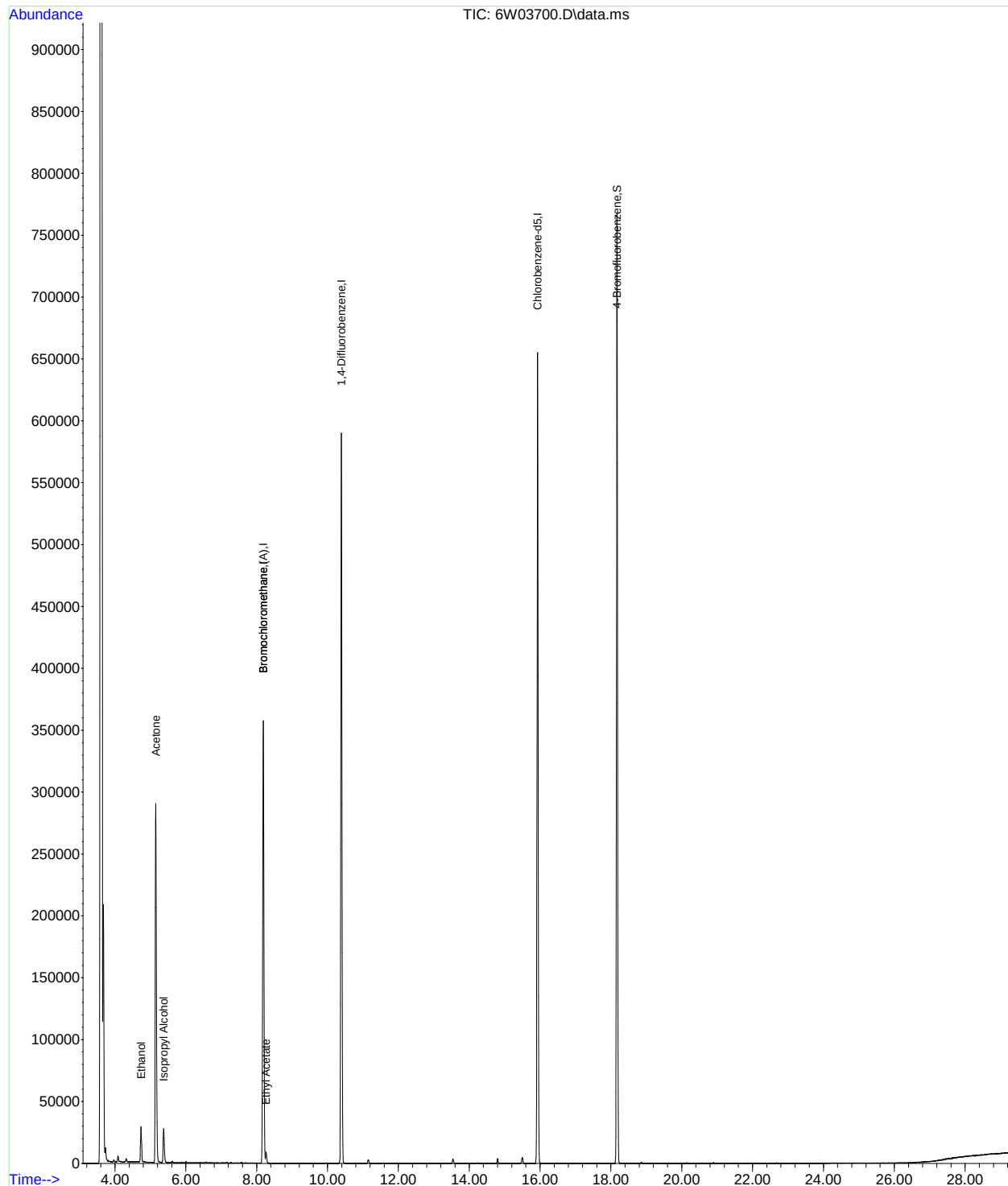
Internal Standards						
1) Bromochloromethane	8.189	130	167494	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.391	114	602228	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.928	82	285731	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.189	130	167494	10.00	ppb(v	0.00
System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.173	95	364283	9.89	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	98.90%
Target Compounds						
					Qvalue	
22) Acetone	5.148	58	148318	17.45	ppb(v	90
26) Isopropyl Alcohol	5.375	45	40732	1.21	ppb(v	94
31) Ethanol	4.732	45	35600	7.43	ppb(v	99
43) Ethyl Acetate	8.262	61	1918	0.35	ppb(v	67

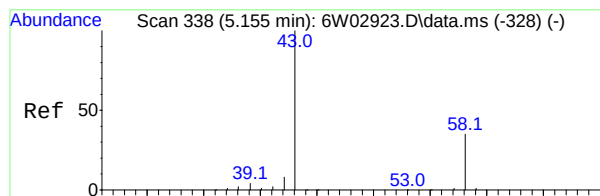
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W03700.D
Acq On : 23 Dec 2017 4:44 am
Operator : DANAT
Sample : jc56815-13
Misc : MS22955,V6W107,20,,,,,1
ALS Vial : 16 Sample Multiplier: 1

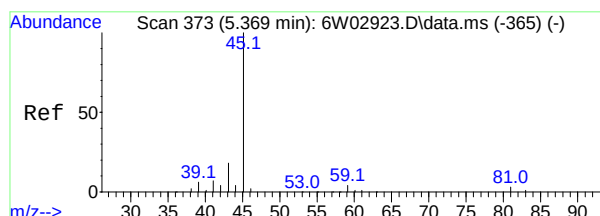
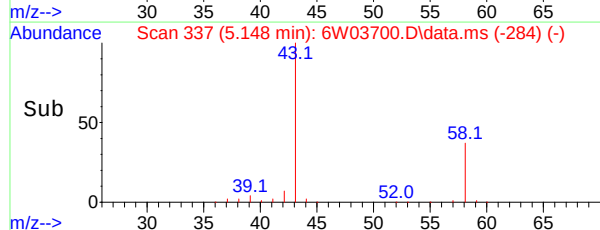
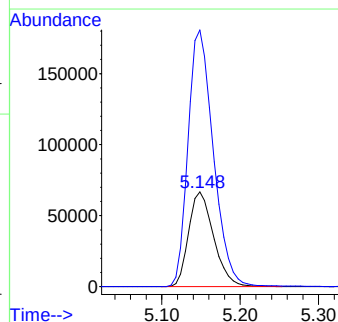
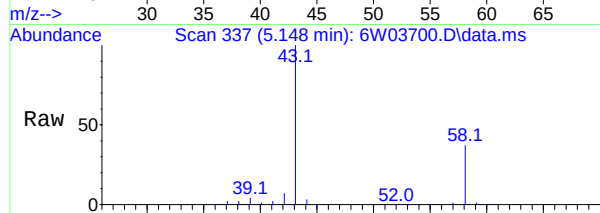
Quant Time: Dec 23 11:35:56 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration





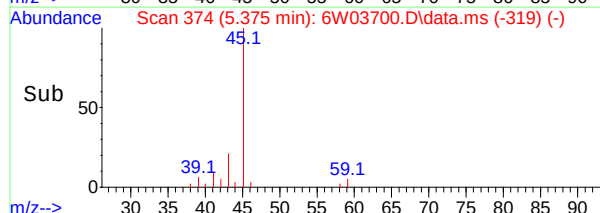
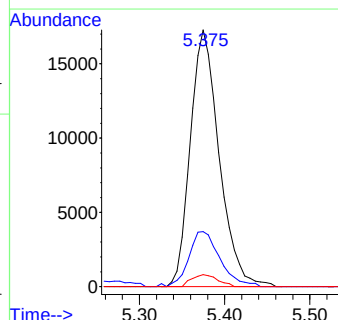
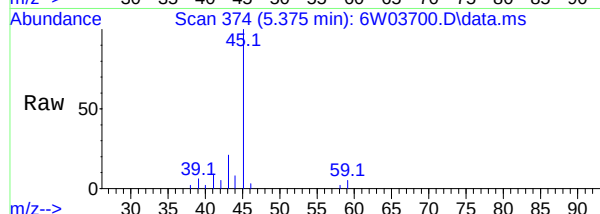
#22
Acetone
Concen: 17.45 ppb(v)
RT: 5.148 min Scan# 337
Delta R.T. -0.006 min
Lab File: 6W03700.D
Acq: 23 Dec 2017 4:44 am

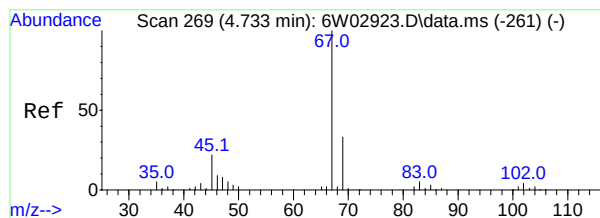
Tgt Ion: 58 Resp: 148318
Ion Ratio Lower Upper
58 100
43 270.9 202.4 375.8



#26
Isopropyl Alcohol
Concen: 1.21 ppb(v)
RT: 5.375 min Scan# 374
Delta R.T. 0.006 min
Lab File: 6W03700.D
Acq: 23 Dec 2017 4:44 am

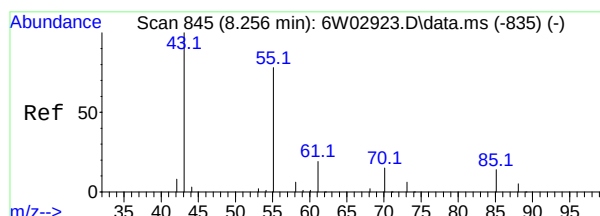
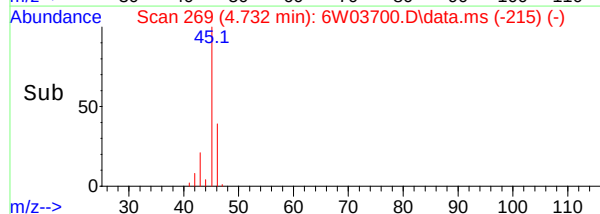
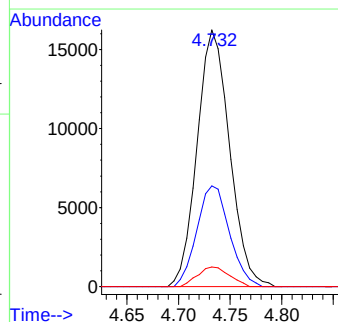
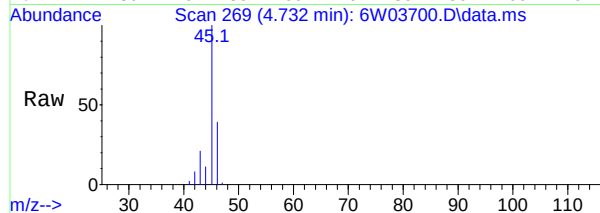
Tgt Ion: 45 Resp: 40732
Ion Ratio Lower Upper
45 100
43 21.4 12.8 23.8
59 4.7 3.0 5.6





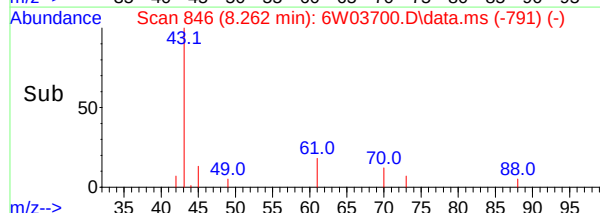
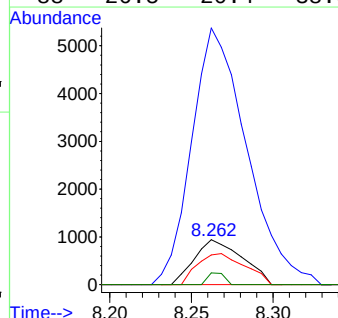
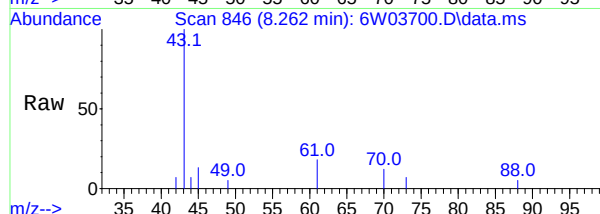
#31
Ethanol
Concen: 7.43 ppb(v)
RT: 4.732 min Scan# 269
Delta R.T. -0.000 min
Lab File: 6W03700.D
Acq: 23 Dec 2017 4:44 am

Tgt Ion: 45 Resp: 35600
Ion Ratio Lower Upper
45 100
46 39.2 27.2 50.4
42 7.7 5.6 10.4



#43
Ethyl Acetate
Concen: 0.35 ppb(v)
RT: 8.262 min Scan# 846
Delta R.T. 0.006 min
Lab File: 6W03700.D
Acq: 23 Dec 2017 4:44 am

Tgt Ion: 61 Resp: 1918
Ion Ratio Lower Upper
61 100
43 571.2 488.5 907.1
70 66.0 54.9 101.9
88 26.5 20.4 38.0



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W03636.D
Acq On : 20 Dec 2017 3:27 pm
Operator : DANAT
Sample : mb
Misc : MS23032,V6W105,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 20 16:07:12 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.189	130	242212	10.00	ppb(v)	0.00
54) 1,4-Difluorobenzene	10.391	114	891233	10.00	ppb(v)	0.00
77) Chlorobenzene-d5	15.928	82	400323	10.00	ppb(v)	0.00
108) Bromochloromethane (A)	8.189	130	242212	10.00	ppb(v)	0.00

System Monitoring Compounds

91) 4-Bromofluorobenzene	18.173	95	514342	9.97	ppb(v)	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	99.70%

Target Compounds	Qvalue

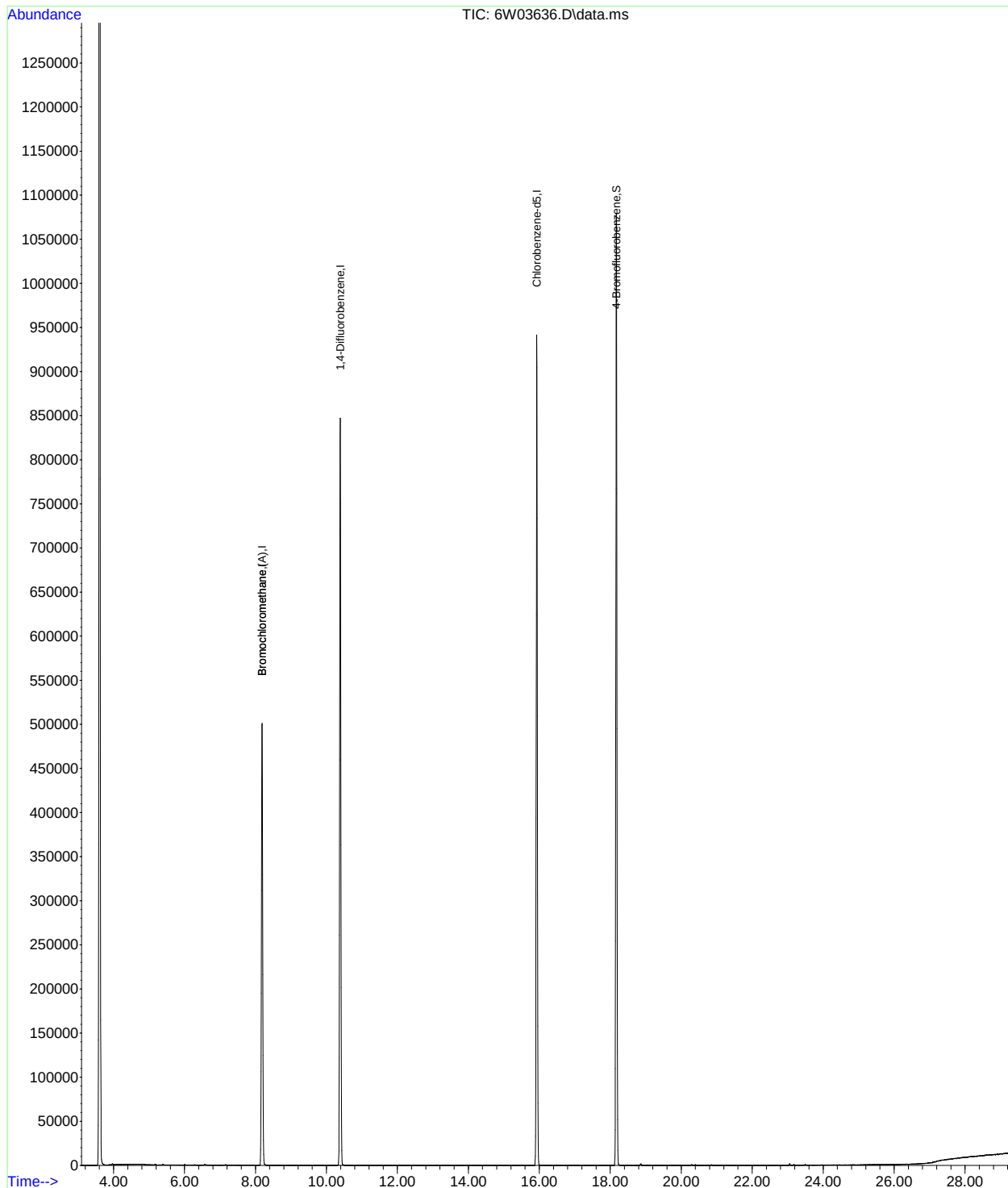
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.2.1

7

Data Path : C:\msdchem\1\data\
Data File : 6W03636.D
Acq On : 20 Dec 2017 3:27 pm
Operator : DANAT
Sample : mb
Misc : MS23032,V6W105,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 20 16:07:12 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W03659.D
Acq On : 21 Dec 2017 2:50 pm
Operator : DANAT
Sample : mb
Misc : MS23032,V6W106,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 21 15:20:55 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.189	130	221840	10.00	ppb(v)	0.00
54) 1,4-Difluorobenzene	10.391	114	820641	10.00	ppb(v)	0.00
77) Chlorobenzene-d5	15.928	82	362153	10.00	ppb(v)	0.00
108) Bromochloromethane (A)	8.189	130	221840	10.00	ppb(v)	0.00

System Monitoring Compounds

91) 4-Bromofluorobenzene	18.173	95	470695	10.09	ppb(v)	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	100.90%

Target Compounds	Qvalue

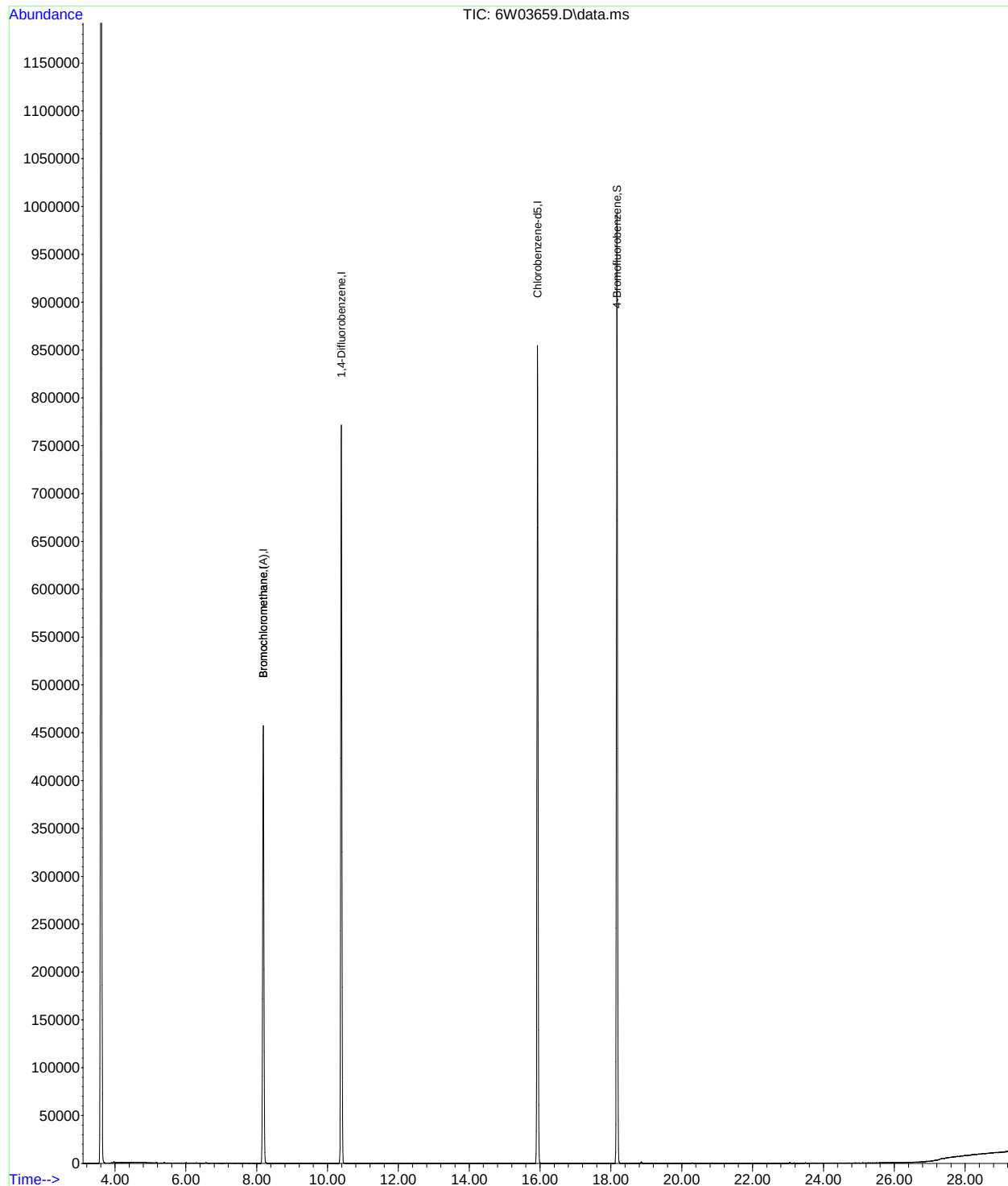
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.2.2

7

Data Path : C:\msdchem\1\data\
Data File : 6W03659.D
Acq On : 21 Dec 2017 2:50 pm
Operator : DANAT
Sample : mb
Misc : MS23032,V6W106,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 21 15:20:55 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W03686.D
Acq On : 22 Dec 2017 4:32 pm
Operator : DANAT
Sample : mb
Misc : MS23193,V6W107,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 22 17:10:17 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.189	130	231432	10.00	ppb(v)	0.00
54) 1,4-Difluorobenzene	10.391	114	852334	10.00	ppb(v)	0.00
77) Chlorobenzene-d5	15.928	82	367581	10.00	ppb(v)	0.00
108) Bromochloromethane (A)	8.189	130	231432	10.00	ppb(v)	0.00

System Monitoring Compounds
91) 4-Bromofluorobenzene 18.173 95 477808 10.09 ppb(v) 0.00
Spiked Amount 10.000 Range 65 - 128 Recovery = 100.90%

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

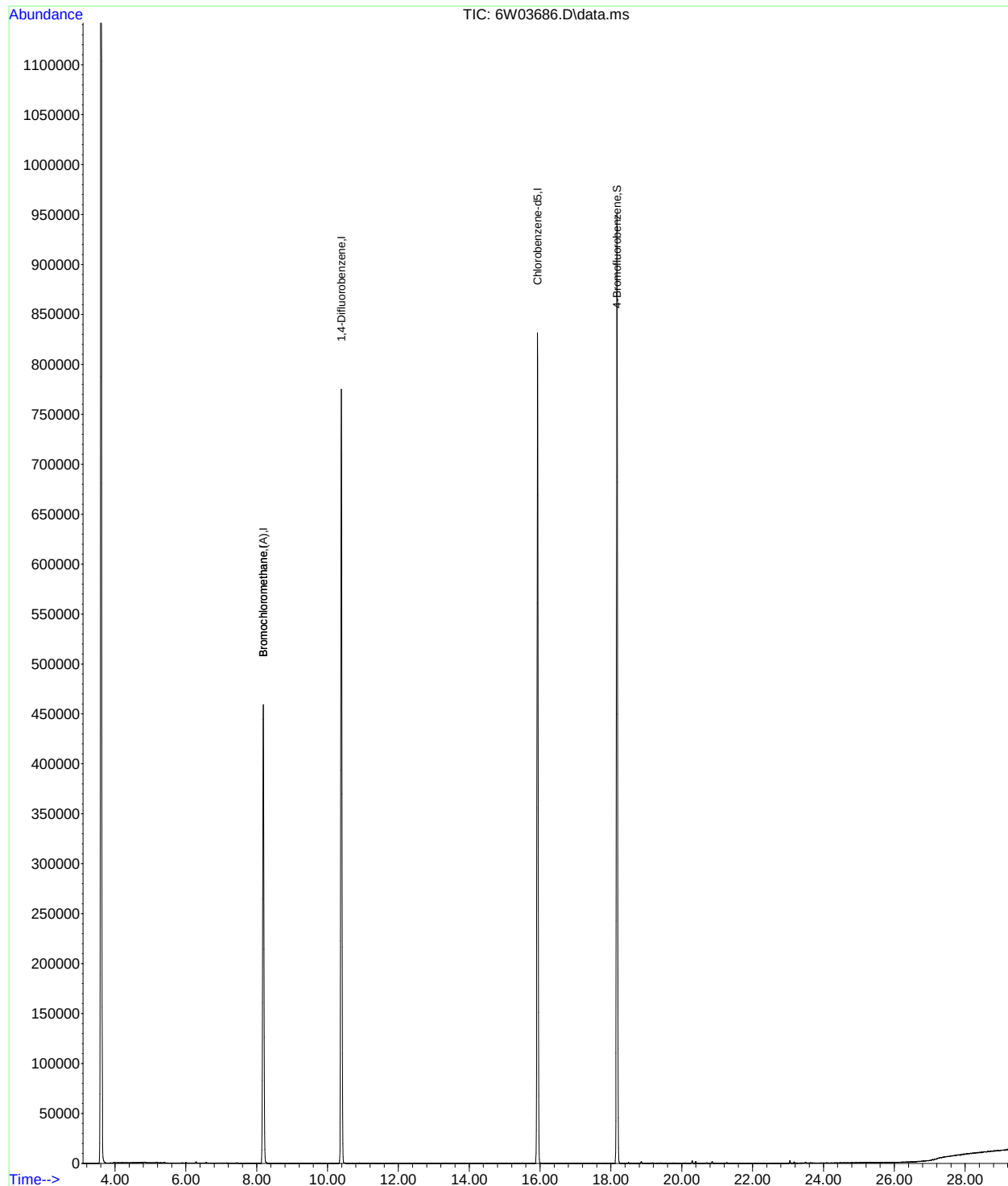
7.2.3

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W03686.D
Acq On : 22 Dec 2017 4:32 pm
Operator : DANAT
Sample : mb
Misc : MS23193,V6W107,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 22 17:10:17 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5W27722.D
Acq On : 8 Nov 2017 1:05 pm
Operator : thomash
Sample : mb
Misc : MS21792,v5w1090,,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 08 14:22:25 2017
Quant Method : C:\msdchem\1\methods\m5w1065.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Sat Oct 07 09:10:30 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.169	130	268469	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.286	114	896640	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.761	82	366248	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.169	130	268469	10.00	ppb(v	0.00

System Monitoring Compounds
91) 4-Bromofluorobenzene 17.994 95 483227 9.38 ppb(v 0.00
Spiked Amount 10.000 Range 65 - 128 Recovery = 93.80%

Target Compounds	Qvalue

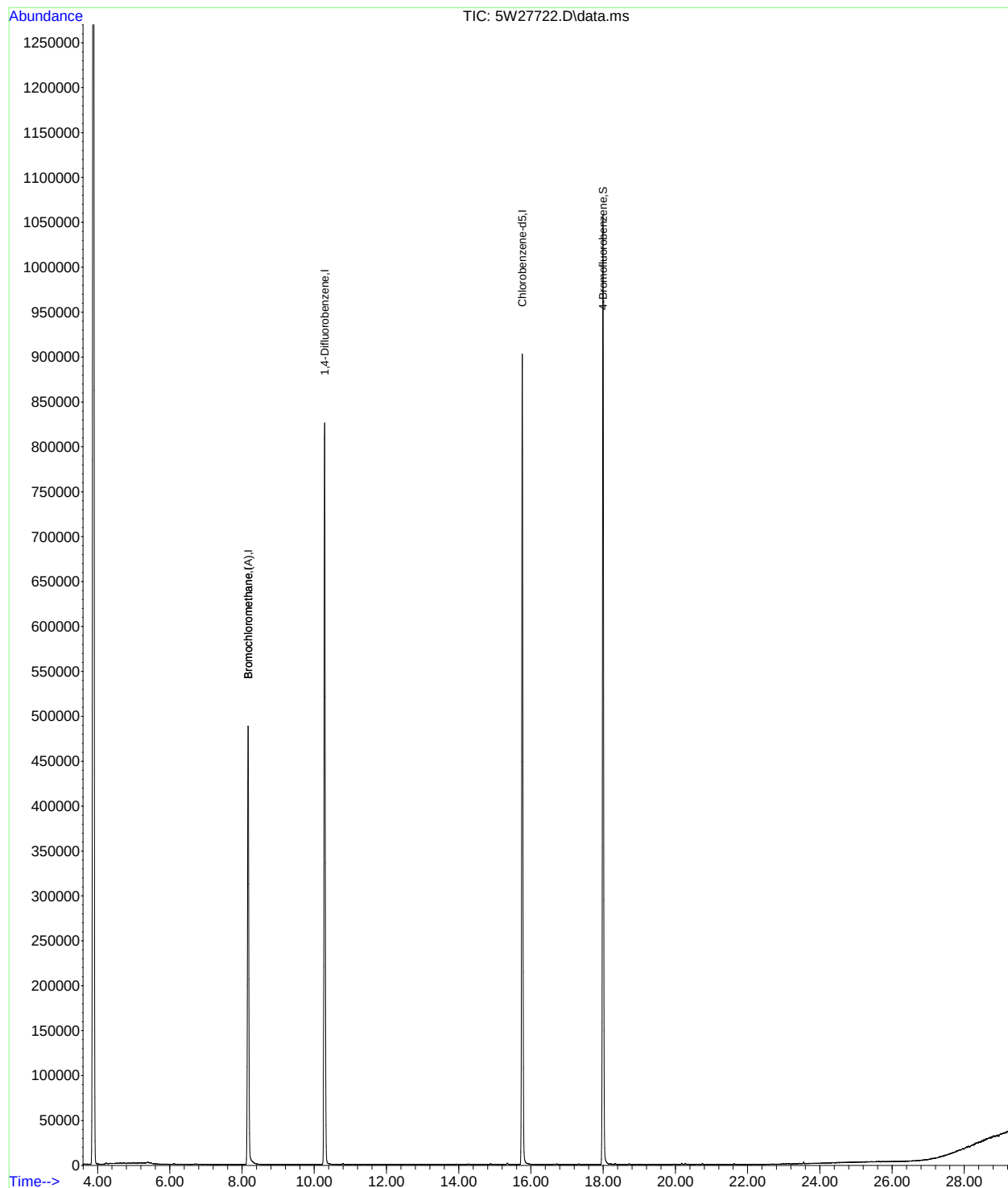
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.2.4

7

Data Path : C:\msdchem\1\data\
Data File : 5W27722.D
Acq On : 8 Nov 2017 1:05 pm
Operator : thomash
Sample : mb
Misc : MS21792,v5w1090,,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 08 14:22:25 2017
Quant Method : C:\msdchem\1\methods\m5w1065.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Sat Oct 07 09:10:30 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5W27800.D
Acq On : 13 Nov 2017 12:06 pm
Operator : thomash
Sample : mb
Misc : MS21947,v5w1093,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 13 12:41:02 2017
Quant Method : C:\msdchem\1\methods\m5w1065.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Sat Oct 07 09:10:30 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.169	130	232299	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.286	114	768841	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.761	82	307662	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.169	130	232458	10.00	ppb(v	0.00

System Monitoring Compounds

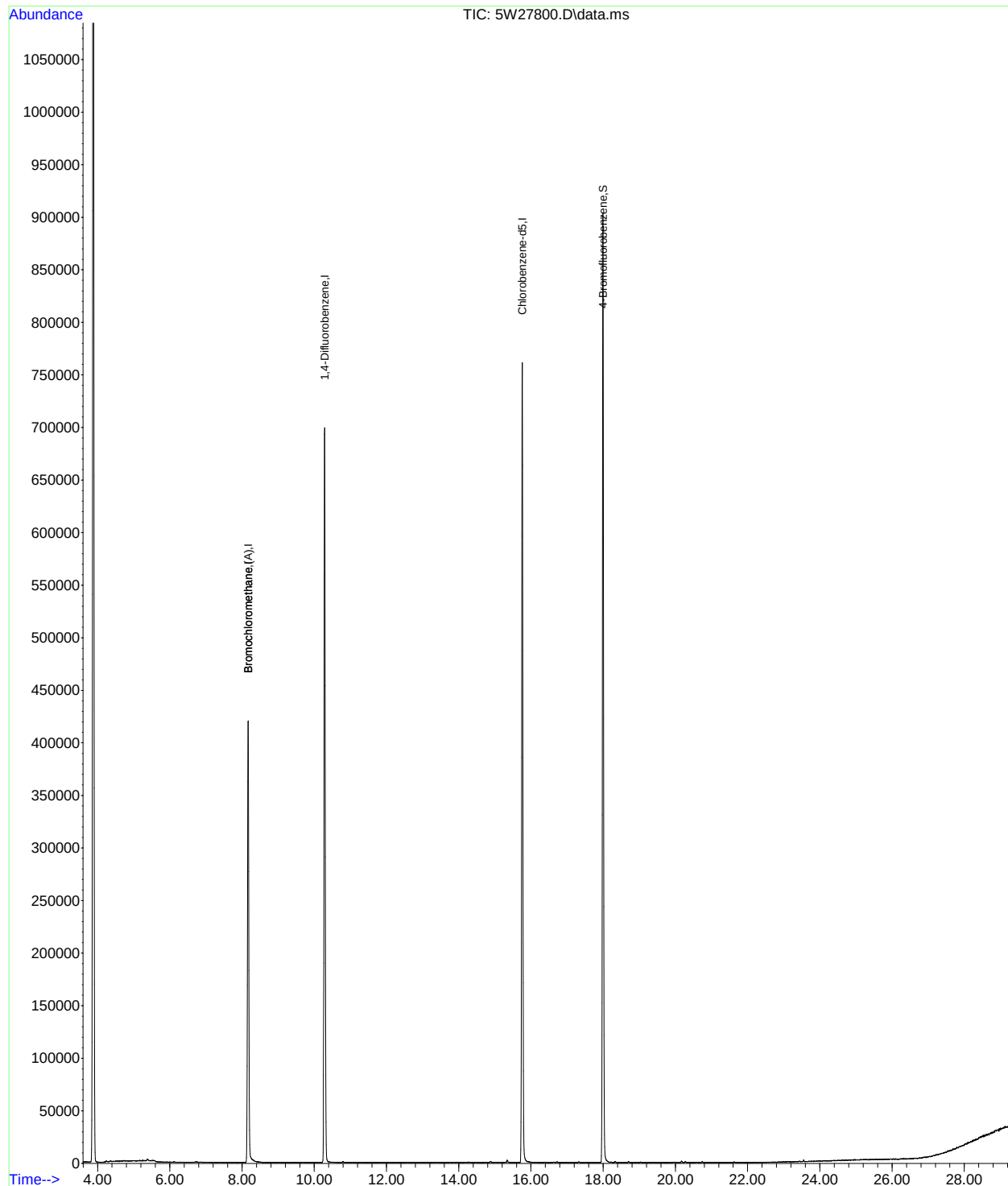
91) 4-Bromofluorobenzene	17.994	95	408620	9.44	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	94.40%

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\
Data File : 5W27800.D
Acq On : 13 Nov 2017 12:06 pm
Operator : thomash
Sample : mb
Misc : MS21947,v5w1093,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 13 12:41:02 2017
Quant Method : C:\msdchem\1\methods\m5w1065.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Sat Oct 07 09:10:30 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W03152.D
Acq On : 21 Nov 2017 1:47 pm
Operator : DANAT
Sample : mb
Misc : MS22325,V6W86,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 21 14:17:47 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.189	130	234238	10.00	ppb(v)	0.00
54) 1,4-Difluorobenzene	10.392	114	879530	10.00	ppb(v)	0.00
77) Chlorobenzene-d5	15.934	82	392403	10.00	ppb(v)	0.00
108) Bromochloromethane (A)	8.189	130	234238	10.00	ppb(v)	0.00

System Monitoring Compounds

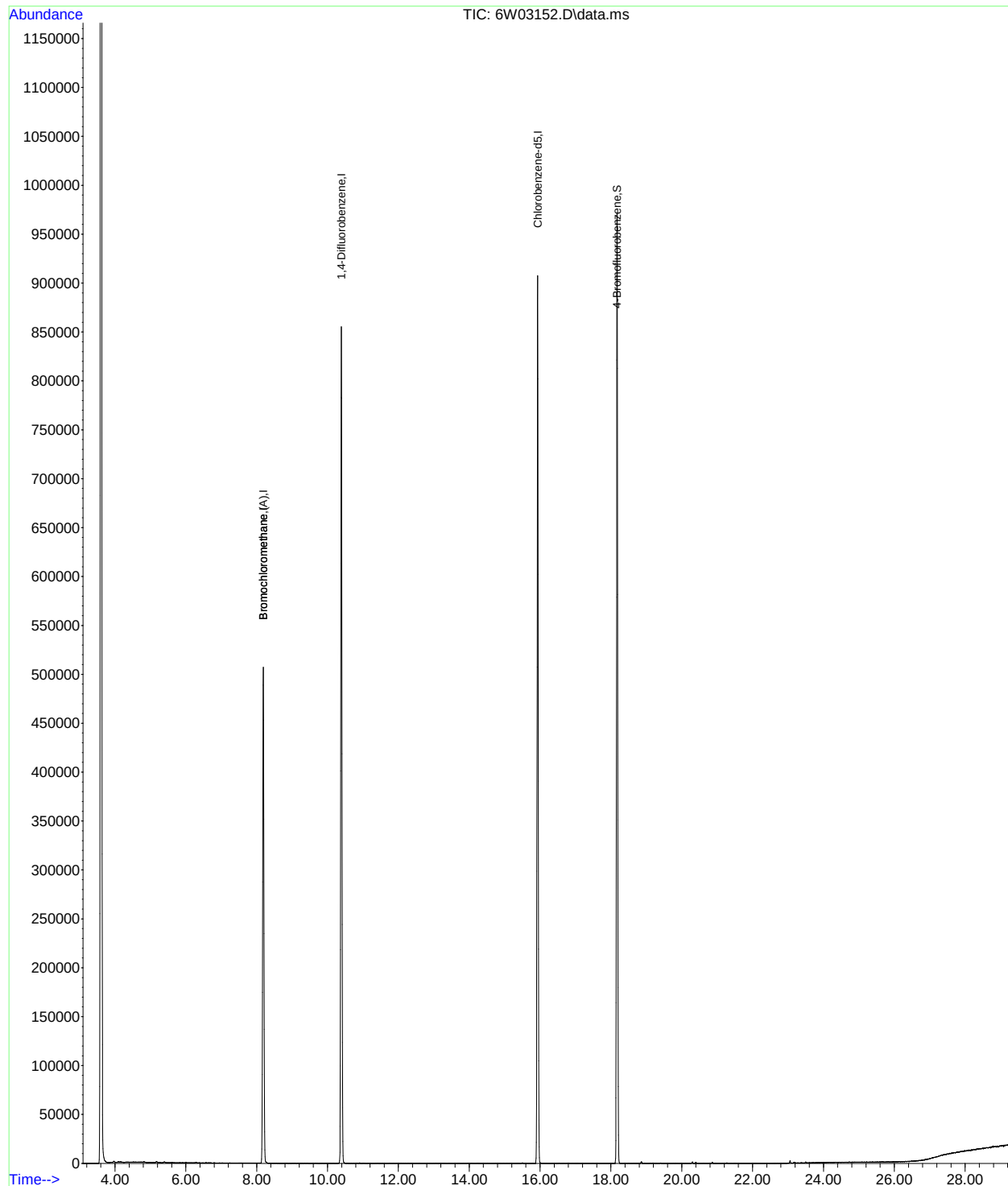
91) 4-Bromofluorobenzene	18.173	95	477458	9.44	ppb(v)	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	94.40%

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\
Data File : 6W03152.D
Acq On : 21 Nov 2017 1:47 pm
Operator : DANAT
Sample : mb
Misc : MS22325,V6W86,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 21 14:17:47 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5W27982.D
Acq On : 22 Nov 2017 4:24 pm
Operator : thomash
Sample : mb
Misc : MS22061,v5w1099,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 22 17:01:19 2017
Quant Method : C:\msdchem\1\methods\m5w1097.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Mon Nov 20 10:49:33 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.163	130	300718	10.00	ppb(v)	-0.01
54) 1,4-Difluorobenzene	10.280	114	1057393	10.00	ppb(v)	-0.01
77) Chlorobenzene-d5	15.755	82	457046	10.00	ppb(v)	0.00
108) Bromochloromethane (A)	8.163	130	300718	10.00	ppb(v)	-0.01

System Monitoring Compounds

91) 4-Bromofluorobenzene	17.994	95	598176	9.87	ppb(v)	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	98.70%

Target Compounds	Qvalue

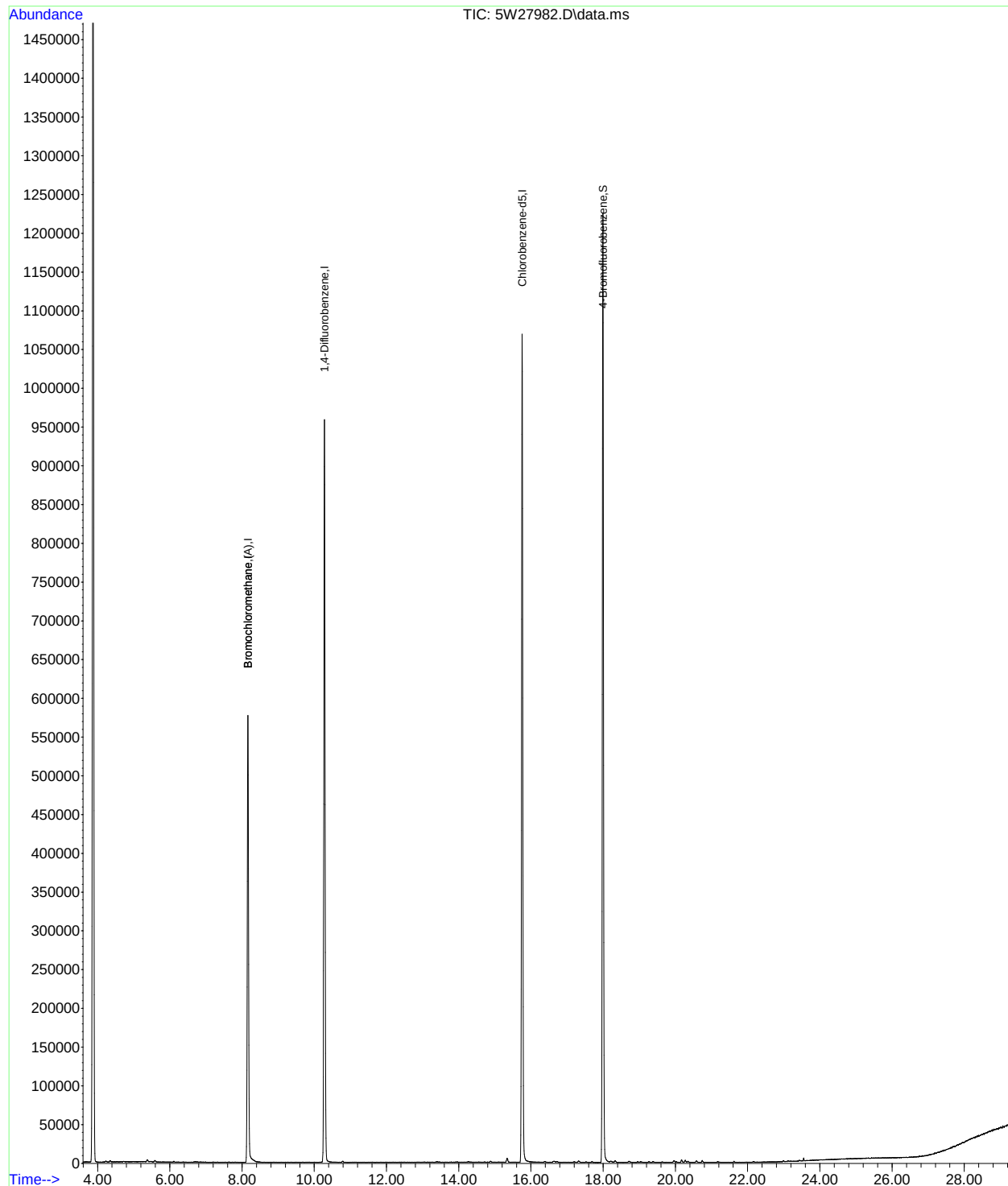
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.2.7

7

Data Path : C:\msdchem\1\data\
Data File : 5W27982.D
Acq On : 22 Nov 2017 4:24 pm
Operator : thomash
Sample : mb
Misc : MS22061,v5w1099,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 22 17:01:19 2017
Quant Method : C:\msdchem\1\methods\m5w1097.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Mon Nov 20 10:49:33 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03633.D
 Acq On : 20 Dec 2017 12:44 pm
 Operator : DANAT
 Sample : bs
 Misc : MS23032,V6W105,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 20 13:15:05 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.189	130	235046	10.00	ppb(v)	0.00
54) 1,4-Difluorobenzene	10.391	114	876068	10.00	ppb(v)	0.00
77) Chlorobenzene-d5	15.934	82	416852	10.00	ppb(v)	0.00
108) Bromochloromethane (A)	8.189	130	235046	10.00	ppb(v)	0.00

System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.173	95	538401	10.02	ppb(v)	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	100.20%

Target Compounds					Qvalue	
2) 1,1,1-Trifluoroethane	3.637	69	353625	9.63	ppb(v)	98
3) Freon 152A	3.735	65	137904	9.04	ppb(v)	99
4) Chlorodifluoromethane	3.772	67	52116	9.75	ppb(v)	96
5) Propene	3.796	41	156385	9.32	ppb(v)	99
6) Chlorotrifluoroethene	3.803	116	356067	9.52	ppb(v)	98
7) Dichlorodifluoromethane	3.851	85	516132	8.79	ppb(v)	99
8) 1-Chloro-1,1-difluoro...	3.968	65	394377	9.92	ppb(v)	100
9) Chloromethane	3.986	50	185275	9.78	ppb(v)	99
10) Dichlorotetrafluoroethane	4.066	85	525217	9.56	ppb(v)	99
11) Vinyl Chloride	4.164	62	210710	9.65	ppb(v)	100
12) 1,3-Butadiene	4.274	54	160652	9.69	ppb(v)	98
13) n-Butane	4.316	58	39032	10.07	ppb(v)	97
14) Bromomethane	4.500	94	194107	9.66	ppb(v)	99
15) Chloroethane	4.641	64	106801	9.36	ppb(v)	100
16) Dichlorofluoromethane	4.720	67	439345	9.39	ppb(v)	99
17) Acetonitrile	4.928	41	167807	9.32	ppb(v)	98
18) Freon 123	5.069	83	575020	9.45	ppb(v)	99
19) Freon 123A	5.118	117	618005	19.01	ppb(v)	97
20) Bromoethene	4.940	106	217661	9.88	ppb(v)	98
21) Trichlorofluoromethane	5.301	101	538020	9.66	ppb(v)	99
22) Acetone	5.148	58	107728	9.03	ppb(v)	97
23) Pentane	5.613	57	56188	10.06	ppb(v)	95
24) 1,1-Dichloro-1-fluoro...	5.405	81	455592	9.43	ppb(v)	99
25) Iodomethane	5.815	142	622597	9.51	ppb(v)	99
26) Isopropyl Alcohol	5.363	45	429033	9.08	ppb(v)	98
27) 1,1-Dichloroethene	5.889	61	333147	9.32	ppb(v)	99
28) Freon 113	6.244	101	475763	9.37	ppb(v)	99
29) Methylene Chloride	6.005	84	207966	8.58	ppb(v)	98
30) Carbon Disulfide	6.286	76	724162	9.40	ppb(v)	100
31) Ethanol	4.732	45	61454	9.14	ppb(v)	99
32) Acrylonitrile	5.571	53	172165	10.13	ppb(v)	99
33) 3-Chloropropene	6.115	76	106599	9.84	ppb(v)	92
34) trans-1,2-Dichloroethene	6.916	61	320776	9.30	ppb(v)	99
35) tert-Butyl Alcohol	5.913	59	459043	10.06	ppb(v)	100
36) Methyl tert-Butyl Ether	7.173	73	620464	9.74	ppb(v)	99
37) Vinyl Acetate	7.277	43	536419	9.43	ppb(v)	100
38) 1,1-Dichloroethane	7.124	63	404428	9.45	ppb(v)	100
39) 2-Butanone	7.528	72	121762	9.94	ppb(v)	96
40) Hexane	8.220	57	355192	9.39	ppb(v)	100
41) cis-1,2-Dichloroethene	8.012	61	303696	9.45	ppb(v)	99
42) Di-isopropyl Ether	8.213	87	204039	9.96	ppb(v)	95
43) Ethyl Acetate	8.250	61	78214	10.04	ppb(v)	99
44) Methyl Acrylate	8.238	55	435640	9.51	ppb(v)	99
45) Chloroform	8.336	83	473541	9.33	ppb(v)	99
46) 2,4-Dimethylpentane	9.204	57	408984	9.73	ppb(v)	99
47) Tetrahydrofuran	8.764	72	111344	10.20	ppb(v)	97
48) 1,1,1-Trichloroethane	9.425	97	438335	9.58	ppb(v)	99
49) 1,2-Dichloroethane	9.149	62	279319	9.45	ppb(v)	99
50) Benzene	9.957	78	734783	9.25	ppb(v)	100
51) Carbon Tetrachloride	10.128	117	478969	9.57	ppb(v)	100
52) Cyclohexane	10.269	56	352770	9.69	ppb(v)	100
53) 2,3-Dimethylpentane	10.557	71	161693	9.78	ppb(v)	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03633.D
 Acq On : 20 Dec 2017 12:44 pm
 Operator : DANAT
 Sample : bs
 Misc : MS23032,V6W105,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

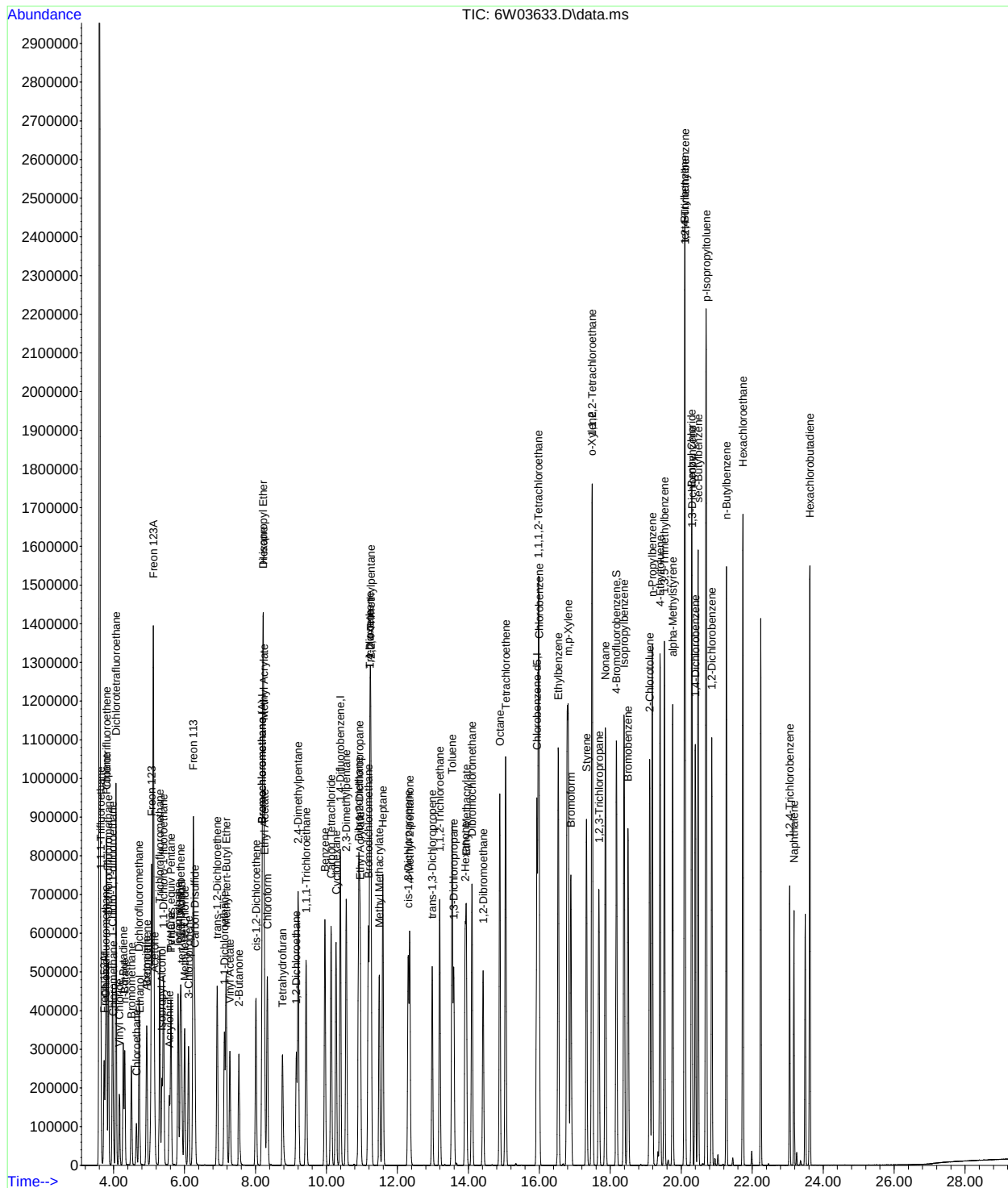
Quant Time: Dec 20 13:15:05 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.248	57	1138109	9.36	ppb(v	99
56) Heptane	11.590	71	248807	9.52	ppb(v	99
57) Trichloroethene	11.223	95	323239	9.44	ppb(v	99
58) 1,2-Dichloropropane	10.930	63	271301	9.37	ppb(v	100
59) Dibromomethane	10.905	174	302368	8.65	ppb(v	98
60) Ethyl Acrylate	10.954	55	538812	10.12	ppb(v	99
61) Methyl Methacrylate	11.493	69	271117	10.23	ppb(v	97
62) 1,4-Dioxane	11.223	88	143414	9.70	ppb(v#	77
63) Bromodichloromethane	11.181	83	522194	9.58	ppb(v	100
64) cis-1,3-Dichloropropene	12.306	75	422802	9.59	ppb(v	100
65) 4-Methyl-2-pentanone	12.343	58	222276	10.33	ppb(v	99
66) trans-1,3-Dichloropropene	12.979	75	382605	9.61	ppb(v	99
67) Toluene	13.542	91	874264	9.16	ppb(v	99
68) 1,1,2-Trichloroethane	13.193	97	297718	9.41	ppb(v	100
69) 1,3-Dichloropropane	13.585	76	422004	9.37	ppb(v	99
70) 2-Hexanone	13.909	58	301706	9.94	ppb(v	99
71) Ethyl Methacrylate	13.940	69	444572	10.58	ppb(v	100
72) Dibromochloromethane	14.099	129	533143	9.80	ppb(v	100
73) Tetrachloroethene	15.053	166	437481	9.11	ppb(v	99
74) 1,2-Dibromoethane	14.417	107	470703	9.46	ppb(v	99
75) Octane	14.888	43	517157	9.53	ppb(v	98
76) 1,1,1,2-Tetrachloroethane	15.977	131	366063	9.37	ppb(v	99
78) Chlorobenzene	15.995	112	668466	8.91	ppb(v	100
79) Ethylbenzene	16.533	91	1099916	9.49	ppb(v	100
80) m,p-Xylene	16.809	91	1693454	19.17	ppb(v	100
81) Styrene	17.329	104	624125	10.62	ppb(v	99
82) Nonane	17.861	43	531331	9.38	ppb(v	99
83) o-Xylene	17.482	91	858112	9.68	ppb(v	99
84) Bromoform	16.888	173	502849	10.30	ppb(v	100
85) 1,1,2,2-Tetrachloroethane	17.488	83	597660	9.58	ppb(v	100
86) 1,2,3-Trichloropropane	17.684	75	441041	9.49	ppb(v	99
87) Isopropylbenzene	18.387	105	1119494	9.19	ppb(v	99
88) Bromobenzene	18.497	156	366773	9.15	ppb(v	99
89) 2-Chlorotoluene	19.109	126	274272	9.57	ppb(v	99
90) n-Propylbenzene	19.182	120	317435	9.76	ppb(v	97
92) 4-Ethyltoluene	19.403	105	1104652	9.86	ppb(v	100
93) 1,3,5-Trimethylbenzene	19.525	105	934288	9.85	ppb(v	99
94) alpha-Methylstyrene	19.758	118	446088	10.94	ppb(v	99
95) tert-Butylbenzene	20.094	134	216357	9.39	ppb(v	98
96) 1,2,4-Trimethylbenzene	20.106	105	886791	9.88	ppb(v	94
97) 1,3-Dichlorobenzene	20.302	146	555491	9.30	ppb(v	99
98) Benzyl Chloride	20.290	91	670831	10.71	ppb(v	99
99) 1,4-Dichlorobenzene	20.400	146	539318	9.45	ppb(v	99
100) sec-Butylbenzene	20.479	134	253928	9.50	ppb(v	99
101) p-Isopropyltoluene	20.706	134	282330	9.54	ppb(v	96
102) 1,2-Dichlorobenzene	20.859	146	522421	9.32	ppb(v	99
103) n-Butylbenzene	21.275	134	241961	10.20	ppb(v	97
104) Hexachloroethane	21.740	201	310969	9.21	ppb(v	96
105) 1,2,4-Trichlorobenzene	23.055	180	227764	9.21	ppb(v	99
106) Naphthalene	23.177	128	503891	11.10	ppb(v	100
107) Hexachlorobutadiene	23.624	225	310226	9.56	ppb(v	100
109) TVHC as equiv Pentane	5.613	TIC	981615	9.56	ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\
Data File : 6W03633.D
Acq On : 20 Dec 2017 12:44 pm
Operator : DANAT
Sample : bs
Misc : MS23032,V6W105,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 20 13:15:05 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration



7.3.1

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03634.D
 Acq On : 20 Dec 2017 1:35 pm
 Operator : DANAT
 Sample : bsd
 Misc : MS23032,V6W105,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 20 15:34:53 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.189	130	238593	10.00	ppb(v)	0.00
54) 1,4-Difluorobenzene	10.391	114	883707	10.00	ppb(v)	0.00
77) Chlorobenzene-d5	15.934	82	416984	10.00	ppb(v)	0.00
108) Bromochloromethane (A)	8.189	130	238593	10.00	ppb(v)	0.00

System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.173	95	537708	10.01	ppb(v)	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	100.10%

Target Compounds					Qvalue	
2) 1,1,1-Trifluoroethane	3.637	69	336423	9.03	ppb(v)	99
3) Freon 152A	3.735	65	140227	9.05	ppb(v)	99
4) Chlorodifluoromethane	3.772	67	52892	9.75	ppb(v)	96
5) Propene	3.796	41	157222	9.23	ppb(v)	99
6) Chlorotrifluoroethene	3.803	116	362481	9.54	ppb(v)	99
7) Dichlorodifluoromethane	3.858	85	490150	8.22	ppb(v)	99
8) 1-Chloro-1,1-difluoroethane	3.968	65	394967	9.79	ppb(v)	100
9) Chloromethane	3.986	50	185691	9.66	ppb(v)	100
10) Dichlorotetrafluoroethane	4.066	85	525091	9.42	ppb(v)	99
11) Vinyl Chloride	4.164	62	211936	9.57	ppb(v)	99
12) 1,3-Butadiene	4.274	54	159701	9.49	ppb(v)	99
13) n-Butane	4.316	58	39250	9.97	ppb(v)	99
14) Bromomethane	4.500	94	195347	9.57	ppb(v)	99
15) Chloroethane	4.641	64	108260	9.35	ppb(v)	99
16) Dichlorofluoromethane	4.720	67	440925	9.29	ppb(v)	100
17) Acetonitrile	4.928	41	170591	9.34	ppb(v)	100
18) Freon 123	5.069	83	589510	9.54	ppb(v)	99
19) Freon 123A	5.118	117	632380	19.16	ppb(v)	97
20) Bromoethene	4.940	106	225358	10.07	ppb(v)	99
21) Trichlorofluoromethane	5.301	101	552799	9.78	ppb(v)	99
22) Acetone	5.148	58	109967	9.08	ppb(v)	97
23) Pentane	5.613	57	56725	10.00	ppb(v)	95
24) 1,1-Dichloro-1-fluoroethane	5.405	81	463720	9.45	ppb(v)	99
25) Iodomethane	5.815	142	640288	9.63	ppb(v)	100
26) Isopropyl Alcohol	5.363	45	440805	9.19	ppb(v)	99
27) 1,1-Dichloroethene	5.889	61	341529	9.42	ppb(v)	99
28) Freon 113	6.244	101	484979	9.41	ppb(v)	99
29) Methylene Chloride	6.005	84	212462	8.64	ppb(v)	98
30) Carbon Disulfide	6.286	76	737863	9.43	ppb(v)	100
31) Ethanol	4.732	45	61656	9.04	ppb(v)	99
32) Acrylonitrile	5.571	53	175238	10.16	ppb(v)	100
33) 3-Chloropropene	6.115	76	109775	9.98	ppb(v)	92
34) trans-1,2-Dichloroethene	6.917	61	326792	9.34	ppb(v)	99
35) tert-Butyl Alcohol	5.913	59	468254	10.11	ppb(v)	99
36) Methyl tert-Butyl Ether	7.173	73	632040	9.78	ppb(v)	99
37) Vinyl Acetate	7.277	43	544190	9.43	ppb(v)	99
38) 1,1-Dichloroethane	7.125	63	411663	9.48	ppb(v)	99
39) 2-Butanone	7.534	72	122991	9.89	ppb(v)	95
40) Hexane	8.220	57	361029	9.40	ppb(v)	97
41) cis-1,2-Dichloroethene	8.012	61	309343	9.49	ppb(v)	98
42) Di-isopropyl Ether	8.213	87	206698	9.94	ppb(v)	96
43) Ethyl Acetate	8.250	61	80524	10.19	ppb(v)	98
44) Methyl Acrylate	8.238	55	442898	9.53	ppb(v)	99
45) Chloroform	8.336	83	485400	9.42	ppb(v)	99
46) 2,4-Dimethylpentane	9.205	57	418109	9.80	ppb(v)	99
47) Tetrahydrofuran	8.764	72	113571	10.25	ppb(v)	95
48) 1,1,1-Trichloroethane	9.425	97	448994	9.67	ppb(v)	100
49) 1,2-Dichloroethane	9.149	62	284884	9.50	ppb(v)	98
50) Benzene	9.957	78	748915	9.29	ppb(v)	99
51) Carbon Tetrachloride	10.128	117	490632	9.66	ppb(v)	99
52) Cyclohexane	10.269	56	359158	9.71	ppb(v)	99
53) 2,3-Dimethylpentane	10.557	71	164800	9.82	ppb(v)	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03634.D
 Acq On : 20 Dec 2017 1:35 pm
 Operator : DANAT
 Sample : bsd
 Misc : MS23032,V6W105,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 20 15:34:53 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

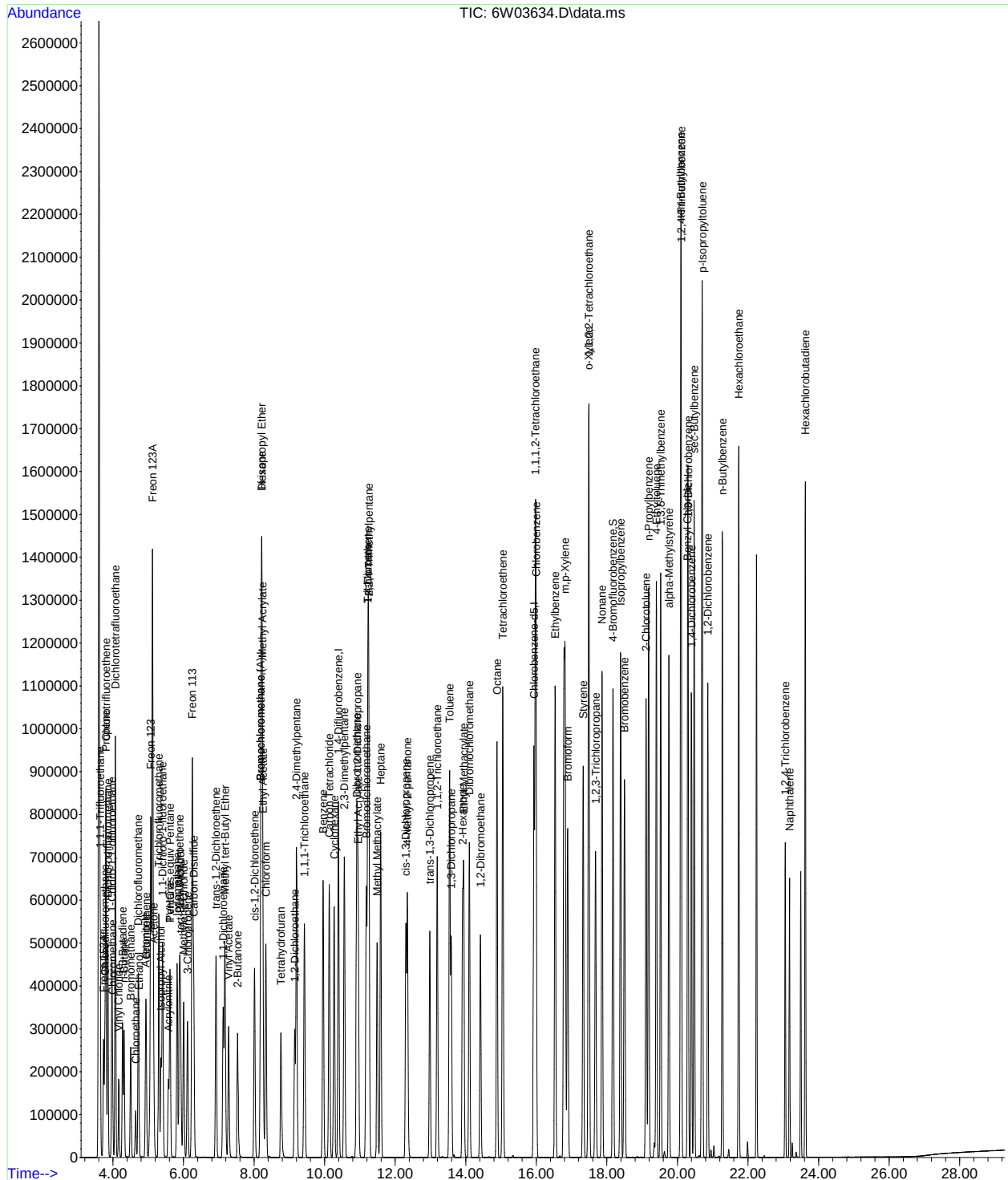
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.248	57	1153362	9.40	ppb(v	100
56) Heptane	11.590	71	254554	9.65	ppb(v	99
57) Trichloroethene	11.223	95	330417	9.56	ppb(v	99
58) 1,2-Dichloropropane	10.930	63	275943	9.45	ppb(v	99
59) Dibromomethane	10.905	174	311768	8.84	ppb(v	98
60) Ethyl Acrylate	10.954	55	545436	10.16	ppb(v	100
61) Methyl Methacrylate	11.493	69	277264	10.37	ppb(v	97
62) 1,4-Dioxane	11.223	88	147267	9.87	ppb(v#	76
63) Bromodichloromethane	11.181	83	534084	9.71	ppb(v	99
64) cis-1,3-Dichloropropene	12.300	75	429714	9.66	ppb(v	99
65) 4-Methyl-2-pentanone	12.343	58	224460	10.34	ppb(v	99
66) trans-1,3-Dichloropropene	12.979	75	392197	9.77	ppb(v	99
67) Toluene	13.542	91	893409	9.28	ppb(v	99
68) 1,1,2-Trichloroethane	13.193	97	305261	9.57	ppb(v	99
69) 1,3-Dichloropropane	13.585	76	430397	9.48	ppb(v	98
70) 2-Hexanone	13.909	58	304466	9.94	ppb(v	100
71) Ethyl Methacrylate	13.940	69	452592	10.68	ppb(v	99
72) Dibromochloromethane	14.099	129	545519	9.94	ppb(v	99
73) Tetrachloroethene	15.047	166	448244	9.26	ppb(v	98
74) 1,2-Dibromoethane	14.417	107	481779	9.60	ppb(v	99
75) Octane	14.888	43	524284	9.58	ppb(v	99
76) 1,1,1,2-Tetrachloroethane	15.977	131	372409	9.45	ppb(v	99
78) Chlorobenzene	15.995	112	682137	9.09	ppb(v	100
79) Ethylbenzene	16.534	91	1118199	9.65	ppb(v	100
80) m,p-Xylene	16.809	91	1722822	19.49	ppb(v	100
81) Styrene	17.329	104	633544	10.77	ppb(v	100
82) Nonane	17.861	43	531502	9.38	ppb(v	99
83) o-Xylene	17.482	91	867236	9.78	ppb(v	100
84) Bromoform	16.888	173	514095	10.53	ppb(v	99
85) 1,1,2,2-Tetrachloroethane	17.488	83	600470	9.62	ppb(v	100
86) 1,2,3-Trichloropropane	17.684	75	442118	9.51	ppb(v	100
87) Isopropylbenzene	18.387	105	1135362	9.31	ppb(v	99
88) Bromobenzene	18.497	156	373302	9.31	ppb(v	98
89) 2-Chlorotoluene	19.109	126	280446	9.78	ppb(v	98
90) n-Propylbenzene	19.183	120	319805	9.83	ppb(v	98
92) 4-Ethyltoluene	19.403	105	1111800	9.92	ppb(v	99
93) 1,3,5-Trimethylbenzene	19.525	105	936615	9.87	ppb(v	100
94) alpha-Methylstyrene	19.758	118	448447	10.99	ppb(v	99
95) tert-Butylbenzene	20.094	134	209358	9.09	ppb(v	99
96) 1,2,4-Trimethylbenzene	20.106	105	838699	9.34	ppb(v	95
97) 1,3-Dichlorobenzene	20.302	146	539315	9.02	ppb(v	98
98) Benzyl Chloride	20.284	91	643432	10.27	ppb(v	98
99) 1,4-Dichlorobenzene	20.400	146	543543	9.52	ppb(v	98
100) sec-Butylbenzene	20.473	134	250684	9.37	ppb(v	99
101) p-Isopropyltoluene	20.706	134	266440	9.00	ppb(v	93
102) 1,2-Dichlorobenzene	20.859	146	525639	9.38	ppb(v	99
103) n-Butylbenzene	21.275	134	236441	9.96	ppb(v	95
104) Hexachloroethane	21.740	201	314913	9.33	ppb(v	94
105) 1,2,4-Trichlorobenzene	23.055	180	231792	9.37	ppb(v	98
106) Naphthalene	23.177	128	504543	11.11	ppb(v	100
107) Hexachlorobutadiene	23.624	225	313926	9.67	ppb(v	99
109) TVHC as equiv Pentane	5.613	TIC	950830	9.12	ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

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Data Path : C:\msdchem\1\data\  
Data File : 6W03634.D  
Acq On : 20 Dec 2017 1:35 pm  
Operator : DANAT  
Sample : bsd  
Misc : MS23032,V6W105,,,,,1  
ALS Vial : 2 Sample Multiplier: 1
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Quant Time: Dec 20 15:34:53 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration



7.3.2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03656.D
 Acq On : 21 Dec 2017 11:46 am
 Operator : DANAT
 Sample : bs
 Misc : MS23032,V6W106,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 21 15:21:55 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.189	130	197556	10.00	ppb(v)	0.00
54) 1,4-Difluorobenzene	10.398	114	704571	10.00	ppb(v)	0.00
77) Chlorobenzene-d5	15.934	82	364413	10.00	ppb(v)	0.00
108) Bromochloromethane (A)	8.189	130	197556	10.00	ppb(v)	0.00

System Monitoring Compounds

91) 4-Bromofluorobenzene	18.173	95	492052	10.48	ppb(v)	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	104.80%

Target Compounds					Qvalue
2) 1,1,1-Trifluoroethane	3.644	69	274199	8.89	ppb(v) 99
3) Freon 152A	3.735	65	125609	9.79	ppb(v) 99
4) Chlorodifluoromethane	3.778	67	46149	10.27	ppb(v) 97
5) Propene	3.803	41	133976	9.50	ppb(v) 98
6) Chlorotrifluoroethene	3.809	116	326726	10.39	ppb(v) 100
7) Dichlorodifluoromethane	3.858	85	458781	9.29	ppb(v) 100
8) 1-Chloro-1,1-difluoro...	3.974	65	369783	11.06	ppb(v) 100
9) Chloromethane	3.992	50	175765	11.04	ppb(v) 100
10) Dichlorotetrafluoroethane	4.066	85	505226	10.95	ppb(v) 96
11) Vinyl Chloride	4.170	62	202048	11.01	ppb(v) 99
12) 1,3-Butadiene	4.280	54	152749	10.97	ppb(v) 97
13) n-Butane	4.323	58	37526	11.52	ppb(v) 89
14) Bromomethane	4.506	94	188405	11.15	ppb(v) 99
15) Chloroethane	4.647	64	104504	10.90	ppb(v) 99
16) Dichlorofluoromethane	4.720	67	424449	10.80	ppb(v) 100
17) Acetonitrile	4.928	41	149582	9.89	ppb(v) 98
18) Freon 123	5.075	83	525335	10.27	ppb(v) 99
19) Freon 123A	5.124	117	567837	20.78	ppb(v) 94
20) Bromoethene	4.947	106	202831	10.95	ppb(v) 99
21) Trichlorofluoromethane	5.308	101	492302	10.52	ppb(v) 100
22) Acetone	5.155	58	96403	9.62	ppb(v) 90
23) Pentane	5.620	57	50472	10.75	ppb(v) 89
24) 1,1-Dichloro-1-fluoro...	5.412	81	409796	10.09	ppb(v) 98
25) Iodomethane	5.821	142	578348	10.51	ppb(v) 99
26) Isopropyl Alcohol	5.363	45	375149	9.44	ppb(v) 99
27) 1,1-Dichloroethene	5.889	61	299341	9.97	ppb(v) 98
28) Freon 113	6.250	101	434828	10.19	ppb(v) 99
29) Methylene Chloride	6.005	84	189027	9.28	ppb(v) 97
30) Carbon Disulfide	6.286	76	661051	10.21	ppb(v) 100
31) Ethanol	4.739	45	59822	10.59	ppb(v) 98
32) Acrylonitrile	5.571	53	153562	10.75	ppb(v) 99
33) 3-Chloropropene	6.115	76	97332	10.69	ppb(v) 88
34) trans-1,2-Dichloroethene	6.923	61	286533	9.89	ppb(v) 96
35) tert-Butyl Alcohol	5.919	59	409555	10.68	ppb(v) 98
36) Methyl tert-Butyl Ether	7.173	73	559108	10.44	ppb(v) 98
37) Vinyl Acetate	7.277	43	462156	9.67	ppb(v) 99
38) 1,1-Dichloroethane	7.131	63	362579	10.08	ppb(v) 99
39) 2-Butanone	7.534	72	109333	10.62	ppb(v) 91
40) Hexane	8.220	57	314894	9.91	ppb(v) 99
41) cis-1,2-Dichloroethene	8.012	61	271770	10.07	ppb(v) 98
42) Di-isopropyl Ether	8.220	87	184698	10.72	ppb(v) 86
43) Ethyl Acetate	8.250	61	70382	10.75	ppb(v) 99
44) Methyl Acrylate	8.238	55	385941	10.03	ppb(v) 99
45) Chloroform	8.336	83	431147	10.11	ppb(v) 99
46) 2,4-Dimethylpentane	9.205	57	364514	10.31	ppb(v) 99
47) Tetrahydrofuran	8.764	72	100122	10.91	ppb(v) 94
48) 1,1,1-Trichloroethane	9.431	97	398159	10.36	ppb(v) 99
49) 1,2-Dichloroethane	9.149	62	247539	9.97	ppb(v) 99
50) Benzene	9.957	78	664348	9.95	ppb(v) 99
51) Carbon Tetrachloride	10.134	117	435375	10.35	ppb(v) 99
52) Cyclohexane	10.269	56	312696	10.21	ppb(v) 98
53) 2,3-Dimethylpentane	10.563	71	146655	10.55	ppb(v) 96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03656.D
 Acq On : 21 Dec 2017 11:46 am
 Operator : DANAT
 Sample : bs
 Misc : MS23032,V6W106,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

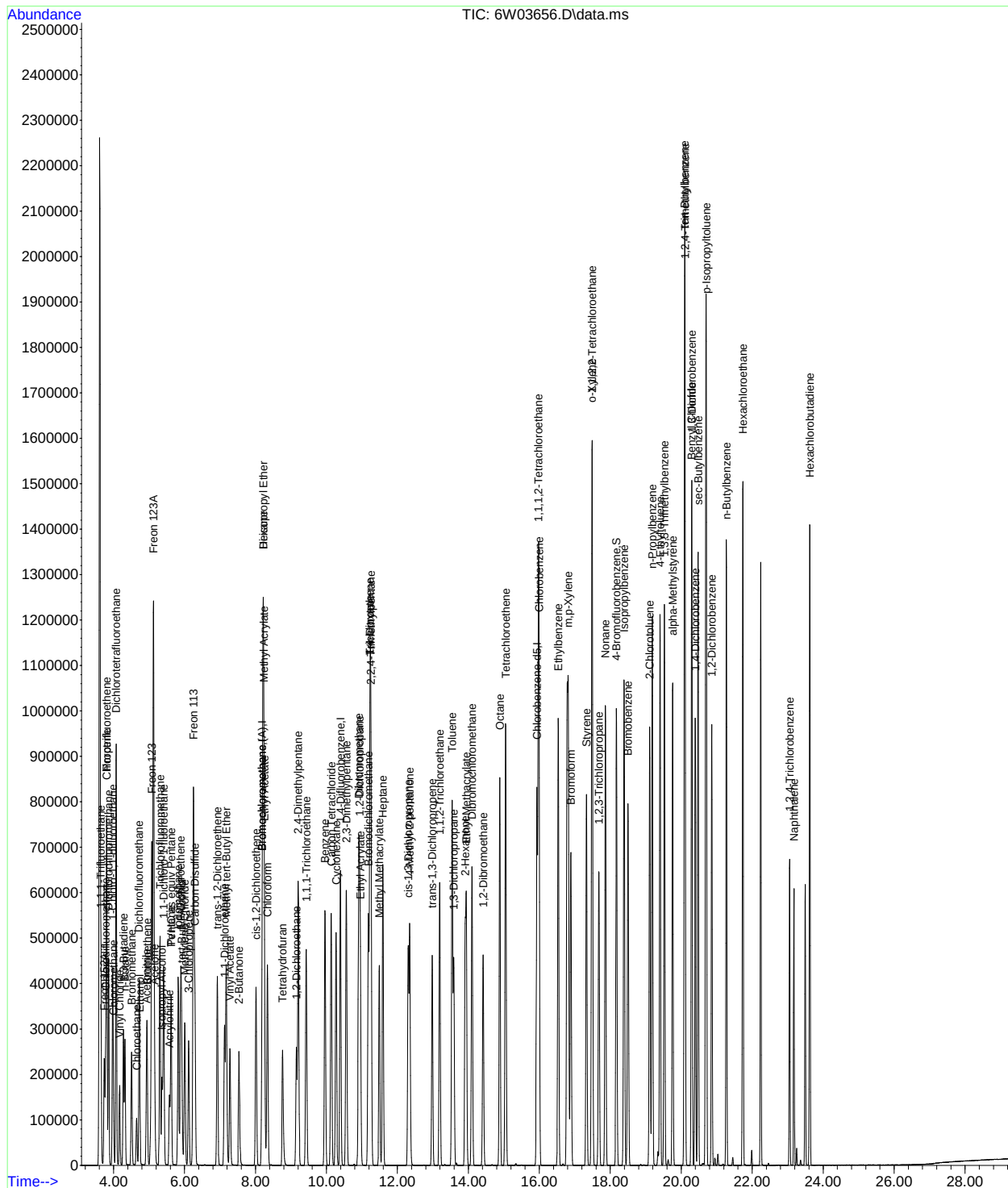
Quant Time: Dec 21 15:21:55 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.254	57	1013911	10.37	ppb(v	99
56) Heptane	11.590	71	225885	10.74	ppb(v	99
57) Trichloroethene	11.223	95	295392	10.72	ppb(v	99
58) 1,2-Dichloropropane	10.936	63	243395	10.45	ppb(v	99
59) Dibromomethane	10.911	174	281872	10.02	ppb(v	95
60) Ethyl Acrylate	10.960	55	476539	11.13	ppb(v	99
61) Methyl Methacrylate	11.493	69	244741	11.49	ppb(v	94
62) 1,4-Dioxane	11.223	88	130911	11.01	ppb(v#	72
63) Bromodichloromethane	11.181	83	470797	10.74	ppb(v	100
64) cis-1,3-Dichloropropene	12.306	75	382909	10.80	ppb(v	99
65) 4-Methyl-2-pentanone	12.343	58	198711	11.48	ppb(v	96
66) trans-1,3-Dichloropropene	12.979	75	347793	10.86	ppb(v	100
67) Toluene	13.542	91	800247	10.42	ppb(v	99
68) 1,1,2-Trichloroethane	13.193	97	273421	10.75	ppb(v	100
69) 1,3-Dichloropropane	13.585	76	382691	10.57	ppb(v	96
70) 2-Hexanone	13.909	58	267817	10.97	ppb(v	97
71) Ethyl Methacrylate	13.940	69	402495	11.91	ppb(v	99
72) Dibromochloromethane	14.099	129	491498	11.23	ppb(v	98
73) Tetrachloroethene	15.053	166	404642	10.48	ppb(v	99
74) 1,2-Dibromoethane	14.417	107	429855	10.74	ppb(v	99
75) Octane	14.888	43	449157	10.29	ppb(v	95
76) 1,1,1,2-Tetrachloroethane	15.977	131	338877	10.78	ppb(v	99
78) Chlorobenzene	15.995	112	613795	9.36	ppb(v	99
79) Ethylbenzene	16.534	91	1006663	9.94	ppb(v	100
80) m,p-Xylene	16.809	91	1548684	20.05	ppb(v	99
81) Styrene	17.329	104	572442	11.14	ppb(v	100
82) Nonane	17.861	43	462630	9.34	ppb(v	97
83) o-Xylene	17.482	91	785760	10.14	ppb(v	100
84) Bromoform	16.888	173	466265	10.93	ppb(v	100
85) 1,1,2,2-Tetrachloroethane	17.488	83	543598	9.97	ppb(v	99
86) 1,2,3-Trichloropropane	17.678	75	400343	9.86	ppb(v	100
87) Isopropylbenzene	18.387	105	1033966	9.70	ppb(v	100
88) Bromobenzene	18.497	156	339493	9.68	ppb(v	97
89) 2-Chlorotoluene	19.109	126	254379	10.16	ppb(v	99
90) n-Propylbenzene	19.183	120	289814	10.19	ppb(v	98
92) 4-Ethyltoluene	19.403	105	1011320	10.33	ppb(v	100
93) 1,3,5-Trimethylbenzene	19.525	105	857738	10.34	ppb(v	100
94) alpha-Methylstyrene	19.758	118	405692	11.38	ppb(v	99
95) tert-Butylbenzene	20.094	134	195451	9.71	ppb(v	98
96) 1,2,4-Trimethylbenzene	20.106	105	777137	9.90	ppb(v	95
97) 1,3-Dichlorobenzene	20.296	146	499993	9.57	ppb(v	99
98) Benzyl Chloride	20.290	91	589705	10.77	ppb(v	100
99) 1,4-Dichlorobenzene	20.400	146	500024	10.02	ppb(v	99
100) sec-Butylbenzene	20.479	134	228140	9.76	ppb(v	94
101) p-Isopropyltoluene	20.706	134	249293	9.63	ppb(v	95
102) 1,2-Dichlorobenzene	20.859	146	478049	9.76	ppb(v	98
103) n-Butylbenzene	21.275	134	219574	10.59	ppb(v	92
104) Hexachloroethane	21.740	201	288656	9.78	ppb(v	94
105) 1,2,4-Trichlorobenzene	23.055	180	215785	9.98	ppb(v	99
106) Naphthalene	23.177	128	475326	11.97	ppb(v	100
107) Hexachlorobutadiene	23.624	225	288198	10.16	ppb(v	99
109) TVHC as equiv Pentane	5.620	TIC	841123	9.75	ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\
Data File : 6W03656.D
Acq On : 21 Dec 2017 11:46 am
Operator : DANAT
Sample : bs
Misc : MS23032,V6W106,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 21 15:21:55 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03657.D
 Acq On : 21 Dec 2017 12:38 pm
 Operator : DANAT
 Sample : bsd
 Misc : MS23032,V6W106,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 21 13:27:27 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.189	130	217731	10.00	ppb(v)	0.00
54) 1,4-Difluorobenzene	10.391	114	823006	10.00	ppb(v)	0.00
77) Chlorobenzene-d5	15.934	82	391171	10.00	ppb(v)	0.00
108) Bromochloromethane (A)	8.189	130	217731	10.00	ppb(v)	0.00

System Monitoring Compounds

91) 4-Bromofluorobenzene	18.173	95	517073	10.26	ppb(v)	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	102.60%

Target Compounds						Qvalue
2) 1,1,1-Trifluoroethane	3.643	69	261709	7.69	ppb(v)	100
3) Freon 152A	3.735	65	128272	9.07	ppb(v)	97
4) Chlorodifluoromethane	3.772	67	47730	9.64	ppb(v)	98
5) Propene	3.796	41	139350	8.97	ppb(v)	98
6) Chlorotrifluoroethene	3.803	116	334008	9.64	ppb(v)	99
7) Dichlorodifluoromethane	3.858	85	458915	8.43	ppb(v)	99
8) 1-Chloro-1,1-difluoro...	3.968	65	372983	10.13	ppb(v)	99
9) Chloromethane	3.986	50	174372	9.94	ppb(v)	99
10) Dichlorotetrafluoroethane	4.066	85	498787	9.81	ppb(v)	98
11) Vinyl Chloride	4.170	62	200578	9.92	ppb(v)	99
12) 1,3-Butadiene	4.280	54	149783	9.76	ppb(v)	97
13) n-Butane	4.316	58	36289	10.11	ppb(v)	91
14) Bromomethane	4.506	94	185429	9.96	ppb(v)	100
15) Chloroethane	4.641	64	101060	9.56	ppb(v)	100
16) Dichlorofluoromethane	4.720	67	412807	9.53	ppb(v)	100
17) Acetonitrile	4.928	41	154708	9.28	ppb(v)	98
18) Freon 123	5.075	83	539321	9.57	ppb(v)	100
19) Freon 123A	5.118	117	582138	19.33	ppb(v)	95
20) Bromoethene	4.940	106	208900	10.23	ppb(v)	100
21) Trichlorofluoromethane	5.308	101	508482	9.86	ppb(v)	98
22) Acetone	5.155	58	99259	8.98	ppb(v)	90
23) Pentane	5.620	57	51947	10.04	ppb(v)	93
24) 1,1-Dichloro-1-fluoro...	5.412	81	421144	9.41	ppb(v)	99
25) Iodomethane	5.821	142	593622	9.79	ppb(v)	99
26) Isopropyl Alcohol	5.363	45	388016	8.86	ppb(v)	98
27) 1,1-Dichloroethene	5.889	61	310136	9.37	ppb(v)	98
28) Freon 113	6.250	101	446723	9.50	ppb(v)	99
29) Methylene Chloride	6.005	84	194779	8.68	ppb(v)	98
30) Carbon Disulfide	6.286	76	678443	9.51	ppb(v)	100
31) Ethanol	4.732	45	56886	9.14	ppb(v)	99
32) Acrylonitrile	5.571	53	157651	10.01	ppb(v)	99
33) 3-Chloropropene	6.115	76	99520	9.92	ppb(v)	89
34) trans-1,2-Dichloroethene	6.923	61	297152	9.31	ppb(v)	98
35) tert-Butyl Alcohol	5.919	59	421388	9.97	ppb(v)	98
36) Methyl tert-Butyl Ether	7.173	73	576094	9.76	ppb(v)	98
37) Vinyl Acetate	7.277	43	479556	9.10	ppb(v)	98
38) 1,1-Dichloroethane	7.124	63	375419	9.47	ppb(v)	100
39) 2-Butanone	7.534	72	112127	9.88	ppb(v)	92
40) Hexane	8.220	57	325401	9.29	ppb(v)	98
41) cis-1,2-Dichloroethene	8.012	61	279686	9.40	ppb(v)	97
42) Di-isopropyl Ether	8.213	87	190414	10.03	ppb(v)	90
43) Ethyl Acetate	8.250	61	72173	10.01	ppb(v)	97
44) Methyl Acrylate	8.238	55	399072	9.41	ppb(v)	99
45) Chloroform	8.336	83	443774	9.44	ppb(v)	99
46) 2,4-Dimethylpentane	9.204	57	374671	9.62	ppb(v)	99
47) Tetrahydrofuran	8.764	72	103162	10.20	ppb(v)	93
48) 1,1,1-Trichloroethane	9.425	97	412332	9.73	ppb(v)	99
49) 1,2-Dichloroethane	9.149	62	256079	9.36	ppb(v)	98
50) Benzene	9.957	78	684029	9.30	ppb(v)	99
51) Carbon Tetrachloride	10.128	117	448354	9.67	ppb(v)	100
52) Cyclohexane	10.269	56	323731	9.59	ppb(v)	98
53) 2,3-Dimethylpentane	10.563	71	150494	9.82	ppb(v)	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03657.D
 Acq On : 21 Dec 2017 12:38 pm
 Operator : DANAT
 Sample : bsd
 Misc : MS23032,V6W106,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 21 13:27:27 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

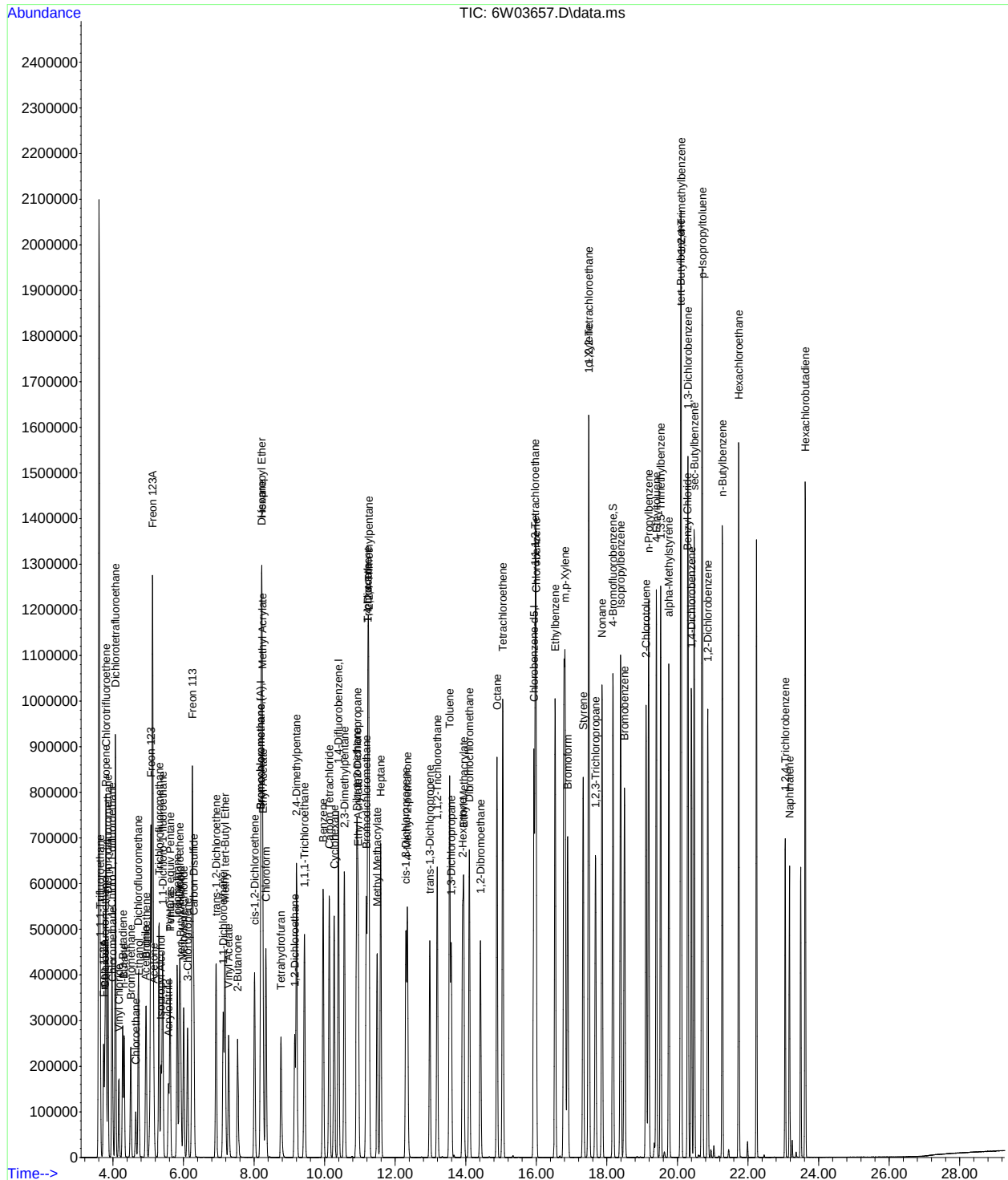
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.248	57	1041429	9.12	ppb(v	98
56) Heptane	11.590	71	231572	9.43	ppb(v	99
57) Trichloroethene	11.223	95	301972	9.38	ppb(v	99
58) 1,2-Dichloropropane	10.930	63	250437	9.21	ppb(v	99
59) Dibromomethane	10.905	174	288830	8.79	ppb(v	100
60) Ethyl Acrylate	10.954	55	489796	9.80	ppb(v	99
61) Methyl Methacrylate	11.493	69	251012	10.08	ppb(v	94
62) 1,4-Dioxane	11.223	88	134505	9.68	ppb(v#	74
63) Bromodichloromethane	11.181	83	484002	9.45	ppb(v	100
64) cis-1,3-Dichloropropene	12.300	75	394078	9.52	ppb(v	99
65) 4-Methyl-2-pentanone	12.343	58	204408	10.11	ppb(v	96
66) trans-1,3-Dichloropropene	12.979	75	357657	9.56	ppb(v	99
67) Toluene	13.542	91	820349	9.15	ppb(v	99
68) 1,1,2-Trichloroethane	13.193	97	279374	9.40	ppb(v	100
69) 1,3-Dichloropropane	13.585	76	391794	9.26	ppb(v	97
70) 2-Hexanone	13.909	58	275592	9.66	ppb(v	97
71) Ethyl Methacrylate	13.940	69	412426	10.45	ppb(v	98
72) Dibromochloromethane	14.099	129	502413	9.83	ppb(v	99
73) Tetrachloroethene	15.047	166	415463	9.21	ppb(v	98
74) 1,2-Dibromoethane	14.417	107	442393	9.46	ppb(v	99
75) Octane	14.888	43	463518	9.09	ppb(v	97
76) 1,1,1,2-Tetrachloroethane	15.971	131	344793	9.39	ppb(v	97
78) Chlorobenzene	15.995	112	628205	8.93	ppb(v	99
79) Ethylbenzene	16.533	91	1030151	9.47	ppb(v	99
80) m,p-Xylene	16.809	91	1583988	19.10	ppb(v	100
81) Styrene	17.329	104	585720	10.62	ppb(v	100
82) Nonane	17.861	43	477899	8.99	ppb(v	98
83) o-Xylene	17.482	91	800138	9.62	ppb(v	100
84) Bromoform	16.888	173	476126	10.40	ppb(v	100
85) 1,1,2,2-Tetrachloroethane	17.488	83	556291	9.50	ppb(v	99
86) 1,2,3-Trichloropropane	17.677	75	411227	9.43	ppb(v	100
87) Isopropylbenzene	18.387	105	1051509	9.19	ppb(v	99
88) Bromobenzene	18.497	156	349040	9.28	ppb(v	98
89) 2-Chlorotoluene	19.109	126	260503	9.69	ppb(v	100
90) n-Propylbenzene	19.182	120	298295	9.77	ppb(v	99
92) 4-Ethyltoluene	19.403	105	1034496	9.84	ppb(v	100
93) 1,3,5-Trimethylbenzene	19.525	105	874921	9.82	ppb(v	99
94) alpha-Methylstyrene	19.751	118	409663	10.71	ppb(v	100
95) tert-Butylbenzene	20.094	134	197339	9.13	ppb(v	97
96) 1,2,4-Trimethylbenzene	20.106	105	791000	9.39	ppb(v	96
97) 1,3-Dichlorobenzene	20.296	146	510455	9.10	ppb(v	100
98) Benzyl Chloride	20.284	91	604413	10.28	ppb(v	99
99) 1,4-Dichlorobenzene	20.400	146	513683	9.59	ppb(v	99
100) sec-Butylbenzene	20.479	134	233682	9.32	ppb(v	95
101) p-Isopropyltoluene	20.706	134	253946	9.14	ppb(v	96
102) 1,2-Dichlorobenzene	20.859	146	485367	9.23	ppb(v	99
103) n-Butylbenzene	21.275	134	224479	10.08	ppb(v	93
104) Hexachloroethane	21.740	201	296500	9.36	ppb(v	93
105) 1,2,4-Trichlorobenzene	23.055	180	224415	9.67	ppb(v	99
106) Naphthalene	23.177	128	495347	11.62	ppb(v	99
107) Hexachlorobutadiene	23.624	225	297921	9.79	ppb(v	100
109) TVHC as equiv Pentane	5.620	TIC	858562	9.03	ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

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Data Path : C:\msdchem\1\data\  
Data File : 6W03657.D  
Acq On : 21 Dec 2017 12:38 pm  
Operator : DANAT  
Sample : bsd  
Misc : MS23032,V6W106,,,,,1  
ALS Vial : 2 Sample Multiplier: 1
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Quant Time: Dec 21 13:27:27 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03683.D
 Acq On : 22 Dec 2017 1:48 pm
 Operator : DANAT
 Sample : bs
 Misc : MS23193,V6W107,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 22 14:17:35 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.189	130	228359	10.00	ppb(v)	0.00
54) 1,4-Difluorobenzene	10.397	114	869334	10.00	ppb(v)	0.00
77) Chlorobenzene-d5	15.934	82	385165	10.00	ppb(v)	0.00
108) Bromochloromethane (A)	8.189	130	228359	10.00	ppb(v)	0.00

System Monitoring Compounds

91) 4-Bromofluorobenzene	18.173	95	498764	10.05	ppb(v)	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	100.50%

Target Compounds						Qvalue
2) 1,1,1-Trifluoroethane	3.644	69	427875	11.99	ppb(v)	95
3) Freon 152A	3.735	65	133921	9.03	ppb(v)	95
4) Chlorodifluoromethane	3.772	67	50228	9.67	ppb(v)	99
5) Propene	3.796	41	126092	7.74	ppb(v)	99
6) Chlorotrifluoroethene	3.803	116	364817	10.03	ppb(v)	99
7) Dichlorodifluoromethane	3.858	85	503120	8.82	ppb(v)	99
8) 1-Chloro-1,1-difluoroethane	3.968	65	381523	9.88	ppb(v)	99
9) Chloromethane	3.986	50	158824	8.63	ppb(v)	99
10) Dichlorotetrafluoroethane	4.066	85	530690	9.95	ppb(v)	98
11) Vinyl Chloride	4.164	62	203771	9.61	ppb(v)	99
12) 1,3-Butadiene	4.274	54	145207	9.02	ppb(v)	97
13) n-Butane	4.316	58	36328	9.65	ppb(v)	80
14) Bromomethane	4.500	94	203987	10.45	ppb(v)	99
15) Chloroethane	4.641	64	104464	9.43	ppb(v)	99
16) Dichlorofluoromethane	4.720	67	447483	9.85	ppb(v)	99
17) Acetonitrile	4.922	41	184872	10.57	ppb(v)	98
18) Freon 123	5.069	83	626045	10.59	ppb(v)	99
19) Freon 123A	5.118	117	682677	21.61	ppb(v)	94
20) Bromoethene	4.940	106	254256	11.88	ppb(v)	100
21) Trichlorofluoromethane	5.301	101	594043	10.98	ppb(v)	100
22) Acetone	5.148	58	113182	9.77	ppb(v)	86
23) Pentane	5.620	57	60947	11.23	ppb(v)	85
24) 1,1-Dichloro-1-fluoroethane	5.412	81	488331	10.40	ppb(v)	98
25) Iodomethane	5.821	142	713356	11.22	ppb(v)	100
26) Isopropyl Alcohol	5.363	45	431457	9.40	ppb(v)	97
27) 1,1-Dichloroethene	5.889	61	360121	10.37	ppb(v)	97
28) Freon 113	6.244	101	523804	10.62	ppb(v)	99
29) Methylene Chloride	6.005	84	230038	9.77	ppb(v)	95
30) Carbon Disulfide	6.286	76	794667	10.62	ppb(v)	100
31) Ethanol	4.732	45	52213	8.00	ppb(v)	98
32) Acrylonitrile	5.571	53	179347	10.86	ppb(v)	99
33) 3-Chloropropene	6.115	76	120475	11.45	ppb(v)	79
34) trans-1,2-Dichloroethene	6.916	61	346807	10.35	ppb(v)	98
35) tert-Butyl Alcohol	5.913	59	483876	10.91	ppb(v)	97
36) Methyl tert-Butyl Ether	7.173	73	674969	10.91	ppb(v)	96
37) Vinyl Acetate	7.277	43	528703	9.57	ppb(v)	96
38) 1,1-Dichloroethane	7.124	63	430268	10.35	ppb(v)	99
39) 2-Butanone	7.528	72	131169	11.02	ppb(v)	79
40) Hexane	8.220	57	348018	9.47	ppb(v)	95
41) cis-1,2-Dichloroethene	8.012	61	322717	10.34	ppb(v)	97
42) Di-isopropyl Ether	8.213	87	216670	10.88	ppb(v)	73
43) Ethyl Acetate	8.250	61	77587	10.26	ppb(v)	87
44) Methyl Acrylate	8.238	55	416163	9.35	ppb(v)	97
45) Chloroform	8.336	83	498866	10.12	ppb(v)	99
46) 2,4-Dimethylpentane	9.204	57	427307	10.46	ppb(v)	98
47) Tetrahydrofuran	8.764	72	121039	11.41	ppb(v)	87
48) 1,1,1-Trichloroethane	9.425	97	464573	10.45	ppb(v)	99
49) 1,2-Dichloroethane	9.149	62	285366	9.94	ppb(v)	98
50) Benzene	9.957	78	784783	10.17	ppb(v)	98
51) Carbon Tetrachloride	10.128	117	524185	10.78	ppb(v)	99
52) Cyclohexane	10.269	56	373408	10.55	ppb(v)	95
53) 2,3-Dimethylpentane	10.563	71	175323	10.91	ppb(v)	91

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03683.D
 Acq On : 22 Dec 2017 1:48 pm
 Operator : DANAT
 Sample : bs
 Misc : MS23193,V6W107,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

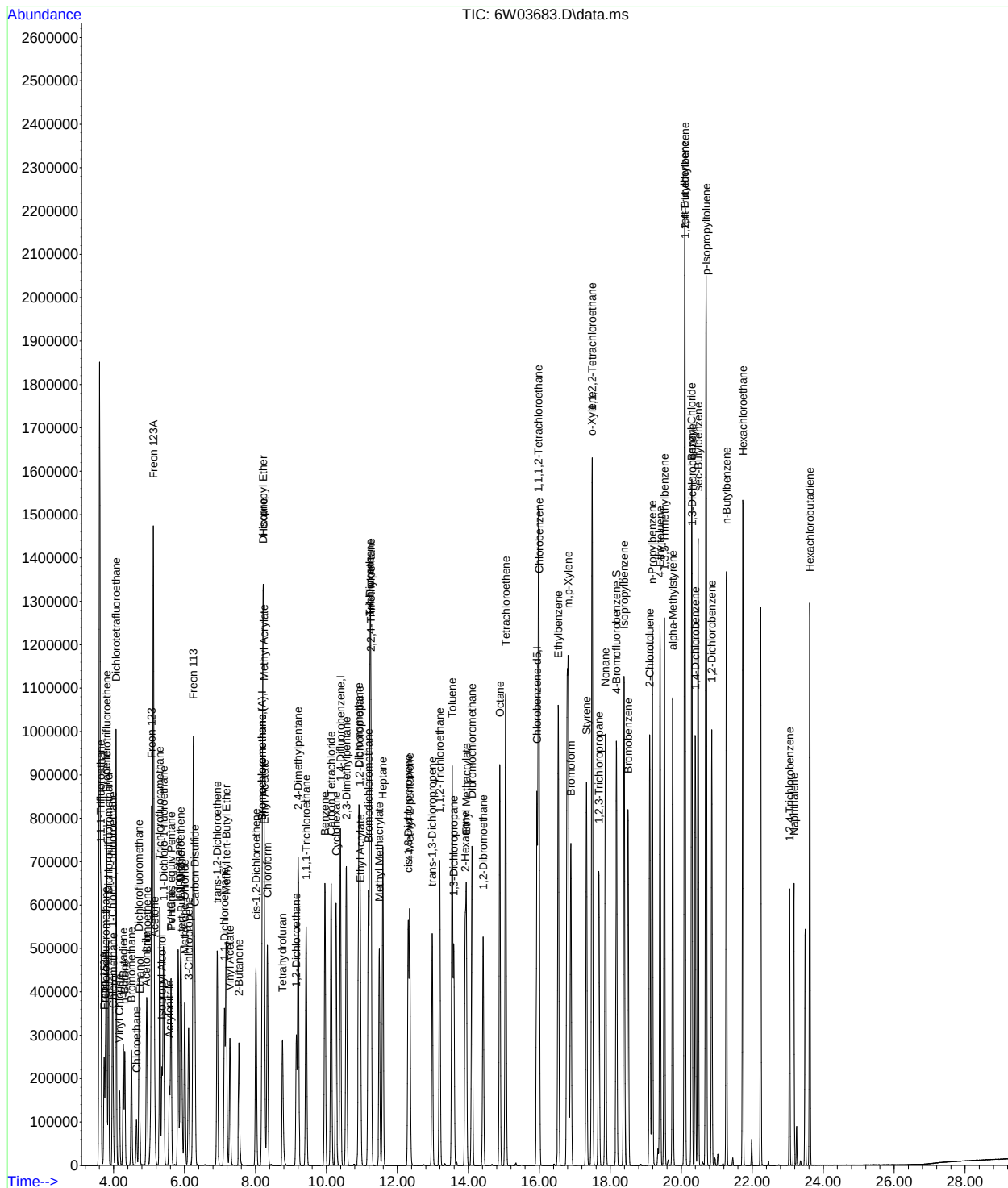
Quant Time: Dec 22 14:17:35 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.254	57	1141212	9.46	ppb(v	98
56) Heptane	11.590	71	265278	10.23	ppb(v	96
57) Trichloroethene	11.223	95	339314	9.98	ppb(v	98
58) 1,2-Dichloropropane	10.936	63	275960	9.60	ppb(v	98
59) Dibromomethane	10.911	174	328882	9.48	ppb(v	97
60) Ethyl Acrylate	10.960	55	525884	9.96	ppb(v	97
61) Methyl Methacrylate	11.493	69	281052	10.69	ppb(v	90
62) 1,4-Dioxane	11.223	88	150582	10.26	ppb(v#	67
63) Bromodichloromethane	11.181	83	538437	9.95	ppb(v	99
64) cis-1,3-Dichloropropene	12.306	75	450768	10.30	ppb(v	98
65) 4-Methyl-2-pentanone	12.343	58	222582	10.42	ppb(v	90
66) trans-1,3-Dichloropropene	12.979	75	409544	10.37	ppb(v	99
67) Toluene	13.542	91	930274	9.82	ppb(v	100
68) 1,1,2-Trichloroethane	13.193	97	316311	10.08	ppb(v	99
69) 1,3-Dichloropropane	13.585	76	441017	9.87	ppb(v	94
70) 2-Hexanone	13.909	58	292452	9.71	ppb(v	91
71) Ethyl Methacrylate	13.940	69	438640	10.52	ppb(v	97
72) Dibromochloromethane	14.099	129	565794	10.48	ppb(v	99
73) Tetrachloroethene	15.053	166	462981	9.72	ppb(v	99
74) 1,2-Dibromoethane	14.417	107	491386	9.95	ppb(v	99
75) Octane	14.888	43	470332	8.74	ppb(v	88
76) 1,1,1,2-Tetrachloroethane	15.977	131	385764	9.95	ppb(v	99
78) Chlorobenzene	15.995	112	706189	10.19	ppb(v	97
79) Ethylbenzene	16.534	91	1117076	10.43	ppb(v	98
80) m,p-Xylene	16.809	91	1683963	20.63	ppb(v	98
81) Styrene	17.329	104	644712	11.87	ppb(v	98
82) Nonane	17.861	43	443478	8.47	ppb(v	91
83) o-Xylene	17.482	91	829216	10.13	ppb(v	98
84) Bromoform	16.888	173	513989	11.40	ppb(v	100
85) 1,1,2,2-Tetrachloroethane	17.488	83	549256	9.53	ppb(v	99
86) 1,2,3-Trichloropropane	17.678	75	429078	10.00	ppb(v	98
87) Isopropylbenzene	18.387	105	1125523	9.99	ppb(v	99
88) Bromobenzene	18.503	156	371598	10.03	ppb(v	90
89) 2-Chlorotoluene	19.109	126	280651	10.60	ppb(v	94
90) n-Propylbenzene	19.182	120	316507	10.53	ppb(v	93
92) 4-Ethyltoluene	19.403	105	1077749	10.41	ppb(v	99
93) 1,3,5-Trimethylbenzene	19.525	105	907980	10.35	ppb(v	99
94) alpha-Methylstyrene	19.758	118	437252	11.61	ppb(v	99
95) tert-Butylbenzene	20.094	134	210558	9.90	ppb(v	97
96) 1,2,4-Trimethylbenzene	20.106	105	834481	10.06	ppb(v	95
97) 1,3-Dichlorobenzene	20.302	146	531384	9.62	ppb(v	98
98) Benzyl Chloride	20.290	91	614500	10.62	ppb(v	98
99) 1,4-Dichlorobenzene	20.400	146	517127	9.80	ppb(v	98
100) sec-Butylbenzene	20.479	134	249772	10.11	ppb(v	92
101) p-Isopropyltoluene	20.706	134	274271	10.03	ppb(v	97
102) 1,2-Dichlorobenzene	20.859	146	493455	9.53	ppb(v	99
103) n-Butylbenzene	21.275	134	235906	10.76	ppb(v	85
104) Hexachloroethane	21.740	201	301761	9.68	ppb(v	94
105) 1,2,4-Trichlorobenzene	23.055	180	213956	9.37	ppb(v	98
106) Naphthalene	23.177	128	522224	12.45	ppb(v	100
107) Hexachlorobutadiene	23.624	225	265205	8.85	ppb(v	99
109) TVHC as equiv Pentane	5.620	TIC	959010	9.61	ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\
Data File : 6W03683.D
Acq On : 22 Dec 2017 1:48 pm
Operator : DANAT
Sample : bs
Misc : MS23193,V6W107,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 22 14:17:35 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03684.D
 Acq On : 22 Dec 2017 2:39 pm
 Operator : DANAT
 Sample : bsd
 Misc : MS23193,V6W107,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 22 16:45:27 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.189	130	217007	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.397	114	821491	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.934	82	361910	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.189	130	217007	10.00	ppb(v	0.00

System Monitoring Compounds

91) 4-Bromofluorobenzene	18.173	95	471697	10.11	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	101.10%

Target Compounds					Qvalue	
2) 1,1,1-Trifluoroethane	3.643	69	398519	11.76	ppb(v	96
3) Freon 152A	3.735	65	125453	8.90	ppb(v	95
4) Chlorodifluoromethane	3.772	67	47995	9.72	ppb(v	99
5) Propene	3.796	41	117234	7.57	ppb(v	99
6) Chlorotrifluoroethene	3.802	116	351068	10.16	ppb(v	99
7) Dichlorodifluoromethane	3.858	85	486770	8.98	ppb(v	99
8) 1-Chloro-1,1-difluoro...	3.968	65	368206	10.03	ppb(v	99
9) Chloromethane	3.986	50	150835	8.63	ppb(v	99
10) Dichlorotetrafluoroethane	4.066	85	510829	10.08	ppb(v	98
11) Vinyl Chloride	4.170	62	192823	9.57	ppb(v#	100
12) 1,3-Butadiene	4.274	54	136968	8.95	ppb(v	98
13) n-Butane	4.322	58	35531	9.93	ppb(v	74
14) Bromomethane	4.506	94	198286	10.69	ppb(v	100
15) Chloroethane	4.641	64	101097	9.60	ppb(v	99
16) Dichlorofluoromethane	4.720	67	428471	9.92	ppb(v	99
17) Acetonitrile	4.928	41	165517	9.96	ppb(v	98
18) Freon 123	5.075	83	584021	10.40	ppb(v	99
19) Freon 123A	5.118	117	648578	21.61	ppb(v	92
20) Bromoethene	4.940	106	242912	11.94	ppb(v	99
21) Trichlorofluoromethane	5.307	101	563726	10.97	ppb(v	100
22) Acetone	5.148	58	103284	9.38	ppb(v	85
23) Pentane	5.619	57	55650	10.79	ppb(v	81
24) 1,1-Dichloro-1-fluoro...	5.411	81	458858	10.28	ppb(v	98
25) Iodomethane	5.821	142	684496	11.32	ppb(v	99
26) Isopropyl Alcohol	5.362	45	394332	9.04	ppb(v	99
27) 1,1-Dichloroethene	5.889	61	335327	10.16	ppb(v	96
28) Freon 113	6.250	101	496504	10.59	ppb(v	97
29) Methylene Chloride	6.005	84	218365	9.76	ppb(v	92
30) Carbon Disulfide	6.286	76	746395	10.49	ppb(v	99
31) Ethanol	4.732	45	48808	7.87	ppb(v	99
32) Acrylonitrile	5.571	53	165769	10.56	ppb(v	98
33) 3-Chloropropene	6.115	76	112647	11.27	ppb(v	80
34) trans-1,2-Dichloroethene	6.923	61	322906	10.15	ppb(v	96
35) tert-Butyl Alcohol	5.919	59	450121	10.68	ppb(v	96
36) Methyl tert-Butyl Ether	7.173	73	629847	10.71	ppb(v	96
37) Vinyl Acetate	7.277	43	479717	9.14	ppb(v	95
38) 1,1-Dichloroethane	7.124	63	399255	10.11	ppb(v	98
39) 2-Butanone	7.534	72	122770	10.86	ppb(v	74
40) Hexane	8.219	57	319511	9.15	ppb(v	94
41) cis-1,2-Dichloroethene	8.011	61	299912	10.11	ppb(v	96
42) Di-isopropyl Ether	8.213	87	203122	10.74	ppb(v	69
43) Ethyl Acetate	8.250	61	72258	10.05	ppb(v	85
44) Methyl Acrylate	8.238	55	379855	8.98	ppb(v	96
45) Chloroform	8.336	83	468864	10.01	ppb(v	98
46) 2,4-Dimethylpentane	9.204	57	391906	10.09	ppb(v	98
47) Tetrahydrofuran	8.764	72	111902	11.10	ppb(v	84
48) 1,1,1-Trichloroethane	9.431	97	439747	10.41	ppb(v	99
49) 1,2-Dichloroethane	9.149	62	267592	9.81	ppb(v	99
50) Benzene	9.957	78	737331	10.06	ppb(v	99
51) Carbon Tetrachloride	10.134	117	498981	10.80	ppb(v	98
52) Cyclohexane	10.269	56	345060	10.26	ppb(v	94
53) 2,3-Dimethylpentane	10.563	71	163472	10.71	ppb(v	89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03684.D
 Acq On : 22 Dec 2017 2:39 pm
 Operator : DANAT
 Sample : bsd
 Misc : MS23193,V6W107,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 22 16:45:27 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

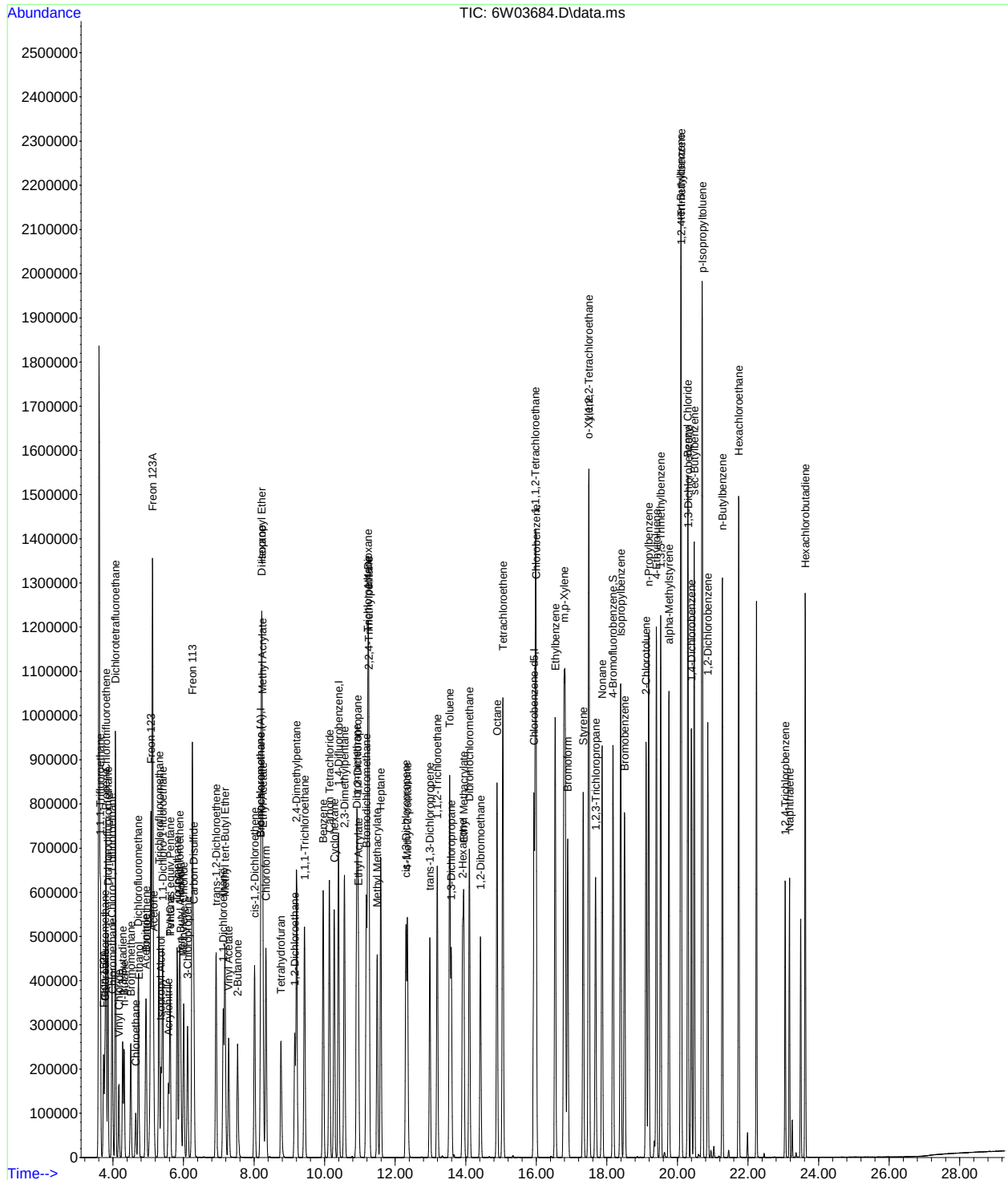
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.254	57	1045406	9.17	ppb(v	98
56) Heptane	11.590	71	246973	10.07	ppb(v	96
57) Trichloroethene	11.223	95	317445	9.88	ppb(v	96
58) 1,2-Dichloropropane	10.936	63	253869	9.35	ppb(v	98
59) Dibromomethane	10.905	174	317633	9.69	ppb(v	96
60) Ethyl Acrylate	10.960	55	482616	9.67	ppb(v	97
61) Methyl Methacrylate	11.492	69	262865	10.58	ppb(v	89
62) 1,4-Dioxane	11.229	88	141330	10.19	ppb(v#	78
63) Bromodichloromethane	11.180	83	505844	9.89	ppb(v	99
64) cis-1,3-Dichloropropene	12.306	75	423815	10.25	ppb(v	99
65) 4-Methyl-2-pentanone	12.343	58	204332	10.13	ppb(v	88
66) trans-1,3-Dichloropropene	12.979	75	382463	10.24	ppb(v	98
67) Toluene	13.542	91	878993	9.82	ppb(v	100
68) 1,1,2-Trichloroethane	13.193	97	300867	10.15	ppb(v	98
69) 1,3-Dichloropropane	13.585	76	408078	9.67	ppb(v	93
70) 2-Hexanone	13.909	58	270855	9.51	ppb(v	90
71) Ethyl Methacrylate	13.940	69	409303	10.39	ppb(v	96
72) Dibromochloromethane	14.099	129	539556	10.57	ppb(v	100
73) Tetrachloroethene	15.053	166	443918	9.86	ppb(v	99
74) 1,2-Dibromoethane	14.417	107	465913	9.98	ppb(v	99
75) Octane	14.888	43	423668	8.33	ppb(v	86
76) 1,1,1,2-Tetrachloroethane	15.977	131	367148	10.02	ppb(v	98
78) Chlorobenzene	15.995	112	670565	10.30	ppb(v	96
79) Ethylbenzene	16.540	91	1054354	10.48	ppb(v	98
80) m,p-Xylene	16.790	91	1605345	20.93	ppb(v	99
81) Styrene	17.329	104	615331	12.05	ppb(v	98
82) Nonane	17.867	43	406449	8.26	ppb(v#	90
83) o-Xylene	17.482	91	793328	10.31	ppb(v	98
84) Bromoform	16.888	173	495177	11.69	ppb(v	99
85) 1,1,2,2-Tetrachloroethane	17.488	83	518705	9.58	ppb(v	99
86) 1,2,3-Trichloropropane	17.684	75	402143	9.97	ppb(v	98
87) Isopropylbenzene	18.393	105	1076564	10.17	ppb(v	99
88) Bromobenzene	18.503	156	356908	10.25	ppb(v	90
89) 2-Chlorotoluene	19.109	126	267839	10.77	ppb(v	95
90) n-Propylbenzene	19.182	120	304477	10.78	ppb(v	94
92) 4-Ethyltoluene	19.403	105	1034053	10.63	ppb(v	99
93) 1,3,5-Trimethylbenzene	19.525	105	880374	10.69	ppb(v	99
94) alpha-Methylstyrene	19.757	118	424683	12.00	ppb(v	99
95) tert-Butylbenzene	20.094	134	205725	10.29	ppb(v	97
96) 1,2,4-Trimethylbenzene	20.106	105	813247	10.44	ppb(v	94
97) 1,3-Dichlorobenzene	20.302	146	519674	10.02	ppb(v	98
98) Benzyl Chloride	20.290	91	597416	10.98	ppb(v	98
99) 1,4-Dichlorobenzene	20.400	146	511880	10.33	ppb(v	98
100) sec-Butylbenzene	20.479	134	243631	10.50	ppb(v	90
101) p-Isopropyltoluene	20.706	134	266597	10.37	ppb(v	97
102) 1,2-Dichlorobenzene	20.859	146	485450	9.98	ppb(v	98
103) n-Butylbenzene	21.275	134	230584	11.19	ppb(v	83
104) Hexachloroethane	21.740	201	295930	10.10	ppb(v	92
105) 1,2,4-Trichlorobenzene	23.055	180	211913	9.87	ppb(v	98
106) Naphthalene	23.177	128	512385	13.00	ppb(v	100
107) Hexachlorobutadiene	23.624	225	260402	9.25	ppb(v	99
109) TVHC as equiv Pentane	5.619	TIC	882726	9.31	ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

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Data Path : C:\msdchem\1\data\  
Data File : 6W03684.D  
Acq On : 22 Dec 2017 2:39 pm  
Operator : DANAT  
Sample : bsd  
Misc : MS23193,V6W107,,,,,1  
ALS Vial : 2 Sample Multiplier: 1
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Quant Time: Dec 22 16:45:27 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration



7.3.6

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27719.D
 Acq On : 8 Nov 2017 10:29 am
 Operator : thomash
 Sample : bs
 Misc : MS21792,v5w1090,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 08 11:02:01 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.139	130	258682	10.00	ppb(v	-0.04
54) 1,4-Difluorobenzene	10.268	114	860148	10.00	ppb(v	-0.02
77) Chlorobenzene-d5	15.755	82	344810	10.00	ppb(v	-0.01
108) Bromochloromethane (A)	8.139	130	258682	10.00	ppb(v	-0.04

System Monitoring Compounds

91) 4-Bromofluorobenzene	17.994	95	517144	10.66	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	106.60%

Target Compounds						Qvalue
2) 1,1,1-Trifluoroethane	3.868	69	545488	10.17	ppb(v	94
3) Freon 152A	3.960	65	117253	8.47	ppb(v	84
4) Chlorodifluoromethane	3.997	67	48683	10.07	ppb(v	97
5) Propene	4.015	41	101812	7.52	ppb(v	98
6) Chlorotrifluoroethene	4.021	116	362687	10.56	ppb(v	99
7) Dichlorodifluoromethane	4.070	85	556097	9.95	ppb(v	100
8) 1-Chloro-1,1-difluoro...	4.180	65	404238	10.91	ppb(v	98
9) Chloromethane	4.199	50	171796	9.93	ppb(v	98
10) Dichlorotetrafluoroethane	4.272	85	632840	11.42	ppb(v	96
11) Vinyl Chloride	4.364	62	223472	11.68	ppb(v#	99
12) 1,3-Butadiene	4.462	54	147015	11.36	ppb(v	99
13) n-Butane	4.499	58	31410	11.88	ppb(v	97
14) Bromomethane	4.676	94	269222	10.42	ppb(v	99
15) Chloroethane	4.811	64	106978	11.63	ppb(v	99
16) Dichlorofluoromethane	4.884	67	515630	11.81	ppb(v	99
17) Acetonitrile	5.104	41	121828	11.30	ppb(v	96
18) Freon 123	5.208	83	631619	11.55	ppb(v	99
19) Freon 123A	5.251	117	692337	21.86	ppb(v	91
20) Bromoethene	5.086	106	261816	11.46	ppb(v	98
21) Trichlorofluoromethane	5.422	101	660685	12.05	ppb(v	100
22) Acetone	5.312	58	90238	10.74	ppb(v	97
23) Pentane	5.704	57	43225	8.21	ppb(v	86
24) 1,1-Dichloro-1-fluoro...	5.520	81	509691	10.35	ppb(v	99
25) Iodomethane	5.906	142	708274	9.94	ppb(v	95
26) Isopropyl Alcohol	5.520	43	50483	8.84	ppb(v	98
27) 1,1-Dichloroethene	5.967	61	302887	9.16	ppb(v	91
28) Freon 113	6.297	101	500182	9.86	ppb(v	99
29) Methylene Chloride	6.083	84	199927	8.56	ppb(v	91
30) Carbon Disulfide	6.334	76	662519	9.74	ppb(v	100
31) Ethanol	4.927	45	54834	10.31	ppb(v	98
32) Acrylonitrile	5.698	53	128417	8.82	ppb(v	98
33) 3-Chloropropene	6.181	76	82780	9.13	ppb(v	73
34) trans-1,2-Dichloroethene	6.927	61	266050	8.77	ppb(v	94
35) tert-Butyl Alcohol	6.034	59	339030	7.49	ppb(v	97
36) Methyl tert-Butyl Ether	7.196	73	495252	8.65	ppb(v	99
37) Vinyl Acetate	7.288	43	343241	7.32	ppb(v	95
38) 1,1-Dichloroethane	7.129	63	348237	8.76	ppb(v	99
39) 2-Butanone	7.545	72	96234	9.42	ppb(v	78
40) Hexane	8.151	57	260970	8.48	ppb(v	92
41) cis-1,2-Dichloroethene	7.967	61	252657	8.70	ppb(v	93
42) Di-isopropyl Ether	8.175	87	175180	9.73	ppb(v	85
43) Ethyl Acetate	8.230	61	64549	9.67	ppb(v	77
44) Methyl Acrylate	8.212	55	313311	8.93	ppb(v	98
45) Chloroform	8.279	83	462098	9.35	ppb(v	97
46) 2,4-Dimethylpentane	9.093	57	319563	9.00	ppb(v	97
47) Tetrahydrofuran	8.732	72	88827	9.47	ppb(v	87
48) 1,1,1-Trichloroethane	9.325	97	430021	9.59	ppb(v	99
49) 1,2-Dichloroethane	9.056	62	256470	9.42	ppb(v	98
50) Benzene	9.845	78	618582	8.71	ppb(v	97
51) Carbon Tetrachloride	10.011	117	450200	9.93	ppb(v	99
52) Cyclohexane	10.133	56	260102	8.56	ppb(v	96
53) 2,3-Dimethylpentane	10.414	71	129968	9.25	ppb(v	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27719.D
 Acq On : 8 Nov 2017 10:29 am
 Operator : thomash
 Sample : bs
 Misc : MS21792,v5w1090,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 08 11:02:01 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

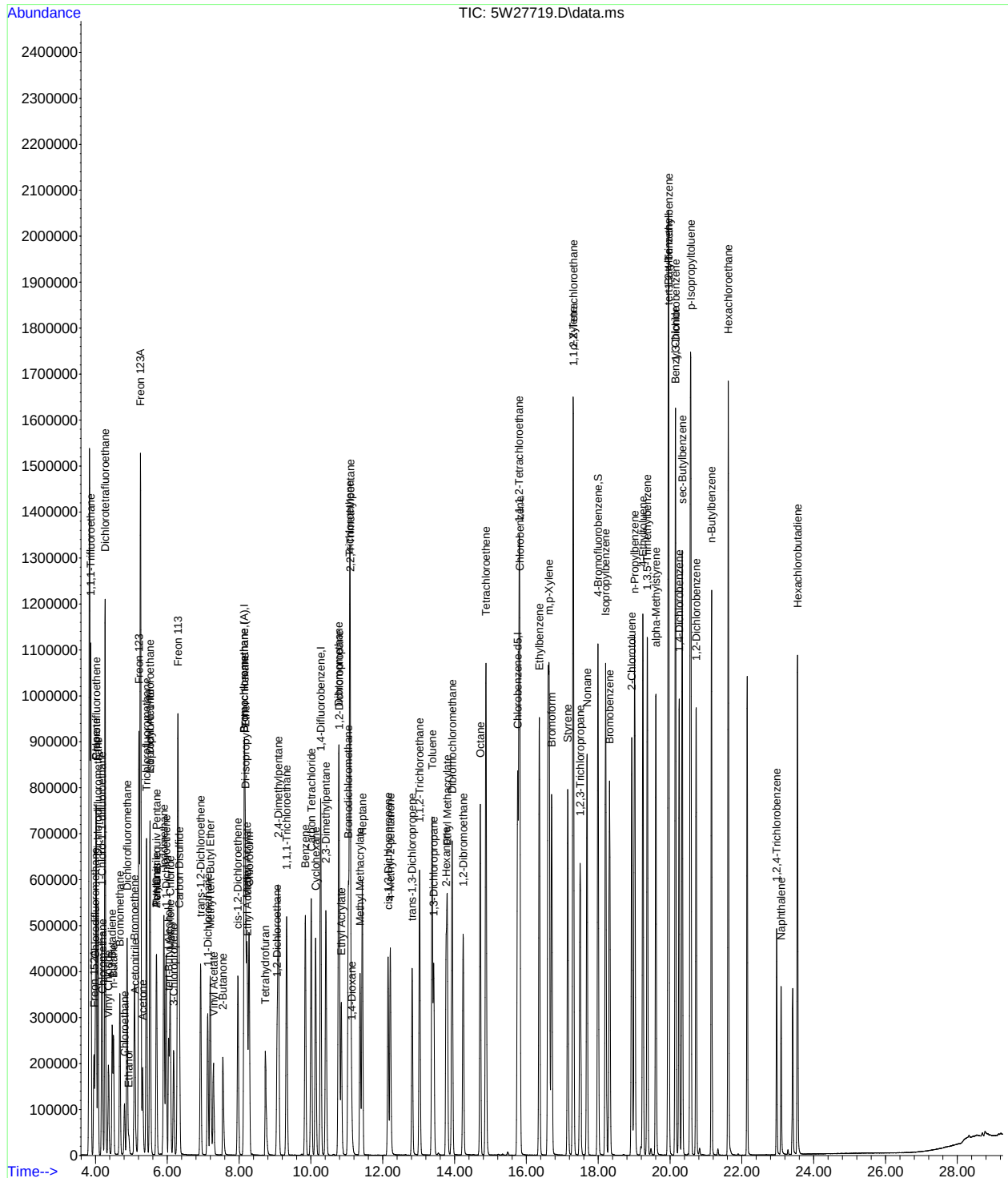
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.093	57	881688	9.42	ppb(v	97
56) Heptane	11.436	71	201926	10.06	ppb(v	98
57) Trichloroethene	11.075	95	317577	9.87	ppb(v	99
58) 1,2-Dichloropropane	10.788	63	222850	9.15	ppb(v	99
59) Dibromomethane	10.775	174	326572	9.41	ppb(v	98
60) Ethyl Acrylate	10.849	55	403373	9.31	ppb(v	97
61) Methyl Methacrylate	11.369	69	214600	9.61	ppb(v	85
62) 1,4-Dioxane	11.130	88	127684	9.94	ppb(v#	90
63) Bromodichloromethane	11.038	83	483257	9.80	ppb(v	99
64) cis-1,3-Dichloropropene	12.152	75	340418	9.14	ppb(v	99
65) 4-Methyl-2-pentanone	12.213	58	170532	9.97	ppb(v	90
66) trans-1,3-Dichloropropene	12.819	75	306293	9.49	ppb(v	98
67) Toluene	13.375	91	731212	9.24	ppb(v	100
68) 1,1,2-Trichloroethane	13.027	97	279225	9.59	ppb(v	98
69) 1,3-Dichloropropane	13.418	76	356356	9.70	ppb(v	92
70) 2-Hexanone	13.767	58	234678	10.79	ppb(v	88
71) Ethyl Methacrylate	13.797	69	369815	10.49	ppb(v	99
72) Dibromochloromethane	13.932	129	522176	9.95	ppb(v	98
73) Tetrachloroethene	14.874	166	448459	9.33	ppb(v	100
74) 1,2-Dibromoethane	14.238	107	450304	9.49	ppb(v	98
75) Octane	14.715	43	368799	8.61	ppb(v	89
76) 1,1,1,2-Tetrachloroethane	15.798	131	370668	9.87	ppb(v	99
78) Chlorobenzene	15.816	112	646925	10.25	ppb(v	100
79) Ethylbenzene	16.361	91	942715	10.22	ppb(v	97
80) m,p-Xylene	16.630	91	1517662	21.49	ppb(v	99
81) Styrene	17.150	104	570185	10.64	ppb(v	100
82) Nonane	17.688	43	370540	9.11	ppb(v	95
83) o-Xylene	17.303	91	775954	10.93	ppb(v	99
84) Bromoform	16.703	173	548941	11.89	ppb(v	100
85) 1,1,2,2-Tetrachloroethane	17.309	83	576969	10.62	ppb(v	100
86) 1,2,3-Trichloropropane	17.499	75	404354	10.45	ppb(v	98
87) Isopropylbenzene	18.208	105	1034042	10.45	ppb(v	99
88) Bromobenzene	18.318	156	392601	10.91	ppb(v	98
89) 2-Chlorotoluene	18.936	126	271603	10.29	ppb(v	95
90) n-Propylbenzene	19.016	120	301978	10.86	ppb(v	96
92) 4-Ethyltoluene	19.242	105	1000421	10.19	ppb(v	99
93) 1,3,5-Trimethylbenzene	19.365	105	845851	9.88	ppb(v	99
94) alpha-Methylstyrene	19.609	118	417193	10.57	ppb(v	99
95) tert-Butylbenzene	19.952	134	196166	10.01	ppb(v	96
96) 1,2,4-Trimethylbenzene	19.964	105	829920	10.44	ppb(v	99
97) 1,3-Dichlorobenzene	20.154	146	568263	10.58	ppb(v	99
98) Benzyl Chloride	20.148	91	575053	11.71	ppb(v	99
99) 1,4-Dichlorobenzene	20.258	146	543933	10.22	ppb(v	100
100) sec-Butylbenzene	20.343	134	227922	10.02	ppb(v	96
101) p-Isopropyltoluene	20.576	134	260973	9.66	ppb(v	98
102) 1,2-Dichlorobenzene	20.729	146	518262	10.23	ppb(v	98
103) n-Butylbenzene	21.157	134	204944	9.82	ppb(v	98
104) Hexachloroethane	21.622	201	345786	10.32	ppb(v	95
105) 1,2,4-Trichlorobenzene	22.968	180	168445	11.13	ppb(v	96
106) Naphthalene	23.096	128	317491	11.02	ppb(v	99
107) Hexachlorobutadiene	23.549	225	234177	8.05	ppb(v	99
109) TVHC as equiv Pentane	5.704	TIC	978959	8.57	ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5W27719.D
Acq On : 8 Nov 2017 10:29 am
Operator : thomash
Sample : bs
Misc : MS21792,v5w1090,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 08 11:02:01 2017
Quant Method : C:\msdchem\1\methods\m5w1065.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Sat Oct 07 09:10:30 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27720.D
 Acq On : 8 Nov 2017 11:15 am
 Operator : thomash
 Sample : bsd
 Misc : MS21792,v5w1090,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 08 11:51:00 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.157	130	261905	10.00	ppb(v	-0.02
54) 1,4-Difluorobenzene	10.280	114	868989	10.00	ppb(v	-0.01
77) Chlorobenzene-d5	15.761	82	353240	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.157	130	261905	10.00	ppb(v	-0.02

System Monitoring Compounds
 91) 4-Bromofluorobenzene 17.994 95 534106 10.75 ppb(v 0.00
 Spiked Amount 10.000 Range 65 - 128 Recovery = 107.50%

Target Compounds					Qvalue	
2) 1,1,1-Trifluoroethane	3.899	69	557562	10.27	ppb(v	93
3) Freon 152A	3.984	65	116253	8.30	ppb(v	84
4) Chlorodifluoromethane	4.021	67	48384	9.88	ppb(v	100
5) Propene	4.046	41	101563	7.41	ppb(v	97
6) Chlorotrifluoroethene	4.046	116	354075	10.18	ppb(v	99
7) Dichlorodifluoromethane	4.101	85	548076	9.69	ppb(v	100
8) 1-Chloro-1,1-difluoro...	4.205	65	397690	10.60	ppb(v	99
9) Chloromethane	4.223	50	168462	9.61	ppb(v	99
10) Dichlorotetrafluoroethane	4.296	85	618618	11.03	ppb(v	94
11) Vinyl Chloride	4.394	62	220264	11.37	ppb(v#	99
12) 1,3-Butadiene	4.492	54	145862	11.13	ppb(v	98
13) n-Butane	4.529	58	31091	11.62	ppb(v	95
14) Bromomethane	4.706	94	263648	10.08	ppb(v	100
15) Chloroethane	4.835	64	105548	11.33	ppb(v	99
16) Dichlorofluoromethane	4.908	67	508217	11.50	ppb(v	100
17) Acetonitrile	5.128	41	123397	11.31	ppb(v	99
18) Freon 123	5.232	83	638040	11.52	ppb(v	100
19) Freon 123A	5.281	117	694262	21.65	ppb(v	91
20) Bromoethene	5.116	106	258258	11.16	ppb(v	98
21) Trichlorofluoromethane	5.447	101	677373	12.20	ppb(v	99
22) Acetone	5.337	58	90233	10.60	ppb(v	98
23) Pentane	5.728	57	44848	8.42	ppb(v	86
24) 1,1-Dichloro-1-fluoro...	5.545	81	499756	10.03	ppb(v	99
25) Iodomethane	5.930	142	727632	10.09	ppb(v	96
26) Isopropyl Alcohol	5.545	43	51800	8.96	ppb(v	92
27) 1,1-Dichloroethene	5.991	61	318403	9.51	ppb(v	92
28) Freon 113	6.321	101	514527	10.02	ppb(v	99
29) Methylene Chloride	6.107	84	206881	8.75	ppb(v	91
30) Carbon Disulfide	6.358	76	674435	9.80	ppb(v	100
31) Ethanol	4.957	45	54030	10.03	ppb(v	98
32) Acrylonitrile	5.722	53	132508	8.99	ppb(v	94
33) 3-Chloropropene	6.205	76	86975	9.48	ppb(v#	72
34) trans-1,2-Dichloroethene	6.952	61	279368	9.10	ppb(v	94
35) tert-Butyl Alcohol	6.058	59	352618	7.70	ppb(v	97
36) Methyl tert-Butyl Ether	7.221	73	520478	8.98	ppb(v	99
37) Vinyl Acetate	7.306	43	363824	7.66	ppb(v	94
38) 1,1-Dichloroethane	7.147	63	361475	8.98	ppb(v	100
39) 2-Butanone	7.569	72	98442	9.51	ppb(v	77
40) Hexane	8.169	57	281577	9.04	ppb(v	93
41) cis-1,2-Dichloroethene	7.985	61	261246	8.88	ppb(v	92
42) Di-isopropyl Ether	8.193	87	182304	10.00	ppb(v	84
43) Ethyl Acetate	8.242	61	66634	9.86	ppb(v	80
44) Methyl Acrylate	8.230	55	322403	9.07	ppb(v	98
45) Chloroform	8.291	83	477684	9.54	ppb(v	98
46) 2,4-Dimethylpentane	9.111	57	327477	9.11	ppb(v	99
47) Tetrahydrofuran	8.750	72	91355	9.62	ppb(v	85
48) 1,1,1-Trichloroethane	9.337	97	441694	9.73	ppb(v	99
49) 1,2-Dichloroethane	9.074	62	267838	9.72	ppb(v	99
50) Benzene	9.857	78	638200	8.87	ppb(v	97
51) Carbon Tetrachloride	10.023	117	460774	10.04	ppb(v	99
52) Cyclohexane	10.145	56	266345	8.66	ppb(v	96
53) 2,3-Dimethylpentane	10.426	71	133547	9.38	ppb(v	93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27720.D
 Acq On : 8 Nov 2017 11:15 am
 Operator : thomash
 Sample : bsd
 Misc : MS21792,v5w1090,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 08 11:51:00 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

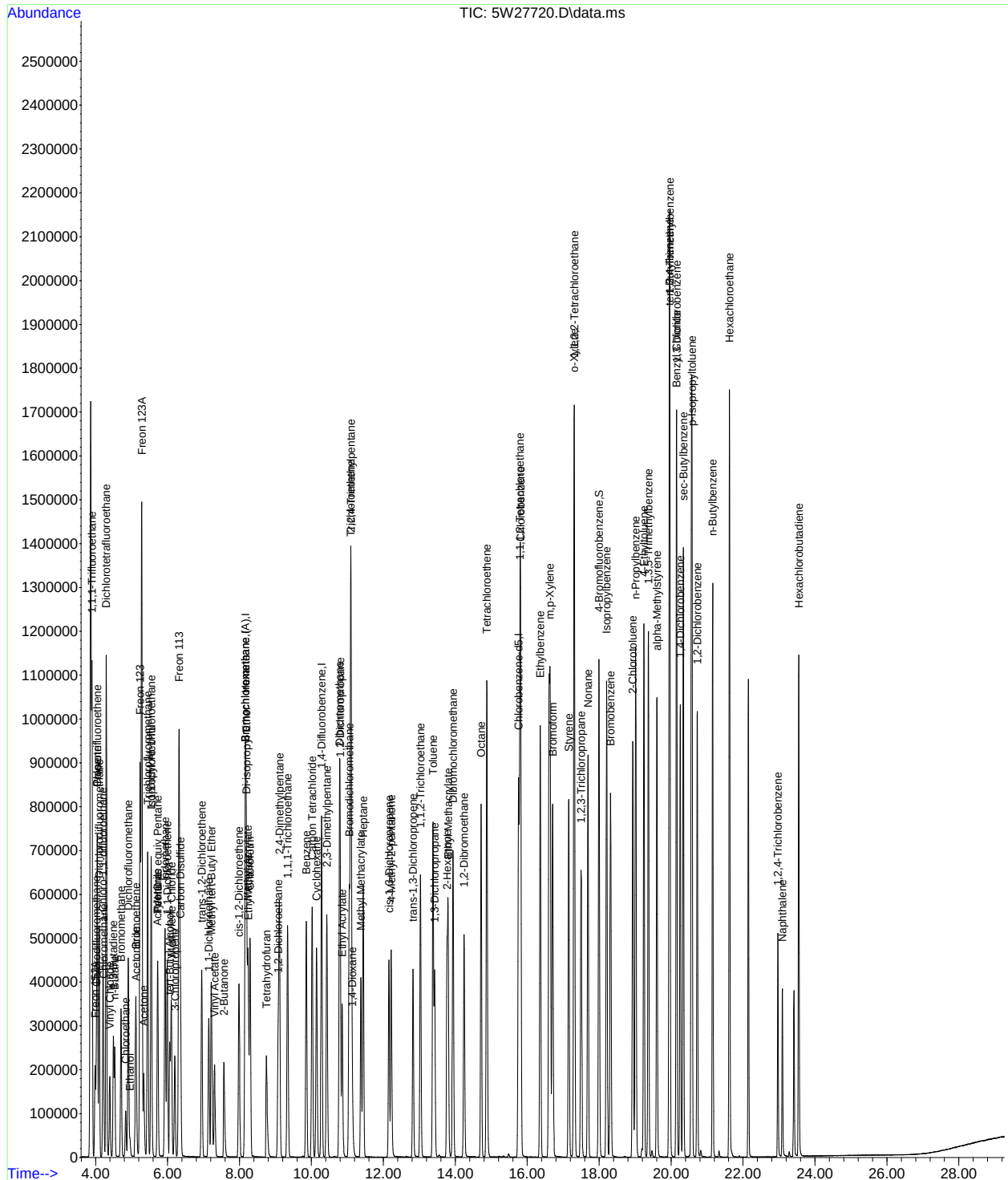
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.099	57	916770	9.70	ppb(v)	97
56) Heptane	11.442	71	209686	10.35	ppb(v)	99
57) Trichloroethene	11.087	95	326470	10.04	ppb(v)	99
58) 1,2-Dichloropropane	10.800	63	229659	9.34	ppb(v)	100
59) Dibromomethane	10.781	174	335094	9.56	ppb(v)	95
60) Ethyl Acrylate	10.855	55	424274	9.69	ppb(v)	98
61) Methyl Methacrylate	11.375	69	223053	9.89	ppb(v)	86
62) 1,4-Dioxane	11.136	88	131443	10.13	ppb(v)	94
63) Bromodichloromethane	11.050	83	500634	10.05	ppb(v)	98
64) cis-1,3-Dichloropropene	12.158	75	356807	9.48	ppb(v)	99
65) 4-Methyl-2-pentanone	12.219	58	177456	10.27	ppb(v)	92
66) trans-1,3-Dichloropropene	12.825	75	321816	9.87	ppb(v)	98
67) Toluene	13.381	91	755539	9.45	ppb(v)	99
68) 1,1,2-Trichloroethane	13.033	97	287215	9.76	ppb(v)	98
69) 1,3-Dichloropropane	13.424	76	367208	9.89	ppb(v)	92
70) 2-Hexanone	13.773	58	242542	11.03	ppb(v)	88
71) Ethyl Methacrylate	13.803	69	377647	10.61	ppb(v)	99
72) Dibromochloromethane	13.932	129	537758	10.14	ppb(v)	99
73) Tetrachloroethene	14.874	166	457227	9.42	ppb(v)	99
74) 1,2-Dibromoethane	14.244	107	467553	9.75	ppb(v)	99
75) Octane	14.715	43	387106	8.94	ppb(v)	90
76) 1,1,1,2-Tetrachloroethane	15.798	131	382339	10.08	ppb(v)	97
78) Chlorobenzene	15.816	112	670505	10.37	ppb(v)	100
79) Ethylbenzene	16.361	91	976602	10.34	ppb(v)	97
80) m,p-Xylene	16.630	91	1580690	21.85	ppb(v)	99
81) Styrene	17.156	104	591449	10.77	ppb(v)	99
82) Nonane	17.688	43	390885	9.38	ppb(v)	94
83) o-Xylene	17.303	91	809070	11.13	ppb(v)	99
84) Bromoform	16.709	173	566233	11.97	ppb(v)	100
85) 1,1,2,2-Tetrachloroethane	17.309	83	594716	10.69	ppb(v)	99
86) 1,2,3-Trichloropropane	17.498	75	423027	10.67	ppb(v)	98
87) Isopropylbenzene	18.208	105	1066801	10.52	ppb(v)	100
88) Bromobenzene	18.318	156	406648	11.04	ppb(v)	98
89) 2-Chlorotoluene	18.936	126	286379	10.60	ppb(v)	96
90) n-Propylbenzene	19.016	120	309219	10.86	ppb(v)	100
92) 4-Ethyltoluene	19.242	105	1038845	10.33	ppb(v)	99
93) 1,3,5-Trimethylbenzene	19.371	105	880446	10.03	ppb(v)	99
94) alpha-Methylstyrene	19.609	118	437074	10.81	ppb(v)	99
95) tert-Butylbenzene	19.952	134	204352	10.18	ppb(v)	96
96) 1,2,4-Trimethylbenzene	19.964	105	858995	10.55	ppb(v)	98
97) 1,3-Dichlorobenzene	20.154	146	592580	10.77	ppb(v)	99
98) Benzyl Chloride	20.147	91	605639	12.04	ppb(v)	99
99) 1,4-Dichlorobenzene	20.258	146	566285	10.39	ppb(v)	99
100) sec-Butylbenzene	20.343	134	238320	10.23	ppb(v)	97
101) p-Isopropyltoluene	20.582	134	270174	9.76	ppb(v)	95
102) 1,2-Dichlorobenzene	20.729	146	535726	10.32	ppb(v)	98
103) n-Butylbenzene	21.157	134	215776	10.09	ppb(v)	99
104) Hexachloroethane	21.622	201	356800	10.39	ppb(v)	93
105) 1,2,4-Trichlorobenzene	22.968	180	173143	11.16	ppb(v)	98
106) Naphthalene	23.096	128	330830	11.21	ppb(v)	99
107) Hexachlorobutadiene	23.549	225	247107	8.29	ppb(v)	99
109) TVHC as equiv Pentane	5.728	TIC	1009620	8.73	ppb(v)	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

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Data Path : C:\msdchem\1\data\  
Data File : 5W27720.D  
Acq On : 8 Nov 2017 11:15 am  
Operator : thomash  
Sample : bsd  
Misc : MS21792,v5w1090,,,,,1  
ALS Vial : 2 Sample Multiplier: 1
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Quant Time: Nov 08 11:51:00 2017
Quant Method : C:\msdchem\1\methods\m5w1065.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Sat Oct 07 09:10:30 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27797.D
 Acq On : 13 Nov 2017 9:33 am
 Operator : thomash
 Sample : bs
 Misc : MS21947,v5w1093,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 13 10:17:58 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.169	130	247609	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.286	114	805873	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.761	82	313628	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.169	130	247609	10.00	ppb(v	0.00

System Monitoring Compounds						
91) 4-Bromofluorobenzene	17.994	95	494633	11.21	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	112.10%

Target Compounds					Qvalue	
2) 1,1,1-Trifluoroethane	3.911	69	511638	9.97	ppb(v	95
3) Freon 152A	4.003	65	109998	8.30	ppb(v	85
4) Chlorodifluoromethane	4.039	67	47846	10.34	ppb(v	99
5) Propene	4.058	41	95883	7.40	ppb(v	96
6) Chlorotrifluoroethene	4.070	116	348660	10.60	ppb(v#	89
7) Dichlorodifluoromethane	4.119	85	535082	10.00	ppb(v	99
8) 1-Chloro-1,1-difluoro...	4.229	65	408117	11.51	ppb(v	98
9) Chloromethane	4.241	50	168526	10.17	ppb(v	100
10) Dichlorotetrafluoroethane	4.315	85	632391	11.93	ppb(v	95
11) Vinyl Chloride	4.413	62	219104	11.96	ppb(v	99
12) 1,3-Butadiene	4.511	54	145021	11.71	ppb(v	98
13) n-Butane	4.547	58	30968	12.24	ppb(v	95
14) Bromomethane	4.725	94	268346	10.85	ppb(v	99
15) Chloroethane	4.853	64	105099	11.94	ppb(v	99
16) Dichlorofluoromethane	4.927	67	501699	12.00	ppb(v	99
17) Acetonitrile	5.147	41	117871	11.43	ppb(v	99
18) Freon 123	5.251	83	617119	11.79	ppb(v	99
19) Freon 123A	5.300	117	690188	22.77	ppb(v	95
20) Bromoethene	5.135	106	255221	11.67	ppb(v#	97
21) Trichlorofluoromethane	5.465	101	663949	12.65	ppb(v	100
22) Acetone	5.355	58	86552	10.76	ppb(v	96
23) Pentane	5.746	57	40404	8.02	ppb(v	88
24) 1,1-Dichloro-1-fluoro...	5.563	81	486293	10.32	ppb(v	100
25) Iodomethane	5.942	142	687449	10.08	ppb(v	96
26) Isopropyl Alcohol	5.563	43	49678	9.09	ppb(v	87
27) 1,1-Dichloroethene	6.003	61	283301	8.95	ppb(v	91
28) Freon 113	6.334	101	475758	9.80	ppb(v	99
29) Methylene Chloride	6.119	84	186816	8.36	ppb(v	92
30) Carbon Disulfide	6.376	76	616647	9.47	ppb(v	100
31) Ethanol	4.969	45	53301	10.47	ppb(v	99
32) Acrylonitrile	5.740	53	118335	8.49	ppb(v	97
33) 3-Chloropropene	6.217	76	79169	9.12	ppb(v	77
34) trans-1,2-Dichloroethene	6.964	61	252732	8.70	ppb(v	92
35) tert-Butyl Alcohol	6.077	59	326922	7.55	ppb(v	97
36) Methyl tert-Butyl Ether	7.233	73	472990	8.63	ppb(v	99
37) Vinyl Acetate	7.319	43	321348	7.16	ppb(v	94
38) 1,1-Dichloroethane	7.159	63	326207	8.57	ppb(v	99
39) 2-Butanone	7.575	72	87927	8.99	ppb(v	80
40) Hexane	8.181	57	248902	8.45	ppb(v	97
41) cis-1,2-Dichloroethene	7.998	61	234558	8.43	ppb(v	92
42) Di-isopropyl Ether	8.206	87	166276	9.65	ppb(v	77
43) Ethyl Acetate	8.255	61	59242	9.27	ppb(v	88
44) Methyl Acrylate	8.236	55	292523	8.71	ppb(v	97
45) Chloroform	8.303	83	437110	9.24	ppb(v	98
46) 2,4-Dimethylpentane	9.117	57	292905	8.62	ppb(v	97
47) Tetrahydrofuran	8.756	72	81730	9.10	ppb(v	87
48) 1,1,1-Trichloroethane	9.350	97	410088	9.55	ppb(v	99
49) 1,2-Dichloroethane	9.080	62	243329	9.34	ppb(v	99
50) Benzene	9.864	78	561309	8.25	ppb(v	98
51) Carbon Tetrachloride	10.029	117	436413	10.06	ppb(v	98
52) Cyclohexane	10.151	56	238818	8.21	ppb(v	95
53) 2,3-Dimethylpentane	10.432	71	117857	8.76	ppb(v	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27797.D
 Acq On : 13 Nov 2017 9:33 am
 Operator : thomash
 Sample : bs
 Misc : MS21947,v5w1093,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

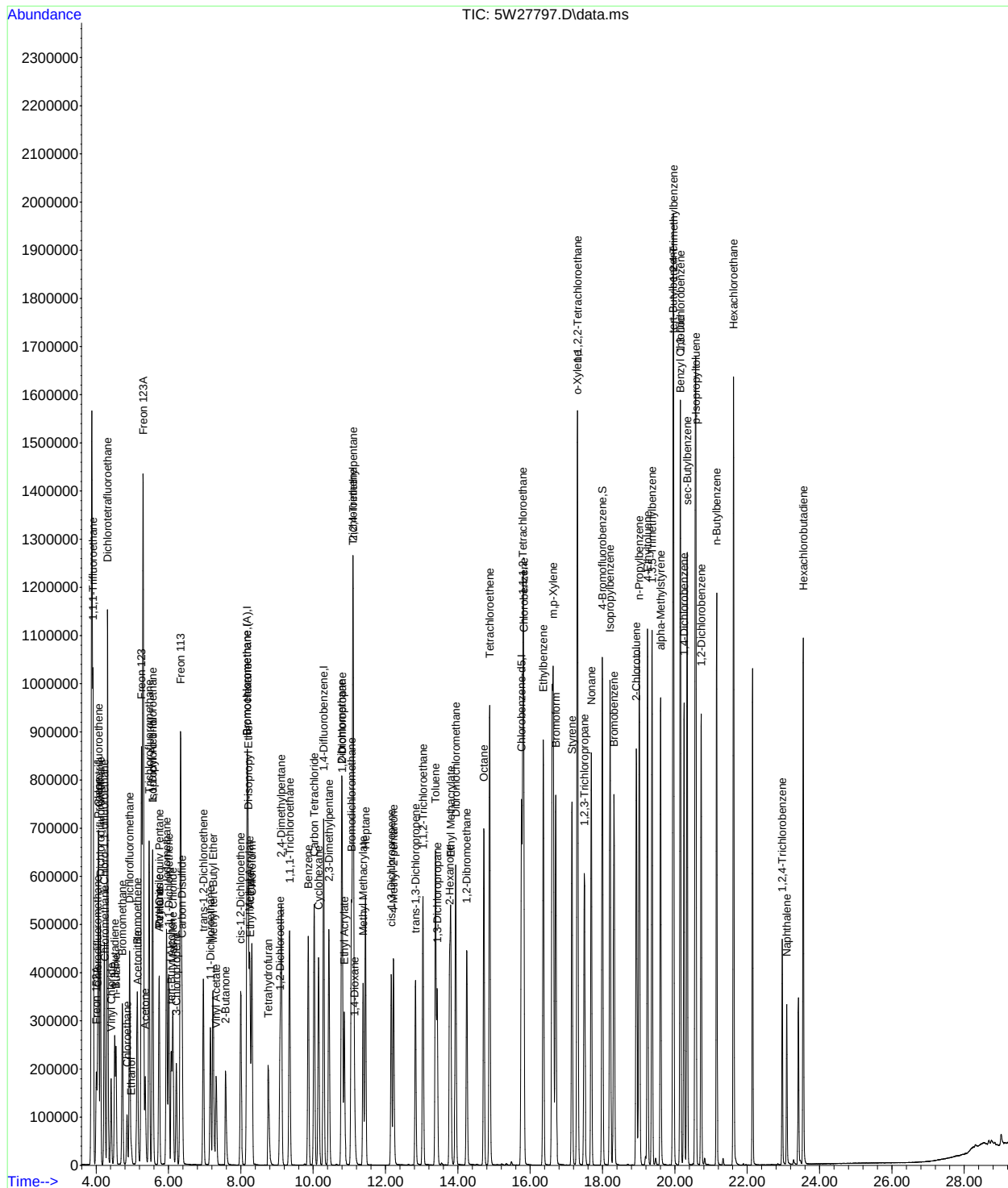
Quant Time: Nov 13 10:17:58 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.105	57	819587	9.35	ppb(v)	98
56) Heptane	11.448	71	186522	9.92	ppb(v)	97
57) Trichloroethene	11.093	95	293442	9.73	ppb(v)	98
58) 1,2-Dichloropropane	10.806	63	196740	8.63	ppb(v)	98
59) Dibromomethane	10.787	174	304873	9.38	ppb(v)	98
60) Ethyl Acrylate	10.861	55	375755	9.25	ppb(v)	97
61) Methyl Methacrylate	11.381	69	201139	9.61	ppb(v)	85
62) 1,4-Dioxane	11.142	88	120741	10.03	ppb(v)	95
63) Bromodichloromethane	11.056	83	440837	9.54	ppb(v)	98
64) cis-1,3-Dichloropropene	12.158	75	308143	8.83	ppb(v)	99
65) 4-Methyl-2-pentanone	12.225	58	161278	10.06	ppb(v)	91
66) trans-1,3-Dichloropropene	12.831	75	285076	9.42	ppb(v)	98
67) Toluene	13.381	91	636998	8.59	ppb(v)	99
68) 1,1,2-Trichloroethane	13.039	97	248923	9.12	ppb(v)	99
69) 1,3-Dichloropropane	13.430	76	313716	9.12	ppb(v)	92
70) 2-Hexanone	13.773	58	217177	10.65	ppb(v)	89
71) Ethyl Methacrylate	13.803	69	342221	10.37	ppb(v)	98
72) Dibromochloromethane	13.938	129	473821	9.64	ppb(v)	100
73) Tetrachloroethene	14.880	166	403600	8.97	ppb(v)	99
74) 1,2-Dibromoethane	14.244	107	409090	9.20	ppb(v)	100
75) Octane	14.715	43	337099	8.40	ppb(v)	91
76) 1,1,1,2-Tetrachloroethane	15.798	131	341420	9.70	ppb(v)	97
78) Chlorobenzene	15.822	112	587319	10.23	ppb(v)	99
79) Ethylbenzene	16.361	91	869754	10.37	ppb(v)	98
80) m,p-Xylene	16.636	91	1433803	22.32	ppb(v)	98
81) Styrene	17.156	104	546989	11.22	ppb(v)	99
82) Nonane	17.688	43	350675	9.47	ppb(v)	95
83) o-Xylene	17.303	91	726224	11.25	ppb(v)	99
84) Bromoform	16.709	173	530940	12.64	ppb(v)	100
85) 1,1,2,2-Tetrachloroethane	17.309	83	533360	10.79	ppb(v)	99
86) 1,2,3-Trichloropropane	17.498	75	382040	10.86	ppb(v)	98
87) Isopropylbenzene	18.208	105	983653	10.93	ppb(v)	99
88) Bromobenzene	18.318	156	377127	11.53	ppb(v)	97
89) 2-Chlorotoluene	18.936	126	263423	10.98	ppb(v)	94
90) n-Propylbenzene	19.016	120	286259	11.32	ppb(v)	96
92) 4-Ethyltoluene	19.242	105	948834	10.63	ppb(v)	99
93) 1,3,5-Trimethylbenzene	19.370	105	810789	10.41	ppb(v)	98
94) alpha-Methylstyrene	19.609	118	399027	11.11	ppb(v)	99
95) tert-Butylbenzene	19.945	134	187813	10.54	ppb(v)	100
96) 1,2,4-Trimethylbenzene	19.964	105	793164	10.97	ppb(v)	97
97) 1,3-Dichlorobenzene	20.153	146	549990	11.26	ppb(v)	99
98) Benzyl Chloride	20.147	91	542629	12.15	ppb(v)	99
99) 1,4-Dichlorobenzene	20.257	146	527281	10.90	ppb(v)	99
100) sec-Butylbenzene	20.343	134	219292	10.60	ppb(v)	98
101) p-Isopropyltoluene	20.582	134	254037	10.34	ppb(v)	92
102) 1,2-Dichlorobenzene	20.729	146	494841	10.73	ppb(v)	98
103) n-Butylbenzene	21.157	134	200313	10.55	ppb(v)	96
104) Hexachloroethane	21.622	201	335358	11.00	ppb(v)	98
105) 1,2,4-Trichlorobenzene	22.968	180	159750	11.60	ppb(v)	98
106) Naphthalene	23.096	128	288974	11.02	ppb(v)	100
107) Hexachlorobutadiene	23.549	225	236154	8.92	ppb(v)	99
109) TVHC as equiv Pentane	5.746	TIC	913423	8.36	ppb(v)	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Data Path : C:\msdchem\1\data\  
Data File : 5W27797.D  
Acq On : 13 Nov 2017 9:33 am  
Operator : thomash  
Sample : bs  
Misc : MS21947,v5w1093,,,,,1  
ALS Vial : 2 Sample Multiplier: 1
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Quant Time: Nov 13 10:17:58 2017
Quant Method : C:\msdchem\1\methods\m5w1065.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Sat Oct 07 09:10:30 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27798.D
 Acq On : 13 Nov 2017 10:19 am
 Operator : thomash
 Sample : bsd
 Misc : MS21947,v5w1093,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 13 10:49:21 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.169	130	235368	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.286	114	781496	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.761	82	319884	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.169	130	235368	10.00	ppb(v	0.00

System Monitoring Compounds

91) 4-Bromofluorobenzene	17.994	95	488283	10.85	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	108.50%

Target Compounds						Qvalue
2) 1,1,1-Trifluoroethane	3.917	69	518208	10.62	ppb(v	94
3) Freon 152A	4.003	65	103520	8.22	ppb(v	86
4) Chlorodifluoromethane	4.040	67	45236	10.28	ppb(v	99
5) Propene	4.064	41	92105	7.48	ppb(v	97
6) Chlorotrifluoroethene	4.070	116	324689	10.39	ppb(v#	89
7) Dichlorodifluoromethane	4.119	85	502832	9.89	ppb(v	99
8) 1-Chloro-1,1-difluoro...	4.223	65	384178	11.40	ppb(v	98
9) Chloromethane	4.242	50	158902	10.09	ppb(v	99
10) Dichlorotetrafluoroethane	4.315	85	580869	11.52	ppb(v	95
11) Vinyl Chloride	4.413	62	200539	11.52	ppb(v#	99
12) 1,3-Butadiene	4.511	54	135284	11.49	ppb(v	98
13) n-Butane	4.547	58	28491	11.84	ppb(v	96
14) Bromomethane	4.725	94	246785	10.50	ppb(v	100
15) Chloroethane	4.853	64	95908	11.46	ppb(v	99
16) Dichlorofluoromethane	4.927	67	474498	11.94	ppb(v	99
17) Acetonitrile	5.147	41	113923	11.62	ppb(v	99
18) Freon 123	5.251	83	592507	11.91	ppb(v	99
19) Freon 123A	5.300	117	656396	22.78	ppb(v	94
20) Bromoethene	5.135	106	243532	11.71	ppb(v#	98
21) Trichlorofluoromethane	5.465	101	641934	12.87	ppb(v	99
22) Acetone	5.355	58	83321	10.89	ppb(v	94
23) Pentane	5.747	57	39873	8.33	ppb(v	85
24) 1,1-Dichloro-1-fluoro...	5.563	81	482596	10.77	ppb(v	99
25) Iodomethane	5.948	142	670899	10.35	ppb(v	97
26) Isopropyl Alcohol	5.563	43	48977	9.43	ppb(v	87
27) 1,1-Dichloroethene	6.003	61	283616	9.43	ppb(v	93
28) Freon 113	6.334	101	464694	10.07	ppb(v	99
29) Methylene Chloride	6.120	84	184140	8.67	ppb(v	91
30) Carbon Disulfide	6.377	76	605556	9.79	ppb(v	100
31) Ethanol	4.970	45	49954	10.32	ppb(v	98
32) Acrylonitrile	5.734	53	116816	8.82	ppb(v	96
33) 3-Chloropropene	6.218	76	77834	9.44	ppb(v	80
34) trans-1,2-Dichloroethene	6.964	61	250335	9.07	ppb(v	94
35) tert-Butyl Alcohol	6.077	59	323639	7.86	ppb(v	97
36) Methyl tert-Butyl Ether	7.233	73	470892	9.04	ppb(v	98
37) Vinyl Acetate	7.319	43	323310	7.58	ppb(v	95
38) 1,1-Dichloroethane	7.160	63	323401	8.94	ppb(v	99
39) 2-Butanone	7.576	72	87350	9.39	ppb(v	82
40) Hexane	8.181	57	246765	8.81	ppb(v	97
41) cis-1,2-Dichloroethene	7.998	61	235099	8.89	ppb(v	93
42) Di-isopropyl Ether	8.206	87	162309	9.91	ppb(v	83
43) Ethyl Acetate	8.255	61	58389	9.61	ppb(v	81
44) Methyl Acrylate	8.243	55	283798	8.89	ppb(v	98
45) Chloroform	8.304	83	430008	9.56	ppb(v	98
46) 2,4-Dimethylpentane	9.117	57	291692	9.03	ppb(v	98
47) Tetrahydrofuran	8.756	72	81944	9.60	ppb(v	84
48) 1,1,1-Trichloroethane	9.350	97	408248	10.01	ppb(v	99
49) 1,2-Dichloroethane	9.081	62	242711	9.80	ppb(v	99
50) Benzene	9.864	78	560804	8.67	ppb(v	98
51) Carbon Tetrachloride	10.029	117	433326	10.51	ppb(v	99
52) Cyclohexane	10.151	56	241286	8.73	ppb(v	96
53) 2,3-Dimethylpentane	10.433	71	119239	9.32	ppb(v	89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27798.D
 Acq On : 13 Nov 2017 10:19 am
 Operator : thomash
 Sample : bsd
 Misc : MS21947,v5w1093,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 13 10:49:21 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

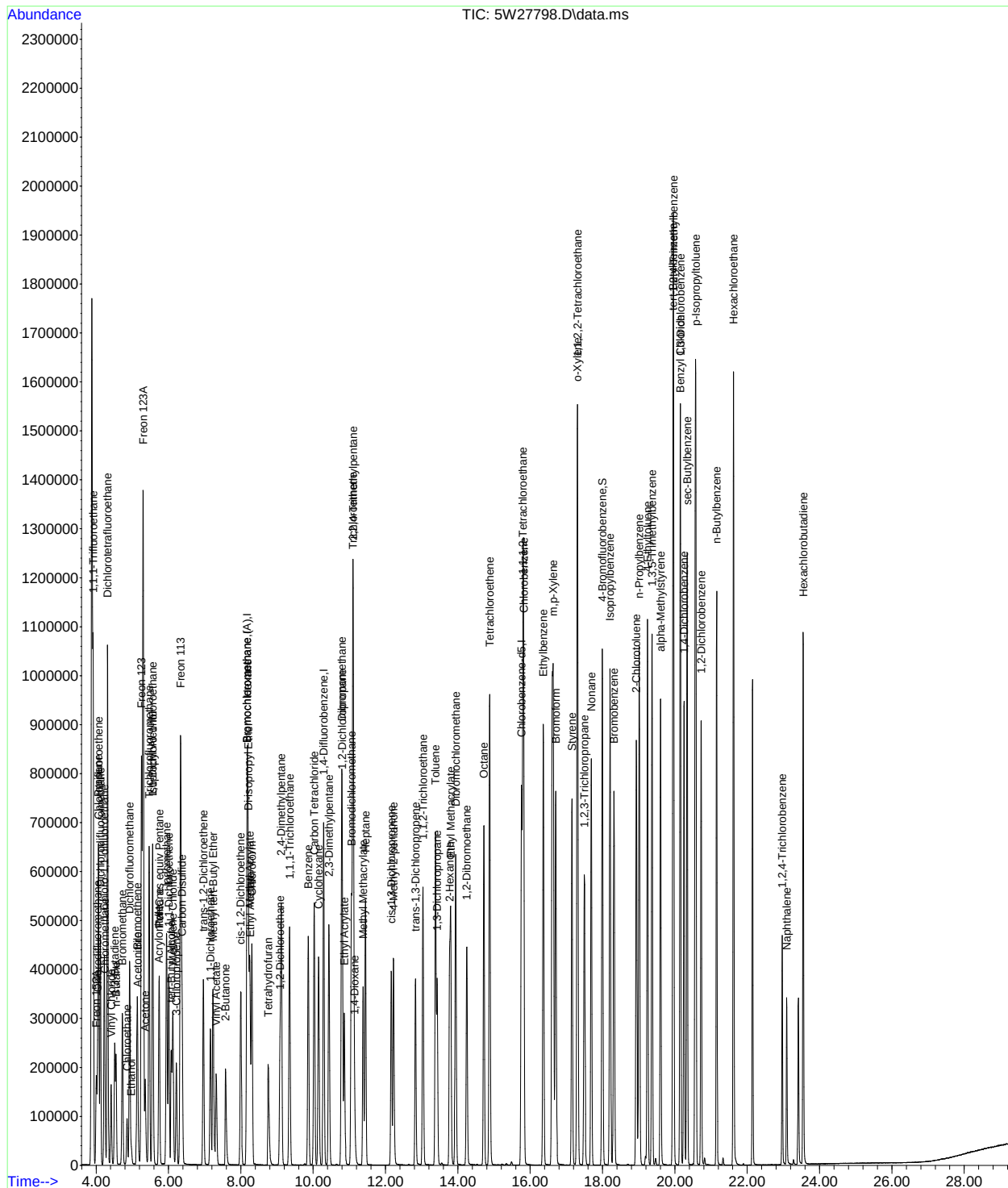
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.106	57	806348	9.48	ppb(v)	98
56) Heptane	11.448	71	184322	10.11	ppb(v)	98
57) Trichloroethene	11.093	95	289569	9.90	ppb(v)	98
58) 1,2-Dichloropropane	10.806	63	197271	8.92	ppb(v)	98
59) Dibromomethane	10.794	174	299873	9.51	ppb(v)	100
60) Ethyl Acrylate	10.861	55	373917	9.50	ppb(v)	97
61) Methyl Methacrylate	11.381	69	198529	9.79	ppb(v)	87
62) 1,4-Dioxane	11.142	88	119670	10.25	ppb(v)	94
63) Bromodichloromethane	11.057	83	443341	9.89	ppb(v)	100
64) cis-1,3-Dichloropropene	12.158	75	312113	9.22	ppb(v)	99
65) 4-Methyl-2-pentanone	12.219	58	156887	10.09	ppb(v)	92
66) trans-1,3-Dichloropropene	12.831	75	289723	9.88	ppb(v)	99
67) Toluene	13.381	91	655244	9.11	ppb(v)	100
68) 1,1,2-Trichloroethane	13.039	97	253881	9.60	ppb(v)	99
69) 1,3-Dichloropropane	13.424	76	320589	9.61	ppb(v)	93
70) 2-Hexanone	13.773	58	216070	10.93	ppb(v)	90
71) Ethyl Methacrylate	13.804	69	341196	10.66	ppb(v)	99
72) Dibromochloromethane	13.938	129	485286	10.18	ppb(v)	99
73) Tetrachloroethene	14.880	166	405749	9.29	ppb(v)	99
74) 1,2-Dibromoethane	14.244	107	414841	9.62	ppb(v)	100
75) Octane	14.715	43	342535	8.80	ppb(v)	93
76) 1,1,1,2-Tetrachloroethane	15.798	131	350849	10.28	ppb(v)	96
78) Chlorobenzene	15.822	112	599540	10.24	ppb(v)	100
79) Ethylbenzene	16.361	91	888595	10.38	ppb(v)	98
80) m,p-Xylene	16.636	91	1442074	22.01	ppb(v)	99
81) Styrene	17.156	104	537249	10.80	ppb(v)	99
82) Nonane	17.688	43	346737	9.19	ppb(v)	94
83) o-Xylene	17.303	91	732550	11.13	ppb(v)	98
84) Bromoform	16.709	173	532692	12.44	ppb(v)	100
85) 1,1,2,2-Tetrachloroethane	17.309	83	527634	10.47	ppb(v)	100
86) 1,2,3-Trichloropropane	17.499	75	376786	10.50	ppb(v)	98
87) Isopropylbenzene	18.208	105	971541	10.58	ppb(v)	99
88) Bromobenzene	18.318	156	372846	11.17	ppb(v)	98
89) 2-Chlorotoluene	18.936	126	261930	10.70	ppb(v)	96
90) n-Propylbenzene	19.016	120	284654	11.04	ppb(v)	98
92) 4-Ethyltoluene	19.242	105	943953	10.37	ppb(v)	99
93) 1,3,5-Trimethylbenzene	19.371	105	807209	10.16	ppb(v)	99
94) alpha-Methylstyrene	19.609	118	398417	10.88	ppb(v)	99
95) tert-Butylbenzene	19.946	134	187214	10.30	ppb(v)	99
96) 1,2,4-Trimethylbenzene	19.964	105	782767	10.61	ppb(v)	99
97) 1,3-Dichlorobenzene	20.154	146	540258	10.85	ppb(v)	99
98) Benzyl Chloride	20.148	91	543492	11.93	ppb(v)	99
99) 1,4-Dichlorobenzene	20.258	146	523035	10.60	ppb(v)	99
100) sec-Butylbenzene	20.343	134	217663	10.32	ppb(v)	99
101) p-Isopropyltoluene	20.576	134	246199	9.82	ppb(v)	98
102) 1,2-Dichlorobenzene	20.729	146	488646	10.39	ppb(v)	98
103) n-Butylbenzene	21.157	134	198810	10.27	ppb(v)	95
104) Hexachloroethane	21.622	201	331190	10.65	ppb(v)	98
105) 1,2,4-Trichlorobenzene	22.968	180	160264	11.41	ppb(v)	97
106) Naphthalene	23.090	128	293349	10.97	ppb(v)	99
107) Hexachlorobutadiene	23.549	225	235289	8.71	ppb(v)	98
109) TVHC as equiv Pentane	5.747	TIC	902995	8.69	ppb(v)	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5W27798.D
Acq On : 13 Nov 2017 10:19 am
Operator : thomash
Sample : bsd
Misc : MS21947,v5w1093,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 13 10:49:21 2017
Quant Method : C:\msdchem\1\methods\m5w1065.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Sat Oct 07 09:10:30 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03149.D
 Acq On : 21 Nov 2017 11:03 am
 Operator : DANAT
 Sample : bs
 Misc : MS22325,V6W86,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 21 11:33:01 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.189	130	232482	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.397	114	862736	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.934	82	407563	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.189	130	232482	10.00	ppb(v	0.00

System Monitoring Compounds

91) 4-Bromofluorobenzene	18.179	95	502961	9.58	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	95.80%

Target Compounds					Qvalue	
2) 1,1,1-Trifluoroethane	3.637	69	443378	12.21	ppb(v	99
3) Freon 152A	3.735	65	164104	10.87	ppb(v	100
4) Chlorodifluoromethane	3.772	67	61138	11.56	ppb(v	99
5) Propene	3.796	41	192187	11.58	ppb(v	99
6) Chlorotrifluoroethene	3.803	116	409462	11.06	ppb(v	98
7) Dichlorodifluoromethane	3.858	85	620838	10.69	ppb(v	99
8) 1-Chloro-1,1-difluoro...	3.968	65	422314	10.74	ppb(v	100
9) Chloromethane	3.986	50	204209	10.90	ppb(v	100
10) Dichlorotetrafluoroethane	4.066	85	583975	10.75	ppb(v	100
11) Vinyl Chloride	4.164	62	237714	11.01	ppb(v	99
12) 1,3-Butadiene	4.274	54	177640	10.84	ppb(v	99
13) n-Butane	4.316	58	43813	11.43	ppb(v	88
14) Bromomethane	4.500	94	219722	11.05	ppb(v	99
15) Chloroethane	4.641	64	121612	10.78	ppb(v	99
16) Dichlorofluoromethane	4.720	67	490835	10.61	ppb(v	99
17) Acetonitrile	4.928	41	210039	11.80	ppb(v	99
18) Freon 123	5.069	83	694622	11.54	ppb(v	99
19) Freon 123A	5.118	117	745171	23.17	ppb(v	98
20) Bromoethene	4.940	106	263805	12.10	ppb(v	99
21) Trichlorofluoromethane	5.301	101	645440	11.72	ppb(v	99
22) Acetone	5.155	58	130134	11.03	ppb(v	97
23) Pentane	5.620	57	68226	12.35	ppb(v	97
24) 1,1-Dichloro-1-fluoro...	5.412	81	541664	11.33	ppb(v	99
25) Iodomethane	5.821	142	749305	11.57	ppb(v	99
26) Isopropyl Alcohol	5.369	45	532021	11.38	ppb(v	97
27) 1,1-Dichloroethene	5.889	61	407848	11.54	ppb(v	100
28) Freon 113	6.250	101	569956	11.35	ppb(v	100
29) Methylene Chloride	6.005	84	249026	10.39	ppb(v	100
30) Carbon Disulfide	6.286	76	871032	11.43	ppb(v	100
31) Ethanol	4.732	45	68614	10.32	ppb(v	99
32) Acrylonitrile	5.571	53	213523	12.70	ppb(v	99
33) 3-Chloropropene	6.115	76	129642	12.10	ppb(v	97
34) trans-1,2-Dichloroethene	6.916	61	392903	11.52	ppb(v	99
35) tert-Butyl Alcohol	5.919	59	566202	12.54	ppb(v	99
36) Methyl tert-Butyl Ether	7.173	73	756979	12.02	ppb(v	100
37) Vinyl Acetate	7.277	43	666626	11.85	ppb(v	100
38) 1,1-Dichloroethane	7.125	63	490239	11.58	ppb(v	100
39) 2-Butanone	7.534	72	147807	12.20	ppb(v	98
40) Hexane	8.220	57	438758	11.73	ppb(v	99
41) cis-1,2-Dichloroethene	8.012	61	370643	11.67	ppb(v	99
42) Di-isopropyl Ether	8.220	87	246221	12.15	ppb(v	99
43) Ethyl Acetate	8.250	61	96553	12.54	ppb(v	87
44) Methyl Acrylate	8.238	55	543103	11.99	ppb(v	98
45) Chloroform	8.336	83	572940	11.41	ppb(v	99
46) 2,4-Dimethylpentane	9.205	57	504864	12.14	ppb(v	100
47) Tetrahydrofuran	8.764	72	136467	12.64	ppb(v	99
48) 1,1,1-Trichloroethane	9.431	97	528075	11.67	ppb(v	100
49) 1,2-Dichloroethane	9.149	62	339721	11.62	ppb(v	99
50) Benzene	9.957	78	886492	11.29	ppb(v	99
51) Carbon Tetrachloride	10.134	117	572509	11.56	ppb(v	99
52) Cyclohexane	10.269	56	434678	12.07	ppb(v	99
53) 2,3-Dimethylpentane	10.563	71	196666	12.02	ppb(v	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03149.D
 Acq On : 21 Nov 2017 11:03 am
 Operator : DANAT
 Sample : bs
 Misc : MS22325,V6W86,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

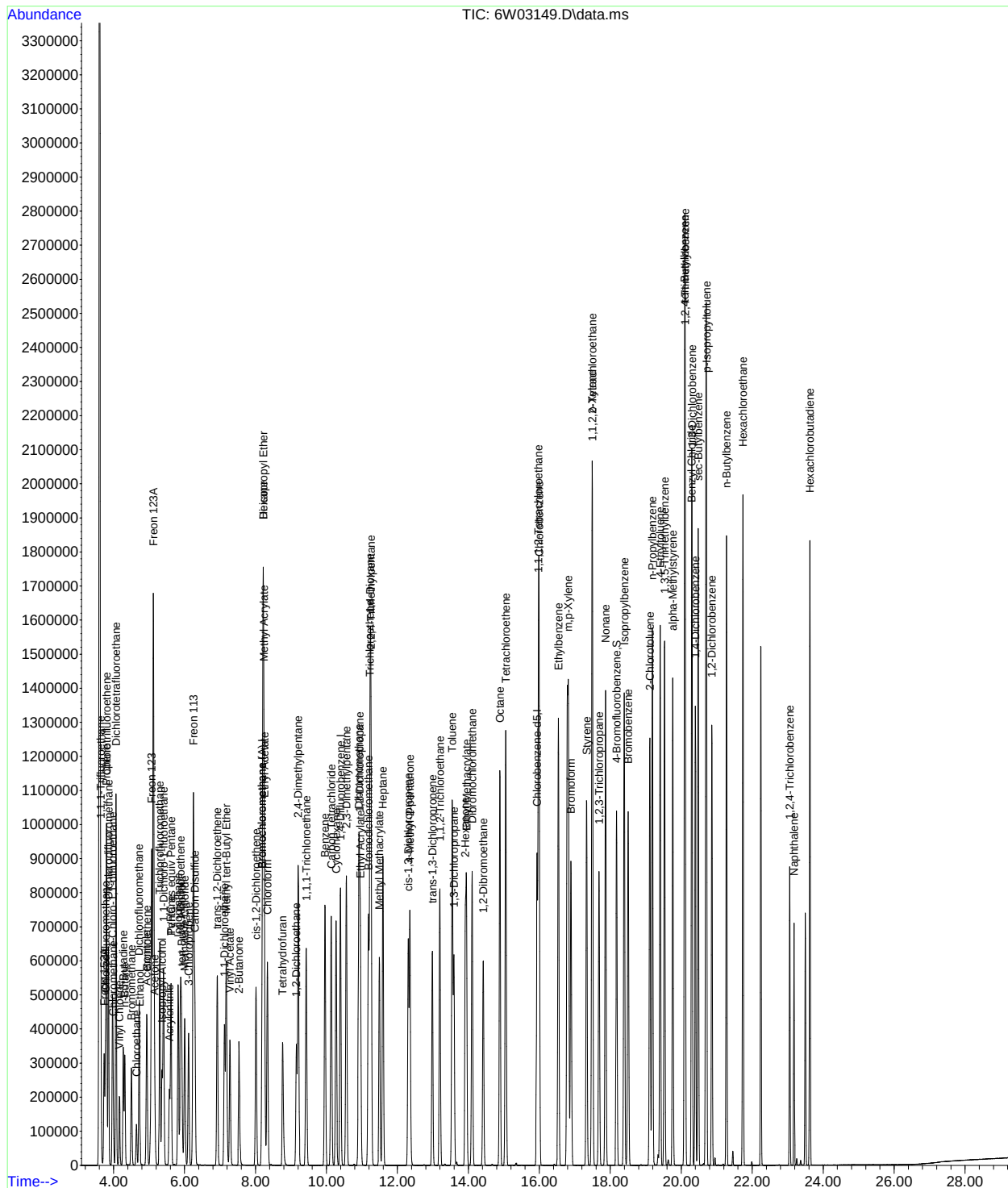
Quant Time: Nov 21 11:33:01 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.254	57	1394058	11.64	ppb(v)	99
56) Heptane	11.590	71	302760	11.76	ppb(v)	99
57) Trichloroethene	11.223	95	386757	11.46	ppb(v)	96
58) 1,2-Dichloropropane	10.936	63	333134	11.68	ppb(v)	99
59) Dibromomethane	10.911	174	363664	10.56	ppb(v)	100
60) Ethyl Acrylate	10.960	55	670701	12.80	ppb(v)	100
61) Methyl Methacrylate	11.493	69	332839	12.76	ppb(v)	99
62) 1,4-Dioxane	11.229	88	174023	11.95	ppb(v)	87
63) Bromodichloromethane	11.181	83	625889	11.66	ppb(v)	99
64) cis-1,3-Dichloropropene	12.306	75	517774	11.93	ppb(v)	99
65) 4-Methyl-2-pentanone	12.349	58	274228	12.94	ppb(v)	100
66) trans-1,3-Dichloropropene	12.985	75	473719	12.08	ppb(v)	99
67) Toluene	13.542	91	1058555	11.26	ppb(v)	99
68) 1,1,2-Trichloroethane	13.199	97	357918	11.49	ppb(v)	99
69) 1,3-Dichloropropane	13.591	76	510744	11.52	ppb(v)	100
70) 2-Hexanone	13.915	58	375970	12.57	ppb(v)	100
71) Ethyl Methacrylate	13.946	69	547005	13.22	ppb(v)	99
72) Dibromochloromethane	14.105	129	636485	11.88	ppb(v)	100
73) Tetrachloroethene	15.053	166	515196	10.90	ppb(v)	99
74) 1,2-Dibromoethane	14.423	107	565452	11.54	ppb(v)	100
75) Octane	14.888	43	648208	12.13	ppb(v)	98
76) 1,1,1,2-Tetrachloroethane	15.977	131	435223	11.31	ppb(v)	100
78) Chlorobenzene	15.995	112	797085	10.87	ppb(v)	98
79) Ethylbenzene	16.540	91	1321465	11.66	ppb(v)	99
80) m,p-Xylene	16.815	91	2028329	23.48	ppb(v)	99
81) Styrene	17.335	104	753273	13.10	ppb(v)	99
82) Nonane	17.867	43	654693	11.82	ppb(v)	100
83) o-Xylene	17.488	91	1016269	11.73	ppb(v)	99
84) Bromoform	16.888	173	596498	12.50	ppb(v)	100
85) 1,1,2,2-Tetrachloroethane	17.494	83	703200	11.53	ppb(v)	99
86) 1,2,3-Trichloropropane	17.684	75	526265	11.59	ppb(v)	99
87) Isopropylbenzene	18.393	105	1321045	11.09	ppb(v)	99
88) Bromobenzene	18.503	156	435586	11.11	ppb(v)	99
89) 2-Chlorotoluene	19.115	126	327432	11.69	ppb(v)	99
90) n-Propylbenzene	19.182	120	372559	11.71	ppb(v)	94
92) 4-Ethyltoluene	19.409	105	1306725	11.93	ppb(v)	100
93) 1,3,5-Trimethylbenzene	19.531	105	1086893	11.71	ppb(v)	100
94) alpha-Methylstyrene	19.758	118	527817	13.24	ppb(v)	99
95) tert-Butylbenzene	20.094	134	252994	11.24	ppb(v)	98
96) 1,2,4-Trimethylbenzene	20.112	105	1041872	11.87	ppb(v)	95
97) 1,3-Dichlorobenzene	20.302	146	658332	11.27	ppb(v)	100
98) Benzyl Chloride	20.290	91	833235	13.60	ppb(v)	98
99) 1,4-Dichlorobenzene	20.400	146	643874	11.53	ppb(v)	99
100) sec-Butylbenzene	20.479	134	295678	11.31	ppb(v)	100
101) p-Isopropyltoluene	20.712	134	322965	11.16	ppb(v)	98
102) 1,2-Dichlorobenzene	20.859	146	611091	11.16	ppb(v)	98
103) n-Butylbenzene	21.275	134	285704	12.32	ppb(v)	99
104) Hexachloroethane	21.740	201	364283	11.04	ppb(v)	99
105) 1,2,4-Trichlorobenzene	23.055	180	271359	11.23	ppb(v)	99
106) Naphthalene	23.177	128	551639	12.43	ppb(v)	99
107) Hexachlorobutadiene	23.624	225	357057	11.26	ppb(v)	100
109) TVHC as equiv Pentane	5.620	TIC	1171004	11.53	ppb(v)	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Data Path : C:\msdchem\1\data\  
Data File : 6W03149.D  
Acq On : 21 Nov 2017 11:03 am  
Operator : DANAT  
Sample : bs  
Misc : MS22325,V6W86,,,,,1  
ALS Vial : 2 Sample Multiplier: 1
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Quant Time: Nov 21 11:33:01 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03150.D
 Acq On : 21 Nov 2017 11:54 am
 Operator : DANAT
 Sample : bsd
 Misc : MS22325,V6W86,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 21 14:13:24 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.189	130	237344	10.00	ppb(v)	0.00
54) 1,4-Difluorobenzene	10.397	114	883268	10.00	ppb(v)	0.00
77) Chlorobenzene-d5	15.934	82	422254	10.00	ppb(v)	0.00
108) Bromochloromethane (A)	8.189	130	237344	10.00	ppb(v)	0.00

System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.179	95	516506	9.49	ppb(v)	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	94.90%

Target Compounds						Qvalue
2) 1,1,1-Trifluoroethane	3.637	69	426872	11.51	ppb(v)	100
3) Freon 152A	3.735	65	165659	10.75	ppb(v)	99
4) Chlorodifluoromethane	3.772	67	61716	11.43	ppb(v)	97
5) Propene	3.796	41	195785	11.56	ppb(v)	99
6) Chlorotrifluoroethene	3.803	116	410375	10.86	ppb(v)	98
7) Dichlorodifluoromethane	3.858	85	617805	10.42	ppb(v)	100
8) 1-Chloro-1,1-difluoro...	3.968	65	420443	10.47	ppb(v)	99
9) Chloromethane	3.986	50	203915	10.66	ppb(v)	100
10) Dichlorotetrafluoroethane	4.066	85	573156	10.34	ppb(v)	100
11) Vinyl Chloride	4.163	62	233245	10.58	ppb(v)	99
12) 1,3-Butadiene	4.274	54	174441	10.42	ppb(v)	98
13) n-Butane	4.316	58	42682	10.90	ppb(v)	95
14) Bromomethane	4.500	94	216738	10.68	ppb(v)	100
15) Chloroethane	4.641	64	120403	10.45	ppb(v)	100
16) Dichlorofluoromethane	4.720	67	485125	10.27	ppb(v)	99
17) Acetonitrile	4.928	41	212174	11.68	ppb(v)	99
18) Freon 123	5.075	83	692408	11.27	ppb(v)	99
19) Freon 123A	5.118	117	743405	22.64	ppb(v)	99
20) Bromoethene	4.940	106	264079	11.87	ppb(v)	100
21) Trichlorofluoromethane	5.301	101	645841	11.49	ppb(v)	99
22) Acetone	5.155	58	130972	10.87	ppb(v)	99
23) Pentane	5.619	57	69078	12.24	ppb(v)	98
24) 1,1-Dichloro-1-fluoro...	5.411	81	543864	11.14	ppb(v)	100
25) Iodomethane	5.821	142	745301	11.27	ppb(v)	99
26) Isopropyl Alcohol	5.363	45	534739	11.21	ppb(v)	99
27) 1,1-Dichloroethene	5.889	61	408447	11.32	ppb(v)	100
28) Freon 113	6.250	101	566578	11.05	ppb(v)	99
29) Methylene Chloride	6.005	84	251745	10.29	ppb(v)	99
30) Carbon Disulfide	6.286	76	872783	11.22	ppb(v)	100
31) Ethanol	4.732	45	67235	9.91	ppb(v)	100
32) Acrylonitrile	5.571	53	214317	12.49	ppb(v)	99
33) 3-Chloropropene	6.115	76	128948	11.79	ppb(v)	98
34) trans-1,2-Dichloroethene	6.923	61	392853	11.29	ppb(v)	99
35) tert-Butyl Alcohol	5.919	59	566754	12.30	ppb(v)	99
36) Methyl tert-Butyl Ether	7.180	73	753890	11.72	ppb(v)	99
37) Vinyl Acetate	7.277	43	672060	11.70	ppb(v)	99
38) 1,1-Dichloroethane	7.124	63	493891	11.43	ppb(v)	100
39) 2-Butanone	7.534	72	147956	11.96	ppb(v)	97
40) Hexane	8.220	57	442564	11.59	ppb(v)	98
41) cis-1,2-Dichloroethene	8.012	61	372436	11.48	ppb(v)	100
42) Di-isopropyl Ether	8.220	87	246644	11.92	ppb(v)	98
43) Ethyl Acetate	8.250	61	96859	12.32	ppb(v)	89
44) Methyl Acrylate	8.238	55	543287	11.75	ppb(v)	98
45) Chloroform	8.336	83	571618	11.15	ppb(v)	100
46) 2,4-Dimethylpentane	9.204	57	506743	11.93	ppb(v)	99
47) Tetrahydrofuran	8.764	72	137224	12.45	ppb(v)	98
48) 1,1,1-Trichloroethane	9.431	97	527555	11.42	ppb(v)	99
49) 1,2-Dichloroethane	9.149	62	338889	11.36	ppb(v)	99
50) Benzene	9.957	78	886888	11.06	ppb(v)	99
51) Carbon Tetrachloride	10.134	117	571651	11.31	ppb(v)	100
52) Cyclohexane	10.269	56	437947	11.91	ppb(v)	98
53) 2,3-Dimethylpentane	10.563	71	196757	11.78	ppb(v)	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03150.D
 Acq On : 21 Nov 2017 11:54 am
 Operator : DANAT
 Sample : bsd
 Misc : MS22325,V6W86,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 21 14:13:24 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

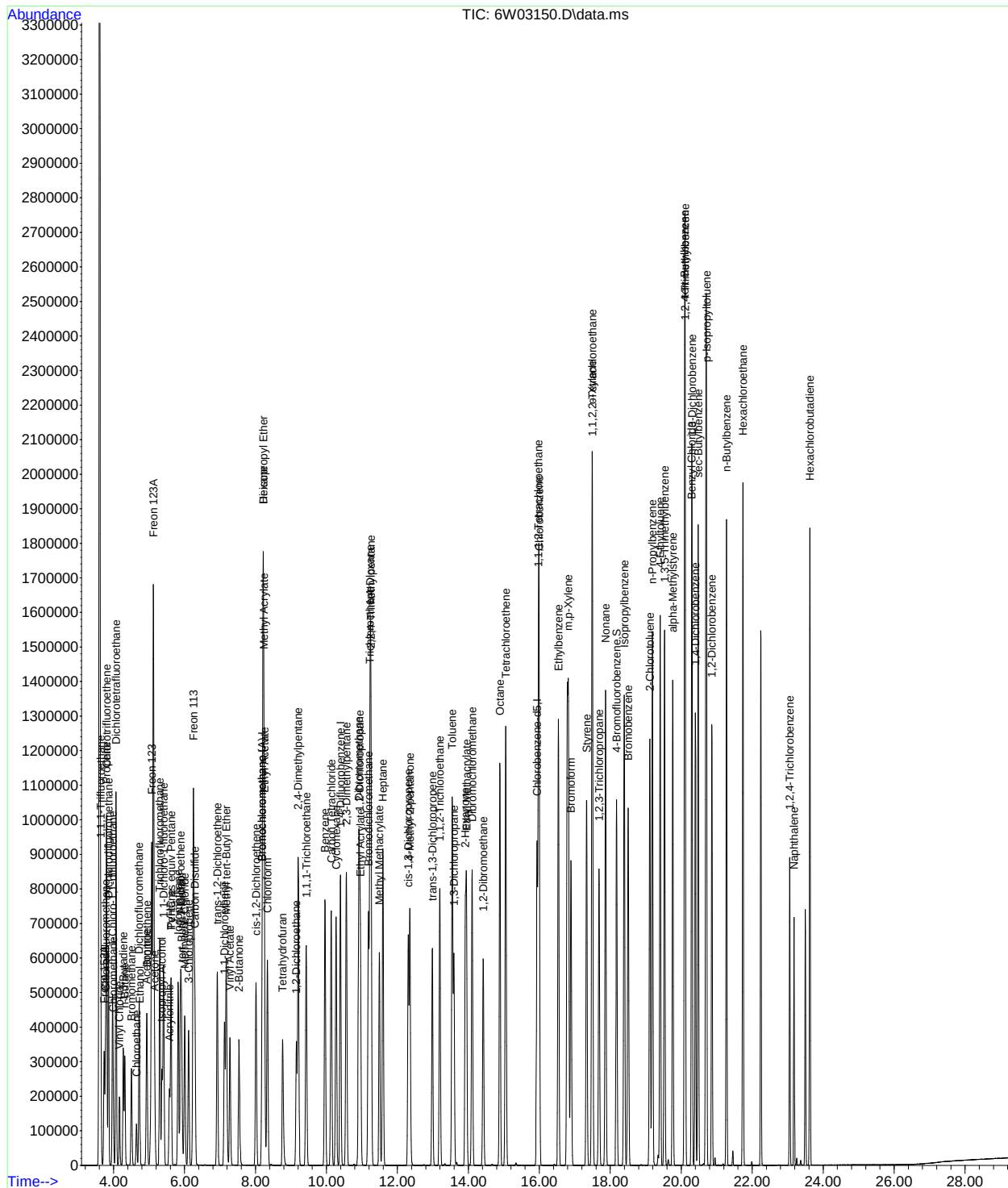
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.254	57	1396799	11.39	ppb(v)	100
56) Heptane	11.590	71	303008	11.50	ppb(v)	99
57) Trichloroethene	11.223	95	385488	11.16	ppb(v)	97
58) 1,2-Dichloropropane	10.936	63	332375	11.39	ppb(v)	100
59) Dibromomethane	10.911	174	362052	10.27	ppb(v)	99
60) Ethyl Acrylate	10.960	55	673854	12.56	ppb(v)	100
61) Methyl Methacrylate	11.492	69	333377	12.48	ppb(v)	99
62) 1,4-Dioxane	11.229	88	173123	11.61	ppb(v)	88
63) Bromodichloromethane	11.180	83	628380	11.43	ppb(v)	99
64) cis-1,3-Dichloropropene	12.306	75	519141	11.68	ppb(v)	100
65) 4-Methyl-2-pentanone	12.349	58	274332	12.65	ppb(v)	98
66) trans-1,3-Dichloropropene	12.985	75	471734	11.75	ppb(v)	99
67) Toluene	13.542	91	1049554	10.91	ppb(v)	99
68) 1,1,2-Trichloroethane	13.193	97	357272	11.21	ppb(v)	99
69) 1,3-Dichloropropane	13.591	76	509539	11.23	ppb(v)	100
70) 2-Hexanone	13.915	58	374638	12.24	ppb(v)	98
71) Ethyl Methacrylate	13.946	69	546446	12.90	ppb(v)	100
72) Dibromochloromethane	14.105	129	632345	11.52	ppb(v)	99
73) Tetrachloroethene	15.053	166	512155	10.58	ppb(v)	99
74) 1,2-Dibromoethane	14.417	107	562564	11.21	ppb(v)	100
75) Octane	14.888	43	648180	11.85	ppb(v)	98
76) 1,1,1,2-Tetrachloroethane	15.977	131	431575	10.95	ppb(v)	99
78) Chlorobenzene	15.995	112	794106	10.45	ppb(v)	99
79) Ethylbenzene	16.540	91	1313723	11.19	ppb(v)	100
80) m,p-Xylene	16.815	91	2013678	22.50	ppb(v)	100
81) Styrene	17.335	104	749413	12.58	ppb(v)	99
82) Nonane	17.867	43	654459	11.40	ppb(v)	99
83) o-Xylene	17.488	91	1014402	11.30	ppb(v)	99
84) Bromoform	16.888	173	591888	11.97	ppb(v)	100
85) 1,1,2,2-Tetrachloroethane	17.494	83	698628	11.05	ppb(v)	100
86) 1,2,3-Trichloropropane	17.684	75	522900	11.11	ppb(v)	99
87) Isopropylbenzene	18.393	105	1311117	10.62	ppb(v)	99
88) Bromobenzene	18.503	156	432430	10.65	ppb(v)	99
89) 2-Chlorotoluene	19.115	126	324124	11.17	ppb(v)	98
90) n-Propylbenzene	19.182	120	371186	11.26	ppb(v)	94
92) 4-Ethyltoluene	19.409	105	1300113	11.46	ppb(v)	100
93) 1,3,5-Trimethylbenzene	19.531	105	1084044	11.28	ppb(v)	99
94) alpha-Methylstyrene	19.758	118	526467	12.75	ppb(v)	99
95) tert-Butylbenzene	20.094	134	250638	10.74	ppb(v)	97
96) 1,2,4-Trimethylbenzene	20.112	105	1035496	11.39	ppb(v)	96
97) 1,3-Dichlorobenzene	20.302	146	653400	10.79	ppb(v)	99
98) Benzyl Chloride	20.290	91	828942	13.06	ppb(v)	98
99) 1,4-Dichlorobenzene	20.400	146	639262	11.05	ppb(v)	99
100) sec-Butylbenzene	20.479	134	295529	10.91	ppb(v)	99
101) p-Isopropyltoluene	20.712	134	321958	10.74	ppb(v)	98
102) 1,2-Dichlorobenzene	20.859	146	608696	10.73	ppb(v)	98
103) n-Butylbenzene	21.275	134	283897	11.81	ppb(v)	98
104) Hexachloroethane	21.740	201	360540	10.55	ppb(v)	98
105) 1,2,4-Trichlorobenzene	23.055	180	274516	10.96	ppb(v)	99
106) Naphthalene	23.177	128	559592	12.17	ppb(v)	100
107) Hexachlorobutadiene	23.624	225	358074	10.90	ppb(v)	99
109) TVHC as equiv Pentane	5.619	TIC	1194168	11.52	ppb(v)	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W03150.D
Acq On : 21 Nov 2017 11:54 am
Operator : DANAT
Sample : bsd
Misc : MS22325,V6W86,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 21 14:13:24 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27979.D
 Acq On : 22 Nov 2017 1:53 pm
 Operator : thomash
 Sample : bs
 Misc : MS22061,v5w1099,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 22 14:24:47 2017
 Quant Method : C:\msdchem\1\methods\m5w1097.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Mon Nov 20 10:49:33 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.163	130	302204	10.00	ppb(v	-0.01
54) 1,4-Difluorobenzene	10.280	114	1067956	10.00	ppb(v	-0.01
77) Chlorobenzene-d5	15.755	82	455503	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.163	130	302204	10.00	ppb(v	-0.01

System Monitoring Compounds						
91) 4-Bromofluorobenzene	17.994	95	649906	10.76	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	107.60%

Target Compounds					Qvalue	
2) 1,1,1-Trifluoroethane	3.905	69	593578	8.83	ppb(v#	90
3) Freon 152A	3.997	65	148330	9.43	ppb(v#	83
4) Chlorodifluoromethane	4.033	67	54221	9.62	ppb(v	100
5) Propene	4.052	41	154903	8.68	ppb(v	97
6) Chlorotrifluoroethene	4.058	116	391976	9.49	ppb(v	98
7) Dichlorodifluoromethane	4.107	85	606594	9.45	ppb(v	99
8) 1-Chloro-1,1-difluoro...	4.217	65	395461	9.68	ppb(v	98
9) Chloromethane	4.235	50	206555	9.02	ppb(v	100
10) Dichlorotetrafluoroethane	4.309	85	636202	9.52	ppb(v	95
11) Vinyl Chloride	4.400	62	226690	9.26	ppb(v	99
12) 1,3-Butadiene	4.504	54	149360	8.32	ppb(v	100
13) n-Butane	4.541	58	32851	7.78	ppb(v	99
14) Bromomethane	4.719	94	266124	8.75	ppb(v	99
15) Chloroethane	4.847	64	109784	8.72	ppb(v	99
16) Dichlorofluoromethane	4.920	67	489521	9.02	ppb(v	100
17) Acetonitrile	5.141	41	132183	8.91	ppb(v	99
18) Freon 123	5.245	83	620137	8.71	ppb(v	99
19) Freon 123A	5.288	117	673915	18.29	ppb(v	93
20) Bromoethene	5.122	106	263189	9.17	ppb(v	99
21) Trichlorofluoromethane	5.459	101	581589	9.80	ppb(v	100
22) Acetone	5.343	58	93174	8.04	ppb(v	98
23) Pentane	5.740	57	61104	8.25	ppb(v	93
24) 1,1-Dichloro-1-fluoro...	5.557	81	519679	9.50	ppb(v	98
25) Iodomethane	5.936	142	774969	9.30	ppb(v	93
26) Isopropyl Alcohol	5.557	43	60386	8.48	ppb(v	98
27) 1,1-Dichloroethene	5.997	61	395747	9.69	ppb(v	97
28) Freon 113	6.328	101	585309	9.66	ppb(v	97
29) Methylene Chloride	6.113	84	243029	8.56	ppb(v	98
30) Carbon Disulfide	6.370	76	823657	9.83	ppb(v	100
31) Ethanol	4.963	45	57765	8.50	ppb(v	95
32) Acrylonitrile	5.728	53	183183	9.53	ppb(v	99
33) 3-Chloropropene	6.211	76	108211	9.71	ppb(v	85
34) trans-1,2-Dichloroethene	6.958	61	362639	9.66	ppb(v	98
35) tert-Butyl Alcohol	6.064	59	473542	9.31	ppb(v	98
36) Methyl tert-Butyl Ether	7.221	73	661415	9.16	ppb(v	98
37) Vinyl Acetate	7.312	43	513268	8.92	ppb(v	99
38) 1,1-Dichloroethane	7.153	63	464694	9.52	ppb(v	100
39) 2-Butanone	7.569	72	129001	9.78	ppb(v	95
40) Hexane	8.169	57	380909	9.12	ppb(v	92
41) cis-1,2-Dichloroethene	7.992	61	342973	9.44	ppb(v	97
42) Di-isopropyl Ether	8.200	87	216884	9.64	ppb(v	97
43) Ethyl Acetate	8.248	61	87498	10.35	ppb(v	90
44) Methyl Acrylate	8.230	55	428756	9.11	ppb(v	99
45) Chloroform	8.297	83	544401	9.48	ppb(v	99
46) 2,4-Dimethylpentane	9.111	57	440565	9.11	ppb(v	98
47) Tetrahydrofuran	8.750	72	121245	9.78	ppb(v	93
48) 1,1,1-Trichloroethane	9.344	97	484014	9.44	ppb(v	99
49) 1,2-Dichloroethane	9.074	62	304225	9.68	ppb(v	98
50) Benzene	9.857	78	800543	9.17	ppb(v	98
51) Carbon Tetrachloride	10.023	117	480378	10.40	ppb(v	99
52) Cyclohexane	10.145	56	369182	9.18	ppb(v	98
53) 2,3-Dimethylpentane	10.426	71	174145	9.32	ppb(v	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27979.D
 Acq On : 22 Nov 2017 1:53 pm
 Operator : thomash
 Sample : bs
 Misc : MS22061,v5w1099,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

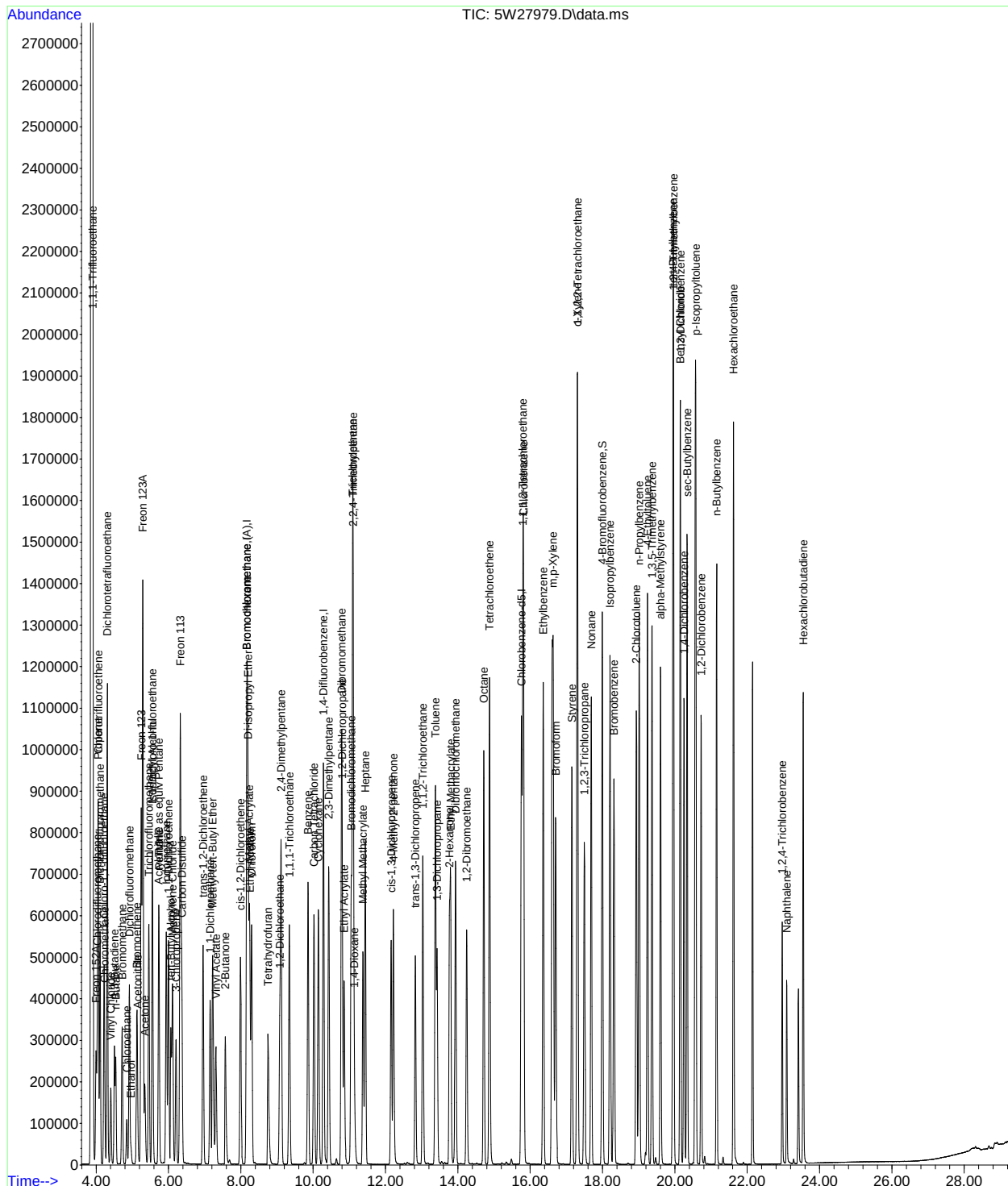
Quant Time: Nov 22 14:24:47 2017
 Quant Method : C:\msdchem\1\methods\m5w1097.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Mon Nov 20 10:49:33 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.105	57	1208047	9.50	ppb(v)	96
56) Heptane	11.442	71	258307	9.41	ppb(v)	98
57) Trichloroethene	11.087	95	374694	9.47	ppb(v)	96
58) 1,2-Dichloropropane	10.806	63	299256	9.48	ppb(v)	94
59) Dibromomethane	10.787	174	360670	9.05	ppb(v)	94
60) Ethyl Acrylate	10.855	55	571909	9.54	ppb(v)	99
61) Methyl Methacrylate	11.375	69	288483	9.65	ppb(v)	93
62) 1,4-Dioxane	11.136	88	160299	9.90	ppb(v)	96
63) Bromodichloromethane	11.050	83	565349	9.71	ppb(v)	98
64) cis-1,3-Dichloropropene	12.158	75	444803	9.40	ppb(v)	99
65) 4-Methyl-2-pentanone	12.219	58	234643	9.97	ppb(v)	96
66) trans-1,3-Dichloropropene	12.825	75	392149	9.68	ppb(v)	100
67) Toluene	13.381	91	921377	8.99	ppb(v)	100
68) 1,1,2-Trichloroethane	13.033	97	337694	9.39	ppb(v)	97
69) 1,3-Dichloropropane	13.424	76	444289	9.69	ppb(v)	95
70) 2-Hexanone	13.767	58	320165	10.87	ppb(v)	92
71) Ethyl Methacrylate	13.803	69	464288	9.70	ppb(v)	98
72) Dibromochloromethane	13.932	129	562794	9.78	ppb(v)	99
73) Tetrachloroethene	14.874	166	489201	9.18	ppb(v)	98
74) 1,2-Dibromoethane	14.244	107	539837	9.72	ppb(v)	100
75) Octane	14.715	43	535824	8.64	ppb(v)	99
76) 1,1,1,2-Tetrachloroethane	15.798	131	418517	9.98	ppb(v)	96
78) Chlorobenzene	15.816	112	762425	9.34	ppb(v)	98
79) Ethylbenzene	16.361	91	1187528	9.24	ppb(v)	99
80) m,p-Xylene	16.630	91	1811461	17.74	ppb(v)	99
81) Styrene	17.156	104	706702	9.67	ppb(v)	99
82) Nonane	17.688	43	521272	8.87	ppb(v)	98
83) o-Xylene	17.303	91	926527	9.32	ppb(v)	99
84) Bromoform	16.709	173	584130	11.07	ppb(v)	100
85) 1,1,2,2-Tetrachloroethane	17.309	83	692347	9.46	ppb(v)	99
86) 1,2,3-Trichloropropane	17.498	75	495036	9.50	ppb(v)	97
87) Isopropylbenzene	18.208	105	1215244	9.26	ppb(v)	100
88) Bromobenzene	18.318	156	437361	9.98	ppb(v)	96
89) 2-Chlorotoluene	18.936	126	326465	9.83	ppb(v)	98
90) n-Propylbenzene	19.016	120	347833	9.60	ppb(v)	95
92) 4-Ethyltoluene	19.242	105	1176625	9.11	ppb(v)	100
93) 1,3,5-Trimethylbenzene	19.370	105	978160	8.85	ppb(v)	99
94) alpha-Methylstyrene	19.603	118	498447	9.49	ppb(v)	100
95) tert-Butylbenzene	19.946	134	227565	9.01	ppb(v)	95
96) 1,2,4-Trimethylbenzene	19.964	105	937380	8.98	ppb(v)	99
97) 1,3-Dichlorobenzene	20.154	146	631570	9.55	ppb(v)	99
98) Benzyl Chloride	20.147	91	681385	10.35	ppb(v)	99
99) 1,4-Dichlorobenzene	20.258	146	613870	9.28	ppb(v)	99
100) sec-Butylbenzene	20.343	134	257639	8.93	ppb(v)	95
101) p-Isopropyltoluene	20.576	134	291656	8.90	ppb(v)	96
102) 1,2-Dichlorobenzene	20.729	146	571262	9.20	ppb(v)	99
103) n-Butylbenzene	21.157	134	238784	9.12	ppb(v)	93
104) Hexachloroethane	21.622	201	353554	9.90	ppb(v)	91
105) 1,2,4-Trichlorobenzene	22.968	180	200915	11.40	ppb(v)	98
106) Naphthalene	23.090	128	385938	10.64	ppb(v)	100
107) Hexachlorobutadiene	23.549	225	241440	8.17	ppb(v)	98
109) TVHC as equiv Pentane	5.734	TIC	1423710	9.71	ppb(v)	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\
Data File : 5W27979.D
Acq On : 22 Nov 2017 1:53 pm
Operator : thomash
Sample : bs
Misc : MS22061,v5w1099,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 22 14:24:47 2017
Quant Method : C:\msdchem\1\methods\m5w1097.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Mon Nov 20 10:49:33 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27980.D
 Acq On : 22 Nov 2017 2:38 pm
 Operator : thomash
 Sample : bsd
 Misc : MS22061,v5w1099,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 22 15:23:51 2017
 Quant Method : C:\msdchem\1\methods\m5w1097.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Mon Nov 20 10:49:33 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.163	130	308579	10.00	ppb(v	-0.01
54) 1,4-Difluorobenzene	10.286	114	1079534	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.755	82	458557	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.163	130	308579	10.00	ppb(v	-0.01

System Monitoring Compounds
 91) 4-Bromofluorobenzene 17.994 95 656320 10.80 ppb(v 0.00
 Spiked Amount 10.000 Range 65 - 128 Recovery = 108.00%

Target Compounds					Qvalue
2) 1,1,1-Trifluoroethane	3.905	69	529612	7.71	ppb(v# 91
3) Freon 152A	3.991	65	148774	9.27	ppb(v 86
4) Chlorodifluoromethane	4.027	67	54744	9.52	ppb(v 100
5) Propene	4.052	41	155218	8.52	ppb(v 97
6) Chlorotrifluoroethene	4.058	116	393893	9.33	ppb(v 98
7) Dichlorodifluoromethane	4.107	85	608105	9.28	ppb(v 99
8) 1-Chloro-1,1-difluoro...	4.217	65	396443	9.50	ppb(v 98
9) Chloromethane	4.235	50	208101	8.90	ppb(v 99
10) Dichlorotetrafluoroethane	4.309	85	641173	9.39	ppb(v 95
11) Vinyl Chloride	4.401	62	226371	9.06	ppb(v 99
12) 1,3-Butadiene	4.505	54	151951	8.29	ppb(v 99
13) n-Butane	4.541	58	33482	7.76	ppb(v 94
14) Bromomethane	4.719	94	269647	8.68	ppb(v 99
15) Chloroethane	4.847	64	110989	8.63	ppb(v 99
16) Dichlorofluoromethane	4.921	67	494553	8.93	ppb(v 100
17) Acetonitrile	5.141	41	132267	8.73	ppb(v 99
18) Freon 123	5.245	83	628518	8.65	ppb(v 99
19) Freon 123A	5.288	117	689015	18.31	ppb(v 92
20) Bromoethene	5.129	106	266424	9.09	ppb(v 99
21) Trichlorofluoromethane	5.459	101	591042	9.75	ppb(v 100
22) Acetone	5.349	58	96917	8.19	ppb(v 99
23) Pentane	5.740	57	62560	8.28	ppb(v 92
24) 1,1-Dichloro-1-fluoro...	5.557	81	503115	9.00	ppb(v 99
25) Iodomethane	5.936	142	791599	9.31	ppb(v 94
26) Isopropyl Alcohol	5.557	43	56258	7.74	ppb(v 95
27) 1,1-Dichloroethene	5.997	61	405969	9.73	ppb(v 96
28) Freon 113	6.328	101	596870	9.65	ppb(v 96
29) Methylene Chloride	6.114	84	248780	8.58	ppb(v 99
30) Carbon Disulfide	6.370	76	843895	9.86	ppb(v 99
31) Ethanol	4.963	45	58853	8.48	ppb(v 98
32) Acrylonitrile	5.728	53	189314	9.64	ppb(v 97
33) 3-Chloropropene	6.211	76	110975	9.75	ppb(v 84
34) trans-1,2-Dichloroethene	6.958	61	368723	9.62	ppb(v 98
35) tert-Butyl Alcohol	6.065	59	485074	9.34	ppb(v 98
36) Methyl tert-Butyl Ether	7.227	73	679714	9.22	ppb(v 98
37) Vinyl Acetate	7.313	43	527913	8.99	ppb(v 98
38) 1,1-Dichloroethane	7.154	63	472772	9.49	ppb(v 99
39) 2-Butanone	7.570	72	131260	9.74	ppb(v 95
40) Hexane	8.175	57	387567	9.09	ppb(v 98
41) cis-1,2-Dichloroethene	7.992	61	347696	9.37	ppb(v 98
42) Di-isopropyl Ether	8.200	87	220846	9.61	ppb(v 97
43) Ethyl Acetate	8.249	61	87646	10.16	ppb(v 90
44) Methyl Acrylate	8.236	55	433136	9.01	ppb(v 100
45) Chloroform	8.298	83	554575	9.45	ppb(v 98
46) 2,4-Dimethylpentane	9.111	57	452568	9.17	ppb(v 98
47) Tetrahydrofuran	8.750	72	122747	9.70	ppb(v 97
48) 1,1,1-Trichloroethane	9.344	97	489036	9.34	ppb(v 99
49) 1,2-Dichloroethane	9.074	62	310742	9.68	ppb(v 99
50) Benzene	9.858	78	825130	9.26	ppb(v 98
51) Carbon Tetrachloride	10.023	117	487651	10.34	ppb(v 100
52) Cyclohexane	10.145	56	376932	9.18	ppb(v 97
53) 2,3-Dimethylpentane	10.433	71	176465	9.25	ppb(v 95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27980.D
 Acq On : 22 Nov 2017 2:38 pm
 Operator : thomash
 Sample : bsd
 Misc : MS22061,v5w1099,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 22 15:23:51 2017
 Quant Method : C:\msdchem\1\methods\m5w1097.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Mon Nov 20 10:49:33 2017
 Response via : Initial Calibration

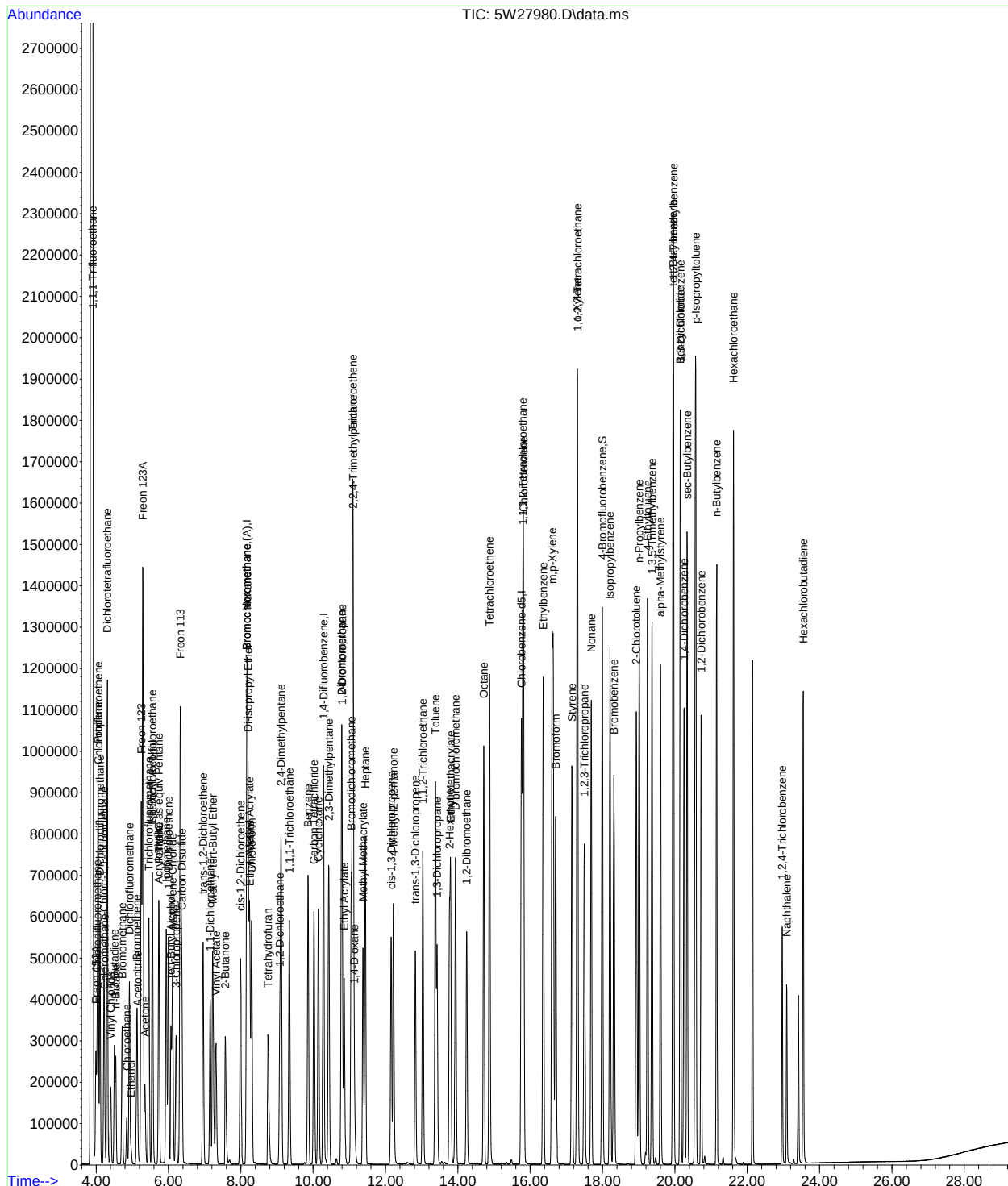
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.106	57	1225989	9.53	ppb(v)	96
56) Heptane	11.442	71	264554	9.53	ppb(v)	97
57) Trichloroethene	11.093	95	378264	9.46	ppb(v)	98
58) 1,2-Dichloropropane	10.800	63	302220	9.47	ppb(v)	94
59) Dibromomethane	10.787	174	363622	9.02	ppb(v)	92
60) Ethyl Acrylate	10.861	55	581316	9.60	ppb(v)	100
61) Methyl Methacrylate	11.381	69	294712	9.75	ppb(v)	90
62) 1,4-Dioxane	11.136	88	160734	9.82	ppb(v)	96
63) Bromodichloromethane	11.051	83	570667	9.70	ppb(v)	99
64) cis-1,3-Dichloropropene	12.158	75	450480	9.41	ppb(v)	99
65) 4-Methyl-2-pentanone	12.219	58	240882	10.13	ppb(v)	95
66) trans-1,3-Dichloropropene	12.825	75	402972	9.84	ppb(v)	100
67) Toluene	13.381	91	933218	9.01	ppb(v)	100
68) 1,1,2-Trichloroethane	13.033	97	344483	9.47	ppb(v)	96
69) 1,3-Dichloropropane	13.424	76	452138	9.76	ppb(v)	95
70) 2-Hexanone	13.773	58	324042	10.89	ppb(v)	92
71) Ethyl Methacrylate	13.803	69	473915	9.80	ppb(v)	98
72) Dibromochloromethane	13.932	129	575126	9.89	ppb(v)	99
73) Tetrachloroethene	14.874	166	495974	9.21	ppb(v)	98
74) 1,2-Dibromoethane	14.244	107	543135	9.67	ppb(v)	100
75) Octane	14.715	43	541820	8.64	ppb(v)	99
76) 1,1,1,2-Tetrachloroethane	15.798	131	420885	9.92	ppb(v)	96
78) Chlorobenzene	15.816	112	763972	9.30	ppb(v)	98
79) Ethylbenzene	16.361	91	1207559	9.33	ppb(v)	98
80) m,p-Xylene	16.611	91	1829534	17.80	ppb(v)	100
81) Styrene	17.156	104	713689	9.70	ppb(v)	98
82) Nonane	17.688	43	518288	8.76	ppb(v)	98
83) o-Xylene	17.303	91	936721	9.36	ppb(v)	99
84) Bromoform	16.709	173	594294	11.19	ppb(v)	99
85) 1,1,2,2-Tetrachloroethane	17.309	83	700247	9.51	ppb(v)	99
86) 1,2,3-Trichloropropane	17.499	75	502421	9.57	ppb(v)	97
87) Isopropylbenzene	18.208	105	1229342	9.30	ppb(v)	99
88) Bromobenzene	18.318	156	441953	10.02	ppb(v)	96
89) 2-Chlorotoluene	18.936	126	326004	9.75	ppb(v)	99
90) n-Propylbenzene	19.016	120	349556	9.58	ppb(v)	95
92) 4-Ethyltoluene	19.242	105	1185749	9.12	ppb(v)	100
93) 1,3,5-Trimethylbenzene	19.371	105	980872	8.81	ppb(v)	99
94) alpha-Methylstyrene	19.603	118	499192	9.44	ppb(v)	100
95) tert-Butylbenzene	19.946	134	229385	9.02	ppb(v)	97
96) 1,2,4-Trimethylbenzene	19.964	105	947324	9.02	ppb(v)	98
97) 1,3-Dichlorobenzene	20.154	146	631402	9.48	ppb(v)	99
98) Benzyl Chloride	20.148	91	683727	10.32	ppb(v)	100
99) 1,4-Dichlorobenzene	20.258	146	609232	9.15	ppb(v)	99
100) sec-Butylbenzene	20.343	134	257837	8.88	ppb(v)	94
101) p-Isopropyltoluene	20.576	134	292789	8.87	ppb(v)	98
102) 1,2-Dichlorobenzene	20.729	146	574170	9.19	ppb(v)	99
103) n-Butylbenzene	21.157	134	239431	9.09	ppb(v)	94
104) Hexachloroethane	21.622	201	354253	9.85	ppb(v)	91
105) 1,2,4-Trichlorobenzene	22.968	180	197450	11.12	ppb(v)	98
106) Naphthalene	23.090	128	376132	10.30	ppb(v)	100
107) Hexachlorobutadiene	23.549	225	239481	8.05	ppb(v)	98
109) TVHC as equiv Pentane	5.734	TIC	1448076	9.67	ppb(v)	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

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Data Path : C:\msdchem\1\data\  
Data File : 5W27980.D  
Acq On : 22 Nov 2017 2:38 pm  
Operator : thomash  
Sample : bsd  
Misc : MS22061,v5w1099,,,,,1  
ALS Vial : 2 Sample Multiplier: 1
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Quant Time: Nov 22 15:23:51 2017
Quant Method : C:\msdchem\1\methods\m5w1097.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Mon Nov 20 10:49:33 2017
Response via : Initial Calibration



m5w1097.M Wed Nov 22 15:29:35 2017

Page: 3

617 of 808

7.3.14

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03639.D
 Acq On : 20 Dec 2017 6:21 pm
 Operator : DANAT
 Sample : jc56815-2dup
 Misc : MS22955,V6W105,660,,,1.65
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 21 11:10:09 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.189	130	212025	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.391	114	789143	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.928	82	361301	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.189	130	212025	10.00	ppb(v	0.00

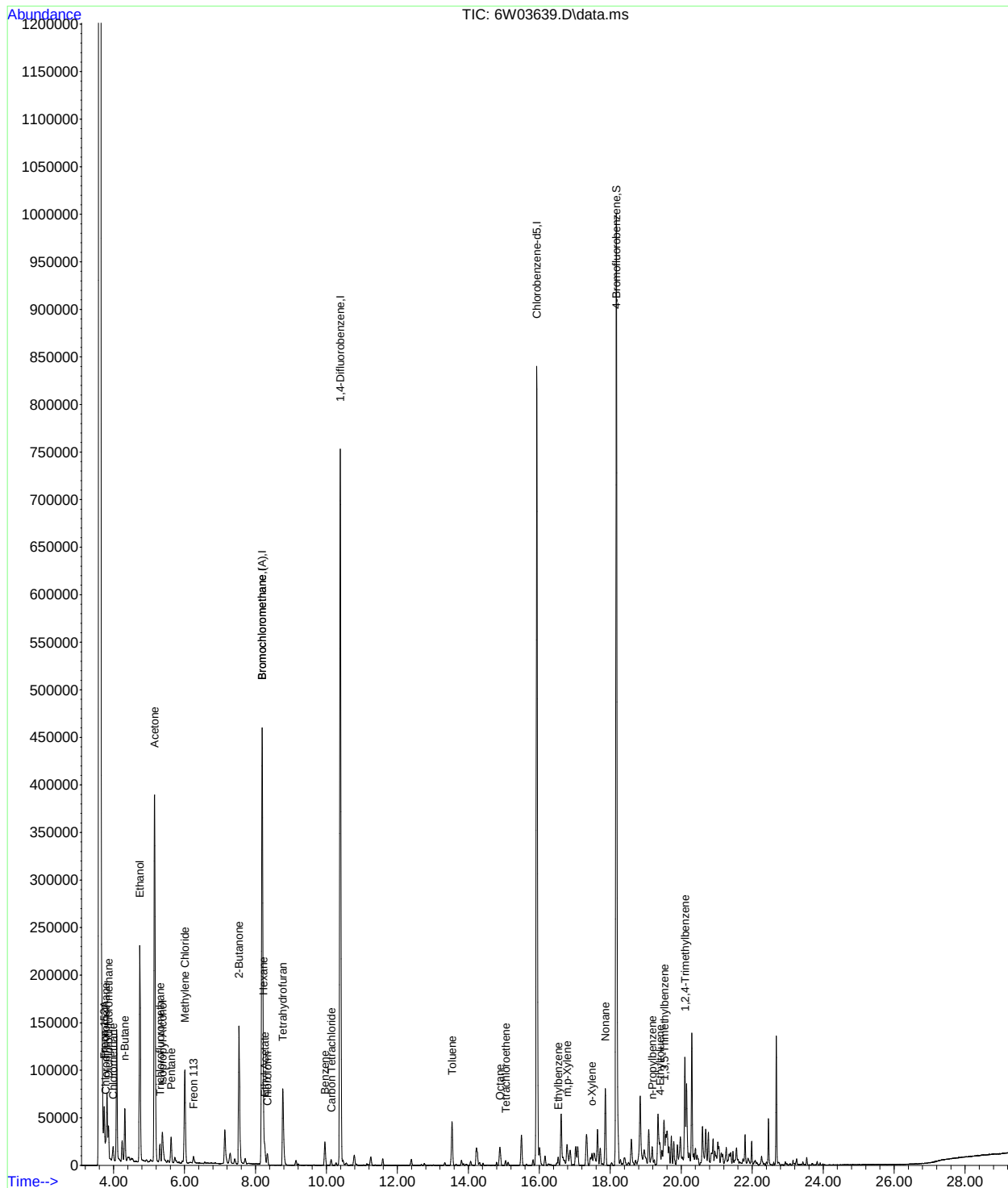
System Monitoring Compounds
 91) 4-Bromofluorobenzene 18.173 95 480876 10.33 ppb(v 0.00
 Spiked Amount 10.000 Range 65 - 128 Recovery = 103.30%

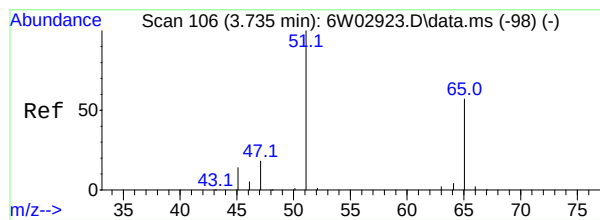
Target Compounds					Qvalue	
3) Freon 152A	3.735	65	23440	1.70	ppb(v	98
4) Chlorodifluoromethane	3.772	67	2684	0.56	ppb(v	92
7) Dichlorodifluoromethane	3.858	85	33071	0.62	ppb(v	98
9) Chloromethane	3.986	50	15180	0.89	ppb(v	99
13) n-Butane	4.316	58	7527	2.15	ppb(v#	91
21) Trichlorofluoromethane	5.307	101	19242	0.38	ppb(v	98
22) Acetone	5.155	58	196687	18.28	ppb(v	93
23) Pentane	5.619	57	3387	0.67	ppb(v	95
26) Isopropyl Alcohol	5.381	45	49153	1.15	ppb(v	96
28) Freon 113	6.250	101	4197	0.09	ppb(v	98
29) Methylene Chloride	6.011	84	57396	2.63	ppb(v	99
31) Ethanol	4.739	45	288188	47.53	ppb(v	99
39) 2-Butanone	7.534	72	60527	5.48	ppb(v	95
40) Hexane	8.219	57	32044	0.94	ppb(v#	51
43) Ethyl Acetate	8.262	61	4182	0.60	ppb(v	85
45) Chloroform	8.336	83	12177	0.27	ppb(v	95
47) Tetrahydrofuran	8.770	72	30769	3.12	ppb(v	98
50) Benzene	9.957	78	23047	0.32	ppb(v	98
51) Carbon Tetrachloride	10.134	117	4837	0.11	ppb(v	99
67) Toluene	13.542	91	45417	0.53	ppb(v	99
73) Tetrachloroethene	15.053	166	2090	0.05	ppb(v	97
75) Octane	14.888	43	8718	0.18	ppb(v	98
79) Ethylbenzene	16.533	91	10158	0.10	ppb(v	99
80) m,p-Xylene	16.784	91	24218	0.32	ppb(v	98
82) Nonane	17.861	43	36090	0.73	ppb(v	97
83) o-Xylene	17.482	91	11123	0.14	ppb(v	99
90) n-Propylbenzene	19.182	120	3187	0.11	ppb(v	100
92) 4-Ethyltoluene	19.403	105	16544	0.17	ppb(v	99
93) 1,3,5-Trimethylbenzene	19.525	105	16365	0.20	ppb(v	97
96) 1,2,4-Trimethylbenzene	20.106	105	51487	0.66	ppb(v#	64

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\
Data File : 6W03639.D
Acq On : 20 Dec 2017 6:21 pm
Operator : DANAT
Sample : jc56815-2dup
Misc : MS22955,V6W105,660,,,,,1.65
ALS Vial : 5 Sample Multiplier: 1

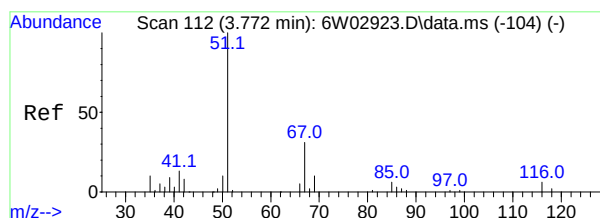
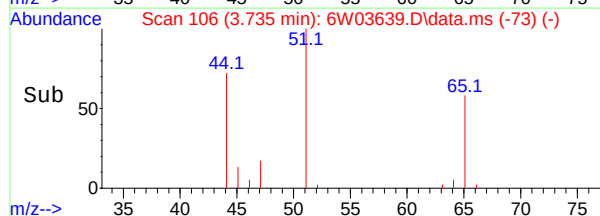
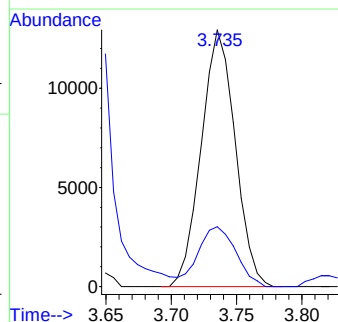
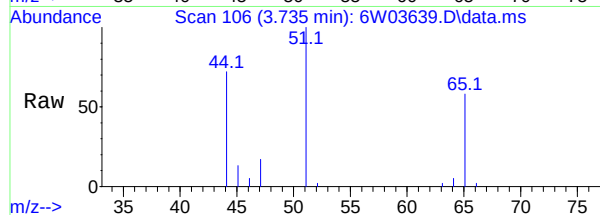
Quant Time: Dec 21 11:10:09 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration





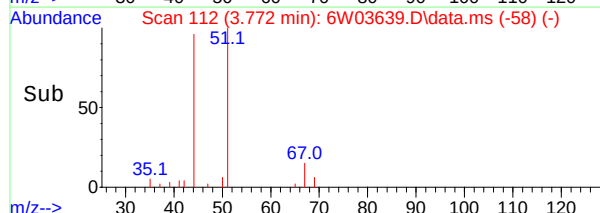
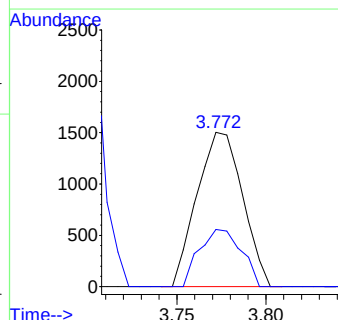
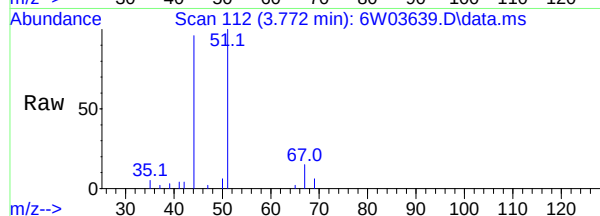
#3
Freon 152A
Concen: 1.70 ppb(v)
RT: 3.735 min Scan# 106
Delta R.T. -0.000 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

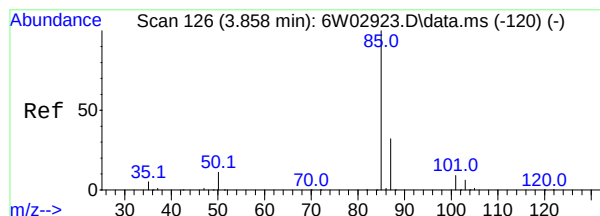
Tgt Ion: 65 Resp: 23440
Ion Ratio Lower Upper
65 100
45 23.3 16.9 31.5



#4
Chlorodifluoromethane
Concen: 0.56 ppb(v)
RT: 3.772 min Scan# 112
Delta R.T. -0.000 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

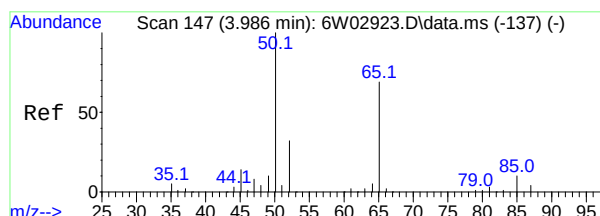
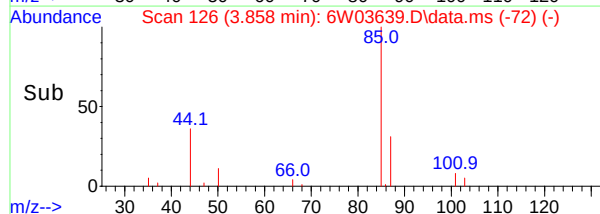
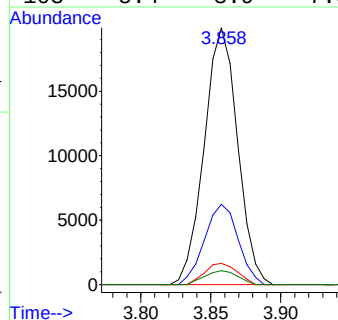
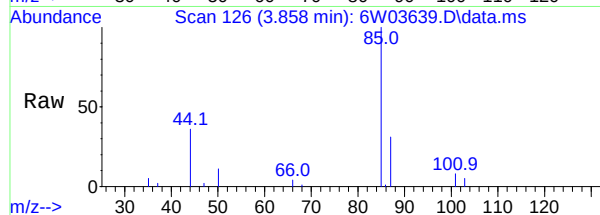
Tgt Ion: 67 Resp: 2684
Ion Ratio Lower Upper
67 100
69 37.0 22.7 42.1





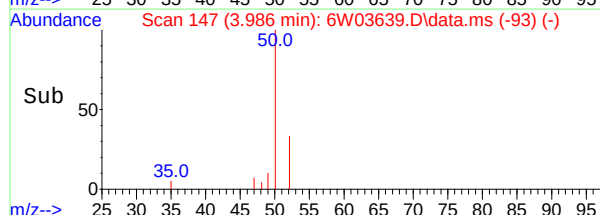
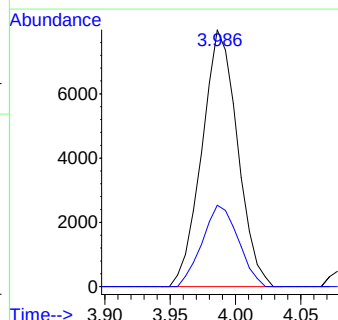
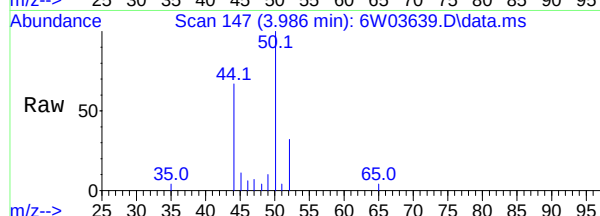
#7
Dichlorodifluoromethane
Concen: 0.62 ppb(v)
RT: 3.858 min Scan# 126
Delta R.T. -0.000 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

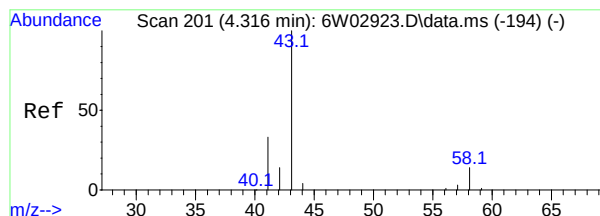
Tgt Ion: 85 Resp: 33071
Ion Ratio Lower Upper
85 100
87 31.3 22.7 42.3
101 8.3 5.9 11.1
103 5.4 3.9 7.3



#9
Chloromethane
Concen: 0.89 ppb(v)
RT: 3.986 min Scan# 147
Delta R.T. -0.000 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

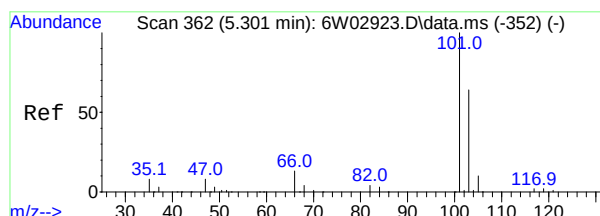
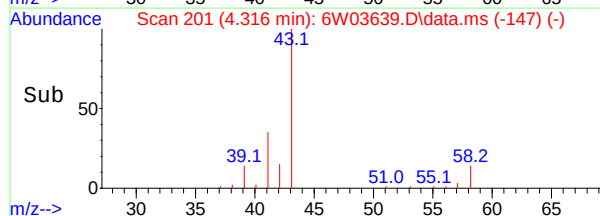
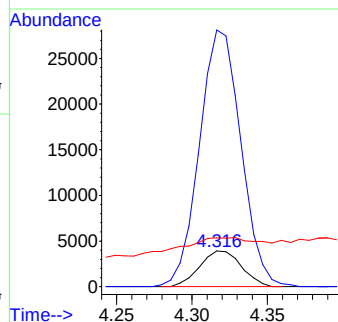
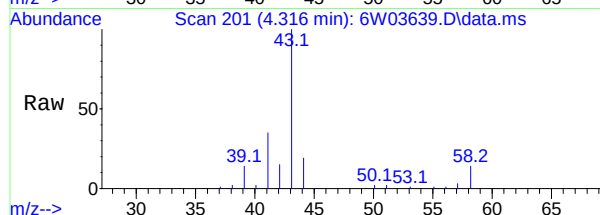
Tgt Ion: 50 Resp: 15180
Ion Ratio Lower Upper
50 100
52 31.7 22.7 42.1





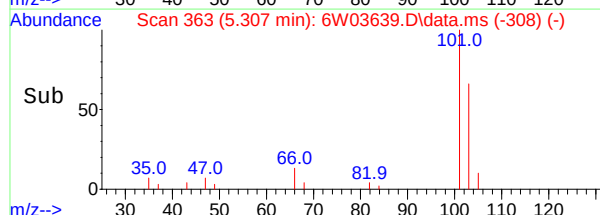
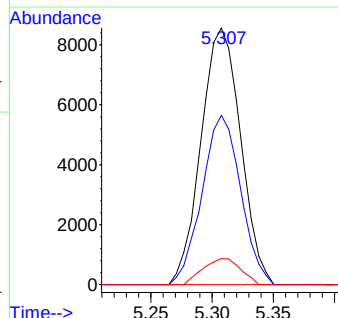
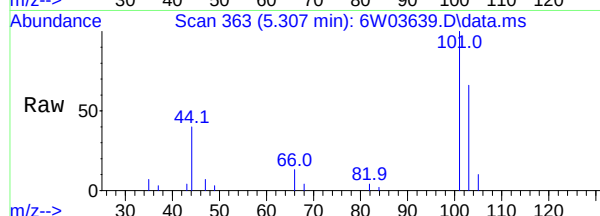
#13
n-Butane
Concen: 2.15 ppb(v)
RT: 4.316 min Scan# 201
Delta R.T. -0.000 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

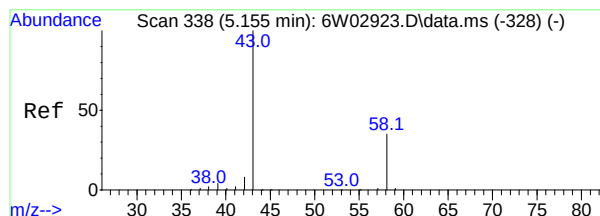
Tgt Ion: 58 Resp: 7527
Ion Ratio Lower Upper
58 100
43 717.4 499.8 928.2
44 135.9 21.1 39.1#



#21
Trichlorofluoromethane
Concen: 0.38 ppb(v)
RT: 5.307 min Scan# 363
Delta R.T. 0.006 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

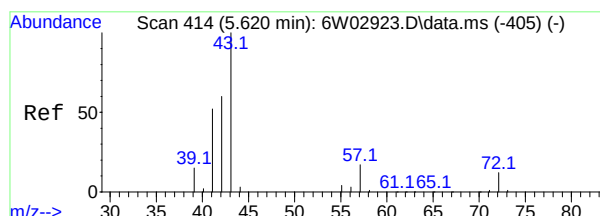
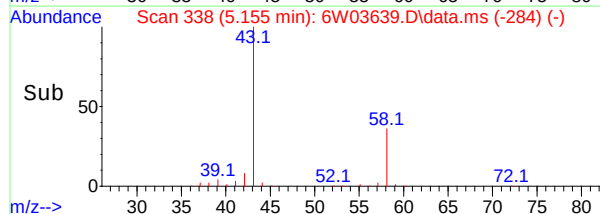
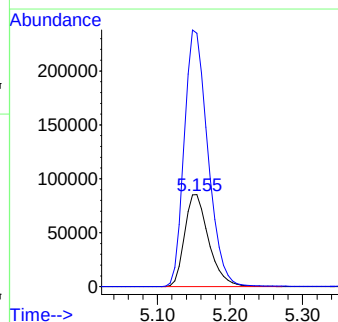
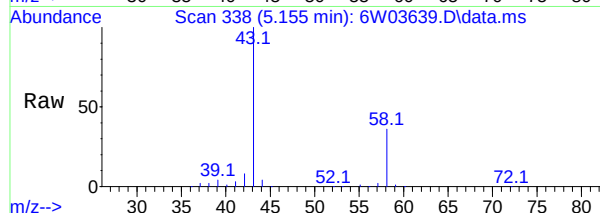
Tgt Ion: 101 Resp: 19242
Ion Ratio Lower Upper
101 100
103 65.9 45.1 83.9
105 10.2 7.3 13.5





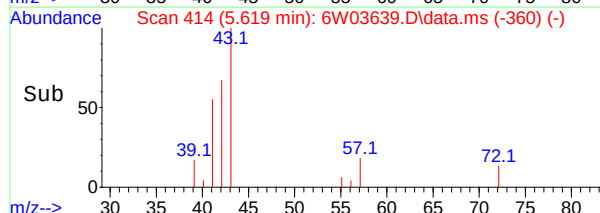
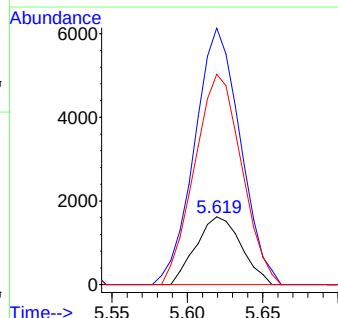
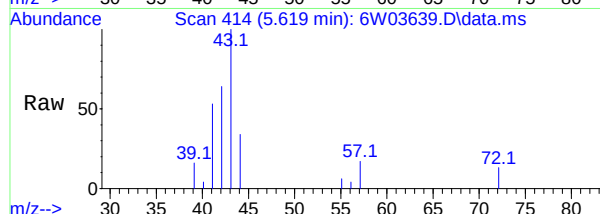
#22
Acetone
Concen: 18.28 ppb(v)
RT: 5.155 min Scan# 338
Delta R.T. -0.000 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

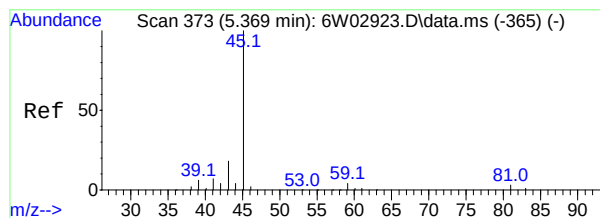
Tgt Ion: 58 Resp: 196687
Ion Ratio Lower Upper
58 100
43 275.1 202.4 375.8



#23
Pentane
Concen: 0.67 ppb(v)
RT: 5.619 min Scan# 414
Delta R.T. -0.000 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

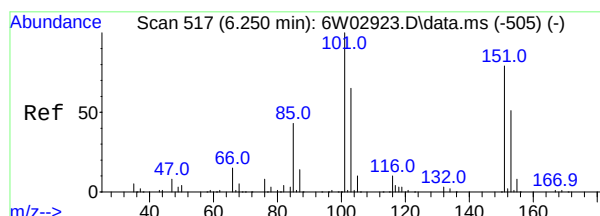
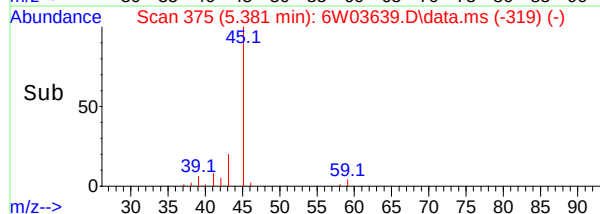
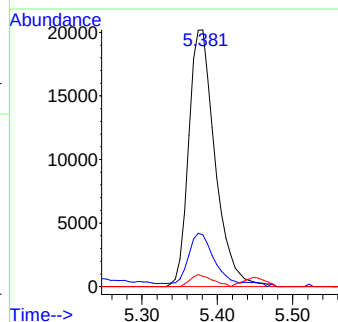
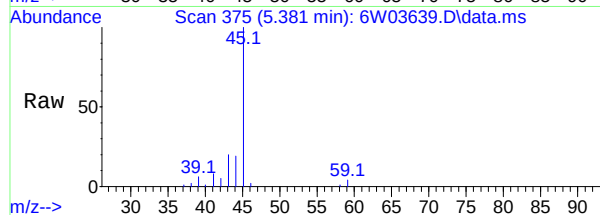
Tgt Ion: 57 Resp: 3387
Ion Ratio Lower Upper
57 100
42 378.9 252.4 468.8
41 310.5 218.7 406.1





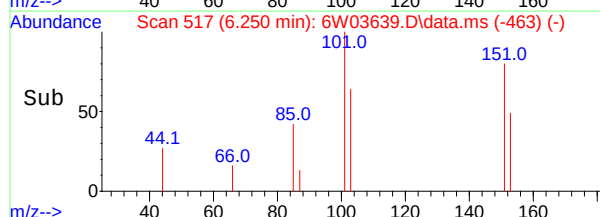
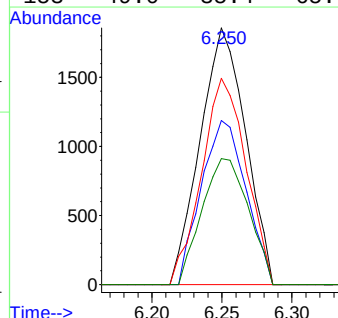
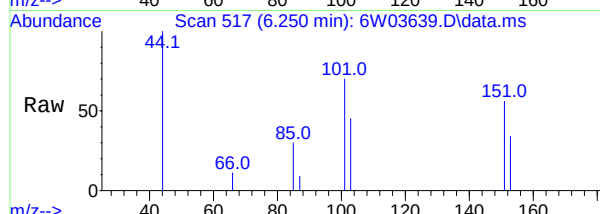
#26
Isopropyl Alcohol
Concen: 1.15 ppb(v)
RT: 5.381 min Scan# 375
Delta R.T. 0.012 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

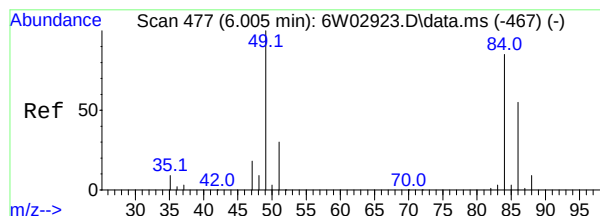
Tgt Ion: 45 Resp: 49153
Ion Ratio Lower Upper
45 100
43 20.2 12.8 23.8
59 4.0 3.0 5.6



#28
Freon 113
Concen: 0.09 ppb(v)
RT: 6.250 min Scan# 517
Delta R.T. -0.000 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

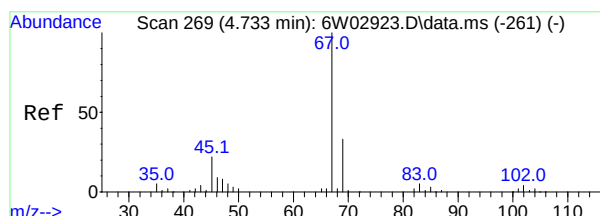
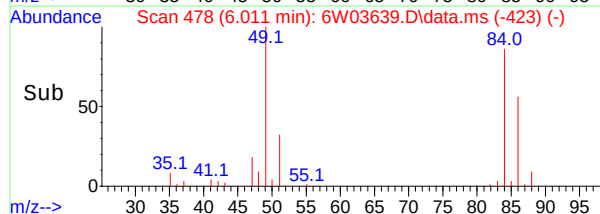
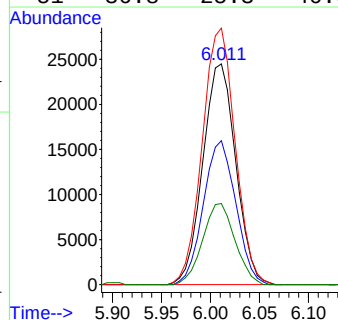
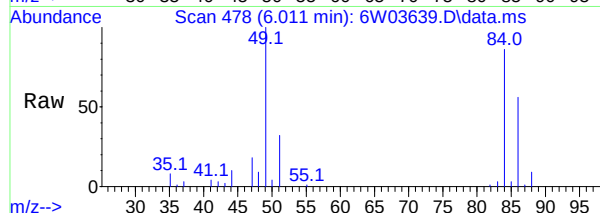
Tgt Ion: 101 Resp: 4197
Ion Ratio Lower Upper
101 100
103 63.9 45.4 84.4
151 80.4 55.3 102.7
153 49.0 35.4 65.7





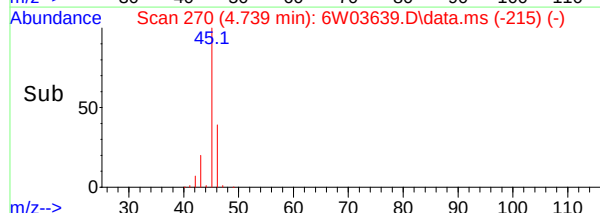
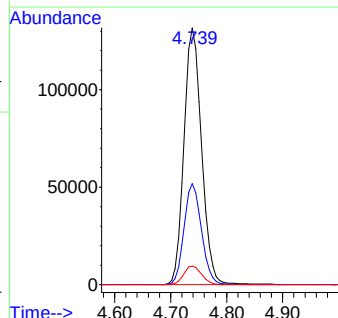
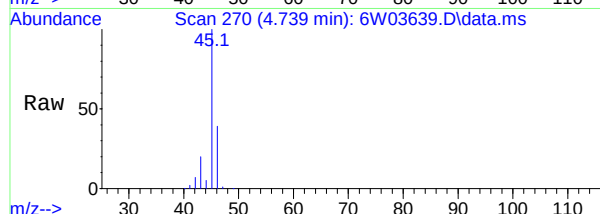
#29
Methylene Chloride
Concen: 2.63 ppb(v)
RT: 6.011 min Scan# 478
Delta R.T. 0.006 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

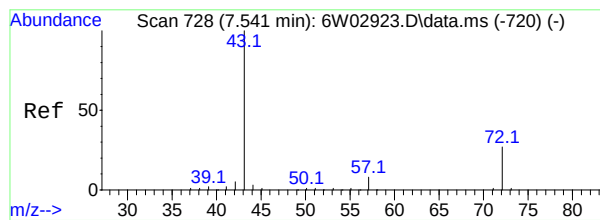
Tgt Ion: 84 Resp: 57396
Ion Ratio Lower Upper
84 100
86 65.2 44.8 83.2
49 116.3 82.1 152.5
51 36.8 25.3 46.9



#31
Ethanol
Concen: 47.53 ppb(v)
RT: 4.739 min Scan# 270
Delta R.T. 0.006 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

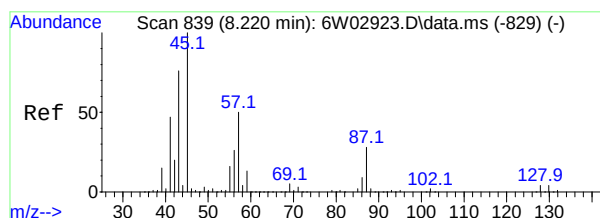
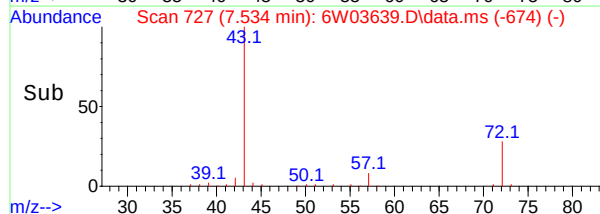
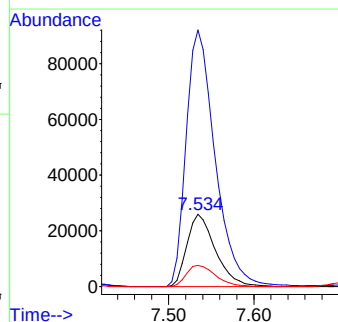
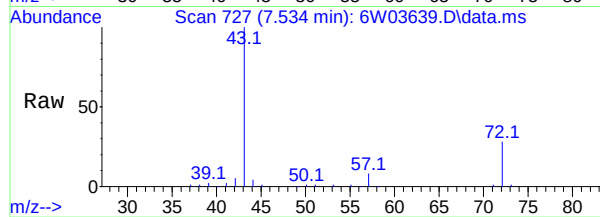
Tgt Ion: 45 Resp: 288188
Ion Ratio Lower Upper
45 100
46 39.4 27.2 50.4
42 7.2 5.6 10.4





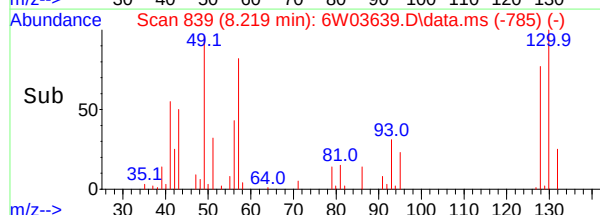
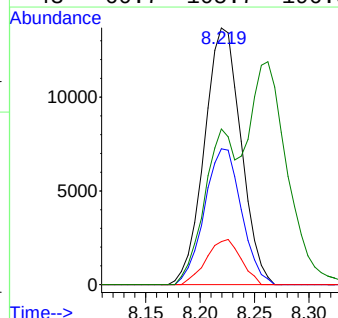
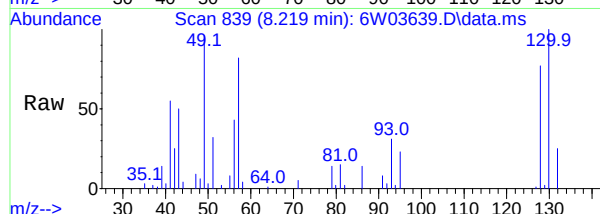
#39
2-Butanone
Concen: 5.48 ppb(v)
RT: 7.534 min Scan# 727
Delta R.T. -0.006 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

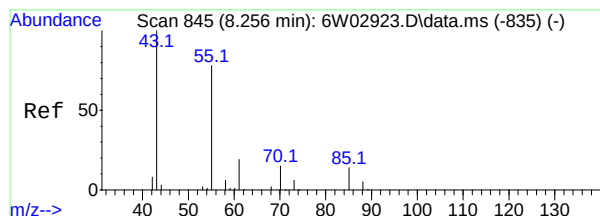
Tgt Ion: 72 Resp: 60527
Ion Ratio Lower Upper
72 100
43 354.7 257.4 478.0
57 29.5 21.0 39.0



#40
Hexane
Concen: 0.94 ppb(v)
RT: 8.219 min Scan# 839
Delta R.T. -0.000 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

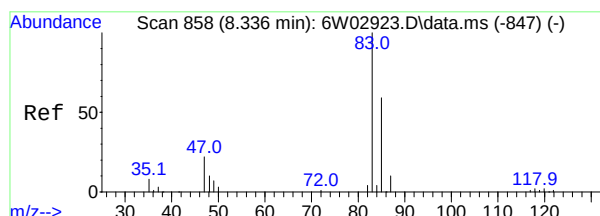
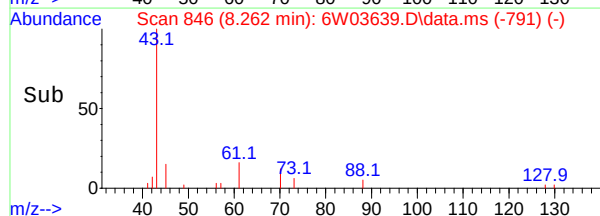
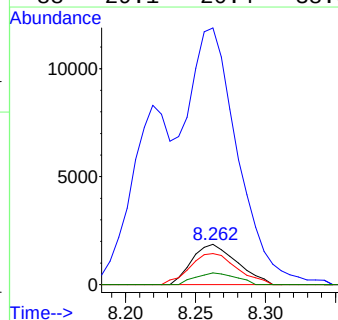
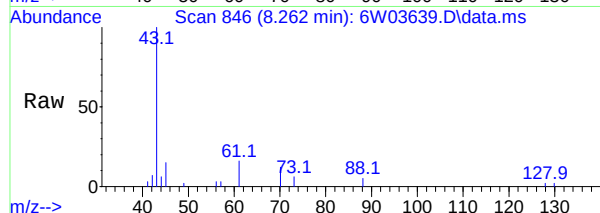
Tgt Ion: 57 Resp: 32044
Ion Ratio Lower Upper
57 100
56 52.9 36.0 67.0
86 16.7 12.1 22.5
43 60.7 105.7 196.3#





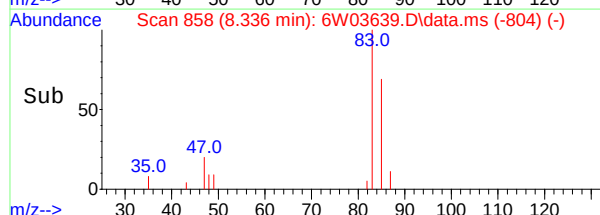
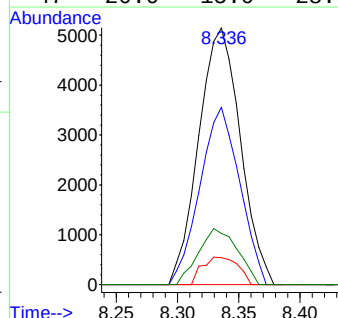
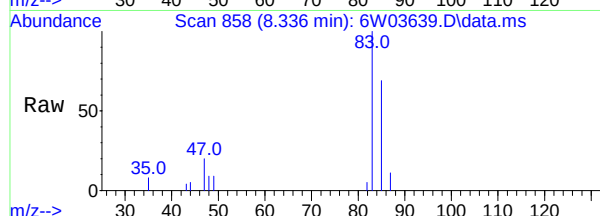
#43
Ethyl Acetate
Concen: 0.60 ppb(v)
RT: 8.262 min Scan# 846
Delta R.T. 0.006 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

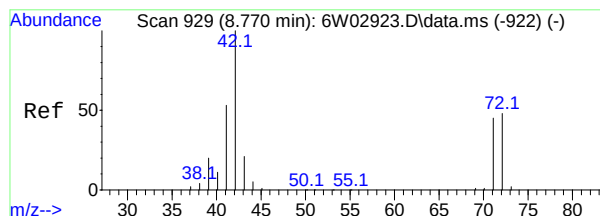
Tgt Ion: 61 Resp: 4182
Ion Ratio Lower Upper
61 100
43 638.6 488.5 907.1
70 77.0 54.9 101.9
88 29.1 20.4 38.0



#45
Chloroform
Concen: 0.27 ppb(v)
RT: 8.336 min Scan# 858
Delta R.T. -0.000 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

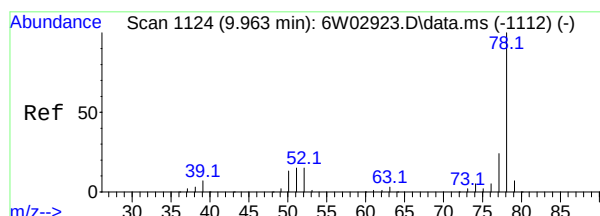
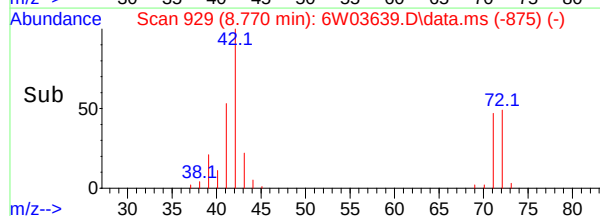
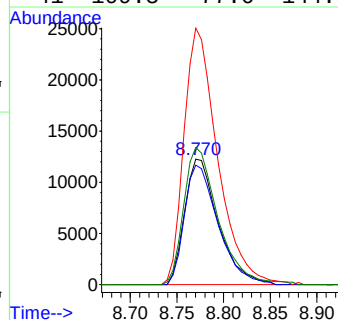
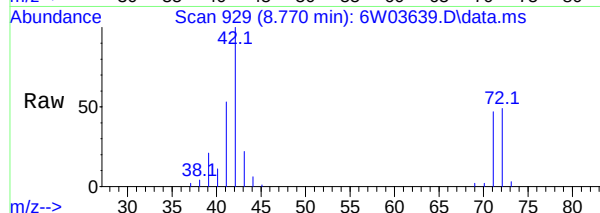
Tgt Ion: 83 Resp: 12177
Ion Ratio Lower Upper
83 100
85 69.1 45.2 84.0
87 10.5 7.3 13.7
47 20.0 15.0 28.0





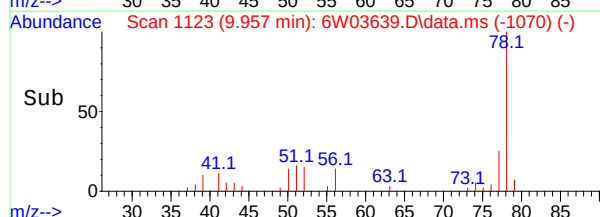
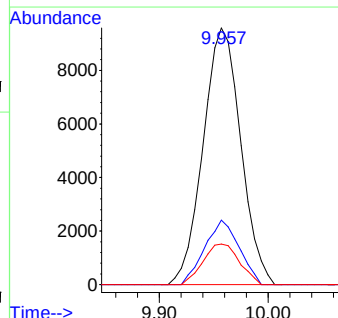
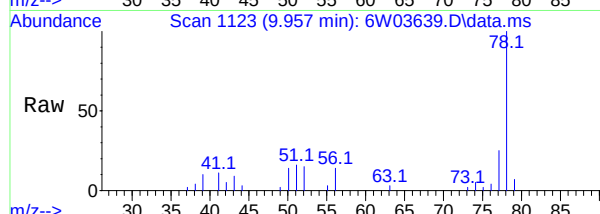
#47
Tetrahydrofuran
Concen: 3.12 ppb(v)
RT: 8.770 min Scan# 929
Delta R.T. -0.000 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

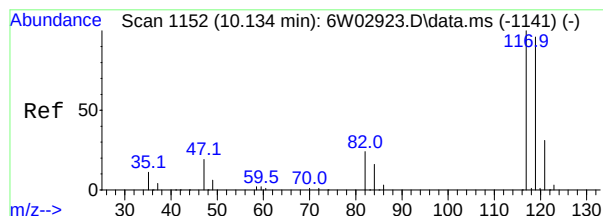
Tgt Ion: 72 Resp: 30769
Ion Ratio Lower Upper
72 100
71 95.3 65.4 121.4
42 204.7 146.4 271.8
41 109.5 77.6 144.0



#50
Benzene
Concen: 0.32 ppb(v)
RT: 9.957 min Scan# 1123
Delta R.T. -0.006 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

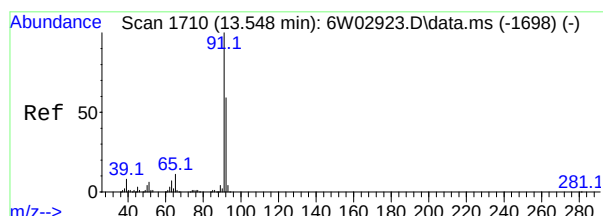
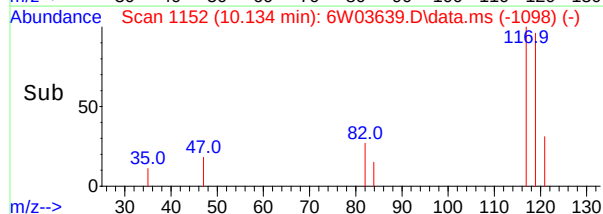
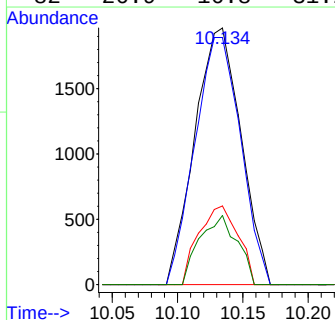
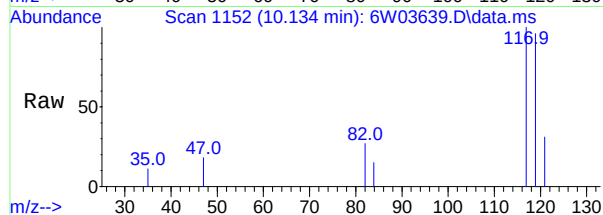
Tgt Ion: 78 Resp: 23047
Ion Ratio Lower Upper
78 100
77 25.1 16.6 30.8
51 15.8 10.6 19.6





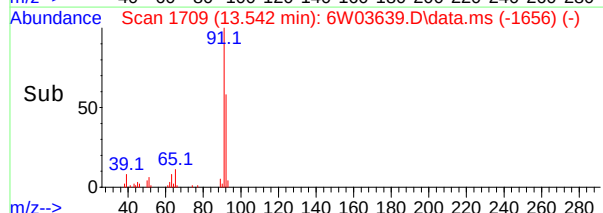
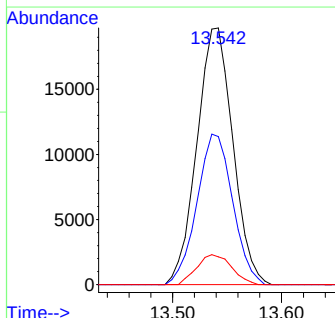
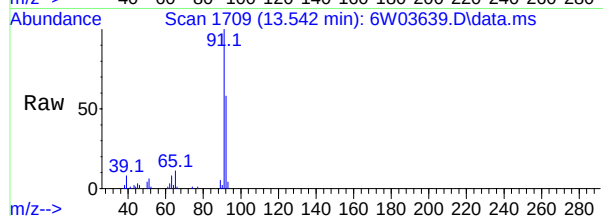
#51
Carbon Tetrachloride
Concen: 0.11 ppb(v)
RT: 10.134 min Scan# 1152
Delta R.T. -0.000 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

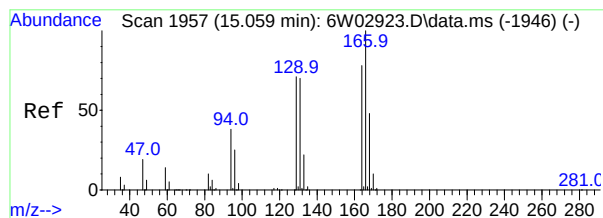
Tgt Ion: 117 Resp: 4837
Ion Ratio Lower Upper
117 100
119 96.2 67.4 125.2
121 30.7 21.9 40.7
82 26.9 16.8 31.2



#67
Toluene
Concen: 0.53 ppb(v)
RT: 13.542 min Scan# 1709
Delta R.T. -0.006 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

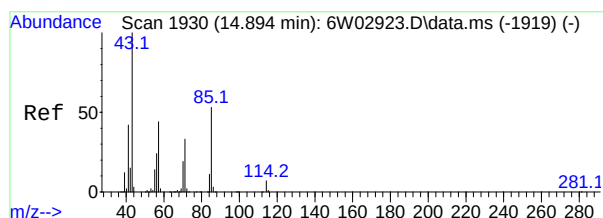
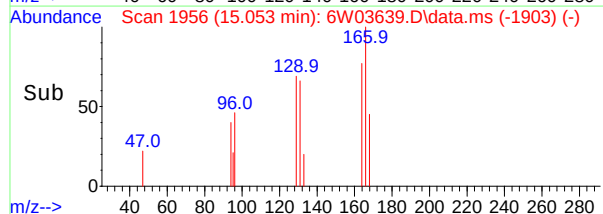
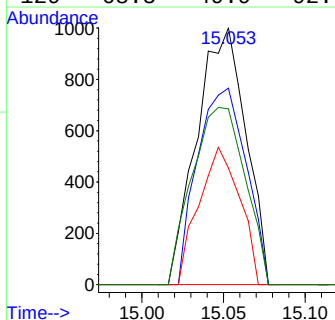
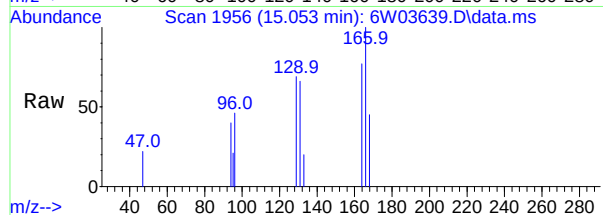
Tgt Ion: 91 Resp: 45417
Ion Ratio Lower Upper
91 100
92 57.6 41.0 76.2
65 10.9 7.8 14.4





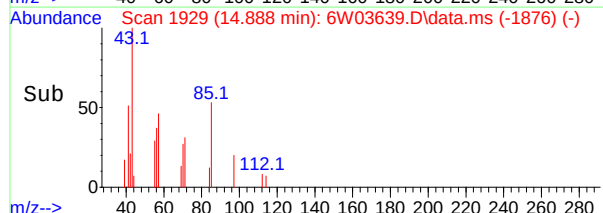
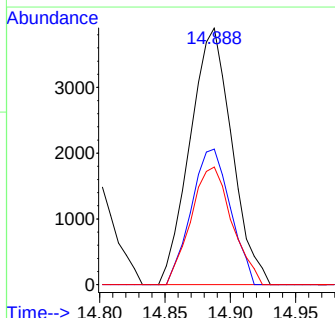
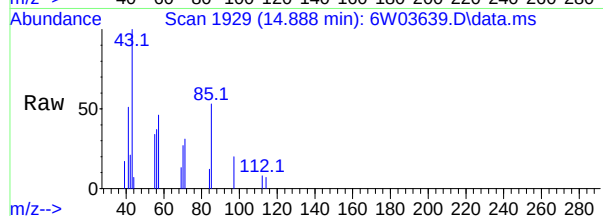
#73
Tetrachloroethene
Concen: 0.05 ppb(v)
RT: 15.053 min Scan# 1956
Delta R.T. -0.006 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

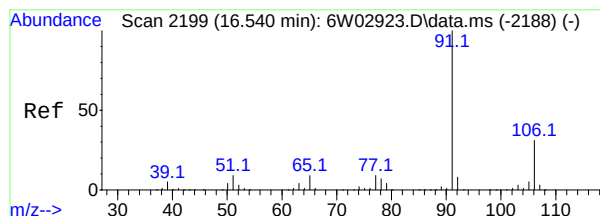
Tgt Ion: 166 Resp: 2090
Ion Ratio Lower Upper
166 100
164 76.5 54.5 101.1
168 45.4 33.9 62.9
129 68.5 49.9 92.7



#75
Octane
Concen: 0.18 ppb(v)
RT: 14.888 min Scan# 1929
Delta R.T. -0.006 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

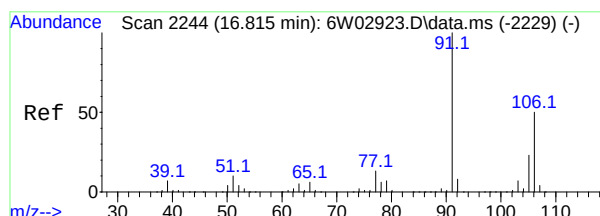
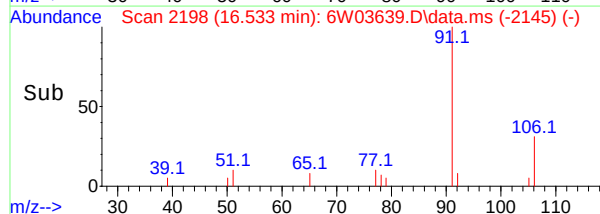
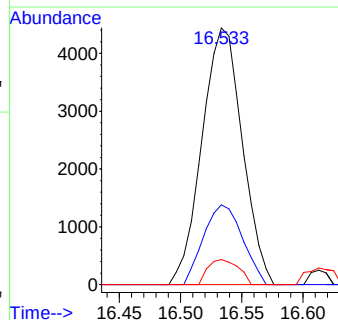
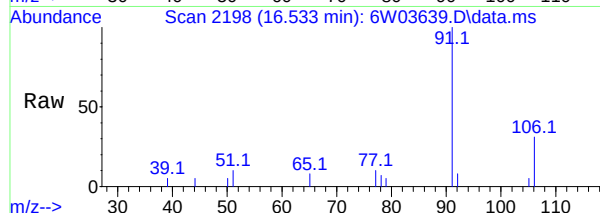
Tgt Ion: 43 Resp: 8718
Ion Ratio Lower Upper
43 100
85 52.8 36.8 68.4
57 45.8 30.7 56.9





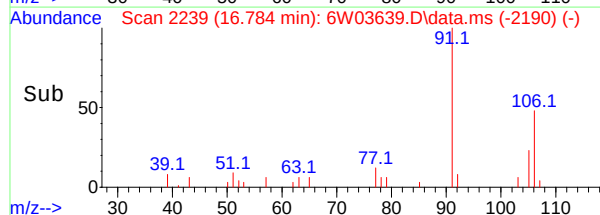
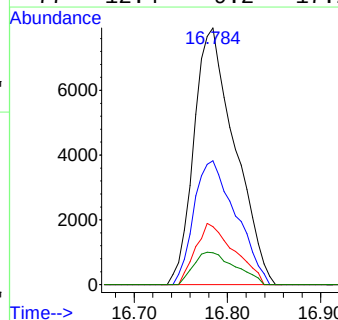
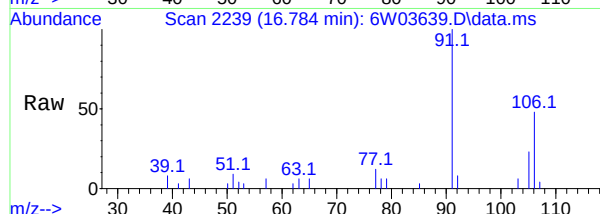
#79
Ethylbenzene
Concen: 0.10 ppb(v)
RT: 16.533 min Scan# 2198
Delta R.T. -0.006 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

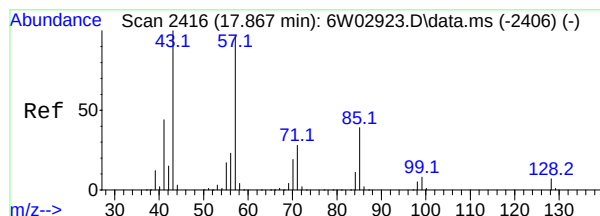
Tgt Ion: 91 Resp: 10158
Ion Ratio Lower Upper
91 100
106 31.1 22.0 41.0
77 9.8 6.0 11.2



#80
m,p-Xylene
Concen: 0.32 ppb(v)
RT: 16.784 min Scan# 2239
Delta R.T. -0.031 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

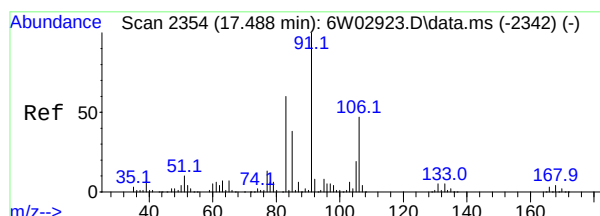
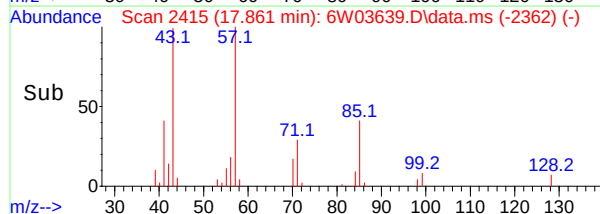
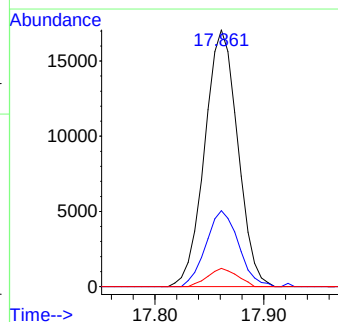
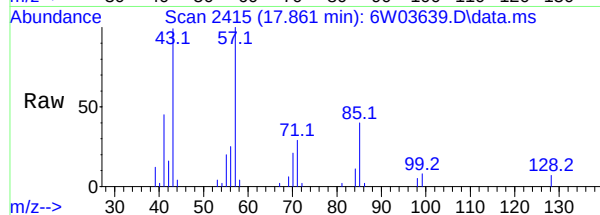
Tgt Ion: 91 Resp: 24218
Ion Ratio Lower Upper
91 100
106 48.2 35.1 65.3
105 22.6 16.0 29.8
77 12.4 9.2 17.2





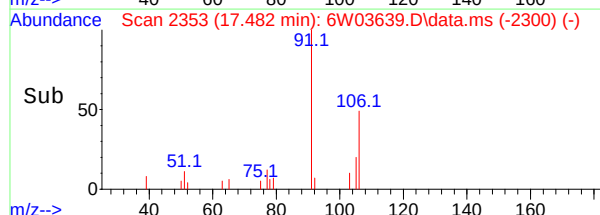
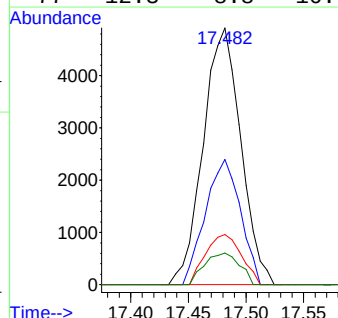
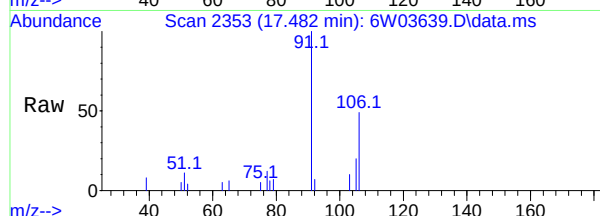
#82
Nonane
Concen: 0.73 ppb(v)
RT: 17.861 min Scan# 2415
Delta R.T. -0.006 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

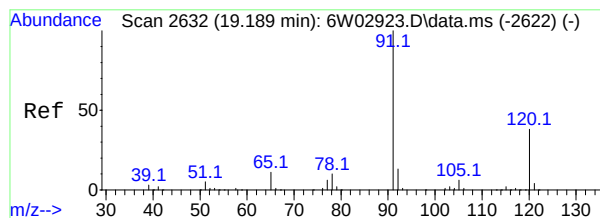
Tgt Ion: 43 Resp: 36090
Ion Ratio Lower Upper
43 100
71 29.5 19.5 36.3
128 7.1 4.6 8.6



#83
o-Xylene
Concen: 0.14 ppb(v)
RT: 17.482 min Scan# 2353
Delta R.T. -0.006 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

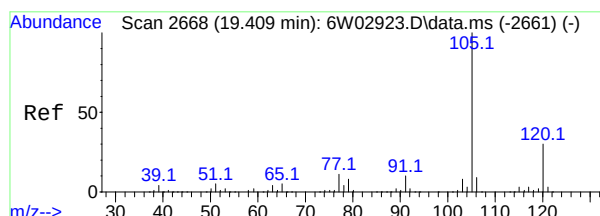
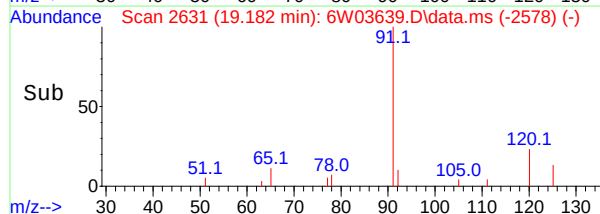
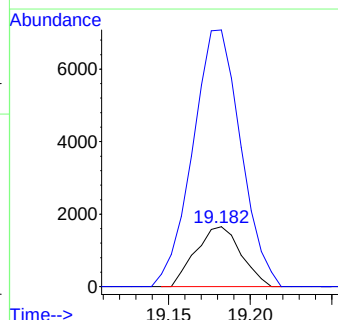
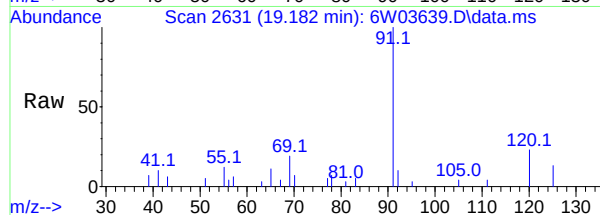
Tgt Ion: 91 Resp: 11123
Ion Ratio Lower Upper
91 100
106 48.8 33.2 61.6
105 19.5 13.4 25.0
77 12.3 8.8 16.4





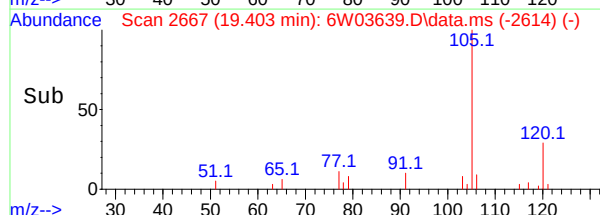
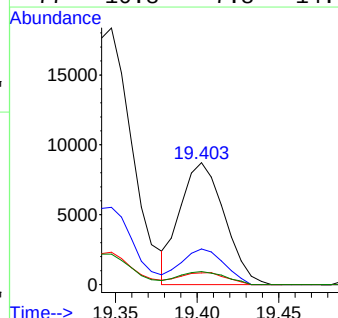
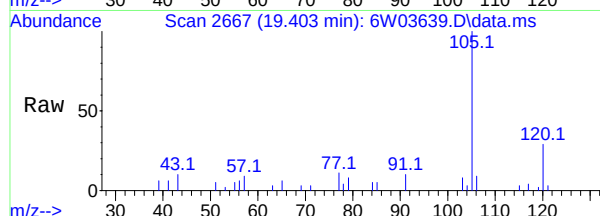
#90
n-Propylbenzene
Concen: 0.11 ppb(v)
RT: 19.182 min Scan# 2631
Delta R.T. -0.006 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

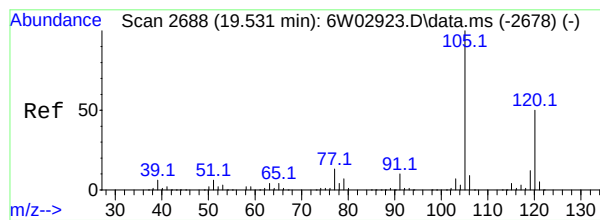
Tgt Ion:120 Resp: 3187
Ion Ratio Lower Upper
120 100
91 429.3 300.0 557.2



#92
4-Ethyltoluene
Concen: 0.17 ppb(v)
RT: 19.403 min Scan# 2667
Delta R.T. -0.006 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

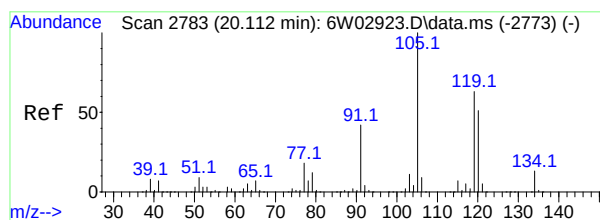
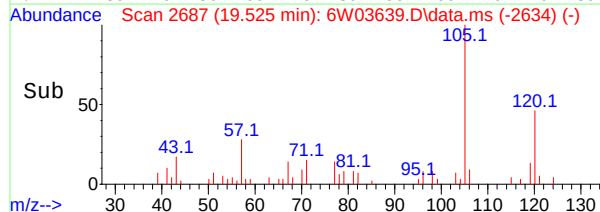
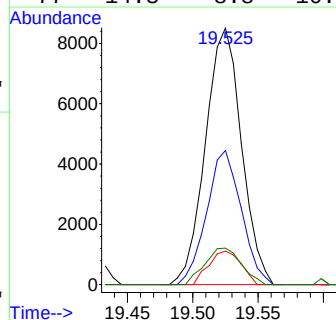
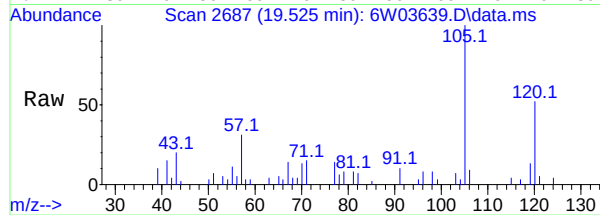
Tgt Ion:105 Resp: 16544
Ion Ratio Lower Upper
105 100
120 29.3 20.6 38.4
91 9.7 7.3 13.7
77 10.8 7.8 14.4





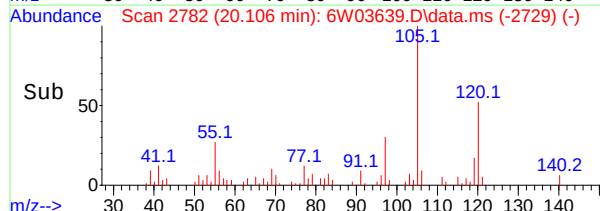
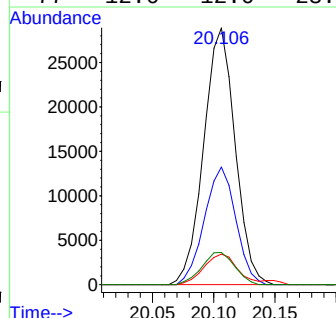
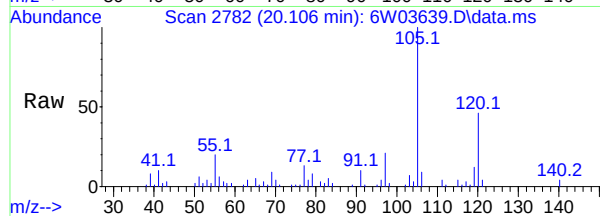
#93
1,3,5-Trimethylbenzene
Concen: 0.20 ppb(v)
RT: 19.525 min Scan# 2687
Delta R.T. -0.006 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

Tgt Ion	Ratio	Lower	Upper
105	100		
120	52.2	34.9	64.9
119	13.0	8.6	16.0
77	14.3	8.8	16.3



#96
1,2,4-Trimethylbenzene
Concen: 0.66 ppb(v)
RT: 20.106 min Scan# 2782
Delta R.T. -0.006 min
Lab File: 6W03639.D
Acq: 20 Dec 2017 6:21 pm

Tgt Ion	Ratio	Lower	Upper
105	100		
120	45.8	35.7	66.3
119	11.9	44.4	82.4#
77	12.6	12.6	23.4#



Data Path : C:\msdchem\1\data\
 Data File : 6W03661.D
 Acq On : 21 Dec 2017 4:42 pm
 Operator : DANAT
 Sample : jc57421-1dup
 Misc : MS23265,V6W106,100,,,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 22 09:47:19 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.201	130	209763	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.397	114	781724	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.928	82	354898	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.201	130	209763	10.00	ppb(v	0.00

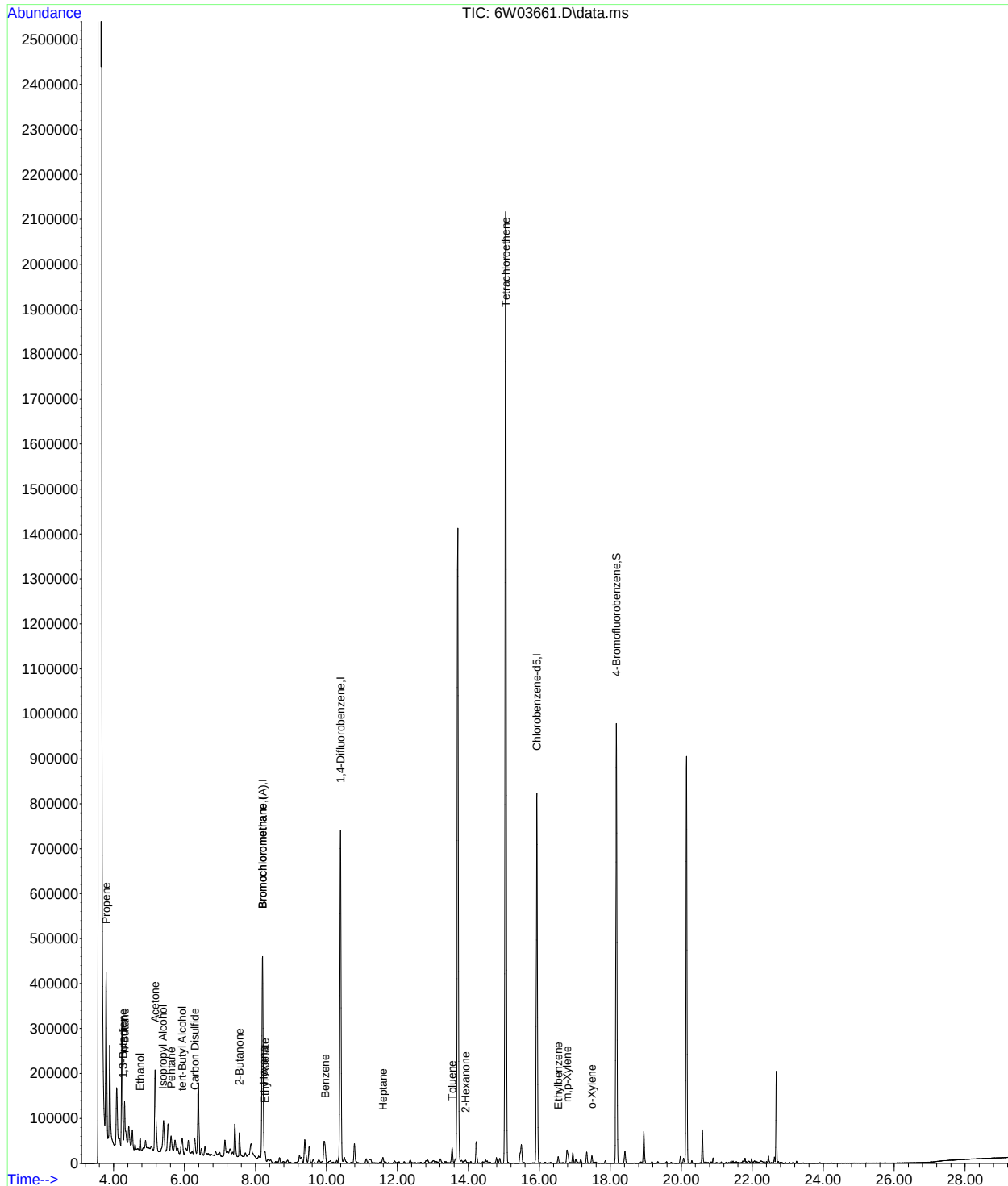
System Monitoring Compounds
 91) 4-Bromofluorobenzene 18.173 95 472800 10.34 ppb(v 0.00
 Spiked Amount 10.000 Range 65 - 128 Recovery = 103.40%

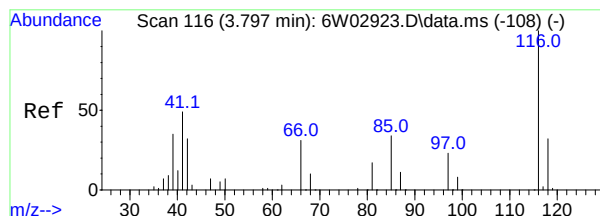
Target Compounds						Qvalue
5) Propene	3.790	41	196404	13.12	ppb(v	98
12) 1,3-Butadiene	4.268	54	27432	1.85	ppb(v	92
13) n-Butane	4.310	58	12946	3.74	ppb(v#	59
22) Acetone	5.167	58	112557	10.57	ppb(v	97
23) Pentane	5.620	57	5318	1.07	ppb(v	95
26) Isopropyl Alcohol	5.387	45	17965	0.43	ppb(v	93
30) Carbon Disulfide	6.286	76	64603	0.94	ppb(v	99
31) Ethanol	4.745	45	31712	5.29	ppb(v	100
35) tert-Butyl Alcohol	5.938	59	18429	0.45	ppb(v#	63
39) 2-Butanone	7.547	72	23853	2.18	ppb(v	94
40) Hexane	8.232	57	11910	0.35	ppb(v#	54
43) Ethyl Acetate	8.269	61	5289	0.76	ppb(v	69
50) Benzene	9.963	78	28084	0.40	ppb(v	100
56) Heptane	11.597	71	3754	0.16	ppb(v	94
67) Toluene	13.542	91	34404	0.40	ppb(v	98
70) 2-Hexanone	13.921	58	3103m	0.11	ppb(v	
73) Tetrachloroethene	15.053	166	866658	20.23	ppb(v	98
79) Ethylbenzene	16.534	91	14695	0.15	ppb(v	100
80) m,p-Xylene	16.784	91	36409	0.48	ppb(v	99
83) o-Xylene	17.476	91	14935	0.20	ppb(v	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\
Data File : 6W03661.D
Acq On : 21 Dec 2017 4:42 pm
Operator : DANAT
Sample : jc57421-1dup
Misc : MS23265,V6W106,100,,,1
ALS Vial : 4 Sample Multiplier: 1

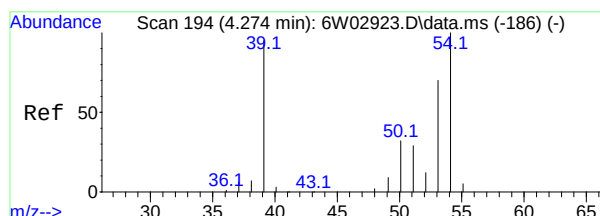
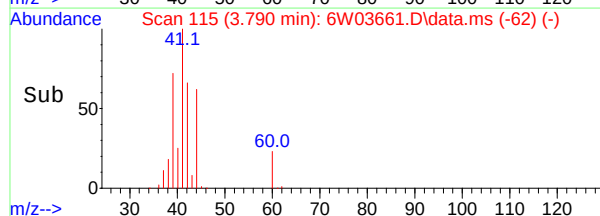
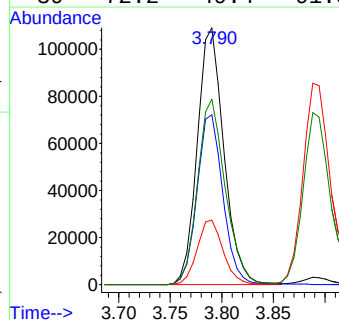
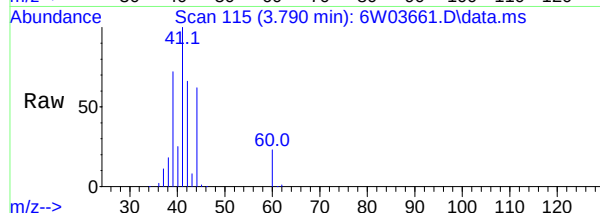
Quant Time: Dec 22 09:47:19 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration





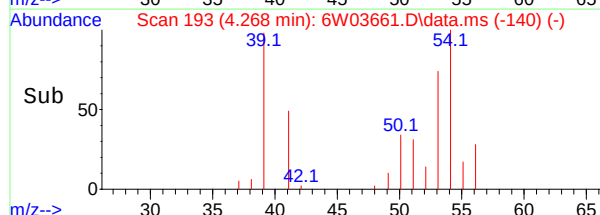
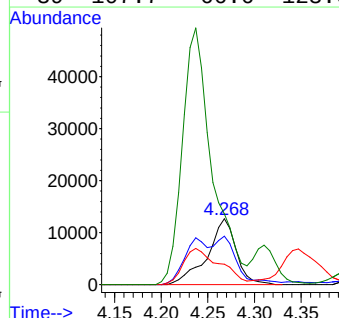
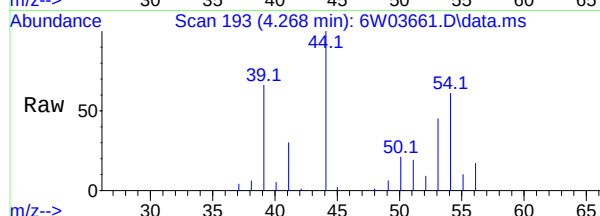
#5
Propene
Concen: 13.12 ppb(v)
RT: 3.790 min Scan# 115
Delta R.T. -0.006 min
Lab File: 6W03661.D
Acq: 21 Dec 2017 4:42 pm

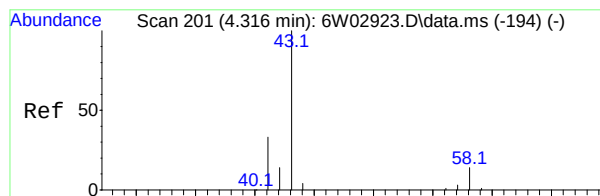
Tgt Ion: 41 Resp: 196404
Ion Ratio Lower Upper
41 100
42 66.2 45.4 84.4
40 25.1 17.4 32.2
39 72.2 49.4 91.8



#12
1,3-Butadiene
Concen: 1.85 ppb(v)
RT: 4.268 min Scan# 193
Delta R.T. -0.006 min
Lab File: 6W03661.D
Acq: 21 Dec 2017 4:42 pm

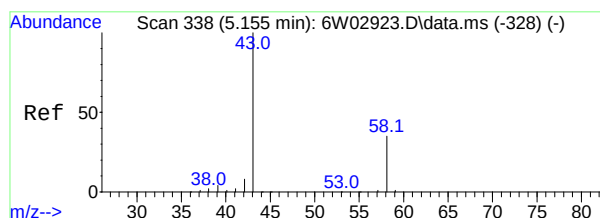
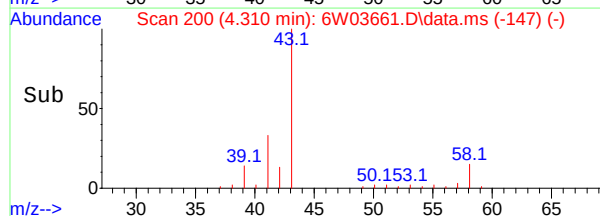
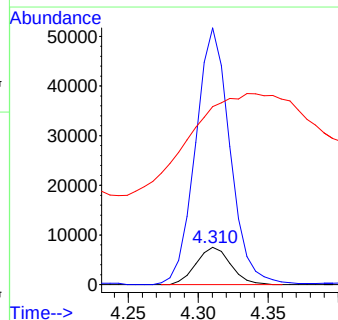
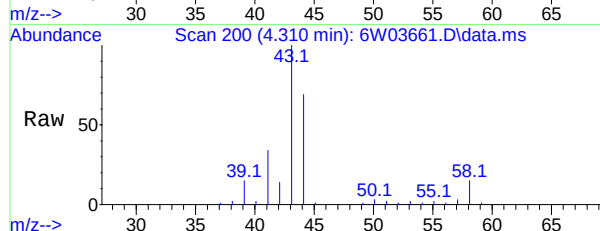
Tgt Ion: 54 Resp: 27432
Ion Ratio Lower Upper
54 100
53 73.5 49.1 91.1
51 31.0 20.5 38.1
39 107.7 66.6 123.6





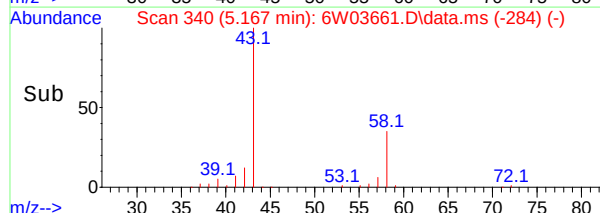
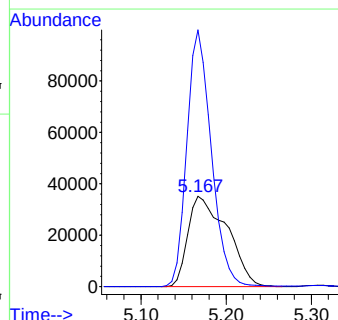
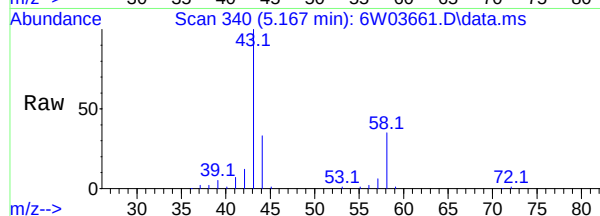
#13
n-Butane
Concen: 3.74 ppb(v)
RT: 4.310 min Scan# 200
Delta R.T. -0.006 min
Lab File: 6W03661.D
Acq: 21 Dec 2017 4:42 pm

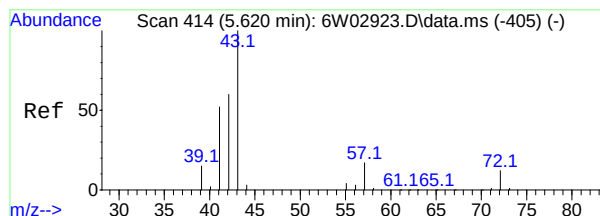
Tgt Ion: 58 Resp: 12946
Ion Ratio Lower Upper
58 100
43 686.9 499.8 928.2
44 476.2 21.1 39.1#



#22
Acetone
Concen: 10.57 ppb(v)
RT: 5.167 min Scan# 340
Delta R.T. 0.012 min
Lab File: 6W03661.D
Acq: 21 Dec 2017 4:42 pm

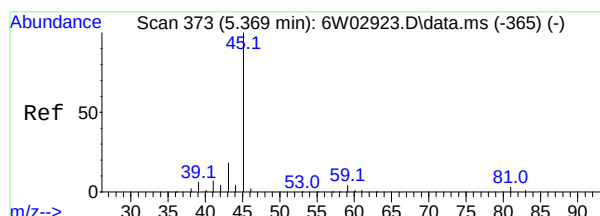
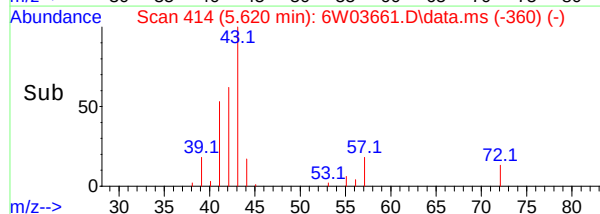
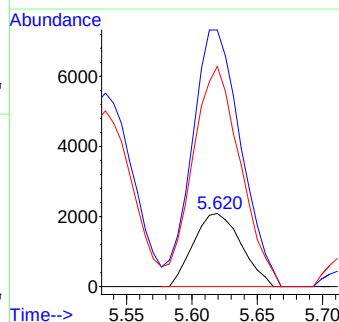
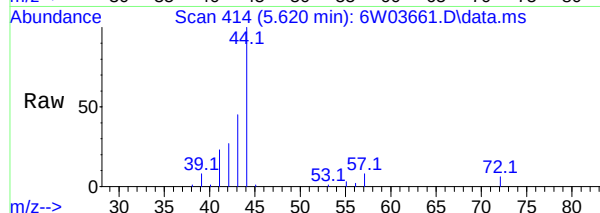
Tgt Ion: 58 Resp: 112557
Ion Ratio Lower Upper
58 100
43 284.1 202.4 375.8





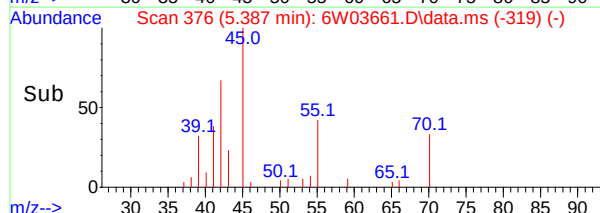
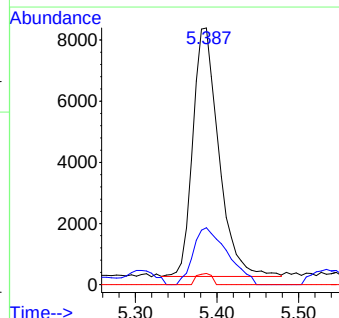
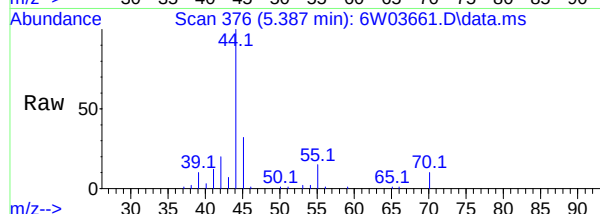
#23
Pentane
Concen: 1.07 ppb(v)
RT: 5.620 min Scan# 414
Delta R.T. -0.000 min
Lab File: 6W03661.D
Acq: 21 Dec 2017 4:42 pm

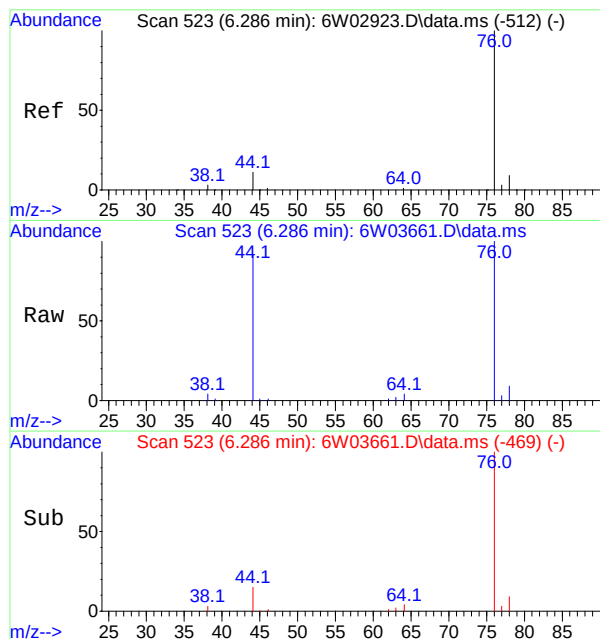
Tgt Ion: 57 Resp: 5318
Ion Ratio Lower Upper
57 100
42 349.8 252.4 468.8
41 300.0 218.7 406.1



#26
Isopropyl Alcohol
Concen: 0.43 ppb(v)
RT: 5.387 min Scan# 376
Delta R.T. 0.018 min
Lab File: 6W03661.D
Acq: 21 Dec 2017 4:42 pm

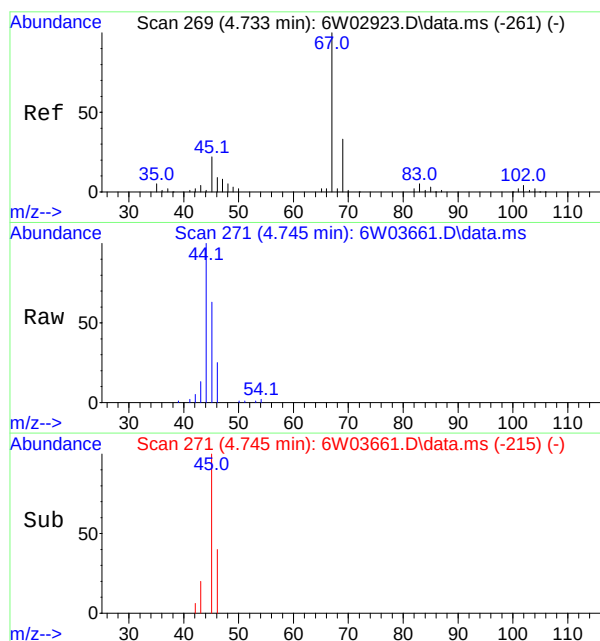
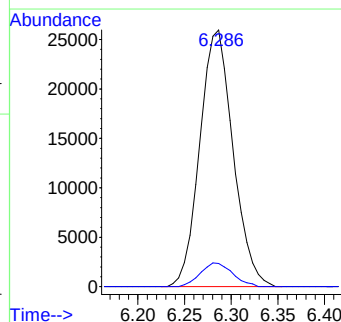
Tgt Ion: 45 Resp: 17965
Ion Ratio Lower Upper
45 100
43 22.2 12.8 23.8
59 4.3 3.0 5.6





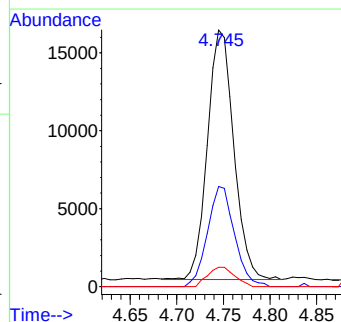
#30
Carbon Disulfide
Concen: 0.94 ppb(v)
RT: 6.286 min Scan# 523
Delta R.T. -0.000 min
Lab File: 6W03661.D
Acq: 21 Dec 2017 4:42 pm

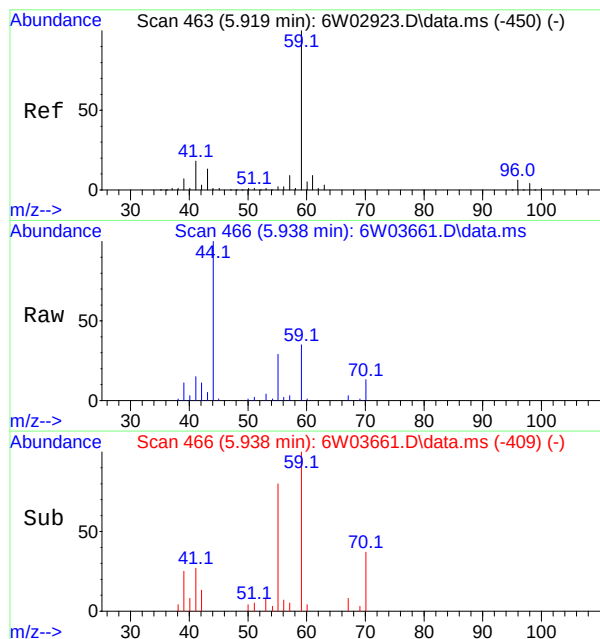
Tgt Ion: 76 Resp: 64603
Ion Ratio Lower Upper
76 100
78 9.0 6.5 12.1



#31
Ethanol
Concen: 5.29 ppb(v)
RT: 4.745 min Scan# 271
Delta R.T. 0.012 min
Lab File: 6W03661.D
Acq: 21 Dec 2017 4:42 pm

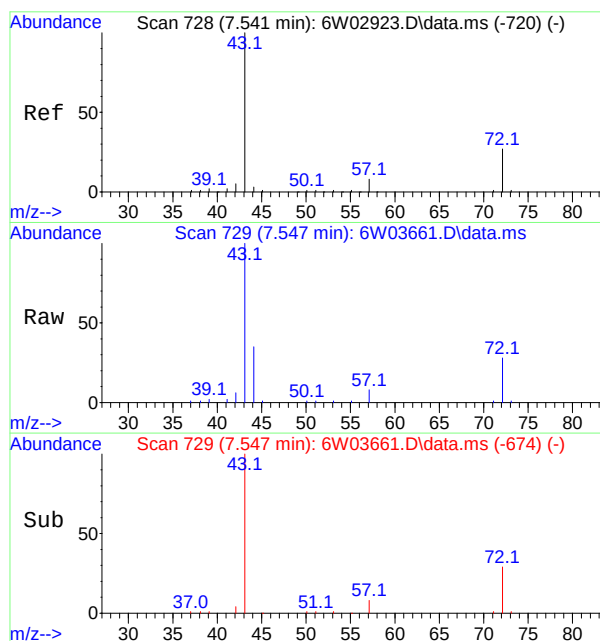
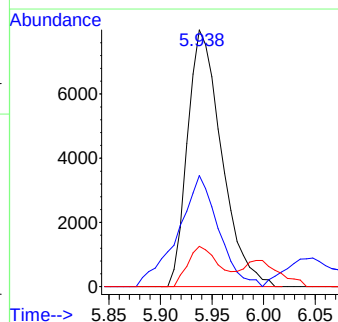
Tgt Ion: 45 Resp: 31712
Ion Ratio Lower Upper
45 100
46 39.0 27.2 50.4
42 7.6 5.6 10.4





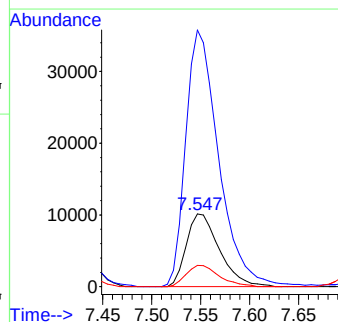
#35
tert-Butyl Alcohol
Concen: 0.45 ppb(v)
RT: 5.938 min Scan# 466
Delta R.T. 0.018 min
Lab File: 6W03661.D
Acq: 21 Dec 2017 4:42 pm

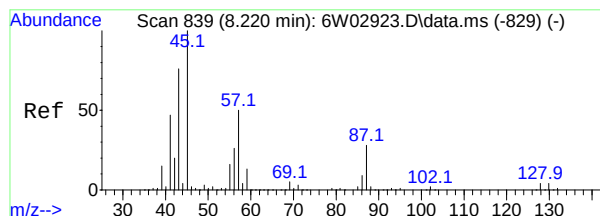
Tgt Ion: 59 Resp: 18429
Ion Ratio Lower Upper
59 100
41 43.2 12.7 23.7#
43 15.7 8.8 16.4



#39
2-Butanone
Concen: 2.18 ppb(v)
RT: 7.547 min Scan# 729
Delta R.T. 0.006 min
Lab File: 6W03661.D
Acq: 21 Dec 2017 4:42 pm

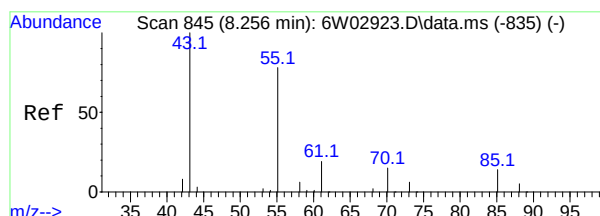
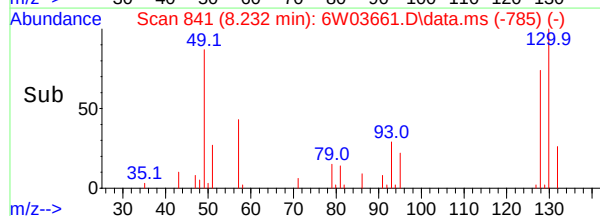
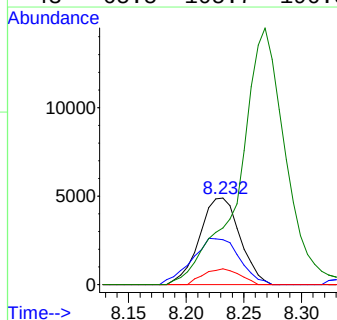
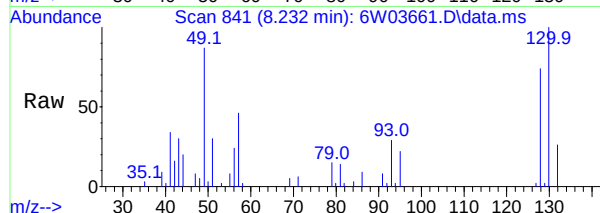
Tgt Ion: 72 Resp: 23853
Ion Ratio Lower Upper
72 100
43 352.7 257.4 478.0
57 29.1 21.0 39.0





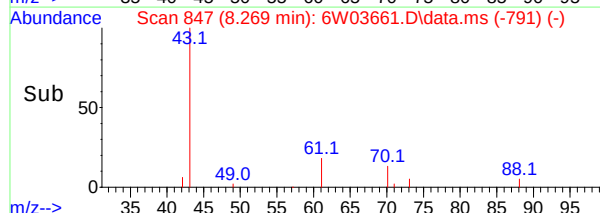
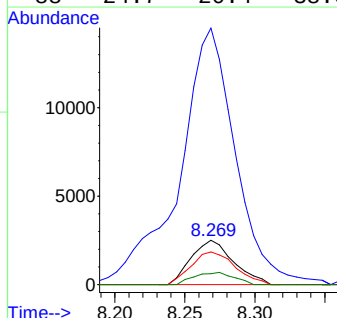
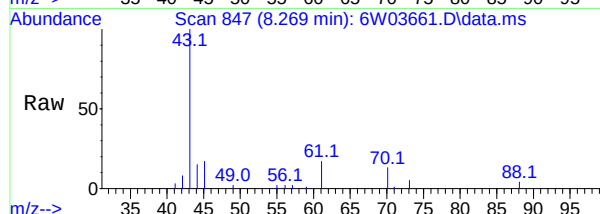
#40
Hexane
Concen: 0.35 ppb(v)
RT: 8.232 min Scan# 841
Delta R.T. 0.012 min
Lab File: 6W03661.D
Acq: 21 Dec 2017 4:42 pm

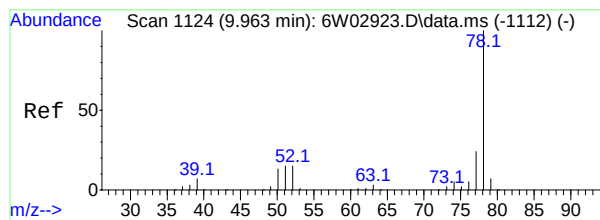
Tgt Ion: 57 Resp: 11910
Ion Ratio Lower Upper
57 100
56 52.0 36.0 67.0
86 18.4 12.1 22.5
43 65.5 105.7 196.3#



#43
Ethyl Acetate
Concen: 0.76 ppb(v)
RT: 8.269 min Scan# 847
Delta R.T. 0.012 min
Lab File: 6W03661.D
Acq: 21 Dec 2017 4:42 pm

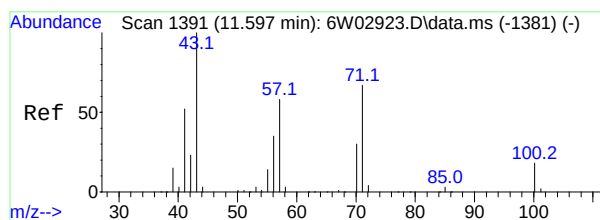
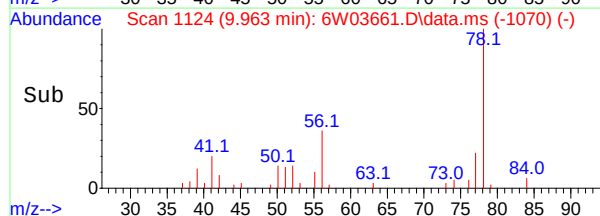
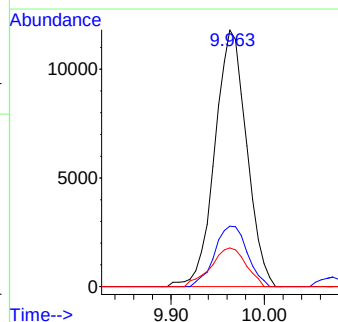
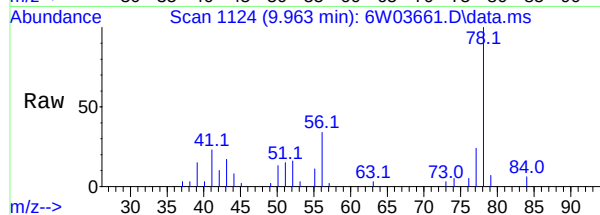
Tgt Ion: 61 Resp: 5289
Ion Ratio Lower Upper
61 100
43 577.5 488.5 907.1
70 73.4 54.9 101.9
88 24.7 20.4 38.0





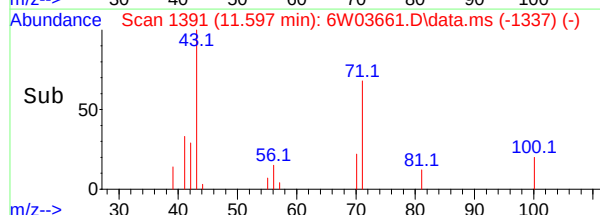
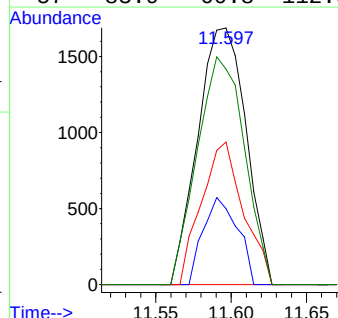
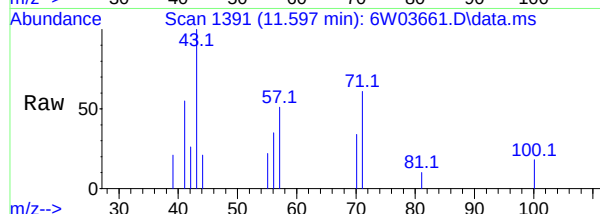
#50
Benzene
Concen: 0.40 ppb(v)
RT: 9.963 min Scan# 1124
Delta R.T. -0.000 min
Lab File: 6W03661.D
Acq: 21 Dec 2017 4:42 pm

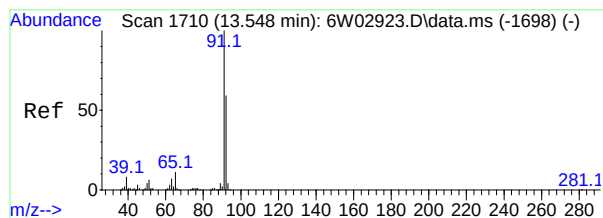
Tgt Ion: 78 Resp: 28084
Ion Ratio Lower Upper
78 100
77 23.5 16.6 30.8
51 15.1 10.6 19.6



#56
Heptane
Concen: 0.16 ppb(v)
RT: 11.597 min Scan# 1391
Delta R.T. -0.000 min
Lab File: 6W03661.D
Acq: 21 Dec 2017 4:42 pm

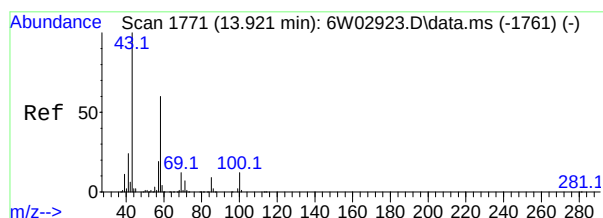
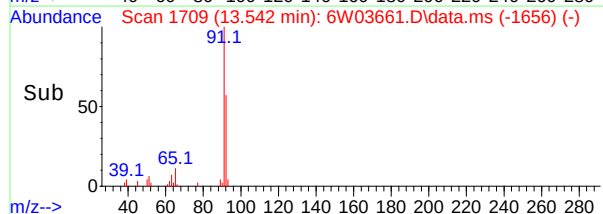
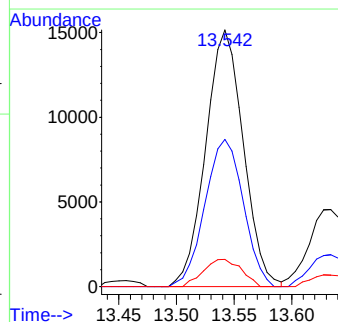
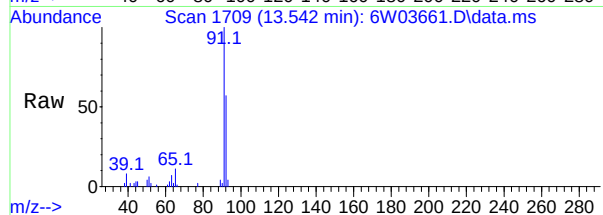
Tgt Ion: 71 Resp: 3754
Ion Ratio Lower Upper
71 100
100 29.6 20.9 38.7
70 55.5 32.1 59.5
57 83.9 60.8 112.8





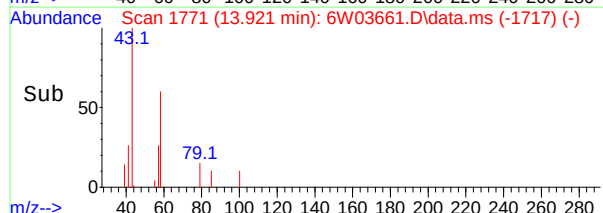
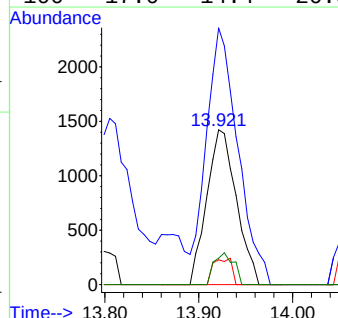
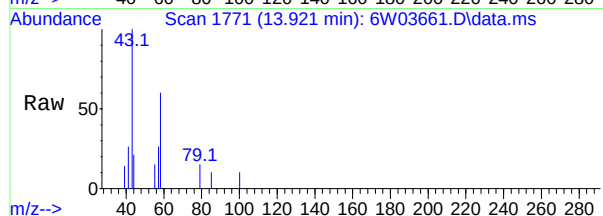
#67
Toluene
Concen: 0.40 ppb(v)
RT: 13.542 min Scan# 1709
Delta R.T. -0.006 min
Lab File: 6W03661.D
Acq: 21 Dec 2017 4:42 pm

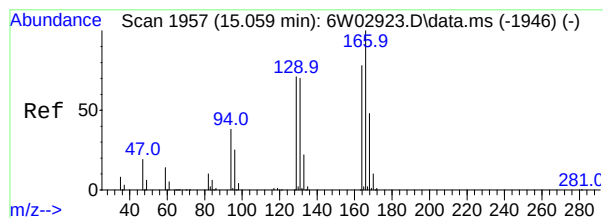
Tgt Ion: 91 Resp: 34404
Ion Ratio Lower Upper
91 100
92 57.3 41.0 76.2
65 10.6 7.8 14.4



#70
2-Hexanone
Concen: 0.11 ppb(v) m
RT: 13.921 min Scan# 1771
Delta R.T. -0.000 min
Lab File: 6W03661.D
Acq: 21 Dec 2017 4:42 pm

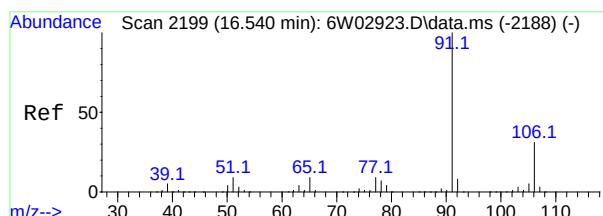
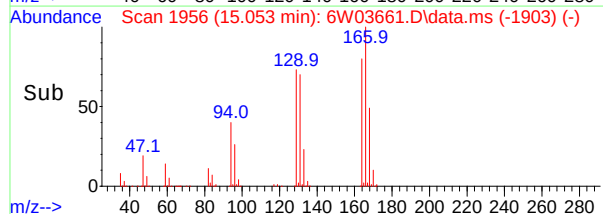
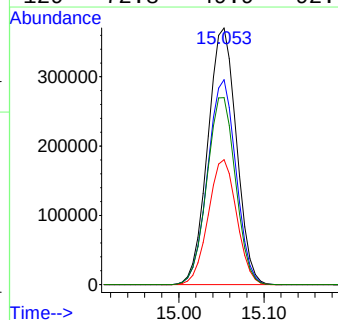
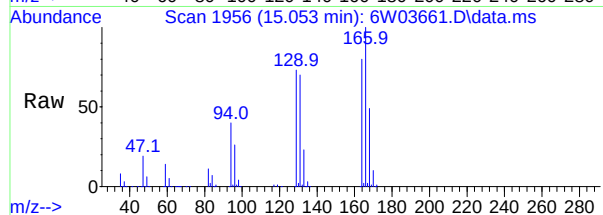
Tgt Ion: 58 Resp: 3103
Ion Ratio Lower Upper
58 100
43 165.9 116.8 217.0
85 16.0 11.1 20.5
100 17.0 14.4 26.8





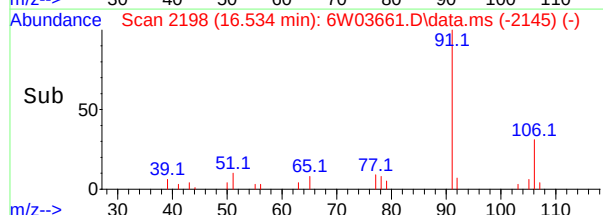
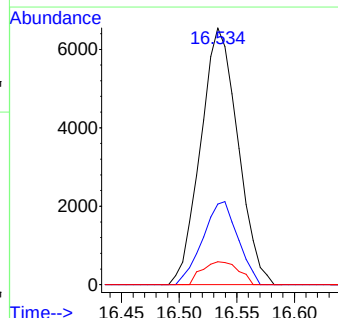
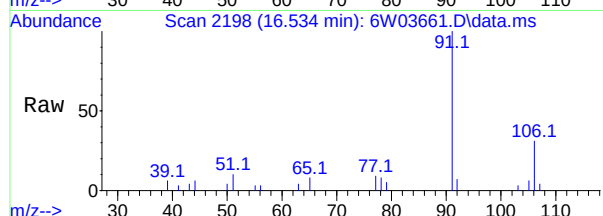
#73
Tetrachloroethene
Concen: 20.23 ppb(v)
RT: 15.053 min Scan# 1956
Delta R.T. -0.006 min
Lab File: 6W03661.D
Acq: 21 Dec 2017 4:42 pm

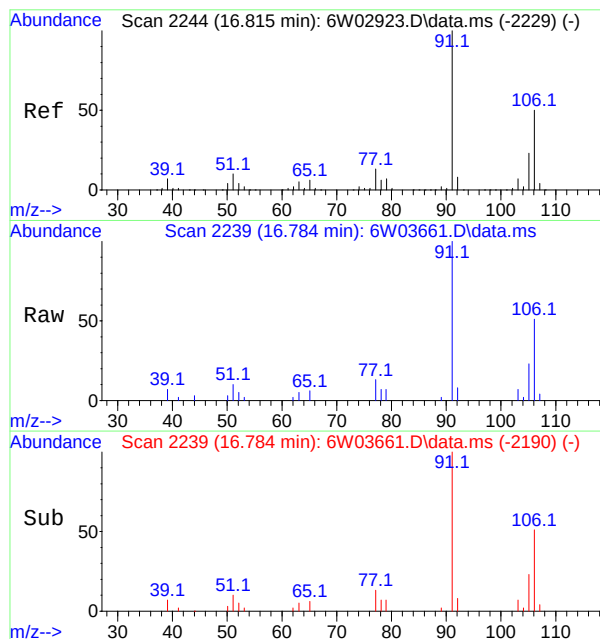
Tgt Ion: 166 Resp: 866658
Ion Ratio Lower Upper
166 100
164 79.9 54.5 101.1
168 48.7 33.9 62.9
129 72.8 49.9 92.7



#79
Ethylbenzene
Concen: 0.15 ppb(v)
RT: 16.534 min Scan# 2198
Delta R.T. -0.006 min
Lab File: 6W03661.D
Acq: 21 Dec 2017 4:42 pm

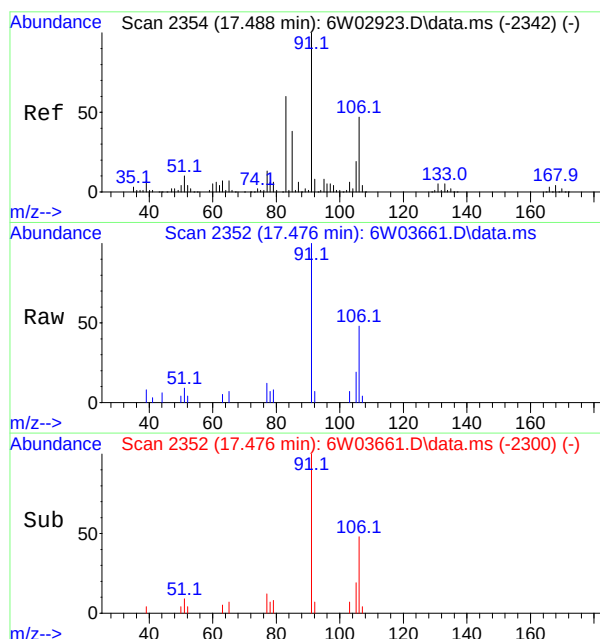
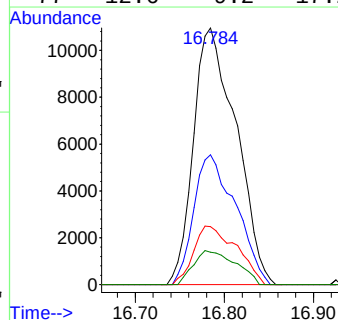
Tgt Ion: 91 Resp: 14695
Ion Ratio Lower Upper
91 100
106 31.4 22.0 41.0
77 8.9 6.0 11.2





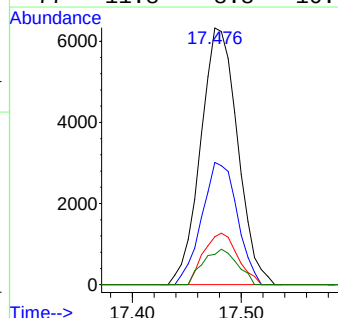
#80
m,p-Xylene
Concen: 0.48 ppb(v)
RT: 16.784 min Scan# 2239
Delta R.T. -0.031 min
Lab File: 6W03661.D
Acq: 21 Dec 2017 4:42 pm

Tgt Ion: 91 Resp: 36409
Ion Ratio Lower Upper
91 100
106 50.6 35.1 65.3
105 22.5 16.0 29.8
77 12.6 9.2 17.2



#83
o-Xylene
Concen: 0.20 ppb(v)
RT: 17.476 min Scan# 2352
Delta R.T. -0.012 min
Lab File: 6W03661.D
Acq: 21 Dec 2017 4:42 pm

Tgt Ion: 91 Resp: 14935
Ion Ratio Lower Upper
91 100
106 47.6 33.2 61.6
105 18.7 13.4 25.0
77 11.8 8.8 16.4



Manual Integration Approval Summary

Sample Number: JC57421-1DUP

Method: TO-15

Lab FileID: 6W03661.D

Analyst approved: 12/22/17 09:46 Dana Tryon

Injection Time: 12/21/17 16:42

Supervisor approved: 12/22/17 10:02 Dana Tryon

Parameter	CAS	Sig#	R.T. (min.)	Reason
2-Hexanone	591-78-6		13.92	Poor instrument integration

7.4.2.1
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03689.D
 Acq On : 22 Dec 2017 7:19 pm
 Operator : DANAT
 Sample : jc57579-2dup
 Misc : MS23313,V6W107,100,,,1
 ALS Vial : 5 Sample Multiplier: 1

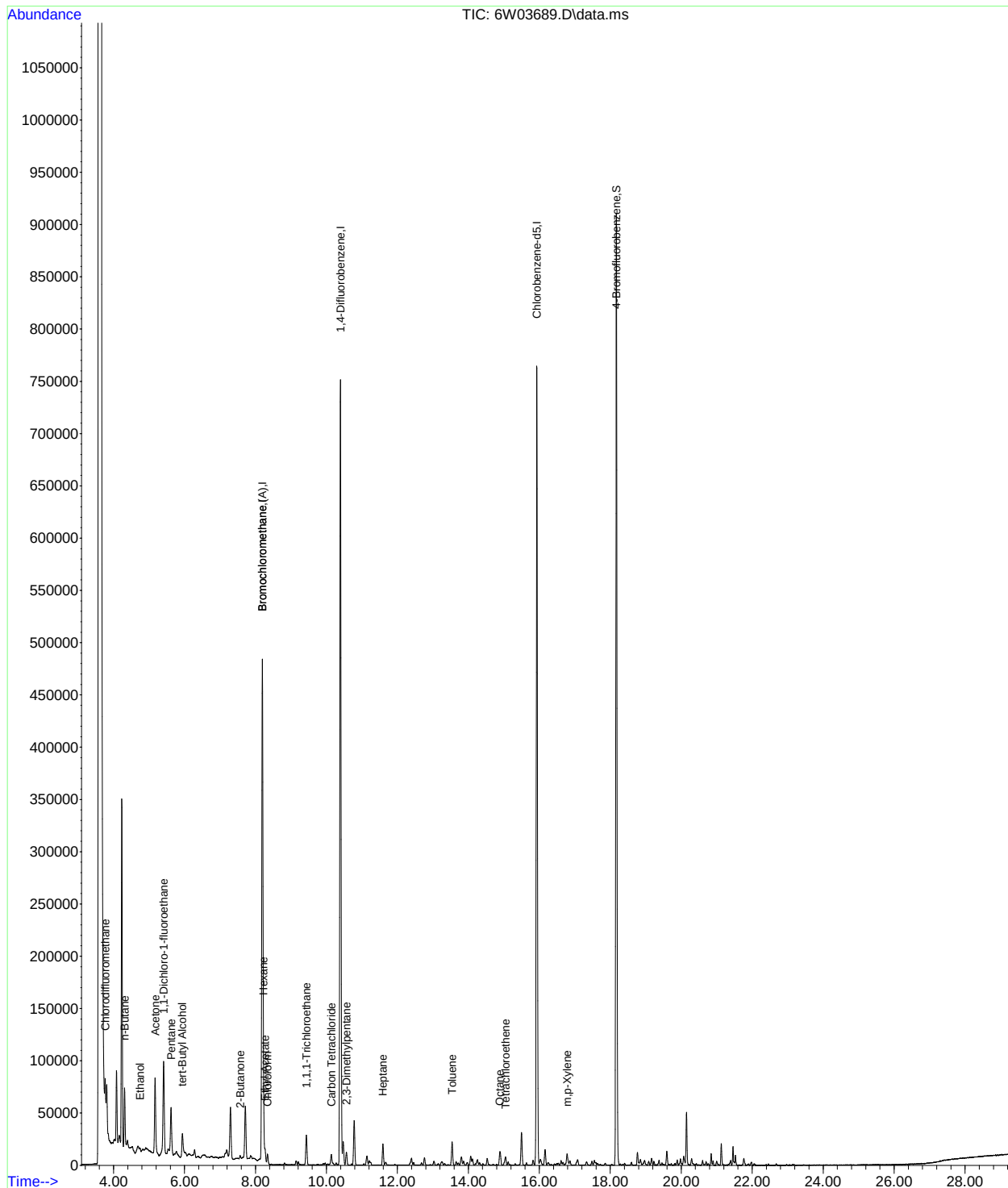
Quant Time: Dec 23 10:59:49 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

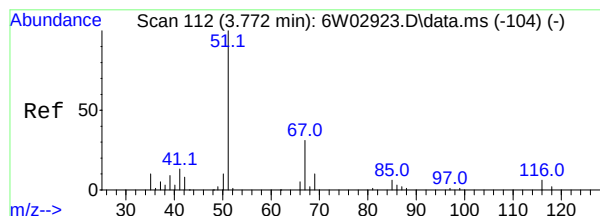
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.195	130	208790	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.397	114	766996	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.928	82	332160	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.195	130	208790	10.00	ppb(v	0.00
System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.173	95	442923	10.35	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	103.50%
Target Compounds						
					Qvalue	
4) Chlorodifluoromethane	3.766	67	6805	1.43	ppb(v	99
13) n-Butane	4.310	58	6703	1.95	ppb(v#	61
22) Acetone	5.173	58	14896	1.41	ppb(v#	32
23) Pentane	5.619	57	5753	1.16	ppb(v	98
24) 1,1-Dichloro-1-fluoroe...	5.411	81	83242	1.94	ppb(v	99
31) Ethanol	4.745	45	6245	1.05	ppb(v	96
35) tert-Butyl Alcohol	5.938	59	26224	0.65	ppb(v	93
39) 2-Butanone	7.571	72	1511	0.14	ppb(v	85
40) Hexane	8.226	57	28672	0.85	ppb(v#	52
43) Ethyl Acetate	8.268	61	2965	0.43	ppb(v	82
45) Chloroform	8.336	83	9771	0.22	ppb(v	97
48) 1,1,1-Trichloroethane	9.437	97	23576	0.58	ppb(v	99
51) Carbon Tetrachloride	10.134	117	7831	0.18	ppb(v	98
53) 2,3-Dimethylpentane	10.563	71	2631	0.18	ppb(v#	93
56) Heptane	11.590	71	6257	0.27	ppb(v	96
67) Toluene	13.542	91	23025	0.28	ppb(v	96
73) Tetrachloroethene	15.047	166	3468	0.08	ppb(v	96
75) Octane	14.882	43	5784	0.12	ppb(v	93
80) m,p-Xylene	16.784	91	10769	0.15	ppb(v	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\
Data File : 6W03689.D
Acq On : 22 Dec 2017 7:19 pm
Operator : DANAT
Sample : jc57579-2dup
Misc : MS23313,V6W107,100,,,1
ALS Vial : 5 Sample Multiplier: 1

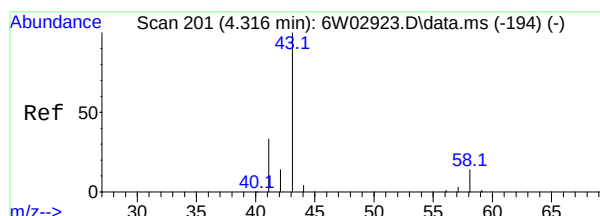
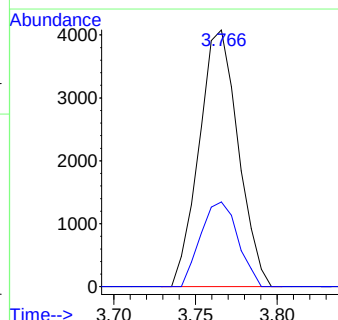
Quant Time: Dec 23 10:59:49 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration





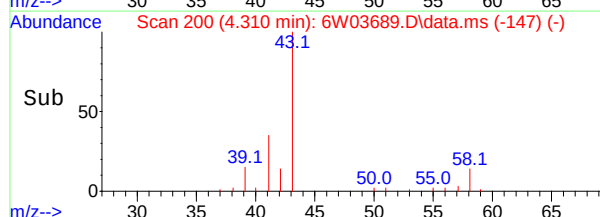
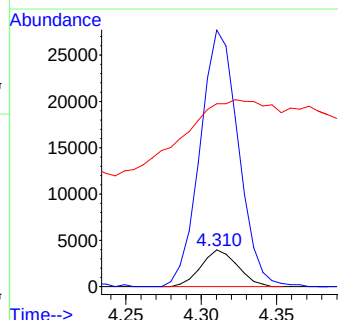
#4
Chlorodifluoromethane
Concen: 1.43 ppb(v)
RT: 3.766 min Scan# 111
Delta R.T. -0.006 min
Lab File: 6W03689.D
Acq: 22 Dec 2017 7:19 pm

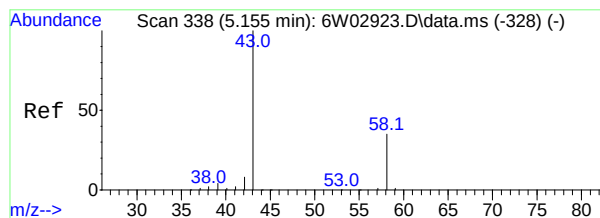
Tgt Ion: 67 Resp: 6805
Ion Ratio Lower Upper
67 100
69 33.0 22.7 42.1



#13
n-Butane
Concen: 1.95 ppb(v)
RT: 4.310 min Scan# 200
Delta R.T. -0.006 min
Lab File: 6W03689.D
Acq: 22 Dec 2017 7:19 pm

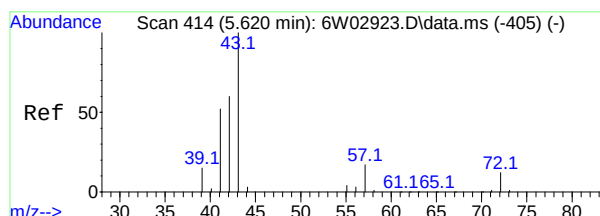
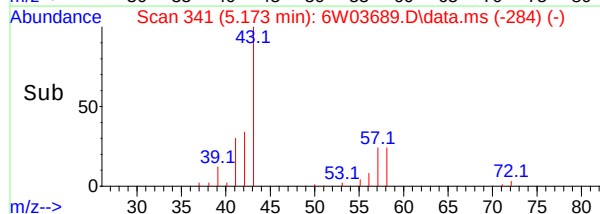
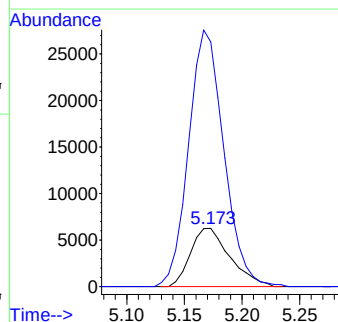
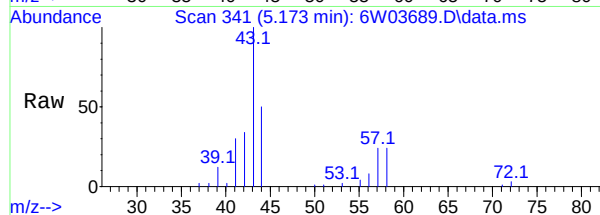
Tgt Ion: 58 Resp: 6703
Ion Ratio Lower Upper
58 100
43 698.4 499.8 928.2
44 497.3 21.1 39.1#





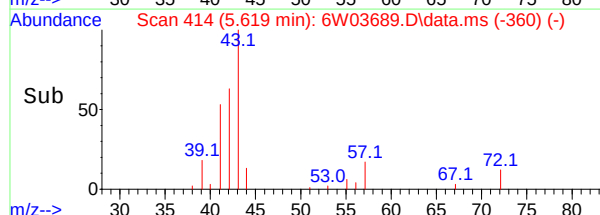
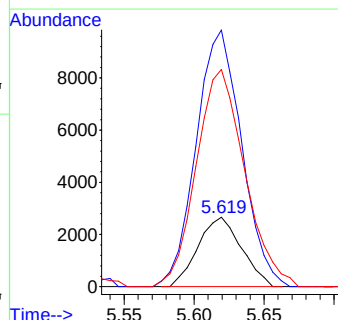
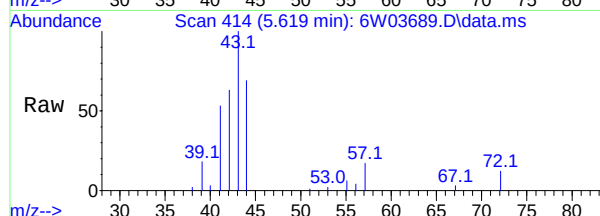
#22
Acetone
Concen: 1.41 ppb(v)
RT: 5.173 min Scan# 341
Delta R.T. 0.018 min
Lab File: 6W03689.D
Acq: 22 Dec 2017 7:19 pm

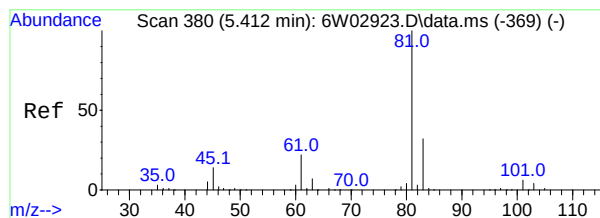
Tgt Ion: 58 Resp: 14896
Ion Ratio Lower Upper
58 100
43 419.2 202.4 375.8#



#23
Pentane
Concen: 1.16 ppb(v)
RT: 5.619 min Scan# 414
Delta R.T. -0.000 min
Lab File: 6W03689.D
Acq: 22 Dec 2017 7:19 pm

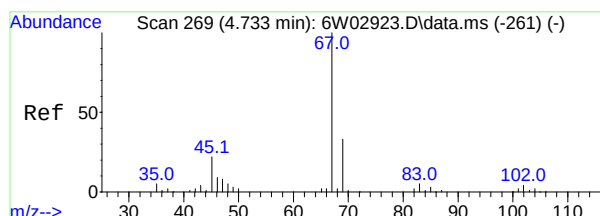
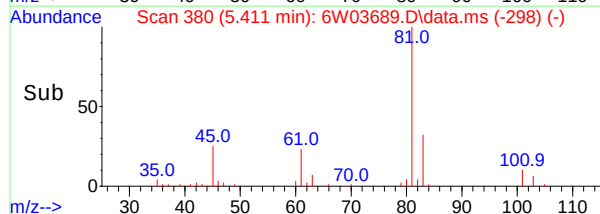
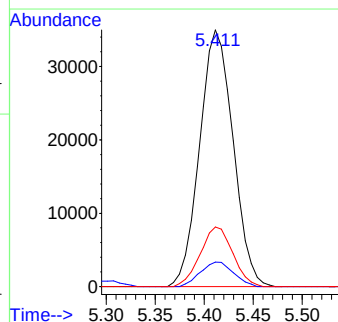
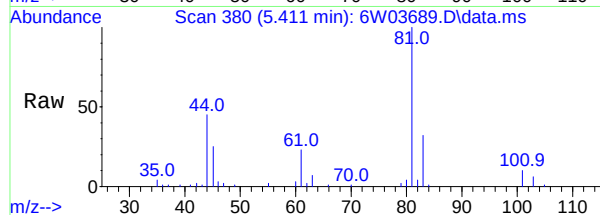
Tgt Ion: 57 Resp: 5753
Ion Ratio Lower Upper
57 100
42 370.1 252.4 468.8
41 313.0 218.7 406.1





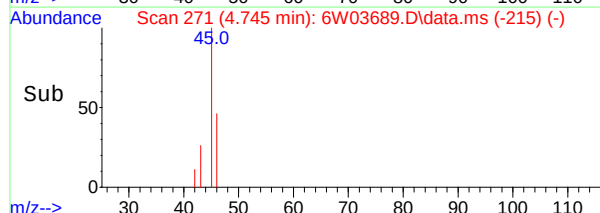
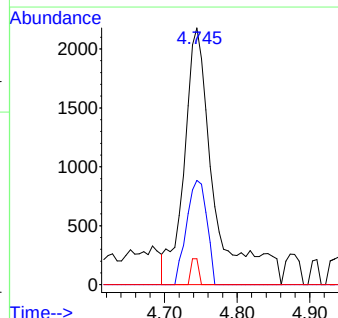
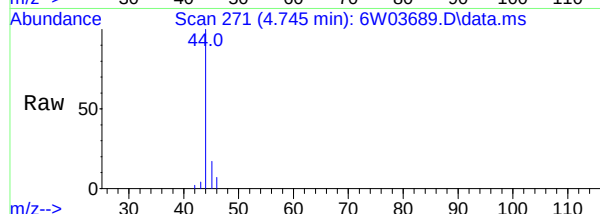
#24
1,1-Dichloro-1-fluoroethane
Concen: 1.94 ppb(v)
RT: 5.411 min Scan# 380
Delta R.T. -0.000 min
Lab File: 6W03689.D
Acq: 22 Dec 2017 7:19 pm

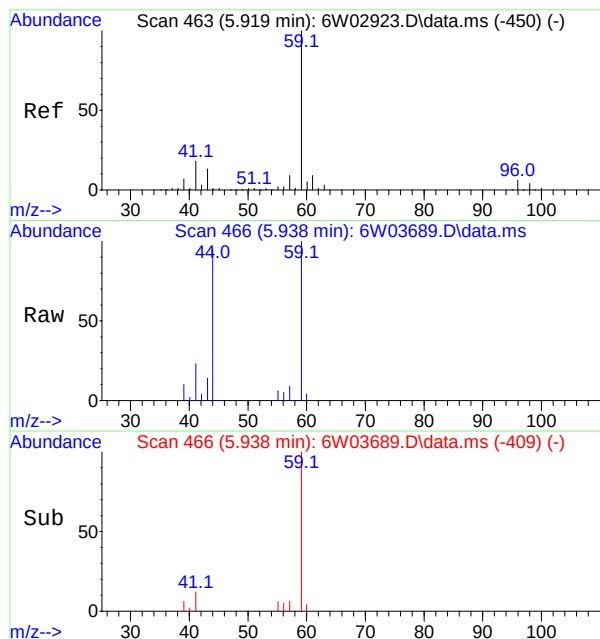
Tgt Ion: 81 Resp: 83242
Ion Ratio Lower Upper
81 100
101 9.5 8.0 12.0
61 22.6 17.8 26.6



#31
Ethanol
Concen: 1.05 ppb(v)
RT: 4.745 min Scan# 271
Delta R.T. 0.012 min
Lab File: 6W03689.D
Acq: 22 Dec 2017 7:19 pm

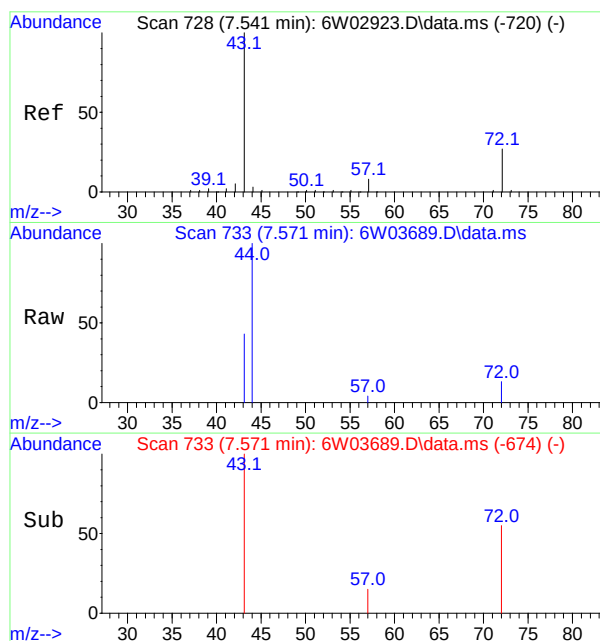
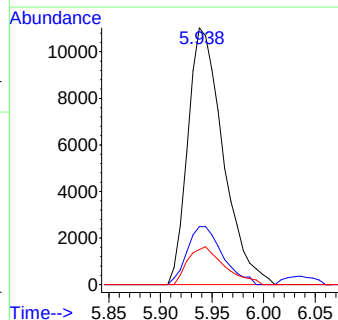
Tgt Ion: 45 Resp: 6245
Ion Ratio Lower Upper
45 100
46 40.7 27.2 50.4
42 10.1 5.6 10.4





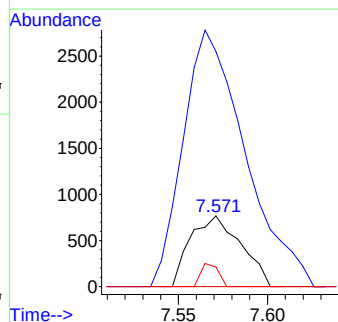
#35
tert-Butyl Alcohol
Concen: 0.65 ppb(v)
RT: 5.938 min Scan# 466
Delta R.T. 0.018 min
Lab File: 6W03689.D
Acq: 22 Dec 2017 7:19 pm

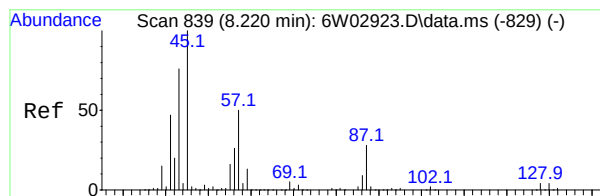
Tgt Ion: 59 Resp: 26224
Ion Ratio Lower Upper
59 100
41 22.6 12.7 23.7
43 13.7 8.8 16.4



#39
2-Butanone
Concen: 0.14 ppb(v)
RT: 7.571 min Scan# 733
Delta R.T. 0.030 min
Lab File: 6W03689.D
Acq: 22 Dec 2017 7:19 pm

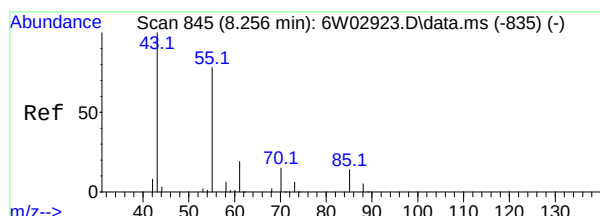
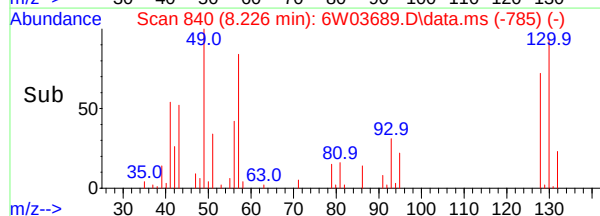
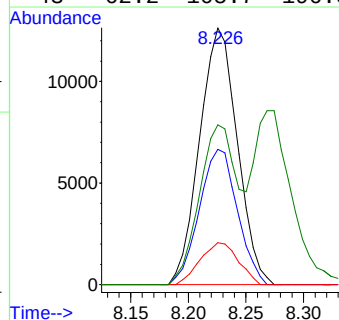
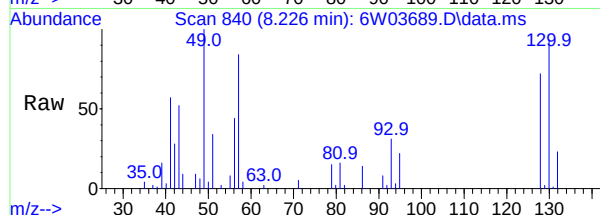
Tgt Ion: 72 Resp: 1511
Ion Ratio Lower Upper
72 100
43 332.0 257.4 478.0
57 27.7 21.0 39.0





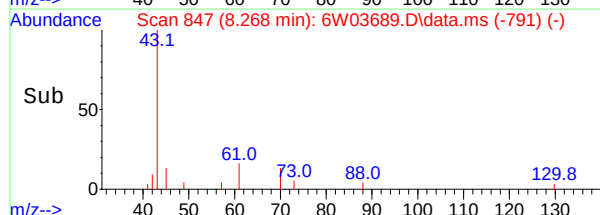
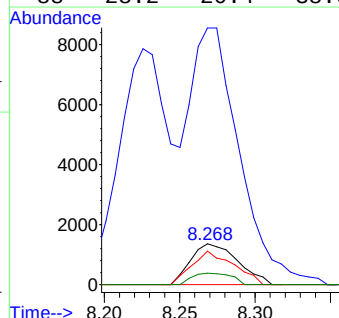
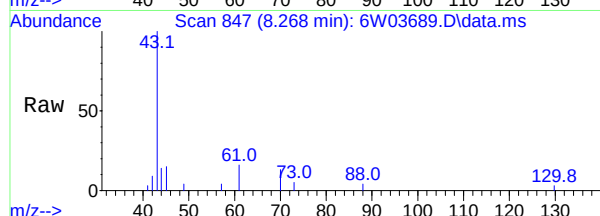
#40
Hexane
Concen: 0.85 ppb(v)
RT: 8.226 min Scan# 840
Delta R.T. 0.006 min
Lab File: 6W03689.D
Acq: 22 Dec 2017 7:19 pm

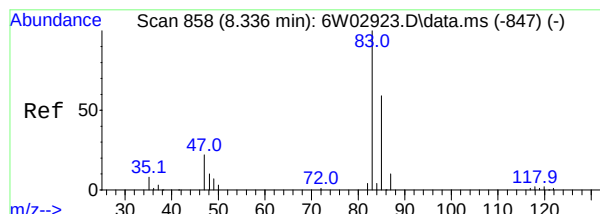
Tgt Ion: 57 Resp: 28672
Ion Ratio Lower Upper
57 100
56 52.7 36.0 67.0
86 16.4 12.1 22.5
43 62.2 105.7 196.3#



#43
Ethyl Acetate
Concen: 0.43 ppb(v)
RT: 8.268 min Scan# 847
Delta R.T. 0.012 min
Lab File: 6W03689.D
Acq: 22 Dec 2017 7:19 pm

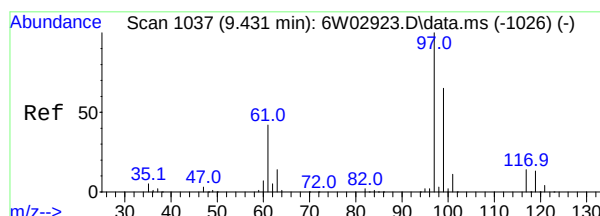
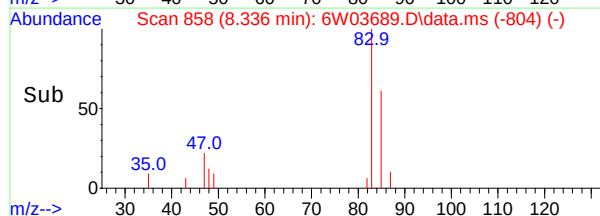
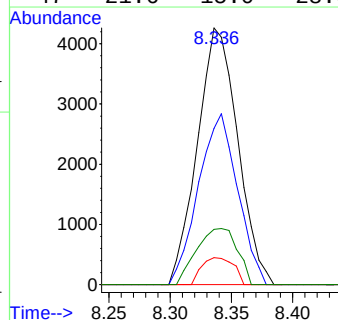
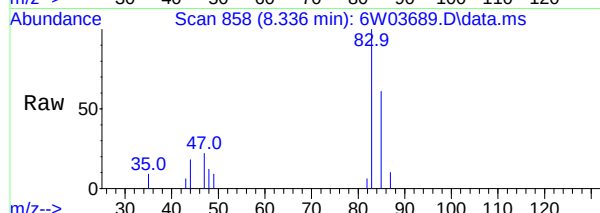
Tgt Ion: 61 Resp: 2965
Ion Ratio Lower Upper
61 100
43 627.8 488.5 907.1
70 82.0 54.9 101.9
88 28.2 20.4 38.0





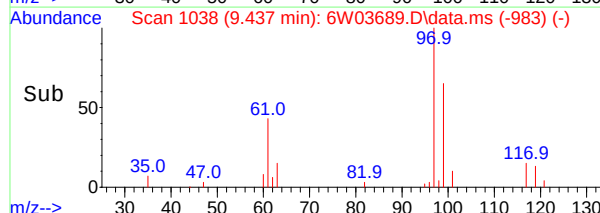
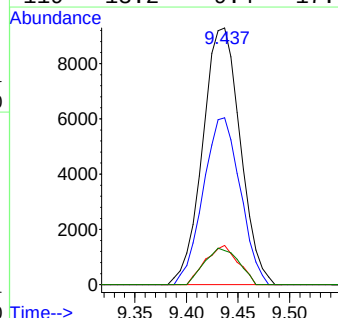
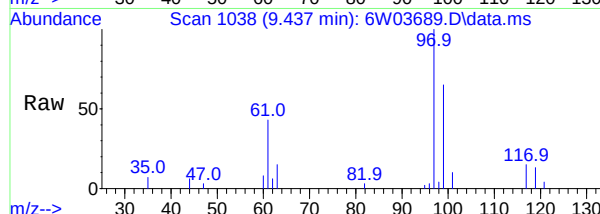
#45
Chloroform
Concen: 0.22 ppb(v)
RT: 8.336 min Scan# 858
Delta R.T. -0.000 min
Lab File: 6W03689.D
Acq: 22 Dec 2017 7:19 pm

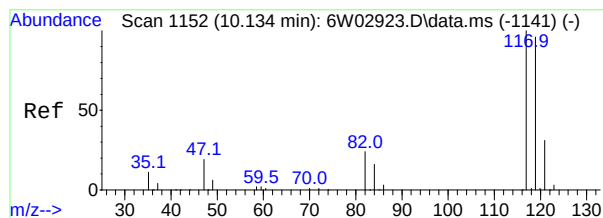
Tgt Ion: 83 Resp: 9771
Ion Ratio Lower Upper
83 100
85 60.8 45.2 84.0
87 10.5 7.3 13.7
47 21.6 15.0 28.0



#48
1,1,1-Trichloroethane
Concen: 0.58 ppb(v)
RT: 9.437 min Scan# 1038
Delta R.T. 0.006 min
Lab File: 6W03689.D
Acq: 22 Dec 2017 7:19 pm

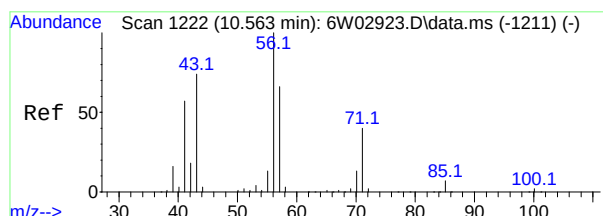
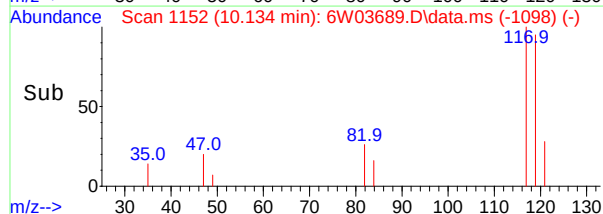
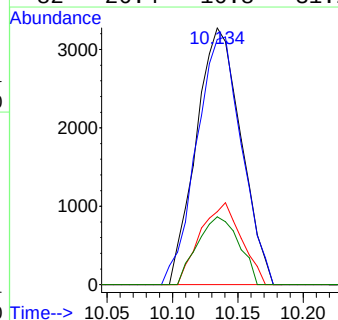
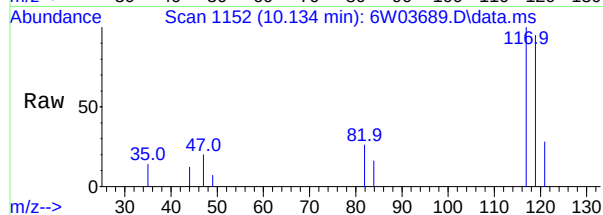
Tgt Ion: 97 Resp: 23576
Ion Ratio Lower Upper
97 100
99 64.9 45.4 84.2
117 15.2 9.9 18.3
119 13.2 9.4 17.4





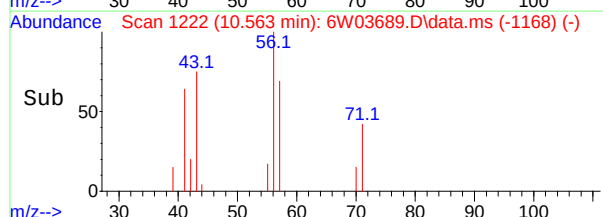
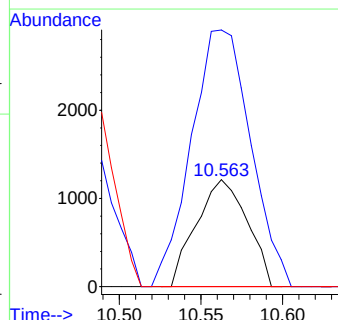
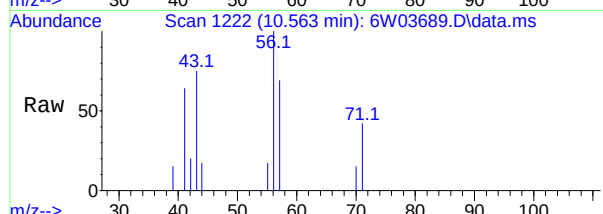
#51
Carbon Tetrachloride
Concen: 0.18 ppb(v)
RT: 10.134 min Scan# 1152
Delta R.T. -0.000 min
Lab File: 6W03689.D
Acq: 22 Dec 2017 7:19 pm

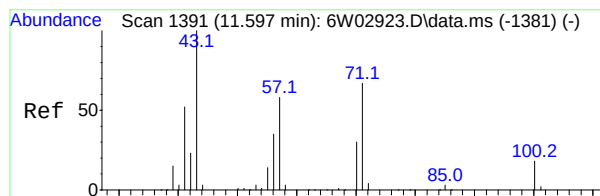
Tgt Ion: 117 Resp: 7831
Ion Ratio Lower Upper
117 100
119 95.5 67.4 125.2
121 28.4 21.9 40.7
82 26.4 16.8 31.2



#53
2,3-Dimethylpentane
Concen: 0.18 ppb(v)
RT: 10.563 min Scan# 1222
Delta R.T. -0.000 min
Lab File: 6W03689.D
Acq: 22 Dec 2017 7:19 pm

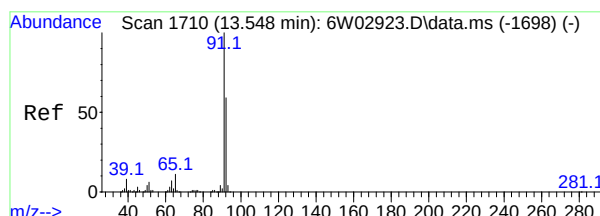
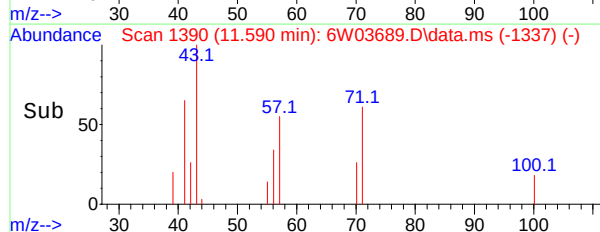
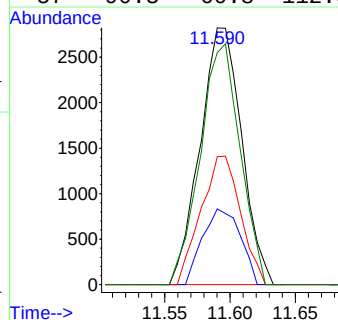
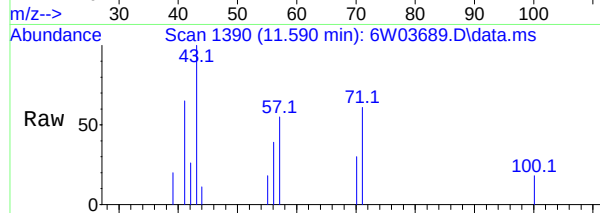
Tgt Ion: 71 Resp: 2631
Ion Ratio Lower Upper
71 100
56 239.7 173.9 323.1
85 0.0 11.5 21.3#





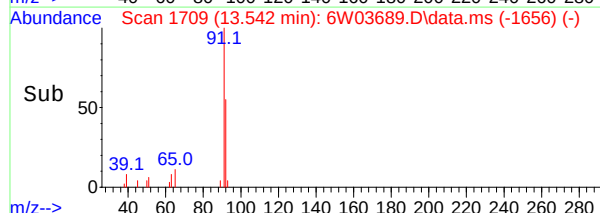
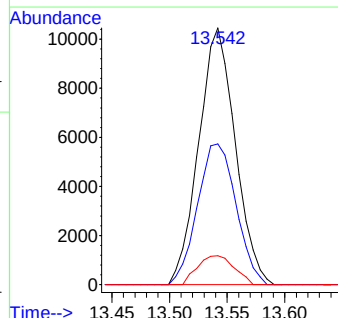
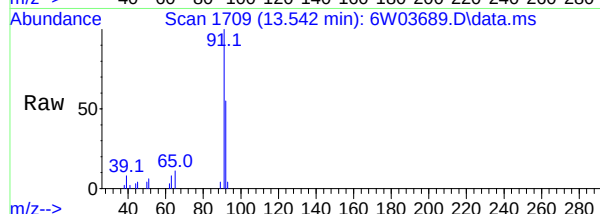
#56
Heptane
Concen: 0.27 ppb(v)
RT: 11.590 min Scan# 1390
Delta R.T. -0.006 min
Lab File: 6W03689.D
Acq: 22 Dec 2017 7:19 pm

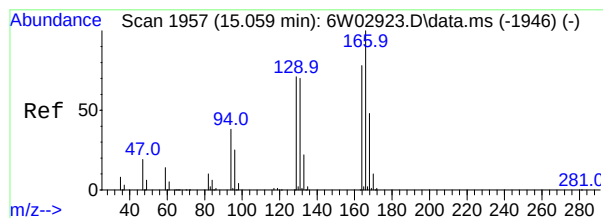
Tgt Ion: 71 Resp: 6257
Ion Ratio Lower Upper
71 100
100 29.5 20.9 38.7
70 49.9 32.1 59.5
57 90.3 60.8 112.8



#67
Toluene
Concen: 0.28 ppb(v)
RT: 13.542 min Scan# 1709
Delta R.T. -0.006 min
Lab File: 6W03689.D
Acq: 22 Dec 2017 7:19 pm

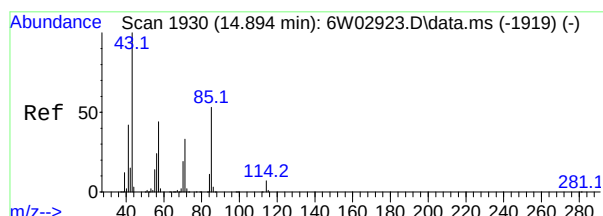
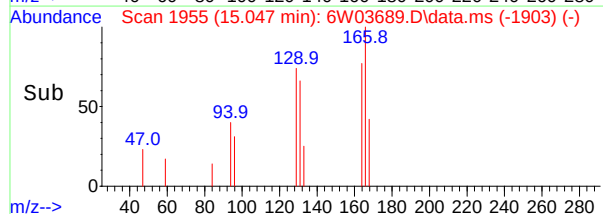
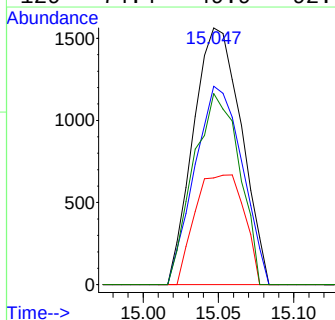
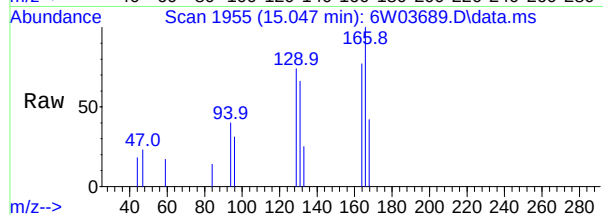
Tgt Ion: 91 Resp: 23025
Ion Ratio Lower Upper
91 100
92 54.8 41.0 76.2
65 11.3 7.8 14.4





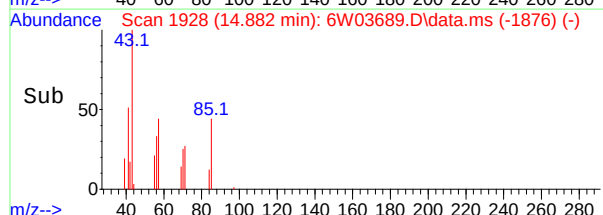
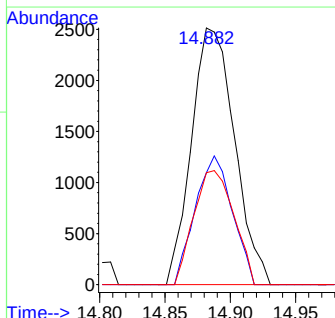
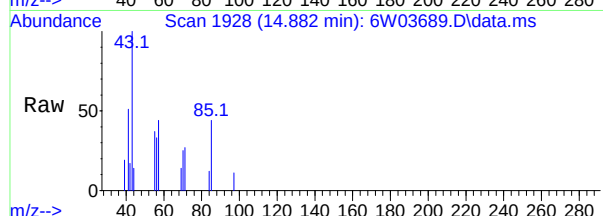
#73
Tetrachloroethene
Concen: 0.08 ppb(v)
RT: 15.047 min Scan# 1955
Delta R.T. -0.012 min
Lab File: 6W03689.D
Acq: 22 Dec 2017 7:19 pm

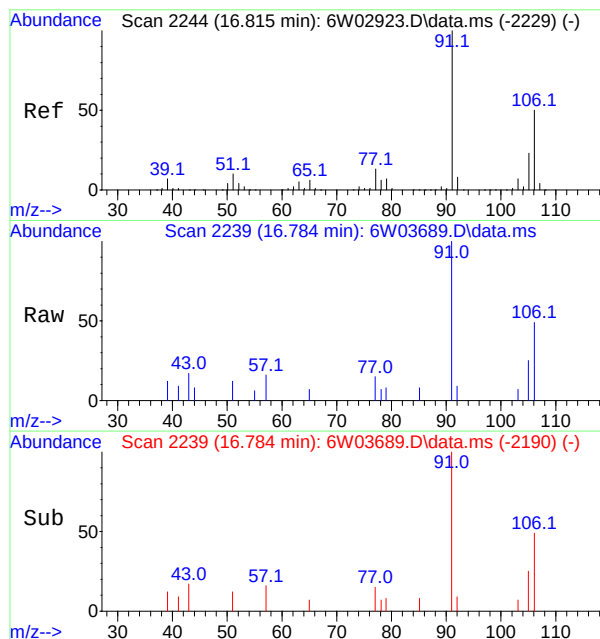
Tgt Ion: 166 Resp: 3468
Ion Ratio Lower Upper
166 100
164 77.2 54.5 101.1
168 41.6 33.9 62.9
129 74.4 49.9 92.7



#75
Octane
Concen: 0.12 ppb(v)
RT: 14.882 min Scan# 1928
Delta R.T. -0.012 min
Lab File: 6W03689.D
Acq: 22 Dec 2017 7:19 pm

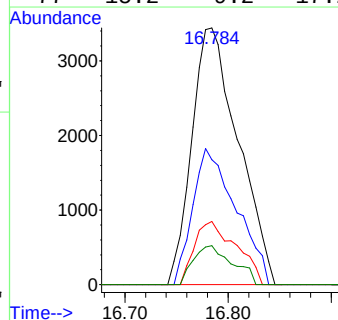
Tgt Ion: 43 Resp: 5784
Ion Ratio Lower Upper
43 100
85 43.6 36.8 68.4
57 43.6 30.7 56.9





#80
m,p-Xylene
Concen: 0.15 ppb(v)
RT: 16.784 min Scan# 2239
Delta R.T. -0.031 min
Lab File: 6W03689.D
Acq: 22 Dec 2017 7:19 pm

Tgt Ion: 91 Resp: 10769
Ion Ratio Lower Upper
91 100
106 48.6 35.1 65.3
105 24.6 16.0 29.8
77 15.2 9.2 17.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5W27738.D
Acq On : 9 Nov 2017 3:32 am
Operator : thomash
Sample : scc(a851)
Misc : MS21947,v5w1090,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 09 08:25:57 2017
Quant Method : C:\msdchem\1\methods\m5w1065.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Sat Oct 07 09:10:30 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.169	130	270056	10.00	ppb(v)	0.00
54) 1,4-Difluorobenzene	10.286	114	864925	10.00	ppb(v)	0.00
77) Chlorobenzene-d5	15.761	82	354804	10.00	ppb(v)	0.00
108) Bromochloromethane (A)	8.169	130	270056	10.00	ppb(v)	0.00

System Monitoring Compounds

91) 4-Bromofluorobenzene	17.994	95	462542	9.27	ppb(v)	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	92.70%

Target Compounds	Qvalue

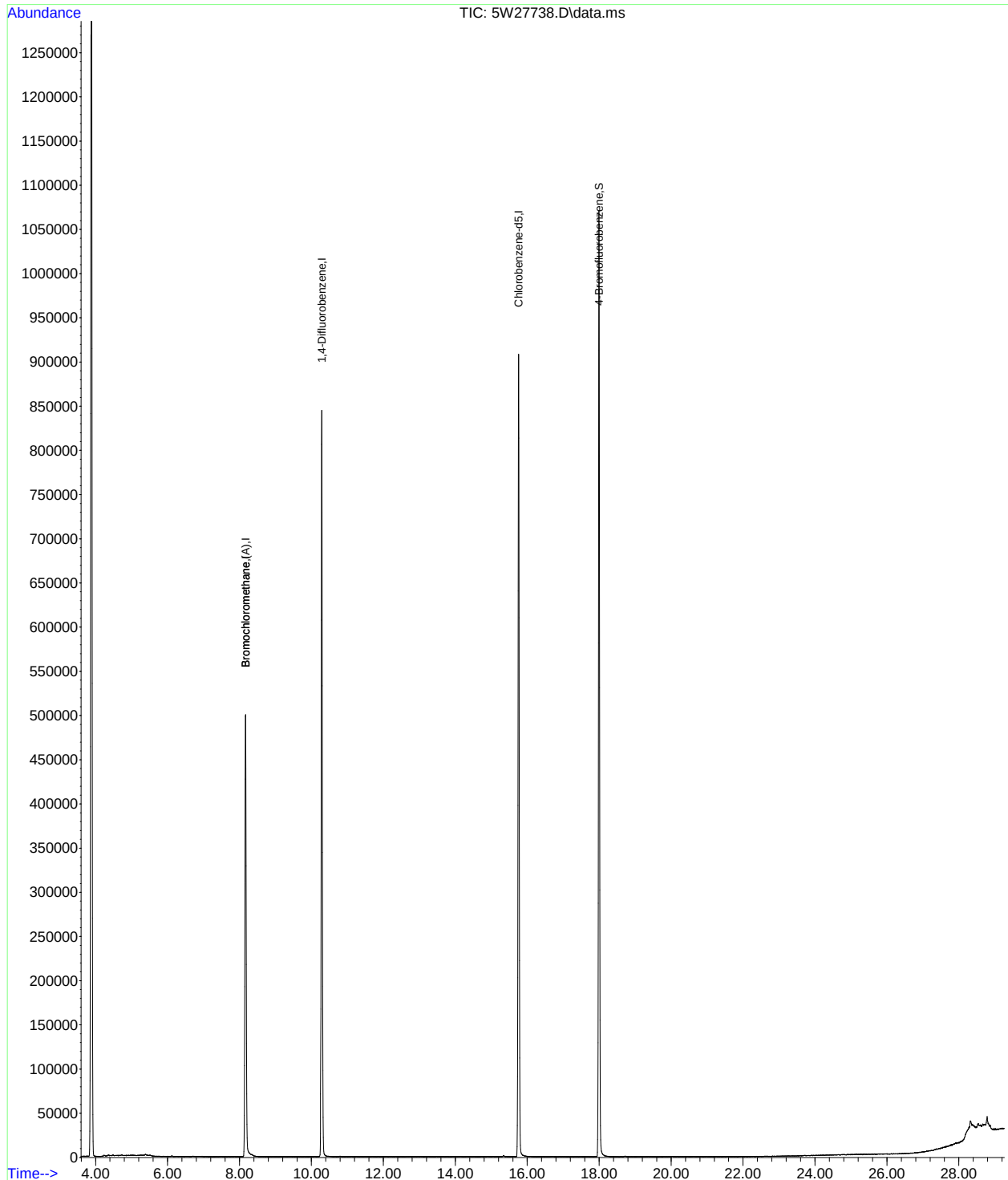
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.5.1

7

Data Path : C:\msdchem\1\data\
Data File : 5W27738.D
Acq On : 9 Nov 2017 3:32 am
Operator : thomash
Sample : scc(a851)
Misc : MS21947,v5w1090,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 09 08:25:57 2017
Quant Method : C:\msdchem\1\methods\m5w1065.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Sat Oct 07 09:10:30 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5W27816.D
Acq On : 14 Nov 2017 1:34 am
Operator : thomash
Sample : scc(m207)
Misc : MS22061,v5w1093,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 14 08:29:12 2017
Quant Method : C:\msdchem\1\methods\m5w1065.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Sat Oct 07 09:10:30 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.138	130	215292	10.00	ppb(v)	-0.04
54) 1,4-Difluorobenzene	10.267	114	661623	10.00	ppb(v)	-0.02
77) Chlorobenzene-d5	15.755	82	268834	10.00	ppb(v)	-0.01
108) Bromochloromethane (A)	8.138	130	215292	10.00	ppb(v)	-0.04

System Monitoring Compounds
91) 4-Bromofluorobenzene 17.994 95 354395 9.37 ppb(v) 0.00
Spiked Amount 10.000 Range 65 - 128 Recovery = 93.70%

Target Compounds	Qvalue

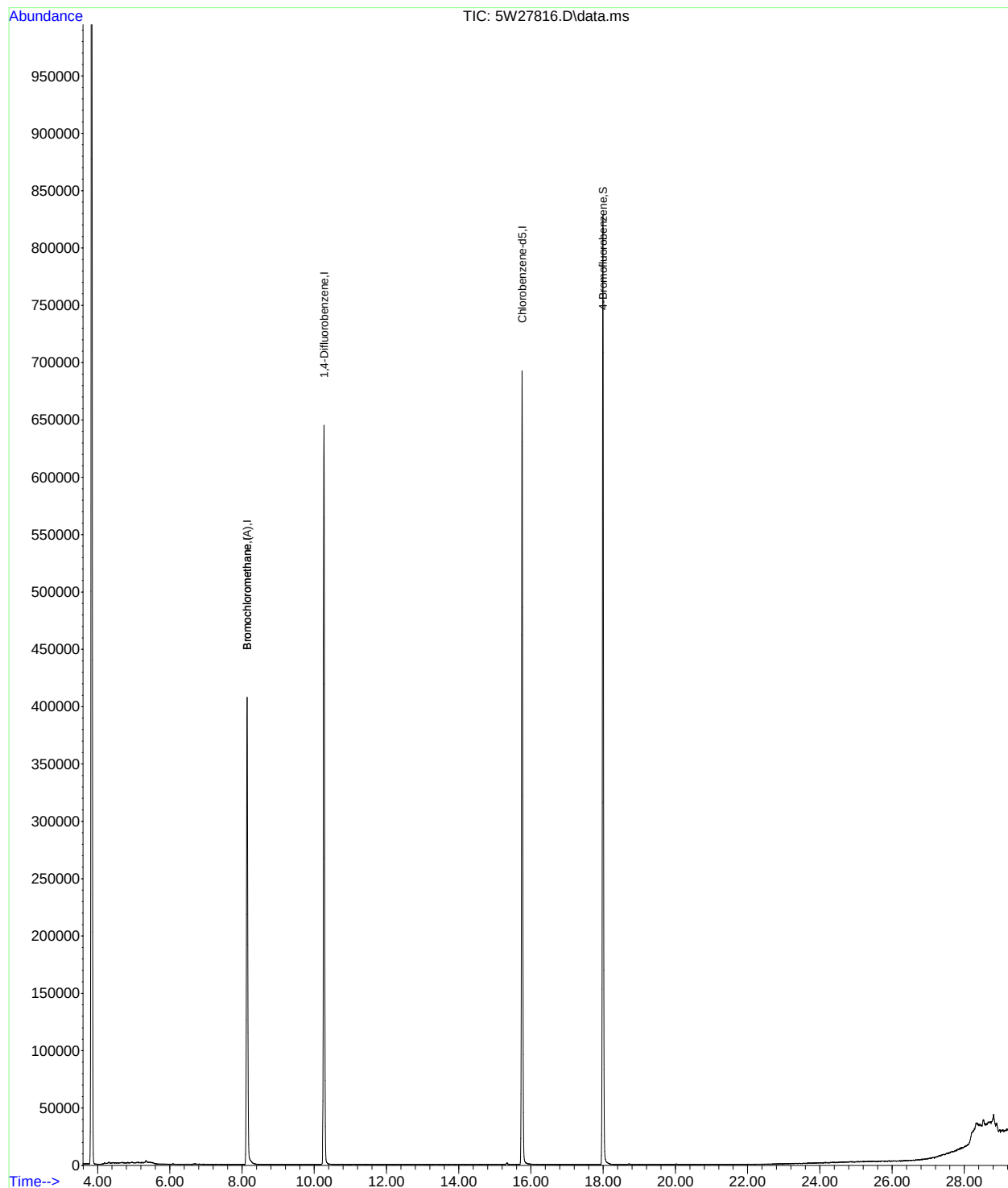
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.5.2

7

Data Path : C:\msdchem\1\data\
Data File : 5W27816.D
Acq On : 14 Nov 2017 1:34 am
Operator : thomash
Sample : scc(m207)
Misc : MS22061,v5w1093,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 14 08:29:12 2017
Quant Method : C:\msdchem\1\methods\m5w1065.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Sat Oct 07 09:10:30 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W03156.D
Acq On : 21 Nov 2017 5:38 pm
Operator : DANAT
Sample : scc(a902)
Misc : MS21692,V6W86,400,,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 22 09:21:03 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.189	130	205413	10.00	ppb(v)	0.00
54) 1,4-Difluorobenzene	10.391	114	772903	10.00	ppb(v)	0.00
77) Chlorobenzene-d5	15.934	82	352984	10.00	ppb(v)	0.00
108) Bromochloromethane (A)	8.189	130	205413	10.00	ppb(v)	0.00

System Monitoring Compounds
91) 4-Bromofluorobenzene 18.173 95 415980 9.14 ppb(v) 0.00
Spiked Amount 10.000 Range 65 - 128 Recovery = 91.40%

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

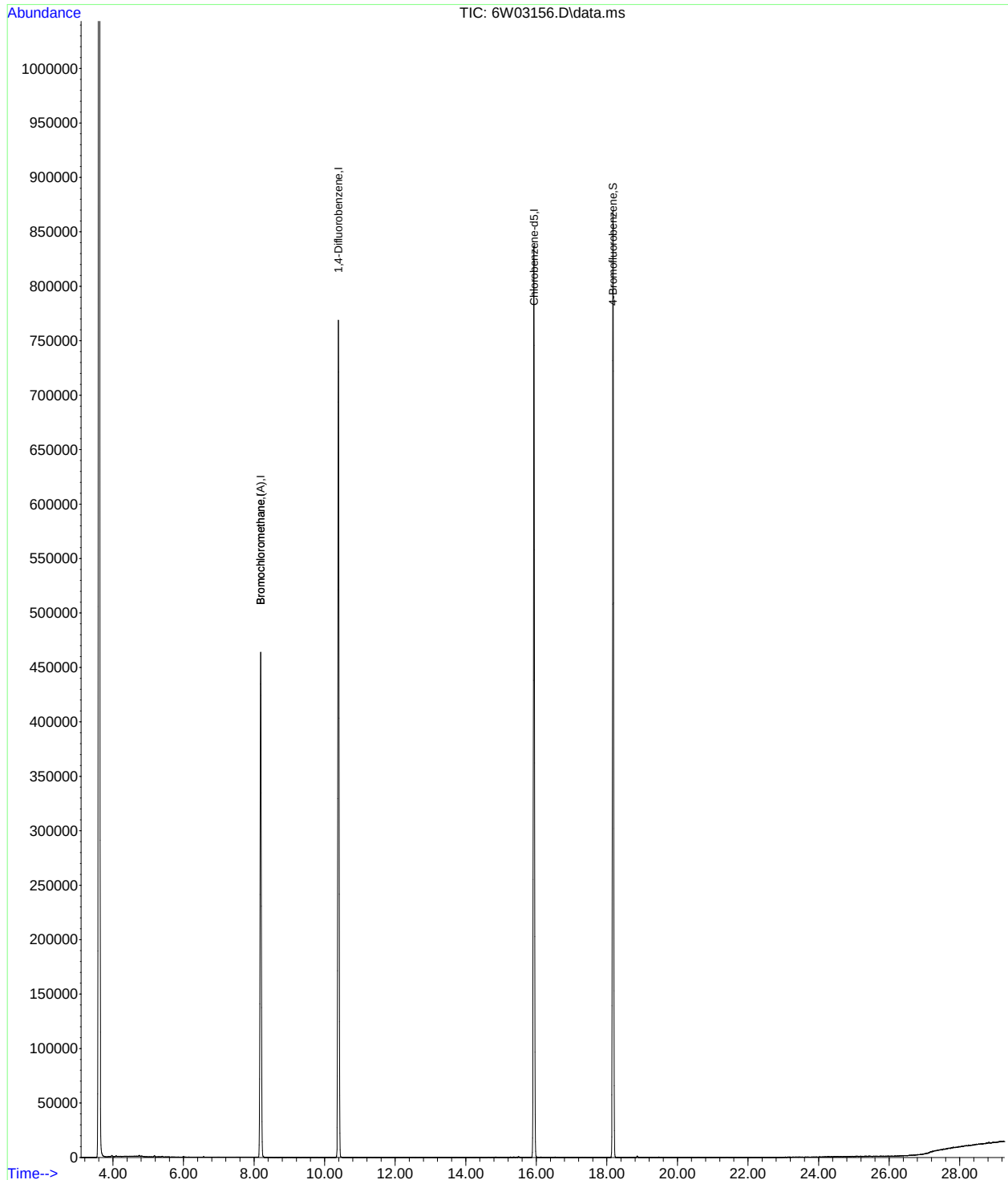
7.5.3

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W03156.D
Acq On : 21 Nov 2017 5:38 pm
Operator : DANAT
Sample : SCC(a902)
Misc : MS21692,V6W86,400,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 22 09:21:03 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5W27985.D
Acq On : 22 Nov 2017 7:07 pm
Operator : thomash
Sample : scc(m257)
Misc : MS22061,v5w1099,,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 27 08:46:12 2017
Quant Method : C:\msdchem\1\methods\m5w1097.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Mon Nov 20 10:49:33 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.163	130	303836	10.00	ppb(v)	-0.01
54) 1,4-Difluorobenzene	10.280	114	1076559	10.00	ppb(v)	-0.01
77) Chlorobenzene-d5	15.755	82	464650	10.00	ppb(v)	0.00
108) Bromochloromethane (A)	8.163	130	304159	10.00	ppb(v)	-0.01

System Monitoring Compounds
91) 4-Bromofluorobenzene 17.994 95 602284 9.78 ppb(v) 0.00
Spiked Amount 10.000 Range 65 - 128 Recovery = 97.80%

Target Compounds	Qvalue

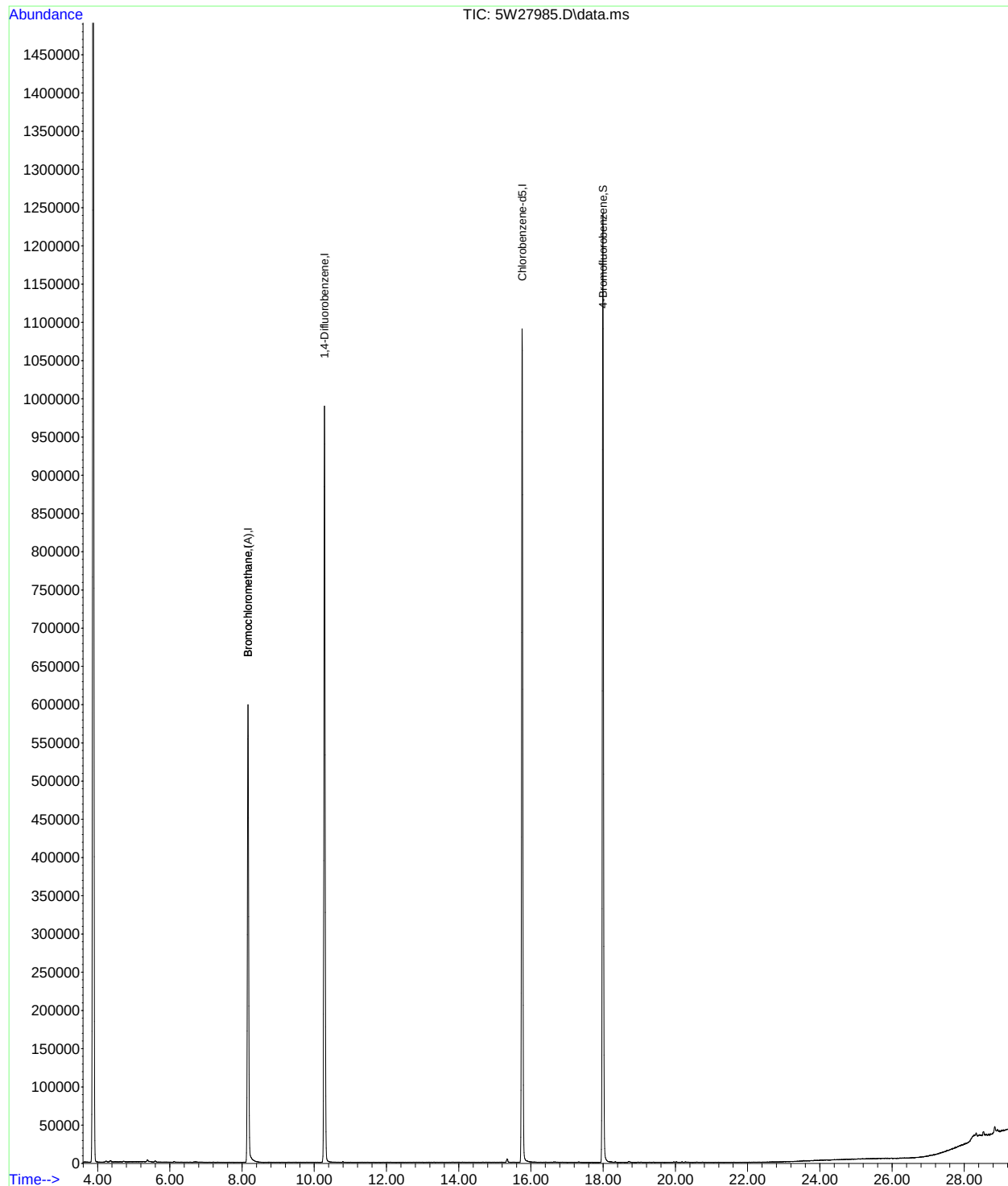
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.5.4

7

Data Path : C:\msdchem\1\data\
Data File : 5W27985.D
Acq On : 22 Nov 2017 7:07 pm
Operator : thomash
Sample : scc(m257)
Misc : MS22061,v5w1099,,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 27 08:46:12 2017
Quant Method : C:\msdchem\1\methods\m5w1097.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Mon Nov 20 10:49:33 2017
Response via : Initial Calibration

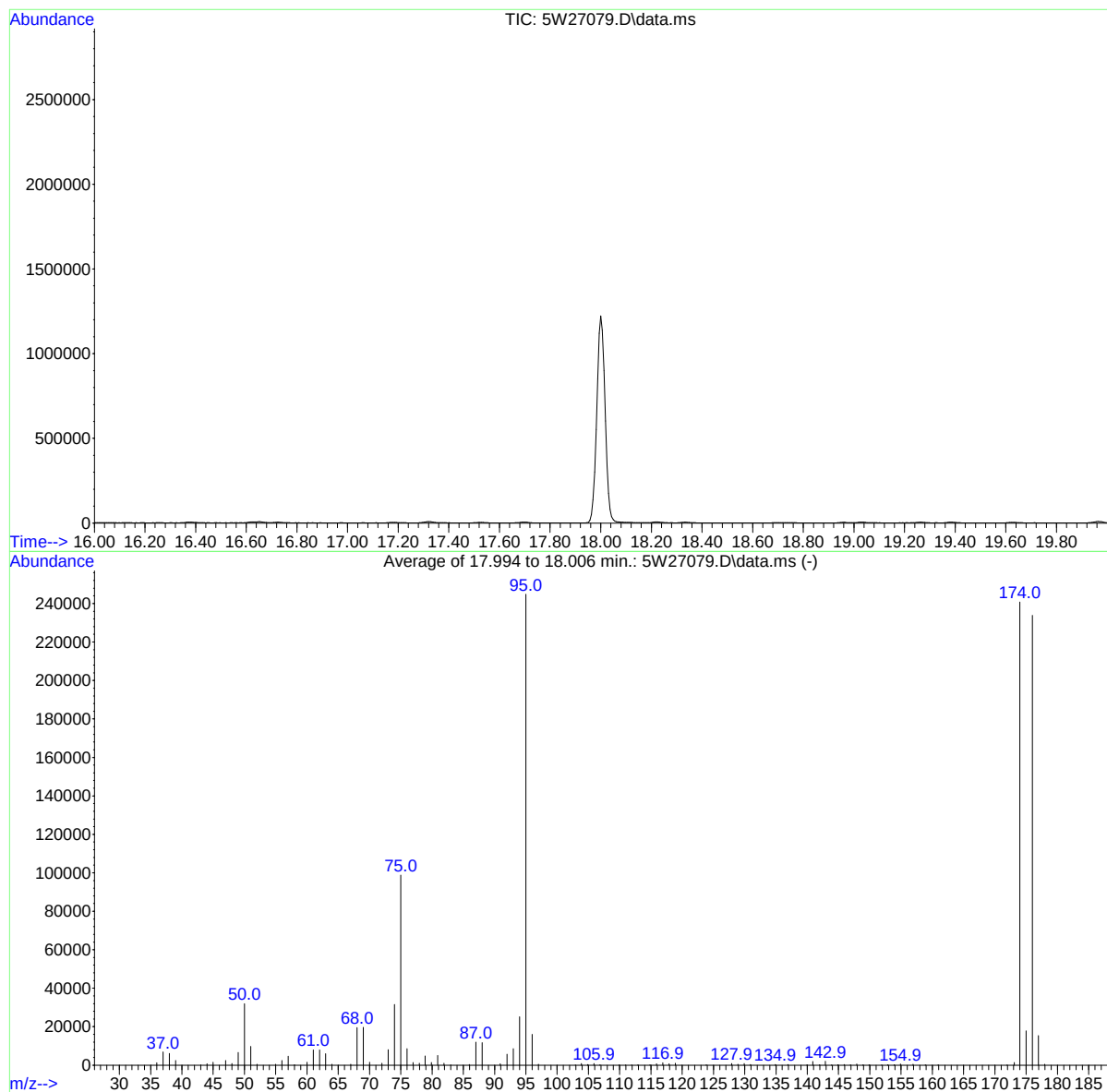


BFB

Data File : C:\msdchem\1\data\5W27079.D
Acq On : 6 Oct 2017 12:05 pm
Sample : bfb
Misc : MS20430,v5w1065,,,,,1
MS Integration Params: Rteint.p

Vial: 1
Operator: thomash
Inst : Air5w
Multiplr: 1.00

Method : C:\msdchem\1\methods\m5w1065.M (RTE Integrator)
Title : T0-15 Full Scan Mode



AutoFind: Scans 2355, 2356, 2357; Background Corrected with Scan 2344

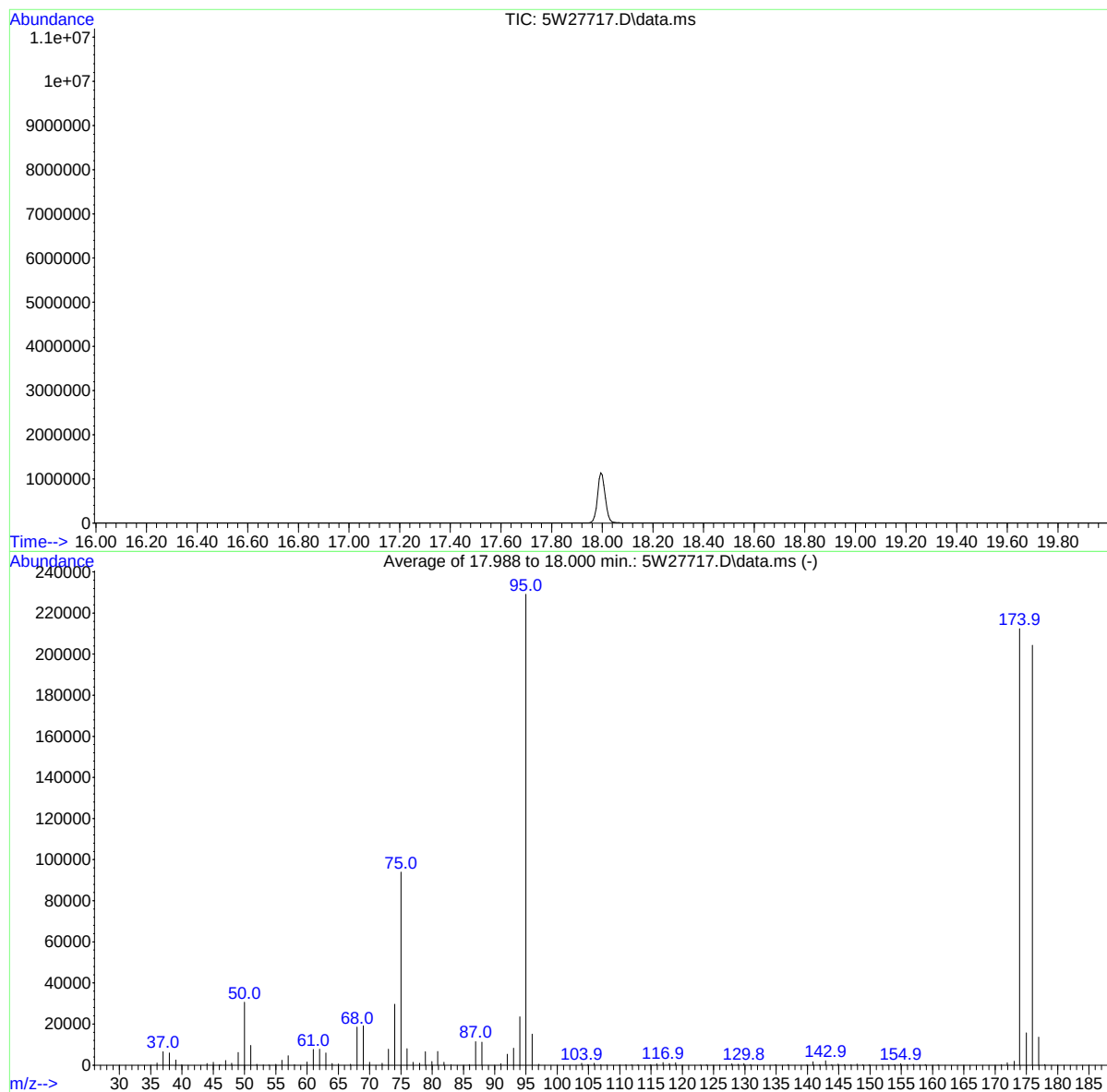
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	13.0	31941	PASS
75	95	30	66	40.4	98781	PASS
95	95	100	100	100.0	244800	PASS
96	95	5	9	6.6	16052	PASS
173	174	0.00	2	0.6	1412	PASS
174	95	50	120	98.4	240832	PASS
175	174	4	9	7.4	17781	PASS
176	174	93	101	97.1	233813	PASS
177	176	5	9	6.5	15298	PASS

BFB

Data File : C:\msdchem\1\data\5W27717.D
Acq On : 8 Nov 2017 8:55 am
Sample : bfb
Misc : MS21792,v5w1090,,,,,1
MS Integration Params: Rteint.p

Vial: 1
Operator: thomash
Inst : Air5w
Multiplr: 1.00

Method : C:\msdchem\1\methods\m5w1065.M (RTE Integrator)
Title : T0-15 Full Scan Mode



AutoFind: Scans 2354, 2355, 2356; Background Corrected with Scan 2344

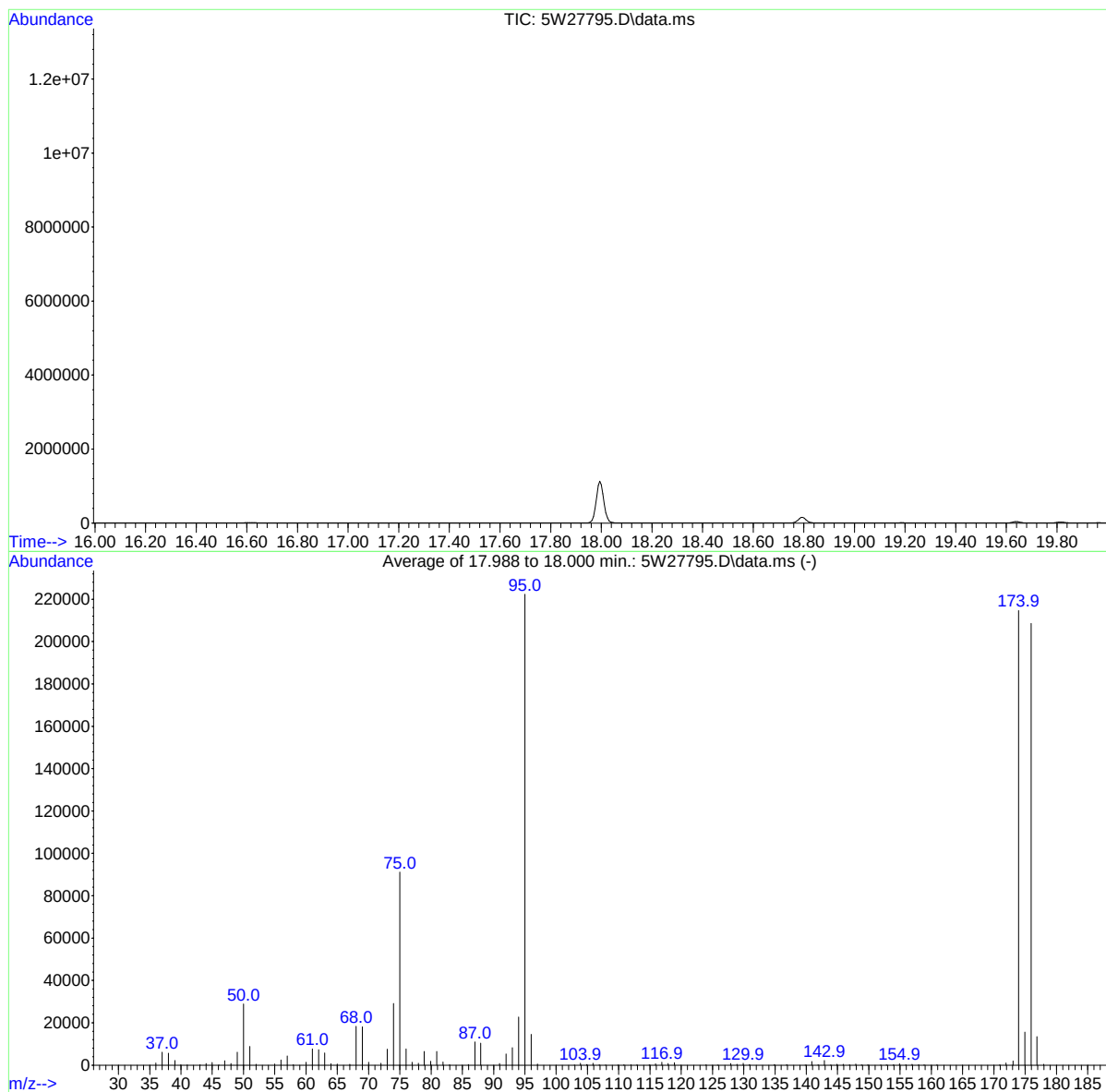
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	13.4	30637	PASS
75	95	30	66	41.0	93984	PASS
95	95	100	100	100.0	229120	PASS
96	95	5	9	6.6	15131	PASS
173	174	0.00	2	0.9	1899	PASS
174	95	50	120	92.7	212437	PASS
175	174	4	9	7.4	15675	PASS
176	174	93	101	96.2	204309	PASS
177	176	5	9	6.7	13614	PASS

BFB

Data File : C:\msdchem\1\data\5W27795.D
Acq On : 13 Nov 2017 7:57 am
Sample : bfb
Misc : MS21947,v5w1093,,,,,1
MS Integration Params: Rteint.p

Vial: 1
Operator: thomash
Inst : Air5w
Multiplr: 1.00

Method : C:\msdchem\1\methods\m5w1065.M (RTE Integrator)
Title : T0-15 Full Scan Mode



AutoFind: Scans 2354, 2355, 2356; Background Corrected with Scan 2343

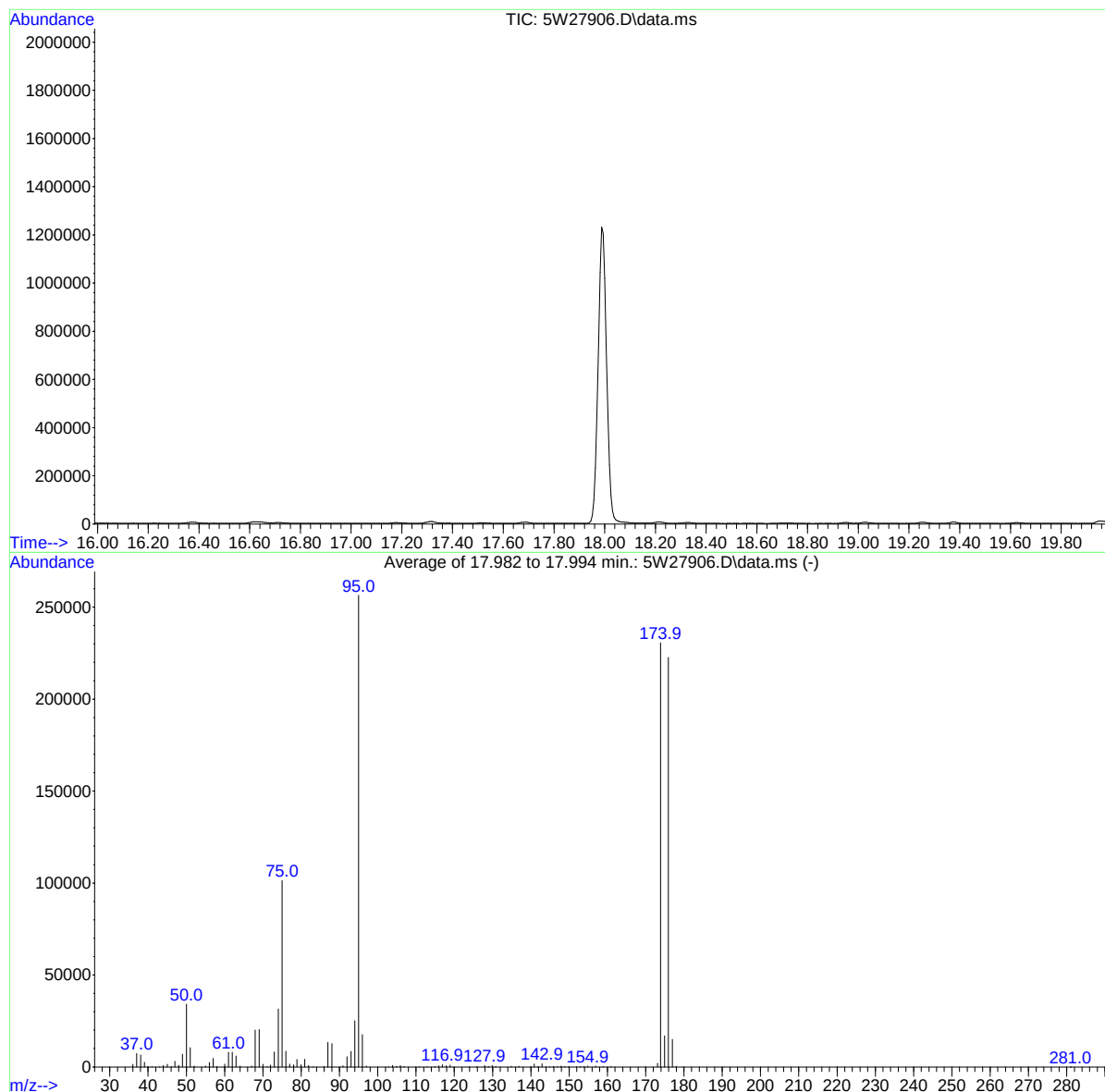
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	13.0	28896	PASS
75	95	30	66	41.0	91205	PASS
95	95	100	100	100.0	222315	PASS
96	95	5	9	6.6	14593	PASS
173	174	0.00	2	0.9	1979	PASS
174	95	50	120	96.6	214677	PASS
175	174	4	9	7.2	15561	PASS
176	174	93	101	97.1	208533	PASS
177	176	5	9	6.4	13449	PASS

BFB

Data File : C:\msdchem\1\data\5W27906.D
Acq On : 17 Nov 2017 6:39 pm
Sample : bfb
Misc : MS22171,v5w1097,,,,,1
MS Integration Params: Rteint.p

Vial: 2
Operator: thomash
Inst : Air5w
Multiplr: 1.00

Method : C:\msdchem\1\methods\m5w1097.M (RTE Integrator)
Title : T0-15 Full Scan Mode



AutoFind: Scans 2353, 2354, 2355; Background Corrected with Scan 2342

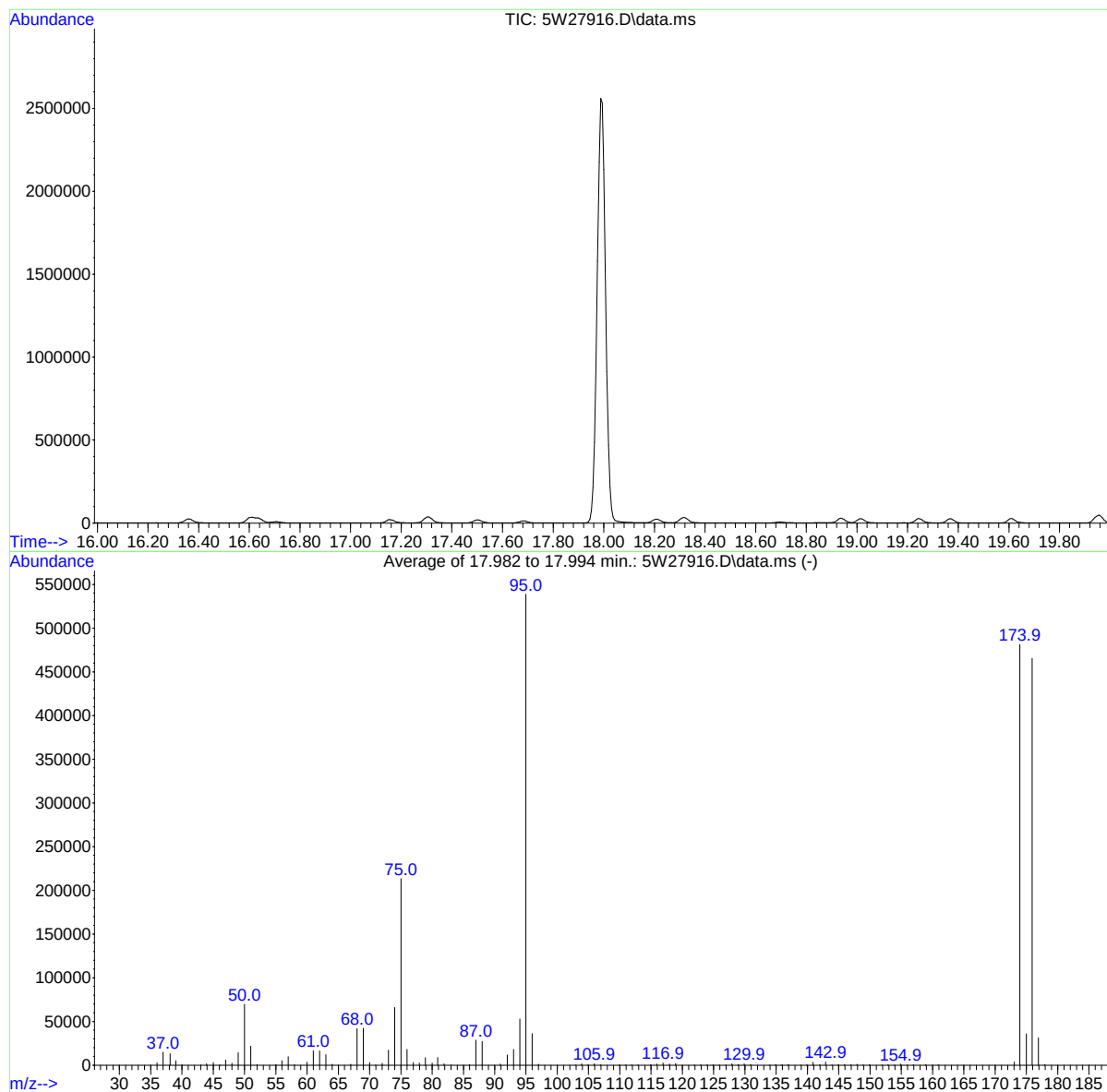
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	13.3	34091	PASS
75	95	30	66	39.5	101387	PASS
95	95	100	100	100.0	256427	PASS
96	95	5	9	6.9	17580	PASS
173	174	0.00	2	0.8	1947	PASS
174	95	50	120	89.9	230656	PASS
175	174	4	9	7.4	16959	PASS
176	174	93	101	96.5	222613	PASS
177	176	5	9	6.7	14968	PASS

BFB

Data File : C:\msdchem\1\data\5W27916.D
Acq On : 20 Nov 2017 9:37 am
Sample : bfb1
Misc : MS22171,v5w1098,,,,,1
MS Integration Params: Rteint.p

Vial: 1
Operator: thomash
Inst : Air5w
Multiplr: 1.00

Method : C:\msdchem\1\methods\m5w1097.M (RTE Integrator)
Title : T0-15 Full Scan Mode



AutoFind: Scans 2353, 2354, 2355; Background Corrected with Scan 2342

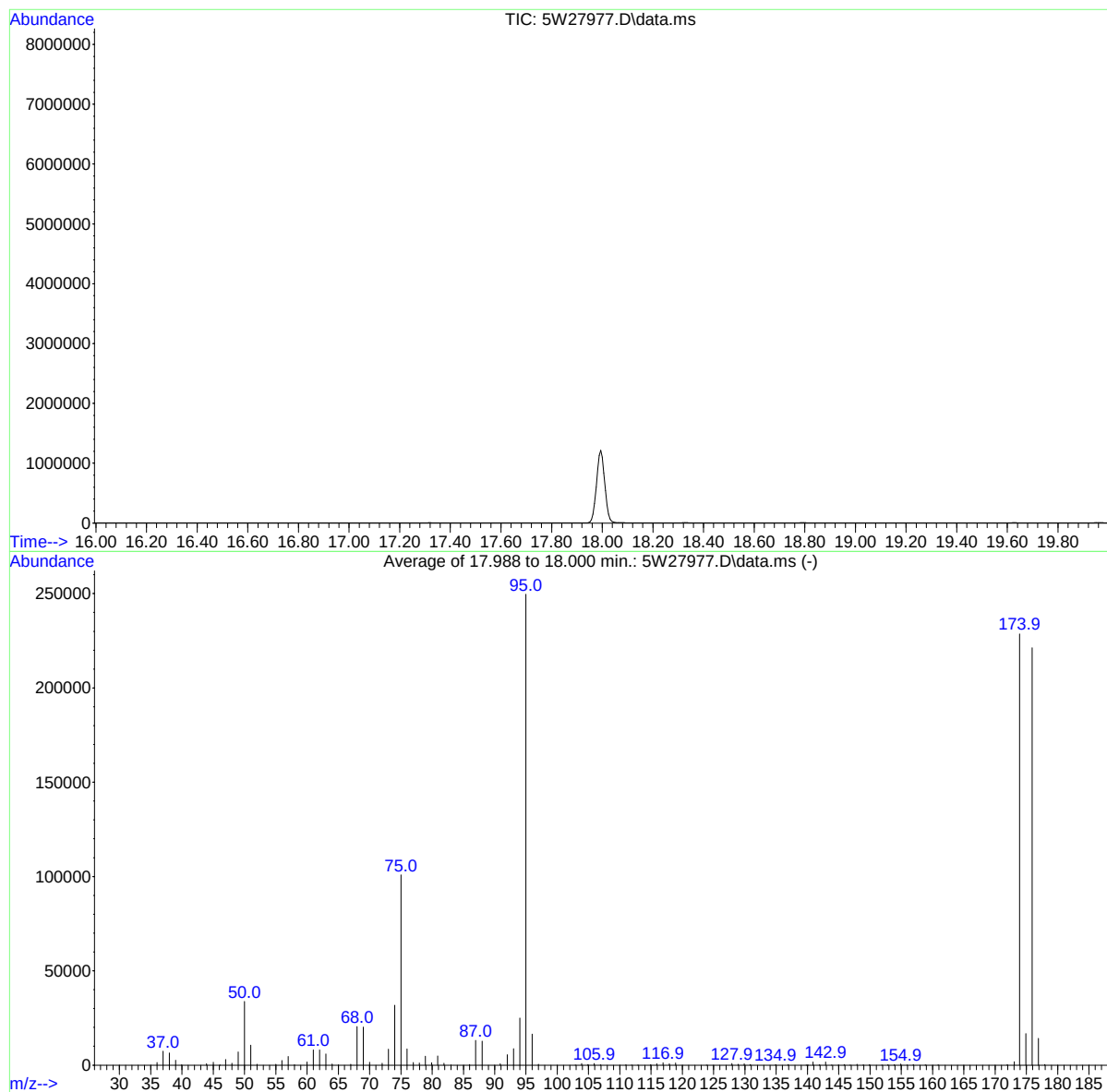
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	12.9	69661	PASS
75	95	30	66	39.6	213525	PASS
95	95	100	100	100.0	538624	PASS
96	95	5	9	6.7	36189	PASS
173	174	0.00	2	0.8	3760	PASS
174	95	50	120	89.3	481152	PASS
175	174	4	9	7.4	35757	PASS
176	174	93	101	96.7	465365	PASS
177	176	5	9	6.7	31272	PASS

BFB

Data File : C:\msdchem\1\data\5W27977.D
Acq On : 22 Nov 2017 12:20 pm
Sample : bfb
Misc : MS22061,v5w1099,,,,,1
MS Integration Params: Rteint.p

Vial: 1
Operator: thomash
Inst : Air5w
Multiplr: 1.00

Method : C:\msdchem\1\methods\m5w1097.M (RTE Integrator)
Title : T0-15 Full Scan Mode



AutoFind: Scans 2354, 2355, 2356; Background Corrected with Scan 2343

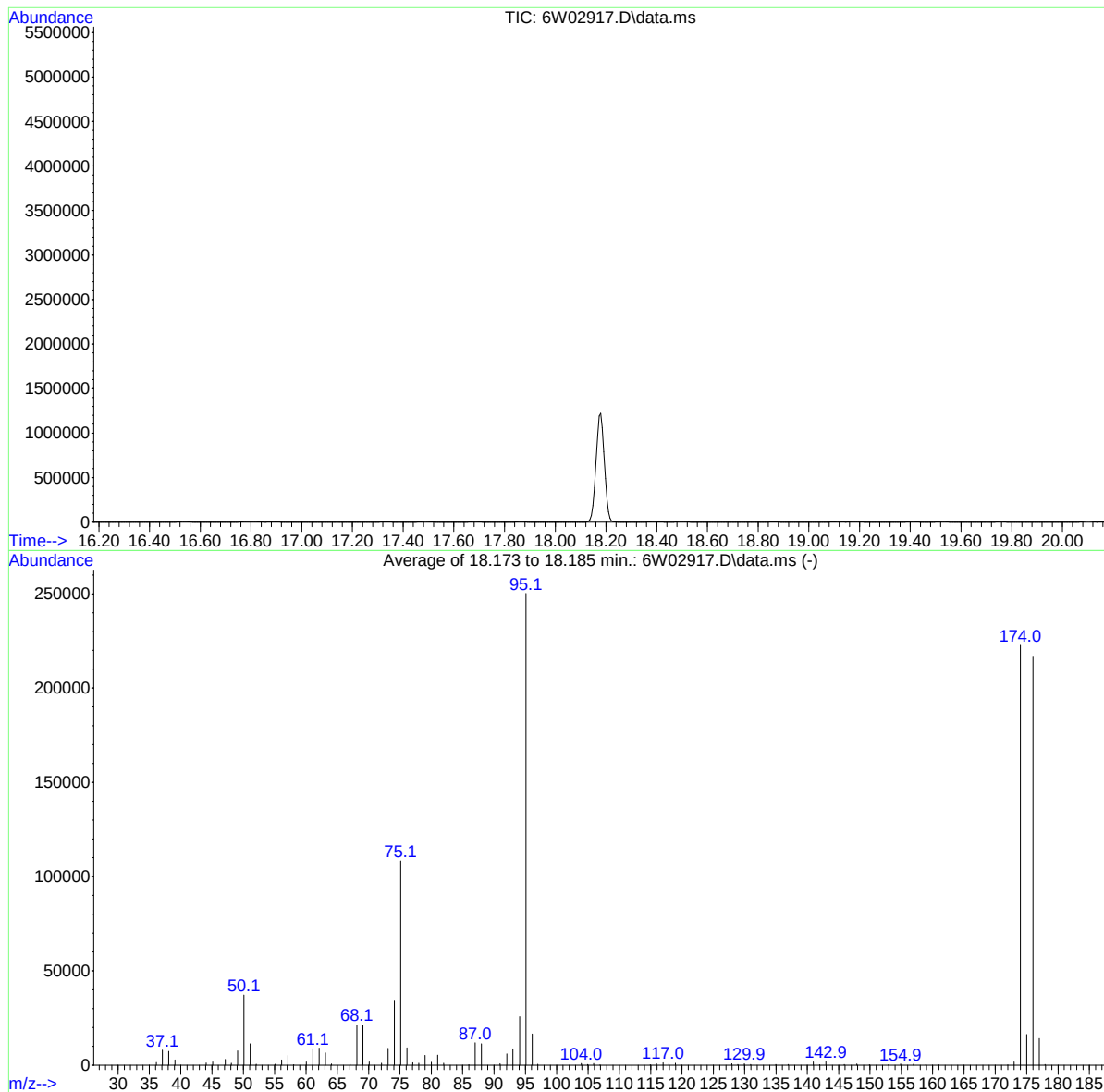
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	13.5	33717	PASS
75	95	30	66	40.4	100947	PASS
95	95	100	100	100.0	249621	PASS
96	95	5	9	6.6	16489	PASS
173	174	0.00	2	0.8	1739	PASS
174	95	50	120	91.6	228672	PASS
175	174	4	9	7.3	16675	PASS
176	174	93	101	96.8	221291	PASS
177	176	5	9	6.4	14255	PASS

BFB

Data File : C:\msdchem\1\data\6W02917.D
Acq On : 7 Nov 2017 3:21 pm
Sample : bfb
Misc : MS21818,V6W76,,,,,1
MS Integration Params: Rteint.p

Vial: 1
Operator: DANAT
Inst : GCMS6W
Multiplr: 1.00

Method : C:\msdchem\1\methods\6w076.M (RTE Integrator)
Title : T0-15 Full Scan Mode



AutoFind: Scans 2466, 2467, 2468; Background Corrected with Scan 2455

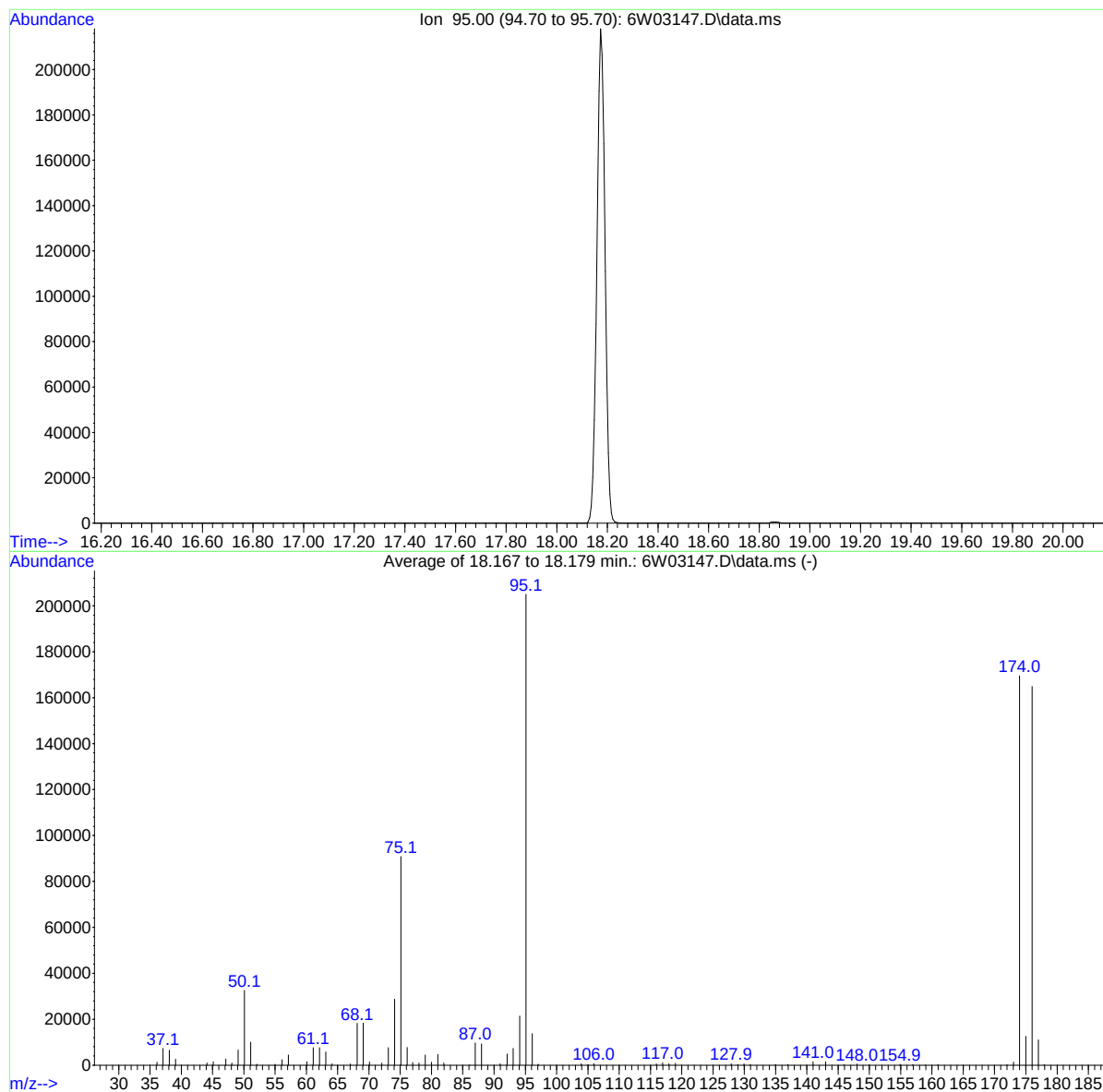
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	14.9	37216	PASS
75	95	30	66	43.3	108349	PASS
95	95	100	100	100.0	250197	PASS
96	95	5	9	6.6	16510	PASS
173	174	0.00	2	0.8	1729	PASS
174	95	50	120	89.0	222741	PASS
175	174	4	9	7.3	16283	PASS
176	174	93	101	97.2	216427	PASS
177	176	5	9	6.5	14110	PASS

BFB

Data File : C:\msdchem\1\data\6W03147.D
Acq On : 21 Nov 2017 9:13 am
Sample : bfb
Misc : MS22325,V6W86,,,,,1
MS Integration Params: Rteint.p

Vial: 1
Operator: DANAT
Inst : GCMS6W
Multiplr: 1.00

Method : C:\msdchem\1\methods\6w076.M (RTE Integrator)
Title : T0-15 Full Scan Mode



AutoFind: Scans 2465, 2466, 2467; Background Corrected with Scan 2455

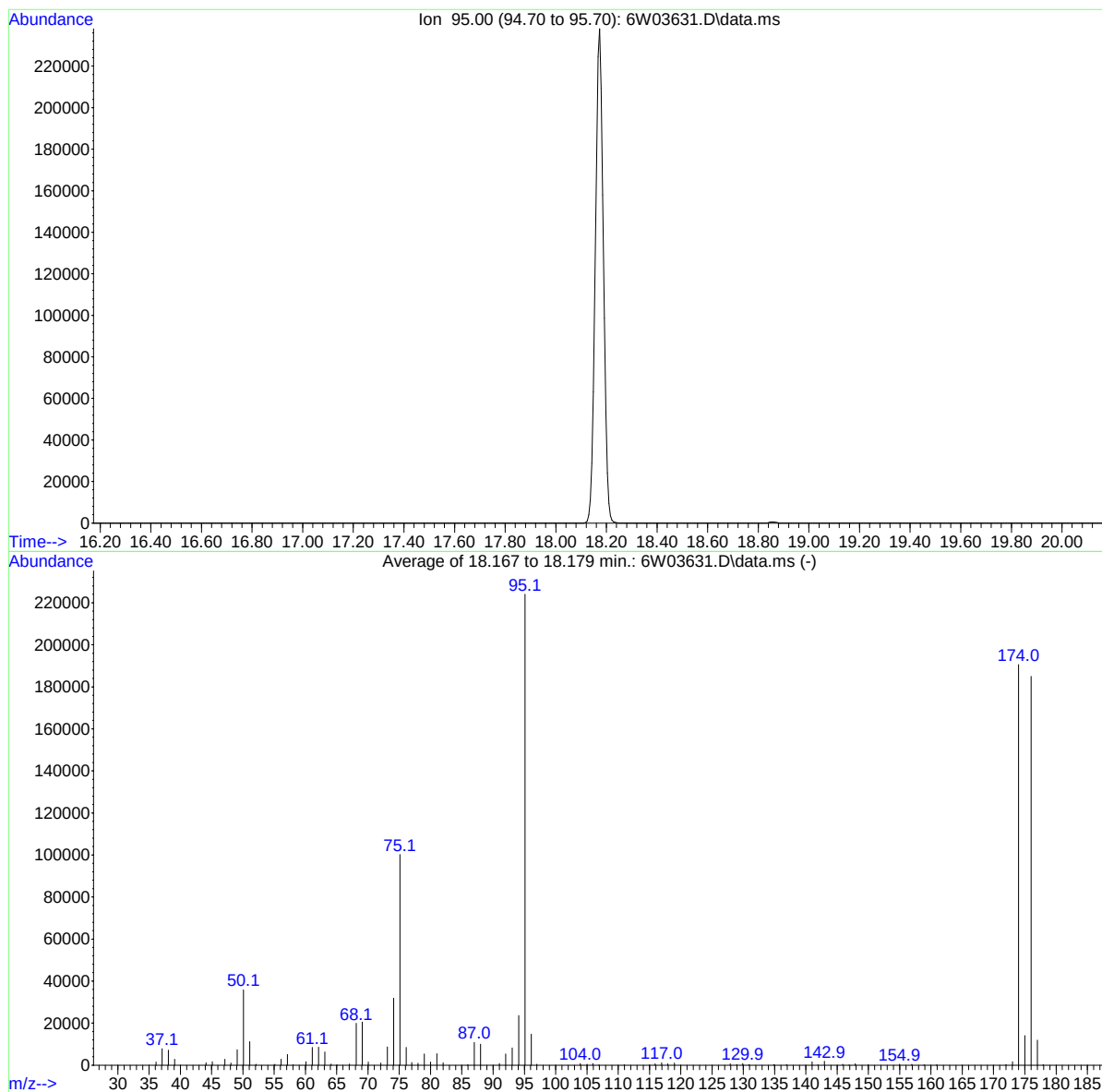
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	15.9	32547	PASS
75	95	30	66	44.3	90837	PASS
95	95	100	100	100.0	205013	PASS
96	95	5	9	6.7	13731	PASS
173	174	0.00	2	0.8	1398	PASS
174	95	50	120	82.7	169536	PASS
175	174	4	9	7.4	12556	PASS
176	174	93	101	97.3	164949	PASS
177	176	5	9	6.7	11004	PASS

BFB

Data File : C:\msdchem\1\data\6W03631.D
Acq On : 20 Dec 2017 11:01 am
Sample : bfb
Misc : MS23032,V6W105,,,,,1
MS Integration Params: Rteint.p

Vial: 1
Operator: DANAT
Inst : GCMS6W
Multiplr: 1.00

Method : C:\msdchem\1\methods\6w076.M (RTE Integrator)
Title : T0-15 Full Scan Mode



AutoFind: Scans 2465, 2466, 2467; Background Corrected with Scan 2454

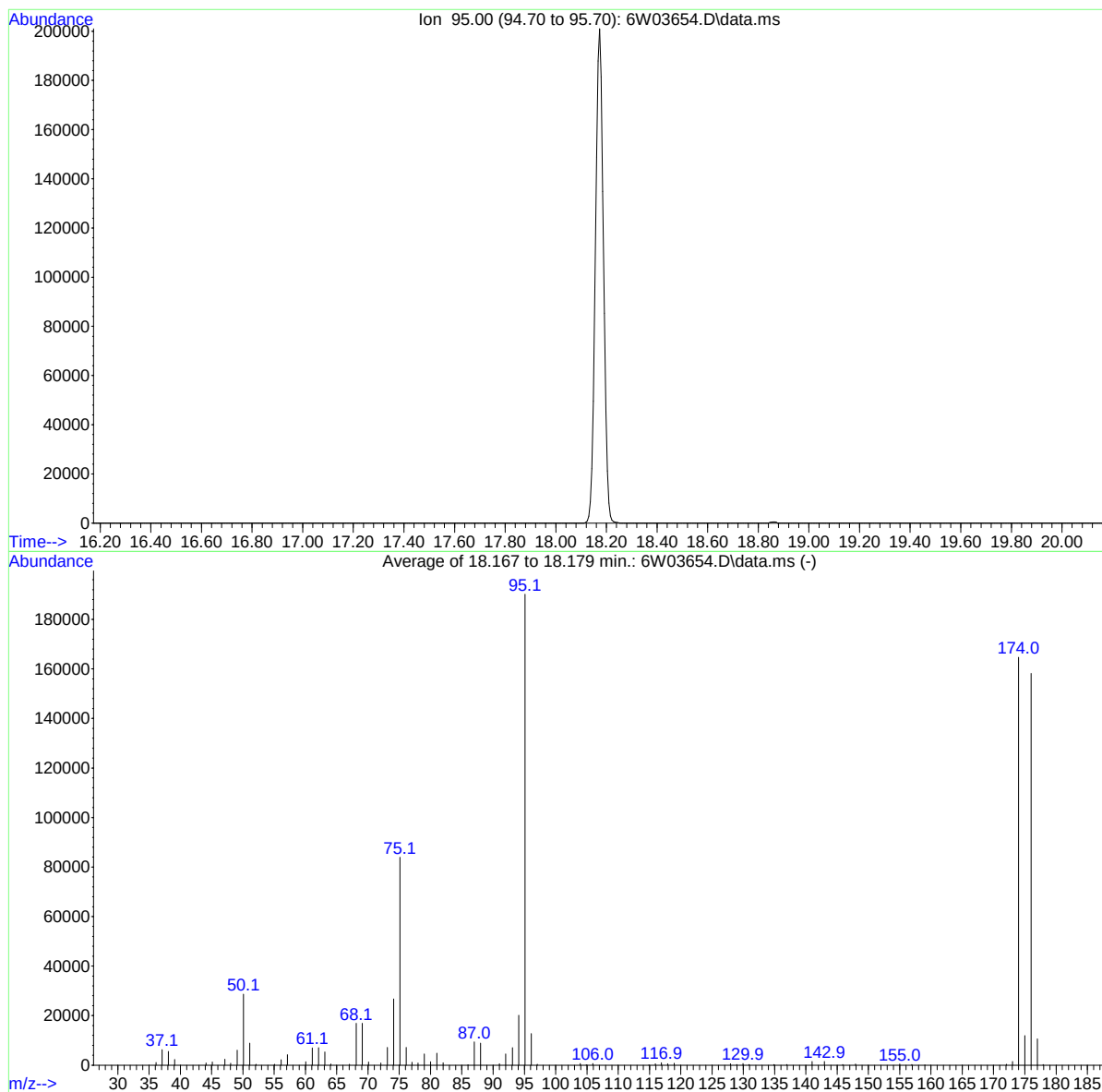
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	16.0	35768	PASS
75	95	30	66	44.8	100272	PASS
95	95	100	100	100.0	224021	PASS
96	95	5	9	6.6	14769	PASS
173	174	0.00	2	0.9	1649	PASS
174	95	50	120	85.1	190571	PASS
175	174	4	9	7.4	14030	PASS
176	174	93	101	97.0	184939	PASS
177	176	5	9	6.5	11947	PASS

BFB

Data File : C:\msdchem\1\data\6W03654.D
Acq On : 21 Dec 2017 10:04 am
Sample : bfb
Misc : MS23032,V6W106,,,,,1
MS Integration Params: Rteint.p

Vial: 1
Operator: DANAT
Inst : GCMS6W
Multiplr: 1.00

Method : C:\msdchem\1\methods\6w076.M (RTE Integrator)
Title : T0-15 Full Scan Mode



AutoFind: Scans 2465, 2466, 2467; Background Corrected with Scan 2454

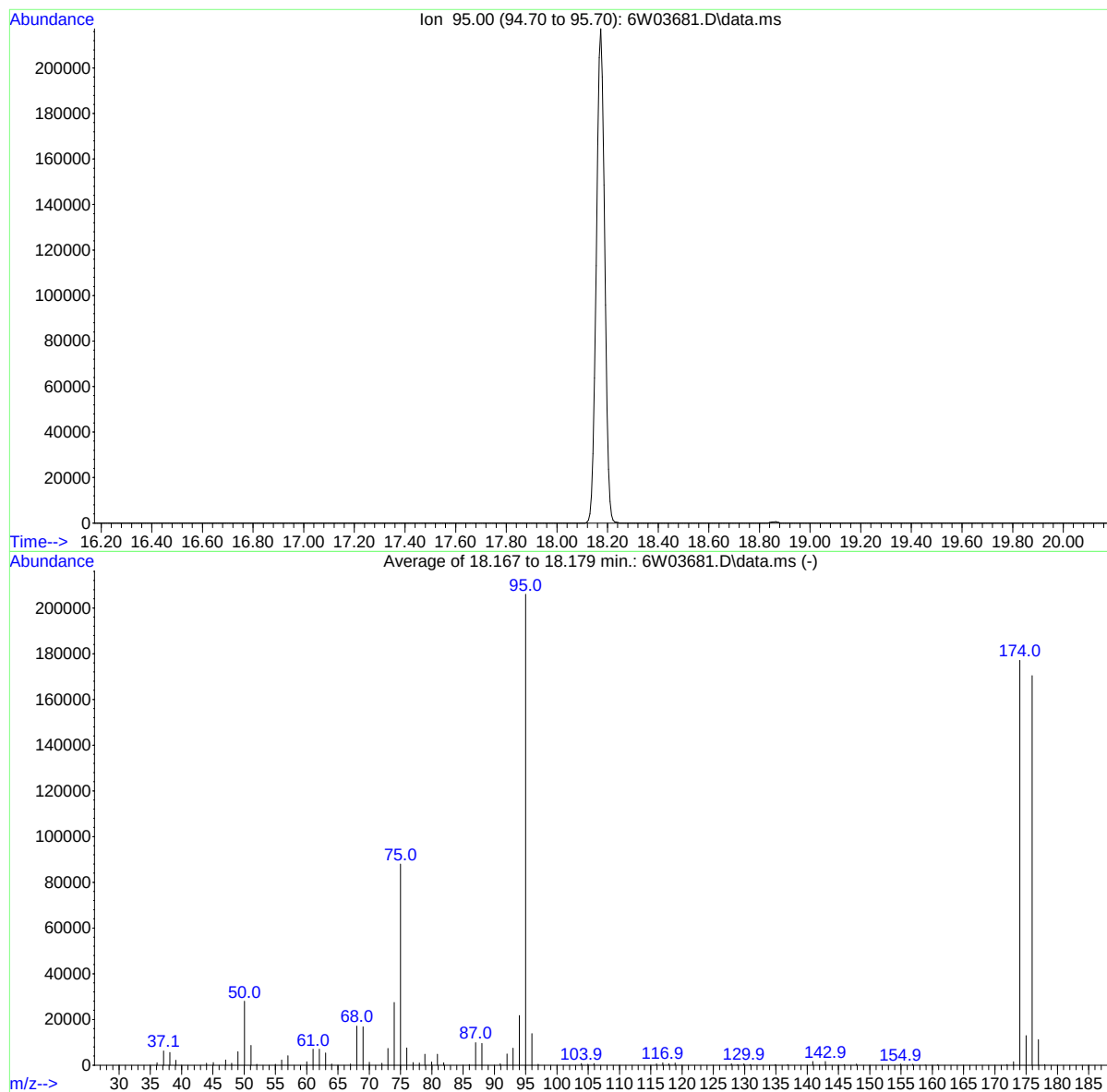
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	15.1	28685	PASS
75	95	30	66	44.2	83947	PASS
95	95	100	100	100.0	190123	PASS
96	95	5	9	6.7	12698	PASS
173	174	0.00	2	0.9	1508	PASS
174	95	50	120	86.6	164651	PASS
175	174	4	9	7.2	11894	PASS
176	174	93	101	96.1	158208	PASS
177	176	5	9	6.7	10560	PASS

BFB

Data File : C:\msdchem\1\data\6W03681.D
Acq On : 22 Dec 2017 12:05 pm
Sample : bfb
Misc : MS23193,V6W107,,,,,1
MS Integration Params: Rteint.p

Vial: 1
Operator: DANAT
Inst : GCMS6W
Multiplr: 1.00

Method : C:\msdchem\1\methods\6w076.M (RTE Integrator)
Title : T0-15 Full Scan Mode



AutoFind: Scans 2465, 2466, 2467; Background Corrected with Scan 2454

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	13.6	27984	PASS
75	95	30	66	42.7	87920	PASS
95	95	100	100	100.0	205973	PASS
96	95	5	9	6.7	13792	PASS
173	174	0.00	2	0.8	1501	PASS
174	95	50	120	86.0	177088	PASS
175	174	4	9	7.3	12957	PASS
176	174	93	101	96.3	170453	PASS
177	176	5	9	6.6	11202	PASS

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27080.D
 Acq On : 6 Oct 2017 12:49 pm
 Operator : thomash
 Sample : ic1065-0.04
 Misc : MS20430,v5w1065,,,,,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 07 09:20:22 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Oct 06 17:46:10 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.175	130	285389	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.292	114	995094	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.767	82	428758	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.175	130	285794	10.00	ppb(v	0.00

System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.000	95	607099	9.92	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	99.20%

Target Compounds						Qvalue
2) 1,1,1-Trifluoroethane	3.917	69	2760	0.05	ppb(v#	86
4) Chlorodifluoromethane	4.046	67	192	0.04	ppb(v#	40
5) Propene	4.058	41	736	0.05	ppb(v#	38
6) Chlorotrifluoroethene	4.070	116	1587	0.04	ppb(v	95
7) Dichlorodifluoromethane	4.125	85	2621	0.04	ppb(v#	96
8) 1-Chloro-1,1-difluoroethane	4.229	65	1864	0.04	ppb(v#	73
9) Chloromethane	4.254	50	829	0.04	ppb(v	83
10) Dichlorotetrafluoroethane	4.321	85	2703	0.04	ppb(v	96
11) Vinyl Chloride	4.413	62	877	0.04	ppb(v#	87
12) 1,3-Butadiene	4.517	54	630	0.04	ppb(v#	66
14) Bromomethane	4.731	94	1655	0.06	ppb(v	96
15) Chloroethane	4.865	64	409	0.04	ppb(v#	38
16) Dichlorofluoromethane	4.933	67	2301	0.05	ppb(v#	95
18) Freon 123	5.257	83	2838	0.05	ppb(v#	95
19) Freon 123A	5.300	117	3269	0.09	ppb(v	97
20) Bromoethene	5.141	106	1091	0.04	ppb(v#	87
21) Trichlorofluoromethane	5.471	101	2577	0.04	ppb(v#	93
23) Pentane	5.752	57	272	0.05	ppb(v#	43
24) 1,1-Dichloro-1-fluoroethane	5.569	81	2747	0.05	ppb(v#	17
25) Iodomethane	5.948	142	3489	0.04	ppb(v	97
27) 1,1-Dichloroethene	6.009	61	1542	0.04	ppb(v	93
28) Freon 113	6.340	101	2314	0.04	ppb(v	93
29) Methylene Chloride	6.126	84	1608	0.06	ppb(v	85
30) Carbon Disulfide	6.389	76	3172	0.04	ppb(v	100
32) Acrylonitrile	5.765	53	680	0.04	ppb(v#	66
33) 3-Chloropropene	6.230	76	409	0.04	ppb(v#	89
34) trans-1,2-Dichloroethene	6.970	61	1408	0.04	ppb(v	89
35) tert-Butyl Alcohol	6.126	59	2453	0.05	ppb(v#	65
37) Vinyl Acetate	7.337	43	2583	0.05	ppb(v	95
38) 1,1-Dichloroethane	7.172	63	1962	0.04	ppb(v#	96
39) 2-Butanone	7.637	72	433	0.04	ppb(v#	85
40) Hexane	8.193	57	1529	0.05	ppb(v#	83
41) cis-1,2-Dichloroethene	8.004	61	1398	0.04	ppb(v	95
42) Di-isopropyl Ether	8.236	87	838	0.04	ppb(v	99
44) Methyl Acrylate	8.273	55	1737	0.04	ppb(v#	79
45) Chloroform	8.310	83	2453	0.04	ppb(v	91
46) 2,4-Dimethylpentane	9.123	57	1654	0.04	ppb(v	92
47) Tetrahydrofuran	8.842	72	332	0.03	ppb(v#	78
48) 1,1,1-Trichloroethane	9.362	97	2132	0.04	ppb(v	97
49) 1,2-Dichloroethane	9.087	62	1271	0.04	ppb(v#	90
50) Benzene	9.870	78	3561	0.04	ppb(v	97
51) Carbon Tetrachloride	10.035	117	2144	0.04	ppb(v	94
52) Cyclohexane	10.163	56	1465	0.04	ppb(v	97
53) 2,3-Dimethylpentane	10.432	71	644	0.04	ppb(v#	64
55) 2,2,4-Trimethylpentane	11.118	57	4709	0.04	ppb(v	97
56) Heptane	11.460	71	906	0.04	ppb(v	82
57) Trichloroethene	11.099	95	1760	0.05	ppb(v	83
58) 1,2-Dichloropropane	10.818	63	1185	0.04	ppb(v#	87
59) Dibromomethane	10.800	174	2082	0.05	ppb(v	97
60) Ethyl Acrylate	10.916	55	1840	0.04	ppb(v#	75
61) Methyl Methacrylate	11.424	69	1033	0.04	ppb(v	97
63) Bromodichloromethane	11.063	83	2493	0.04	ppb(v	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27080.D
 Acq On : 6 Oct 2017 12:49 pm
 Operator : thomash
 Sample : ic1065-0.04
 Misc : MS20430,v5w1065,,,,,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 07 09:20:22 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Oct 06 17:46:10 2017
 Response via : Initial Calibration

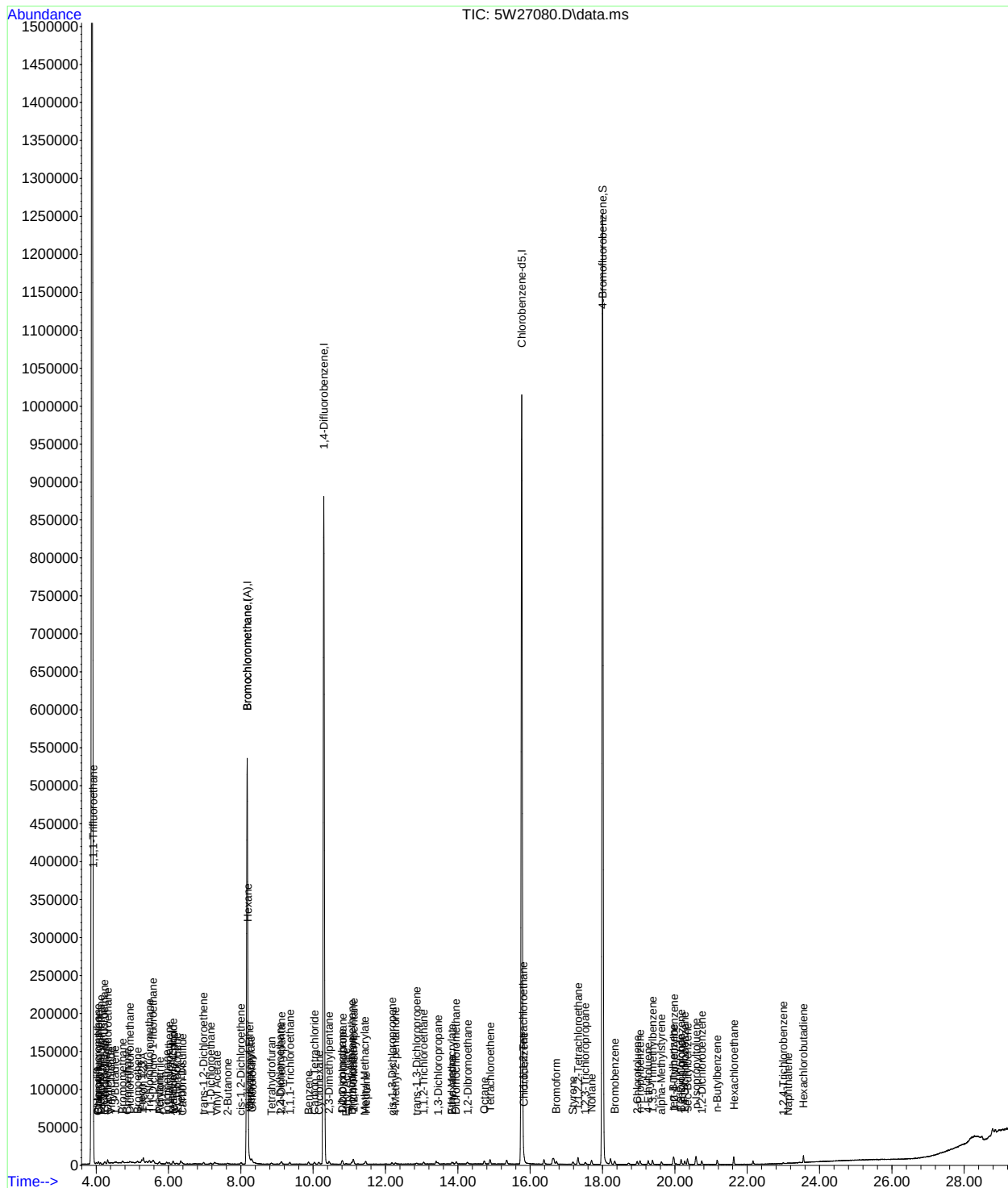
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
64)	cis-1,3-Dichloropropene	12.182	75	1724	0.04	ppb(v#	87
65)	4-Methyl-2-pentanone	12.274	58	652	0.03	ppb(v#	88
66)	trans-1,3-Dichloropropene	12.861	75	1502	0.04	ppb(v#	88
68)	1,1,2-Trichloroethane	13.051	97	1401	0.04	ppb(v	94
69)	1,3-Dichloropropane	13.455	76	1740	0.04	ppb(v#	88
70)	2-Hexanone	13.840	58	638	0.03	ppb(v#	82
71)	Ethyl Methacrylate	13.834	69	1637	0.04	ppb(v#	82
72)	Dibromochloromethane	13.950	129	2734	0.04	ppb(v#	93
73)	Tetrachloroethene	14.892	166	2735	0.05	ppb(v	90
74)	1,2-Dibromoethane	14.268	107	2575	0.05	ppb(v#	92
75)	Octane	14.727	43	2429	0.05	ppb(v	93
76)	1,1,1,2-Tetrachloroethane	15.810	131	1991	0.04	ppb(v#	1
78)	Chlorobenzene	15.828	112	3946	0.05	ppb(v	92
81)	Styrene	17.180	104	3071	0.05	ppb(v	92
82)	Nonane	17.694	43	2755	0.05	ppb(v#	89
84)	Bromoform	16.721	173	2733	0.05	ppb(v#	88
85)	1,1,2,2-Tetrachloroethane	17.327	83	3320	0.05	ppb(v#	95
86)	1,2,3-Trichloropropane	17.523	75	2241	0.04	ppb(v	92
88)	Bromobenzene	18.337	156	2288	0.05	ppb(v	90
89)	2-Chlorotoluene	18.961	126	1581	0.05	ppb(v	77
90)	n-Propylbenzene	19.034	120	1536	0.04	ppb(v	75
92)	4-Ethyltoluene	19.260	105	6331	0.05	ppb(v#	94
93)	1,3,5-Trimethylbenzene	19.383	105	5266	0.05	ppb(v	95
94)	alpha-Methylstyrene	19.627	118	2148	0.04	ppb(v	92
95)	tert-Butylbenzene	19.952	134	1185	0.05	ppb(v	95
96)	1,2,4-Trimethylbenzene	19.976	105	4804	0.05	ppb(v	93
97)	1,3-Dichlorobenzene	20.172	146	3333	0.05	ppb(v	94
98)	Benzyl Chloride	20.172	91	2619	0.05	ppb(v#	90
99)	1,4-Dichlorobenzene	20.270	146	3381	0.05	ppb(v	97
100)	sec-Butylbenzene	20.355	134	1352	0.05	ppb(v	92
101)	p-Isopropyltoluene	20.588	134	1645	0.05	ppb(v	98
102)	1,2-Dichlorobenzene	20.741	146	3130	0.05	ppb(v	94
103)	n-Butylbenzene	21.169	134	1152	0.04	ppb(v	97
104)	Hexachloroethane	21.634	201	1933	0.04	ppb(v	91
105)	1,2,4-Trichlorobenzene	22.998	180	628	0.04	ppb(v#	80
106)	Naphthalene	23.127	128	1426	0.05	ppb(v#	69
107)	Hexachlorobutadiene	23.549	225	2145	0.06	ppb(v	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.7.1
7

Data Path : C:\msdchem\1\data\
Data File : 5W27080.D
Acq On : 6 Oct 2017 12:49 pm
Operator : thomash
Sample : ic1065-0.04
Misc : MS20430,v5w1065,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 07 09:20:22 2017
Quant Method : C:\msdchem\1\methods\m5w1065.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Fri Oct 06 17:46:10 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27081.D
 Acq On : 6 Oct 2017 1:35 pm
 Operator : thomash
 Sample : ic1065-0.1
 Misc : MS20430,v5w1065,,,,,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 06 17:46:47 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Oct 06 17:43:11 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.138	130	256090	10.00	ppb(v	-0.04
54) 1,4-Difluorobenzene	10.267	114	886442	10.00	ppb(v	-0.02
77) Chlorobenzene-d5	15.761	82	385129	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.138	130	256090	10.00	ppb(v	-0.04

System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.000	95	545688	9.90	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	99.00%

Target Compounds						Qvalue
2) 1,1,1-Trifluoroethane	3.862	69	6391	0.13	ppb(v#	92
3) Freon 152A	3.954	65	1810	0.13	ppb(v	89
4) Chlorodifluoromethane	3.985	67	476	0.10	ppb(v#	81
5) Propene	4.009	41	1493	0.11	ppb(v#	72
6) Chlorotrifluoroethene	4.015	116	3566	0.11	ppb(v	98
7) Dichlorodifluoromethane	4.064	85	6068	0.11	ppb(v	99
8) 1-Chloro-1,1-difluoro...	4.174	65	4070	0.11	ppb(v#	67
9) Chloromethane	4.199	50	1939	0.11	ppb(v	87
10) Dichlorotetrafluoroethane	4.266	85	6056	0.11	ppb(v	95
11) Vinyl Chloride	4.364	62	2101	0.11	ppb(v#	96
12) 1,3-Butadiene	4.462	54	1473	0.11	ppb(v	93
13) n-Butane	4.492	58	297	0.11	ppb(v#	14
14) Bromomethane	4.670	94	3051	0.13	ppb(v	88
15) Chloroethane	4.810	64	1014	0.11	ppb(v#	95
16) Dichlorofluoromethane	4.878	67	4772	0.11	ppb(v	93
18) Freon 123	5.202	83	6113	0.11	ppb(v	100
19) Freon 123A	5.251	117	6992	0.22	ppb(v	96
20) Bromoethene	5.086	106	2435	0.11	ppb(v#	89
21) Trichlorofluoromethane	5.416	101	6002	0.11	ppb(v	97
22) Acetone	5.330	58	1097	0.13	ppb(v	88
23) Pentane	5.704	57	601	0.12	ppb(v	72
24) 1,1-Dichloro-1-fluoro...	5.514	81	5560	0.12	ppb(v	98
25) Iodomethane	5.899	142	7759	0.11	ppb(v	98
27) 1,1-Dichloroethene	5.961	61	3445	0.11	ppb(v	95
28) Freon 113	6.291	101	5535	0.11	ppb(v	90
29) Methylene Chloride	6.077	84	2704	0.13	ppb(v	94
30) Carbon Disulfide	6.340	76	7153	0.11	ppb(v	97
32) Acrylonitrile	5.710	53	1448	0.10	ppb(v	90
33) 3-Chloropropene	6.175	76	952	0.11	ppb(v	90
34) trans-1,2-Dichloroethene	6.921	61	3158	0.11	ppb(v	97
35) tert-Butyl Alcohol	6.065	59	5734	0.13	ppb(v#	86
37) Vinyl Acetate	7.294	43	5335	0.12	ppb(v	98
38) 1,1-Dichloroethane	7.123	63	4187	0.11	ppb(v#	99
39) 2-Butanone	7.588	72	1000	0.10	ppb(v	99
40) Hexane	8.151	57	3152	0.11	ppb(v	88
41) cis-1,2-Dichloroethene	7.973	61	3068	0.11	ppb(v	98
42) Di-isopropyl Ether	8.200	87	1716	0.10	ppb(v	89
43) Ethyl Acetate	8.261	61	569	0.08	ppb(v#	73
44) Methyl Acrylate	8.236	55	3550	0.10	ppb(v	91
45) Chloroform	8.273	83	5425	0.11	ppb(v#	94
46) 2,4-Dimethylpentane	9.093	57	3675	0.11	ppb(v	99
47) Tetrahydrofuran	8.793	72	930	0.10	ppb(v	78
48) 1,1,1-Trichloroethane	9.331	97	4892	0.11	ppb(v	94
49) 1,2-Dichloroethane	9.062	62	2843	0.10	ppb(v#	90
50) Benzene	9.845	78	8004	0.12	ppb(v	98
51) Carbon Tetrachloride	10.010	117	4822	0.11	ppb(v	95
52) Cyclohexane	10.133	56	3228	0.11	ppb(v	93
53) 2,3-Dimethylpentane	10.414	71	1458	0.11	ppb(v#	91
55) 2,2,4-Trimethylpentane	11.093	57	10101	0.10	ppb(v	96
56) Heptane	11.442	71	2191	0.11	ppb(v	94
57) Trichloroethene	11.081	95	3554	0.11	ppb(v	95
58) 1,2-Dichloropropane	10.800	63	2756	0.11	ppb(v	93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27081.D
 Acq On : 6 Oct 2017 1:35 pm
 Operator : thomash
 Sample : ic1065-0.1
 Misc : MS20430,v5w1065,,,,,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 06 17:46:47 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Oct 06 17:43:11 2017
 Response via : Initial Calibration

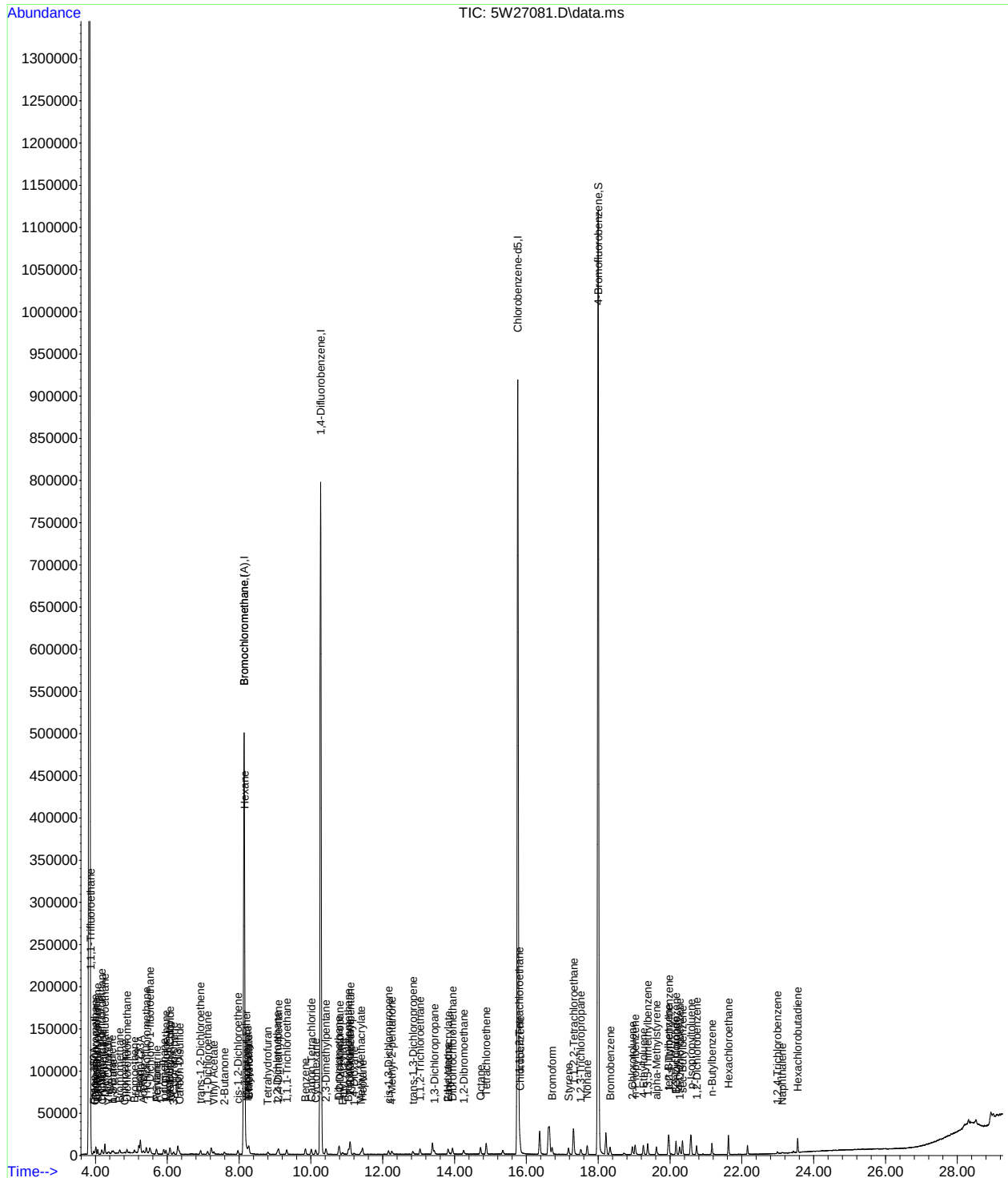
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
59) Dibromomethane	10.775	174	4012	0.12	ppb(v	87
60) Ethyl Acrylate	10.885	55	4424	0.10	ppb(v#	82
61) Methyl Methacrylate	11.393	69	2215	0.10	ppb(v	84
62) 1,4-Dioxane	11.197	88	1344	0.10	ppb(v#	83
63) Bromodichloromethane	11.038	83	5546	0.11	ppb(v	98
64) cis-1,3-Dichloropropene	12.164	75	3960	0.10	ppb(v	92
65) 4-Methyl-2-pentanone	12.250	58	1527	0.08	ppb(v	77
66) trans-1,3-Dichloropropene	12.843	75	3292	0.10	ppb(v	99
68) 1,1,2-Trichloroethane	13.039	97	3267	0.11	ppb(v	95
69) 1,3-Dichloropropane	13.436	76	4004	0.10	ppb(v	97
70) 2-Hexanone	13.816	58	1801	0.08	ppb(v	93
71) Ethyl Methacrylate	13.828	69	3359	0.09	ppb(v#	97
72) Dibromochloromethane	13.938	129	6033	0.11	ppb(v	96
73) Tetrachloroethene	14.880	166	5557	0.12	ppb(v	96
74) 1,2-Dibromoethane	14.256	107	5246	0.11	ppb(v#	97
75) Octane	14.721	43	4647	0.11	ppb(v	96
76) 1,1,1,2-Tetrachloroethane	15.804	131	4251	0.11	ppb(v#	1
78) Chlorobenzene	15.822	112	8260	0.12	ppb(v	98
81) Styrene	17.174	104	6474	0.11	ppb(v	97
82) Nonane	17.688	43	5248	0.12	ppb(v	97
84) Bromoform	16.722	173	5559	0.11	ppb(v	98
85) 1,1,2,2-Tetrachloroethane	17.321	83	6794	0.11	ppb(v#	93
86) 1,2,3-Trichloropropane	17.511	75	4980	0.12	ppb(v	87
88) Bromobenzene	18.337	156	4590	0.12	ppb(v	92
89) 2-Chlorotoluene	18.955	126	3371	0.12	ppb(v	93
90) n-Propylbenzene	19.028	120	3388	0.11	ppb(v	97
92) 4-Ethyltoluene	19.254	105	12223	0.12	ppb(v	97
93) 1,3,5-Trimethylbenzene	19.377	105	11033	0.12	ppb(v	96
94) alpha-Methylstyrene	19.621	118	4702	0.11	ppb(v	99
95) tert-Butylbenzene	19.952	134	2598	0.12	ppb(v	81
96) 1,2,4-Trimethylbenzene	19.970	105	10152	0.11	ppb(v	97
97) 1,3-Dichlorobenzene	20.166	146	6613	0.11	ppb(v	95
98) Benzyl Chloride	20.166	91	5374	0.11	ppb(v	98
99) 1,4-Dichlorobenzene	20.270	146	6773	0.12	ppb(v	98
100) sec-Butylbenzene	20.349	134	2766	0.11	ppb(v	91
101) p-Isopropyltoluene	20.588	134	3375	0.11	ppb(v	99
102) 1,2-Dichlorobenzene	20.741	146	6333	0.12	ppb(v	99
103) n-Butylbenzene	21.169	134	2460	0.11	ppb(v	98
104) Hexachloroethane	21.628	201	4264	0.11	ppb(v	95
105) 1,2,4-Trichlorobenzene	22.986	180	1341	0.09	ppb(v	94
106) Naphthalene	23.121	128	2050	0.08	ppb(v#	86
107) Hexachlorobutadiene	23.555	225	3982	0.13	ppb(v	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5W27081.D
Acq On : 6 Oct 2017 1:35 pm
Operator : thomash
Sample : ic1065-0.1
Misc : MS20430,v5w1065,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 06 17:46:47 2017
Quant Method : C:\msdchem\1\methods\m5w1065.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Fri Oct 06 17:43:11 2017
Response via : Initial Calibration



7.7.2

Quantitation Report (QT Reviewed)

Manual Integrations
APPROVED
(compounds with "m" flag)

Dana Tryon
10/08/17 11:18

Data Path : C:\msdchem\1\data\
Data File : 5W27082.D
Acq On : 6 Oct 2017 2:28 pm
Operator : thomash
Sample : ic1065-0.2
Misc : MS20430,v5w1065,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 06 17:43:03 2017
Quant Method : C:\msdchem\1\methods\m5w1065.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Fri Oct 06 17:41:19 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.157	130	269496	10.00	ppb(v	-0.02
54) 1,4-Difluorobenzene	10.279	114	937921	10.00	ppb(v	-0.01
77) Chlorobenzene-d5	15.761	82	416042	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.157	130	269496	10.00	ppb(v	-0.02

System Monitoring Compounds

91) 4-Bromofluorobenzene	18.000	95	585106	9.75	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	97.50%

Target Compounds						Qvalue
2) 1,1,1-Trifluoroethane	3.880	69	9669	0.18	ppb(v#	95
3) Freon 152A	3.978	65	3202	0.24	ppb(v#	83
4) Chlorodifluoromethane	4.015	67	1059	0.21	ppb(v	90
5) Propene	4.033	41	2838	0.21	ppb(v#	86
6) Chlorotrifluoroethene	4.039	116	7049	0.20	ppb(v	98
7) Dichlorodifluoromethane	4.094	85	11811	0.20	ppb(v	99
8) 1-Chloro-1,1-difluoroethane	4.198	65	7740	0.20	ppb(v#	81
9) Chloromethane	4.223	50	3646	0.20	ppb(v	98
10) Dichlorotetrafluoroethane	4.290	85	11394	0.20	ppb(v	95
11) Vinyl Chloride	4.388	62	3953	0.20	ppb(v#	98
12) 1,3-Butadiene	4.492	54	2778	0.21	ppb(v	98
13) n-Butane	4.523	58	504	0.18	ppb(v#	60
14) Bromomethane	4.706	94	5535	0.23	ppb(v	98
15) Chloroethane	4.835	64	1904	0.19	ppb(v	92
16) Dichlorofluoromethane	4.908	67	9204	0.21	ppb(v	94
17) Acetonitrile	5.141	41	2347	0.20	ppb(v#	55
18) Freon 123	5.232	83	11757	0.21	ppb(v	98
19) Freon 123A	5.275	117	13650	0.41	ppb(v	99
20) Bromoethene	5.110	106	4799	0.20	ppb(v#	94
21) Trichlorofluoromethane	5.440	101	11823	0.20	ppb(v	99
22) Acetone	5.355	58	2054	0.24	ppb(v	97
23) Pentane	5.728	57	1166	0.22	ppb(v	82
24) 1,1-Dichloro-1-fluoroethane	5.544	81	9765	0.20	ppb(v	99
25) Iodomethane	5.924	142	14571	0.20	ppb(v	98
26) Isopropyl Alcohol	5.557	43	1533	0.23	ppb(v#	21
27) 1,1-Dichloroethene	5.985	61	6844	0.20	ppb(v	95
28) Freon 113	6.321	101	10493	0.20	ppb(v	94
29) Methylene Chloride	6.107	84	4837	0.22	ppb(v	94
30) Carbon Disulfide	6.358	76	14018	0.20	ppb(v	99
31) Ethanol	4.957	45	1605	0.29	ppb(v#	89
32) Acrylonitrile	5.728	53	3047	0.20	ppb(v	96
33) 3-Chloropropene	6.199	76	1821	0.19	ppb(v	94
34) trans-1,2-Dichloroethene	6.945	61	6081	0.19	ppb(v	98
35) tert-Butyl Alcohol	6.083	59	9736	0.22	ppb(v	97
36) Methyl tert-Butyl Ether	7.245	73	12517	0.21	ppb(v	99
37) Vinyl Acetate	7.312	43	10036	0.22	ppb(v	99
38) 1,1-Dichloroethane	7.147	63	8253	0.20	ppb(v	99
39) 2-Butanone	7.600	72	2136	0.20	ppb(v	88
40) Hexane	8.169	57	6181	0.19	ppb(v	90
41) cis-1,2-Dichloroethene	7.991	61	5895	0.20	ppb(v	95
42) Di-isopropyl Ether	8.212	87	3755	0.20	ppb(v	94
43) Ethyl Acetate	8.261	61	1430	0.20	ppb(v	84
44) Methyl Acrylate	8.242	55	7377	0.20	ppb(v	94
45) Chloroform	8.291	83	10678	0.21	ppb(v	97
46) 2,4-Dimethylpentane	9.111	57	7372	0.20	ppb(v	95
47) Tetrahydrofuran	8.799	72	1952	0.19	ppb(v	94
48) 1,1,1-Trichloroethane	9.337	97	9456	0.21	ppb(v	96
49) 1,2-Dichloroethane	9.074	62	5811	0.20	ppb(v	97
50) Benzene	9.857	78	14958	0.21	ppb(v	99
51) Carbon Tetrachloride	10.023	117	8933	0.20	ppb(v	95
52) Cyclohexane	10.151	56	6167	0.20	ppb(v	99
53) 2,3-Dimethylpentane	10.432	71	2823	0.19	ppb(v	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27082.D
 Acq On : 6 Oct 2017 2:28 pm
 Operator : thomash
 Sample : ic1065-0.2
 Misc : MS20430,v5w1065,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 06 17:43:03 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Oct 06 17:41:19 2017
 Response via : Initial Calibration

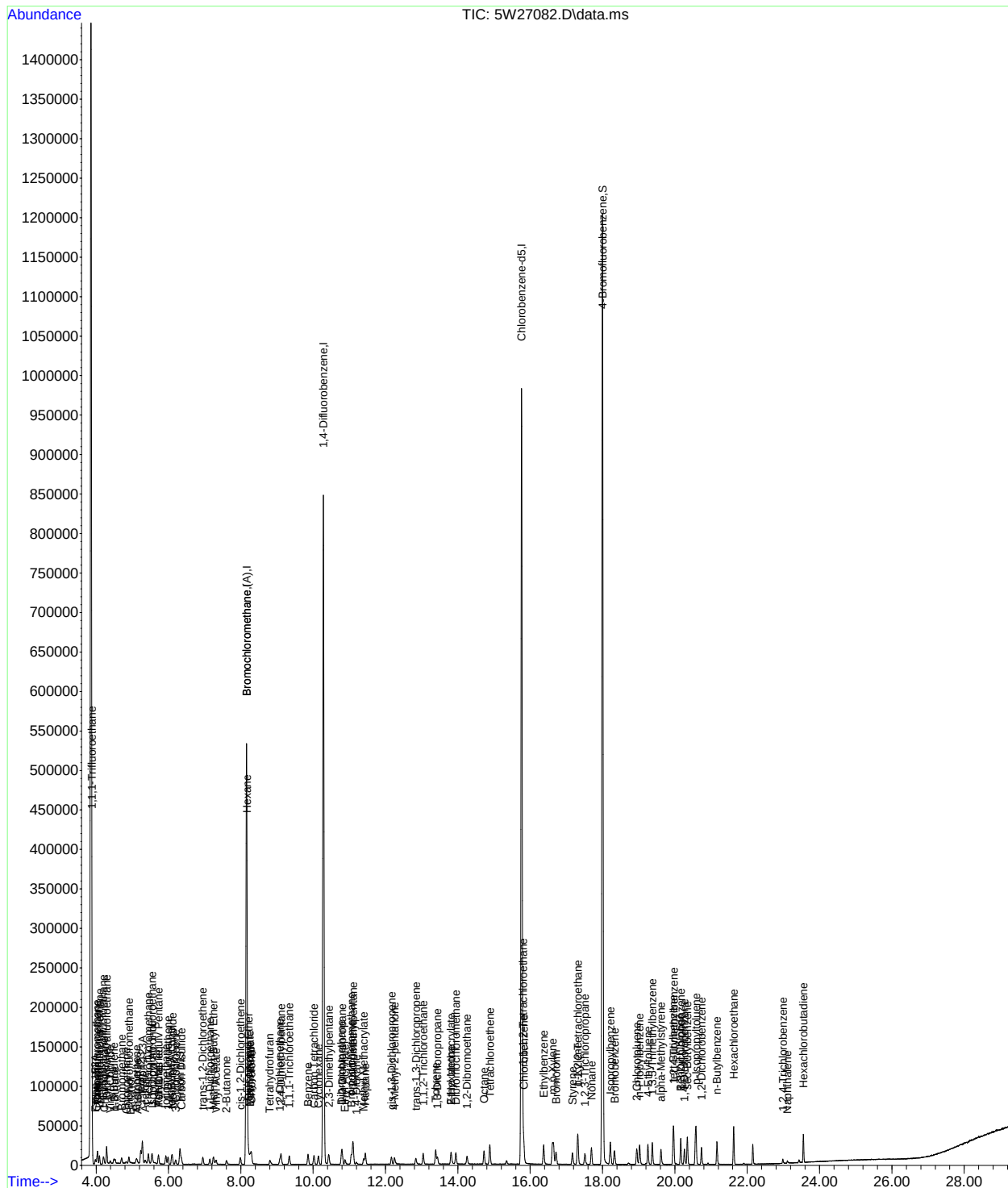
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.105	57	20186	0.20	ppb(v	99
56) Heptane	11.442	71	4268	0.19	ppb(v	96
57) Trichloroethene	11.087	95	6865	0.20	ppb(v	93
58) 1,2-Dichloropropane	10.806	63	5421	0.21	ppb(v	95
59) Dibromomethane	10.781	174	7748	0.22	ppb(v	98
60) Ethyl Acrylate	10.879	55	9281	0.19	ppb(v	99
61) Methyl Methacrylate	11.393	69	4732	0.19	ppb(v	98
62) 1,4-Dioxane	11.191	88	2862	0.21	ppb(v#	91
63) Bromodichloromethane	11.050	83	10863	0.21	ppb(v	98
64) cis-1,3-Dichloropropene	12.170	75	8200	0.20	ppb(v	98
65) 4-Methyl-2-pentanone	12.249	58	3689	0.19	ppb(v	93
66) trans-1,3-Dichloropropene	12.843	75	7186	0.20	ppb(v	97
67) Toluene	13.387	91	18979	0.21	ppb(v	97
68) 1,1,2-Trichloroethane	13.045	97	6602	0.21	ppb(v	94
69) 1,3-Dichloropropane	13.430	76	8354	0.20	ppb(v	98
70) 2-Hexanone	13.809	58	4568	0.17	ppb(v	91
71) Ethyl Methacrylate	13.816	69	7313	0.19	ppb(v	98
72) Dibromochloromethane	13.944	129	11816	0.21	ppb(v	100
73) Tetrachloroethene	14.886	166	10695	0.22	ppb(v	98
74) 1,2-Dibromoethane	14.250	107	10639	0.20	ppb(v	94
75) Octane	14.721	43	9147	0.20	ppb(v	99
76) 1,1,1,2-Tetrachloroethane	15.804	131	8562	0.20	ppb(v#	1
78) Chlorobenzene	15.822	112	15890	0.21	ppb(v	96
79) Ethylbenzene	16.373	91	26928	0.23	ppb(v	98
80) m,p-Xylene	16.624	91	42004	0.47	ppb(v	97
81) Styrene	17.168	104	12139	0.19	ppb(v	97
82) Nonane	17.694	43	9915	0.22	ppb(v	100
83) o-Xylene	17.315	91	20919	0.23	ppb(v	100
84) Bromoform	16.715	173	11161	0.20	ppb(v	99
85) 1,1,2,2-Tetrachloroethane	17.321	83	13725	0.21	ppb(v	99
86) 1,2,3-Trichloropropane	17.511	75	9809	0.22	ppb(v	92
87) Isopropylbenzene	18.220	105	29157	0.23	ppb(v	100
88) Bromobenzene	18.330	156	8866	0.21	ppb(v	96
89) 2-Chlorotoluene	18.948	126	6444	0.21	ppb(v	97
90) n-Propylbenzene	19.022	120	6863	0.21	ppb(v	89
92) 4-Ethyltoluene	19.254	105	23753	0.21	ppb(v	97
93) 1,3,5-Trimethylbenzene	19.377	105	22096	0.22	ppb(v	99
94) alpha-Methylstyrene	19.615	118	9187	0.20	ppb(v	99
95) tert-Butylbenzene	19.952	134	4945	0.22	ppb(v	98
96) 1,2,4-Trimethylbenzene	19.970	105	20288	0.22	ppb(v	99
97) 1,3-Dichlorobenzene	20.166	146	13087	0.21	ppb(v	99
98) Benzyl Chloride	20.160	91	10707	0.19	ppb(v	98
99) 1,4-Dichlorobenzene	20.264	146	12841	0.22	ppb(v	99
100) sec-Butylbenzene	20.343	134	5888	0.22	ppb(v	89
101) p-Isopropyltoluene	20.588	134	7282	0.23	ppb(v	96
102) 1,2-Dichlorobenzene	20.735	146	12433	0.22	ppb(v	97
103) n-Butylbenzene	21.163	134	5103	0.21	ppb(v	85
104) Hexachloroethane	21.628	201	9026	0.23	ppb(v	99
105) 1,2,4-Trichlorobenzene	22.986	180	2680	0.16	ppb(v	96
106) Naphthalene	23.108	128	4779	0.16	ppb(v	96
107) Hexachlorobutadiene	23.555	225	7830	0.25	ppb(v	97
109) TVHC as equiv Pentane	5.728	TIC	25471m	0.21	ppb(v	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5W27082.D
Acq On : 6 Oct 2017 2:28 pm
Operator : thomash
Sample : ic1065-0.2
Misc : MS20430,v5w1065,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 06 17:43:03 2017
Quant Method : C:\msdchem\1\methods\m5w1065.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Fri Oct 06 17:41:19 2017
Response via : Initial Calibration



Manual Integration Approval Summary

Sample Number: V5W1065-IC1065

Method: TO-15

Lab FileID: 5W27082.D

Analyst approved: 10/07/17 09:23 Thomas Hilbig

Injection Time: 10/06/17 14:28

Supervisor approved: 10/08/17 11:18 Dana Tryon

Parameter	CAS	Sig#	R.T. (min.)	Reason
TVHC As Equiv Pentane			5.73	Missed peak

7.7.3.1
7

Quantitation Report (QT Reviewed)

Manual Integrations
APPROVED
(compounds with "m" flag)

Dana Tryon
10/08/17 11:18

Data Path : C:\msdchem\1\data\
Data File : 5W27084.D
Acq On : 6 Oct 2017 4:10 pm
Operator : thomash
Sample : ic1065-0.5
Misc : MS20430,v5w1065,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 06 17:41:10 2017
Quant Method : C:\msdchem\1\methods\m5w1065.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Fri Oct 06 17:38:49 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.175	130	287053	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.292	114	994982	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.767	82	435260	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.175	130	287167	10.00	ppb(v	0.00

System Monitoring Compounds
91) 4-Bromofluorobenzene 18.000 95 630672 10.09 ppb(v 0.00
Spiked Amount 10.000 Range 65 - 128 Recovery = 100.90%

Target Compounds					Qvalue
2) 1,1,1-Trifluoroethane	3.917	69	21900	0.32	ppb(v 100
3) Freon 152A	4.009	65	7284	0.51	ppb(v 90
4) Chlorodifluoromethane	4.046	67	2623	0.46	ppb(v 95
5) Propene	4.064	41	7145	0.49	ppb(v# 93
6) Chlorotrifluoroethene	4.070	116	18064	0.47	ppb(v 99
7) Dichlorodifluoromethane	4.125	85	29963	0.48	ppb(v 97
8) 1-Chloro-1,1-difluoro...	4.229	65	19865	0.48	ppb(v# 93
9) Chloromethane	4.248	50	9483	0.49	ppb(v 99
10) Dichlorotetrafluoroethane	4.321	85	29903	0.48	ppb(v 97
11) Vinyl Chloride	4.413	62	10395	0.49	ppb(v# 99
12) 1,3-Butadiene	4.517	54	7051	0.50	ppb(v 95
13) n-Butane	4.553	58	1498	0.48	ppb(v# 69
14) Bromomethane	4.731	94	13109	0.50	ppb(v 96
15) Chloroethane	4.859	64	5190	0.49	ppb(v# 96
16) Dichlorofluoromethane	4.933	67	23421	0.48	ppb(v 98
17) Acetonitrile	5.165	41	6259	0.48	ppb(v# 78
18) Freon 123	5.257	83	29877	0.49	ppb(v 99
19) Freon 123A	5.300	117	34665	0.97	ppb(v 94
20) Bromoethene	5.141	106	12335	0.48	ppb(v 98
21) Trichlorofluoromethane	5.471	101	30376	0.49	ppb(v 99
22) Acetone	5.379	58	4829	0.56	ppb(v 82
23) Pentane	5.753	57	2709	0.48	ppb(v 89
24) 1,1-Dichloro-1-fluoro...	5.569	81	24859	0.46	ppb(v 99
25) Iodomethane	5.948	142	37137	0.47	ppb(v 95
26) Isopropyl Alcohol	5.575	43	3979	0.64	ppb(v# 56
27) 1,1-Dichloroethene	6.009	61	17801	0.47	ppb(v 97
28) Freon 113	6.340	101	27356	0.48	ppb(v 97
29) Methylene Chloride	6.126	84	11415	0.50	ppb(v 95
30) Carbon Disulfide	6.383	76	36224	0.47	ppb(v 98
31) Ethanol	4.982	45	3146	0.57	ppb(v# 96
32) Acrylonitrile	5.746	53	7413	0.43	ppb(v 99
33) 3-Chloropropene	6.224	76	4713	0.45	ppb(v 92
34) trans-1,2-Dichloroethene	6.970	61	16271	0.47	ppb(v 98
35) tert-Butyl Alcohol	6.095	59	24586	0.54	ppb(v 97
36) Methyl tert-Butyl Ether	7.257	73	31753	0.49	ppb(v 97
37) Vinyl Acetate	7.331	43	23324	0.47	ppb(v 97
38) 1,1-Dichloroethane	7.166	63	21486	0.49	ppb(v 97
39) 2-Butanone	7.612	72	5489	0.46	ppb(v 98
40) Hexane	8.187	57	16231	0.46	ppb(v 89
41) cis-1,2-Dichloroethene	8.004	61	15358	0.47	ppb(v 98
42) Di-isopropyl Ether	8.224	87	9580	0.46	ppb(v 93
43) Ethyl Acetate	8.279	61	3649	0.46	ppb(v 98
44) Methyl Acrylate	8.261	55	19122	0.49	ppb(v 98
45) Chloroform	8.310	83	27006	0.50	ppb(v 98
46) 2,4-Dimethylpentane	9.123	57	18725	0.46	ppb(v 97
47) Tetrahydrofuran	8.799	72	5214	0.47	ppb(v 90
48) 1,1,1-Trichloroethane	9.356	97	23519	0.47	ppb(v 96
49) 1,2-Dichloroethane	9.087	62	15193	0.50	ppb(v 99
50) Benzene	9.870	78	37610	0.49	ppb(v 99
51) Carbon Tetrachloride	10.035	117	22849	0.45	ppb(v 97
52) Cyclohexane	10.157	56	15780	0.46	ppb(v 96
53) 2,3-Dimethylpentane	10.439	71	7456	0.46	ppb(v 95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27084.D
 Acq On : 6 Oct 2017 4:10 pm
 Operator : thomash
 Sample : ic1065-0.5
 Misc : MS20430,v5w1065,,,,,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 06 17:41:10 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Oct 06 17:38:49 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.112	57	52696	0.47	ppb(v	98
56) Heptane	11.454	71	11163	0.46	ppb(v	93
57) Trichloroethene	11.099	95	17662	0.47	ppb(v	98
58) 1,2-Dichloropropane	10.818	63	13668	0.48	ppb(v	93
59) Dibromomethane	10.800	174	18331	0.49	ppb(v	97
60) Ethyl Acrylate	10.879	55	24080	0.45	ppb(v	97
61) Methyl Methacrylate	11.399	69	12652	0.47	ppb(v	94
62) 1,4-Dioxane	11.185	88	7246	0.48	ppb(v#	84
63) Bromodichloromethane	11.063	83	27449	0.48	ppb(v	97
64) cis-1,3-Dichloropropene	12.170	75	21000	0.47	ppb(v	98
65) 4-Methyl-2-pentanone	12.249	58	9967	0.46	ppb(v	92
66) trans-1,3-Dichloropropene	12.843	75	18732	0.47	ppb(v	97
67) Toluene	13.394	91	46894	0.49	ppb(v	100
68) 1,1,2-Trichloroethane	13.045	97	16895	0.50	ppb(v	97
69) 1,3-Dichloropropane	13.436	76	21901	0.50	ppb(v	97
70) 2-Hexanone	13.803	58	13277	0.46	ppb(v	94
71) Ethyl Methacrylate	13.822	69	20154	0.47	ppb(v	99
72) Dibromochloromethane	13.944	129	29374	0.47	ppb(v	99
73) Tetrachloroethene	14.886	166	25771	0.48	ppb(v	97
74) 1,2-Dibromoethane	14.256	107	27563	0.49	ppb(v	99
75) Octane	14.727	43	24184	0.48	ppb(v	98
76) 1,1,1,2-Tetrachloroethane	15.810	131	22145	0.50	ppb(v#	55
78) Chlorobenzene	15.828	112	40078	0.53	ppb(v	97
79) Ethylbenzene	16.373	91	67088	0.59	ppb(v	100
80) m,p-Xylene	16.624	91	102864	1.21	ppb(v	98
81) Styrene	17.168	104	33045	0.51	ppb(v	98
82) Nonane	17.694	43	25560	0.57	ppb(v	100
83) o-Xylene	17.309	91	52141	0.59	ppb(v	98
84) Bromoform	16.715	173	29784	0.50	ppb(v	98
85) 1,1,2,2-Tetrachloroethane	17.321	83	36098	0.58	ppb(v	98
86) 1,2,3-Trichloropropane	17.511	75	25551	0.58	ppb(v	97
87) Isopropylbenzene	18.220	105	72094	0.62	ppb(v	98
88) Bromobenzene	18.324	156	22972	0.54	ppb(v	94
89) 2-Chlorotoluene	18.948	126	17003	0.55	ppb(v	96
90) n-Propylbenzene	19.022	120	18183	0.56	ppb(v	96
92) 4-Ethyltoluene	19.254	105	62880	0.58	ppb(v	99
93) 1,3,5-Trimethylbenzene	19.377	105	57391	0.62	ppb(v	100
94) alpha-Methylstyrene	19.615	118	25018	0.54	ppb(v	98
95) tert-Butylbenzene	19.952	134	13099	0.62	ppb(v	97
96) 1,2,4-Trimethylbenzene	19.970	105	53833	0.61	ppb(v	99
97) 1,3-Dichlorobenzene	20.160	146	34469	0.58	ppb(v	98
98) Benzyl Chloride	20.160	91	29378	0.50	ppb(v	98
99) 1,4-Dichlorobenzene	20.264	146	33339	0.59	ppb(v	99
100) sec-Butylbenzene	20.343	134	15836	0.64	ppb(v	94
101) p-Isopropyltoluene	20.582	134	19255	0.68	ppb(v	87
102) 1,2-Dichlorobenzene	20.735	146	33242	0.61	ppb(v	100
103) n-Butylbenzene	21.163	134	14613	0.65	ppb(v	86
104) Hexachloroethane	21.628	201	23875	0.68	ppb(v	97
105) 1,2,4-Trichlorobenzene	22.980	180	9405	0.57	ppb(v	96
106) Naphthalene	23.108	128	16912	0.55	ppb(v	98
107) Hexachlorobutadiene	23.555	225	20981	0.84	ppb(v	98
109) TVHC as equiv Pentane	5.753	TIC	62937m	0.47	ppb(v	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

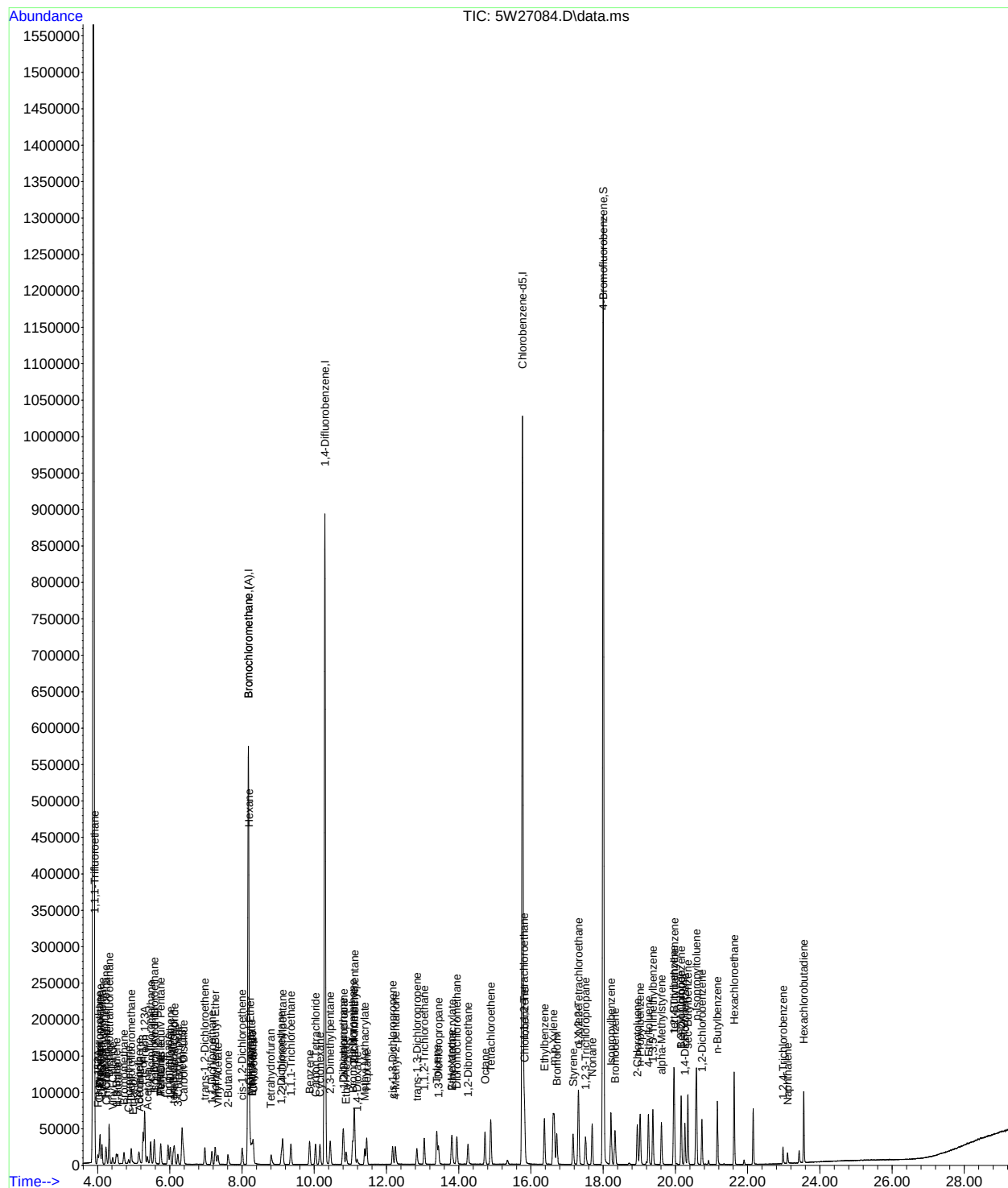
7.7.4

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5W27084.D
Acq On : 6 Oct 2017 4:10 pm
Operator : thomash
Sample : ic1065-0.5
Misc : MS20430,v5w1065,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 06 17:41:10 2017
Quant Method : C:\msdchem\1\methods\m5w1065.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Fri Oct 06 17:38:49 2017
Response via : Initial Calibration



Manual Integration Approval Summary

Sample Number:

V5W1065-IC1065

Method:

TO-15

Lab FileID:

5W27084.D

Analyst approved:

10/07/17 09:23 Thomas Hilbig

Injection Time:

10/06/17 16:10

Supervisor approved:

10/08/17 11:18 Dana Tryon

Parameter	CAS	Sig#	R.T. (min.)	Reason
TVHC As Equiv Pentane			5.75	Missed peak

7.7.4.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27085.D
 Acq On : 6 Oct 2017 5:00 pm
 Operator : thomash
 Sample : ic1065-5
 Misc : MS20430,v5w1065,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 06 17:37:22 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Thu Oct 05 09:07:36 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.175	130	293092	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.292	114	1004061	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.767	82	463849	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.175	130	293092	10.00	ppb(v	0.00

System Monitoring Compounds

91) 4-Bromofluorobenzene	18.000	95	666382	9.86	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	98.60%

Target Compounds						Qvalue
2) 1,1,1-Trifluoroethane	3.917	69	347166	6.28	ppb(v#	92
3) Freon 152A	4.009	65	73340	6.55	ppb(v	87
4) Chlorodifluoromethane	4.046	67	29089	4.78	ppb(v	100
5) Propene	4.064	41	75066	5.32	ppb(v	99
6) Chlorotrifluoroethene	4.070	116	197688	5.31	ppb(v#	89
7) Dichlorodifluoromethane	4.125	85	321836	5.10	ppb(v	100
8) 1-Chloro-1,1-difluoro...	4.229	65	209295	4.67	ppb(v	99
9) Chloromethane	4.248	50	98366	4.86	ppb(v	98
10) Dichlorotetrafluoroethane	4.321	85	318624	4.67	ppb(v	97
11) Vinyl Chloride	4.413	62	108936	4.38	ppb(v	99
12) 1,3-Butadiene	4.517	54	72662	4.50	ppb(v	98
13) n-Butane	4.554	58	15884	4.49	ppb(v	98
14) Bromomethane	4.731	94	132833	4.82	ppb(v	100
15) Chloroethane	4.859	64	53542	4.78	ppb(v	99
16) Dichlorofluoromethane	4.933	67	247938	4.91	ppb(v	99
17) Acetonitrile	5.153	41	65981	5.15	ppb(v	99
18) Freon 123	5.257	83	314452	5.08	ppb(v	100
19) Freon 123A	5.300	117	364775	10.04	ppb(v	95
20) Bromoethene	5.141	106	132431	4.80	ppb(v	99
21) Trichlorofluoromethane	5.471	101	318278	5.06	ppb(v	100
22) Acetone	5.361	58	43980	4.80	ppb(v	93
23) Pentane	5.753	57	28942	5.33	ppb(v	94
24) 1,1-Dichloro-1-fluoro...	5.569	81	276677	5.16	ppb(v	98
25) Iodomethane	5.948	142	402394	5.37	ppb(v	96
26) Isopropyl Alcohol	5.563	43	31905	5.90	ppb(v	90
27) 1,1-Dichloroethene	6.010	61	194005	5.34	ppb(v	98
28) Freon 113	6.340	101	292761	5.34	ppb(v	98
29) Methylene Chloride	6.126	84	117710	5.68	ppb(v	99
30) Carbon Disulfide	6.383	76	394792	5.92	ppb(v	99
31) Ethanol	4.976	45	28185	5.04	ppb(v	98
32) Acrylonitrile	5.740	53	87662	5.89	ppb(v	97
33) 3-Chloropropene	6.224	76	53470	5.81	ppb(v	89
34) trans-1,2-Dichloroethene	6.970	61	176322	5.46	ppb(v	98
35) tert-Butyl Alcohol	6.077	59	231378	4.28	ppb(v	99
36) Methyl tert-Butyl Ether	7.239	73	331748	4.88	ppb(v	99
37) Vinyl Acetate	7.325	43	251301	5.27	ppb(v	98
38) 1,1-Dichloroethane	7.166	63	225820	5.61	ppb(v	100
39) 2-Butanone	7.588	72	60579	5.56	ppb(v	97
40) Hexane	8.187	57	180320	5.12	ppb(v	100
41) cis-1,2-Dichloroethene	8.004	61	166638	5.42	ppb(v	97
42) Di-isopropyl Ether	8.212	87	106546	5.10	ppb(v	98
43) Ethyl Acetate	8.261	61	40725	5.43	ppb(v	96
44) Methyl Acrylate	8.242	55	200950	5.27	ppb(v	99
45) Chloroform	8.310	83	275358	5.24	ppb(v	98
46) 2,4-Dimethylpentane	9.123	57	206590	5.33	ppb(v	98
47) Tetrahydrofuran	8.769	72	56943	5.59	ppb(v	96
48) 1,1,1-Trichloroethane	9.356	97	254260	4.99	ppb(v	99
49) 1,2-Dichloroethane	9.087	62	155790	4.84	ppb(v	98
50) Benzene	9.870	78	394755	5.51	ppb(v	98
51) Carbon Tetrachloride	10.035	117	257836	5.00	ppb(v	98
52) Cyclohexane	10.157	56	173753	5.64	ppb(v	99
53) 2,3-Dimethylpentane	10.439	71	82328	5.50	ppb(v	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27085.D
 Acq On : 6 Oct 2017 5:00 pm
 Operator : thomash
 Sample : ic1065-5
 Misc : MS20430,v5w1065,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 06 17:37:22 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : TO-15 Full Scan Mode
 QLast Update : Thu Oct 05 09:07:36 2017
 Response via : Initial Calibration

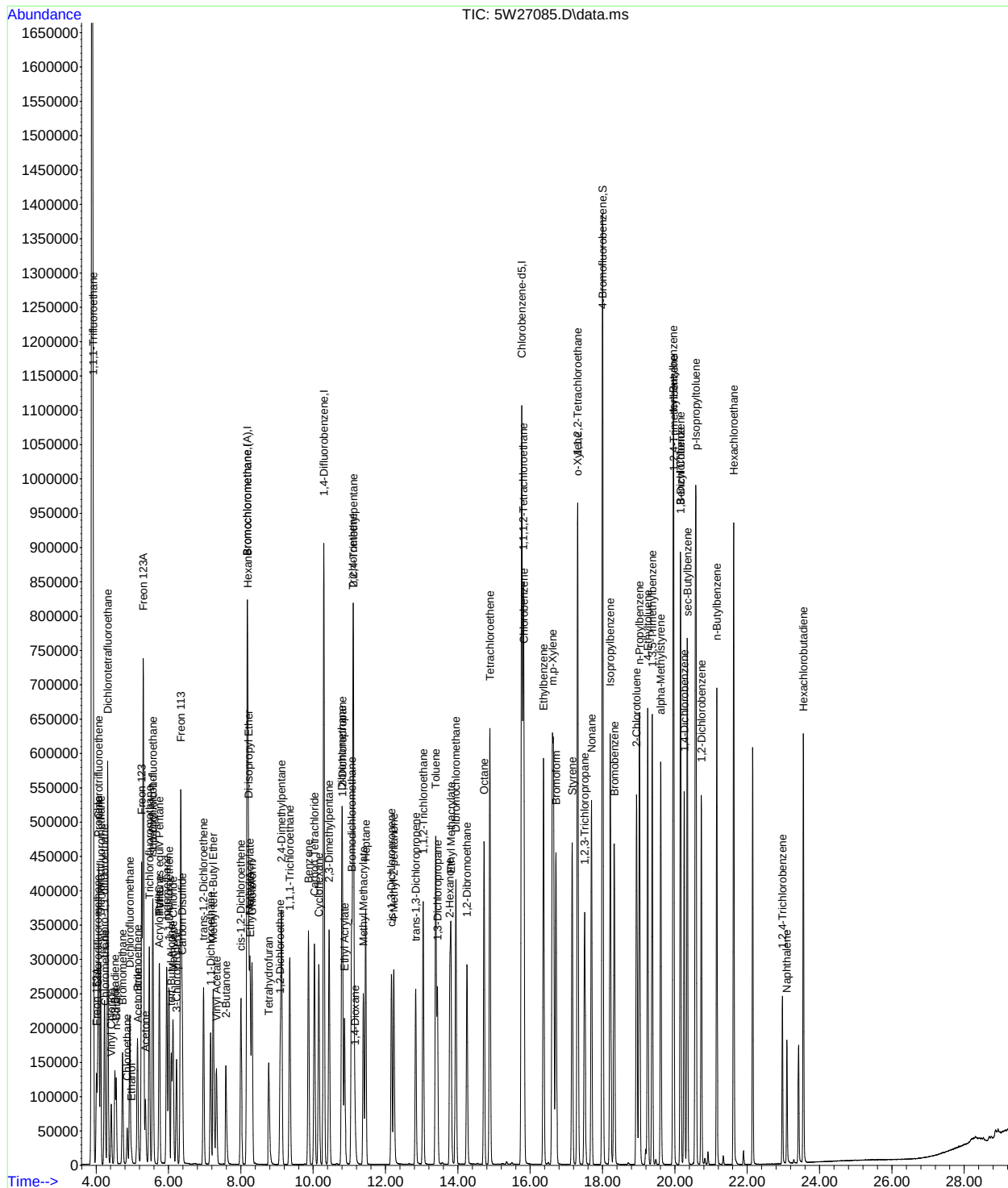
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.112	57	569089	4.88	ppb(v)	97
56) Heptane	11.454	71	122516	4.95	ppb(v)	98
57) Trichloroethene	11.099	95	187951	4.85	ppb(v)	99
58) 1,2-Dichloropropane	10.812	63	143738	5.20	ppb(v)	96
59) Dibromomethane	10.794	174	187520	4.85	ppb(v)	94
60) Ethyl Acrylate	10.867	55	269100	4.90	ppb(v)	100
61) Methyl Methacrylate	11.387	69	136602	5.04	ppb(v)	94
62) 1,4-Dioxane	11.155	88	75822	5.35	ppb(v)	91
63) Bromodichloromethane	11.063	83	288399	4.94	ppb(v)	99
64) cis-1,3-Dichloropropene	12.164	75	223868	5.26	ppb(v)	99
65) 4-Methyl-2-pentanone	12.231	58	108903	4.83	ppb(v)	98
66) trans-1,3-Dichloropropene	12.837	75	200313	5.29	ppb(v)	99
67) Toluene	13.387	91	478186	5.27	ppb(v)	99
68) 1,1,2-Trichloroethane	13.045	97	171930	5.58	ppb(v)	97
69) 1,3-Dichloropropane	13.436	76	222380	5.60	ppb(v)	95
70) 2-Hexanone	13.779	58	146737	4.60	ppb(v)	93
71) Ethyl Methacrylate	13.810	69	218450	4.71	ppb(v)	99
72) Dibromochloromethane	13.944	129	315957	5.68	ppb(v)	100
73) Tetrachloroethene	14.886	166	269340	5.23	ppb(v)	100
74) 1,2-Dibromoethane	14.250	107	282588	5.76	ppb(v)	99
75) Octane	14.721	43	251719	4.96	ppb(v)	99
76) 1,1,1,2-Tetrachloroethane	15.810	131	224626	5.67	ppb(v)	98
78) Chlorobenzene	15.828	112	399536	5.60	ppb(v)	100
79) Ethylbenzene	16.367	91	601183	5.17	ppb(v)	99
80) m,p-Xylene	16.618	91	905185	9.75	ppb(v)	99
81) Styrene	17.162	104	346619	4.87	ppb(v)	99
82) Nonane	17.694	43	239476	4.47	ppb(v)	100
83) o-Xylene	17.309	91	468013	4.98	ppb(v)	99
84) Bromoform	16.716	173	316782	5.64	ppb(v)	100
85) 1,1,2,2-Tetrachloroethane	17.315	83	331162	4.75	ppb(v)	99
86) 1,2,3-Trichloropropane	17.505	75	235967	4.86	ppb(v)	98
87) Isopropylbenzene	18.214	105	622865	4.85	ppb(v)	100
88) Bromobenzene	18.324	156	224838	5.13	ppb(v)	99
89) 2-Chlorotoluene	18.942	126	164612	5.01	ppb(v)	96
90) n-Propylbenzene	19.022	120	174387	4.66	ppb(v)	98
92) 4-Ethyltoluene	19.248	105	578337	4.48	ppb(v)	100
93) 1,3,5-Trimethylbenzene	19.377	105	496140	4.49	ppb(v)	99
94) alpha-Methylstyrene	19.609	118	245223	4.33	ppb(v)	99
95) tert-Butylbenzene	19.952	134	113473	4.26	ppb(v)	97
96) 1,2,4-Trimethylbenzene	19.970	105	467249	4.23	ppb(v)	97
97) 1,3-Dichlorobenzene	20.160	146	316181	4.31	ppb(v)	98
98) Benzyl Chloride	20.154	91	310668	3.91	ppb(v)	100
99) 1,4-Dichlorobenzene	20.264	146	303155	4.31	ppb(v)	99
100) sec-Butylbenzene	20.349	134	131271	4.35	ppb(v)	98
101) p-Isopropyltoluene	20.582	134	151076	4.26	ppb(v)	98
102) 1,2-Dichlorobenzene	20.735	146	289672	4.35	ppb(v)	97
103) n-Butylbenzene	21.163	134	119719	4.13	ppb(v)	99
104) Hexachloroethane	21.628	201	187282	4.60	ppb(v)	98
105) 1,2,4-Trichlorobenzene	22.974	180	88323	3.75	ppb(v)	98
106) Naphthalene	23.096	128	162503	3.68	ppb(v)	100
107) Hexachlorobutadiene	23.555	225	132631	4.26	ppb(v)	99
109) TVHC as equiv Pentane	5.753	TIC	679790	5.31	ppb(v)	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5W27085.D
Acq On : 6 Oct 2017 5:00 pm
Operator : thomash
Sample : ic1065-5
Misc : MS20430,v5w1065,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 06 17:37:22 2017
Quant Method : C:\msdchem\1\methods\m5w1065.M
Quant Title : TH-15 Full Scan Mode
QLast Update : Thu Oct 05 09:07:36 2017
Response via : Initial Calibration



7.7.5

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27086.D
 Acq On : 6 Oct 2017 5:45 pm
 Operator : thomash
 Sample : icc1065-10
 Misc : MS20430,v5w1065,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 07 07:38:06 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Oct 06 17:49:17 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.175	130	291386	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.292	114	996968	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.767	82	450995	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.175	130	291386	10.00	ppb(v	0.00

System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.000	95	670043	10.43	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	104.30%

Target Compounds						Qvalue
2) 1,1,1-Trifluoroethane	3.917	69	676894	10.96	ppb(v#	91
3) Freon 152A	4.009	65	141677	8.42	ppb(v	86
4) Chlorodifluoromethane	4.046	67	56601	10.42	ppb(v	97
5) Propene	4.064	41	144922	9.00	ppb(v	98
6) Chlorotrifluoroethene	4.070	116	387076	9.92	ppb(v	100
7) Dichlorodifluoromethane	4.125	85	619731	9.55	ppb(v	100
8) 1-Chloro-1,1-difluoro...	4.229	65	404854	9.30	ppb(v	99
9) Chloromethane	4.247	50	189575	9.32	ppb(v	100
10) Dichlorotetrafluoroethane	4.321	85	619718	9.58	ppb(v	98
11) Vinyl Chloride	4.413	62	217178	9.83	ppb(v	99
12) 1,3-Butadiene	4.517	54	140593	9.17	ppb(v	98
13) n-Butane	4.553	58	30225	9.83	ppb(v	98
14) Bromomethane	4.731	94	254861	7.97	ppb(v	100
15) Chloroethane	4.859	64	103484	9.68	ppb(v	99
16) Dichlorofluoromethane	4.933	67	471839	9.09	ppb(v	100
17) Acetonitrile	5.153	41	122415	9.54	ppb(v	99
18) Freon 123	5.257	83	597125	9.08	ppb(v	99
19) Freon 123A	5.300	117	692252	18.23	ppb(v	97
20) Bromoethene	5.141	106	255559	9.62	ppb(v	99
21) Trichlorofluoromethane	5.471	101	603032	9.34	ppb(v	99
22) Acetone	5.361	58	85461	8.11	ppb(v	100
23) Pentane	5.752	57	56093	8.95	ppb(v	93
24) 1,1-Dichloro-1-fluoro...	5.569	81	509488	8.73	ppb(v	99
25) Iodomethane	5.948	142	780312	9.48	ppb(v	96
26) Isopropyl Alcohol	5.569	43	51529	6.81	ppb(v	96
27) 1,1-Dichloroethene	6.009	61	374337	9.84	ppb(v	98
28) Freon 113	6.340	101	565596	9.67	ppb(v	98
29) Methylene Chloride	6.126	84	226328	7.83	ppb(v	98
30) Carbon Disulfide	6.383	76	765134	9.80	ppb(v	99
31) Ethanol	4.975	45	53122	7.71	ppb(v	98
32) Acrylonitrile	5.746	53	168169	10.16	ppb(v	98
33) 3-Chloropropene	6.223	76	102747	10.01	ppb(v	90
34) trans-1,2-Dichloroethene	6.970	61	344667	9.97	ppb(v	98
35) tert-Butyl Alcohol	6.077	59	449678	8.13	ppb(v	98
36) Methyl tert-Butyl Ether	7.239	73	642715	9.73	ppb(v	99
37) Vinyl Acetate	7.325	43	493222	8.86	ppb(v	99
38) 1,1-Dichloroethane	7.166	63	437394	9.47	ppb(v	100
39) 2-Butanone	7.582	72	119375	10.44	ppb(v	95
40) Hexane	8.187	57	346482	9.78	ppb(v	98
41) cis-1,2-Dichloroethene	8.004	61	325785	9.77	ppb(v	97
42) Di-isopropyl Ether	8.212	87	204024	10.02	ppb(v	100
43) Ethyl Acetate	8.261	61	79046	10.64	ppb(v	93
44) Methyl Acrylate	8.242	55	393420	9.67	ppb(v	99
45) Chloroform	8.310	83	533535	9.15	ppb(v	98
46) 2,4-Dimethylpentane	9.123	57	403101	9.93	ppb(v	99
47) Tetrahydrofuran	8.762	72	111958	10.87	ppb(v	93
48) 1,1,1-Trichloroethane	9.356	97	490132	9.44	ppb(v	99
49) 1,2-Dichloroethane	9.093	62	303406	9.60	ppb(v	98
50) Benzene	9.870	78	763016	9.13	ppb(v	98
51) Carbon Tetrachloride	10.035	117	508304	9.95	ppb(v	99
52) Cyclohexane	10.157	56	339814	9.76	ppb(v	100
53) 2,3-Dimethylpentane	10.439	71	158920	9.96	ppb(v	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27086.D
 Acq On : 6 Oct 2017 5:45 pm
 Operator : thomash
 Sample : icc1065-10
 Misc : MS20430,v5w1065,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 07 07:38:06 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Oct 06 17:49:17 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.111	57	1100294	9.87	ppb(v)	97
56) Heptane	11.454	71	237271	10.16	ppb(v)	98
57) Trichloroethene	11.099	95	361699	9.36	ppb(v)	98
58) 1,2-Dichloropropane	10.812	63	279660	9.62	ppb(v)	96
59) Dibromomethane	10.799	174	366144	8.62	ppb(v)	97
60) Ethyl Acrylate	10.867	55	531135	10.76	ppb(v)	100
61) Methyl Methacrylate	11.387	69	269407	10.49	ppb(v)	92
62) 1,4-Dioxane	11.148	88	149241	10.28	ppb(v)	96
63) Bromodichloromethane	11.063	83	551779	9.36	ppb(v)	98
64) cis-1,3-Dichloropropene	12.164	75	433325	9.95	ppb(v)	99
65) 4-Methyl-2-pentanone	12.231	58	217461	11.48	ppb(v)	96
66) trans-1,3-Dichloropropene	12.837	75	384010	10.10	ppb(v)	99
67) Toluene	13.387	91	905096	9.37	ppb(v)	99
68) 1,1,2-Trichloroethane	13.045	97	329318	9.41	ppb(v)	98
69) 1,3-Dichloropropane	13.436	76	422469	9.56	ppb(v)	94
70) 2-Hexanone	13.779	58	291940	12.56	ppb(v)	91
71) Ethyl Methacrylate	13.809	69	433238	10.75	ppb(v)	99
72) Dibromochloromethane	13.944	129	587676	9.16	ppb(v)	100
73) Tetrachloroethene	14.886	166	511273	8.73	ppb(v)	99
74) 1,2-Dibromoethane	14.256	107	534359	9.17	ppb(v)	99
75) Octane	14.727	43	488576	9.39	ppb(v)	96
76) 1,1,1,2-Tetrachloroethane	15.810	131	431367	9.29	ppb(v)	99
78) Chlorobenzene	15.828	112	762999	8.53	ppb(v)	100
79) Ethylbenzene	16.373	91	1159785	8.66	ppb(v)	99
80) m,p-Xylene	16.624	91	1795720	17.47	ppb(v)	99
81) Styrene	17.162	104	699322	9.76	ppb(v)	99
82) Nonane	17.694	43	476325	8.29	ppb(v)	97
83) o-Xylene	17.309	91	909888	8.74	ppb(v)	99
84) Bromoform	16.715	173	613032	9.56	ppb(v)	100
85) 1,1,2,2-Tetrachloroethane	17.321	83	648204	8.52	ppb(v)	100
86) 1,2,3-Trichloropropane	17.511	75	468406	8.70	ppb(v)	99
87) Isopropylbenzene	18.220	105	1233659	8.64	ppb(v)	99
88) Bromobenzene	18.324	156	447096	8.83	ppb(v)	99
89) 2-Chlorotoluene	18.948	126	330500	9.02	ppb(v)	95
90) n-Propylbenzene	19.022	120	348438	9.22	ppb(v)	98
92) 4-Ethyltoluene	19.254	105	1179946	8.66	ppb(v)	99
93) 1,3,5-Trimethylbenzene	19.377	105	990265	8.21	ppb(v)	99
94) alpha-Methylstyrene	19.615	118	498039	9.55	ppb(v)	99
95) tert-Butylbenzene	19.952	134	224088	8.14	ppb(v)	96
96) 1,2,4-Trimethylbenzene	19.970	105	928732	8.33	ppb(v)	97
97) 1,3-Dichlorobenzene	20.160	146	639385	8.67	ppb(v)	99
98) Benzyl Chloride	20.153	91	657098	10.56	ppb(v)	99
99) 1,4-Dichlorobenzene	20.264	146	624620	8.54	ppb(v)	99
100) sec-Butylbenzene	20.349	134	261909	8.28	ppb(v)	99
101) p-Isopropyltoluene	20.582	134	301300	7.87	ppb(v)	98
102) 1,2-Dichlorobenzene	20.735	146	586794	8.41	ppb(v)	98
103) n-Butylbenzene	21.163	134	247141	8.81	ppb(v)	99
104) Hexachloroethane	21.628	201	385036	8.17	ppb(v)	98
105) 1,2,4-Trichlorobenzene	22.974	180	215641	12.93	ppb(v)	97
106) Naphthalene	23.096	128	413129	13.41	ppb(v)	100
107) Hexachlorobutadiene	23.555	225	283127	6.59	ppb(v)	99
109) TVHC as equiv Pentane	5.752	TIC	1302322	9.75	ppb(v)	100

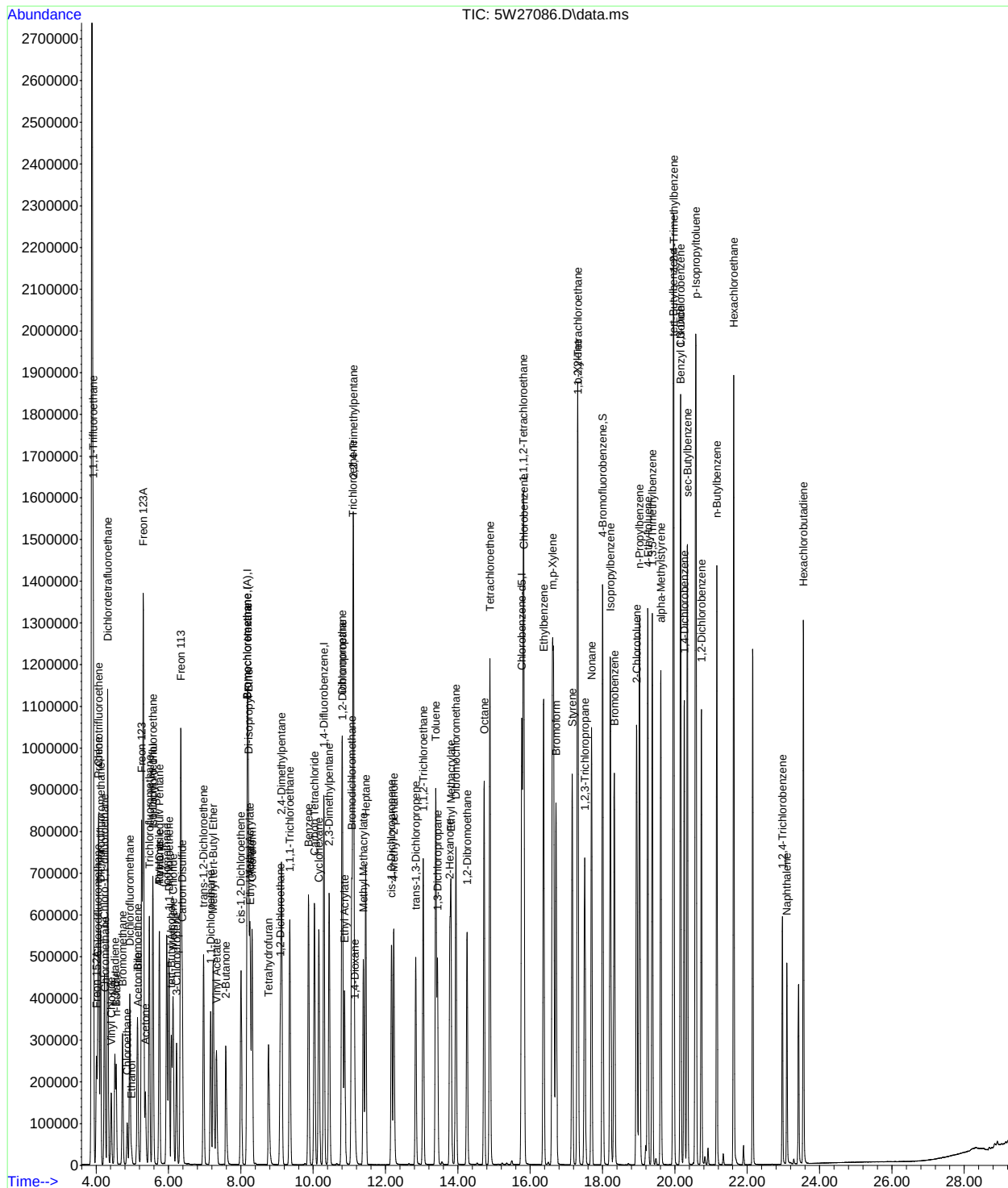
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.7.6
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5W27086.D
Acq On : 6 Oct 2017 5:45 pm
Operator : thomash
Sample : icc1065-10
Misc : MS20430,v5w1065,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 07 07:38:06 2017
Quant Method : C:\msdchem\1\methods\m5w1065.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Fri Oct 06 17:49:17 2017
Response via : Initial Calibration



7.7.6

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27087.D
 Acq On : 6 Oct 2017 6:33 pm
 Operator : thomash
 Sample : ic1065-20
 Misc : MS20430,v5w1065,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 07 07:39:17 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Oct 06 17:49:17 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.181	130	293152	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.298	114	994053	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.767	82	418627	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.181	130	293152	10.00	ppb(v	0.00

System Monitoring Compounds

91) 4-Bromofluorobenzene	18.006	95	606995	10.18	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	101.80%

Target Compounds					Qvalue	
2) 1,1,1-Trifluoroethane	3.923	69	1245966	20.04	ppb(v	93
3) Freon 152A	4.009	65	281627	16.64	ppb(v	86
4) Chlorodifluoromethane	4.046	67	110757	20.27	ppb(v	98
5) Propene	4.064	41	280977	17.34	ppb(v	98
6) Chlorotrifluoroethene	4.076	116	773439	19.69	ppb(v#	90
7) Dichlorodifluoromethane	4.125	85	1199901	18.37	ppb(v	100
8) 1-Chloro-1,1-difluoro...	4.235	65	788541	18.00	ppb(v	99
9) Chloromethane	4.254	50	368476	18.00	ppb(v	100
10) Dichlorotetrafluoroethane	4.321	85	1199794	18.43	ppb(v	98
11) Vinyl Chloride	4.419	62	423109	19.04	ppb(v	100
12) 1,3-Butadiene	4.517	54	272447	17.67	ppb(v	98
13) n-Butane	4.554	58	57818	18.68	ppb(v	97
14) Bromomethane	4.731	94	495476	15.40	ppb(v	99
15) Chloroethane	4.859	64	198702	18.47	ppb(v	99
16) Dichlorofluoromethane	4.933	67	904782	17.32	ppb(v	99
17) Acetonitrile	5.153	41	230449	17.84	ppb(v	98
18) Freon 123	5.257	83	1115595	16.87	ppb(v	100
19) Freon 123A	5.306	117	1301674	34.08	ppb(v	97
20) Bromoethene	5.141	106	492028	18.40	ppb(v	99
21) Trichlorofluoromethane	5.471	101	1163451	17.90	ppb(v	100
22) Acetone	5.361	58	161866	15.27	ppb(v	96
23) Pentane	5.753	57	107705	17.08	ppb(v	91
24) 1,1-Dichloro-1-fluoro...	5.569	81	1044359	17.80	ppb(v	99
25) Iodomethane	5.954	142	1554029	18.77	ppb(v	96
26) Isopropyl Alcohol	5.569	43	113367	14.89	ppb(v	96
27) 1,1-Dichloroethene	6.016	61	726794	18.98	ppb(v	95
28) Freon 113	6.340	101	1110122	18.86	ppb(v	99
29) Methylene Chloride	6.126	84	442757	15.22	ppb(v	97
30) Carbon Disulfide	6.383	76	1498884	19.09	ppb(v	100
31) Ethanol	4.982	45	103360	14.91	ppb(v	98
32) Acrylonitrile	5.746	53	324211	19.46	ppb(v	98
33) 3-Chloropropene	6.224	76	204864	19.84	ppb(v	86
34) trans-1,2-Dichloroethene	6.970	61	673944	19.38	ppb(v	98
35) tert-Butyl Alcohol	6.083	59	886728	15.94	ppb(v	97
36) Methyl tert-Butyl Ether	7.239	73	1269752	19.11	ppb(v	98
37) Vinyl Acetate	7.325	43	973490	17.39	ppb(v	98
38) 1,1-Dichloroethane	7.172	63	858626	18.48	ppb(v	99
39) 2-Butanone	7.582	72	234911	20.42	ppb(v	93
40) Hexane	8.187	57	676742	18.99	ppb(v	97
41) cis-1,2-Dichloroethene	8.010	61	637448	19.00	ppb(v	96
42) Di-isopropyl Ether	8.212	87	407183	19.87	ppb(v	96
43) Ethyl Acetate	8.261	61	154170	20.63	ppb(v	92
44) Methyl Acrylate	8.249	55	759945	18.57	ppb(v	99
45) Chloroform	8.316	83	1035272	17.64	ppb(v	98
46) 2,4-Dimethylpentane	9.130	57	789724	19.34	ppb(v	99
47) Tetrahydrofuran	8.762	72	222747	21.49	ppb(v	91
48) 1,1,1-Trichloroethane	9.356	97	972197	18.62	ppb(v	99
49) 1,2-Dichloroethane	9.093	62	586123	18.43	ppb(v	97
50) Benzene	9.876	78	1494098	17.78	ppb(v	98
51) Carbon Tetrachloride	10.041	117	1024043	19.92	ppb(v	99
52) Cyclohexane	10.163	56	674082	19.25	ppb(v	99
53) 2,3-Dimethylpentane	10.445	71	316018	19.68	ppb(v	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27087.D
 Acq On : 6 Oct 2017 6:33 pm
 Operator : thomash
 Sample : ic1065-20
 Misc : MS20430,v5w1065,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 07 07:39:17 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Oct 06 17:49:17 2017
 Response via : Initial Calibration

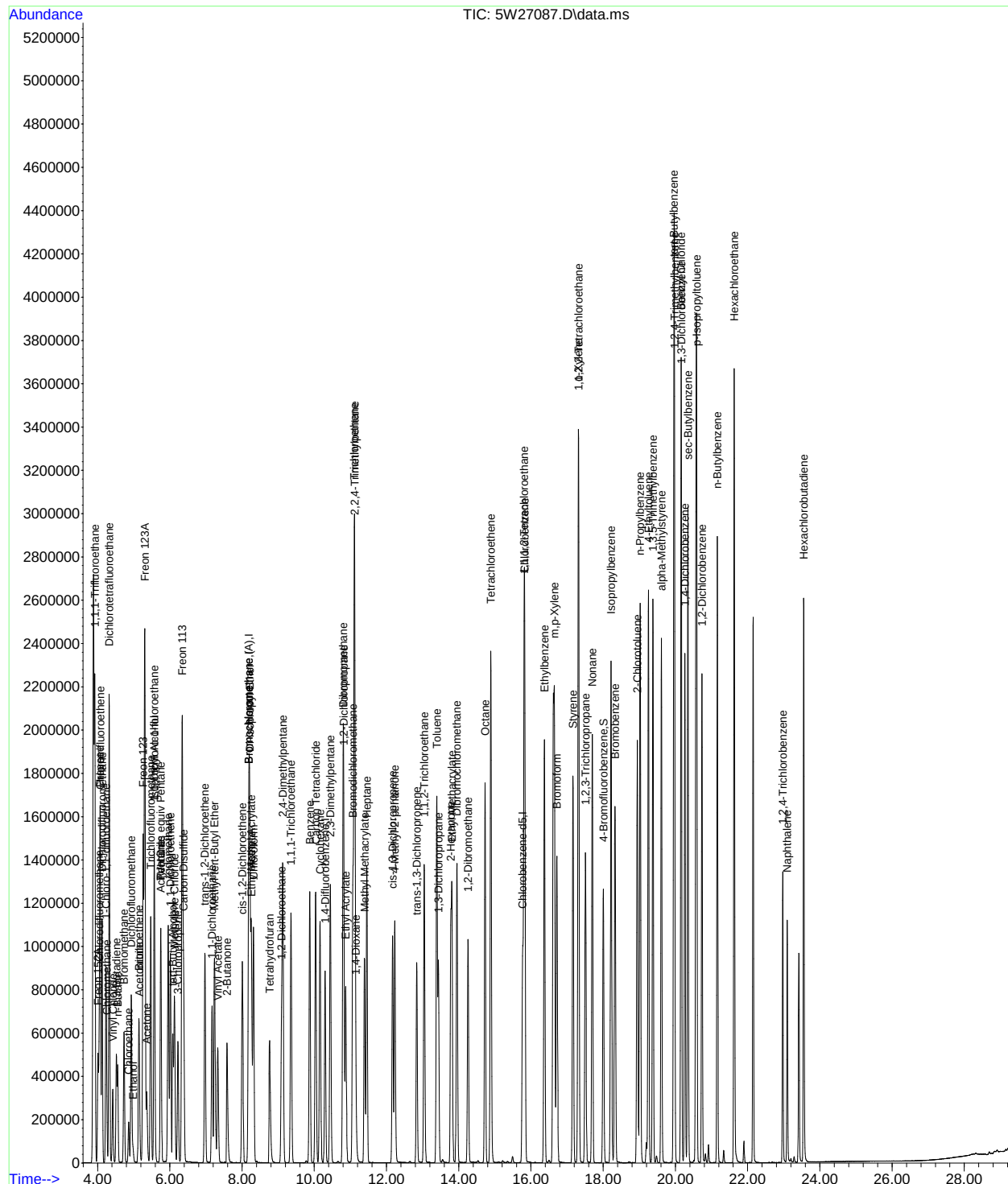
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.118	57	2108432	18.97	ppb(v)	97
56) Heptane	11.454	71	463801	19.93	ppb(v)	98
57) Trichloroethene	11.106	95	711179	18.45	ppb(v)	99
58) 1,2-Dichloropropane	10.818	63	536786	18.51	ppb(v)	97
59) Dibromomethane	10.800	174	726503	17.15	ppb(v)	96
60) Ethyl Acrylate	10.873	55	1045718	21.24	ppb(v)	99
61) Methyl Methacrylate	11.393	69	528250	20.63	ppb(v)	89
62) 1,4-Dioxane	11.148	88	289472	20.00	ppb(v)	98
63) Bromodichloromethane	11.069	83	1093724	18.60	ppb(v)	99
64) cis-1,3-Dichloropropene	12.170	75	848838	19.54	ppb(v)	100
65) 4-Methyl-2-pentanone	12.231	58	433459	22.95	ppb(v)	95
66) trans-1,3-Dichloropropene	12.837	75	722566	19.06	ppb(v)	99
67) Toluene	13.394	91	1734252	18.01	ppb(v)	99
68) 1,1,2-Trichloroethane	13.045	97	629411	18.04	ppb(v)	98
69) 1,3-Dichloropropane	13.436	76	792839	17.98	ppb(v)	94
70) 2-Hexanone	13.785	58	580718	25.05	ppb(v)	90
71) Ethyl Methacrylate	13.816	69	852320	21.22	ppb(v)	99
72) Dibromochloromethane	13.950	129	1095749	17.13	ppb(v)	99
73) Tetrachloroethene	14.886	166	1016020	17.39	ppb(v)	99
74) 1,2-Dibromoethane	14.256	107	979570	16.86	ppb(v)	99
75) Octane	14.727	43	922930	17.79	ppb(v)	94
76) 1,1,1,2-Tetrachloroethane	15.810	131	756736	16.34	ppb(v)	100
78) Chlorobenzene	15.828	112	1336677	16.09	ppb(v)	100
79) Ethylbenzene	16.373	91	2031115	16.33	ppb(v)	99
80) m,p-Xylene	16.648	91	3124054	32.74	ppb(v)	99
81) Styrene	17.162	104	1347758	20.26	ppb(v)	99
82) Nonane	17.694	43	924922	17.35	ppb(v)	97
83) o-Xylene	17.315	91	1577767	16.32	ppb(v)	98
84) Bromoform	16.722	173	1020834	17.14	ppb(v)	100
85) 1,1,2,2-Tetrachloroethane	17.321	83	1262913	17.88	ppb(v)	100
86) 1,2,3-Trichloropropane	17.511	75	910734	18.22	ppb(v)	99
87) Isopropylbenzene	18.220	105	2307618	17.40	ppb(v)	99
88) Bromobenzene	18.324	156	808222	17.19	ppb(v)	99
89) 2-Chlorotoluene	18.948	126	616865	18.14	ppb(v)	94
90) n-Propylbenzene	19.022	120	687263	19.60	ppb(v)	99
92) 4-Ethyltoluene	19.254	105	2325499	18.39	ppb(v)	99
93) 1,3,5-Trimethylbenzene	19.377	105	1956211	17.48	ppb(v)	99
94) alpha-Methylstyrene	19.615	118	1016151	20.98	ppb(v)	100
95) tert-Butylbenzene	19.958	134	452934	17.73	ppb(v)	95
96) 1,2,4-Trimethylbenzene	19.976	105	1845433	17.83	ppb(v)	94
97) 1,3-Dichlorobenzene	20.166	146	1294135	18.90	ppb(v)	98
98) Benzyl Chloride	20.160	91	1352373	23.41	ppb(v)	98
99) 1,4-Dichlorobenzene	20.264	146	1268464	18.68	ppb(v)	99
100) sec-Butylbenzene	20.349	134	527881	17.97	ppb(v)	99
101) p-Isopropyltoluene	20.588	134	601244	16.91	ppb(v)	91
102) 1,2-Dichlorobenzene	20.735	146	1193264	18.41	ppb(v)	98
103) n-Butylbenzene	21.163	134	508315	19.51	ppb(v)	97
104) Hexachloroethane	21.628	201	769893	17.60	ppb(v)	99
105) 1,2,4-Trichlorobenzene	22.974	180	481502	31.10	ppb(v)	98
106) Naphthalene	23.096	128	956925	33.46	ppb(v)	100
107) Hexachlorobutadiene	23.555	225	574185	14.40	ppb(v)	97
109) TVHC as equiv Pentane	5.753	TIC	2493615	18.56	ppb(v)	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

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Data Path : C:\msdchem\1\data\  
Data File : 5W27087.D  
Acq On : 6 Oct 2017 6:33 pm  
Operator : thomash  
Sample : ic1065-20  
Misc : MS20430,v5w1065,,,,,1  
ALS Vial : 3 Sample Multiplier: 1
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Quant Time: Oct 07 07:39:17 2017
Quant Method : C:\msdchem\1\methods\m5w1065.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Fri Oct 06 17:49:17 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27088.D
 Acq On : 6 Oct 2017 7:23 pm
 Operator : thomash
 Sample : ic1065-40
 Misc : MS20430,v5w1065,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 07 09:20:08 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Oct 06 17:49:17 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.181	130	298904	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.298	114	1009982	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.773	82	428032	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.181	130	298904	10.00	ppb(v	0.00

System Monitoring Compounds

91) 4-Bromofluorobenzene	18.006	95	510141	8.36	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	83.60%

Target Compounds						Qvalue
2) 1,1,1-Trifluoroethane	3.923	69	1829170	28.86	ppb(v	97
3) Freon 152A	4.015	65	561477	32.54	ppb(v	85
4) Chlorodifluoromethane	4.046	67	216000	38.78	ppb(v	99
5) Propene	4.064	41	531504	32.16	ppb(v	98
6) Chlorotrifluoroethene	4.076	116	1529952	38.21	ppb(v	99
7) Dichlorodifluoromethane	4.125	85	2353196	35.33	ppb(v	99
8) 1-Chloro-1,1-difluoro...	4.235	65	1498936	33.56	ppb(v	98
9) Chloromethane	4.254	50	694879	33.29	ppb(v	98
10) Dichlorotetrafluoroethane	4.321	85	2219115	33.43	ppb(v	100
11) Vinyl Chloride	4.419	62	789031	34.83	ppb(v	99
12) 1,3-Butadiene	4.517	54	509087	32.39	ppb(v	98
13) n-Butane	4.553	58	108537	34.40	ppb(v	98
14) Bromomethane	4.731	94	938215	28.60	ppb(v	100
15) Chloroethane	4.865	64	377597	34.43	ppb(v	99
16) Dichlorofluoromethane	4.933	67	1711487	32.13	ppb(v	100
17) Acetonitrile	5.159	41	436273	33.13	ppb(v	100
18) Freon 123	5.263	83	2007616	29.77	ppb(v	99
19) Freon 123A	5.306	117	2345429	60.22	ppb(v	93
20) Bromoethene	5.141	106	945794	34.70	ppb(v	99
21) Trichlorofluoromethane	5.471	101	2173168	32.80	ppb(v	99
22) Acetone	5.361	58	309883	28.68	ppb(v	97
23) Pentane	5.752	57	210441	32.73	ppb(v	85
24) 1,1-Dichloro-1-fluoro...	5.569	81	2014056	33.66	ppb(v	99
25) Iodomethane	5.954	142	3082889	36.52	ppb(v	97
26) Isopropyl Alcohol	5.569	43	208608	26.86	ppb(v	90
27) 1,1-Dichloroethene	6.016	61	1400235	35.87	ppb(v	93
28) Freon 113	6.340	101	2165140	36.08	ppb(v	100
29) Methylene Chloride	6.132	84	870128	29.34	ppb(v	94
30) Carbon Disulfide	6.383	76	2939221	36.72	ppb(v	100
31) Ethanol	4.982	45	198391	28.07	ppb(v	98
32) Acrylonitrile	5.746	53	633402	37.29	ppb(v	98
33) 3-Chloropropene	6.230	76	407182	38.68	ppb(v	82
34) trans-1,2-Dichloroethene	6.970	61	1337341	37.71	ppb(v	97
35) tert-Butyl Alcohol	6.083	59	1731561	30.53	ppb(v	96
36) Methyl tert-Butyl Ether	7.239	73	2518739	37.18	ppb(v	98
37) Vinyl Acetate	7.325	43	1919323	33.63	ppb(v	97
38) 1,1-Dichloroethane	7.172	63	1686213	35.60	ppb(v	99
39) 2-Butanone	7.582	72	464082	39.57	ppb(v	90
40) Hexane	8.187	57	1311019	36.08	ppb(v	95
41) cis-1,2-Dichloroethene	8.010	61	1262431	36.90	ppb(v	95
42) Di-isopropyl Ether	8.218	87	809079	38.72	ppb(v	87
43) Ethyl Acetate	8.267	61	301569	39.58	ppb(v	84
44) Methyl Acrylate	8.249	55	1467258	35.16	ppb(v	99
45) Chloroform	8.322	83	2014679	33.67	ppb(v	98
46) 2,4-Dimethylpentane	9.129	57	1536699	36.90	ppb(v	99
47) Tetrahydrofuran	8.756	72	440890	41.71	ppb(v	91
48) 1,1,1-Trichloroethane	9.356	97	1940408	36.45	ppb(v	99
49) 1,2-Dichloroethane	9.093	62	1142243	35.23	ppb(v	97
50) Benzene	9.876	78	2958582	34.53	ppb(v	98
51) Carbon Tetrachloride	10.041	117	2102344	40.10	ppb(v	99
52) Cyclohexane	10.163	56	1323500	37.06	ppb(v	98
53) 2,3-Dimethylpentane	10.445	71	626113	38.25	ppb(v	93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27088.D
 Acq On : 6 Oct 2017 7:23 pm
 Operator : thomash
 Sample : ic1065-40
 Misc : MS20430,v5w1065,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 07 09:20:08 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Oct 06 17:49:17 2017
 Response via : Initial Calibration

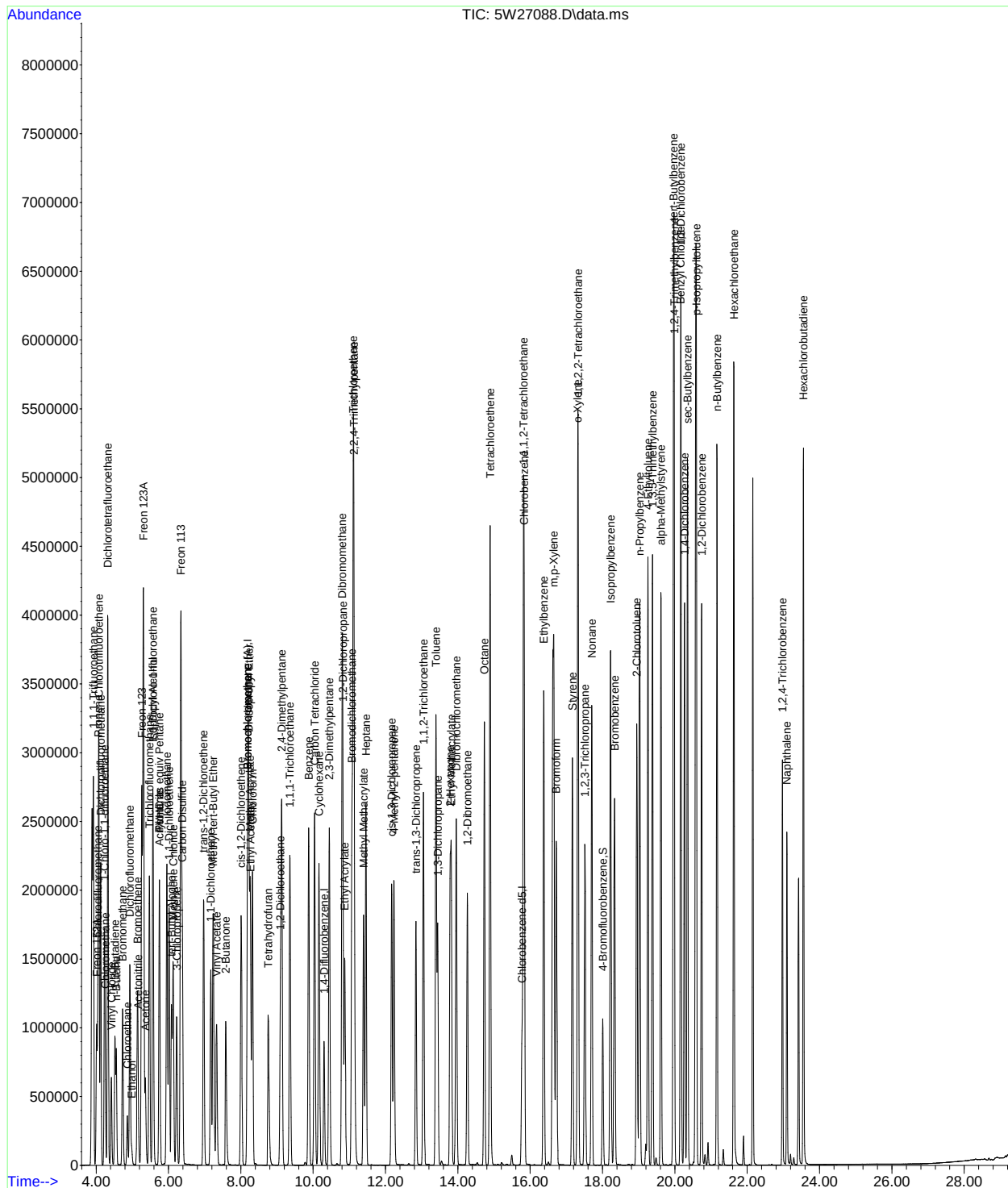
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.124	57	3833288	33.94	ppb(v)	97
56) Heptane	11.460	71	904805	38.26	ppb(v)	98
57) Trichloroethene	11.105	95	1352894	34.55	ppb(v)	98
58) 1,2-Dichloropropane	10.824	63	1030654	34.98	ppb(v)	97
59) Dibromomethane	10.806	174	1469991	34.15	ppb(v)	97
60) Ethyl Acrylate	10.873	55	2002253	40.03	ppb(v)	98
61) Methyl Methacrylate	11.393	69	1021380	39.26	ppb(v)	87
63) Bromodichloromethane	11.069	83	2126815	35.60	ppb(v)	99
64) cis-1,3-Dichloropropene	12.170	75	1688448	38.25	ppb(v)	99
65) 4-Methyl-2-pentanone	12.237	58	827835	43.14	ppb(v)	92
66) trans-1,3-Dichloropropene	12.843	75	1402041	36.39	ppb(v)	98
67) Toluene	13.394	91	3374206	34.48	ppb(v)	100
68) 1,1,2-Trichloroethane	13.051	97	1238650	34.95	ppb(v)	99
69) 1,3-Dichloropropane	13.442	76	1521785	33.98	ppb(v)	93
70) 2-Hexanone	13.791	58	1100599	46.72	ppb(v)	89
71) Ethyl Methacrylate	13.822	69	1591637	39.00	ppb(v)	98
72) Dibromochloromethane	13.956	129	2116185	32.56	ppb(v)	99
73) Tetrachloroethene	14.892	166	2046003	34.47	ppb(v)	99
74) 1,2-Dibromoethane	14.262	107	1874493	31.75	ppb(v)	100
75) Octane	14.733	43	1705143	32.35	ppb(v)	90
76) 1,1,1,2-Tetrachloroethane	15.816	131	1417122	30.13	ppb(v)	98
78) Chlorobenzene	15.834	112	2453898	28.90	ppb(v)	100
79) Ethylbenzene	16.373	91	3665508	28.83	ppb(v)	98
80) m,p-Xylene	16.654	91	5457831	55.94	ppb(v)	98
81) Styrene	17.168	104	2279444	33.52	ppb(v)	99
82) Nonane	17.700	43	1562220	28.66	ppb(v)	94
83) o-Xylene	17.315	91	2603179	26.34	ppb(v)	98
84) Bromoform	16.722	173	1747523	28.70	ppb(v)	99
85) 1,1,2,2-Tetrachloroethane	17.327	83	2093223	28.99	ppb(v)	99
86) 1,2,3-Trichloropropane	17.511	75	1507916	29.50	ppb(v)	99
87) Isopropylbenzene	18.226	105	3813634	28.13	ppb(v)	99
88) Bromobenzene	18.330	156	1322883	27.51	ppb(v)	97
89) 2-Chlorotoluene	18.948	126	1008325	28.99	ppb(v)	94
90) n-Propylbenzene	19.028	120	1144106	31.92	ppb(v)	95
92) 4-Ethyltoluene	19.254	105	3899961	30.16	ppb(v)	99
93) 1,3,5-Trimethylbenzene	19.383	105	3379495	29.53	ppb(v)	99
94) alpha-Methylstyrene	19.615	118	1810673	36.57	ppb(v)	100
95) tert-Butylbenzene	19.964	134	784861	30.05	ppb(v)	94
96) 1,2,4-Trimethylbenzene	19.982	105	3110209	29.39	ppb(v)	91
97) 1,3-Dichlorobenzene	20.166	146	2248649	32.11	ppb(v)	99
98) Benzyl Chloride	20.160	91	2435295	41.24	ppb(v)	98
99) 1,4-Dichlorobenzene	20.270	146	2280025	32.83	ppb(v)	99
100) sec-Butylbenzene	20.355	134	953776	31.76	ppb(v)	93
101) p-Isopropyltoluene	20.594	134	1090091	29.98	ppb(v)	89
102) 1,2-Dichlorobenzene	20.741	146	2213525	33.41	ppb(v)	97
103) n-Butylbenzene	21.169	134	987414	37.07	ppb(v)	88
104) Hexachloroethane	21.634	201	1334941	29.85	ppb(v)	91
105) 1,2,4-Trichlorobenzene	22.974	180	1043557	65.91	ppb(v)	98
106) Naphthalene	23.096	128	2074286	70.94	ppb(v)	100
107) Hexachlorobutadiene	23.555	225	1160534	28.47	ppb(v)	98
109) TVHC as equiv Pentane	5.752	TIC	4799365	35.04	ppb(v)	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5W27088.D
Acq On : 6 Oct 2017 7:23 pm
Operator : thomash
Sample : ic1065-40
Misc : MS20430,v5w1065,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 07 09:20:08 2017
Quant Method : C:\msdchem\1\methods\m5w1065.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Fri Oct 06 17:49:17 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27092.D
 Acq On : 7 Oct 2017 8:32 am
 Operator : thomash
 Sample : icv1065-10
 Misc : MS20430,v5w1065,,,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 07 09:17:57 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.175	130	289109	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.292	114	974395	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.767	82	407225	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.175	130	289109	10.00	ppb(v	0.00

System Monitoring Compounds
 91) 4-Bromofluorobenzene 18.000 95 692917 12.10 ppb(v 0.00
 Spiked Amount 10.000 Range 65 - 128 Recovery = 121.00%

Target Compounds					Qvalue	
3) Freon 152A	4.009	65	149384	9.66	ppb(v	87
4) Chlorodifluoromethane	4.046	67	58953	10.91	ppb(v	96
5) Propene	4.064	41	150532	9.95	ppb(v	99
6) Chlorotrifluoroethene	4.070	116	399350	10.40	ppb(v#	89
7) Dichlorodifluoromethane	4.125	85	647883	10.37	ppb(v	100
8) 1-Chloro-1,1-difluoro...	4.229	65	409323	9.88	ppb(v	99
9) Chloromethane	4.247	50	193959	10.03	ppb(v	99
10) Dichlorotetrafluoroethane	4.321	85	657864	10.62	ppb(v	95
11) Vinyl Chloride	4.413	62	218615	10.22	ppb(v	99
12) 1,3-Butadiene	4.517	54	140834	9.74	ppb(v	97
13) n-Butane	4.553	58	31767	10.75	ppb(v	99
14) Bromomethane	4.731	94	266061	9.21	ppb(v	100
15) Chloroethane	4.859	64	105174	10.23	ppb(v	98
16) Dichlorofluoromethane	4.933	67	506259	10.37	ppb(v	99
17) Acetonitrile	5.153	41	130290	10.82	ppb(v	100
18) Freon 123	5.257	83	623109	10.19	ppb(v	99
19) Freon 123A	5.300	117	695334	19.65	ppb(v	97
20) Bromoethene	5.135	106	257520	10.08	ppb(v	100
21) Trichlorofluoromethane	5.471	101	639247	10.43	ppb(v	100
22) Acetone	5.355	58	91798	9.77	ppb(v	98
23) Pentane	5.752	57	61854	10.52	ppb(v	93
25) Iodomethane	5.948	142	798726	10.03	ppb(v	97
26) Isopropyl Alcohol	5.569	43	69405	10.88	ppb(v	52
27) 1,1-Dichloroethene	6.009	61	374009	10.12	ppb(v	98
28) Freon 113	6.340	101	558621	9.86	ppb(v	99
29) Methylene Chloride	6.126	84	226563	8.68	ppb(v	99
30) Carbon Disulfide	6.383	76	752681	9.90	ppb(v	99
31) Ethanol	4.975	45	71812	12.08	ppb(v	97
32) Acrylonitrile	5.740	53	187511	11.53	ppb(v	97
33) 3-Chloropropene	6.223	76	115290	11.38	ppb(v	90
34) trans-1,2-Dichloroethene	6.970	61	361196	10.65	ppb(v	99
35) tert-Butyl Alcohol	6.077	59	449703	8.89	ppb(v	98
36) Methyl tert-Butyl Ether	7.233	73	688023	10.75	ppb(v	99
37) Vinyl Acetate	7.325	43	587781	11.21	ppb(v	98
38) 1,1-Dichloroethane	7.166	63	452286	10.18	ppb(v	100
39) 2-Butanone	7.582	72	122686	10.74	ppb(v	97
40) Hexane	8.187	57	364980	10.61	ppb(v	97
41) cis-1,2-Dichloroethene	8.004	61	334114	10.29	ppb(v	98
42) Di-isopropyl Ether	8.212	87	218064	10.84	ppb(v	98
43) Ethyl Acetate	8.261	61	83456	11.19	ppb(v	94
44) Methyl Acrylate	8.242	55	417752	10.65	ppb(v	99
45) Chloroform	8.310	83	541292	9.80	ppb(v	98
46) 2,4-Dimethylpentane	9.123	57	433157	10.91	ppb(v	99
47) Tetrahydrofuran	8.762	72	123367	11.77	ppb(v	95
48) 1,1,1-Trichloroethane	9.356	97	532664	10.63	ppb(v	99
49) 1,2-Dichloroethane	9.087	62	311141	10.23	ppb(v	99
50) Benzene	9.870	78	758847	9.56	ppb(v	98
51) Carbon Tetrachloride	10.035	117	524261	10.35	ppb(v	98
52) Cyclohexane	10.157	56	357735	10.54	ppb(v	99
53) 2,3-Dimethylpentane	10.439	71	167019	10.63	ppb(v	95
55) 2,2,4-Trimethylpentane	11.112	57	1177648	11.11	ppb(v	97
56) Heptane	11.454	71	244598	10.76	ppb(v	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27092.D
 Acq On : 7 Oct 2017 8:32 am
 Operator : thomash
 Sample : icv1065-10
 Misc : MS20430,v5w1065,,,,,1
 ALS Vial : 6 Sample Multiplier: 1

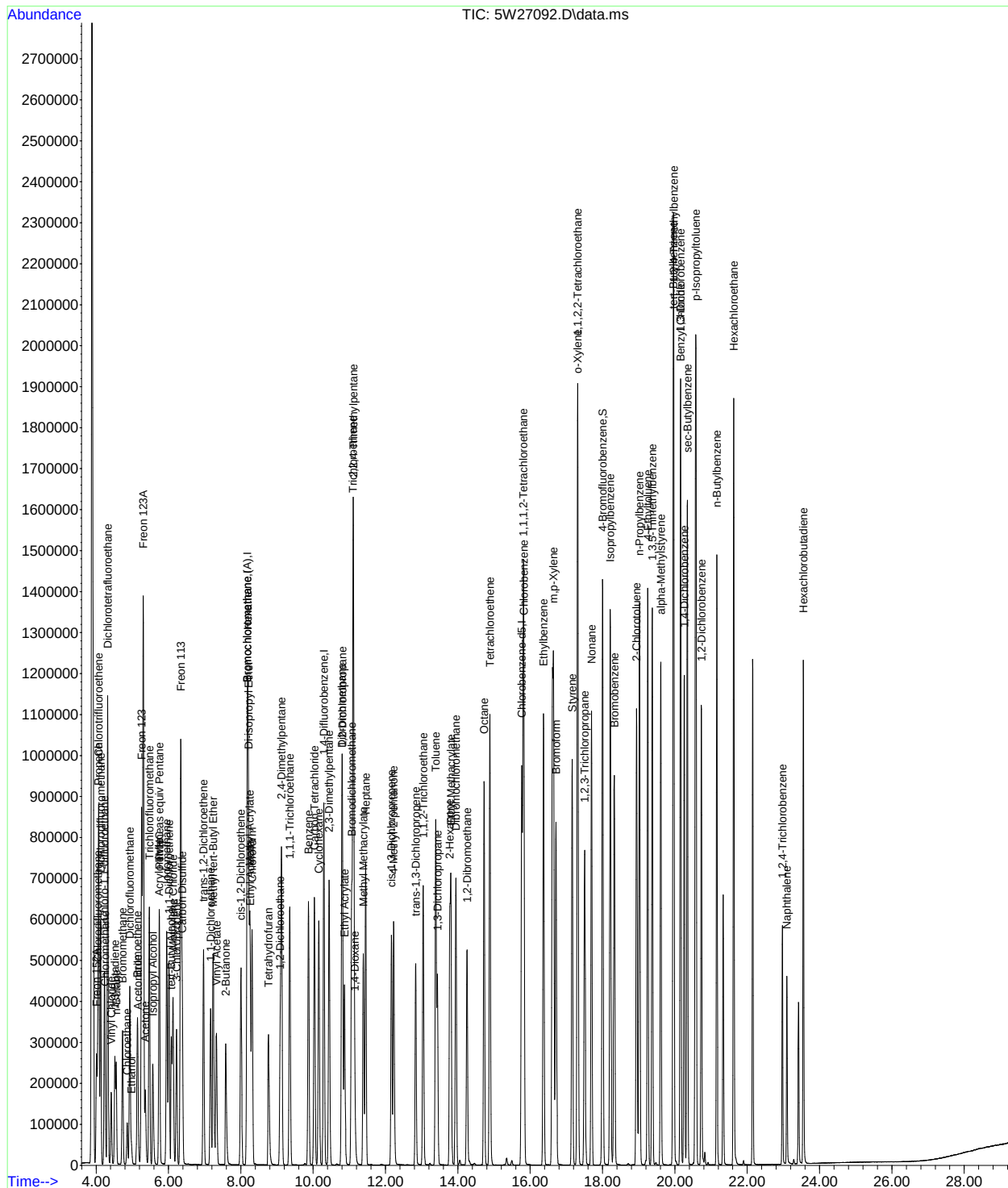
Quant Time: Oct 07 09:17:57 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
57) Trichloroethene	11.099	95	364857	10.01	ppb(v)	99
58) 1,2-Dichloropropane	10.812	63	272087	9.87	ppb(v)	96
59) Dibromomethane	10.793	174	359823	9.15	ppb(v)	93
60) Ethyl Acrylate	10.867	55	561337	11.43	ppb(v)	100
61) Methyl Methacrylate	11.387	69	282807	11.18	ppb(v)	92
62) 1,4-Dioxane	11.148	88	187712	12.90	ppb(v)	95
63) Bromodichloromethane	11.063	83	547199	9.79	ppb(v)	99
64) cis-1,3-Dichloropropene	12.164	75	453827	10.75	ppb(v)	100
65) 4-Methyl-2-pentanone	12.225	58	228315	11.78	ppb(v)	97
66) trans-1,3-Dichloropropene	12.837	75	385409	10.54	ppb(v)	99
67) Toluene	13.387	91	841959	9.39	ppb(v)	100
68) 1,1,2-Trichloroethane	13.045	97	309481	9.38	ppb(v)	98
69) 1,3-Dichloropropane	13.436	76	396747	9.53	ppb(v)	94
70) 2-Hexanone	13.779	58	317013	12.86	ppb(v)	92
71) Ethyl Methacrylate	13.809	69	461951	11.57	ppb(v)	99
72) Dibromochloromethane	13.944	129	540248	9.09	ppb(v)	100
73) Tetrachloroethene	14.886	166	465021	8.54	ppb(v)	99
74) 1,2-Dibromoethane	14.256	107	507912	9.44	ppb(v)	99
75) Octane	14.721	43	503745	10.38	ppb(v)	98
76) 1,1,1,2-Tetrachloroethane	15.810	131	395174	9.29	ppb(v)	99
78) Chlorobenzene	15.828	112	703794	9.44	ppb(v)	100
79) Ethylbenzene	16.367	91	1138044	10.45	ppb(v)	99
80) m,p-Xylene	16.642	91	1768026	21.20	ppb(v)	99
81) Styrene	17.162	104	740350	11.70	ppb(v)	99
82) Nonane	17.694	43	499306	10.39	ppb(v)	97
83) o-Xylene	17.309	91	898573	10.72	ppb(v)	99
84) Bromoform	16.715	173	591449	10.85	ppb(v)	99
85) 1,1,2,2-Tetrachloroethane	17.315	83	665218	10.37	ppb(v)	100
86) 1,2,3-Trichloropropane	17.505	75	493017	10.79	ppb(v)	99
87) Isopropylbenzene	18.214	105	1354025	11.58	ppb(v)	99
88) Bromobenzene	18.324	156	456671	10.75	ppb(v)	99
89) 2-Chlorotoluene	18.942	126	342001	10.98	ppb(v)	98
90) n-Propylbenzene	19.022	120	355818	10.84	ppb(v)	98
92) 4-Ethyltoluene	19.248	105	1236500	10.67	ppb(v)	99
93) 1,3,5-Trimethylbenzene	19.377	105	1012803	10.01	ppb(v)	99
94) alpha-Methylstyrene	19.615	118	515366	11.05	ppb(v)	99
95) tert-Butylbenzene	19.958	134	232755	10.06	ppb(v)	97
96) 1,2,4-Trimethylbenzene	19.970	105	959245	10.22	ppb(v)	98
97) 1,3-Dichlorobenzene	20.160	146	678087	10.69	ppb(v)	98
98) Benzyl Chloride	20.154	91	688154	11.87	ppb(v)	99
99) 1,4-Dichlorobenzene	20.264	146	667182	10.62	ppb(v)	99
100) sec-Butylbenzene	20.349	134	281328	10.48	ppb(v)	97
101) p-Isopropyltoluene	20.582	134	303455	9.51	ppb(v)	98
102) 1,2-Dichlorobenzene	20.735	146	604540	10.10	ppb(v)	97
103) n-Butylbenzene	21.163	134	253817	10.30	ppb(v)	98
104) Hexachloroethane	21.628	201	383323	9.68	ppb(v)	96
105) 1,2,4-Trichlorobenzene	22.974	180	207350	11.60	ppb(v)	98
106) Naphthalene	23.096	128	395466	11.62	ppb(v)	100
107) Hexachlorobutadiene	23.549	225	262485	7.64	ppb(v)	99
109) TVHC as equiv Pentane	5.746	TIC	1449168	11.36	ppb(v)	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\
Data File : 5W27092.D
Acq On : 7 Oct 2017 8:32 am
Operator : thomash
Sample : icv1065-10
Misc : MS20430,v5w1065,,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 07 09:17:57 2017
Quant Method : C:\msdchem\1\methods\m5w1065.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Sat Oct 07 09:10:30 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27718.D
 Acq On : 8 Nov 2017 9:41 am
 Operator : thomash
 Sample : cc1065-10
 Misc : MS21792,v5w1090,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 08 11:01:51 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.169	130	298157	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.286	114	946728	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.761	82	383895	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.169	130	298157	10.00	ppb(v	0.00

System Monitoring Compounds

91) 4-Bromofluorobenzene	17.994	95	590594	10.94	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	109.40%

Target Compounds						Qvalue
2) 1,1,1-Trifluoroethane	3.917	69	626260	10.13	ppb(v	92
3) Freon 152A	4.003	65	134716	8.45	ppb(v	85
4) Chlorodifluoromethane	4.040	67	55568	9.97	ppb(v	99
5) Propene	4.064	41	124365	7.97	ppb(v	97
6) Chlorotrifluoroethene	4.070	116	402803	10.17	ppb(v	99
7) Dichlorodifluoromethane	4.119	85	625855	9.72	ppb(v	99
8) 1-Chloro-1,1-difluoro...	4.229	65	444425	10.41	ppb(v	99
9) Chloromethane	4.247	50	205161	10.29	ppb(v	97
10) Dichlorotetrafluoroethane	4.315	85	729708	11.43	ppb(v	90
11) Vinyl Chloride	4.413	62	259863	11.78	ppb(v	99
12) 1,3-Butadiene	4.511	54	170490	11.43	ppb(v	100
13) n-Butane	4.547	58	37838	12.42	ppb(v	96
14) Bromomethane	4.725	94	318581	10.70	ppb(v	99
15) Chloroethane	4.853	64	128432	12.12	ppb(v	99
16) Dichlorofluoromethane	4.927	67	607973	12.08	ppb(v	100
17) Acetonitrile	5.147	41	146187	11.77	ppb(v	99
18) Freon 123	5.251	83	755255	11.98	ppb(v	100
19) Freon 123A	5.300	117	813043	22.27	ppb(v	94
20) Bromoethene	5.135	106	297844	11.31	ppb(v#	98
21) Trichlorofluoromethane	5.465	101	764751	12.10	ppb(v	99
22) Acetone	5.355	58	107375	11.08	ppb(v	99
23) Pentane	5.746	57	51186	8.44	ppb(v	92
24) 1,1-Dichloro-1-fluoro...	5.563	81	542558	9.56	ppb(v	99
25) Iodomethane	5.942	142	739073	9.00	ppb(v	99
26) Isopropyl Alcohol	5.563	43	65514	9.96	ppb(v	74
27) 1,1-Dichloroethene	6.003	61	346907	9.10	ppb(v	93
28) Freon 113	6.334	101	585934	10.02	ppb(v	98
29) Methylene Chloride	6.120	84	232823	8.65	ppb(v	94
30) Carbon Disulfide	6.376	76	777519	9.92	ppb(v	99
31) Ethanol	4.969	45	64458	10.51	ppb(v	99
32) Acrylonitrile	5.740	53	152263	9.08	ppb(v	98
33) 3-Chloropropene	6.217	76	93460	8.94	ppb(v	79
34) trans-1,2-Dichloroethene	6.964	61	303102	8.67	ppb(v	94
35) tert-Butyl Alcohol	6.077	59	374995	7.19	ppb(v	96
36) Methyl tert-Butyl Ether	7.233	73	546271	8.28	ppb(v	98
37) Vinyl Acetate	7.319	43	392954	7.27	ppb(v	95
38) 1,1-Dichloroethane	7.160	63	412145	8.99	ppb(v	98
39) 2-Butanone	7.582	72	108015	9.17	ppb(v	82
40) Hexane	8.181	57	318351	8.97	ppb(v	99
41) cis-1,2-Dichloroethene	7.998	61	284416	8.49	ppb(v	95
42) Di-isopropyl Ether	8.206	87	199382	9.61	ppb(v	89
43) Ethyl Acetate	8.255	61	76507	9.95	ppb(v	83
44) Methyl Acrylate	8.236	55	370947	9.17	ppb(v	99
45) Chloroform	8.304	83	538619	9.45	ppb(v	98
46) 2,4-Dimethylpentane	9.117	57	372199	9.09	ppb(v	96
47) Tetrahydrofuran	8.756	72	96572	8.93	ppb(v	90
48) 1,1,1-Trichloroethane	9.350	97	476890	9.23	ppb(v	98
49) 1,2-Dichloroethane	9.080	62	294581	9.39	ppb(v	98
50) Benzene	9.864	78	690632	8.43	ppb(v	98
51) Carbon Tetrachloride	10.029	117	489905	9.38	ppb(v	99
52) Cyclohexane	10.151	56	296921	8.48	ppb(v	98
53) 2,3-Dimethylpentane	10.432	71	150695	9.30	ppb(v	93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27718.D
 Acq On : 8 Nov 2017 9:41 am
 Operator : thomash
 Sample : cc1065-10
 Misc : MS21792,v5w1090,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

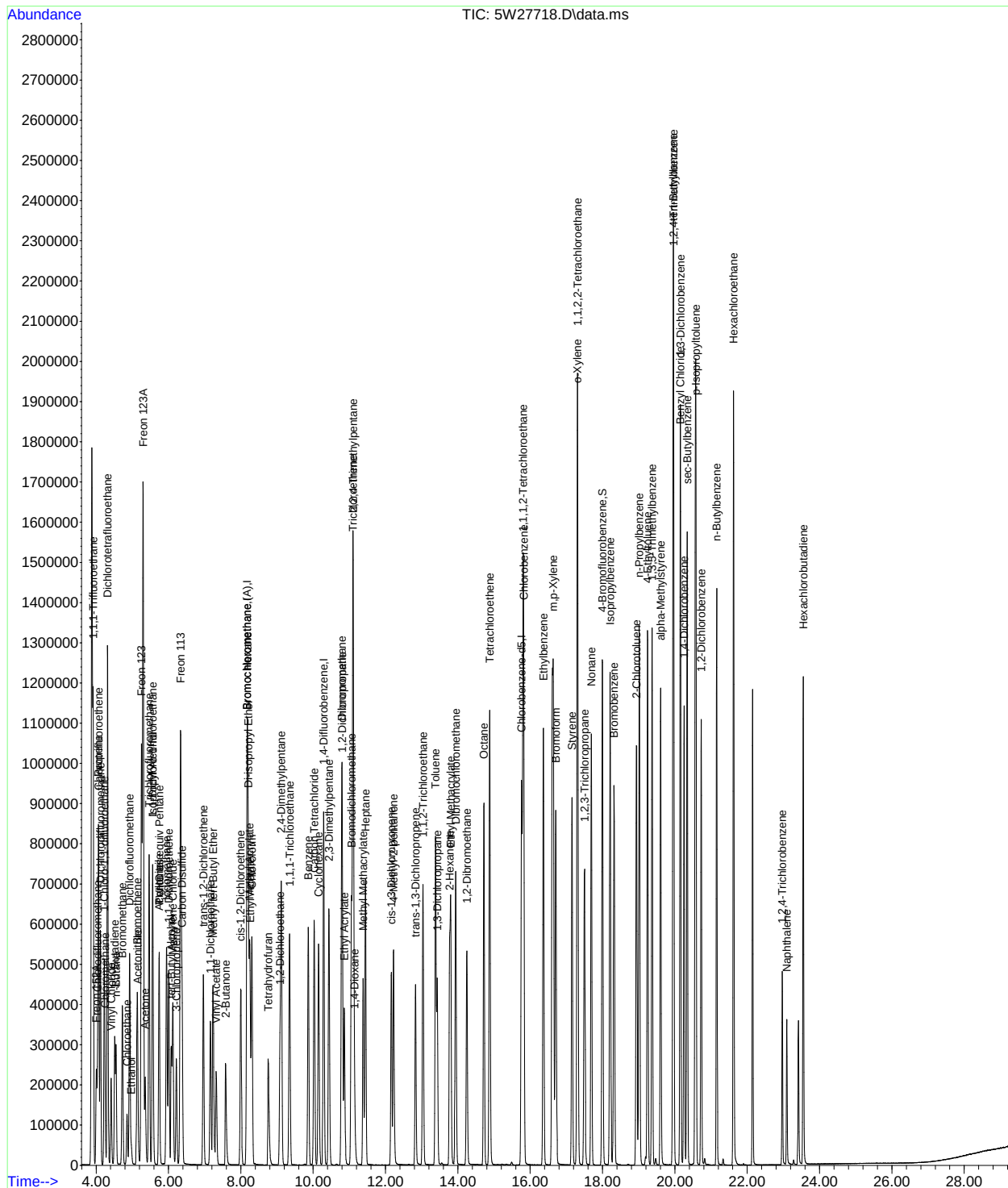
Quant Time: Nov 08 11:01:51 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.105	57	1049114	10.18	ppb(v)	98
56) Heptane	11.448	71	231539	10.49	ppb(v)	100
57) Trichloroethene	11.093	95	357891	10.10	ppb(v)	98
58) 1,2-Dichloropropane	10.806	63	253730	9.47	ppb(v)	99
59) Dibromomethane	10.793	174	354055	9.27	ppb(v)	95
60) Ethyl Acrylate	10.861	55	467737	9.81	ppb(v)	98
61) Methyl Methacrylate	11.381	69	249251	10.14	ppb(v)	88
62) 1,4-Dioxane	11.142	88	145561	10.29	ppb(v)	95
63) Bromodichloromethane	11.057	83	537161	9.89	ppb(v)	99
64) cis-1,3-Dichloropropene	12.164	75	366527	8.94	ppb(v)	99
65) 4-Methyl-2-pentanone	12.225	58	199468	10.59	ppb(v)	94
66) trans-1,3-Dichloropropene	12.831	75	332256	9.35	ppb(v)	99
67) Toluene	13.381	91	783579	8.99	ppb(v)	99
68) 1,1,2-Trichloroethane	13.039	97	308448	9.62	ppb(v)	96
69) 1,3-Dichloropropane	13.430	76	401756	9.94	ppb(v)	93
70) 2-Hexanone	13.773	58	272056	11.36	ppb(v)	91
71) Ethyl Methacrylate	13.803	69	421780	10.87	ppb(v)	98
72) Dibromochloromethane	13.938	129	556640	9.64	ppb(v)	99
73) Tetrachloroethene	14.880	166	470619	8.90	ppb(v)	99
74) 1,2-Dibromoethane	14.250	107	487882	9.34	ppb(v)	99
75) Octane	14.715	43	437601	9.28	ppb(v)	95
76) 1,1,1,2-Tetrachloroethane	15.804	131	410304	9.93	ppb(v)	99
78) Chlorobenzene	15.822	112	722405	10.28	ppb(v)	100
79) Ethylbenzene	16.367	91	1071812	10.44	ppb(v)	98
80) m,p-Xylene	16.636	91	1738608	22.11	ppb(v)	99
81) Styrene	17.156	104	636271	10.66	ppb(v)	99
82) Nonane	17.688	43	442592	9.77	ppb(v)	96
83) o-Xylene	17.303	91	893105	11.30	ppb(v)	99
84) Bromoform	16.709	173	604649	11.76	ppb(v)	99
85) 1,1,2,2-Tetrachloroethane	17.309	83	683276	11.30	ppb(v)	100
86) 1,2,3-Trichloropropane	17.505	75	473866	11.00	ppb(v)	98
87) Isopropylbenzene	18.214	105	1180483	10.71	ppb(v)	99
88) Bromobenzene	18.318	156	444435	11.10	ppb(v)	99
89) 2-Chlorotoluene	18.942	126	313947	10.69	ppb(v)	95
90) n-Propylbenzene	19.016	120	345105	11.15	ppb(v)	99
92) 4-Ethyltoluene	19.242	105	1143933	10.47	ppb(v)	99
93) 1,3,5-Trimethylbenzene	19.370	105	969359	10.16	ppb(v)	99
94) alpha-Methylstyrene	19.609	118	477562	10.86	ppb(v)	99
95) tert-Butylbenzene	19.952	134	225923	10.35	ppb(v)	99
96) 1,2,4-Trimethylbenzene	19.964	105	949914	10.73	ppb(v)	94
97) 1,3-Dichlorobenzene	20.154	146	644194	10.78	ppb(v)	100
98) Benzyl Chloride	20.147	91	643959	11.78	ppb(v)	99
99) 1,4-Dichlorobenzene	20.258	146	618998	10.45	ppb(v)	99
100) sec-Butylbenzene	20.343	134	260584	10.29	ppb(v)	94
101) p-Isopropyltoluene	20.582	134	299430	9.95	ppb(v)	94
102) 1,2-Dichlorobenzene	20.729	146	581523	10.31	ppb(v)	98
103) n-Butylbenzene	21.157	134	230911	9.94	ppb(v)	96
104) Hexachloroethane	21.622	201	387613	10.39	ppb(v)	93
105) 1,2,4-Trichlorobenzene	22.968	180	166371	9.87	ppb(v)	96
106) Naphthalene	23.096	128	304866	9.50	ppb(v)	100
107) Hexachlorobutadiene	23.549	225	255727	7.89	ppb(v)	99
109) TVHC as equiv Pentane	5.746	TIC	1198953	9.11	ppb(v)	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\
Data File : 5W27718.D
Acq On : 8 Nov 2017 9:41 am
Operator : thomash
Sample : cc1065-10
Misc : MS21792,v5w1090,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 08 11:01:51 2017
Quant Method : C:\msdchem\1\methods\m5w1065.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Sat Oct 07 09:10:30 2017
Response via : Initial Calibration



7.7.10

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27796.D
 Acq On : 13 Nov 2017 8:42 am
 Operator : thomash
 Sample : cc1065-10
 Misc : MS21947,v5w1093,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 13 09:12:06 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.169	130	270892	10.00	ppb(v)	0.00
54) 1,4-Difluorobenzene	10.286	114	857560	10.00	ppb(v)	0.00
77) Chlorobenzene-d5	15.761	82	339833	10.00	ppb(v)	0.00
108) Bromochloromethane (A)	8.169	130	270892	10.00	ppb(v)	0.00

System Monitoring Compounds
 91) 4-Bromofluorobenzene 17.994 95 531332 11.12 ppb(v) 0.00
 Spiked Amount 10.000 Range 65 - 128 Recovery = 111.20%

Target Compounds					Qvalue
2) 1,1,1-Trifluoroethane	3.917	69	593259	10.57	92
3) Freon 152A	4.003	65	119380	8.24	85
4) Chlorodifluoromethane	4.040	67	50712	10.01	98
5) Propene	4.064	41	110905	7.83	96
6) Chlorotrifluoroethene	4.064	116	368883	10.25	98
7) Dichlorodifluoromethane	4.119	85	565621	9.67	99
8) 1-Chloro-1,1-difluoro...	4.223	65	413413	10.65	99
9) Chloromethane	4.241	50	183203	10.11	100
10) Dichlorotetrafluoroethane	4.315	85	658696	11.35	94
11) Vinyl Chloride	4.407	62	236793	11.82	99
12) 1,3-Butadiene	4.511	54	161708	11.93	99
13) n-Butane	4.547	58	35540	12.84	94
14) Bromomethane	4.725	94	293690	10.85	99
15) Chloroethane	4.853	64	119078	12.36	98
16) Dichlorofluoromethane	4.927	67	572413	12.52	99
17) Acetonitrile	5.147	41	145094	12.86	99
18) Freon 123	5.251	83	725704	12.67	99
19) Freon 123A	5.294	117	774712	23.36	90
20) Bromoethene	5.135	106	281984	11.78	98
21) Trichlorofluoromethane	5.465	101	736778	12.83	100
22) Acetone	5.355	58	102247	11.62	96
23) Pentane	5.746	57	45322	8.22	93
24) 1,1-Dichloro-1-fluoro...	5.563	81	570046	11.06	99
25) Iodomethane	5.942	142	701567	9.40	99
26) Isopropyl Alcohol	5.563	43	63763	10.67	69
27) 1,1-Dichloroethene	6.003	61	309613	8.94	92
28) Freon 113	6.334	101	534889	10.07	99
29) Methylene Chloride	6.120	84	211367	8.65	92
30) Carbon Disulfide	6.376	76	698850	9.81	99
31) Ethanol	4.976	45	60288	10.82	99
32) Acrylonitrile	5.734	53	137727	9.04	96
33) 3-Chloropropene	6.217	76	85775	9.03	76
34) trans-1,2-Dichloroethene	6.964	61	269291	8.48	94
35) tert-Butyl Alcohol	6.077	59	345913	7.30	96
36) Methyl tert-Butyl Ether	7.233	73	495682	8.27	98
37) Vinyl Acetate	7.319	43	353483	7.20	95
38) 1,1-Dichloroethane	7.160	63	365135	8.77	99
39) 2-Butanone	7.582	72	95337	8.91	81
40) Hexane	8.181	57	282593	8.77	98
41) cis-1,2-Dichloroethene	7.998	61	251197	8.26	95
42) Di-isopropyl Ether	8.206	87	180727	9.59	85
43) Ethyl Acetate	8.255	61	67694	9.69	86
44) Methyl Acrylate	8.236	55	325762	8.86	98
45) Chloroform	8.304	83	487709	9.42	98
46) 2,4-Dimethylpentane	9.117	57	326591	8.78	97
47) Tetrahydrofuran	8.756	72	86842	8.84	88
48) 1,1,1-Trichloroethane	9.350	97	443151	9.44	99
49) 1,2-Dichloroethane	9.081	62	266420	9.34	98
50) Benzene	9.864	78	620875	8.34	97
51) Carbon Tetrachloride	10.029	117	480544	10.12	99
52) Cyclohexane	10.151	56	265648	8.35	97
53) 2,3-Dimethylpentane	10.433	71	133563	9.07	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27796.D
 Acq On : 13 Nov 2017 8:42 am
 Operator : thomash
 Sample : cc1065-10
 Misc : MS21947,v5w1093,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

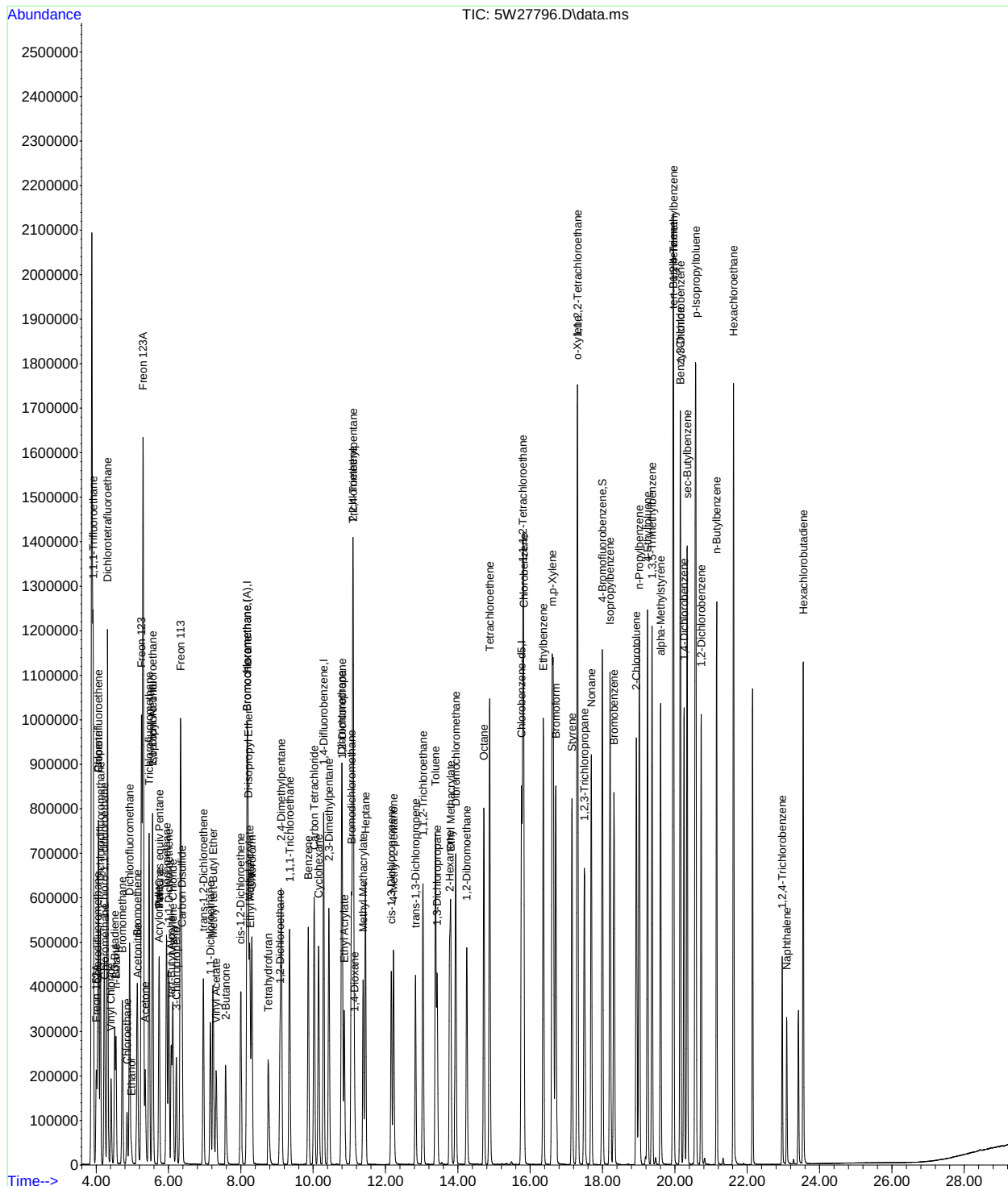
Quant Time: Nov 13 09:12:06 2017
 Quant Method : C:\msdchem\1\methods\m5w1065.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.105	57	924702	9.91	ppb(v)	98
56) Heptane	11.448	71	207414	10.37	ppb(v)	99
57) Trichloroethene	11.093	95	325198	10.13	ppb(v)	100
58) 1,2-Dichloropropane	10.806	63	224991	9.27	ppb(v)	99
59) Dibromomethane	10.787	174	332148	9.60	ppb(v)	95
60) Ethyl Acrylate	10.861	55	408125	9.45	ppb(v)	98
61) Methyl Methacrylate	11.381	69	219702	9.87	ppb(v)	87
62) 1,4-Dioxane	11.142	88	132424	10.34	ppb(v)	95
63) Bromodichloromethane	11.057	83	488488	9.93	ppb(v)	99
64) cis-1,3-Dichloropropene	12.158	75	332365	8.95	ppb(v)	99
65) 4-Methyl-2-pentanone	12.219	58	178355	10.46	ppb(v)	93
66) trans-1,3-Dichloropropene	12.831	75	308928	9.60	ppb(v)	98
67) Toluene	13.381	91	714582	9.05	ppb(v)	99
68) 1,1,2-Trichloroethane	13.039	97	281847	9.71	ppb(v)	98
69) 1,3-Dichloropropane	13.424	76	363839	9.93	ppb(v)	93
70) 2-Hexanone	13.773	58	241066	11.11	ppb(v)	91
71) Ethyl Methacrylate	13.803	69	375482	10.69	ppb(v)	99
72) Dibromochloromethane	13.938	129	531387	10.15	ppb(v)	99
73) Tetrachloroethene	14.880	166	441691	9.22	ppb(v)	99
74) 1,2-Dibromoethane	14.244	107	450049	9.51	ppb(v)	100
75) Octane	14.715	43	386030	9.03	ppb(v)	92
76) 1,1,1,2-Tetrachloroethane	15.798	131	389091	10.39	ppb(v)	96
78) Chlorobenzene	15.822	112	664925	10.69	ppb(v)	99
79) Ethylbenzene	16.361	91	968575	10.66	ppb(v)	98
80) m,p-Xylene	16.611	91	1596184	22.93	ppb(v)	98
81) Styrene	17.156	104	577916	10.94	ppb(v)	99
82) Nonane	17.688	43	385303	9.61	ppb(v)	95
83) o-Xylene	17.303	91	803145	11.48	ppb(v)	99
84) Bromoform	16.709	173	588877	12.94	ppb(v)	100
85) 1,1,2,2-Tetrachloroethane	17.309	83	601406	11.23	ppb(v)	100
86) 1,2,3-Trichloropropane	17.498	75	419550	11.00	ppb(v)	98
87) Isopropylbenzene	18.208	105	1069722	10.97	ppb(v)	99
88) Bromobenzene	18.318	156	411473	11.61	ppb(v)	98
89) 2-Chlorotoluene	18.936	126	286787	11.03	ppb(v)	94
90) n-Propylbenzene	19.016	120	314729	11.49	ppb(v)	99
92) 4-Ethyltoluene	19.242	105	1033889	10.69	ppb(v)	99
93) 1,3,5-Trimethylbenzene	19.371	105	881923	10.45	ppb(v)	98
94) alpha-Methylstyrene	19.609	118	427848	11.00	ppb(v)	99
95) tert-Butylbenzene	19.952	134	204826	10.60	ppb(v)	99
96) 1,2,4-Trimethylbenzene	19.964	105	858444	10.96	ppb(v)	98
97) 1,3-Dichlorobenzene	20.154	146	596009	11.26	ppb(v)	99
98) Benzyl Chloride	20.147	91	587496	12.14	ppb(v)	100
99) 1,4-Dichlorobenzene	20.258	146	566181	10.80	ppb(v)	99
100) sec-Butylbenzene	20.343	134	239517	10.69	ppb(v)	99
101) p-Isopropyltoluene	20.576	134	272790	10.24	ppb(v)	99
102) 1,2-Dichlorobenzene	20.729	146	536048	10.73	ppb(v)	98
103) n-Butylbenzene	21.157	134	211227	10.27	ppb(v)	99
104) Hexachloroethane	21.622	201	363995	11.02	ppb(v)	97
105) 1,2,4-Trichlorobenzene	22.968	180	159763	10.71	ppb(v)	98
106) Naphthalene	23.090	128	284776	10.03	ppb(v)	99
107) Hexachlorobutadiene	23.549	225	246673	8.60	ppb(v)	99
109) TVHC as equiv Pentane	5.746	TIC	1072687	8.97	ppb(v)	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\
Data File : 5W27796.D
Acq On : 13 Nov 2017 8:42 am
Operator : thomash
Sample : cc1065-10
Misc : MS21947,v5w1093,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 13 09:12:06 2017
Quant Method : C:\msdchem\1\methods\m5w1065.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Sat Oct 07 09:10:30 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27907.D
 Acq On : 17 Nov 2017 7:24 pm
 Operator : thomash
 Sample : ic1097-0.04
 Misc : MS22171,v5w1097,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 20 10:52:05 2017
 Quant Method : C:\msdchem\1\methods\m5w1097.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.163	130	326981	10.00	ppb(v	-0.01
54) 1,4-Difluorobenzene	10.280	114	1171952	10.00	ppb(v	-0.01
77) Chlorobenzene-d5	15.755	82	494002	10.00	ppb(v	-0.01
108) Bromochloromethane (A)	8.163	130	327169	10.00	ppb(v	-0.01

System Monitoring Compounds						
91) 4-Bromofluorobenzene	17.988	95	650133	9.36	ppb(v	-0.01
Spiked Amount	10.000	Range	65 - 128	Recovery	=	93.60%

Target Compounds						Qvalue
2) 1,1,1-Trifluoroethane	3.905	69	3486	0.05	ppb(v#	85
3) Freon 152A	4.003	65	699	0.04	ppb(v	94
4) Chlorodifluoromethane	4.033	67	257	0.04	ppb(v#	51
6) Chlorotrifluoroethene	4.058	116	1844	0.04	ppb(v#	91
7) Dichlorodifluoromethane	4.113	85	3085	0.04	ppb(v#	96
8) 1-Chloro-1,1-difluoroethane	4.223	65	2042	0.04	ppb(v#	1
9) Chloromethane	4.235	50	1274	0.06	ppb(v	95
10) Dichlorotetrafluoroethane	4.309	85	3235	0.05	ppb(v	92
11) Vinyl Chloride	4.400	62	1103	0.05	ppb(v#	86
12) 1,3-Butadiene	4.504	54	1051	0.06	ppb(v#	82
13) n-Butane	4.547	58	282	0.08	ppb(v#	1
14) Bromomethane	4.725	94	1844	0.06	ppb(v#	93
15) Chloroethane	4.847	64	691	0.06	ppb(v#	52
16) Dichlorofluoromethane	4.920	67	2720	0.05	ppb(v#	95
17) Acetonitrile	5.153	41	751	0.06	ppb(v#	9
18) Freon 123	5.245	83	4269	0.06	ppb(v#	87
19) Freon 123A	5.294	117	3472	0.09	ppb(v	82
20) Bromoethene	5.128	106	1409	0.05	ppb(v#	90
21) Trichlorofluoromethane	5.459	101	2605	0.04	ppb(v#	91
24) 1,1-Dichloro-1-fluoroethane	5.557	81	2905	0.05	ppb(v#	88
25) Iodomethane	5.936	142	4032	0.04	ppb(v	87
27) 1,1-Dichloroethene	6.003	61	1806	0.04	ppb(v	89
28) Freon 113	6.334	101	2689	0.04	ppb(v	96
29) Methylene Chloride	6.120	84	1744	0.06	ppb(v	92
30) Carbon Disulfide	6.376	76	3700	0.04	ppb(v	98
32) Acrylonitrile	5.752	53	943	0.05	ppb(v#	92
33) 3-Chloropropene	6.211	76	409	0.04	ppb(v#	78
34) trans-1,2-Dichloroethene	6.958	61	1664	0.04	ppb(v#	96
35) tert-Butyl Alcohol	6.113	59	2227	0.04	ppb(v#	59
36) Methyl tert-Butyl Ether	7.264	73	3215	0.04	ppb(v#	85
37) Vinyl Acetate	7.325	43	3086	0.05	ppb(v#	92
38) 1,1-Dichloroethane	7.160	63	2243	0.04	ppb(v#	87
39) 2-Butanone	7.618	72	548	0.04	ppb(v#	74
40) Hexane	8.175	57	2184	0.06	ppb(v	90
41) cis-1,2-Dichloroethene	7.992	61	1635	0.04	ppb(v	94
42) Di-isopropyl Ether	8.224	87	897	0.04	ppb(v	86
43) Ethyl Acetate	8.291	61	266	0.03	ppb(v#	64
44) Methyl Acrylate	8.255	55	2349	0.05	ppb(v#	92
45) Chloroform	8.297	83	2729	0.04	ppb(v#	89
46) 2,4-Dimethylpentane	9.117	57	2387	0.05	ppb(v	89
47) Tetrahydrofuran	8.824	72	485	0.04	ppb(v	90
48) 1,1,1-Trichloroethane	9.344	97	2439	0.04	ppb(v	96
49) 1,2-Dichloroethane	9.081	62	1342	0.04	ppb(v#	90
50) Benzene	9.857	78	4280	0.05	ppb(v	94
51) Carbon Tetrachloride	10.029	117	2048	0.04	ppb(v	87
52) Cyclohexane	10.151	56	1933	0.05	ppb(v#	92
53) 2,3-Dimethylpentane	10.433	71	906	0.05	ppb(v#	93
55) 2,2,4-Trimethylpentane	11.105	57	5950	0.05	ppb(v	94
56) Heptane	11.448	71	1267	0.05	ppb(v	94
57) Trichloroethene	11.093	95	1901	0.04	ppb(v	93
58) 1,2-Dichloropropane	10.812	63	1420	0.04	ppb(v#	88
59) Dibromomethane	10.793	174	2221	0.05	ppb(v	92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27907.D
 Acq On : 17 Nov 2017 7:24 pm
 Operator : thomash
 Sample : ic1097-0.04
 Misc : MS22171,v5w1097,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 20 10:52:05 2017
 Quant Method : C:\msdchem\1\methods\m5w1097.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
60) Ethyl Acrylate	10.897	55	2798	0.05	ppb(v#	68
61) Methyl Methacrylate	11.405	69	1273	0.04	ppb(v#	91
63) Bromodichloromethane	11.050	83	2641	0.04	ppb(v#	93
64) cis-1,3-Dichloropropene	12.176	75	2007	0.04	ppb(v	92
65) 4-Methyl-2-pentanone	12.268	58	838	0.04	ppb(v#	73
66) trans-1,3-Dichloropropene	12.849	75	1709	0.04	ppb(v	92
67) Toluene	13.387	91	5081	0.05	ppb(v	99
68) 1,1,2-Trichloroethane	13.045	97	1665	0.04	ppb(v	88
69) 1,3-Dichloropropane	13.442	76	1977	0.04	ppb(v#	73
70) 2-Hexanone	13.846	58	635	0.02	ppb(v#	77
71) Ethyl Methacrylate	13.828	69	2076	0.04	ppb(v#	60
72) Dibromochloromethane	13.938	129	2545	0.04	ppb(v#	92
73) Tetrachloroethene	14.874	166	2550	0.04	ppb(v	95
74) 1,2-Dibromoethane	14.250	107	2542	0.04	ppb(v#	93
75) Octane	14.721	43	3743	0.06	ppb(v	96
76) 1,1,1,2-Tetrachloroethane	15.798	131	1926	0.04	ppb(v#	1
78) Chlorobenzene	15.816	112	4059	0.04	ppb(v	93
79) Ethylbenzene	16.373	91	6425	0.05	ppb(v	96
80) m,p-Xylene	16.624	91	11478	0.11	ppb(v	96
81) Styrene	17.186	104	3111	0.04	ppb(v	91
82) Nonane	17.682	43	3233	0.06	ppb(v#	84
83) o-Xylene	17.309	91	5072	0.05	ppb(v	98
84) Bromoform	16.709	173	2182	0.03	ppb(v#	91
85) 1,1,2,2-Tetrachloroethane	17.327	83	3375	0.04	ppb(v#	96
86) 1,2,3-Trichloropropane	17.517	75	2386	0.04	ppb(v	91
87) Isopropylbenzene	18.214	105	5932	0.04	ppb(v	95
88) Bromobenzene	18.324	156	1978	0.04	ppb(v	95
89) 2-Chlorotoluene	18.948	126	1343	0.04	ppb(v	98
90) n-Propylbenzene	19.034	120	1520	0.04	ppb(v	86
92) 4-Ethyltoluene	19.254	105	5849	0.04	ppb(v#	92
93) 1,3,5-Trimethylbenzene	19.370	105	5276	0.04	ppb(v	92
94) alpha-Methylstyrene	19.621	118	1939	0.03	ppb(v	98
95) tert-Butylbenzene	19.946	134	1160	0.04	ppb(v	97
96) 1,2,4-Trimethylbenzene	19.970	105	4981	0.04	ppb(v#	86
97) 1,3-Dichlorobenzene	20.172	146	2718	0.04	ppb(v	98
98) Benzyl Chloride	20.178	91	2550	0.04	ppb(v#	83
99) 1,4-Dichlorobenzene	20.276	146	3030	0.04	ppb(v	91
100) sec-Butylbenzene	20.343	134	1225	0.04	ppb(v	88
101) p-Isopropyltoluene	20.582	134	1407	0.04	ppb(v	90
102) 1,2-Dichlorobenzene	20.741	146	2718	0.04	ppb(v	97
103) n-Butylbenzene	21.163	134	958	0.03	ppb(v	77
104) Hexachloroethane	21.622	201	1409	0.03	ppb(v	74
107) Hexachlorobutadiene	23.549	225	1507	0.04	ppb(v	95

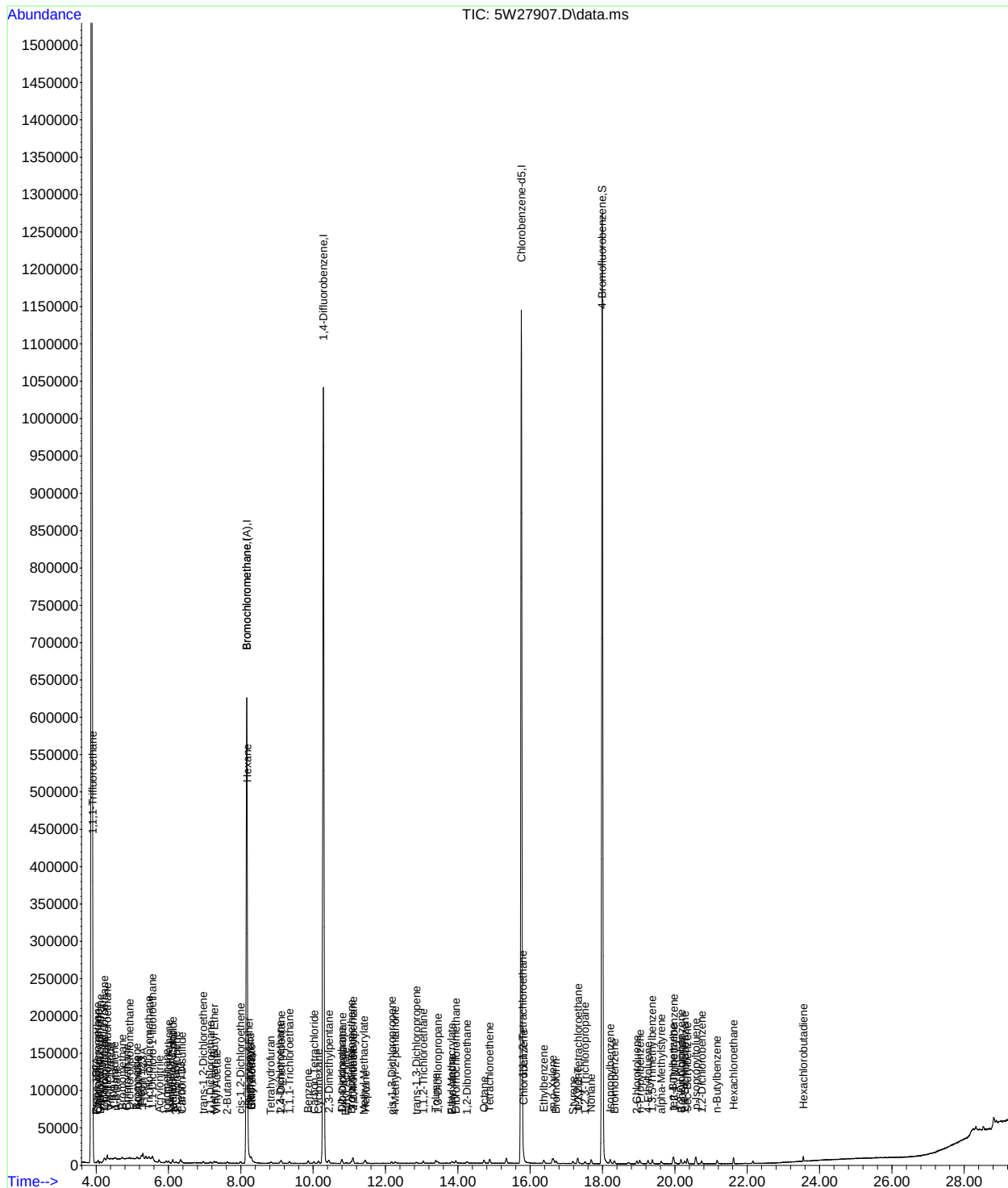
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.7.12

7

Data Path : C:\msdchem\1\data\
Data File : 5W27907.D
Acq On : 17 Nov 2017 7:24 pm
Operator : thomash
Sample : ic1097-0.04
Misc : MS22171,v5w1097,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 20 10:52:05 2017
Quant Method : C:\msdchem\1\methods\m5w1097.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Sat Oct 07 09:10:30 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27908.D
 Acq On : 17 Nov 2017 8:08 pm
 Operator : thomash
 Sample : ic1097-0.1
 Misc : MS22171,v5w1097,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 20 09:44:07 2017
 Quant Method : C:\msdchem\1\methods\m5w1097.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.163	130	326969	10.00	ppb(v	-0.01
54) 1,4-Difluorobenzene	10.280	114	1179140	10.00	ppb(v	-0.01
77) Chlorobenzene-d5	15.755	82	502720	10.00	ppb(v	-0.01
108) Bromochloromethane (A)	8.163	130	326969	10.00	ppb(v	-0.01

System Monitoring Compounds						
91) 4-Bromofluorobenzene	17.994	95	655873	9.28	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	92.80%

Target Compounds						Qvalue
2) 1,1,1-Trifluoroethane	3.911	69	8357	0.12	ppb(v#	89
3) Freon 152A	4.003	65	1841	0.11	ppb(v	94
4) Chlorodifluoromethane	4.039	67	619	0.10	ppb(v	84
5) Propene	4.058	41	2498	0.15	ppb(v#	72
6) Chlorotrifluoroethene	4.064	116	4681	0.11	ppb(v#	92
7) Dichlorodifluoromethane	4.119	85	7543	0.11	ppb(v	99
8) 1-Chloro-1,1-difluoro...	4.223	65	4894	0.10	ppb(v#	72
9) Chloromethane	4.241	50	2815	0.13	ppb(v	96
10) Dichlorotetrafluoroethane	4.315	85	7945	0.11	ppb(v	96
11) Vinyl Chloride	4.407	62	2782	0.12	ppb(v#	99
12) 1,3-Butadiene	4.511	54	2194	0.13	ppb(v#	86
13) n-Butane	4.547	58	542	0.16	ppb(v#	3
14) Bromomethane	4.725	94	3540	0.11	ppb(v	90
15) Chloroethane	4.853	64	1509	0.13	ppb(v#	89
16) Dichlorofluoromethane	4.933	67	6802	0.12	ppb(v	99
17) Acetonitrile	5.165	41	1719	0.13	ppb(v#	55
18) Freon 123	5.251	83	8584	0.12	ppb(v#	95
19) Freon 123A	5.294	117	8985	0.22	ppb(v	92
20) Bromoethene	5.128	106	3377	0.12	ppb(v#	87
21) Trichlorofluoromethane	5.465	101	6852	0.10	ppb(v	95
23) Pentane	5.746	57	1214	0.18	ppb(v	70
24) 1,1-Dichloro-1-fluoro...	5.557	81	6810	0.11	ppb(v	97
25) Iodomethane	5.942	142	9610	0.11	ppb(v	95
27) 1,1-Dichloroethene	6.003	61	4682	0.11	ppb(v	95
28) Freon 113	6.334	101	7148	0.11	ppb(v	97
29) Methylene Chloride	6.120	84	3643	0.12	ppb(v	94
30) Carbon Disulfide	6.376	76	9612	0.11	ppb(v	98
31) Ethanol	4.976	45	930	0.14	ppb(v#	85
32) Acrylonitrile	5.746	53	2137	0.12	ppb(v	84
33) 3-Chloropropene	6.217	76	1387	0.12	ppb(v	88
34) trans-1,2-Dichloroethene	6.964	61	4201	0.11	ppb(v	98
35) tert-Butyl Alcohol	6.107	59	5930	0.10	ppb(v#	88
36) Methyl tert-Butyl Ether	7.257	73	8734	0.12	ppb(v	97
37) Vinyl Acetate	7.325	43	6711	0.11	ppb(v	100
38) 1,1-Dichloroethane	7.160	63	5663	0.11	ppb(v#	90
39) 2-Butanone	7.618	72	1407	0.11	ppb(v#	88
40) Hexane	8.181	57	4940	0.13	ppb(v	88
41) cis-1,2-Dichloroethene	7.992	61	4152	0.11	ppb(v	96
42) Di-isopropyl Ether	8.224	87	2668	0.12	ppb(v	94
43) Ethyl Acetate	8.279	61	976	0.12	ppb(v	79
44) Methyl Acrylate	8.261	55	6200	0.14	ppb(v	94
45) Chloroform	8.297	83	6753	0.11	ppb(v	99
46) 2,4-Dimethylpentane	9.117	57	5780	0.13	ppb(v	96
47) Tetrahydrofuran	8.817	72	1438	0.12	ppb(v	91
48) 1,1,1-Trichloroethane	9.350	97	5920	0.10	ppb(v	91
49) 1,2-Dichloroethane	9.080	62	3758	0.11	ppb(v#	97
50) Benzene	9.864	78	10599	0.12	ppb(v	99
51) Carbon Tetrachloride	10.029	117	5025	0.09	ppb(v	94
52) Cyclohexane	10.145	56	4603	0.12	ppb(v	96
53) 2,3-Dimethylpentane	10.426	71	2283	0.13	ppb(v	70
55) 2,2,4-Trimethylpentane	11.105	57	14977	0.12	ppb(v	97
56) Heptane	11.442	71	3198	0.12	ppb(v	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27908.D
 Acq On : 17 Nov 2017 8:08 pm
 Operator : thomash
 Sample : ic1097-0.1
 Misc : MS22171,v5w1097,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 20 09:44:07 2017
 Quant Method : C:\msdchem\1\methods\m5w1097.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

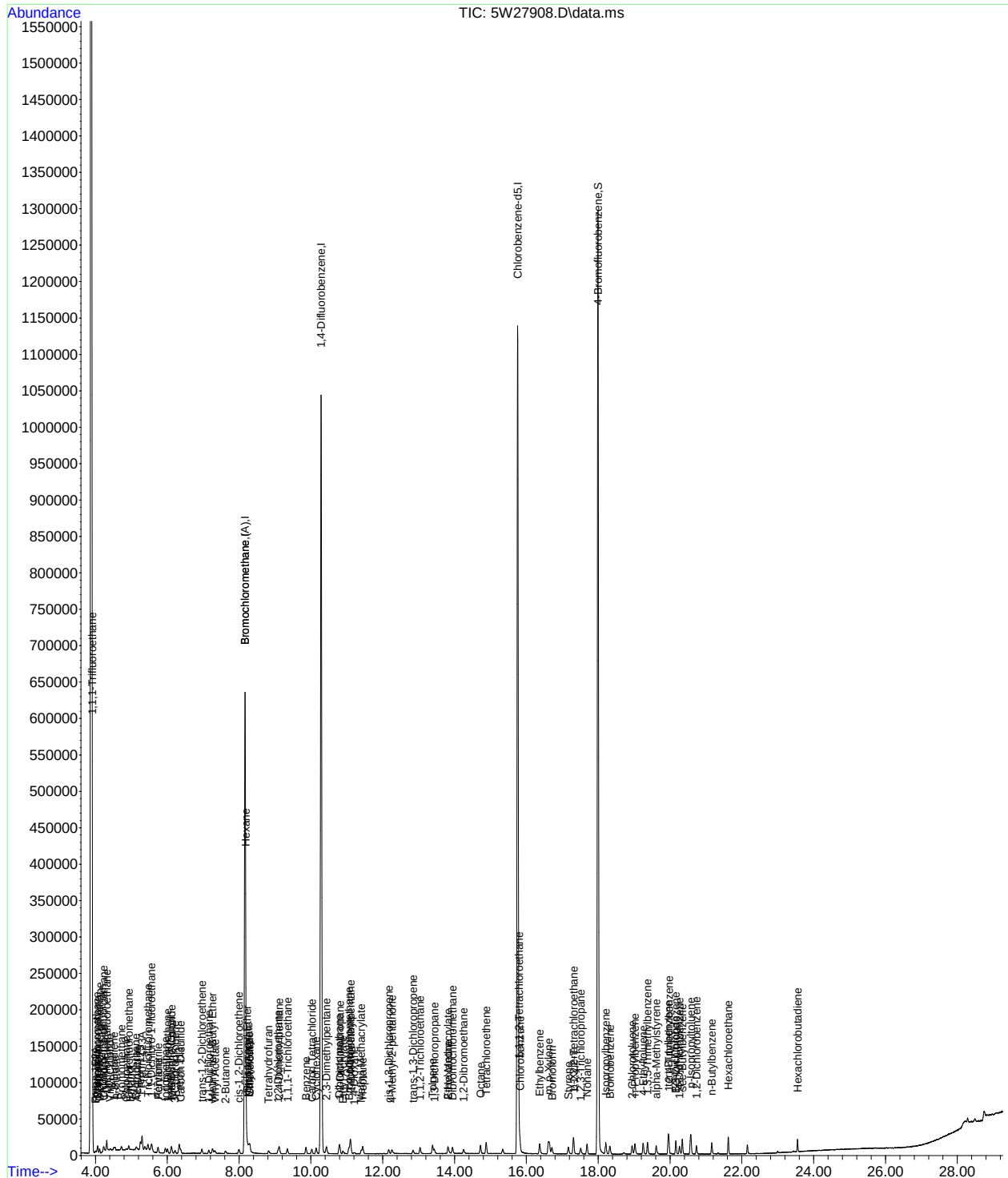
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
57) Trichloroethene	11.093	95	4851	0.11	ppb(v	94
58) 1,2-Dichloropropane	10.812	63	3754	0.11	ppb(v	90
59) Dibromomethane	10.787	174	4848	0.10	ppb(v	93
60) Ethyl Acrylate	10.891	55	6703	0.11	ppb(v#	93
61) Methyl Methacrylate	11.399	69	3590	0.12	ppb(v	97
62) 1,4-Dioxane	11.203	88	1869	0.11	ppb(v#	94
63) Bromodichloromethane	11.057	83	6932	0.10	ppb(v	93
64) cis-1,3-Dichloropropene	12.170	75	5770	0.11	ppb(v	96
65) 4-Methyl-2-pentanone	12.256	58	2556	0.11	ppb(v	93
66) trans-1,3-Dichloropropene	12.843	75	4705	0.11	ppb(v	97
67) Toluene	13.387	91	13215	0.12	ppb(v	96
68) 1,1,2-Trichloroethane	13.039	97	4511	0.11	ppb(v	96
69) 1,3-Dichloropropane	13.436	76	5421	0.11	ppb(v	92
70) 2-Hexanone	13.822	58	2736	0.09	ppb(v	93
71) Ethyl Methacrylate	13.822	69	5300	0.11	ppb(v#	93
72) Dibromochloromethane	13.938	129	6908	0.10	ppb(v	97
73) Tetrachloroethene	14.880	166	6703	0.10	ppb(v	94
74) 1,2-Dibromoethane	14.250	107	6768	0.10	ppb(v#	95
75) Octane	14.721	43	8030	0.14	ppb(v	95
76) 1,1,1,2-Tetrachloroethane	15.798	131	5254	0.10	ppb(v#	1
78) Chlorobenzene	15.822	112	10276	0.11	ppb(v	95
79) Ethylbenzene	16.367	91	16807	0.12	ppb(v	97
80) m,p-Xylene	16.624	91	28299	0.27	ppb(v	98
81) Styrene	17.168	104	8263	0.11	ppb(v	94
82) Nonane	17.688	43	7089	0.12	ppb(v	96
83) o-Xylene	17.309	91	12931	0.12	ppb(v	98
84) Bromoform	16.715	173	5950	0.09	ppb(v	96
85) 1,1,2,2-Tetrachloroethane	17.321	83	8750	0.11	ppb(v	97
86) 1,2,3-Trichloropropane	17.511	75	6218	0.11	ppb(v	97
87) Isopropylbenzene	18.214	105	16409	0.11	ppb(v	97
88) Bromobenzene	18.324	156	5319	0.10	ppb(v	90
89) 2-Chlorotoluene	18.948	126	3968	0.10	ppb(v	96
90) n-Propylbenzene	19.022	120	4331	0.11	ppb(v	98
92) 4-Ethyltoluene	19.248	105	15636	0.11	ppb(v	99
93) 1,3,5-Trimethylbenzene	19.370	105	13652	0.11	ppb(v	99
94) alpha-Methylstyrene	19.615	118	6043	0.10	ppb(v	92
95) tert-Butylbenzene	19.952	134	2980	0.10	ppb(v	89
96) 1,2,4-Trimethylbenzene	19.970	105	12391	0.11	ppb(v	86
97) 1,3-Dichlorobenzene	20.160	146	7682	0.10	ppb(v	97
98) Benzyl Chloride	20.160	91	6386	0.09	ppb(v	97
99) 1,4-Dichlorobenzene	20.264	146	7726	0.10	ppb(v	93
100) sec-Butylbenzene	20.343	134	3532	0.11	ppb(v	87
101) p-Isopropyltoluene	20.582	134	3900	0.10	ppb(v	97
102) 1,2-Dichlorobenzene	20.735	146	7104	0.10	ppb(v	97
103) n-Butylbenzene	21.163	134	3017	0.10	ppb(v	75
104) Hexachloroethane	21.622	201	4162	0.09	ppb(v	95
107) Hexachlorobutadiene	23.549	225	3920	0.09	ppb(v	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

```
Data Path : C:\msdchem\1\data\  
Data File : 5W27908.D  
Acq On : 17 Nov 2017 8:08 pm  
Operator : thomash  
Sample : ic1097-0.1  
Misc : MS22171,v5w1097,,,,,1  
ALS Vial : 2 Sample Multiplier: 1
```

Quant Time: Nov 20 09:44:07 2017
Quant Method : C:\msdchem\1\methods\m5w1097.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Sat Oct 07 09:10:30 2017
Response via : Initial Calibration



7.7.13

Quantitation Report (QT Reviewed)

Manual Integrations
APPROVED
(compounds with "m" flag)

Dana Tryon
11/22/17 11:16

Data Path : C:\msdchem\1\data\
Data File : 5W27909.D
Acq On : 17 Nov 2017 8:52 pm
Operator : thomash
Sample : ic1097-0.2
Misc : MS22171,v5w1097,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 20 09:27:19 2017
Quant Method : C:\msdchem\1\methods\m5w1097.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Sat Oct 07 09:10:30 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.132	130	295206	10.00	ppb(v	-0.04
54) 1,4-Difluorobenzene	10.261	114	1052221	10.00	ppb(v	-0.03
77) Chlorobenzene-d5	15.749	82	452524	10.00	ppb(v	-0.02
108) Bromochloromethane (A)	8.132	130	295206	10.00	ppb(v	-0.04

System Monitoring Compounds						
91) 4-Bromofluorobenzene	17.988	95	589090	9.26	ppb(v	-0.01
Spiked Amount	10.000	Range	65 - 128	Recovery	=	92.60%

Target Compounds						Qvalue
2) 1,1,1-Trifluoroethane	3.868	69	14126	0.23	ppb(v#	90
3) Freon 152A	3.960	65	3062	0.19	ppb(v	87
4) Chlorodifluoromethane	3.997	67	1116	0.20	ppb(v#	64
5) Propene	4.015	41	3768	0.24	ppb(v#	83
6) Chlorotrifluoroethene	4.021	116	8067	0.21	ppb(v	99
7) Dichlorodifluoromethane	4.070	85	12460	0.20	ppb(v	97
8) 1-Chloro-1,1-difluoro...	4.180	65	8004	0.19	ppb(v#	64
9) Chloromethane	4.199	50	4395	0.22	ppb(v	94
10) Dichlorotetrafluoroethane	4.266	85	12876	0.20	ppb(v	92
11) Vinyl Chloride	4.364	62	4753	0.22	ppb(v#	97
12) 1,3-Butadiene	4.468	54	3460	0.23	ppb(v	94
13) n-Butane	4.505	58	858	0.28	ppb(v#	43
14) Bromomethane	4.682	94	5781	0.20	ppb(v	97
15) Chloroethane	4.810	64	2383	0.23	ppb(v#	94
16) Dichlorofluoromethane	4.884	67	10886	0.22	ppb(v	94
17) Acetonitrile	5.110	41	3171	0.26	ppb(v#	66
18) Freon 123	5.208	83	13756	0.22	ppb(v	97
19) Freon 123A	5.251	117	14706	0.41	ppb(v	87
20) Bromoethene	5.086	106	5651	0.22	ppb(v	94
21) Trichlorofluoromethane	5.416	101	11580	0.19	ppb(v	99
22) Acetone	5.330	58	3253	0.34	ppb(v	100
23) Pentane	5.698	57	1664	0.28	ppb(v	74
24) 1,1-Dichloro-1-fluoro...	5.520	81	10470	0.19	ppb(v	99
25) Iodomethane	5.899	142	16345	0.20	ppb(v	95
26) Isopropyl Alcohol	5.538	43	2325	0.36	ppb(v#	10
27) 1,1-Dichloroethene	5.961	61	7870	0.21	ppb(v	94
28) Freon 113	6.297	101	11990	0.21	ppb(v	96
29) Methylene Chloride	6.077	84	5599	0.21	ppb(v	98
30) Carbon Disulfide	6.334	76	16255	0.21	ppb(v	98
31) Ethanol	4.939	45	1593	0.26	ppb(v#	84
32) Acrylonitrile	5.704	53	3951	0.24	ppb(v	87
33) 3-Chloropropene	6.175	76	2151	0.21	ppb(v	89
34) trans-1,2-Dichloroethene	6.927	61	7255	0.21	ppb(v	95
35) tert-Butyl Alcohol	6.065	59	9881	0.19	ppb(v	92
36) Methyl tert-Butyl Ether	7.221	73	14134	0.22	ppb(v	95
37) Vinyl Acetate	7.294	43	11477	0.21	ppb(v	98
38) 1,1-Dichloroethane	7.123	63	9531	0.21	ppb(v	97
39) 2-Butanone	7.576	72	2595	0.22	ppb(v#	94
40) Hexane	8.145	57	8064	0.23	ppb(v	89
41) cis-1,2-Dichloroethene	7.967	61	7299	0.22	ppb(v	96
42) Di-isopropyl Ether	8.187	87	4252	0.21	ppb(v	91
43) Ethyl Acetate	8.242	61	1638	0.22	ppb(v	98
44) Methyl Acrylate	8.230	55	9098	0.23	ppb(v	93
45) Chloroform	8.273	83	11523	0.20	ppb(v	98
46) 2,4-Dimethylpentane	9.093	57	9256	0.23	ppb(v	97
47) Tetrahydrofuran	8.781	72	2330	0.22	ppb(v	96
48) 1,1,1-Trichloroethane	9.319	97	9988	0.20	ppb(v	98
49) 1,2-Dichloroethane	9.056	62	6326	0.20	ppb(v	98
50) Benzene	9.839	78	17203	0.21	ppb(v	98
51) Carbon Tetrachloride	10.011	117	8630	0.17	ppb(v	98
52) Cyclohexane	10.127	56	7898	0.23	ppb(v	94
53) 2,3-Dimethylpentane	10.408	71	3497	0.22	ppb(v	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27909.D
 Acq On : 17 Nov 2017 8:52 pm
 Operator : thomash
 Sample : ic1097-0.2
 Misc : MS22171,v5w1097,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 20 09:27:19 2017
 Quant Method : C:\msdchem\1\methods\m5w1097.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

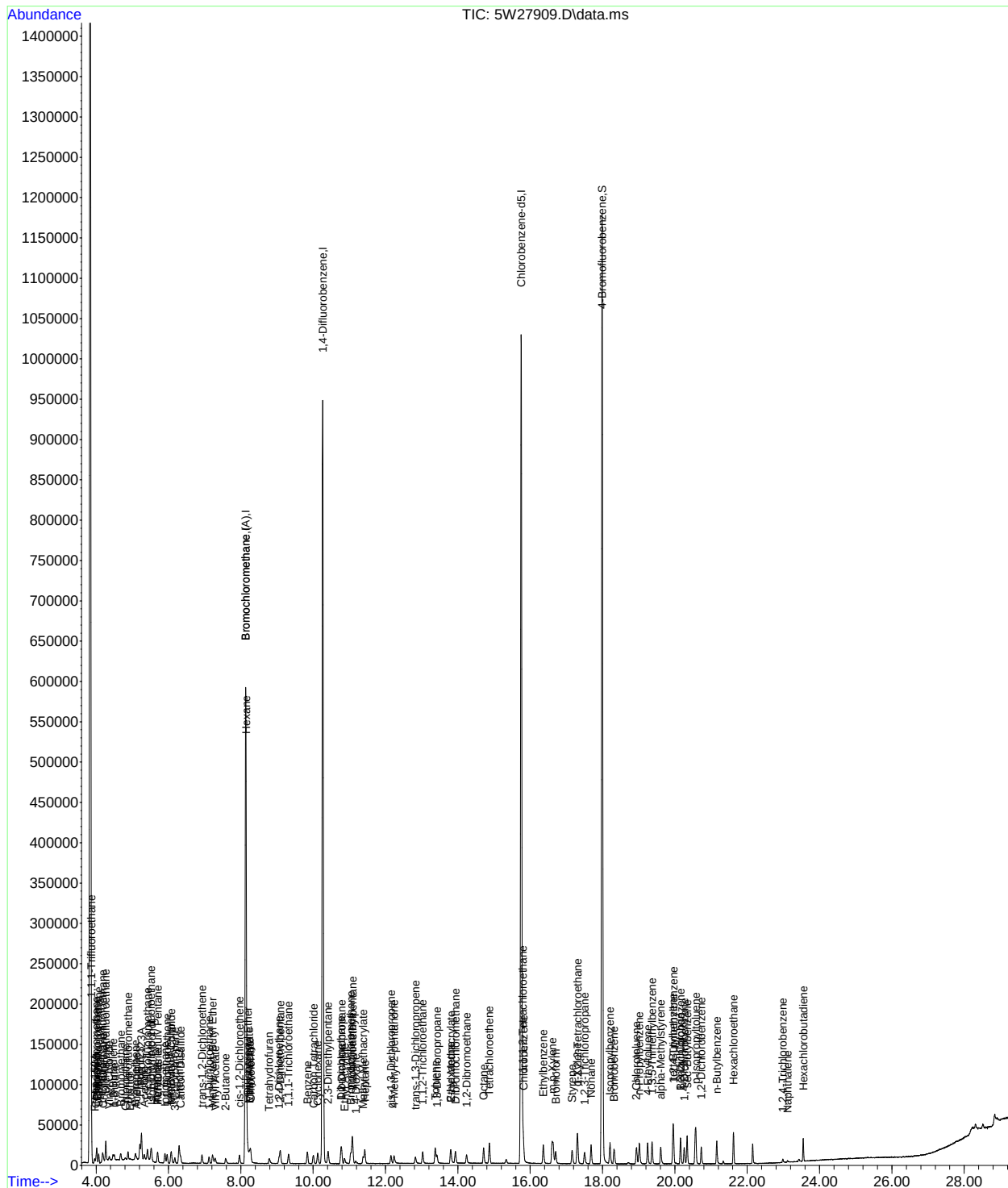
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.087	57	24419	0.21	ppb(v	95
56) Heptane	11.430	71	5306	0.22	ppb(v	96
57) Trichloroethene	11.075	95	7755	0.20	ppb(v	93
58) 1,2-Dichloropropane	10.787	63	6430	0.22	ppb(v	95
59) Dibromomethane	10.769	174	8062	0.19	ppb(v	88
60) Ethyl Acrylate	10.867	55	11663	0.22	ppb(v	98
61) Methyl Methacrylate	11.381	69	5657	0.21	ppb(v	94
62) 1,4-Dioxane	11.179	88	3370	0.21	ppb(v#	84
63) Bromodichloromethane	11.038	83	11755	0.19	ppb(v	95
64) cis-1,3-Dichloropropene	12.152	75	9363	0.21	ppb(v	98
65) 4-Methyl-2-pentanone	12.237	58	4377	0.21	ppb(v	98
66) trans-1,3-Dichloropropene	12.831	75	8079	0.20	ppb(v	97
67) Toluene	13.375	91	20929	0.22	ppb(v	99
68) 1,1,2-Trichloroethane	13.027	97	7331	0.21	ppb(v	98
69) 1,3-Dichloropropane	13.424	76	9708	0.22	ppb(v	98
70) 2-Hexanone	13.803	58	5495	0.21	ppb(v	89
71) Ethyl Methacrylate	13.810	69	8921	0.21	ppb(v	98
72) Dibromochloromethane	13.932	129	12074	0.19	ppb(v	99
73) Tetrachloroethene	14.868	166	11006	0.19	ppb(v	95
74) 1,2-Dibromoethane	14.244	107	11559	0.20	ppb(v	92
75) Octane	14.709	43	11921	0.23	ppb(v	98
76) 1,1,1,2-Tetrachloroethane	15.798	131	8922	0.19	ppb(v#	8
78) Chlorobenzene	15.816	112	17296	0.21	ppb(v	97
79) Ethylbenzene	16.361	91	26889	0.22	ppb(v	99
80) m,p-Xylene	16.612	91	40932	0.44	ppb(v	98
81) Styrene	17.156	104	14513	0.21	ppb(v	96
82) Nonane	17.682	43	11258	0.21	ppb(v	98
83) o-Xylene	17.303	91	21032	0.23	ppb(v	98
84) Bromoform	16.709	173	10403	0.17	ppb(v	97
85) 1,1,2,2-Tetrachloroethane	17.309	83	14585	0.20	ppb(v	99
86) 1,2,3-Trichloropropane	17.505	75	10443	0.21	ppb(v	94
87) Isopropylbenzene	18.208	105	27431	0.21	ppb(v	98
88) Bromobenzene	18.318	156	9109	0.19	ppb(v	96
89) 2-Chlorotoluene	18.936	126	6794	0.20	ppb(v	94
90) n-Propylbenzene	19.016	120	6983	0.19	ppb(v	82
92) 4-Ethyltoluene	19.248	105	25832	0.20	ppb(v	97
93) 1,3,5-Trimethylbenzene	19.371	105	22537	0.20	ppb(v	96
94) alpha-Methylstyrene	19.609	118	10336	0.20	ppb(v	98
95) tert-Butylbenzene	19.946	134	5094	0.20	ppb(v	96
96) 1,2,4-Trimethylbenzene	19.964	105	20765	0.20	ppb(v	97
97) 1,3-Dichlorobenzene	20.160	146	13007	0.18	ppb(v	98
98) Benzyl Chloride	20.154	91	11193	0.17	ppb(v	96
99) 1,4-Dichlorobenzene	20.264	146	13145	0.19	ppb(v	99
100) sec-Butylbenzene	20.343	134	5851	0.20	ppb(v	92
101) p-Isopropyltoluene	20.582	134	6785	0.19	ppb(v	95
102) 1,2-Dichlorobenzene	20.729	146	12266	0.18	ppb(v	96
103) n-Butylbenzene	21.163	134	5226	0.19	ppb(v	94
104) Hexachloroethane	21.622	201	6973	0.16	ppb(v	90
105) 1,2,4-Trichlorobenzene	22.980	180	2470	0.12	ppb(v	91
106) Naphthalene	23.115	128	3824	0.10	ppb(v	97
107) Hexachlorobutadiene	23.549	225	6201	0.16	ppb(v	98
109) TVHC as equiv Pentane	5.704	TIC	31454m	0.24	ppb(v	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5W27909.D
Acq On : 17 Nov 2017 8:52 pm
Operator : thomash
Sample : ic1097-0.2
Misc : MS22171,v5w1097,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 20 09:27:19 2017
Quant Method : C:\msdchem\1\methods\m5w1097.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Sat Oct 07 09:10:30 2017
Response via : Initial Calibration



7.7.14 7

Manual Integration Approval Summary

Sample Number: V5W1097-IC1097

Method: TO-15

Lab FileID: 5W27909.D

Analyst approved: 11/20/17 11:37 Thomas Hilbig

Injection Time: 11/17/17 20:52

Supervisor approved: 11/22/17 11:16 Dana Tryon

Parameter	CAS	Sig#	R.T. (min.)	Reason

TVHC As Equiv Pentane			5.70	Missed peak

7.7.14.1
7

Quantitation Report (QT Reviewed)

Manual Integrations
APPROVED
(compounds with "m" flag)

Dana Tryon
11/22/17 11:16

Data Path : C:\msdchem\1\data\
Data File : 5W27910.D
Acq On : 17 Nov 2017 9:39 pm
Operator : thomash
Sample : ic1097-0.5
Misc : MS22171,v5w1097,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 20 09:28:41 2017
Quant Method : C:\msdchem\1\methods\m5w1097.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Sat Oct 07 09:10:30 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.157	130	316100	10.00	ppb(v	-0.02
54) 1,4-Difluorobenzene	10.280	114	1131891	10.00	ppb(v	-0.01
77) Chlorobenzene-d5	15.755	82	493045	10.00	ppb(v	-0.01
108) Bromochloromethane (A)	8.157	130	316100	10.00	ppb(v	-0.02

System Monitoring Compounds						
91) 4-Bromofluorobenzene	17.994	95	653269	9.42	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	94.20%

Target Compounds						Qvalue
2) 1,1,1-Trifluoroethane	3.905	69	33348	0.51	ppb(v#	90
3) Freon 152A	3.991	65	7845	0.46	ppb(v	85
4) Chlorodifluoromethane	4.027	67	2859	0.48	ppb(v	94
5) Propene	4.052	41	9108	0.55	ppb(v#	93
6) Chlorotrifluoroethene	4.052	116	20598	0.49	ppb(v	98
7) Dichlorodifluoromethane	4.107	85	31887	0.47	ppb(v	99
8) 1-Chloro-1,1-difluoro...	4.217	65	20035	0.44	ppb(v#	82
9) Chloromethane	4.235	50	11054	0.52	ppb(v	98
10) Dichlorotetrafluoroethane	4.303	85	33485	0.49	ppb(v	96
11) Vinyl Chloride	4.401	62	12352	0.53	ppb(v#	98
12) 1,3-Butadiene	4.498	54	8607	0.54	ppb(v	96
13) n-Butane	4.535	58	2003	0.62	ppb(v#	80
14) Bromomethane	4.713	94	14725	0.47	ppb(v	98
15) Chloroethane	4.841	64	6129	0.55	ppb(v#	99
16) Dichlorofluoromethane	4.914	67	26792	0.50	ppb(v	97
17) Acetonitrile	5.147	41	7299	0.55	ppb(v#	74
18) Freon 123	5.239	83	35076	0.52	ppb(v	99
19) Freon 123A	5.288	117	38270	0.99	ppb(v	93
20) Bromoethene	5.122	106	14255	0.51	ppb(v	98
21) Trichlorofluoromethane	5.453	101	30209	0.45	ppb(v	97
22) Acetone	5.361	58	7078	0.69	ppb(v	86
23) Pentane	5.734	57	3552	0.55	ppb(v	91
24) 1,1-Dichloro-1-fluoro...	5.551	81	27576	0.46	ppb(v	99
25) Iodomethane	5.930	142	41336	0.47	ppb(v	94
26) Isopropyl Alcohol	5.557	43	4230	0.61	ppb(v	67
27) 1,1-Dichloroethene	5.991	61	20529	0.51	ppb(v	98
28) Freon 113	6.328	101	30735	0.50	ppb(v	97
29) Methylene Chloride	6.107	84	13478	0.47	ppb(v	97
30) Carbon Disulfide	6.364	76	42311	0.51	ppb(v	98
31) Ethanol	4.969	45	3627	0.56	ppb(v#	94
32) Acrylonitrile	5.734	53	8976	0.50	ppb(v	99
33) 3-Chloropropene	6.205	76	5649	0.51	ppb(v	91
34) trans-1,2-Dichloroethene	6.952	61	18638	0.50	ppb(v	98
35) tert-Butyl Alcohol	6.083	59	26113	0.47	ppb(v	97
36) Methyl tert-Butyl Ether	7.239	73	36540	0.52	ppb(v	98
37) Vinyl Acetate	7.313	43	29385	0.51	ppb(v	97
38) 1,1-Dichloroethane	7.147	63	24452	0.50	ppb(v	99
39) 2-Butanone	7.594	72	6780	0.54	ppb(v	95
40) Hexane	8.169	57	20184	0.54	ppb(v	90
41) cis-1,2-Dichloroethene	7.992	61	18408	0.52	ppb(v	96
42) Di-isopropyl Ether	8.206	87	11299	0.51	ppb(v	90
43) Ethyl Acetate	8.261	61	4532	0.56	ppb(v	91
44) Methyl Acrylate	8.242	55	22587	0.53	ppb(v	98
45) Chloroform	8.291	83	29605	0.49	ppb(v	98
46) 2,4-Dimethylpentane	9.111	57	24071	0.55	ppb(v	98
47) Tetrahydrofuran	8.793	72	6370	0.56	ppb(v	96
48) 1,1,1-Trichloroethane	9.344	97	25820	0.47	ppb(v	99
49) 1,2-Dichloroethane	9.074	62	16264	0.49	ppb(v#	95
50) Benzene	9.858	78	43839	0.50	ppb(v	98
51) Carbon Tetrachloride	10.023	117	21625	0.39	ppb(v	99
52) Cyclohexane	10.145	56	20330	0.55	ppb(v	97
53) 2,3-Dimethylpentane	10.426	71	9115	0.53	ppb(v	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27910.D
 Acq On : 17 Nov 2017 9:39 pm
 Operator : thomash
 Sample : ic1097-0.5
 Misc : MS22171,v5w1097,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 20 09:28:41 2017
 Quant Method : C:\msdchem\1\methods\m5w1097.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.099	57	65662	0.53	ppb(v	97
56) Heptane	11.442	71	13736	0.52	ppb(v	98
57) Trichloroethene	11.087	95	20194	0.48	ppb(v	95
58) 1,2-Dichloropropane	10.800	63	16340	0.51	ppb(v	92
59) Dibromomethane	10.781	174	19489	0.43	ppb(v	91
60) Ethyl Acrylate	10.873	55	30279	0.53	ppb(v	99
61) Methyl Methacrylate	11.387	69	15574	0.53	ppb(v	95
62) 1,4-Dioxane	11.173	88	8514	0.50	ppb(v#	90
63) Bromodichloromethane	11.044	83	29718	0.46	ppb(v	98
64) cis-1,3-Dichloropropene	12.158	75	25118	0.51	ppb(v	98
65) 4-Methyl-2-pentanone	12.237	58	12411	0.55	ppb(v	99
66) trans-1,3-Dichloropropene	12.831	75	21785	0.51	ppb(v	99
67) Toluene	13.381	91	54605	0.52	ppb(v	99
68) 1,1,2-Trichloroethane	13.033	97	19292	0.50	ppb(v	98
69) 1,3-Dichloropropane	13.430	76	25607	0.53	ppb(v	98
70) 2-Hexanone	13.791	58	16410	0.57	ppb(v	93
71) Ethyl Methacrylate	13.810	69	24695	0.53	ppb(v	99
72) Dibromochloromethane	13.938	129	31424	0.45	ppb(v	99
73) Tetrachloroethene	14.874	166	27637	0.44	ppb(v	96
74) 1,2-Dibromoethane	14.244	107	30386	0.49	ppb(v	96
75) Octane	14.715	43	29694	0.53	ppb(v	99
76) 1,1,1,2-Tetrachloroethane	15.798	131	22704	0.46	ppb(v#	38
78) Chlorobenzene	15.816	112	44526	0.49	ppb(v	98
79) Ethylbenzene	16.361	91	69667	0.53	ppb(v	99
80) m,p-Xylene	16.611	91	105172	1.04	ppb(v	98
81) Styrene	17.156	104	38314	0.50	ppb(v	99
82) Nonane	17.682	43	29295	0.50	ppb(v	98
83) o-Xylene	17.303	91	53933	0.53	ppb(v	97
84) Bromoform	16.709	173	28229	0.43	ppb(v	99
85) 1,1,2,2-Tetrachloroethane	17.315	83	38097	0.49	ppb(v	97
86) 1,2,3-Trichloropropane	17.499	75	27661	0.50	ppb(v	96
87) Isopropylbenzene	18.208	105	71193	0.50	ppb(v	98
88) Bromobenzene	18.318	156	23301	0.45	ppb(v	87
89) 2-Chlorotoluene	18.936	126	18226	0.48	ppb(v	99
90) n-Propylbenzene	19.016	120	19119	0.48	ppb(v	84
92) 4-Ethyltoluene	19.242	105	68873	0.49	ppb(v	98
93) 1,3,5-Trimethylbenzene	19.371	105	58736	0.48	ppb(v	100
94) alpha-Methylstyrene	19.609	118	27962	0.50	ppb(v	99
95) tert-Butylbenzene	19.946	134	13282	0.47	ppb(v	96
96) 1,2,4-Trimethylbenzene	19.964	105	55489	0.49	ppb(v	95
97) 1,3-Dichlorobenzene	20.154	146	34281	0.45	ppb(v	99
98) Benzyl Chloride	20.154	91	30440	0.43	ppb(v	100
99) 1,4-Dichlorobenzene	20.258	146	33611	0.44	ppb(v	98
100) sec-Butylbenzene	20.343	134	15345	0.47	ppb(v	87
101) p-Isopropyltoluene	20.576	134	17993	0.47	ppb(v	98
102) 1,2-Dichlorobenzene	20.729	146	32913	0.45	ppb(v	99
103) n-Butylbenzene	21.157	134	14588	0.49	ppb(v	91
104) Hexachloroethane	21.622	201	19036	0.40	ppb(v	90
105) 1,2,4-Trichlorobenzene	22.974	180	7863	0.36	ppb(v	97
106) Naphthalene	23.102	128	13113	0.32	ppb(v	99
107) Hexachlorobutadiene	23.549	225	15830	0.38	ppb(v	97
109) TVHC as equiv Pentane	5.734	TIC	75489m	0.54	ppb(v	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

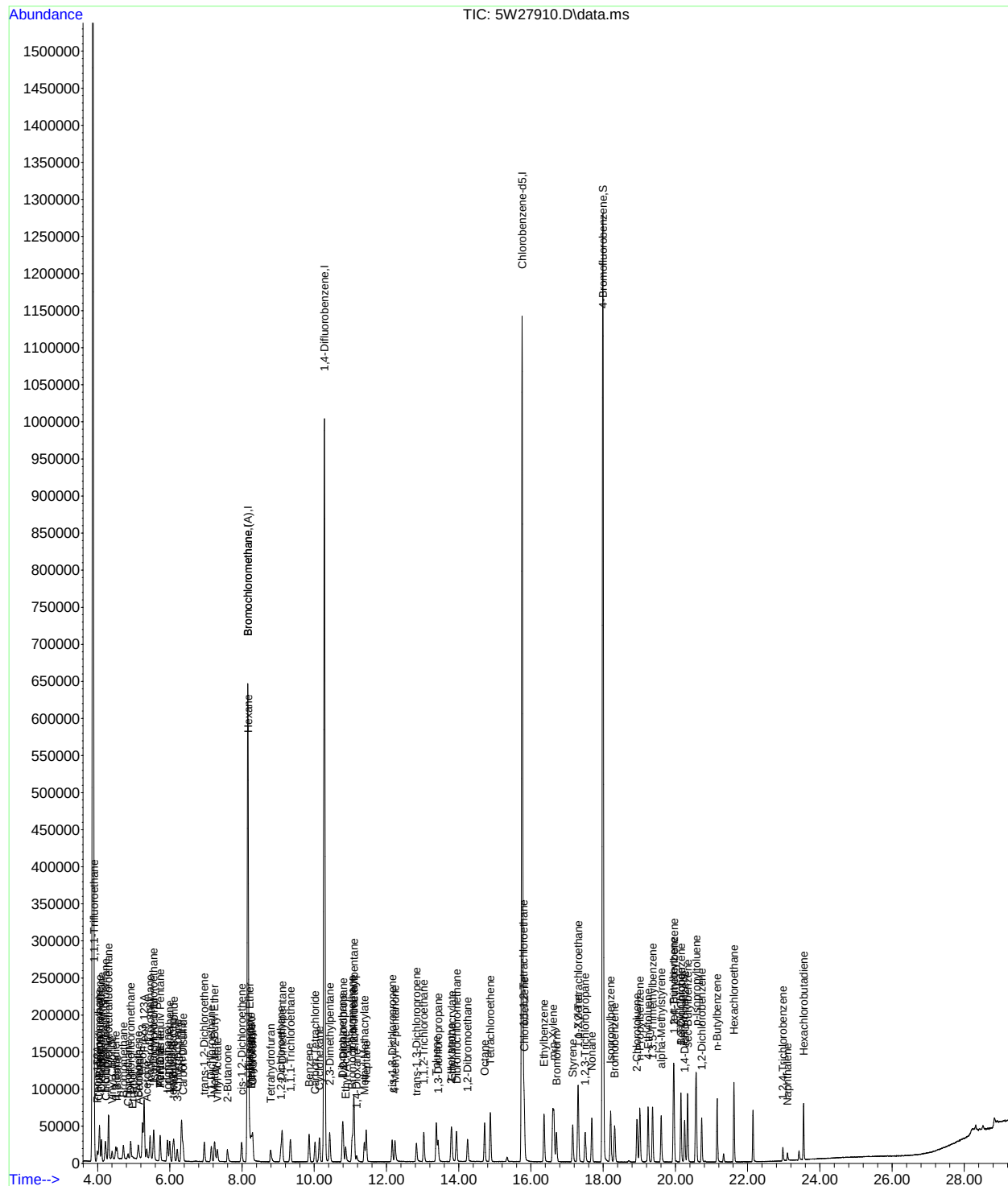
7.7.15

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5W27910.D
Acq On : 17 Nov 2017 9:39 pm
Operator : thomash
Sample : ic1097-0.5
Misc : MS22171,v5w1097,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 20 09:28:41 2017
Quant Method : C:\msdchem\1\methods\m5w1097.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Sat Oct 07 09:10:30 2017
Response via : Initial Calibration



m5w1097.M Wed Nov 22 10:27:23 2017

Page: 3

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7.7.15

Manual Integration Approval Summary

Sample Number: V5W1097-IC1097

Method: TO-15

Lab FileID: 5W27910.D

Analyst approved: 11/20/17 11:37 Thomas Hilbig

Injection Time: 11/17/17 21:39

Supervisor approved: 11/22/17 11:16 Dana Tryon

Parameter	CAS	Sig#	R.T. (min.)	Reason
TVHC As Equiv Pentane			5.73	Missed peak

7.7.15.1
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27911.D
 Acq On : 17 Nov 2017 10:23 pm
 Operator : thomash
 Sample : ic1097-5
 Misc : MS22171,v5w1097,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 20 08:47:31 2017
 Quant Method : C:\msdchem\1\methods\m5w1097.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.163	130	319791	10.00	ppb(v	-0.01
54) 1,4-Difluorobenzene	10.286	114	1137679	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.755	82	513062	10.00	ppb(v	-0.01
108) Bromochloromethane (A)	8.163	130	319791	10.00	ppb(v	-0.01

System Monitoring Compounds						
91) 4-Bromofluorobenzene	17.994	95	683209	9.47	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	94.70%

Target Compounds						Qvalue
2) 1,1,1-Trifluoroethane	3.911	69	404975	6.11	ppb(v#	89
3) Freon 152A	4.003	65	88149	5.15	ppb(v	83
4) Chlorodifluoromethane	4.033	67	31864	5.33	ppb(v	97
5) Propene	4.058	41	96453	5.76	ppb(v	96
6) Chlorotrifluoroethene	4.064	116	233470	5.50	ppb(v	99
7) Dichlorodifluoromethane	4.113	85	361498	5.23	ppb(v	99
8) 1-Chloro-1,1-difluoro...	4.223	65	225916	4.93	ppb(v	97
9) Chloromethane	4.241	50	121902	5.70	ppb(v	99
10) Dichlorotetrafluoroethane	4.309	85	377233	5.51	ppb(v	93
11) Vinyl Chloride	4.407	62	139069	5.88	ppb(v	99
12) 1,3-Butadiene	4.505	54	94239	5.89	ppb(v	99
13) n-Butane	4.541	58	20373	6.23	ppb(v#	94
14) Bromomethane	4.719	94	159015	4.98	ppb(v	100
15) Chloroethane	4.853	64	67497	5.94	ppb(v	98
16) Dichlorofluoromethane	4.927	67	293952	5.45	ppb(v	99
17) Acetonitrile	5.147	41	81121	6.09	ppb(v	98
18) Freon 123	5.251	83	380695	5.63	ppb(v	100
19) Freon 123A	5.294	117	417098	10.65	ppb(v	93
20) Bromoethene	5.129	106	158970	5.63	ppb(v	98
21) Trichlorofluoromethane	5.459	101	333703	4.92	ppb(v	99
22) Acetone	5.349	58	57125	5.50	ppb(v	90
23) Pentane	5.740	57	37100	5.70	ppb(v	92
24) 1,1-Dichloro-1-fluoro...	5.557	81	298885	4.91	ppb(v	98
25) Iodomethane	5.942	142	463975	5.27	ppb(v	92
26) Isopropyl Alcohol	5.557	43	34287	4.86	ppb(v	90
27) 1,1-Dichloroethene	6.003	61	236088	5.78	ppb(v	96
28) Freon 113	6.334	101	342007	5.45	ppb(v	97
29) Methylene Chloride	6.120	84	143084	4.96	ppb(v	99
30) Carbon Disulfide	6.370	76	477620	5.68	ppb(v	100
31) Ethanol	4.969	45	34073	5.18	ppb(v	97
32) Acrylonitrile	5.734	53	109819	6.10	ppb(v	98
33) 3-Chloropropene	6.211	76	64446	5.75	ppb(v	89
34) trans-1,2-Dichloroethene	6.958	61	215675	5.75	ppb(v	100
35) tert-Butyl Alcohol	6.071	59	288513	5.16	ppb(v	97
36) Methyl tert-Butyl Ether	7.227	73	404643	5.72	ppb(v	98
37) Vinyl Acetate	7.313	43	297725	5.13	ppb(v	100
38) 1,1-Dichloroethane	7.160	63	276304	5.62	ppb(v	100
39) 2-Butanone	7.576	72	76787	6.08	ppb(v	94
40) Hexane	8.175	57	227334	5.97	ppb(v	94
41) cis-1,2-Dichloroethene	7.998	61	204221	5.69	ppb(v	98
42) Di-isopropyl Ether	8.206	87	130077	5.85	ppb(v	94
43) Ethyl Acetate	8.249	61	51130	6.20	ppb(v	93
44) Methyl Acrylate	8.236	55	254005	5.85	ppb(v	99
45) Chloroform	8.297	83	316790	5.18	ppb(v	98
46) 2,4-Dimethylpentane	9.117	57	268393	6.11	ppb(v	99
47) Tetrahydrofuran	8.762	72	72195	6.23	ppb(v	96
48) 1,1,1-Trichloroethane	9.344	97	285299	5.15	ppb(v	99
49) 1,2-Dichloroethane	9.081	62	180037	5.35	ppb(v	99
50) Benzene	9.864	78	475298	5.41	ppb(v	98
51) Carbon Tetrachloride	10.029	117	261200	4.66	ppb(v	98
52) Cyclohexane	10.151	56	224227	5.97	ppb(v	98
53) 2,3-Dimethylpentane	10.433	71	103398	5.95	ppb(v	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27911.D
 Acq On : 17 Nov 2017 10:23 pm
 Operator : thomash
 Sample : ic1097-5
 Misc : MS22171,v5w1097,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 20 08:47:31 2017
 Quant Method : C:\msdchem\1\methods\m5w1097.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.106	57	726736	5.87	ppb(v)	96
56) Heptane	11.442	71	154215	5.81	ppb(v)	98
57) Trichloroethene	11.087	95	217296	5.10	ppb(v)	96
58) 1,2-Dichloropropane	10.806	63	177075	5.50	ppb(v)	94
59) Dibromomethane	10.787	174	207979	4.53	ppb(v)	92
60) Ethyl Acrylate	10.861	55	338974	5.91	ppb(v)	100
61) Methyl Methacrylate	11.381	69	170030	5.76	ppb(v)	93
62) 1,4-Dioxane	11.142	88	91593	5.39	ppb(v)	93
63) Bromodichloromethane	11.050	83	322972	4.95	ppb(v)	99
64) cis-1,3-Dichloropropene	12.158	75	270809	5.50	ppb(v)	99
65) 4-Methyl-2-pentanone	12.219	58	141067	6.23	ppb(v)	94
66) trans-1,3-Dichloropropene	12.825	75	242089	5.67	ppb(v)	99
67) Toluene	13.381	91	572285	5.47	ppb(v)	100
68) 1,1,2-Trichloroethane	13.033	97	204218	5.30	ppb(v)	98
69) 1,3-Dichloropropane	13.424	76	270458	5.57	ppb(v)	96
70) 2-Hexanone	13.773	58	190462	6.62	ppb(v)	95
71) Ethyl Methacrylate	13.803	69	275161	5.90	ppb(v)	97
72) Dibromochloromethane	13.932	129	341904	4.93	ppb(v)	99
73) Tetrachloroethene	14.874	166	294012	4.63	ppb(v)	99
74) 1,2-Dibromoethane	14.244	107	327354	5.21	ppb(v)	100
75) Octane	14.715	43	327276	5.77	ppb(v)	99
76) 1,1,1,2-Tetrachloroethane	15.798	131	249981	5.03	ppb(v)	94
78) Chlorobenzene	15.816	112	468171	4.99	ppb(v)	98
79) Ethylbenzene	16.361	91	713186	5.20	ppb(v)	99
80) m,p-Xylene	16.611	91	1093034	10.40	ppb(v)	99
81) Styrene	17.150	104	416968	5.23	ppb(v)	99
82) Nonane	17.682	43	310852	5.13	ppb(v)	98
83) o-Xylene	17.303	91	547255	5.18	ppb(v)	98
84) Bromoform	16.703	173	333154	4.85	ppb(v)	99
85) 1,1,2,2-Tetrachloroethane	17.309	83	392324	4.85	ppb(v)	99
86) 1,2,3-Trichloropropane	17.499	75	284783	4.95	ppb(v)	98
87) Isopropylbenzene	18.208	105	724425	4.92	ppb(v)	99
88) Bromobenzene	18.312	156	247833	4.63	ppb(v)	93
89) 2-Chlorotoluene	18.936	126	188905	4.81	ppb(v)	98
90) n-Propylbenzene	19.010	120	199513	4.82	ppb(v)	90
92) 4-Ethyltoluene	19.242	105	684203	4.68	ppb(v)	99
93) 1,3,5-Trimethylbenzene	19.364	105	566576	4.45	ppb(v)	100
94) alpha-Methylstyrene	19.603	118	283567	4.83	ppb(v)	100
95) tert-Butylbenzene	19.946	134	130497	4.47	ppb(v)	98
96) 1,2,4-Trimethylbenzene	19.964	105	541160	4.58	ppb(v)	96
97) 1,3-Dichlorobenzene	20.154	146	348986	4.37	ppb(v)	99
98) Benzyl Chloride	20.147	91	369411	5.06	ppb(v)	99
99) 1,4-Dichlorobenzene	20.251	146	336398	4.25	ppb(v)	98
100) sec-Butylbenzene	20.343	134	148734	4.40	ppb(v)	93
101) p-Isopropyltoluene	20.576	134	167917	4.18	ppb(v)	96
102) 1,2-Dichlorobenzene	20.729	146	318419	4.22	ppb(v)	99
103) n-Butylbenzene	21.157	134	135673	4.37	ppb(v)	94
104) Hexachloroethane	21.622	201	189888	3.81	ppb(v)	91
105) 1,2,4-Trichlorobenzene	22.968	180	96324	4.28	ppb(v)	96
106) Naphthalene	23.096	128	179250	4.18	ppb(v)	99
107) Hexachlorobutadiene	23.549	225	132011	3.05	ppb(v)	98
109) TVHC as equiv Pentane	5.740	TIC	846176	5.99	ppb(v)	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

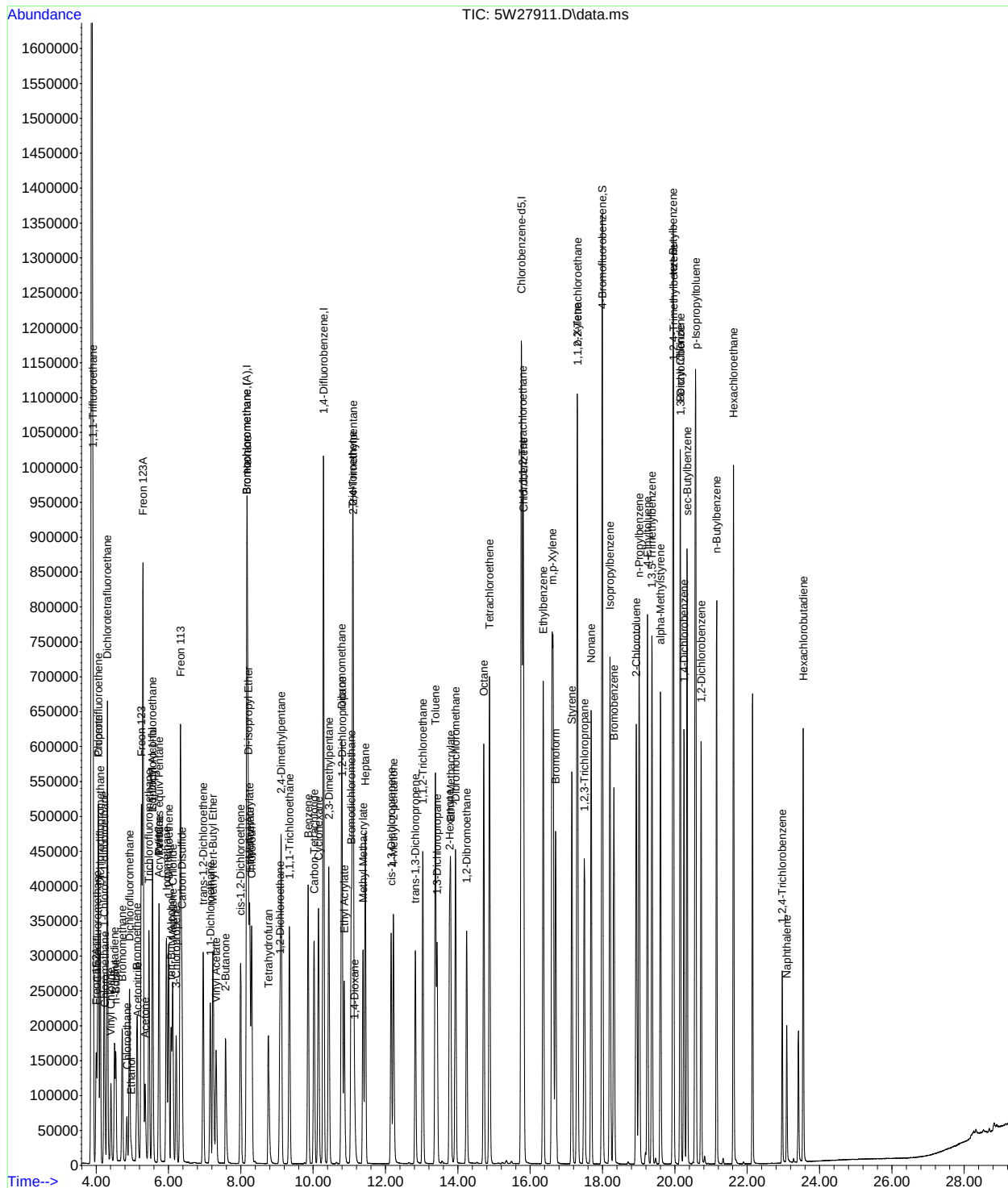
7.7.16

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5W27911.D
Acq On : 17 Nov 2017 10:23 pm
Operator : thomash
Sample : ic1097-5
Misc : MS22171,v5w1097,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 20 08:47:31 2017
Quant Method : C:\msdchem\1\methods\m5w1097.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Sat Oct 07 09:10:30 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27912.D
 Acq On : 17 Nov 2017 11:08 pm
 Operator : thomash
 Sample : icc1097-10
 Misc : MS22171,v5w1097,,,,,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 20 09:17:29 2017
 Quant Method : C:\msdchem\1\methods\m5w1097.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.175	130	323377	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.292	114	1129790	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.761	82	493329	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.175	130	323377	10.00	ppb(v	0.00

System Monitoring Compounds

91) 4-Bromofluorobenzene	17.994	95	689253	9.93	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	99.30%

Target Compounds						Qvalue
2) 1,1,1-Trifluoroethane	3.923	69	678462	10.12	ppb(v#	86
3) Freon 152A	4.015	65	167107	9.66	ppb(v	84
4) Chlorodifluoromethane	4.052	67	60399	9.99	ppb(v	99
5) Propene	4.064	41	170424	10.07	ppb(v	97
6) Chlorotrifluoroethene	4.076	116	440421	10.25	ppb(v	99
7) Dichlorodifluoromethane	4.131	85	673099	9.64	ppb(v	100
8) 1-Chloro-1,1-difluoro...	4.235	65	427013	9.22	ppb(v	97
9) Chloromethane	4.254	50	232422	10.74	ppb(v	100
10) Dichlorotetrafluoroethane	4.327	85	716828	10.35	ppb(v	97
11) Vinyl Chloride	4.419	62	267494	11.18	ppb(v	99
12) 1,3-Butadiene	4.523	54	177534	10.97	ppb(v	99
13) n-Butane	4.560	58	38721	11.72	ppb(v	95
14) Bromomethane	4.737	94	300070	9.29	ppb(v	100
15) Chloroethane	4.865	64	128108	11.14	ppb(v	99
16) Dichlorofluoromethane	4.939	67	552029	10.11	ppb(v	99
17) Acetonitrile	5.159	41	151243	11.23	ppb(v	99
18) Freon 123	5.263	83	705573	10.32	ppb(v	99
19) Freon 123A	5.306	117	774633	19.57	ppb(v	93
20) Bromoethene	5.141	106	299425	10.48	ppb(v	98
21) Trichlorofluoromethane	5.471	101	697659	10.18	ppb(v	100
22) Acetone	5.367	58	110671	10.53	ppb(v	92
23) Pentane	5.753	57	68071	10.35	ppb(v	88
24) 1,1-Dichloro-1-fluoro...	5.575	81	574694	9.34	ppb(v	98
25) Iodomethane	5.954	142	872893	9.80	ppb(v	92
26) Isopropyl Alcohol	5.575	43	67028	9.39	ppb(v	94
27) 1,1-Dichloroethene	6.016	61	443789	10.74	ppb(v	97
28) Freon 113	6.346	101	641592	10.12	ppb(v	98
29) Methylene Chloride	6.132	84	267525	9.17	ppb(v	98
30) Carbon Disulfide	6.383	76	898103	10.56	ppb(v	99
31) Ethanol	4.988	45	64230	9.66	ppb(v	96
32) Acrylonitrile	5.753	53	202479	11.13	ppb(v	96
33) 3-Chloropropene	6.224	76	121313	10.70	ppb(v	89
34) trans-1,2-Dichloroethene	6.970	61	406405	10.72	ppb(v	100
35) tert-Butyl Alcohol	6.083	59	543490	9.61	ppb(v	97
36) Methyl tert-Butyl Ether	7.239	73	760659	10.63	ppb(v	98
37) Vinyl Acetate	7.325	43	575067	9.81	ppb(v	99
38) 1,1-Dichloroethane	7.172	63	518483	10.43	ppb(v	100
39) 2-Butanone	7.588	72	145005	11.35	ppb(v	91
40) Hexane	8.187	57	429986	11.18	ppb(v	98
41) cis-1,2-Dichloroethene	8.004	61	383132	10.55	ppb(v	99
42) Di-isopropyl Ether	8.212	87	247440	11.00	ppb(v	95
43) Ethyl Acetate	8.261	61	96306	11.54	ppb(v	92
44) Methyl Acrylate	8.249	55	481956	10.99	ppb(v	99
45) Chloroform	8.310	83	593373	9.60	ppb(v	99
46) 2,4-Dimethylpentane	9.123	57	500135	11.27	ppb(v	99
47) Tetrahydrofuran	8.762	72	137979	11.77	ppb(v	96
48) 1,1,1-Trichloroethane	9.356	97	537913	9.59	ppb(v	99
49) 1,2-Dichloroethane	9.087	62	333240	9.79	ppb(v	98
50) Benzene	9.870	78	896349	10.09	ppb(v	99
51) Carbon Tetrachloride	10.035	117	508555	8.97	ppb(v	99
52) Cyclohexane	10.157	56	417858	11.00	ppb(v	98
53) 2,3-Dimethylpentane	10.439	71	194578	11.07	ppb(v	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27912.D
 Acq On : 17 Nov 2017 11:08 pm
 Operator : thomash
 Sample : icc1097-10
 Misc : MS22171,v5w1097,,,,,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 20 09:17:29 2017
 Quant Method : C:\msdchem\1\methods\m5w1097.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

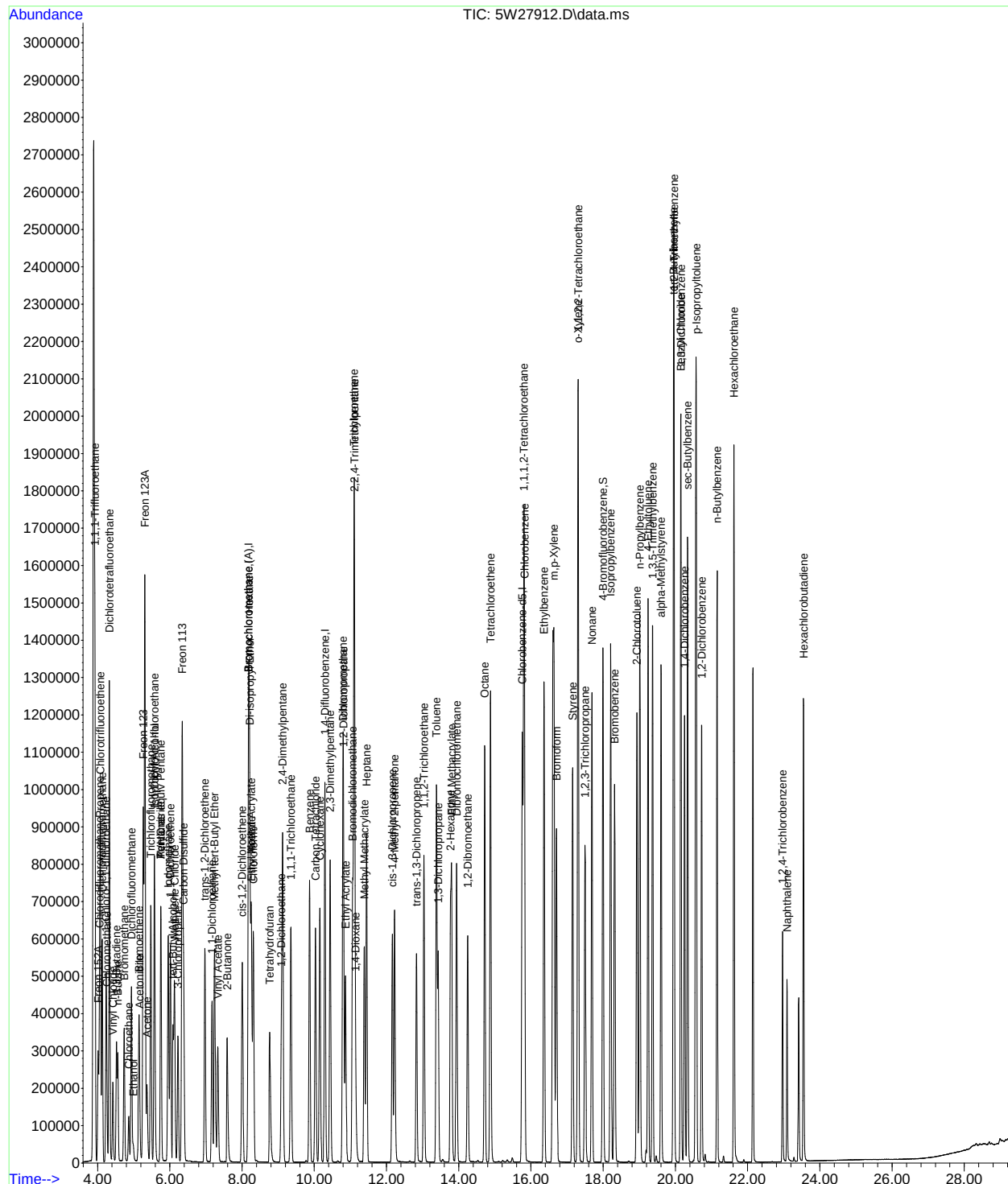
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.112	57	1358867	11.05	ppb(v)	96
56) Heptane	11.448	71	291446	11.06	ppb(v)	97
57) Trichloroethene	11.099	95	409721	9.69	ppb(v)	98
58) 1,2-Dichloropropane	10.812	63	331298	10.36	ppb(v)	93
59) Dibromomethane	10.793	174	392156	8.60	ppb(v)	91
60) Ethyl Acrylate	10.867	55	640411	11.25	ppb(v)	100
61) Methyl Methacrylate	11.387	69	322361	10.99	ppb(v)	93
62) 1,4-Dioxane	11.142	88	173999	10.31	ppb(v)	96
63) Bromodichloromethane	11.057	83	611996	9.45	ppb(v)	99
64) cis-1,3-Dichloropropene	12.164	75	501366	10.25	ppb(v)	100
65) 4-Methyl-2-pentanone	12.225	58	266309	11.85	ppb(v)	93
66) trans-1,3-Dichloropropene	12.831	75	445496	10.50	ppb(v)	100
67) Toluene	13.381	91	1030350	9.91	ppb(v)	100
68) 1,1,2-Trichloroethane	13.039	97	373669	9.77	ppb(v)	98
69) 1,3-Dichloropropane	13.430	76	487328	10.10	ppb(v)	96
70) 2-Hexanone	13.773	58	363410	12.72	ppb(v)	91
71) Ethyl Methacrylate	13.803	69	520471	11.24	ppb(v)	98
72) Dibromochloromethane	13.938	129	611685	8.87	ppb(v)	99
73) Tetrachloroethene	14.880	166	533947	8.46	ppb(v)	99
74) 1,2-Dibromoethane	14.250	107	591954	9.49	ppb(v)	99
75) Octane	14.715	43	617855	10.98	ppb(v)	99
76) 1,1,1,2-Tetrachloroethane	15.804	131	455685	9.24	ppb(v)	98
78) Chlorobenzene	15.822	112	854162	9.46	ppb(v)	100
79) Ethylbenzene	16.361	91	1337521	10.14	ppb(v)	99
80) m,p-Xylene	16.636	91	2047711	20.27	ppb(v)	99
81) Styrene	17.156	104	794326	10.36	ppb(v)	99
82) Nonane	17.688	43	589421	10.12	ppb(v)	99
83) o-Xylene	17.303	91	1035050	10.19	ppb(v)	99
84) Bromoform	16.709	173	621969	9.42	ppb(v)	99
85) 1,1,2,2-Tetrachloroethane	17.309	83	748075	9.62	ppb(v)	99
86) 1,2,3-Trichloropropane	17.498	75	543325	9.81	ppb(v)	97
87) Isopropylbenzene	18.208	105	1370753	9.68	ppb(v)	99
88) Bromobenzene	18.318	156	475003	9.23	ppb(v)	96
89) 2-Chlorotoluene	18.936	126	361186	9.57	ppb(v)	97
90) n-Propylbenzene	19.016	120	387663	9.75	ppb(v)	95
92) 4-Ethyltoluene	19.242	105	1313671	9.35	ppb(v)	99
93) 1,3,5-Trimethylbenzene	19.371	105	1086577	8.87	ppb(v)	99
94) alpha-Methylstyrene	19.603	118	557521	9.87	ppb(v)	100
95) tert-Butylbenzene	19.946	134	252651	9.01	ppb(v)	98
96) 1,2,4-Trimethylbenzene	19.964	105	1045172	9.19	ppb(v)	98
97) 1,3-Dichlorobenzene	20.154	146	687129	8.94	ppb(v)	99
98) Benzyl Chloride	20.147	91	760488	10.82	ppb(v)	99
99) 1,4-Dichlorobenzene	20.258	146	663007	8.71	ppb(v)	100
100) sec-Butylbenzene	20.337	134	283931	8.73	ppb(v)	92
101) p-Isopropyltoluene	20.576	134	317282	8.21	ppb(v)	98
102) 1,2-Dichlorobenzene	20.729	146	624100	8.61	ppb(v)	99
103) n-Butylbenzene	21.157	134	264120	8.84	ppb(v)	94
104) Hexachloroethane	21.622	201	379195	7.91	ppb(v)	91
105) 1,2,4-Trichlorobenzene	22.968	180	216041	9.97	ppb(v)	98
106) Naphthalene	23.090	128	423924	10.28	ppb(v)	100
107) Hexachlorobutadiene	23.549	225	261268	6.27	ppb(v)	98
109) TVHC as equiv Pentane	5.753	TIC	1557976	10.91	ppb(v)	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5W27912.D
Acq On : 17 Nov 2017 11:08 pm
Operator : thomash
Sample : icc1097-10
Misc : MS22171,v5w1097,,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 20 09:17:29 2017
Quant Method : C:\msdchem\1\methods\m5w1097.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Sat Oct 07 09:10:30 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Manual Integrations
APPROVED
(compounds with "m" flag)

Dana Tryon
11/22/17 11:16

Data Path : C:\msdchem\1\data\
Data File : 5W27913.D
Acq On : 17 Nov 2017 11:55 pm
Operator : thomash
Sample : ic1097-20
Misc : MS22171,v5w1097,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 20 09:33:00 2017
Quant Method : C:\msdchem\1\methods\m5w1097.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Sat Oct 07 09:10:30 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.169	130	326637	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.286	114	1128229	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.761	82	441211	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.169	130	326637	10.00	ppb(v	0.00

System Monitoring Compounds
91) 4-Bromofluorobenzene 17.994 95 622453 10.03 ppb(v 0.00
Spiked Amount 10.000 Range 65 - 128 Recovery = 100.30%

Target Compounds					Qvalue
2) 1,1,1-Trifluoroethane	3.917	69	1280245	18.91	ppb(v# 92
3) Freon 152A	4.009	65	326262m	18.67	ppb(v
4) Chlorodifluoromethane	4.040	67	116828	19.13	ppb(v 99
5) Propene	4.058	41	346981	20.30	ppb(v 97
6) Chlorotrifluoroethene	4.070	116	868236	20.01	ppb(v 98
7) Dichlorodifluoromethane	4.119	85	1295124	18.35	ppb(v 100
8) 1-Chloro-1,1-difluoro...	4.229	65	812058	17.36	ppb(v 97
9) Chloromethane	4.248	50	439730	20.12	ppb(v 99
10) Dichlorotetrafluoroethane	4.315	85	1338873	19.14	ppb(v 96
11) Vinyl Chloride	4.413	62	502873	20.82	ppb(v 99
12) 1,3-Butadiene	4.511	54	339022	20.75	ppb(v 98
13) n-Butane	4.547	58	72996	21.87	ppb(v 93
14) Bromomethane	4.725	94	579896	17.77	ppb(v 99
15) Chloroethane	4.853	64	246313	21.21	ppb(v 99
16) Dichlorofluoromethane	4.927	67	1050976	19.06	ppb(v 100
17) Acetonitrile	5.147	41	287101	21.10	ppb(v 99
18) Freon 123	5.251	83	1321794	19.14	ppb(v 99
19) Freon 123A	5.294	117	1453343	36.34	ppb(v 95
20) Bromoethene	5.135	106	576237	19.97	ppb(v 99
21) Trichlorofluoromethane	5.465	101	1187323	17.15	ppb(v 100
22) Acetone	5.349	58	202486	19.08	ppb(v 92
23) Pentane	5.746	57	132514	19.94	ppb(v 87
24) 1,1-Dichloro-1-fluoro...	5.563	81	1002776	16.13	ppb(v 99
25) Iodomethane	5.942	142	1697386	18.87	ppb(v 93
26) Isopropyl Alcohol	5.563	43	106908	14.83	ppb(v 93
27) 1,1-Dichloroethene	6.003	61	855035	20.48	ppb(v 96
28) Freon 113	6.334	101	1241254	19.38	ppb(v 98
29) Methylene Chloride	6.120	84	518909	17.60	ppb(v 98
30) Carbon Disulfide	6.377	76	1752469	20.41	ppb(v 100
31) Ethanol	4.970	45	126917	18.90	ppb(v 98
32) Acrylonitrile	5.734	53	391587	21.31	ppb(v 97
33) 3-Chloropropene	6.218	76	238747	20.86	ppb(v 87
34) trans-1,2-Dichloroethene	6.964	61	789777	20.62	ppb(v 98
35) tert-Butyl Alcohol	6.077	59	1054305	18.46	ppb(v 96
36) Methyl tert-Butyl Ether	7.227	73	1472723	20.38	ppb(v 98
37) Vinyl Acetate	7.319	43	1118454	18.88	ppb(v 98
38) 1,1-Dichloroethane	7.160	63	992957	19.77	ppb(v 100
39) 2-Butanone	7.576	72	282468	21.89	ppb(v 90
40) Hexane	8.175	57	830785	21.38	ppb(v 93
41) cis-1,2-Dichloroethene	7.998	61	750501	20.46	ppb(v 98
42) Di-isopropyl Ether	8.206	87	477104	20.99	ppb(v 99
43) Ethyl Acetate	8.255	61	186080	22.08	ppb(v 84
44) Methyl Acrylate	8.236	55	912048	20.58	ppb(v 99
45) Chloroform	8.304	83	1148792	18.40	ppb(v 98
46) 2,4-Dimethylpentane	9.117	57	965903	21.54	ppb(v 99
47) Tetrahydrofuran	8.750	72	265908	22.45	ppb(v 95
48) 1,1,1-Trichloroethane	9.350	97	1045977	18.47	ppb(v 99
49) 1,2-Dichloroethane	9.081	62	637044	18.53	ppb(v 98
50) Benzene	9.864	78	1732869	19.31	ppb(v 98
51) Carbon Tetrachloride	10.029	117	1016148	17.75	ppb(v 99
52) Cyclohexane	10.151	56	816161	21.27	ppb(v 98
53) 2,3-Dimethylpentane	10.433	71	377605	21.28	ppb(v 98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27913.D
 Acq On : 17 Nov 2017 11:55 pm
 Operator : thomash
 Sample : ic1097-20
 Misc : MS22171,v5w1097,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 20 09:33:00 2017
 Quant Method : C:\msdchem\1\methods\m5w1097.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

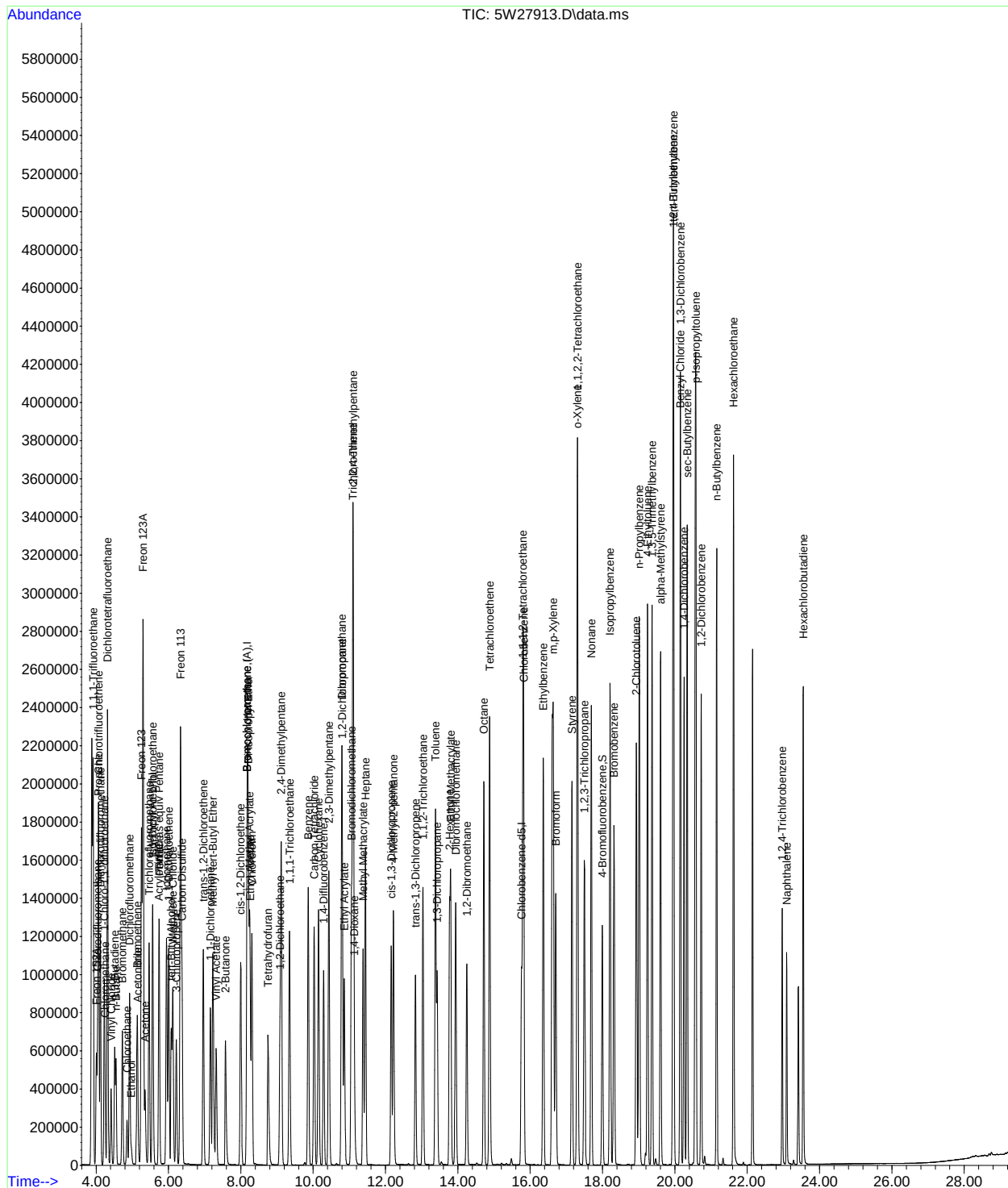
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.106	57	2568885	20.93	ppb(v)	96
56) Heptane	11.448	71	564147	21.44	ppb(v)	98
57) Trichloroethene	11.093	95	780448	18.48	ppb(v)	99
58) 1,2-Dichloropropane	10.806	63	636483	19.93	ppb(v)	94
59) Dibromomethane	10.794	174	761086	16.72	ppb(v)	96
60) Ethyl Acrylate	10.861	55	1253672	22.06	ppb(v)	99
61) Methyl Methacrylate	11.381	69	622429	21.25	ppb(v)	92
62) 1,4-Dioxane	11.136	88	335446	19.91	ppb(v)	92
63) Bromodichloromethane	11.057	83	1169795	18.08	ppb(v)	99
64) cis-1,3-Dichloropropene	12.158	75	950061	19.44	ppb(v)	99
65) 4-Methyl-2-pentanone	12.219	58	522562	23.29	ppb(v)	94
66) trans-1,3-Dichloropropene	12.831	75	795850	18.79	ppb(v)	99
67) Toluene	13.381	91	1880083	18.11	ppb(v)	100
68) 1,1,2-Trichloroethane	13.039	97	677126	17.73	ppb(v)	98
69) 1,3-Dichloropropane	13.424	76	867878	18.01	ppb(v)	95
70) 2-Hexanone	13.773	58	717478	25.14	ppb(v)	89
71) Ethyl Methacrylate	13.804	69	1030014	22.28	ppb(v)	98
72) Dibromochloromethane	13.938	129	1081956	15.72	ppb(v)	99
73) Tetrachloroethene	14.880	166	1013633	16.08	ppb(v)	99
74) 1,2-Dibromoethane	14.250	107	1026309	16.48	ppb(v)	99
75) Octane	14.715	43	1120293	19.93	ppb(v)	98
76) 1,1,1,2-Tetrachloroethane	15.798	131	744839	15.12	ppb(v)	97
78) Chlorobenzene	15.822	112	1381081	17.10	ppb(v)	99
79) Ethylbenzene	16.361	91	2210207	18.73	ppb(v)	99
80) m,p-Xylene	16.636	91	3433481	37.99	ppb(v)	100
81) Styrene	17.156	104	1515539	22.10	ppb(v)	99
82) Nonane	17.688	43	1137017	21.84	ppb(v)	98
83) o-Xylene	17.303	91	1728862	19.04	ppb(v)	99
84) Bromoform	16.709	173	1005993	17.03	ppb(v)	99
85) 1,1,2,2-Tetrachloroethane	17.309	83	1461101	21.02	ppb(v)	99
86) 1,2,3-Trichloropropane	17.499	75	1040052	21.01	ppb(v)	98
87) Isopropylbenzene	18.208	105	2513626	19.85	ppb(v)	99
88) Bromobenzene	18.318	156	842153	18.30	ppb(v)	96
89) 2-Chlorotoluene	18.936	126	668701	19.81	ppb(v)	98
90) n-Propylbenzene	19.016	120	757387	21.29	ppb(v)	98
92) 4-Ethyltoluene	19.242	105	2604973	20.74	ppb(v)	99
93) 1,3,5-Trimethylbenzene	19.371	105	2164867	19.75	ppb(v)	99
94) alpha-Methylstyrene	19.609	118	1123571	22.24	ppb(v)	100
95) tert-Butylbenzene	19.952	134	507993	20.26	ppb(v)	96
96) 1,2,4-Trimethylbenzene	19.964	105	2072030	20.37	ppb(v)	92
97) 1,3-Dichlorobenzene	20.154	146	1398029	20.35	ppb(v)	99
98) Benzyl Chloride	20.148	91	1560553	24.84	ppb(v)	100
99) 1,4-Dichlorobenzene	20.258	146	1359759	19.97	ppb(v)	99
100) sec-Butylbenzene	20.343	134	579544	19.92	ppb(v)	97
101) p-Isopropyltoluene	20.582	134	652240	18.86	ppb(v)	93
102) 1,2-Dichlorobenzene	20.729	146	1267878	19.55	ppb(v)	99
103) n-Butylbenzene	21.157	134	543660	20.35	ppb(v)	97
104) Hexachloroethane	21.622	201	750029	17.49	ppb(v)	91
105) 1,2,4-Trichlorobenzene	22.968	180	467669	24.14	ppb(v)	97
106) Naphthalene	23.090	128	936200	25.39	ppb(v)	100
107) Hexachlorobutadiene	23.549	225	530607	14.25	ppb(v)	98
109) TVHC as equiv Pentane	5.740	TIC	2997254	20.79	ppb(v)	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 5W27913.D
Acq On : 17 Nov 2017 11:55 pm
Operator : thomash
Sample : ic1097-20
Misc : MS22171,v5w1097,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 20 09:33:00 2017
Quant Method : C:\msdchem\1\methods\m5w1097.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Sat Oct 07 09:10:30 2017
Response via : Initial Calibration



Manual Integration Approval Summary

Sample Number:

V5W1097-IC1097

Method:

TO-15

Lab FileID:

5W27913.D

Analyst approved:

11/20/17 11:37 Thomas Hilbig

Injection Time:

11/17/17 23:55

Supervisor approved:

11/22/17 11:16 Dana Tryon

Parameter	CAS	Sig#	R.T. (min.)	Reason
Freon 152A	75-37-6		4.01	Missed peak

7.7.18.1
7

Quantitation Report (QT Reviewed)

Manual Integrations
APPROVED
(compounds with "m" flag)

Dana Tryon
11/22/17 11:16

Data Path : C:\msdchem\1\data\
Data File : 5W27915.D
Acq On : 18 Nov 2017 1:32 am
Operator : thomash
Sample : ic1097-40
Misc : MS22171,v5w1097,,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 20 10:39:28 2017
Quant Method : C:\msdchem\1\methods\m5w1097.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Sat Oct 07 09:10:30 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.175	130	331708	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.292	114	1118824	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.761	82	416722	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.175	130	331708	10.00	ppb(v	0.00

System Monitoring Compounds
91) 4-Bromofluorobenzene 18.000 95 507174 8.65 ppb(v 0.00
Spiked Amount 10.000 Range 65 - 128 Recovery = 86.50%

Target Compounds					Qvalue
2) 1,1,1-Trifluoroethane	3.911	69	1973622	28.71	ppb(v 95
3) Freon 152A	4.003	65	640324m	36.08	ppb(v
4) Chlorodifluoromethane	4.039	67	226753	36.57	ppb(v 100
5) Propene	4.058	41	655581	37.78	ppb(v 96
6) Chlorotrifluoroethene	4.064	116	1694901	38.47	ppb(v 99
7) Dichlorodifluoromethane	4.119	85	2490188	34.75	ppb(v 99
8) 1-Chloro-1,1-difluoro...	4.223	65	1541756	32.45	ppb(v 98
9) Chloromethane	4.241	50	836514	37.70	ppb(v 99
10) Dichlorotetrafluoroethane	4.315	85	2483089	34.95	ppb(v 99
11) Vinyl Chloride	4.407	62	969914	39.54	ppb(v 99
12) 1,3-Butadiene	4.511	54	652112	39.29	ppb(v 99
13) n-Butane	4.547	58	140189	41.36	ppb(v 92
14) Bromomethane	4.725	94	1112208	33.56	ppb(v 99
15) Chloroethane	4.853	64	475094	40.28	ppb(v 99
16) Dichlorofluoromethane	4.927	67	2000872	35.73	ppb(v 100
17) Acetonitrile	5.153	41	549359	39.75	ppb(v 98
18) Freon 123	5.251	83	2409898	34.36	ppb(v 100
19) Freon 123A	5.294	117	2608011	64.22	ppb(v 98
20) Bromoethene	5.128	106	1101273	37.58	ppb(v 99
21) Trichlorofluoromethane	5.465	101	2248073	31.98	ppb(v 99
22) Acetone	5.349	58	387399	35.94	ppb(v 93
23) Pentane	5.746	57	254226	37.67	ppb(v 85
24) 1,1-Dichloro-1-fluoro...	5.563	81	1969903	31.21	ppb(v 98
25) Iodomethane	5.942	142	3240828	35.48	ppb(v 95
26) Isopropyl Alcohol	5.575	43	222095	30.34	ppb(v 97
27) 1,1-Dichloroethene	6.003	61	1607302	37.91	ppb(v 94
28) Freon 113	6.334	101	2382778	36.64	ppb(v 99
29) Methylene Chloride	6.119	84	1001072	33.44	ppb(v 97
30) Carbon Disulfide	6.376	76	3375868	38.71	ppb(v 100
31) Ethanol	4.975	45	245492	35.99	ppb(v 97
32) Acrylonitrile	5.740	53	751390	40.26	ppb(v 97
33) 3-Chloropropene	6.217	76	462811	39.81	ppb(v 85
34) trans-1,2-Dichloroethene	6.964	61	1541238	39.62	ppb(v 98
35) tert-Butyl Alcohol	6.083	59	2017508	34.78	ppb(v 96
36) Methyl tert-Butyl Ether	7.227	73	2849950	38.83	ppb(v 97
37) Vinyl Acetate	7.319	43	2199714	36.57	ppb(v 98
38) 1,1-Dichloroethane	7.166	63	1938530	38.01	ppb(v 99
39) 2-Butanone	7.575	72	550242	41.99	ppb(v 89
40) Hexane	8.181	57	1600894	40.56	ppb(v 96
41) cis-1,2-Dichloroethene	8.004	61	1444796	38.78	ppb(v 97
42) Di-isopropyl Ether	8.206	87	944606	40.92	ppb(v 95
43) Ethyl Acetate	8.261	61	357007	41.71	ppb(v 83
44) Methyl Acrylate	8.242	55	1752773	38.95	ppb(v 99
45) Chloroform	8.310	83	2197105	34.65	ppb(v 98
46) 2,4-Dimethylpentane	9.123	57	1871079	41.09	ppb(v 99
47) Tetrahydrofuran	8.750	72	514372	42.76	ppb(v 94
48) 1,1,1-Trichloroethane	9.350	97	2016019	35.06	ppb(v 99
49) 1,2-Dichloroethane	9.087	62	1213807	34.77	ppb(v# 97
50) Benzene	9.870	78	3325280	36.49	ppb(v 98
51) Carbon Tetrachloride	10.029	117	2028874	34.90	ppb(v 99
52) Cyclohexane	10.151	56	1575669	40.44	ppb(v 98
53) 2,3-Dimethylpentane	10.439	71	741140	41.12	ppb(v 94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27915.D
 Acq On : 18 Nov 2017 1:32 am
 Operator : thomash
 Sample : ic1097-40
 Misc : MS22171,v5w1097,,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 20 10:39:28 2017
 Quant Method : C:\msdchem\1\methods\m5w1097.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Sat Oct 07 09:10:30 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.112	57	4706747	38.66	ppb(v)	96
56) Heptane	11.454	71	1079142	41.35	ppb(v)	99
57) Trichloroethene	11.099	95	1479764	35.34	ppb(v)	99
58) 1,2-Dichloropropane	10.812	63	1179465	37.25	ppb(v)	94
59) Dibromomethane	10.793	174	1450255	32.13	ppb(v)	94
60) Ethyl Acrylate	10.867	55	2311939	41.02	ppb(v)	99
61) Methyl Methacrylate	11.387	69	1160155	39.94	ppb(v)	91
62) 1,4-Dioxane	11.142	88	576275	34.49	ppb(v)	93
63) Bromodichloromethane	11.063	83	2222545	34.64	ppb(v)	99
64) cis-1,3-Dichloropropene	12.164	75	1786422	36.87	ppb(v)	100
65) 4-Methyl-2-pentanone	12.225	58	1005156	45.17	ppb(v)	91
66) trans-1,3-Dichloropropene	12.831	75	1470139	35.01	ppb(v)	99
67) Toluene	13.387	91	3420986	33.22	ppb(v)	99
68) 1,1,2-Trichloroethane	13.039	97	1244656	32.86	ppb(v)	98
69) 1,3-Dichloropropane	13.430	76	1557379	32.59	ppb(v)	95
70) 2-Hexanone	13.779	58	1400169	49.48	ppb(v)	87
71) Ethyl Methacrylate	13.809	69	1925319	42.00	ppb(v)	99
72) Dibromochloromethane	13.944	129	1923766	28.18	ppb(v)	99
73) Tetrachloroethene	14.880	166	1921600	30.75	ppb(v)	98
74) 1,2-Dibromoethane	14.256	107	1813788	29.37	ppb(v)	99
75) Octane	14.721	43	2044535	36.68	ppb(v)	95
76) 1,1,1,2-Tetrachloroethane	15.804	131	1289576	26.40	ppb(v)	98
78) Chlorobenzene	15.822	112	2333992	30.60	ppb(v)	99
79) Ethylbenzene	16.367	91	3635741	32.62	ppb(v)	98
80) m,p-Xylene	16.642	91	5564095	65.19	ppb(v)	99
81) Styrene	17.156	104	2505695	38.68	ppb(v)	99
82) Nonane	17.694	43	1912830	38.90	ppb(v)	96
83) o-Xylene	17.309	91	2711735	31.61	ppb(v)	98
84) Bromoform	16.715	173	1638210	29.36	ppb(v)	99
85) 1,1,2,2-Tetrachloroethane	17.315	83	2569390	39.13	ppb(v)	100
86) 1,2,3-Trichloropropane	17.505	75	1743234	37.28	ppb(v)	98
87) Isopropylbenzene	18.214	105	4042524	33.80	ppb(v)	99
88) Bromobenzene	18.324	156	1338682	30.79	ppb(v)	97
89) 2-Chlorotoluene	18.942	126	1082316	33.94	ppb(v)	96
90) n-Propylbenzene	19.016	120	1277496	38.03	ppb(v)	99
92) 4-Ethyltoluene	19.248	105	4479267	37.76	ppb(v)	99
93) 1,3,5-Trimethylbenzene	19.377	105	3819118	36.89	ppb(v)	98
94) alpha-Methylstyrene	19.609	118	2099028	43.99	ppb(v)	99
95) tert-Butylbenzene	19.958	134	927858	39.17	ppb(v)	91
96) 1,2,4-Trimethylbenzene	19.970	105	3709305	38.61	ppb(v)	94
97) 1,3-Dichlorobenzene	20.166	146	2577593	39.72	ppb(v)	98
98) Benzyl Chloride	20.154	91	2966705	49.99	ppb(v)	98
99) 1,4-Dichlorobenzene	20.264	146	2559544	39.81	ppb(v)	99
100) sec-Butylbenzene	20.349	134	1107018	40.28	ppb(v)	95
101) p-Isopropyltoluene	20.588	134	1256268	38.47	ppb(v)	88
102) 1,2-Dichlorobenzene	20.735	146	2463814	40.22	ppb(v)	99
103) n-Butylbenzene	21.163	134	1105536	43.82	ppb(v)	95
104) Hexachloroethane	21.628	201	1383855	34.16	ppb(v)	100
106) Naphthalene	23.096	128	2004653	57.56	ppb(v)	100
107) Hexachlorobutadiene	23.549	225	1124432	31.97	ppb(v)	98
109) TVHC as equiv Pentane	5.740	TIC	5726554	39.11	ppb(v)	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed


```
Data Path : C:\msdchem\1\data\  
Data File : 5W27915.D  
Acq On : 18 Nov 2017 1:32 am  
Operator : thomash  
Sample : ic1097-40  
Misc : MS22171,v5w1097,,,,,1  
ALS Vial : 5 Sample Multiplier: 1
```

[illegible]

7.7.19

Manual Integration Approval Summary

Sample Number: V5W1097-IC1097

Method: TO-15

Lab FileID: 5W27915.D

Analyst approved: 11/20/17 11:37 Thomas Hilbig

Injection Time: 11/18/17 01:32

Supervisor approved: 11/22/17 11:16 Dana Tryon

Parameter	CAS	Sig#	R.T. (min.)	Reason
Freon 152A	75-37-6		4.00	Missed peak

7.7.19.1
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27917.D
 Acq On : 20 Nov 2017 10:22 am
 Operator : thomash
 Sample : icv1097-10
 Misc : MS22171,v5w1097,,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 20 11:27:34 2017
 Quant Method : C:\msdchem\1\methods\m5w1097.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Mon Nov 20 10:48:12 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.157	130	323022	10.00	ppb(v	-0.02
54) 1,4-Difluorobenzene	10.280	114	1124820	10.00	ppb(v	-0.01
77) Chlorobenzene-d5	15.755	82	482626	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.157	130	323022	10.00	ppb(v	-0.02

System Monitoring Compounds

91) 4-Bromofluorobenzene	17.994	95	709477	11.09	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	110.90%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) Freon 152A	3.991	65	176555	10.50	ppb(v#	83
4) Chlorodifluoromethane	4.027	67	63440	10.53	ppb(v	97
5) Propene	4.046	41	185180	9.71	ppb(v	96
6) Chlorotrifluoroethene	4.052	116	458426	10.38	ppb(v	99
7) Dichlorodifluoromethane	4.107	85	718090	10.46	ppb(v	100
8) 1-Chloro-1,1-difluoro...	4.211	65	436111	9.98	ppb(v	97
9) Chloromethane	4.229	50	242971	9.92	ppb(v	99
10) Dichlorotetrafluoroethane	4.303	85	787038	11.01	ppb(v	93
11) Vinyl Chloride	4.394	62	270524	10.34	ppb(v	100
12) 1,3-Butadiene	4.498	54	176172	9.18	ppb(v	98
13) n-Butane	4.535	58	39970	8.85	ppb(v	98
14) Bromomethane	4.713	94	322107	9.91	ppb(v	99
15) Chloroethane	4.841	64	129570	9.62	ppb(v	98
16) Dichlorofluoromethane	4.914	67	580712	10.01	ppb(v	100
17) Acetonitrile	5.135	41	156030	9.84	ppb(v	99
18) Freon 123	5.239	83	726529	9.55	ppb(v	100
19) Freon 123A	5.282	117	779396	19.79	ppb(v	95
20) Bromoethene	5.116	106	304268	9.91	ppb(v	99
21) Trichlorofluoromethane	5.447	101	658190	10.37	ppb(v	99
22) Acetone	5.337	58	108709	8.78	ppb(v	94
23) Pentane	5.734	57	74106	9.36	ppb(v	92
25) Iodomethane	5.930	142	900739	10.12	ppb(v	92
26) Isopropyl Alcohol	5.545	43	78932	10.37	ppb(v	66
27) 1,1-Dichloroethene	5.991	61	439890	10.07	ppb(v	95
28) Freon 113	6.322	101	638067	9.85	ppb(v	97
29) Methylene Chloride	6.107	84	266091	8.76	ppb(v	98
30) Carbon Disulfide	6.364	76	874140	9.76	ppb(v	100
31) Ethanol	4.957	45	86947	11.96	ppb(v	96
32) Acrylonitrile	5.722	53	220336	10.72	ppb(v	98
33) 3-Chloropropene	6.205	76	130294	10.93	ppb(v	87
34) trans-1,2-Dichloroethene	6.952	61	421072	10.49	ppb(v	97
35) tert-Butyl Alcohol	6.058	59	530988	9.77	ppb(v	96
36) Methyl tert-Butyl Ether	7.221	73	797044	10.32	ppb(v	98
37) Vinyl Acetate	7.306	43	604131	9.83	ppb(v	98
38) 1,1-Dichloroethane	7.147	63	531400	10.19	ppb(v	99
39) 2-Butanone	7.563	72	147718	10.47	ppb(v	96
40) Hexane	8.169	57	442996	9.93	ppb(v	98
41) cis-1,2-Dichloroethene	7.986	61	389112	10.02	ppb(v	98
42) Di-isopropyl Ether	8.194	87	260866	10.84	ppb(v	97
43) Ethyl Acetate	8.243	61	100052	11.07	ppb(v	89
44) Methyl Acrylate	8.230	55	487349	9.69	ppb(v	99
45) Chloroform	8.291	83	616501	10.04	ppb(v	99
46) 2,4-Dimethylpentane	9.111	57	524201	10.14	ppb(v	99
47) Tetrahydrofuran	8.750	72	148631	11.22	ppb(v	92
48) 1,1,1-Trichloroethane	9.338	97	581283	10.61	ppb(v	99
49) 1,2-Dichloroethane	9.075	62	342285	10.19	ppb(v	97
50) Benzene	9.858	78	913334	9.79	ppb(v	98
51) Carbon Tetrachloride	10.023	117	546233	11.07	ppb(v	99
52) Cyclohexane	10.145	56	437058	10.17	ppb(v	98
53) 2,3-Dimethylpentane	10.427	71	201114	10.07	ppb(v	97
55) 2,2,4-Trimethylpentane	11.099	57	1418592	10.59	ppb(v	96
56) Heptane	11.442	71	300793	10.40	ppb(v	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27917.D
 Acq On : 20 Nov 2017 10:22 am
 Operator : thomash
 Sample : icv1097-10
 Misc : MS22171,v5w1097,,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 20 11:27:34 2017
 Quant Method : C:\msdchem\1\methods\m5w1097.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Mon Nov 20 10:48:12 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
57) Trichloroethene	11.087	95	424296	10.18	ppb(v)	99
58) 1,2-Dichloropropane	10.800	63	334790	10.07	ppb(v)	94
59) Dibromomethane	10.781	174	407663	9.71	ppb(v)	93
60) Ethyl Acrylate	10.855	55	653275	10.35	ppb(v)	100
61) Methyl Methacrylate	11.375	69	330160	10.49	ppb(v)	94
62) 1,4-Dioxane	11.130	88	221463	12.98	ppb(v)	97
63) Bromodichloromethane	11.044	83	617185	10.07	ppb(v)	99
64) cis-1,3-Dichloropropene	12.152	75	519459	10.42	ppb(v)	99
65) 4-Methyl-2-pentanone	12.213	58	274511	11.08	ppb(v)	95
66) trans-1,3-Dichloropropene	12.825	75	430149	10.09	ppb(v)	99
67) Toluene	13.375	91	1039966	9.63	ppb(v)	100
68) 1,1,2-Trichloroethane	13.033	97	376464	9.94	ppb(v)	97
69) 1,3-Dichloropropane	13.424	76	484358	10.03	ppb(v)	95
70) 2-Hexanone	13.767	58	371164	11.97	ppb(v)	92
71) Ethyl Methacrylate	13.797	69	545891	10.83	ppb(v)	98
72) Dibromochloromethane	13.932	129	618566	10.21	ppb(v)	100
73) Tetrachloroethene	14.874	166	541110	9.64	ppb(v)	98
74) 1,2-Dibromoethane	14.244	107	602641	10.30	ppb(v)	100
75) Octane	14.715	43	640789	9.81	ppb(v)	98
76) 1,1,1,2-Tetrachloroethane	15.798	131	463797	10.50	ppb(v)	97
78) Chlorobenzene	15.816	112	855151	9.89	ppb(v)	98
79) Ethylbenzene	16.361	91	1389438	10.20	ppb(v)	99
80) m,p-Xylene	16.630	91	2108244	19.49	ppb(v)	99
81) Styrene	17.150	104	826537	10.68	ppb(v)	99
82) Nonane	17.688	43	614732	9.87	ppb(v)	98
83) o-Xylene	17.303	91	1074963	10.20	ppb(v)	99
84) Bromoform	16.703	173	650084	11.63	ppb(v)	99
85) 1,1,2,2-Tetrachloroethane	17.309	83	773893	9.98	ppb(v)	99
86) 1,2,3-Trichloropropane	17.499	75	567741	10.28	ppb(v)	98
87) Isopropylbenzene	18.208	105	1542311	11.09	ppb(v)	99
88) Bromobenzene	18.312	156	492975	10.62	ppb(v)	94
89) 2-Chlorotoluene	18.936	126	387217	11.00	ppb(v)	98
90) n-Propylbenzene	19.016	120	402672	10.48	ppb(v)	97
92) 4-Ethyltoluene	19.242	105	1388710	10.15	ppb(v)	99
93) 1,3,5-Trimethylbenzene	19.371	105	1155562	9.87	ppb(v)	99
94) alpha-Methylstyrene	19.603	118	571490	10.27	ppb(v)	100
95) tert-Butylbenzene	19.946	134	266389	9.96	ppb(v)	95
96) 1,2,4-Trimethylbenzene	19.964	105	1092321	9.88	ppb(v)	99
97) 1,3-Dichlorobenzene	20.154	146	707165	10.09	ppb(v)	99
98) Benzyl Chloride	20.148	91	741619	10.63	ppb(v)	99
99) 1,4-Dichlorobenzene	20.258	146	678372	9.68	ppb(v)	99
100) sec-Butylbenzene	20.343	134	315678	10.33	ppb(v)	98
101) p-Isopropyltoluene	20.576	134	337566	9.72	ppb(v)	99
102) 1,2-Dichlorobenzene	20.729	146	633642	9.64	ppb(v)	98
103) n-Butylbenzene	21.157	134	286250	10.32	ppb(v)	93
104) Hexachloroethane	21.622	201	411777	10.88	ppb(v)	92
105) 1,2,4-Trichlorobenzene	22.968	180	212966	11.40	ppb(v)	99
106) Naphthalene	23.096	128	386685	10.07	ppb(v)	99
107) Hexachlorobutadiene	23.549	225	274718	8.77	ppb(v)	99
109) TVHC as equiv Pentane	5.728	TIC	1704407	10.87	ppb(v)	100

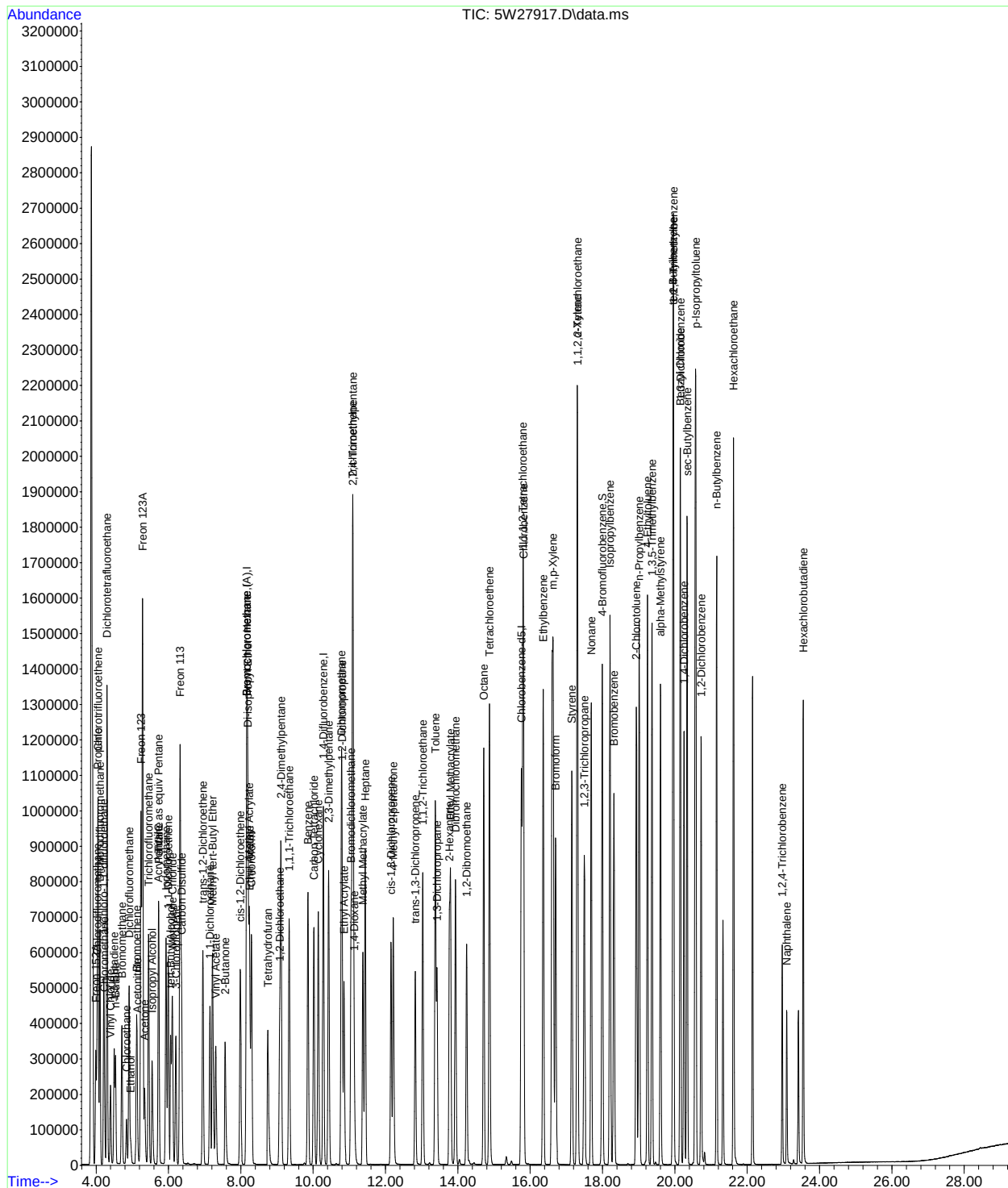
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.7.20

7

Data Path : C:\msdchem\1\data\
Data File : 5W27917.D
Acq On : 20 Nov 2017 10:22 am
Operator : thomash
Sample : icv1097-10
Misc : MS22171,v5w1097,,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 20 11:27:34 2017
Quant Method : C:\msdchem\1\methods\m5w1097.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Mon Nov 20 10:48:12 2017
Response via : Initial Calibration



7.7.20 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27978.D
 Acq On : 22 Nov 2017 1:06 pm
 Operator : thomash
 Sample : cc1097-10
 Misc : MS22061,v5w1099,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 22 14:44:24 2017
 Quant Method : C:\msdchem\1\methods\m5w1097.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Mon Nov 20 10:49:33 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.163	130	298634	10.00	ppb(v	-0.01
54) 1,4-Difluorobenzene	10.286	114	1042119	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.761	82	447005	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.163	130	298634	10.00	ppb(v	-0.01

System Monitoring Compounds

91) 4-Bromofluorobenzene	17.994	95	645004	10.89	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	108.90%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) 1,1,1-Trifluoroethane	3.911	69	569422	8.57	ppb(v#	90
3) Freon 152A	3.997	65	143644	9.24	ppb(v	85
4) Chlorodifluoromethane	4.033	67	52843	9.49	ppb(v	99
5) Propene	4.052	41	150985	8.56	ppb(v	97
6) Chlorotrifluoroethene	4.058	116	382754	9.37	ppb(v	99
7) Dichlorodifluoromethane	4.113	85	595928	9.39	ppb(v	100
8) 1-Chloro-1,1-difluoro...	4.223	65	389041	9.63	ppb(v	98
9) Chloromethane	4.235	50	205189	9.07	ppb(v	99
10) Dichlorotetrafluoroethane	4.309	85	632176	9.57	ppb(v	93
11) Vinyl Chloride	4.407	62	234135	9.68	ppb(v	100
12) 1,3-Butadiene	4.504	54	148637	8.38	ppb(v	99
13) n-Butane	4.541	58	33249	7.97	ppb(v	96
14) Bromomethane	4.719	94	265879	8.85	ppb(v	99
15) Chloroethane	4.847	64	109621	8.81	ppb(v	99
16) Dichlorofluoromethane	4.920	67	488258	9.11	ppb(v	100
17) Acetonitrile	5.141	41	130238	8.88	ppb(v	99
18) Freon 123	5.245	83	617179	8.78	ppb(v	100
19) Freon 123A	5.294	117	676517	18.58	ppb(v	94
20) Bromoethene	5.128	106	258689	9.12	ppb(v	100
21) Trichlorofluoromethane	5.459	101	582360	9.93	ppb(v	100
22) Acetone	5.349	58	92946	8.12	ppb(v	100
23) Pentane	5.740	57	60660	8.29	ppb(v	90
24) 1,1-Dichloro-1-fluoro...	5.557	81	524030	9.69	ppb(v	98
25) Iodomethane	5.942	142	758196	9.21	ppb(v	93
26) Isopropyl Alcohol	5.557	43	62968	8.95	ppb(v	99
27) 1,1-Dichloroethene	6.003	61	392669	9.73	ppb(v	96
28) Freon 113	6.328	101	576950	9.64	ppb(v	96
29) Methylene Chloride	6.113	84	239788	8.54	ppb(v	99
30) Carbon Disulfide	6.370	76	812508	9.81	ppb(v	99
31) Ethanol	4.963	45	57806	8.60	ppb(v	97
32) Acrylonitrile	5.734	53	180400	9.49	ppb(v	97
33) 3-Chloropropene	6.211	76	105651	9.59	ppb(v	87
34) trans-1,2-Dichloroethene	6.958	61	356926	9.62	ppb(v	99
35) tert-Butyl Alcohol	6.064	59	463667	9.23	ppb(v	97
36) Methyl tert-Butyl Ether	7.227	73	652917	9.15	ppb(v	99
37) Vinyl Acetate	7.313	43	506306	8.91	ppb(v	99
38) 1,1-Dichloroethane	7.153	63	459372	9.52	ppb(v	100
39) 2-Butanone	7.569	72	125790	9.65	ppb(v	95
40) Hexane	8.175	57	373372	9.05	ppb(v	97
41) cis-1,2-Dichloroethene	7.992	61	334173	9.31	ppb(v	99
42) Di-isopropyl Ether	8.200	87	212439	9.55	ppb(v	93
43) Ethyl Acetate	8.248	61	85875	10.28	ppb(v	90
44) Methyl Acrylate	8.236	55	418872	9.01	ppb(v	99
45) Chloroform	8.297	83	536894	9.46	ppb(v	98
46) 2,4-Dimethylpentane	9.117	57	434344	9.09	ppb(v	99
47) Tetrahydrofuran	8.756	72	117525	9.60	ppb(v	94
48) 1,1,1-Trichloroethane	9.344	97	474681	9.37	ppb(v	99
49) 1,2-Dichloroethane	9.081	62	298448	9.61	ppb(v	98
50) Benzene	9.864	78	796193	9.23	ppb(v	98
51) Carbon Tetrachloride	10.029	117	474900	10.41	ppb(v	100
52) Cyclohexane	10.151	56	362977	9.14	ppb(v	98
53) 2,3-Dimethylpentane	10.433	71	169798	9.20	ppb(v	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W27978.D
 Acq On : 22 Nov 2017 1:06 pm
 Operator : thomash
 Sample : cc1097-10
 Misc : MS22061,v5w1099,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

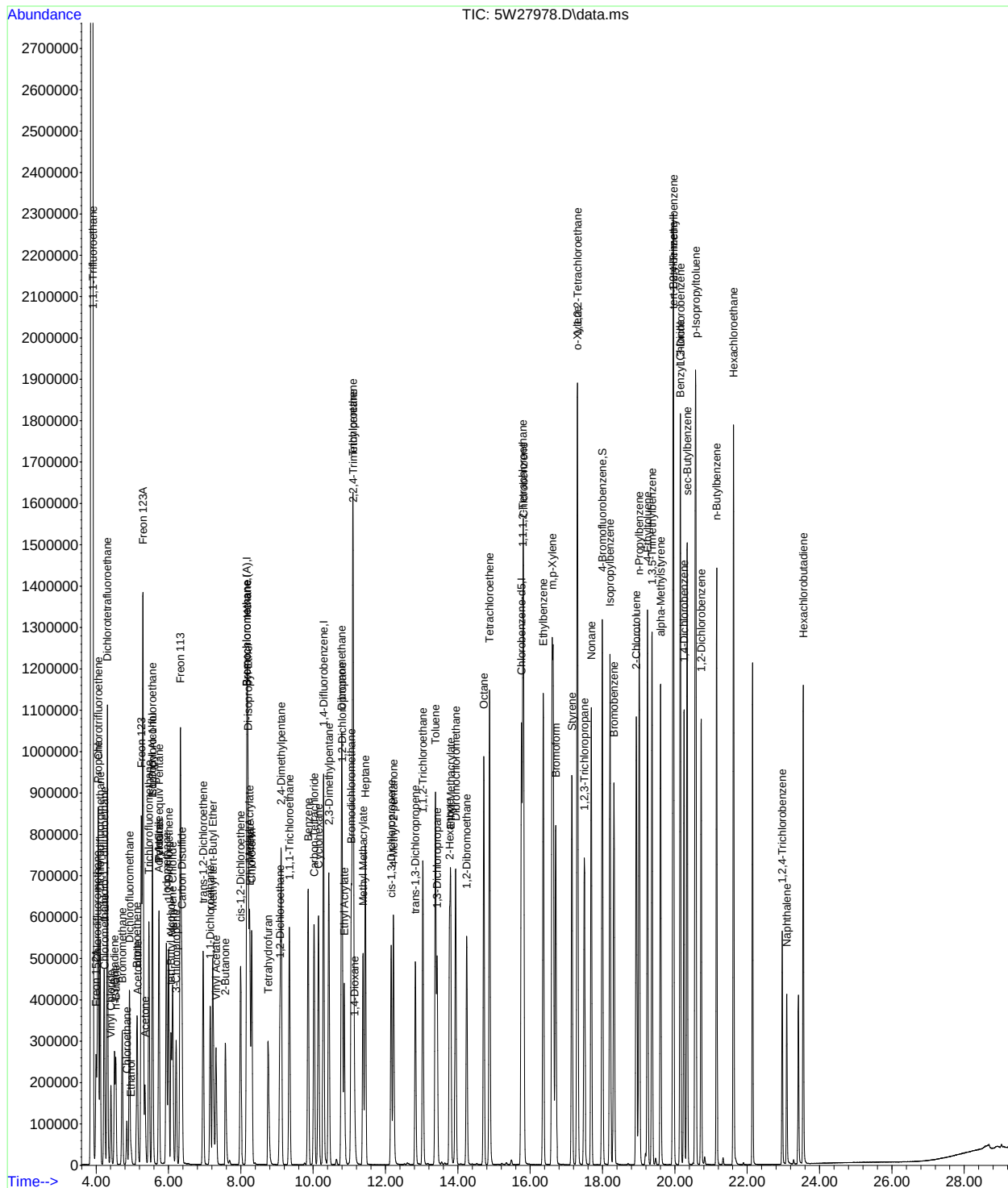
Quant Time: Nov 22 14:44:24 2017
 Quant Method : C:\msdchem\1\methods\m5w1097.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Mon Nov 20 10:49:33 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.105	57	1198106	9.65	ppb(v)	96
56) Heptane	11.442	71	257166	9.60	ppb(v)	98
57) Trichloroethene	11.093	95	368833	9.55	ppb(v)	97
58) 1,2-Dichloropropane	10.806	63	294893	9.57	ppb(v)	94
59) Dibromomethane	10.787	174	354634	9.12	ppb(v)	92
60) Ethyl Acrylate	10.861	55	557801	9.54	ppb(v)	99
61) Methyl Methacrylate	11.381	69	285277	9.78	ppb(v)	91
62) 1,4-Dioxane	11.142	88	156936	9.93	ppb(v)	95
63) Bromodichloromethane	11.050	83	556926	9.81	ppb(v)	99
64) cis-1,3-Dichloropropene	12.158	75	435852	9.43	ppb(v)	99
65) 4-Methyl-2-pentanone	12.219	58	232238	10.11	ppb(v)	95
66) trans-1,3-Dichloropropene	12.825	75	387164	9.80	ppb(v)	99
67) Toluene	13.381	91	901405	9.01	ppb(v)	99
68) 1,1,2-Trichloroethane	13.033	97	335153	9.55	ppb(v)	97
69) 1,3-Dichloropropane	13.424	76	435154	9.73	ppb(v)	94
70) 2-Hexanone	13.773	58	314407	10.94	ppb(v)	92
71) Ethyl Methacrylate	13.803	69	461064	9.88	ppb(v)	98
72) Dibromochloromethane	13.938	129	554364	9.87	ppb(v)	100
73) Tetrachloroethene	14.874	166	480888	9.25	ppb(v)	98
74) 1,2-Dibromoethane	14.244	107	529607	9.77	ppb(v)	100
75) Octane	14.715	43	526213	8.69	ppb(v)	99
76) 1,1,1,2-Tetrachloroethane	15.798	131	411288	10.05	ppb(v)	96
78) Chlorobenzene	15.816	112	743982	9.29	ppb(v)	98
79) Ethylbenzene	16.361	91	1166224	9.25	ppb(v)	99
80) m,p-Xylene	16.611	91	1797228	17.94	ppb(v)	99
81) Styrene	17.156	104	695808	9.70	ppb(v)	99
82) Nonane	17.688	43	511096	8.86	ppb(v)	98
83) o-Xylene	17.303	91	908757	9.31	ppb(v)	99
84) Bromoform	16.709	173	576816	11.14	ppb(v)	99
85) 1,1,2,2-Tetrachloroethane	17.309	83	679624	9.47	ppb(v)	99
86) 1,2,3-Trichloropropane	17.498	75	485712	9.49	ppb(v)	97
87) Isopropylbenzene	18.208	105	1209548	9.39	ppb(v)	100
88) Bromobenzene	18.318	156	431209	10.03	ppb(v)	96
89) 2-Chlorotoluene	18.936	126	323549	9.92	ppb(v)	98
90) n-Propylbenzene	19.016	120	343305	9.65	ppb(v)	95
92) 4-Ethyltoluene	19.242	105	1161320	9.16	ppb(v)	100
93) 1,3,5-Trimethylbenzene	19.371	105	962562	8.87	ppb(v)	99
94) alpha-Methylstyrene	19.609	118	485141	9.41	ppb(v)	100
95) tert-Butylbenzene	19.952	134	222812	8.99	ppb(v)	98
96) 1,2,4-Trimethylbenzene	19.964	105	926011	9.04	ppb(v)	99
97) 1,3-Dichlorobenzene	20.154	146	614102	9.46	ppb(v)	100
98) Benzyl Chloride	20.147	91	667853	10.34	ppb(v)	100
99) 1,4-Dichlorobenzene	20.258	146	597050	9.20	ppb(v)	100
100) sec-Butylbenzene	20.343	134	257759	9.10	ppb(v)	94
101) p-Isopropyltoluene	20.576	134	288434	8.97	ppb(v)	98
102) 1,2-Dichlorobenzene	20.729	146	563162	9.25	ppb(v)	99
103) n-Butylbenzene	21.157	134	235912	9.18	ppb(v)	91
104) Hexachloroethane	21.622	201	351933	10.04	ppb(v)	90
105) 1,2,4-Trichlorobenzene	22.968	180	192150	11.11	ppb(v)	98
106) Naphthalene	23.096	128	361773	10.17	ppb(v)	100
107) Hexachlorobutadiene	23.549	225	239221	8.25	ppb(v)	98
109) TVHC as equiv Pentane	5.740	TIC	1404257	9.69	ppb(v)	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Data Path : C:\msdchem\1\data\  
Data File : 5W27978.D  
Acq On : 22 Nov 2017 1:06 pm  
Operator : thomash  
Sample : cc1097-10  
Misc : MS22061,v5w1099,,,,,1  
ALS Vial : 2 Sample Multiplier: 1
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Quant Time: Nov 22 14:44:24 2017
Quant Method : C:\msdchem\1\methods\m5w1097.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Mon Nov 20 10:49:33 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W28001.D
 Acq On : 23 Nov 2017 7:09 am
 Operator : thomash
 Sample : ecc1097-10
 Misc : MS22061,v5w1099,,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 27 08:24:08 2017
 Quant Method : C:\msdchem\1\methods\m5w1097.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Mon Nov 20 10:49:33 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.163	130	289531	10.00	ppb(v	#-0.01
54) 1,4-Difluorobenzene	10.279	114	1014714	10.00	ppb(v	-0.01
77) Chlorobenzene-d5	15.755	82	465503	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.163	130	289531	10.00	ppb(v	#-0.01

System Monitoring Compounds						
91) 4-Bromofluorobenzene	17.994	95	652009	10.57	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	105.70%

Target Compounds					Qvalue	
2) 1,1,1-Trifluoroethane	3.905	69	602742	9.36	ppb(v#	90
3) Freon 152A	3.997	65	147637	9.80	ppb(v	87
4) Chlorodifluoromethane	4.033	67	56233	10.42	ppb(v	98
5) Propene	4.052	41	165269	9.67	ppb(v	97
6) Chlorotrifluoroethene	4.058	116	368856	9.32	ppb(v	98
7) Dichlorodifluoromethane	4.107	85	609448	9.91	ppb(v	99
8) 1-Chloro-1,1-difluoro...	4.217	65	410198	10.48	ppb(v	98
9) Chloromethane	4.235	50	221732	10.10	ppb(v	99
10) Dichlorotetrafluoroethane	4.309	85	655406	10.23	ppb(v	93
11) Vinyl Chloride	4.400	62	249255	10.63	ppb(v	100
12) 1,3-Butadiene	4.504	54	168406	9.79	ppb(v	98
13) n-Butane	4.541	58	37131	9.18	ppb(v	97
14) Bromomethane	4.718	94	286220	9.82	ppb(v	99
15) Chloroethane	4.847	64	124384	10.31	ppb(v	99
16) Dichlorofluoromethane	4.920	67	543812	10.46	ppb(v	100
17) Acetonitrile	5.134	41	157298	11.07	ppb(v	99
18) Freon 123	5.245	83	679973	9.97	ppb(v	99
19) Freon 123A	5.287	117	720017	20.40	ppb(v	87
20) Bromoethene	5.122	106	271794	9.88	ppb(v	100
21) Trichlorofluoromethane	5.459	101	622135	10.94	ppb(v	99
22) Acetone	5.342	58	106141	9.56	ppb(v	99
23) Pentane	5.734	57	62089	8.75	ppb(v	90
24) 1,1-Dichloro-1-fluoro...	5.557	81	529894	10.11	ppb(v	98
25) Iodomethane	5.936	142	694135	8.70	ppb(v	97
26) Isopropyl Alcohol	5.550	43	65363	9.58	ppb(v	93
27) 1,1-Dichloroethene	5.997	61	396890	10.14	ppb(v	99
28) Freon 113	6.327	101	569040	9.80	ppb(v	93
29) Methylene Chloride	6.113	84	237762	8.74	ppb(v	95
30) Carbon Disulfide	6.364	76	817163	10.18	ppb(v	99
31) Ethanol	4.963	45	67709	10.40	ppb(v	98
32) Acrylonitrile	5.728	53	187060	10.15	ppb(v	98
33) 3-Chloropropene	6.211	76	104204	9.76	ppb(v	89
34) trans-1,2-Dichloroethene	6.958	61	362651	10.08	ppb(v	97
35) tert-Butyl Alcohol	6.064	59	464409	9.53	ppb(v	96
36) Methyl tert-Butyl Ether	7.221	73	638988	9.23	ppb(v	95
37) Vinyl Acetate	7.306	43	538994	9.78	ppb(v	98
38) 1,1-Dichloroethane	7.153	63	476793	10.20	ppb(v	100
39) 2-Butanone	7.569	72	125236	9.91	ppb(v	94
40) Hexane	8.169	57	395886	9.90	ppb(v	95
41) cis-1,2-Dichloroethene	7.991	61	342827	9.85	ppb(v	98
42) Di-isopropyl Ether	8.199	87	212584	9.86	ppb(v	82
43) Ethyl Acetate	8.248	61	89373	11.04	ppb(v	96
44) Methyl Acrylate	8.230	55	447545	9.93	ppb(v	97
45) Chloroform	8.297	83	553075	10.05	ppb(v	99
46) 2,4-Dimethylpentane	9.111	57	452334	9.77	ppb(v	96
47) Tetrahydrofuran	8.750	72	115078	9.69	ppb(v	97
48) 1,1,1-Trichloroethane	9.343	97	483521	9.85	ppb(v	99
49) 1,2-Dichloroethane	9.074	62	318127	10.56	ppb(v	99
50) Benzene	9.857	78	793130	9.49	ppb(v	99
51) Carbon Tetrachloride	10.023	117	481139	10.88	ppb(v	100
52) Cyclohexane	10.145	56	375376	9.75	ppb(v	94
53) 2,3-Dimethylpentane	10.426	71	171966	9.61	ppb(v	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 5W28001.D
 Acq On : 23 Nov 2017 7:09 am
 Operator : thomash
 Sample : ecc1097-10
 Misc : MS22061,v5w1099,,,,,1
 ALS Vial : 5 Sample Multiplier: 1

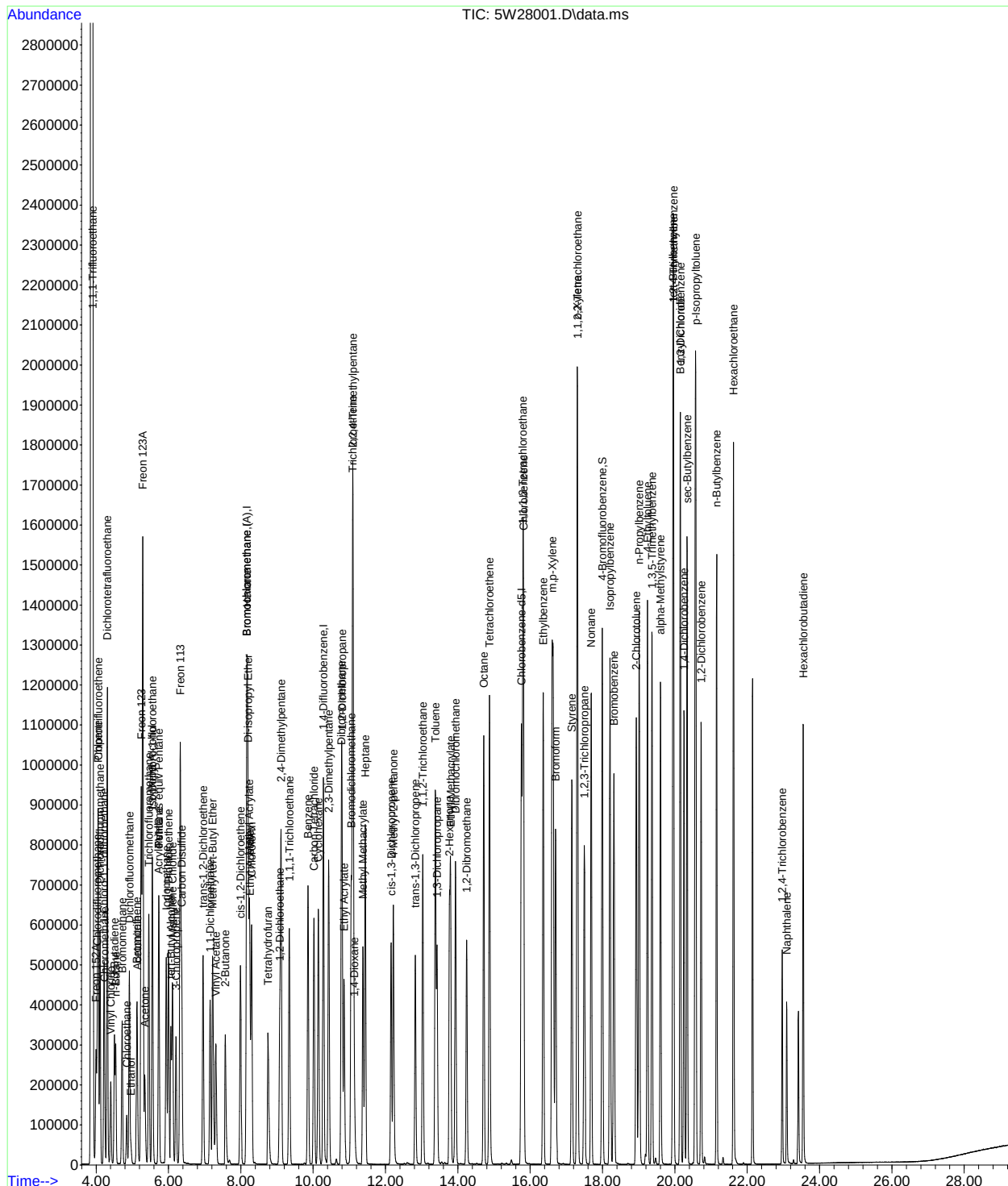
Quant Time: Nov 27 08:24:08 2017
 Quant Method : C:\msdchem\1\methods\m5w1097.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Mon Nov 20 10:49:33 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.099	57	1272195	10.52	ppb(v)	97
56) Heptane	11.442	71	267003	10.24	ppb(v)	96
57) Trichloroethene	11.087	95	382558	10.18	ppb(v)	94
58) 1,2-Dichloropropane	10.799	63	310607	10.35	ppb(v)	94
59) Dibromomethane	10.781	174	336005	8.87	ppb(v)	82
60) Ethyl Acrylate	10.855	55	585867	10.29	ppb(v)	99
61) Methyl Methacrylate	11.375	69	290474	10.23	ppb(v)	96
62) 1,4-Dioxane	11.136	88	154405	10.03	ppb(v)	96
63) Bromodichloromethane	11.050	83	582000	10.53	ppb(v)	99
64) cis-1,3-Dichloropropene	12.158	75	440343	9.79	ppb(v)	98
65) 4-Methyl-2-pentanone	12.219	58	241336	10.79	ppb(v)	98
66) trans-1,3-Dichloropropene	12.824	75	394915	10.26	ppb(v)	99
67) Toluene	13.375	91	917522	9.42	ppb(v)	99
68) 1,1,2-Trichloroethane	13.032	97	336635	9.85	ppb(v)	96
69) 1,3-Dichloropropane	13.424	76	454694	10.44	ppb(v)	98
70) 2-Hexanone	13.767	58	331077	11.83	ppb(v)	96
71) Ethyl Methacrylate	13.803	69	481150	10.59	ppb(v)	96
72) Dibromochloromethane	13.932	129	564433	10.33	ppb(v)	99
73) Tetrachloroethene	14.874	166	467313	9.23	ppb(v)	97
74) 1,2-Dibromoethane	14.244	107	528514	10.01	ppb(v)	100
75) Octane	14.715	43	575552	9.77	ppb(v)	97
76) 1,1,1,2-Tetrachloroethane	15.798	131	415857	10.43	ppb(v)	97
78) Chlorobenzene	15.816	112	756918	9.07	ppb(v)	96
79) Ethylbenzene	16.360	91	1179757	8.98	ppb(v)	100
80) m,p-Xylene	16.611	91	1833393	17.57	ppb(v)	99
81) Styrene	17.150	104	683389	9.15	ppb(v)	99
82) Nonane	17.682	43	570033	9.49	ppb(v)	98
83) o-Xylene	17.303	91	934964	9.20	ppb(v)	100
84) Bromoform	16.703	173	564463	10.47	ppb(v)	99
85) 1,1,2,2-Tetrachloroethane	17.309	83	713473	9.54	ppb(v)	99
86) 1,2,3-Trichloropropane	17.498	75	512433	9.62	ppb(v)	96
87) Isopropylbenzene	18.208	105	1213547	9.04	ppb(v)	99
88) Bromobenzene	18.312	156	425554	9.50	ppb(v)	90
89) 2-Chlorotoluene	18.936	126	318656	9.39	ppb(v)	97
90) n-Propylbenzene	19.009	120	345222	9.32	ppb(v)	87
92) 4-Ethyltoluene	19.242	105	1181646	8.95	ppb(v)	99
93) 1,3,5-Trimethylbenzene	19.370	105	977320	8.65	ppb(v)	100
94) alpha-Methylstyrene	19.603	118	484709	9.03	ppb(v)	99
95) tert-Butylbenzene	19.945	134	224264	8.69	ppb(v)	98
96) 1,2,4-Trimethylbenzene	19.964	105	950527	8.91	ppb(v)	98
97) 1,3-Dichlorobenzene	20.153	146	619974	9.17	ppb(v)	99
98) Benzyl Chloride	20.147	91	696456	10.35	ppb(v)	99
99) 1,4-Dichlorobenzene	20.257	146	594550	8.79	ppb(v)	98
100) sec-Butylbenzene	20.343	134	257294	8.73	ppb(v)	93
101) p-Isopropyltoluene	20.576	134	295375	8.82	ppb(v)	99
102) 1,2-Dichlorobenzene	20.729	146	559694	8.82	ppb(v)	100
103) n-Butylbenzene	21.157	134	236584	8.84	ppb(v)	88
104) Hexachloroethane	21.622	201	337893	9.26	ppb(v)	87
105) 1,2,4-Trichlorobenzene	22.968	180	179083	9.94	ppb(v)	98
106) Naphthalene	23.090	128	338880	9.15	ppb(v)	100
107) Hexachlorobutadiene	23.549	225	225266	7.46	ppb(v)	99
109) TVHC as equiv Pentane	5.734	TIC	1504749	10.71	ppb(v)	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\
Data File : 5W28001.D
Acq On : 23 Nov 2017 7:09 am
Operator : thomash
Sample : ecc1097-10
Misc : MS22061,v5w1099,,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 27 08:24:08 2017
Quant Method : C:\msdchem\1\methods\m5w1097.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Mon Nov 20 10:49:33 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W02918.D
 Acq On : 7 Nov 2017 4:11 pm
 Operator : DANAT
 Sample : ic76-0.04
 Misc : MS21818,V6W76,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 08 09:24:51 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:22:27 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.189	130	252859	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.391	114	916411	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.934	82	385312	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.189	130	252859	10.00	ppb(v	0.00

System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.179	95	519363	10.53	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	105.30%

Target Compounds						Qvalue
3) Freon 152A	3.729	65	679	0.04	ppb(v#	51
5) Propene	3.803	41	616	0.03	ppb(v#	84
6) Chlorotrifluoroethene	3.803	116	1574	0.04	ppb(v#	80
7) Dichlorodifluoromethane	3.858	85	2560	0.04	ppb(v#	92
8) 1-Chloro-1,1-difluoro...	3.968	65	1732	0.04	ppb(v#	1
9) Chloromethane	3.992	50	643	0.03	ppb(v#	42
10) Dichlorotetrafluoroethane	4.066	85	2427	0.04	ppb(v	93
11) Vinyl Chloride	4.170	62	826	0.03	ppb(v#	49
12) 1,3-Butadiene	4.268	54	651	0.04	ppb(v#	87
14) Bromomethane	4.494	94	742	0.03	ppb(v#	76
16) Dichlorofluoromethane	4.714	67	1926	0.04	ppb(v#	95
17) Acetonitrile	4.928	41	782	0.04	ppb(v#	82
19) Freon 123A	5.118	117	2646	0.08	ppb(v	98
20) Bromoethene	4.941	106	858	0.04	ppb(v#	87
21) Trichlorofluoromethane	5.301	101	2363	0.04	ppb(v#	93
24) 1,1-Dichloro-1-fluoro...	5.405	81	2122	0.04	ppb(v#	60
25) Iodomethane	5.815	142	2820	0.04	ppb(v	90
27) 1,1-Dichloroethene	5.883	61	1494	0.04	ppb(v	91
28) Freon 113	6.250	101	2185	0.04	ppb(v	97
29) Methylene Chloride	6.005	84	1295	0.05	ppb(v	92
30) Carbon Disulfide	6.286	76	3383	0.04	ppb(v#	74
31) Ethanol	4.739	45	227	0.03	ppb(v#	43
32) Acrylonitrile	5.577	53	529	0.03	ppb(v#	80
34) trans-1,2-Dichloroethene	6.917	61	1454	0.04	ppb(v	92
35) tert-Butyl Alcohol	5.962	59	1616	0.03	ppb(v#	63
36) Methyl tert-Butyl Ether	7.210	73	2568	0.04	ppb(v#	88
37) Vinyl Acetate	7.284	43	2268	0.04	ppb(v#	72
38) 1,1-Dichloroethane	7.125	63	1730	0.04	ppb(v#	94
40) Hexane	8.220	57	1498	0.04	ppb(v#	65
41) cis-1,2-Dichloroethene	8.012	61	1288	0.04	ppb(v#	84
42) Di-isopropyl Ether	8.238	87	664	0.03	ppb(v#	83
45) Chloroform	8.336	83	2170	0.04	ppb(v#	86
46) 2,4-Dimethylpentane	9.205	57	1566	0.03	ppb(v	93
48) 1,1,1-Trichloroethane	9.431	97	1908	0.04	ppb(v#	83
49) 1,2-Dichloroethane	9.156	62	1153	0.04	ppb(v#	84
50) Benzene	9.957	78	3457	0.04	ppb(v	97
51) Carbon Tetrachloride	10.128	117	2155	0.04	ppb(v#	88
52) Cyclohexane	10.269	56	1421	0.04	ppb(v	96
53) 2,3-Dimethylpentane	10.550	71	511	0.03	ppb(v#	79
55) 2,2,4-Trimethylpentane	11.254	57	4852	0.04	ppb(v#	96
56) Heptane	11.597	71	950	0.03	ppb(v#	83
57) Trichloroethene	11.223	95	1322	0.04	ppb(v	95
58) 1,2-Dichloropropane	10.936	63	1076	0.03	ppb(v#	45
59) Dibromomethane	10.911	174	1789	0.05	ppb(v	87
60) Ethyl Acrylate	10.979	55	1754	0.03	ppb(v#	77
61) Methyl Methacrylate	11.499	69	767	0.03	ppb(v#	83
63) Bromodichloromethane	11.181	83	2069	0.04	ppb(v#	89
64) cis-1,3-Dichloropropene	12.300	75	1695	0.04	ppb(v#	90
65) 4-Methyl-2-pentanone	12.386	58	634	0.03	ppb(v#	73
66) trans-1,3-Dichloropropene	12.979	75	1504	0.04	ppb(v#	72
67) Toluene	13.542	91	4276	0.04	ppb(v	95
68) 1,1,2-Trichloroethane	13.199	97	1220	0.04	ppb(v	85

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W02918.D
 Acq On : 7 Nov 2017 4:11 pm
 Operator : DANAT
 Sample : ic76-0.04
 Misc : MS21818,V6W76,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

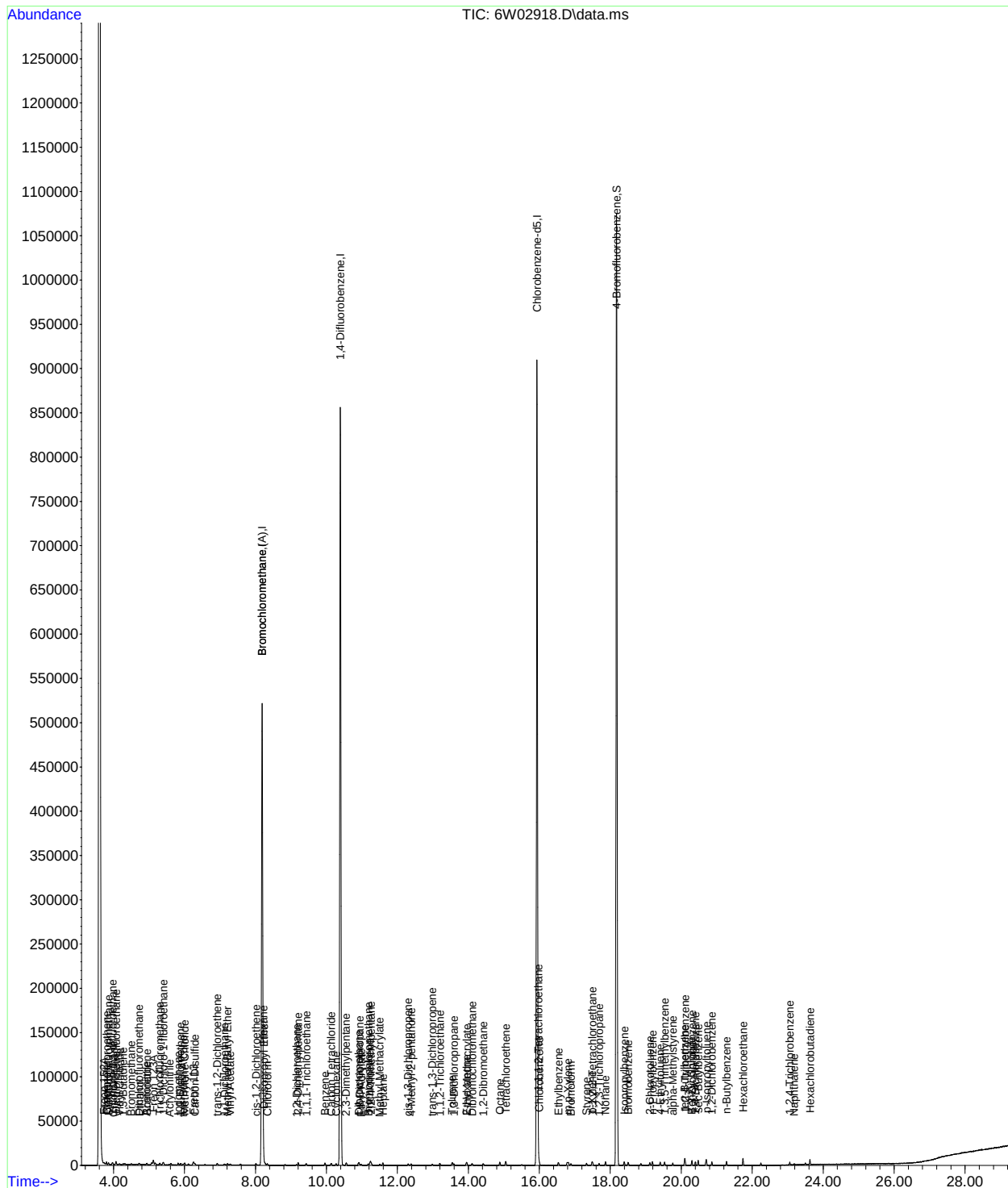
Quant Time: Nov 08 09:24:51 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:22:27 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
69) 1,3-Dichloropropane	13.591	76	1825	0.04	ppb(v#	86
70) 2-Hexanone	13.946	58	1122	0.03	ppb(v#	90
71) Ethyl Methacrylate	13.958	69	1230	0.03	ppb(v#	63
72) Dibromochloromethane	14.105	129	2106	0.04	ppb(v#	77
73) Tetrachloroethene	15.053	166	2090	0.04	ppb(v	93
74) 1,2-Dibromoethane	14.417	107	1936	0.04	ppb(v#	98
75) Octane	14.888	43	1997	0.03	ppb(v	95
76) 1,1,1,2-Tetrachloroethane	15.977	131	1533	0.04	ppb(v#	1
78) Chlorobenzene	15.995	112	3213	0.05	ppb(v	95
79) Ethylbenzene	16.540	91	4623	0.04	ppb(v#	94
80) m,p-Xylene	16.803	91	6906	0.09	ppb(v	98
81) Styrene	17.329	104	1881	0.03	ppb(v	98
82) Nonane	17.861	43	2066	0.04	ppb(v#	90
83) o-Xylene	17.488	91	3350	0.04	ppb(v#	91
84) Bromoform	16.888	173	1754	0.04	ppb(v#	93
85) 1,1,2,2-Tetrachloroethane	17.494	83	2548	0.04	ppb(v#	89
86) 1,2,3-Trichloropropane	17.684	75	1752	0.04	ppb(v	95
87) Isopropylbenzene	18.393	105	5157	0.05	ppb(v	99
88) Bromobenzene	18.503	156	1718	0.05	ppb(v	83
89) 2-Chlorotoluene	19.115	126	1081	0.04	ppb(v	93
90) n-Propylbenzene	19.189	120	1072	0.04	ppb(v	99
92) 4-Ethyltoluene	19.409	105	4101	0.04	ppb(v	99
93) 1,3,5-Trimethylbenzene	19.531	105	3546	0.04	ppb(v	98
94) alpha-Methylstyrene	19.758	118	1279	0.03	ppb(v	90
95) tert-Butylbenzene	20.094	134	798	0.04	ppb(v	92
96) 1,2,4-Trimethylbenzene	20.106	105	3225	0.04	ppb(v#	77
97) 1,3-Dichlorobenzene	20.302	146	2433	0.04	ppb(v	98
98) Benzyl Chloride	20.290	91	2173	0.04	ppb(v#	92
99) 1,4-Dichlorobenzene	20.400	146	2283	0.04	ppb(v	97
100) sec-Butylbenzene	20.479	134	891	0.04	ppb(v	97
101) p-Isopropyltoluene	20.712	134	1107	0.04	ppb(v	94
102) 1,2-Dichlorobenzene	20.859	146	2403	0.05	ppb(v	94
103) n-Butylbenzene	21.275	134	791	0.04	ppb(v	95
104) Hexachloroethane	21.746	201	1351	0.04	ppb(v	87
105) 1,2,4-Trichlorobenzene	23.055	180	1343	0.06	ppb(v	95
106) Naphthalene	23.177	128	1733	0.04	ppb(v#	70
107) Hexachlorobutadiene	23.630	225	1600	0.06	ppb(v	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\
Data File : 6W02918.D
Acq On : 7 Nov 2017 4:11 pm
Operator : DANAT
Sample : ic76-0.04
Misc : MS21818,V6W76,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 08 09:24:51 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:22:27 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W02919.D
 Acq On : 7 Nov 2017 5:01 pm
 Operator : DANAT
 Sample : ic76-0.1
 Misc : MS21818,V6W76,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 08 09:21:34 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:20:29 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.189	130	249403	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.391	114	921813	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.934	82	418279	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.189	130	249403	10.00	ppb(v	0.00

System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.179	95	533909	9.97	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	99.70%

Target Compounds			Qvalue			
3) Freon 152A	3.735	65	1976	0.13	ppb(v	95
4) Chlorodifluoromethane	3.778	67	537	0.09	ppb(v#	42
5) Propene	3.803	41	2045	0.11	ppb(v	94
6) Chlorotrifluoroethene	3.809	116	4503	0.12	ppb(v	96
7) Dichlorodifluoromethane	3.858	85	7043	0.12	ppb(v	99
8) 1-Chloro-1,1-difluoro...	3.968	65	4703	0.11	ppb(v#	71
9) Chloromethane	3.986	50	2305	0.11	ppb(v	100
10) Dichlorotetrafluoroethane	4.066	85	6725	0.12	ppb(v	97
11) Vinyl Chloride	4.170	62	2540	0.11	ppb(v#	97
12) 1,3-Butadiene	4.274	54	1924	0.11	ppb(v	96
13) n-Butane	4.323	58	368	0.09	ppb(v#	54
14) Bromomethane	4.506	94	2387	0.11	ppb(v#	93
15) Chloroethane	4.641	64	1326	0.11	ppb(v#	50
16) Dichlorofluoromethane	4.720	67	5741	0.12	ppb(v	98
17) Acetonitrile	4.934	41	2095	0.11	ppb(v	97
18) Freon 123	5.075	83	7041	0.11	ppb(v	98
19) Freon 123A	5.118	117	7762	0.23	ppb(v	89
20) Bromoethene	4.940	106	2546	0.11	ppb(v#	92
21) Trichlorofluoromethane	5.307	101	6603	0.11	ppb(v	96
23) Pentane	5.613	57	490	0.08	ppb(v	79
24) 1,1-Dichloro-1-fluoro...	5.411	81	5678	0.11	ppb(v#	93
25) Iodomethane	5.821	142	7761	0.11	ppb(v	99
27) 1,1-Dichloroethene	5.889	61	4189	0.11	ppb(v	99
28) Freon 113	6.250	101	5987	0.11	ppb(v	97
29) Methylene Chloride	6.005	84	2976	0.12	ppb(v	92
30) Carbon Disulfide	6.286	76	8907	0.11	ppb(v	99
31) Ethanol	4.739	45	880	0.12	ppb(v#	43
32) Acrylonitrile	5.583	53	1822	0.10	ppb(v	87
33) 3-Chloropropene	6.115	76	1108	0.10	ppb(v#	84
34) trans-1,2-Dichloroethene	6.923	61	3870	0.11	ppb(v	98
35) tert-Butyl Alcohol	5.956	59	4961	0.10	ppb(v	92
36) Methyl tert-Butyl Ether	7.204	73	7299	0.11	ppb(v	96
37) Vinyl Acetate	7.284	43	6268	0.10	ppb(v	99
38) 1,1-Dichloroethane	7.131	63	4932	0.11	ppb(v#	93
39) 2-Butanone	7.571	72	1163	0.09	ppb(v#	84
40) Hexane	8.220	57	4382	0.11	ppb(v	83
41) cis-1,2-Dichloroethene	8.011	61	3724	0.11	ppb(v	95
42) Di-isopropyl Ether	8.232	87	2305	0.10	ppb(v	87
43) Ethyl Acetate	8.268	61	668	0.08	ppb(v#	81
44) Methyl Acrylate	8.262	55	4949	0.10	ppb(v#	88
45) Chloroform	8.330	83	5898	0.11	ppb(v	99
46) 2,4-Dimethylpentane	9.204	57	4616	0.10	ppb(v	93
47) Tetrahydrofuran	8.819	72	944	0.08	ppb(v	90
48) 1,1,1-Trichloroethane	9.437	97	5094	0.11	ppb(v	98
49) 1,2-Dichloroethane	9.149	62	3388	0.11	ppb(v#	87
50) Benzene	9.957	78	9232	0.11	ppb(v	99
51) Carbon Tetrachloride	10.134	117	5783	0.11	ppb(v	97
52) Cyclohexane	10.269	56	4003	0.10	ppb(v	90
53) 2,3-Dimethylpentane	10.556	71	1805	0.10	ppb(v#	91
55) 2,2,4-Trimethylpentane	11.254	57	13647	0.11	ppb(v	98
56) Heptane	11.590	71	2845	0.10	ppb(v	98
57) Trichloroethene	11.223	95	3876	0.11	ppb(v	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W02919.D
 Acq On : 7 Nov 2017 5:01 pm
 Operator : DANAT
 Sample : ic76-0.1
 Misc : MS21818,V6W76,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 08 09:21:34 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:20:29 2017
 Response via : Initial Calibration

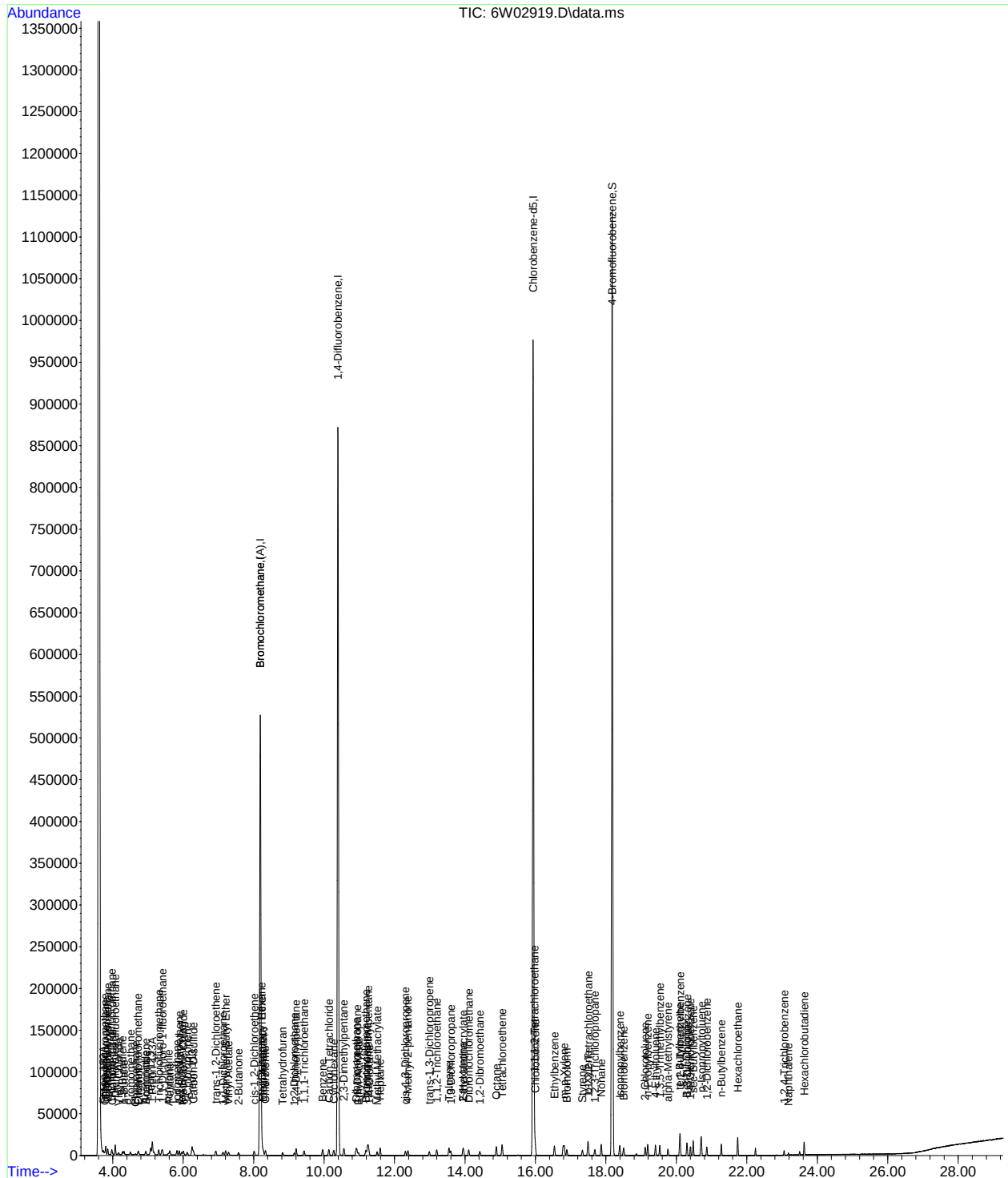
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
58) 1,2-Dichloropropane	10.942	63	3263	0.11	ppb(v#	92
59) Dibromomethane	10.905	174	4071	0.12	ppb(v	98
60) Ethyl Acrylate	10.979	55	5355	0.09	ppb(v#	83
61) Methyl Methacrylate	11.511	69	2689	0.09	ppb(v	95
62) 1,4-Dioxane	11.278	88	1420	0.09	ppb(v#	82
63) Bromodichloromethane	11.180	83	5855	0.10	ppb(v	94
64) cis-1,3-Dichloropropene	12.306	75	4761	0.10	ppb(v	96
65) 4-Methyl-2-pentanone	12.373	58	2155	0.09	ppb(v	94
66) trans-1,3-Dichloropropene	12.985	75	4253	0.10	ppb(v	98
67) Toluene	13.548	91	10726	0.11	ppb(v	96
68) 1,1,2-Trichloroethane	13.199	97	3300	0.10	ppb(v	94
69) 1,3-Dichloropropane	13.597	76	4816	0.10	ppb(v	99
70) 2-Hexanone	13.940	58	3000	0.09	ppb(v#	82
71) Ethyl Methacrylate	13.952	69	3953	0.08	ppb(v#	95
72) Dibromochloromethane	14.105	129	5747	0.10	ppb(v#	96
73) Tetrachloroethene	15.053	166	5502	0.11	ppb(v	97
74) 1,2-Dibromoethane	14.417	107	5393	0.10	ppb(v#	94
75) Octane	14.888	43	5767	0.10	ppb(v	96
76) 1,1,1,2-Tetrachloroethane	15.977	131	4451	0.11	ppb(v#	1
78) Chlorobenzene	15.995	112	8614	0.12	ppb(v	97
79) Ethylbenzene	16.540	91	12556	0.11	ppb(v	99
80) m,p-Xylene	16.815	91	18847	0.22	ppb(v	98
81) Styrene	17.329	104	5498	0.09	ppb(v	97
82) Nonane	17.867	43	6183	0.11	ppb(v	98
83) o-Xylene	17.488	91	9402	0.11	ppb(v	98
84) Bromoform	16.888	173	4697	0.09	ppb(v	97
85) 1,1,2,2-Tetrachloroethane	17.500	83	6761	0.11	ppb(v#	96
86) 1,2,3-Trichloropropane	17.690	75	5237	0.12	ppb(v	96
87) Isopropylbenzene	18.393	105	13518	0.12	ppb(v	99
88) Bromobenzene	18.503	156	4306	0.11	ppb(v	96
89) 2-Chlorotoluene	19.109	126	2955	0.10	ppb(v	96
90) n-Propylbenzene	19.182	120	3582	0.11	ppb(v	95
92) 4-Ethyltoluene	19.409	105	11616	0.10	ppb(v	96
93) 1,3,5-Trimethylbenzene	19.531	105	9958	0.11	ppb(v	99
94) alpha-Methylstyrene	19.758	118	3571	0.08	ppb(v	94
95) tert-Butylbenzene	20.094	134	2558	0.11	ppb(v	99
96) 1,2,4-Trimethylbenzene	20.106	105	9509	0.11	ppb(v#	80
97) 1,3-Dichlorobenzene	20.302	146	6565	0.11	ppb(v	96
98) Benzyl Chloride	20.290	91	5601	0.09	ppb(v#	96
99) 1,4-Dichlorobenzene	20.400	146	5983	0.11	ppb(v	98
100) sec-Butylbenzene	20.479	134	2954	0.11	ppb(v	95
101) p-Isopropyltoluene	20.712	134	3205	0.11	ppb(v	86
102) 1,2-Dichlorobenzene	20.865	146	6168	0.11	ppb(v	99
103) n-Butylbenzene	21.275	134	2326	0.10	ppb(v	89
104) Hexachloroethane	21.746	201	3654	0.11	ppb(v	88
105) 1,2,4-Trichlorobenzene	23.061	180	2112	0.09	ppb(v	95
106) Naphthalene	23.183	128	3210	0.07	ppb(v	100
107) Hexachlorobutadiene	23.630	225	3463	0.11	ppb(v	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

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Data Path : C:\msdchem\1\data\  
Data File : 6W02919.D  
Acq On : 7 Nov 2017 5:01 pm  
Operator : DANAT  
Sample : ic76-0.1  
Misc : MS21818,V6W76,,,,,1  
ALS Vial : 3 Sample Multiplier: 1
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Quant Time: Nov 08 09:21:34 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Wed Nov 08 09:20:29 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Manual Integrations
APPROVED
(compounds with "m" flag)

Dana Tryon
11/09/17 15:47

Data Path : C:\msdchem\1\data\
Data File : 6W02920.D
Acq On : 7 Nov 2017 5:52 pm
Operator : DANAT
Sample : ic76-0.2
Misc : MS21818,V6W76,,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 08 09:20:22 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:04:56 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.189	130	238658	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.391	114	890407	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.934	82	407045	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.189	130	238658	10.00	ppb(v	0.00

System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.179	95	530706	10.22	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	102.20%

Target Compounds					Qvalue	
2) 1,1,1-Trifluoroethane	3.638	69	10337	0.30	ppb(v	95
3) Freon 152A	3.735	65	3221	0.22	ppb(v	95
4) Chlorodifluoromethane	3.778	67	1051	0.19	ppb(v#	42
5) Propene	3.797	41	3623	0.22	ppb(v	98
6) Chlorotrifluoroethene	3.803	116	7845	0.21	ppb(v	99
7) Dichlorodifluoromethane	3.858	85	12716	0.22	ppb(v	99
8) 1-Chloro-1,1-difluoro...	3.968	65	8694	0.22	ppb(v#	71
9) Chloromethane	3.986	50	4313	0.23	ppb(v	98
10) Dichlorotetrafluoroethane	4.066	85	12198	0.23	ppb(v	99
11) Vinyl Chloride	4.164	62	4789	0.22	ppb(v#	98
12) 1,3-Butadiene	4.274	54	3632	0.22	ppb(v	97
13) n-Butane	4.317	58	757	0.19	ppb(v#	66
14) Bromomethane	4.500	94	4469	0.22	ppb(v	96
15) Chloroethane	4.641	64	2548	0.23	ppb(v#	91
16) Dichlorofluoromethane	4.720	67	10348	0.23	ppb(v	99
17) Acetonitrile	4.934	41	3597	0.20	ppb(v	98
18) Freon 123	5.069	83	12787	0.21	ppb(v	98
19) Freon 123A	5.118	117	13739	0.43	ppb(v	96
20) Bromoethene	4.941	106	4444	0.20	ppb(v	98
21) Trichlorofluoromethane	5.302	101	11564	0.21	ppb(v	98
22) Acetone	5.167	58	2948	0.25	ppb(v	86
23) Pentane	5.614	57	1077	0.18	ppb(v	90
24) 1,1-Dichloro-1-fluoro...	5.406	81	10247	0.22	ppb(v#	95
25) Iodomethane	5.815	142	13279	0.20	ppb(v	98
26) Isopropyl Alcohol	5.387	45	11399	0.25	ppb(v#	97
27) 1,1-Dichloroethene	5.889	61	7362	0.21	ppb(v	98
28) Freon 113	6.250	101	10622	0.21	ppb(v	96
29) Methylene Chloride	6.005	84	5256	0.24	ppb(v	97
30) Carbon Disulfide	6.287	76	16084	0.21	ppb(v	100
31) Ethanol	4.739	45	1649	0.25	ppb(v#	95
32) Acrylonitrile	5.577	53	3510	0.19	ppb(v	97
33) 3-Chloropropene	6.115	76	2053	0.18	ppb(v	98
34) trans-1,2-Dichloroethene	6.917	61	7251	0.21	ppb(v	96
35) tert-Butyl Alcohol	5.950	59	9274	0.19	ppb(v	95
36) Methyl tert-Butyl Ether	7.198	73	12788	0.20	ppb(v	96
37) Vinyl Acetate	7.284	43	11517	0.20	ppb(v	98
38) 1,1-Dichloroethane	7.125	63	9143	0.21	ppb(v#	97
39) 2-Butanone	7.559	72	2450	0.19	ppb(v	93
40) Hexane	8.220	57	7842	0.21	ppb(v	91
41) cis-1,2-Dichloroethene	8.012	61	6635	0.21	ppb(v	99
42) Di-isopropyl Ether	8.232	87	4235	0.20	ppb(v	99
43) Ethyl Acetate	8.275	61	1536	0.19	ppb(v#	80
44) Methyl Acrylate	8.250	55	9191	0.20	ppb(v	99
45) Chloroform	8.330	83	10608	0.21	ppb(v	98
46) 2,4-Dimethylpentane	9.205	57	8514	0.20	ppb(v	97
47) Tetrahydrofuran	8.819	72	2021	0.17	ppb(v	91
48) 1,1,1-Trichloroethane	9.425	97	9543	0.21	ppb(v	99
49) 1,2-Dichloroethane	9.150	62	6360	0.21	ppb(v	98
50) Benzene	9.957	78	16642	0.21	ppb(v	98
51) Carbon Tetrachloride	10.135	117	10175	0.20	ppb(v	97
52) Cyclohexane	10.263	56	7411	0.20	ppb(v	95
53) 2,3-Dimethylpentane	10.563	71	3633	0.21	ppb(v	83

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W02920.D
 Acq On : 7 Nov 2017 5:52 pm
 Operator : DANAT
 Sample : ic76-0.2
 Misc : MS21818,V6W76,,,,,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 08 09:20:22 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : TO-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:04:56 2017
 Response via : Initial Calibration

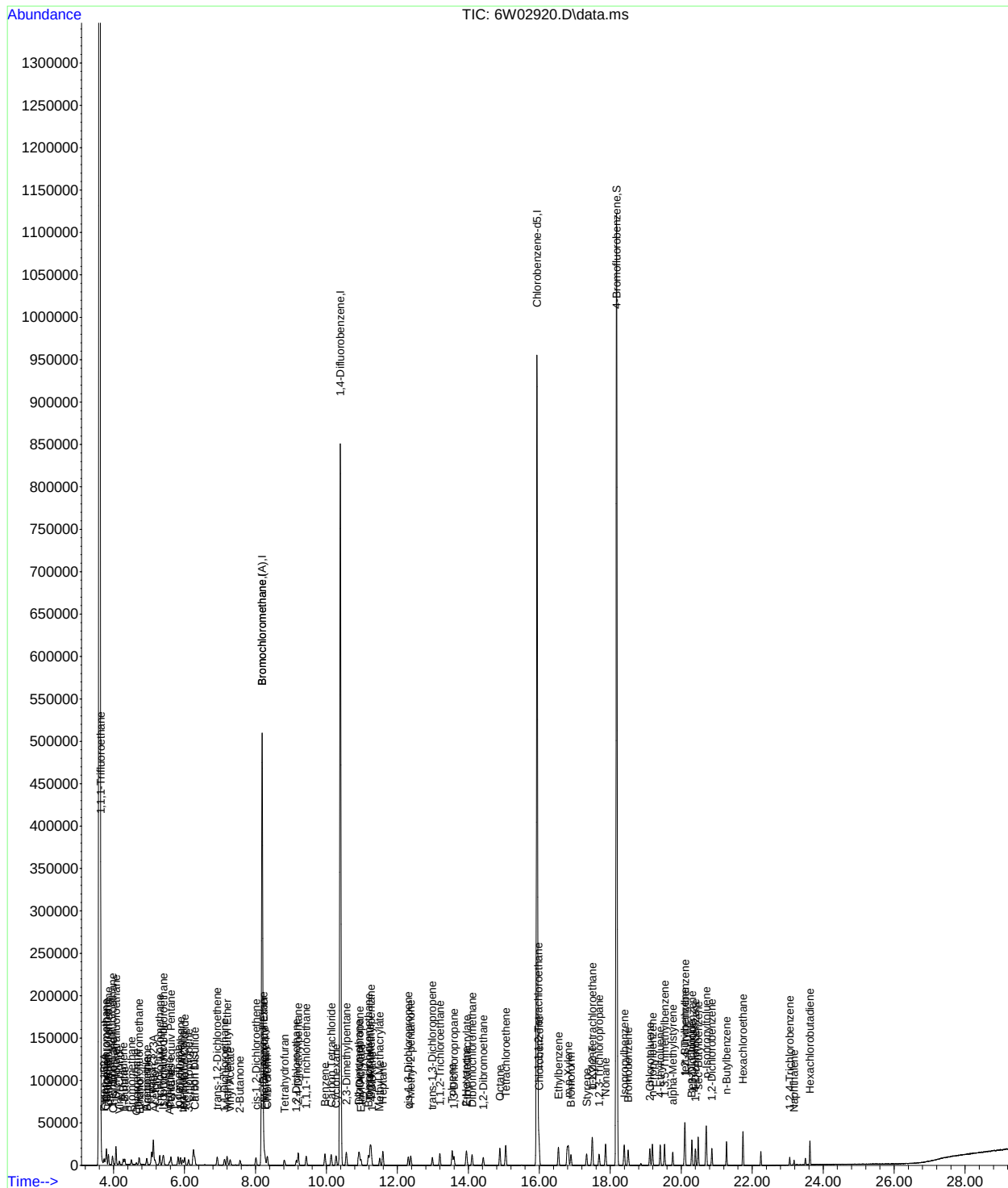
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.254	57	24509	0.20	ppb(v	97
56) Heptane	11.591	71	5230	0.19	ppb(v	98
57) Trichloroethene	11.223	95	6999	0.20	ppb(v	94
58) 1,2-Dichloropropane	10.936	63	6003	0.20	ppb(v	98
59) Dibromomethane	10.911	174	6896	0.21	ppb(v	96
60) Ethyl Acrylate	10.973	55	9983	0.17	ppb(v	99
61) Methyl Methacrylate	11.499	69	5079	0.17	ppb(v	96
62) 1,4-Dioxane	11.279	88	2827	0.18	ppb(v#	69
63) Bromodichloromethane	11.181	83	10991	0.20	ppb(v	98
64) cis-1,3-Dichloropropene	12.306	75	8603	0.19	ppb(v	98
65) 4-Methyl-2-pentanone	12.374	58	3980	0.17	ppb(v	94
66) trans-1,3-Dichloropropene	12.979	75	7637	0.18	ppb(v	97
67) Toluene	13.542	91	18770	0.20	ppb(v	96
68) 1,1,2-Trichloroethane	13.200	97	6431	0.20	ppb(v	98
69) 1,3-Dichloropropane	13.591	76	9330	0.20	ppb(v	99
70) 2-Hexanone	13.934	58	5565	0.17	ppb(v	98
71) Ethyl Methacrylate	13.958	69	7414	0.16	ppb(v#	98
72) Dibromochloromethane	14.105	129	10238	0.18	ppb(v	98
73) Tetrachloroethene	15.053	166	9818	0.21	ppb(v	95
74) 1,2-Dibromoethane	14.423	107	9681	0.19	ppb(v#	98
75) Octane	14.888	43	10854	0.19	ppb(v	97
76) 1,1,1,2-Tetrachloroethane	15.977	131	7876	0.20	ppb(v#	1
78) Chlorobenzene	15.995	112	15417	0.23	ppb(v	98
79) Ethylbenzene	16.540	91	22808	0.21	ppb(v	99
80) m,p-Xylene	16.815	91	35338	0.42	ppb(v	99
81) Styrene	17.335	104	10391	0.17	ppb(v	97
82) Nonane	17.867	43	11456	0.21	ppb(v	99
83) o-Xylene	17.488	91	17666	0.21	ppb(v	99
84) Bromoform	16.888	173	8758	0.18	ppb(v	96
85) 1,1,2,2-Tetrachloroethane	17.494	83	12157	0.21	ppb(v	99
86) 1,2,3-Trichloropropane	17.684	75	9185	0.21	ppb(v	97
87) Isopropylbenzene	18.393	105	24769	0.22	ppb(v	97
88) Bromobenzene	18.504	156	7809	0.21	ppb(v	99
89) 2-Chlorotoluene	19.115	126	5610	0.20	ppb(v	96
90) n-Propylbenzene	19.189	120	6312	0.20	ppb(v	100
92) 4-Ethyltoluene	19.409	105	21499	0.20	ppb(v	99
93) 1,3,5-Trimethylbenzene	19.531	105	18480	0.20	ppb(v	98
94) alpha-Methylstyrene	19.758	118	6711	0.16	ppb(v	98
95) tert-Butylbenzene	20.100	134	4808	0.22	ppb(v	97
96) 1,2,4-Trimethylbenzene	20.106	105	17817	0.21	ppb(v#	81
97) 1,3-Dichlorobenzene	20.302	146	11355	0.20	ppb(v	97
98) Benzyl Chloride	20.290	91	9946	0.15	ppb(v	99
99) 1,4-Dichlorobenzene	20.400	146	10452	0.19	ppb(v	97
100) sec-Butylbenzene	20.480	134	5512	0.21	ppb(v	97
101) p-Isopropyltoluene	20.706	134	5953	0.21	ppb(v	91
102) 1,2-Dichlorobenzene	20.859	146	10477	0.20	ppb(v	97
103) n-Butylbenzene	21.275	134	4354	0.18	ppb(v	95
104) Hexachloroethane	21.740	201	6414	0.20	ppb(v	97
105) 1,2,4-Trichlorobenzene	23.055	180	3580	0.15	ppb(v	99
106) Naphthalene	23.184	128	5625	0.11	ppb(v	97
107) Hexachlorobutadiene	23.624	225	5924	0.20	ppb(v	97
109) TVHC as equiv Pentane	5.614	TIC	22012m	0.21	ppb(v	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W02920.D
Acq On : 7 Nov 2017 5:52 pm
Operator : DANAT
Sample : ic76-0.2
Misc : MS21818,V6W76,,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 08 09:20:22 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:04:56 2017
Response via : Initial Calibration



Manual Integration Approval Summary

Sample Number: V6W76-IC76

Method: TO-15

Lab FileID: 6W02920.D

Analyst approved: 11/08/17 09:40 Dana Tryon

Injection Time: 11/07/17 17:52

Supervisor approved: 11/09/17 15:47 Dana Tryon

Parameter	CAS	Sig#	R.T. (min.)	Reason

TVHC As Equiv Pentane			5.61	Poor instrument integration

7.7.25.1

7

Quantitation Report (QT Reviewed)

Manual Integrations
APPROVED
(compounds with "m" flag)

Dana Tryon
11/09/17 15:47

Data Path : C:\msdchem\1\data\
Data File : 6W02921.D
Acq On : 7 Nov 2017 6:44 pm
Operator : DANAT
Sample : ic76-0.5
Misc : MS21818,V6W76,,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 08 09:04:49 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:02:01 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.189	130	232517	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.391	114	866042	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.934	82	401025	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.189	130	232517	10.00	ppb(v	0.00

System Monitoring Compounds

91) 4-Bromofluorobenzene	18.179	95	525362	10.33	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	103.30%

Target Compounds						Qvalue
2) 1,1,1-Trifluoroethane	3.643	69	18552	0.57	ppb(v	98
3) Freon 152A	3.735	65	7523	0.54	ppb(v	95
4) Chlorodifluoromethane	3.772	67	2747	0.51	ppb(v	96
5) Propene	3.803	41	8445	0.52	ppb(v	97
6) Chlorotrifluoroethene	3.803	116	18301	0.51	ppb(v	99
7) Dichlorodifluoromethane	3.858	85	28957	0.53	ppb(v	98
8) 1-Chloro-1,1-difluoro...	3.968	65	20563	0.56	ppb(v#	92
9) Chloromethane	3.986	50	10499	0.59	ppb(v	96
10) Dichlorotetrafluoroethane	4.066	85	28603	0.57	ppb(v	97
11) Vinyl Chloride	4.163	62	11666	0.56	ppb(v#	95
12) 1,3-Butadiene	4.274	54	8812	0.56	ppb(v	96
13) n-Butane	4.316	58	2186	0.57	ppb(v#	93
14) Bromomethane	4.500	94	10533	0.55	ppb(v	98
15) Chloroethane	4.641	64	5784	0.54	ppb(v	99
16) Dichlorofluoromethane	4.720	67	24880	0.58	ppb(v	100
17) Acetonitrile	4.928	41	8977	0.52	ppb(v	97
18) Freon 123	5.075	83	29725	0.51	ppb(v	98
19) Freon 123A	5.124	117	31734	1.01	ppb(v	96
20) Bromoethene	4.940	106	10623	0.48	ppb(v	96
21) Trichlorofluoromethane	5.307	101	27283	0.51	ppb(v	99
22) Acetone	5.161	58	6374	0.58	ppb(v	93
23) Pentane	5.619	57	2805	0.48	ppb(v	97
24) 1,1-Dichloro-1-fluoro...	5.411	81	23910	0.52	ppb(v	99
25) Iodomethane	5.821	142	31274	0.49	ppb(v	99
26) Isopropyl Alcohol	5.381	45	24035	0.54	ppb(v	98
27) 1,1-Dichloroethene	5.889	61	17566	0.51	ppb(v	97
28) Freon 113	6.250	101	24977	0.51	ppb(v	98
29) Methylene Chloride	6.005	84	11593	0.54	ppb(v	96
30) Carbon Disulfide	6.286	76	37819	0.51	ppb(v	98
31) Ethanol	4.739	45	3933	0.66	ppb(v#	94
32) Acrylonitrile	5.577	53	8566	0.48	ppb(v	99
33) 3-Chloropropene	6.115	76	5380	0.49	ppb(v	94
34) trans-1,2-Dichloroethene	6.923	61	17367	0.52	ppb(v	97
35) tert-Butyl Alcohol	5.938	59	22664	0.48	ppb(v	97
36) Methyl tert-Butyl Ether	7.192	73	30641	0.48	ppb(v	98
37) Vinyl Acetate	7.283	43	27446	0.48	ppb(v	99
38) 1,1-Dichloroethane	7.131	63	21405	0.52	ppb(v	99
39) 2-Butanone	7.553	72	6004	0.48	ppb(v	96
40) Hexane	8.219	57	18958	0.51	ppb(v	96
41) cis-1,2-Dichloroethene	8.011	61	15757	0.50	ppb(v	97
42) Di-isopropyl Ether	8.226	87	10358	0.49	ppb(v	98
43) Ethyl Acetate	8.268	61	3842	0.47	ppb(v	99
44) Methyl Acrylate	8.250	55	22867	0.51	ppb(v	98
45) Chloroform	8.336	83	25433	0.52	ppb(v	100
46) 2,4-Dimethylpentane	9.204	57	20902	0.49	ppb(v	94
47) Tetrahydrofuran	8.801	72	5295	0.46	ppb(v	98
48) 1,1,1-Trichloroethane	9.431	97	22727	0.51	ppb(v	97
49) 1,2-Dichloroethane	9.149	62	14935	0.52	ppb(v	98
50) Benzene	9.957	78	39238	0.52	ppb(v	99
51) Carbon Tetrachloride	10.134	117	24149	0.50	ppb(v	98
52) Cyclohexane	10.269	56	17636	0.48	ppb(v	98
53) 2,3-Dimethylpentane	10.563	71	8603	0.51	ppb(v	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W02921.D
 Acq On : 7 Nov 2017 6:44 pm
 Operator : DANAT
 Sample : ic76-0.5
 Misc : MS21818,V6W76,,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 08 09:04:49 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : TO-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:02:01 2017
 Response via : Initial Calibration

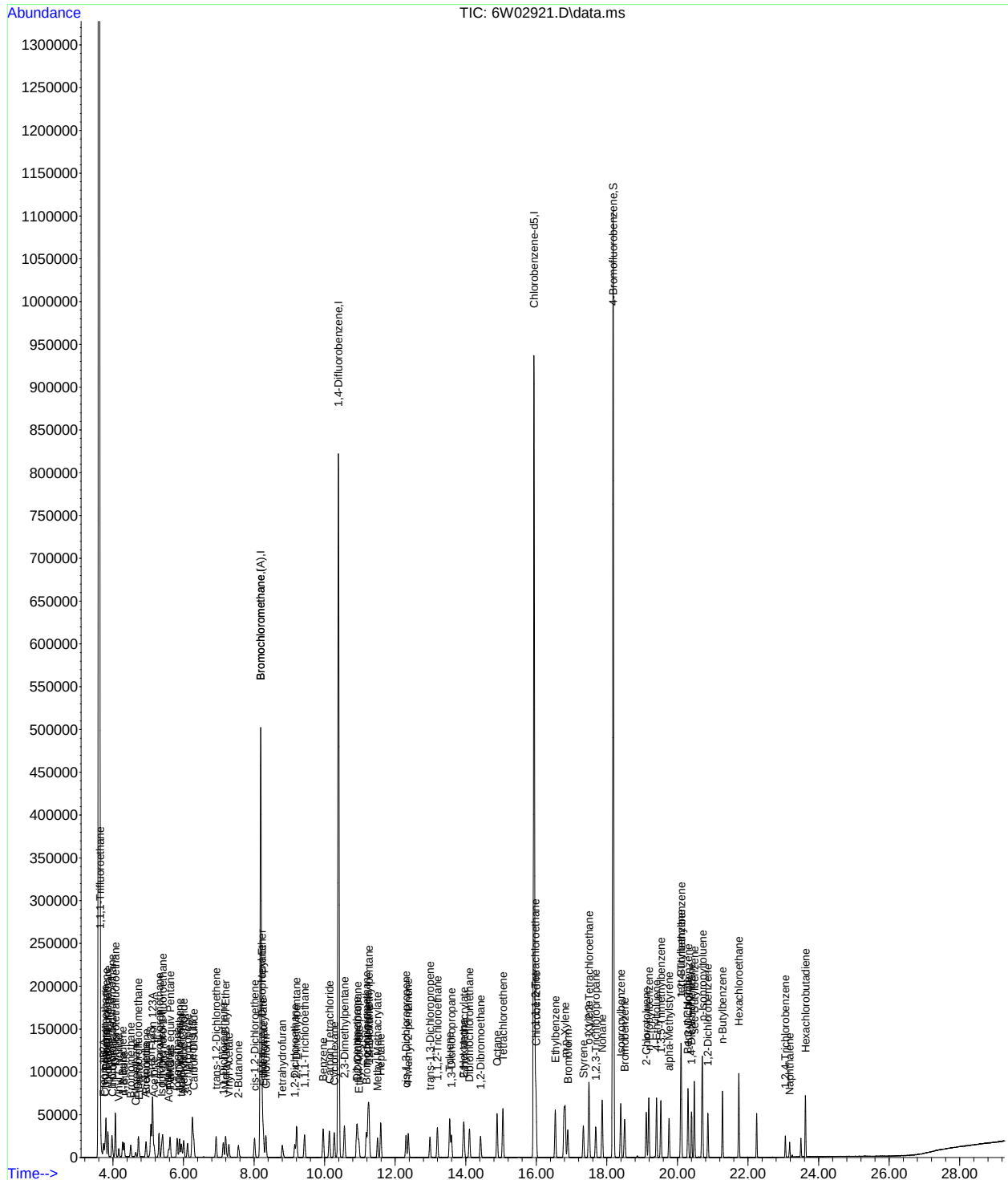
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.254	57	60882	0.51	ppb(v	99
56) Heptane	11.590	71	12828	0.48	ppb(v	97
57) Trichloroethene	11.223	95	16718	0.49	ppb(v	99
58) 1,2-Dichloropropane	10.936	63	14384	0.50	ppb(v	98
59) Dibromomethane	10.905	174	16203	0.50	ppb(v	98
60) Ethyl Acrylate	10.972	55	25433	0.44	ppb(v	99
61) Methyl Methacrylate	11.499	69	12772	0.44	ppb(v	95
62) 1,4-Dioxane	11.260	88	7302	0.48	ppb(v#	72
63) Bromodichloromethane	11.180	83	26589	0.48	ppb(v	98
64) cis-1,3-Dichloropropene	12.306	75	20765	0.46	ppb(v	99
65) 4-Methyl-2-pentanone	12.367	58	10442	0.44	ppb(v	90
66) trans-1,3-Dichloropropene	12.985	75	18723	0.45	ppb(v	98
67) Toluene	13.542	91	45445	0.49	ppb(v	99
68) 1,1,2-Trichloroethane	13.199	97	15766	0.49	ppb(v	97
69) 1,3-Dichloropropane	13.591	76	22021	0.49	ppb(v	99
70) 2-Hexanone	13.933	58	14320	0.44	ppb(v	99
71) Ethyl Methacrylate	13.952	69	19904	0.42	ppb(v	98
72) Dibromochloromethane	14.099	129	25211	0.45	ppb(v	99
73) Tetrachloroethene	15.053	166	23462	0.51	ppb(v	99
74) 1,2-Dibromoethane	14.423	107	24009	0.48	ppb(v	96
75) Octane	14.888	43	27098	0.49	ppb(v	98
76) 1,1,1,2-Tetrachloroethane	15.977	131	19179	0.50	ppb(v#	53
78) Chlorobenzene	15.995	112	36654	0.56	ppb(v	99
79) Ethylbenzene	16.540	91	55709	0.52	ppb(v	100
80) m,p-Xylene	16.815	91	86751	1.06	ppb(v	99
81) Styrene	17.335	104	26934	0.44	ppb(v	99
82) Nonane	17.867	43	30756	0.60	ppb(v	99
83) o-Xylene	17.482	91	44466	0.54	ppb(v	98
84) Bromoform	16.894	173	21724	0.44	ppb(v	97
85) 1,1,2,2-Tetrachloroethane	17.494	83	30035	0.52	ppb(v	99
86) 1,2,3-Trichloropropane	17.690	75	22635	0.53	ppb(v	99
87) Isopropylbenzene	18.393	105	60310	0.56	ppb(v	100
88) Bromobenzene	18.503	156	19242	0.53	ppb(v	95
89) 2-Chlorotoluene	19.115	126	14178	0.52	ppb(v	99
90) n-Propylbenzene	19.189	120	16842	0.55	ppb(v	95
92) 4-Ethyltoluene	19.409	105	56184	0.53	ppb(v	99
93) 1,3,5-Trimethylbenzene	19.531	105	48262	0.54	ppb(v	99
94) alpha-Methylstyrene	19.757	118	18455	0.42	ppb(v	98
95) tert-Butylbenzene	20.100	134	12186	0.58	ppb(v	97
96) 1,2,4-Trimethylbenzene	20.106	105	46544	0.56	ppb(v#	81
97) 1,3-Dichlorobenzene	20.302	146	28776	0.52	ppb(v	98
98) Benzyl Chloride	20.290	91	25324	0.37	ppb(v	98
99) 1,4-Dichlorobenzene	20.400	146	26799	0.49	ppb(v	98
100) sec-Butylbenzene	20.479	134	13978	0.56	ppb(v	98
101) p-Isopropyltoluene	20.712	134	15549	0.58	ppb(v	96
102) 1,2-Dichlorobenzene	20.859	146	25999	0.51	ppb(v	98
103) n-Butylbenzene	21.275	134	11456	0.48	ppb(v	93
104) Hexachloroethane	21.740	201	16313	0.52	ppb(v	95
105) 1,2,4-Trichlorobenzene	23.055	180	8419	0.33	ppb(v	99
106) Naphthalene	23.183	128	14532	0.27	ppb(v	97
107) Hexachlorobutadiene	23.630	225	14218	0.49	ppb(v	98
109) TVHC as equiv Pentane	5.619	TIC	50958m	0.51	ppb(v	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

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Data Path : C:\msdchem\1\data\  
Data File : 6W02921.D  
Acq On : 7 Nov 2017 6:44 pm  
Operator : DANAT  
Sample : ic76-0.5  
Misc : MS21818,V6W76,,,,,1  
ALS Vial : 5 Sample Multiplier: 1
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Quant Time: Nov 08 09:04:49 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Wed Nov 08 09:02:01 2017
Response via : Initial Calibration



7.7.26

Manual Integration Approval Summary

Sample Number: V6W76-IC76

Method: TO-15

Lab FileID: 6W02921.D

Analyst approved: 11/08/17 09:40 Dana Tryon

Injection Time: 11/07/17 18:44

Supervisor approved: 11/09/17 15:47 Dana Tryon

Parameter	CAS	Sig#	R.T. (min.)	Reason

TVHC As Equiv Pentane			5.62	Poor instrument integration

7.7.26.1
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W02922.D
 Acq On : 7 Nov 2017 7:35 pm
 Operator : DANAT
 Sample : ic76-5
 Misc : MS21818,V6W76,,,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 08 09:00:36 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:00:20 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.189	130	223358	10.00	ppb(v)	0.00
54) 1,4-Difluorobenzene	10.397	114	815599	10.00	ppb(v)	0.00
77) Chlorobenzene-d5	15.934	82	370753	10.00	ppb(v)	0.00
108) Bromochloromethane (A)	8.189	130	223358	10.00	ppb(v)	0.00

System Monitoring Compounds

91) 4-Bromofluorobenzene	18.179	95	499754	10.86	ppb(v)	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	108.60%

Target Compounds					Qvalue	
2) 1,1,1-Trifluoroethane	3.637	69	235839	9.05	ppb(v)	98
3) Freon 152A	3.735	65	72571	5.54	ppb(v)	98
4) Chlorodifluoromethane	3.772	67	27894	5.59	ppb(v)	96
5) Propene	3.796	41	85944	5.70	ppb(v)	98
6) Chlorotrifluoroethene	3.803	116	185087	5.52	ppb(v)	100
7) Dichlorodifluoromethane	3.858	85	290624	5.67	ppb(v)	100
8) 1-Chloro-1,1-difluoro...	3.968	65	204867	6.10	ppb(v)	99
9) Chloromethane	3.986	50	102129	6.34	ppb(v)	100
10) Dichlorotetrafluoroethane	4.066	85	281610	6.24	ppb(v)	99
11) Vinyl Chloride	4.164	62	115279	6.06	ppb(v)	100
12) 1,3-Butadiene	4.274	54	88835	6.24	ppb(v)	99
13) n-Butane	4.316	58	21582	6.21	ppb(v)	99
14) Bromomethane	4.500	94	104235	5.90	ppb(v)	99
15) Chloroethane	4.641	64	58966	6.06	ppb(v)	100
16) Dichlorofluoromethane	4.720	67	243054	6.24	ppb(v)	100
17) Acetonitrile	4.928	41	89456	5.50	ppb(v)	99
18) Freon 123	5.075	83	299444	5.45	ppb(v)	100
19) Freon 123A	5.118	117	320689	10.87	ppb(v)	99
20) Bromoethene	4.940	106	108899	5.20	ppb(v)	99
21) Trichlorofluoromethane	5.301	101	272135	5.41	ppb(v)	99
22) Acetone	5.155	58	56302	5.50	ppb(v)	97
23) Pentane	5.620	57	30075	5.52	ppb(v)	98
24) 1,1-Dichloro-1-fluoro...	5.412	81	236173	5.51	ppb(v)	100
25) Iodomethane	5.821	142	317212	5.28	ppb(v)	99
26) Isopropyl Alcohol	5.369	45	231253	5.61	ppb(v)	100
27) 1,1-Dichloroethene	5.889	61	180920	5.61	ppb(v)	99
28) Freon 113	6.250	101	248326	5.45	ppb(v)	99
29) Methylene Chloride	6.005	84	110484	5.53	ppb(v)	99
30) Carbon Disulfide	6.286	76	382108	5.54	ppb(v)	100
31) Ethanol	4.732	45	34086	6.35	ppb(v)	100
32) Acrylonitrile	5.577	53	91754	5.51	ppb(v)	99
33) 3-Chloropropene	6.115	76	55730	5.39	ppb(v)	99
34) trans-1,2-Dichloroethene	6.923	61	171169	5.48	ppb(v)	100
35) tert-Butyl Alcohol	5.919	59	243182	5.56	ppb(v)	99
36) Methyl tert-Butyl Ether	7.180	73	324289	5.45	ppb(v)	99
37) Vinyl Acetate	7.277	43	294243	5.50	ppb(v)	99
38) 1,1-Dichloroethane	7.124	63	214524	5.54	ppb(v)	100
39) 2-Butanone	7.540	72	63597	5.40	ppb(v)	99
40) Hexane	8.220	57	196574	5.74	ppb(v)	99
41) cis-1,2-Dichloroethene	8.012	61	162724	5.51	ppb(v)	100
42) Di-isopropyl Ether	8.220	87	109711	5.59	ppb(v)	98
43) Ethyl Acetate	8.256	61	42161	5.54	ppb(v)	96
44) Methyl Acrylate	8.244	55	238290	5.69	ppb(v)	100
45) Chloroform	8.336	83	253041	5.58	ppb(v)	99
46) 2,4-Dimethylpentane	9.204	57	220879	5.54	ppb(v)	100
47) Tetrahydrofuran	8.776	72	58992	5.41	ppb(v)	98
48) 1,1,1-Trichloroethane	9.431	97	227787	5.42	ppb(v)	99
49) 1,2-Dichloroethane	9.149	62	149382	5.57	ppb(v)	99
50) Benzene	9.957	78	392300	5.53	ppb(v)	99
51) Carbon Tetrachloride	10.134	117	246438	5.36	ppb(v)	99
52) Cyclohexane	10.269	56	188754	5.48	ppb(v)	100
53) 2,3-Dimethylpentane	10.563	71	87470	5.56	ppb(v)	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W02922.D
 Acq On : 7 Nov 2017 7:35 pm
 Operator : DANAT
 Sample : ic76-5
 Misc : MS21818,V6W76,,,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 08 09:00:36 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:00:20 2017
 Response via : Initial Calibration

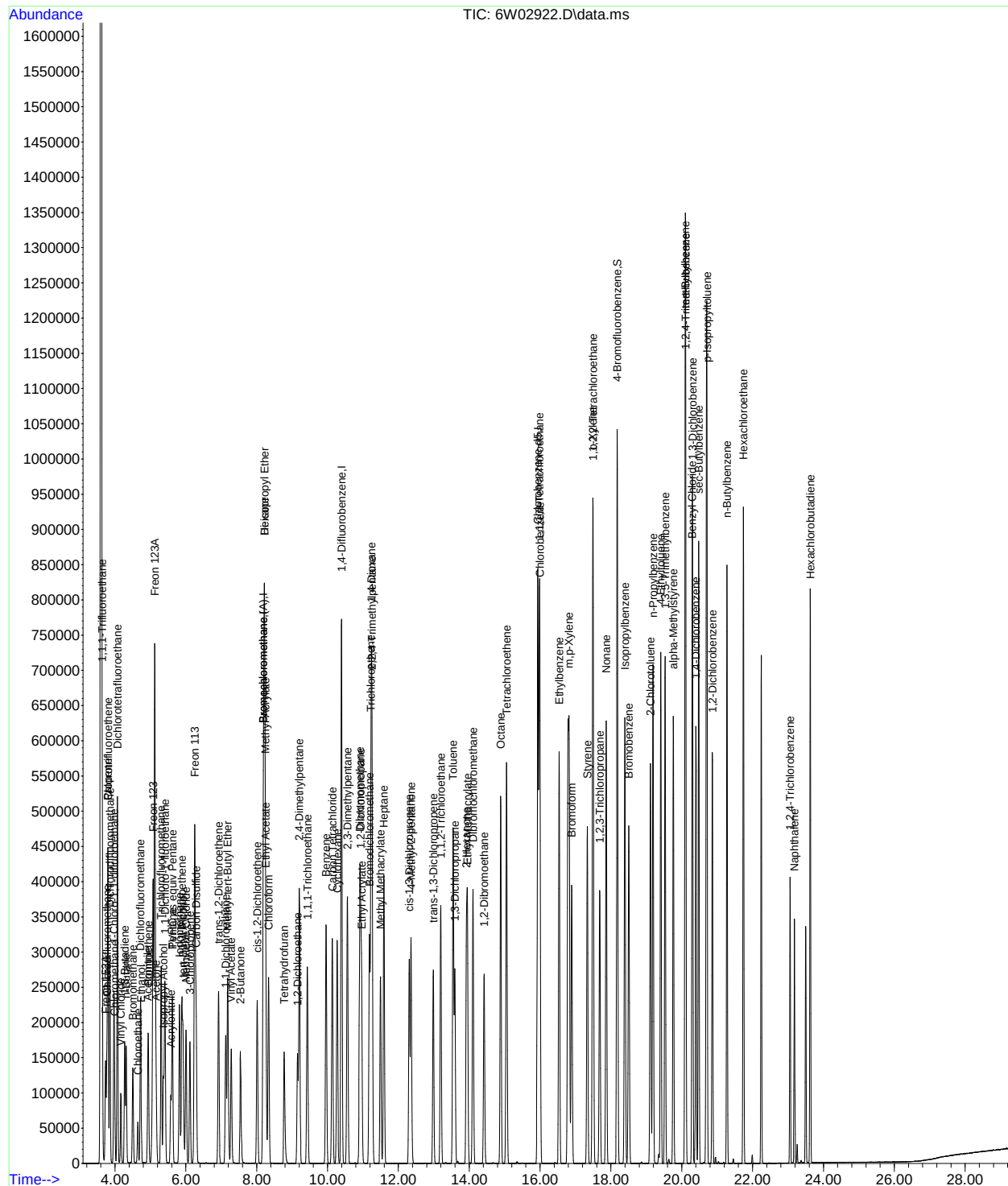
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.254	57	626781	5.79	ppb(v)	100
56) Heptane	11.590	71	135381	5.55	ppb(v)	99
57) Trichloroethene	11.223	95	174418	5.63	ppb(v)	98
58) 1,2-Dichloropropane	10.936	63	145874	5.53	ppb(v)	99
59) Dibromomethane	10.911	174	159922	5.30	ppb(v)	99
60) Ethyl Acrylate	10.966	55	287429	5.43	ppb(v)	100
61) Methyl Methacrylate	11.499	69	143570	5.35	ppb(v)	99
62) 1,4-Dioxane	11.236	88	76933	5.53	ppb(v)	92
63) Bromodichloromethane	11.181	83	277121	5.45	ppb(v)	99
64) cis-1,3-Dichloropropene	12.306	75	222451	5.32	ppb(v)	99
65) 4-Methyl-2-pentanone	12.355	58	118423	5.42	ppb(v)	99
66) trans-1,3-Dichloropropene	12.985	75	201851	5.27	ppb(v)	99
67) Toluene	13.542	91	467571	5.48	ppb(v)	100
68) 1,1,2-Trichloroethane	13.199	97	159201	5.42	ppb(v)	99
69) 1,3-Dichloropropane	13.591	76	225759	5.52	ppb(v)	99
70) 2-Hexanone	13.921	58	161043	5.37	ppb(v)	99
71) Ethyl Methacrylate	13.952	69	236481	5.38	ppb(v)	99
72) Dibromochloromethane	14.105	129	281275	5.37	ppb(v)	99
73) Tetrachloroethene	15.053	166	230450	5.44	ppb(v)	99
74) 1,2-Dibromoethane	14.423	107	252522	5.42	ppb(v)	98
75) Octane	14.888	43	282149	5.59	ppb(v)	99
76) 1,1,1,2-Tetrachloroethane	15.983	131	193668	5.45	ppb(v)	99
78) Chlorobenzene	15.995	112	364258	6.46	ppb(v)	99
79) Ethylbenzene	16.540	91	587198	6.34	ppb(v)	100
80) m,p-Xylene	16.815	91	905993	12.89	ppb(v)	100
81) Styrene	17.335	104	330173	6.14	ppb(v)	100
82) Nonane	17.867	43	291067	6.64	ppb(v)	99
83) o-Xylene	17.488	91	462667	6.57	ppb(v)	99
84) Bromoform	16.888	173	262883	6.03	ppb(v)	99
85) 1,1,2,2-Tetrachloroethane	17.494	83	328056	6.73	ppb(v)	99
86) 1,2,3-Trichloropropane	17.684	75	238355	6.46	ppb(v)	99
87) Isopropylbenzene	18.393	105	600374	6.46	ppb(v)	99
88) Bromobenzene	18.503	156	200189	6.34	ppb(v)	98
89) 2-Chlorotoluene	19.115	126	147291	6.27	ppb(v)	99
90) n-Propylbenzene	19.189	120	170463	6.39	ppb(v)	97
92) 4-Ethyltoluene	19.409	105	595932	6.52	ppb(v)	99
93) 1,3,5-Trimethylbenzene	19.531	105	495461	6.49	ppb(v)	100
94) alpha-Methylstyrene	19.758	118	237978	6.18	ppb(v)	100
95) tert-Butylbenzene	20.100	134	120621	6.77	ppb(v)	99
96) 1,2,4-Trimethylbenzene	20.112	105	488061	6.91	ppb(v)	96
97) 1,3-Dichlorobenzene	20.302	146	311089	6.60	ppb(v)	99
98) Benzyl Chloride	20.290	91	366750	6.17	ppb(v)	98
99) 1,4-Dichlorobenzene	20.400	146	300200	6.38	ppb(v)	99
100) sec-Butylbenzene	20.479	134	139767	6.58	ppb(v)	99
101) p-Isopropyltoluene	20.712	134	156153	6.84	ppb(v)	98
102) 1,2-Dichlorobenzene	20.865	146	285389	6.42	ppb(v)	99
103) n-Butylbenzene	21.275	134	131039	6.35	ppb(v)	99
104) Hexachloroethane	21.740	201	167195	6.09	ppb(v)	99
105) 1,2,4-Trichlorobenzene	23.055	180	126392	5.60	ppb(v)	99
106) Naphthalene	23.183	128	278030	5.76	ppb(v)	100
107) Hexachlorobutadiene	23.630	225	157668	6.16	ppb(v)	99
109) TVHC as equiv Pentane	5.620	TIC	520931	5.57	ppb(v)	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W02922.D
Acq On : 7 Nov 2017 7:35 pm
Operator : DANAT
Sample : ic76-5
Misc : MS21818,V6W76,,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 08 09:00:36 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:00:20 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W02923.D
 Acq On : 7 Nov 2017 8:26 pm
 Operator : DANAT
 Sample : icc76-10
 Misc : MS21818,V6W76,,,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 08 08:54:39 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Oct 27 16:04:07 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.195	130	229071	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.398	114	813074	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.934	82	418516	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.195	130	229071	10.00	ppb(v	0.00

System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.179	95	549222	9.86	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	98.60%

Target Compounds						Qvalue
2) 1,1,1-Trifluoroethane	3.637	69	372013	7.17	ppb(v#	85
3) Freon 152A	3.735	65	147300	11.59	ppb(v	98
4) Chlorodifluoromethane	3.772	67	56273	12.61	ppb(v	98
5) Propene	3.797	41	172249	11.31	ppb(v	98
6) Chlorotrifluoroethene	3.803	116	375740	10.86	ppb(v	99
7) Dichlorodifluoromethane	3.858	85	592128	11.30	ppb(v	100
8) 1-Chloro-1,1-difluoro...	3.968	65	399251	12.15	ppb(v	99
9) Chloromethane	3.986	50	193790	14.50	ppb(v	99
10) Dichlorotetrafluoroethane	4.066	85	544176	12.28	ppb(v	95
11) Vinyl Chloride	4.164	62	221839	13.51	ppb(v	100
12) 1,3-Butadiene	4.274	54	169379	13.48	ppb(v	98
13) n-Butane	4.316	58	41337	14.58	ppb(v	91
14) Bromomethane	4.500	94	203792	11.97	ppb(v	100
15) Chloroethane	4.641	64	113332	13.11	ppb(v	99
16) Dichlorofluoromethane	4.720	67	462350	12.02	ppb(v	99
17) Acetonitrile	4.928	41	179055	13.76	ppb(v	100
18) Freon 123	5.075	83	604249	13.38	ppb(v	100
19) Freon 123A	5.118	117	649424	26.22	ppb(v	85
20) Bromoethene	4.941	106	223050	12.50	ppb(v	99
21) Trichlorofluoromethane	5.301	101	545175	12.16	ppb(v	100
22) Acetone	5.155	58	112864	13.01	ppb(v	96
23) Pentane	5.620	57	59994	10.39	ppb(v	93
24) 1,1-Dichloro-1-fluoro...	5.412	81	473483	11.52	ppb(v	99
25) Iodomethane	5.821	142	642162	9.85	ppb(v	97
26) Isopropyl Alcohol	5.369	45	458354	12.41	ppb(v	99
27) 1,1-Dichloroethene	5.889	61	358102	10.57	ppb(v	98
28) Freon 113	6.250	101	500043	10.38	ppb(v	97
29) Methylene Chloride	6.005	84	219564	9.19	ppb(v	95
30) Carbon Disulfide	6.286	76	762854	10.15	ppb(v	100
31) Ethanol	4.733	45	63901	13.20	ppb(v	99
32) Acrylonitrile	5.571	53	183037	10.09	ppb(v	98
33) 3-Chloropropene	6.115	76	112805	10.71	ppb(v	92
34) trans-1,2-Dichloroethene	6.923	61	342927	10.26	ppb(v	97
35) tert-Butyl Alcohol	5.919	59	486643	10.34	ppb(v	97
36) Methyl tert-Butyl Ether	7.180	73	650430	9.92	ppb(v	98
37) Vinyl Acetate	7.284	43	590338	10.63	ppb(v	98
38) 1,1-Dichloroethane	7.131	63	424689	10.32	ppb(v	100
39) 2-Butanone	7.541	72	127301	10.33	ppb(v	89
40) Hexane	8.220	57	390396	10.40	ppb(v	95
41) cis-1,2-Dichloroethene	8.012	61	322750	10.45	ppb(v	97
42) Di-isopropyl Ether	8.220	87	218797	10.57	ppb(v	86
43) Ethyl Acetate	8.256	61	84665	11.23	ppb(v	90
44) Methyl Acrylate	8.244	55	473969	10.43	ppb(v	99
45) Chloroform	8.336	83	500729	10.37	ppb(v	99
46) 2,4-Dimethylpentane	9.205	57	440032	10.01	ppb(v	99
47) Tetrahydrofuran	8.770	72	118123	10.88	ppb(v	93
48) 1,1,1-Trichloroethane	9.431	97	455256	10.48	ppb(v	99
49) 1,2-Dichloroethane	9.149	62	294570	10.78	ppb(v	98
50) Benzene	9.963	78	776478	9.70	ppb(v	99
51) Carbon Tetrachloride	10.134	117	496107	11.45	ppb(v	99
52) Cyclohexane	10.269	56	378686	10.14	ppb(v	97
53) 2,3-Dimethylpentane	10.563	71	172568	10.27	ppb(v	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W02923.D
 Acq On : 7 Nov 2017 8:26 pm
 Operator : DANAT
 Sample : icc76-10
 Misc : MS21818,V6W76,,,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 08 08:54:39 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Fri Oct 27 16:04:07 2017
 Response via : Initial Calibration

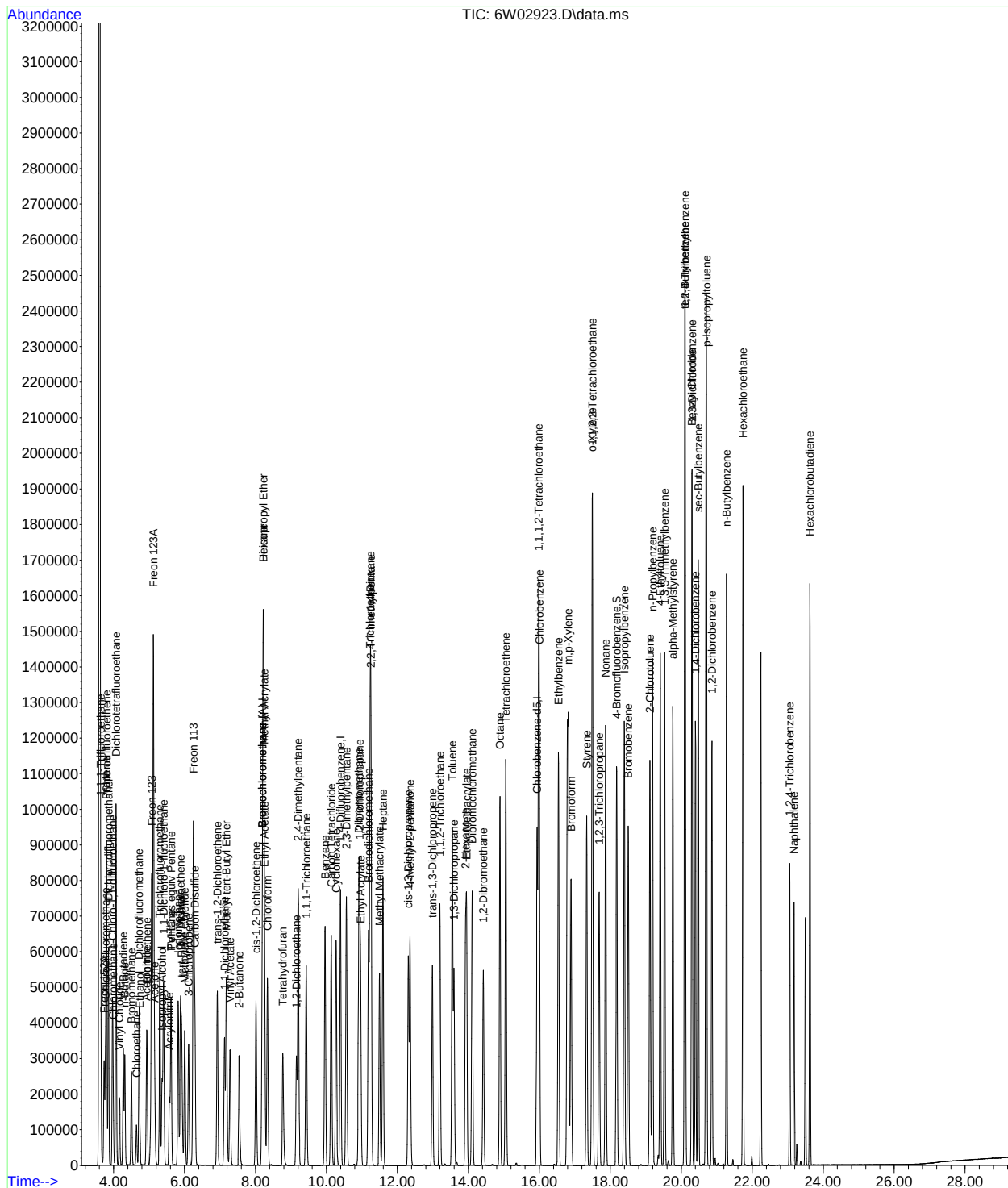
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.254	57	1237313	11.35	ppb(v)	98
56) Heptane	11.597	71	269543	10.91	ppb(v)	97
57) Trichloroethene	11.230	95	347150	11.18	ppb(v)	97
58) 1,2-Dichloropropane	10.936	63	292190	11.42	ppb(v)	99
59) Dibromomethane	10.911	174	323457	10.17	ppb(v)	94
60) Ethyl Acrylate	10.966	55	581493	10.98	ppb(v)	99
61) Methyl Methacrylate	11.499	69	290827	10.75	ppb(v)	94
62) 1,4-Dioxane	11.236	88	154968	11.21	ppb(v)	93
63) Bromodichloromethane	11.187	83	556143	12.40	ppb(v)	100
64) cis-1,3-Dichloropropene	12.306	75	452222	11.20	ppb(v)	99
65) 4-Methyl-2-pentanone	12.355	58	238745	11.27	ppb(v)	94
66) trans-1,3-Dichloropropene	12.985	75	413654	11.20	ppb(v)	98
67) Toluene	13.548	91	935570	10.26	ppb(v)	99
68) 1,1,2-Trichloroethane	13.199	97	319874	10.93	ppb(v)	99
69) 1,3-Dichloropropane	13.591	76	450170	11.10	ppb(v)	97
70) 2-Hexanone	13.921	58	327397	10.31	ppb(v)	95
71) Ethyl Methacrylate	13.952	69	483082	11.04	ppb(v)	97
72) Dibromochloromethane	14.105	129	569165	13.38	ppb(v)	100
73) Tetrachloroethene	15.059	166	461116	10.42	ppb(v)	99
74) 1,2-Dibromoethane	14.423	107	508994	11.17	ppb(v)	99
75) Octane	14.894	43	566232	10.86	ppb(v)	95
76) 1,1,1,2-Tetrachloroethane	15.983	131	391455	12.17	ppb(v)	100
78) Chlorobenzene	16.001	112	726491	9.68	ppb(v)	100
79) Ethylbenzene	16.540	91	1179825	9.30	ppb(v)	99
80) m,p-Xylene	16.815	91	1817246	18.73	ppb(v)	99
81) Styrene	17.335	104	676693	9.27	ppb(v)	100
82) Nonane	17.867	43	578790	10.55	ppb(v)	95
83) o-Xylene	17.488	91	926884	9.41	ppb(v)	99
84) Bromoform	16.895	173	544339	12.50	ppb(v)	100
85) 1,1,2,2-Tetrachloroethane	17.494	83	648003	10.35	ppb(v)	99
86) 1,2,3-Trichloropropane	17.690	75	470951	9.91	ppb(v)	98
87) Isopropylbenzene	18.393	105	1197651	9.08	ppb(v)	99
88) Bromobenzene	18.503	156	399378	9.49	ppb(v)	94
89) 2-Chlorotoluene	19.115	126	296922	9.17	ppb(v)	94
90) n-Propylbenzene	19.189	120	342270	9.13	ppb(v)	98
92) 4-Ethyltoluene	19.409	105	1187340	9.08	ppb(v)	98
93) 1,3,5-Trimethylbenzene	19.531	105	992783	8.84	ppb(v)	100
94) alpha-Methylstyrene	19.758	118	489319	9.18	ppb(v)	99
95) tert-Butylbenzene	20.100	134	240057	8.95	ppb(v)	96
96) 1,2,4-Trimethylbenzene	20.112	105	965763	9.22	ppb(v)	93
97) 1,3-Dichlorobenzene	20.302	146	622478	9.47	ppb(v)	98
98) Benzyl Chloride	20.296	91	774018	10.70	ppb(v)	100
99) 1,4-Dichlorobenzene	20.400	146	606491	9.23	ppb(v)	99
100) sec-Butylbenzene	20.479	134	275943	8.82	ppb(v)	93
101) p-Isopropyltoluene	20.712	134	308382	9.54	ppb(v)	96
102) 1,2-Dichlorobenzene	20.865	146	570513	9.09	ppb(v)	100
103) n-Butylbenzene	21.275	134	263262	8.78	ppb(v)	90
104) Hexachloroethane	21.740	201	346812	12.34	ppb(v)	91
105) 1,2,4-Trichlorobenzene	23.055	180	267131	8.18	ppb(v)	100
106) Naphthalene	23.183	128	582301	9.10	ppb(v)	99
107) Hexachlorobutadiene	23.624	225	318046	7.88	ppb(v)	99
109) TVHC as equiv Pentane	5.620	TIC	1033212	10.52	ppb(v)	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W02923.D
Acq On : 7 Nov 2017 8:26 pm
Operator : DANAT
Sample : icc76-10
Misc : MS21818,V6W76,,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 08 08:54:39 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Fri Oct 27 16:04:07 2017
Response via : Initial Calibration



7.7.28



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W02924.D
 Acq On : 7 Nov 2017 9:19 pm
 Operator : DANAT
 Sample : ic76-20
 Misc : MS21818,V6W76,,,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 08 08:56:58 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 08:56:46 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.195	130	245937	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.397	114	898144	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.940	82	470529	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.195	130	245937	10.00	ppb(v	0.00

System Monitoring Compounds

91) 4-Bromofluorobenzene	18.185	95	580703	9.40	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	94.00%

Target Compounds					Qvalue	
2) 1,1,1-Trifluoroethane	3.637	69	585249	14.65	ppb(v	99
3) Freon 152A	3.735	65	285204	18.03	ppb(v	99
4) Chlorodifluoromethane	3.772	67	110302	18.26	ppb(v	99
5) Propene	3.796	41	333016	18.01	ppb(v	99
6) Chlorotrifluoroethene	3.802	116	740080	18.35	ppb(v	99
7) Dichlorodifluoromethane	3.858	85	1149826	18.09	ppb(v	99
8) 1-Chloro-1,1-difluoro...	3.968	65	758352	17.69	ppb(v	99
9) Chloromethane	3.986	50	367992	17.69	ppb(v	100
10) Dichlorotetrafluoroethane	4.066	85	1025906	17.56	ppb(v	99
11) Vinyl Chloride	4.170	62	428074	17.97	ppb(v	99
12) 1,3-Butadiene	4.280	54	322287	17.72	ppb(v	97
13) n-Butane	4.316	58	78804	17.76	ppb(v	93
14) Bromomethane	4.506	94	393467	17.98	ppb(v	100
15) Chloroethane	4.647	64	217603	17.88	ppb(v	99
16) Dichlorofluoromethane	4.720	67	876231	17.65	ppb(v	100
17) Acetonitrile	4.934	41	363990	18.93	ppb(v	98
18) Freon 123	5.075	83	1239295	19.10	ppb(v	100
19) Freon 123A	5.124	117	1343837	38.55	ppb(v	95
20) Bromoethene	4.940	106	472483	19.73	ppb(v	100
21) Trichlorofluoromethane	5.307	101	1133494	19.37	ppb(v	99
22) Acetone	5.154	58	229843	18.97	ppb(v	97
23) Pentane	5.619	57	121719	18.90	ppb(v	97
24) 1,1-Dichloro-1-fluoro...	5.411	81	960377	18.89	ppb(v	100
25) Iodomethane	5.821	142	1355868	19.67	ppb(v	99
26) Isopropyl Alcohol	5.369	45	925430	18.81	ppb(v	98
27) 1,1-Dichloroethene	5.889	61	723209	18.81	ppb(v	99
28) Freon 113	6.250	101	1024132	19.08	ppb(v	100
29) Methylene Chloride	6.011	84	447135	18.97	ppb(v	97
30) Carbon Disulfide	6.292	76	1543302	18.84	ppb(v	100
31) Ethanol	4.738	45	121347	17.69	ppb(v	100
32) Acrylonitrile	5.577	53	372401	18.95	ppb(v	100
33) 3-Chloropropene	6.115	76	230937	19.07	ppb(v	98
34) trans-1,2-Dichloroethene	6.922	61	698824	18.98	ppb(v	99
35) tert-Butyl Alcohol	5.919	59	989571	18.94	ppb(v	99
36) Methyl tert-Butyl Ether	7.179	73	1330740	19.06	ppb(v	100
37) Vinyl Acetate	7.283	43	1202551	18.97	ppb(v	99
38) 1,1-Dichloroethane	7.130	63	864953	18.97	ppb(v	99
39) 2-Butanone	7.540	72	263363	19.27	ppb(v	96
40) Hexane	8.226	57	782736	18.67	ppb(v	100
41) cis-1,2-Dichloroethene	8.011	61	659717	19.04	ppb(v	99
42) Di-isopropyl Ether	8.219	87	444589	18.93	ppb(v	96
43) Ethyl Acetate	8.256	61	171876	18.91	ppb(v	100
44) Methyl Acrylate	8.244	55	952853	18.73	ppb(v	99
45) Chloroform	8.342	83	1014196	18.87	ppb(v	99
46) 2,4-Dimethylpentane	9.204	57	892488	18.89	ppb(v	100
47) Tetrahydrofuran	8.770	72	243937	19.23	ppb(v	98
48) 1,1,1-Trichloroethane	9.431	97	943589	19.31	ppb(v	100
49) 1,2-Dichloroethane	9.155	62	600870	19.00	ppb(v	100
50) Benzene	9.963	78	1585964	19.02	ppb(v	100
51) Carbon Tetrachloride	10.134	117	1028249	19.30	ppb(v	99
52) Cyclohexane	10.269	56	770996	18.96	ppb(v	100
53) 2,3-Dimethylpentane	10.563	71	353167	19.06	ppb(v	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W02924.D
 Acq On : 7 Nov 2017 9:19 pm
 Operator : DANAT
 Sample : ic76-20
 Misc : MS21818,V6W76,,,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 08 08:56:58 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 08:56:46 2017
 Response via : Initial Calibration

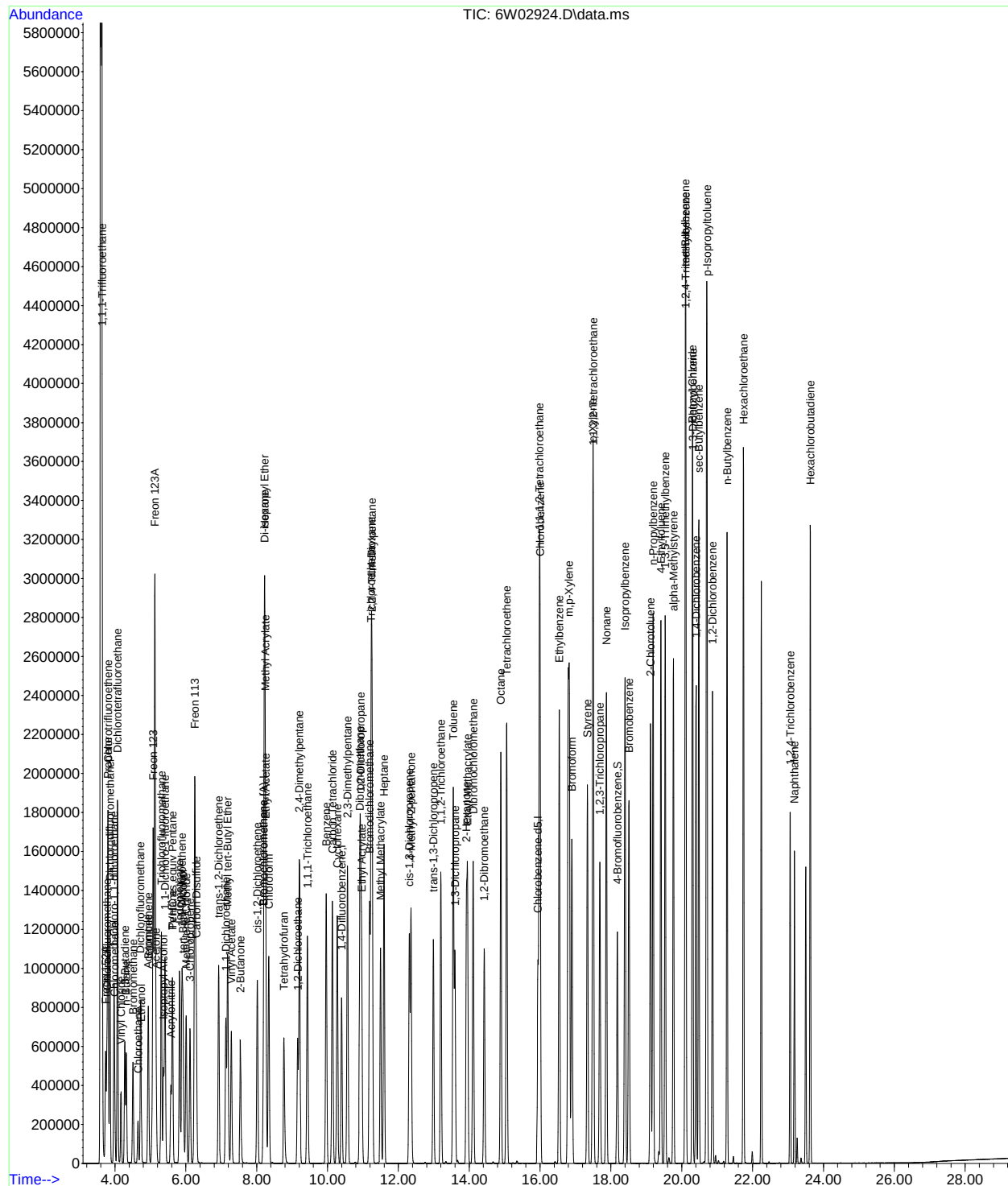
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.254	57	2444351	17.88	ppb(v)	99
56) Heptane	11.596	71	544517	18.29	ppb(v)	99
57) Trichloroethene	11.229	95	699186	18.23	ppb(v)	99
58) 1,2-Dichloropropane	10.936	63	591802	18.34	ppb(v)	100
59) Dibromomethane	10.911	174	675719	18.91	ppb(v)	99
60) Ethyl Acrylate	10.966	55	1185685	18.46	ppb(v)	100
61) Methyl Methacrylate	11.499	69	597329	18.59	ppb(v)	98
62) 1,4-Dioxane	11.235	88	314088	18.35	ppb(v)	92
63) Bromodichloromethane	11.187	83	1140367	18.56	ppb(v)	100
64) cis-1,3-Dichloropropene	12.306	75	930017	18.62	ppb(v)	100
65) 4-Methyl-2-pentanone	12.355	58	485324	18.40	ppb(v)	98
66) trans-1,3-Dichloropropene	12.985	75	851645	18.64	ppb(v)	100
67) Toluene	13.548	91	1902427	18.41	ppb(v)	100
68) 1,1,2-Trichloroethane	13.199	97	654610	18.53	ppb(v)	100
69) 1,3-Dichloropropane	13.597	76	907766	18.25	ppb(v)	99
70) 2-Hexanone	13.921	58	676028	18.69	ppb(v)	98
71) Ethyl Methacrylate	13.952	69	986001	18.48	ppb(v)	99
72) Dibromochloromethane	14.111	129	1171875	18.64	ppb(v)	100
73) Tetrachloroethene	15.059	166	948740	18.63	ppb(v)	100
74) 1,2-Dibromoethane	14.423	107	1039427	18.49	ppb(v)	99
75) Octane	14.894	43	1133718	18.13	ppb(v)	99
76) 1,1,1,2-Tetrachloroethane	15.983	131	803992	18.59	ppb(v)	99
78) Chlorobenzene	16.001	112	1462950	17.91	ppb(v)	99
79) Ethylbenzene	16.546	91	2390153	18.02	ppb(v)	100
80) m,p-Xylene	16.815	91	3635131	35.58	ppb(v)	100
81) Styrene	17.335	104	1387740	18.24	ppb(v)	100
82) Nonane	17.873	43	1142844	17.56	ppb(v)	98
83) o-Xylene	17.488	91	1835824	17.62	ppb(v)	100
84) Bromoform	16.894	173	1129549	18.46	ppb(v)	100
85) 1,1,2,2-Tetrachloroethane	17.500	83	1274489	17.49	ppb(v)	99
86) 1,2,3-Trichloropropane	17.690	75	947760	17.90	ppb(v)	100
87) Isopropylbenzene	18.399	105	2402196	17.84	ppb(v)	100
88) Bromobenzene	18.509	156	808688	18.01	ppb(v)	96
89) 2-Chlorotoluene	19.115	126	602700	18.05	ppb(v)	100
90) n-Propylbenzene	19.188	120	688642	17.90	ppb(v)	99
92) 4-Ethyltoluene	19.415	105	2373876	17.78	ppb(v)	99
93) 1,3,5-Trimethylbenzene	19.531	105	1977308	17.72	ppb(v)	99
94) alpha-Methylstyrene	19.764	118	996750	18.12	ppb(v)	100
95) tert-Butylbenzene	20.100	134	464998	17.23	ppb(v)	99
96) 1,2,4-Trimethylbenzene	20.112	105	1849259	17.03	ppb(v)	90
97) 1,3-Dichlorobenzene	20.308	146	1219352	17.42	ppb(v)	99
98) Benzyl Chloride	20.296	91	1564284	17.98	ppb(v)	100
99) 1,4-Dichlorobenzene	20.406	146	1209597	17.74	ppb(v)	99
100) sec-Butylbenzene	20.485	134	552370	17.80	ppb(v)	91
101) p-Isopropyltoluene	20.712	134	599743	17.30	ppb(v)	97
102) 1,2-Dichlorobenzene	20.865	146	1145053	17.85	ppb(v)	99
103) n-Butylbenzene	21.281	134	538840	18.21	ppb(v)	91
104) Hexachloroethane	21.746	201	723258	18.55	ppb(v)	89
105) 1,2,4-Trichlorobenzene	23.061	180	590942	19.68	ppb(v)	99
106) Naphthalene	23.183	128	1256496	19.19	ppb(v)	99
107) Hexachlorobutadiene	23.630	225	676539	18.92	ppb(v)	99
109) TVHC as equiv Pentane	5.619	TIC	2118425	19.10	ppb(v)	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W02924.D
Acq On : 7 Nov 2017 9:19 pm
Operator : DANAT
Sample : ic76-20
Misc : MS21818,V6W76,,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 08 08:56:58 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 08:56:46 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Manual Integrations
APPROVED
(compounds with "m" flag)

Dana Tryon
11/09/17 15:47

Data Path : C:\msdchem\1\data\
Data File : 6W02925.D
Acq On : 7 Nov 2017 10:15 pm
Operator : DANAT
Sample : ic76-40
Misc : MS21818,V6W76,,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 08 09:00:12 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 08:58:20 2017
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.195	130	261279	10.00	ppb(v)	0.00
54) 1,4-Difluorobenzene	10.398	114	968343	10.00	ppb(v)	0.00
77) Chlorobenzene-d5	15.940	82	521891	10.00	ppb(v)	0.00
108) Bromochloromethane (A)	8.195	130	261279	10.00	ppb(v)	0.00

System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.185	95	614141	9.24	ppb(v)	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	92.40%

Target Compounds						Qvalue
2) 1,1,1-Trifluoroethane	3.638	69	716344	19.49	ppb(v)	97
3) Freon 152A	3.735	65	559680	35.03	ppb(v)	98
4) Chlorodifluoromethane	3.772	67	209891	34.19	ppb(v)	99
5) Propene	3.797	41	623640	33.41	ppb(v)	99
6) Chlorotrifluoroethene	3.803	116	1416157	34.47	ppb(v)	100
7) Dichlorodifluoromethane	3.852	85	2045618	31.81	ppb(v)	99
8) 1-Chloro-1,1-difluoro...	3.968	65	1281876	29.87	ppb(v)	100
9) Chloromethane	3.986	50	596028	28.62	ppb(v)	100
10) Dichlorotetrafluoroethane	4.066	85	1668340	28.63	ppb(v)	93
11) Vinyl Chloride	4.164	62	748458	31.16	ppb(v)	100
12) 1,3-Butadiene	4.274	54	539493	29.61	ppb(v)	98
13) n-Butane	4.317	58	132143	29.69	ppb(v)	88
14) Bromomethane	4.500	94	716233	32.45	ppb(v)	99
15) Chloroethane	4.641	64	385555	31.49	ppb(v)	99
16) Dichlorofluoromethane	4.720	67	1493114	30.08	ppb(v)	100
17) Acetonitrile	4.928	41	693677	34.90	ppb(v)	99
18) Freon 123	5.075	83	2322892	34.48	ppb(v)	100
19) Freon 123A	5.118	117	2462917	67.73	ppb(v)	93
20) Bromoethene	4.941	106	916475	36.27	ppb(v)	99
21) Trichlorofluoromethane	5.302	101	2168583	35.44	ppb(v)	99
22) Acetone	5.155	58	433632	34.58	ppb(v)	95
23) Pentane	5.620	57	231858	34.84	ppb(v)	93
24) 1,1-Dichloro-1-fluoro...	5.412	81	1814856	34.56	ppb(v)	99
25) Iodomethane	5.822	142	2623964	36.13	ppb(v)	100
26) Isopropyl Alcohol	5.369	45	1729671	34.10	ppb(v)	98
27) 1,1-Dichloroethene	5.889	61	1357644	34.26	ppb(v)	98
28) Freon 113	6.250	101	1939913	34.82	ppb(v)	98
29) Methylene Chloride	6.005	84	854807	35.04	ppb(v)	98
30) Carbon Disulfide	6.286	76	2921790	34.58	ppb(v)	100
31) Ethanol	4.739	45	204497	29.78	ppb(v)	99
32) Acrylonitrile	5.577	53	713234	35.08	ppb(v)	99
33) 3-Chloropropene	6.115	76	446795	35.55	ppb(v)	91
34) trans-1,2-Dichloroethene	6.923	61	1338581	35.12	ppb(v)	97
35) tert-Butyl Alcohol	5.926	59	1817869	33.64	ppb(v)	98
36) Methyl tert-Butyl Ether	7.180	73	2561160	35.36	ppb(v)	99
37) Vinyl Acetate	7.284	43	2265339	34.53	ppb(v)	98
38) 1,1-Dichloroethane	7.131	63	1659185	35.16	ppb(v)	99
39) 2-Butanone	7.541	72	512609	35.96	ppb(v)	91
40) Hexane	8.220	57	1363231	31.66	ppb(v)	94
41) cis-1,2-Dichloroethene	8.012	61	1269202	35.33	ppb(v)	98
42) Di-isopropyl Ether	8.220	87	810027	33.35	ppb(v)	85
43) Ethyl Acetate	8.263	61	316049	33.65	ppb(v)	82
44) Methyl Acrylate	8.250	55	1694388	32.37	ppb(v)	99
45) Chloroform	8.342	83	1924553	34.68	ppb(v)	98
46) 2,4-Dimethylpentane	9.205	57	1691304	34.66	ppb(v)	99
47) Tetrahydrofuran	8.764	72	474096	35.87	ppb(v)	95
48) 1,1,1-Trichloroethane	9.431	97	1820283	35.67	ppb(v)	99
49) 1,2-Dichloroethane	9.156	62	1145532	34.97	ppb(v)	99
50) Benzene	9.963	78	3048004	35.28	ppb(v)	100
51) Carbon Tetrachloride	10.135	117	2002022	36.01	ppb(v)	99
52) Cyclohexane	10.269	56	1470305	34.95	ppb(v)	99
53) 2,3-Dimethylpentane	10.563	71	672532	34.99	ppb(v)	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W02925.D
 Acq On : 7 Nov 2017 10:15 pm
 Operator : DANAT
 Sample : ic76-40
 Misc : MS21818,V6W76,,,,,1
 ALS Vial : 9 Sample Multiplier: 1

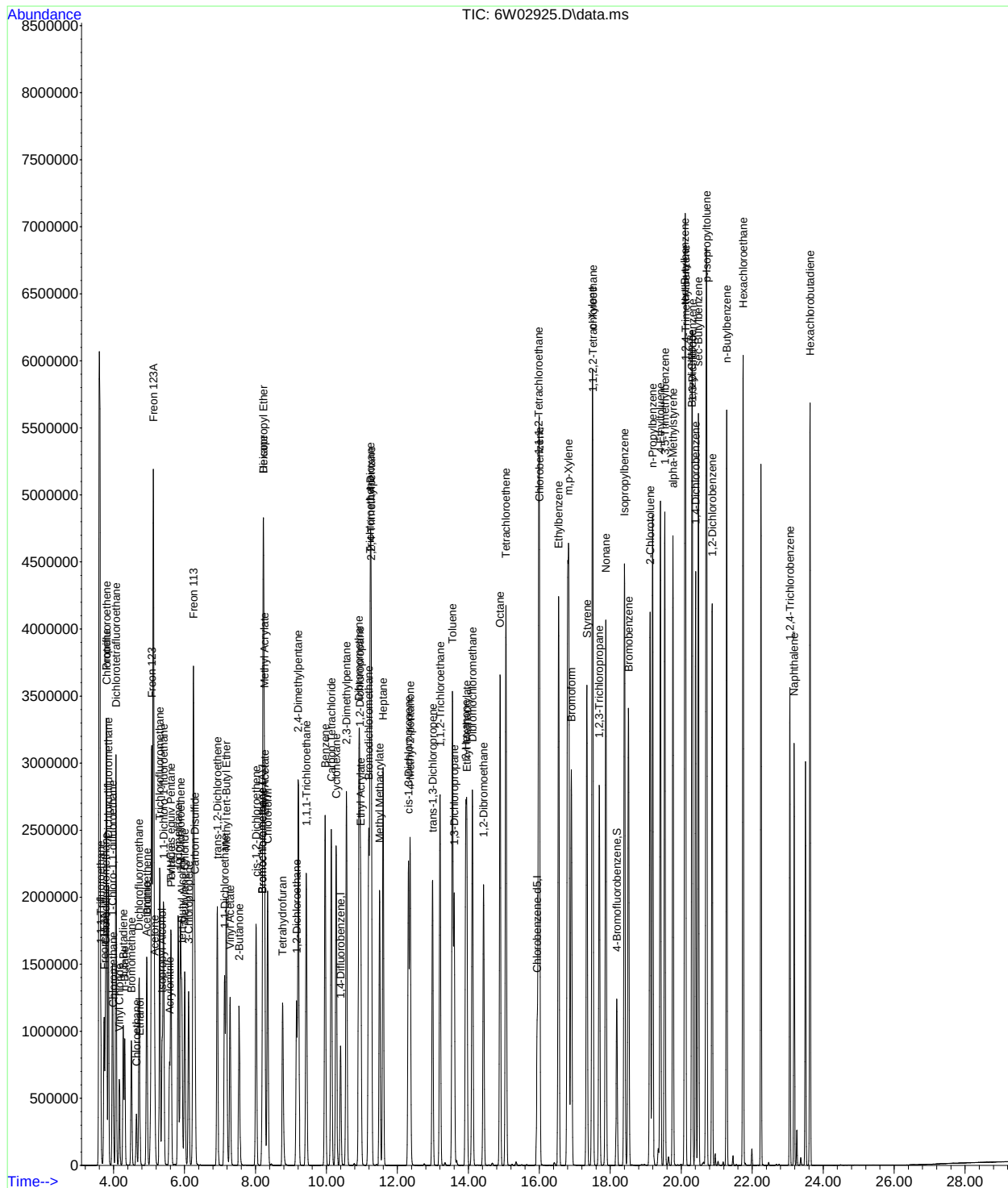
Quant Time: Nov 08 09:00:12 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 08:58:20 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.260	57	4257165	30.50	ppb(v	99
56) Heptane	11.597	71	1018732	33.15	ppb(v	99
57) Trichloroethene	11.230	95	1255510	31.77	ppb(v	99
58) 1,2-Dichloropropane	10.942	63	1086978	32.59	ppb(v	100
59) Dibromomethane	10.918	174	1301322	34.73	ppb(v	94
60) Ethyl Acrylate	10.967	55	2220176	33.34	ppb(v	99
61) Methyl Methacrylate	11.499	69	1146808	34.32	ppb(v	96
62) 1,4-Dioxane	11.236	88	565110	31.94	ppb(v#	80
63) Bromodichloromethane	11.193	83	2130372	33.36	ppb(v	100
64) cis-1,3-Dichloropropene	12.312	75	1800250	34.62	ppb(v	99
65) 4-Methyl-2-pentanone	12.355	58	926663	33.95	ppb(v	95
66) trans-1,3-Dichloropropene	12.992	75	1646067	34.59	ppb(v	99
67) Toluene	13.548	91	3589922	33.55	ppb(v	98
68) 1,1,2-Trichloroethane	13.206	97	1253233	34.16	ppb(v	99
69) 1,3-Dichloropropane	13.597	76	1726552	33.67	ppb(v	97
70) 2-Hexanone	13.928	58	1254161	33.25	ppb(v	94
71) Ethyl Methacrylate	13.958	69	1833540	33.13	ppb(v	98
72) Dibromochloromethane	14.111	129	2218807	33.89	ppb(v	99
73) Tetrachloroethene	15.059	166	1794846	33.85	ppb(v	99
74) 1,2-Dibromoethane	14.429	107	1974294	33.85	ppb(v	99
75) Octane	14.894	43	2049753	31.89	ppb(v	96
76) 1,1,1,2-Tetrachloroethane	15.983	131	1467866	32.63	ppb(v	98
78) Chlorobenzene	16.008	112	2652932	30.90	ppb(v	99
79) Ethylbenzene	16.546	91	4449690	31.82	ppb(v	98
80) m,p-Xylene	16.821	91	6611019	61.76	ppb(v	100
81) Styrene	17.341	104	2623053	32.51	ppb(v	99
82) Nonane	17.873	43	1977586	29.18	ppb(v	95
83) o-Xylene	17.494	91	3202298	29.46	ppb(v	99
84) Bromoform	16.901	173	2142782	32.83	ppb(v	99
85) 1,1,2,2-Tetrachloroethane	17.506	83	2172007	28.68	ppb(v	99
86) 1,2,3-Trichloropropane	17.690	75	1777757	31.95	ppb(v	99
87) Isopropylbenzene	18.400	105	4401388	31.15	ppb(v	99
88) Bromobenzene	18.516	156	1544161	32.63	ppb(v	94
89) 2-Chlorotoluene	19.121	126	1149000	32.62	ppb(v	95
90) n-Propylbenzene	19.189	120	1267836	31.35	ppb(v	94
92) 4-Ethyltoluene	19.415	105	4256474	30.43	ppb(v	98
93) 1,3,5-Trimethylbenzene	19.537	105	3566022	30.55	ppb(v	100
94) alpha-Methylstyrene	19.764	118	1847666	31.78	ppb(v	99
95) tert-Butylbenzene	20.100	134	780082	28.00	ppb(v	92
96) 1,2,4-Trimethylbenzene	20.125	105	3016787	27.06	ppb(v#	86
97) 1,3-Dichlorobenzene	20.314	146	2147444	29.57	ppb(v	99
98) Benzyl Chloride	20.296	91	2713853	29.62	ppb(v	99
99) 1,4-Dichlorobenzene	20.406	146	2237119	31.35	ppb(v	99
100) sec-Butylbenzene	20.486	134	984240	30.26	ppb(v	89
101) p-Isopropyltoluene	20.718	134	989127	27.58	ppb(v	92
102) 1,2-Dichlorobenzene	20.871	146	2120162	31.49	ppb(v	99
103) n-Butylbenzene	21.281	134	979809	31.25	ppb(v	88
104) Hexachloroethane	21.746	201	1306900	31.36	ppb(v	86
105) 1,2,4-Trichlorobenzene	23.061	180	1170042	35.41	ppb(v	98
106) Naphthalene	23.184	128	2464593	34.64	ppb(v	99
107) Hexachlorobutadiene	23.630	225	1239579	32.12	ppb(v	99
109) TVHC as equiv Pentane	5.614	TIC	3905281m	33.90	ppb(v	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\
Data File : 6W02925.D
Acq On : 7 Nov 2017 10:15 pm
Operator : DANAT
Sample : ic76-40
Misc : MS21818,V6W76,,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 08 09:00:12 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 08:58:20 2017
Response via : Initial Calibration



7.7.30

Manual Integration Approval Summary

Sample Number: V6W76-IC76

Method: TO-15

Lab FileID: 6W02925.D

Analyst approved: 11/08/17 09:40 Dana Tryon

Injection Time: 11/07/17 22:15

Supervisor approved: 11/09/17 15:47 Dana Tryon

Parameter	CAS	Sig#	R.T. (min.)	Reason

TVHC As Equiv Pentane			5.61	Poor instrument integration

7.7.30.1
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W02927.D
 Acq On : 7 Nov 2017 11:57 pm
 Operator : DANAT
 Sample : icv76-10
 Misc : MS21818,V6W76,,,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 08 09:38:38 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.195	130	277658	10.00	ppb(v)	0.00
54) 1,4-Difluorobenzene	10.397	114	1024076	10.00	ppb(v)	0.00
77) Chlorobenzene-d5	15.940	82	483984	10.00	ppb(v)	0.00
108) Bromochloromethane (A)	8.195	130	277658	10.00	ppb(v)	0.00

System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.179	95	627195	10.06	ppb(v)	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	100.60%

Target Compounds						Qvalue
3) Freon 152A	3.735	65	168509	9.35	ppb(v)	98
4) Chlorodifluoromethane	3.772	67	63375	10.03	ppb(v)	99
5) Propene	3.796	41	187212	9.45	ppb(v)	98
6) Chlorotrifluoroethene	3.802	116	377611	8.54	ppb(v)	99
7) Dichlorodifluoromethane	3.858	85	677434	9.76	ppb(v)	100
8) 1-Chloro-1,1-difluoro...	3.968	65	424324	9.03	ppb(v)	100
9) Chloromethane	3.986	50	201125	8.99	ppb(v)	99
10) Dichlorotetrafluoroethane	4.066	85	609203	9.39	ppb(v)	98
11) Vinyl Chloride	4.163	62	229138	8.89	ppb(v)	100
12) 1,3-Butadiene	4.274	54	164731	8.42	ppb(v)	97
13) n-Butane	4.316	58	42083	9.19	ppb(v)	91
14) Bromomethane	4.500	94	217380	9.16	ppb(v)	99
15) Chloroethane	4.641	64	113611	8.43	ppb(v)	99
16) Dichlorofluoromethane	4.720	67	479006	8.67	ppb(v)	99
17) Acetonitrile	4.928	41	205180	9.65	ppb(v)	100
18) Freon 123	5.075	83	719111	10.01	ppb(v)	99
19) Freon 123A	5.118	117	816935	21.27	ppb(v)	94
20) Bromoethene	4.940	106	266311	10.23	ppb(v)	98
21) Trichlorofluoromethane	5.307	101	670213	10.19	ppb(v)	100
22) Acetone	5.154	58	131085	9.30	ppb(v)	97
23) Pentane	5.619	57	72710	11.02	ppb(v)	95
25) Iodomethane	5.821	142	808118	10.45	ppb(v)	97
26) Isopropyl Alcohol	5.369	45	460284	8.25	ppb(v)	98
27) 1,1-Dichloroethene	5.889	61	391409	9.27	ppb(v)	97
28) Freon 113	6.250	101	567834	9.47	ppb(v)	98
29) Methylene Chloride	6.005	84	250544	8.75	ppb(v)	96
30) Carbon Disulfide	6.286	76	841585	9.25	ppb(v)	100
31) Ethanol	4.732	45	79151	9.97	ppb(v)	100
32) Acrylonitrile	5.570	53	220706	10.99	ppb(v)	98
33) 3-Chloropropene	6.115	76	141655	11.07	ppb(v)	92
34) trans-1,2-Dichloroethene	6.922	61	399263	9.80	ppb(v)	97
35) tert-Butyl Alcohol	5.919	59	537123	9.96	ppb(v)	98
36) Methyl tert-Butyl Ether	7.179	73	786173	10.45	ppb(v)	98
37) Vinyl Acetate	7.283	43	752720	11.21	ppb(v)	98
38) 1,1-Dichloroethane	7.130	63	490725	9.71	ppb(v)	99
39) 2-Butanone	7.540	72	150746	10.42	ppb(v)	90
40) Hexane	8.219	57	443534	9.93	ppb(v)	99
41) cis-1,2-Dichloroethene	8.011	61	370969	9.78	ppb(v)	98
42) Di-isopropyl Ether	8.219	87	260376	10.76	ppb(v)	93
43) Ethyl Acetate	8.256	61	97795	10.63	ppb(v)	96
44) Methyl Acrylate	8.244	55	533566	9.86	ppb(v)	99
45) Chloroform	8.336	83	588673	9.82	ppb(v)	99
46) 2,4-Dimethylpentane	9.204	57	516631	10.40	ppb(v)	99
47) Tetrahydrofuran	8.770	72	146618	11.37	ppb(v)	96
48) 1,1,1-Trichloroethane	9.431	97	582911	10.79	ppb(v)	99
49) 1,2-Dichloroethane	9.149	62	342722	9.82	ppb(v)	99
50) Benzene	9.963	78	921517	9.82	ppb(v)	99
51) Carbon Tetrachloride	10.134	117	601541	10.17	ppb(v)	99
52) Cyclohexane	10.269	56	443644	10.31	ppb(v)	98
53) 2,3-Dimethylpentane	10.563	71	204987	10.49	ppb(v)	94
55) 2,2,4-Trimethylpentane	11.254	57	1433350	10.08	ppb(v)	99
56) Heptane	11.596	71	316311	10.35	ppb(v)	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W02927.D
 Acq On : 7 Nov 2017 11:57 pm
 Operator : DANAT
 Sample : icv76-10
 Misc : MS21818,V6W76,,,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 08 09:38:38 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

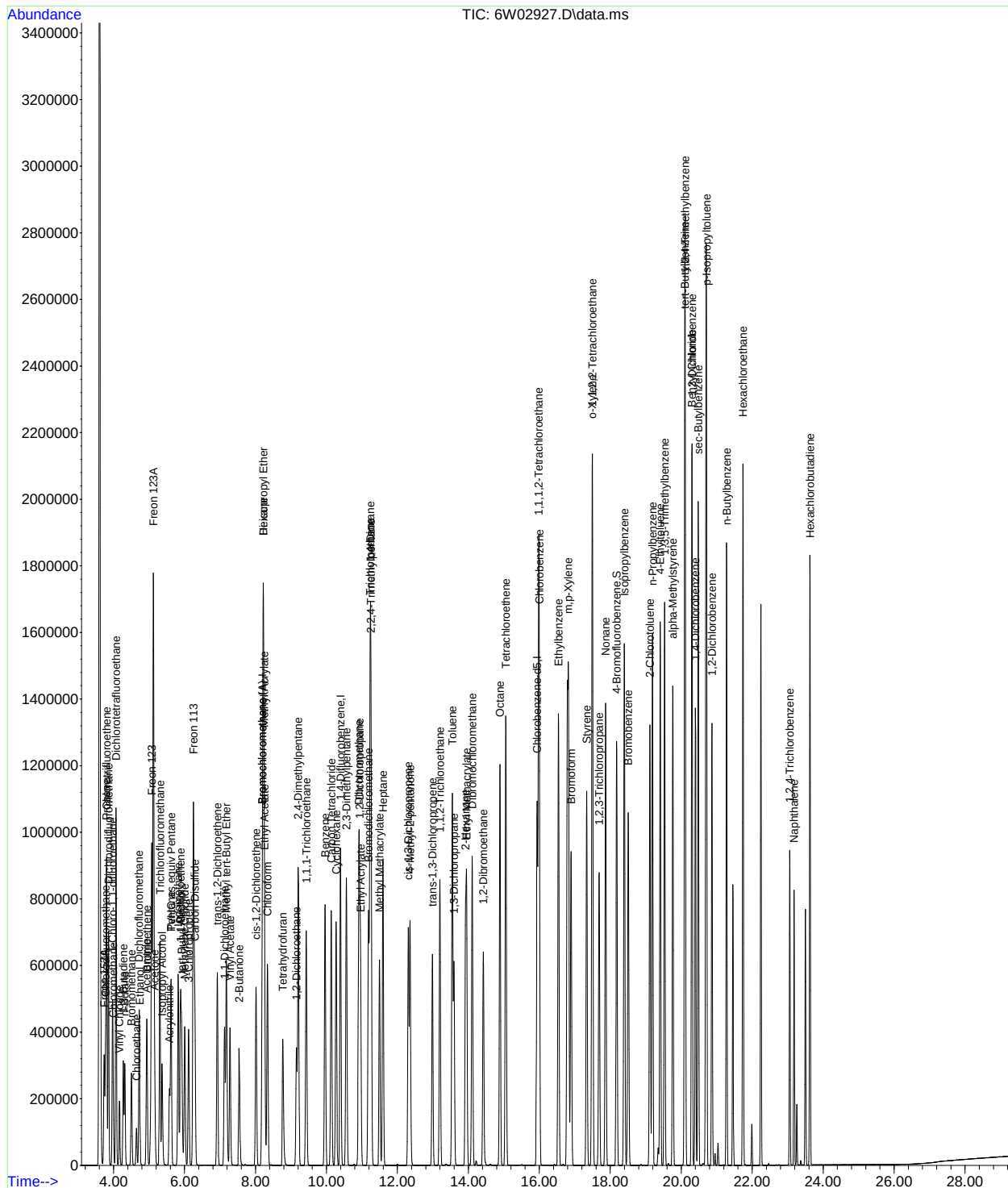
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
57) Trichloroethene	11.229	95	409260	10.22	ppb(v)	98
58) 1,2-Dichloropropane	10.936	63	333397	9.85	ppb(v)	100
59) Dibromomethane	10.911	174	401168	9.81	ppb(v)	95
60) Ethyl Acrylate	10.966	55	660873	10.62	ppb(v)	99
61) Methyl Methacrylate	11.499	69	341208	11.02	ppb(v)	96
62) 1,4-Dioxane	11.235	88	220141	12.74	ppb(v)	90
63) Bromodichloromethane	11.187	83	652227	10.23	ppb(v)	100
64) cis-1,3-Dichloropropene	12.306	75	559786	10.86	ppb(v)	99
65) 4-Methyl-2-pentanone	12.355	58	277198	11.02	ppb(v)	96
66) trans-1,3-Dichloropropene	12.985	75	472558	10.15	ppb(v)	98
67) Toluene	13.548	91	1122881	10.06	ppb(v)	99
68) 1,1,2-Trichloroethane	13.199	97	381008	10.31	ppb(v)	99
69) 1,3-Dichloropropane	13.591	76	511713	9.72	ppb(v)	98
70) 2-Hexanone	13.921	58	378990	10.68	ppb(v)	99
71) Ethyl Methacrylate	13.952	69	568300	11.57	ppb(v)	98
72) Dibromochloromethane	14.105	129	696376	10.95	ppb(v)	99
73) Tetrachloroethene	15.053	166	573069	10.21	ppb(v)	99
74) 1,2-Dibromoethane	14.423	107	606224	10.42	ppb(v)	99
75) Octane	14.894	43	649547	10.24	ppb(v)	96
76) 1,1,1,2-Tetrachloroethane	15.983	131	465723	10.19	ppb(v)	99
78) Chlorobenzene	16.001	112	853014	9.80	ppb(v)	99
79) Ethylbenzene	16.540	91	1402495	10.42	ppb(v)	99
80) m,p-Xylene	16.815	91	2126950	20.73	ppb(v)	99
81) Styrene	17.335	104	801664	11.74	ppb(v)	100
82) Nonane	17.867	43	641618	9.75	ppb(v)	97
83) o-Xylene	17.488	91	1079586	10.49	ppb(v)	99
84) Bromoform	16.894	173	650985	11.49	ppb(v)	99
85) 1,1,2,2-Tetrachloroethane	17.494	83	727224	10.04	ppb(v)	100
86) 1,2,3-Trichloropropane	17.690	75	544253	10.09	ppb(v)	98
87) Isopropylbenzene	18.393	105	1521560	10.75	ppb(v)	100
88) Bromobenzene	18.503	156	471749	10.13	ppb(v)	95
89) 2-Chlorotoluene	19.115	126	355336	10.68	ppb(v)	99
90) n-Propylbenzene	19.188	120	397005	10.51	ppb(v)	98
92) 4-Ethyltoluene	19.409	105	1378731	10.60	ppb(v)	99
93) 1,3,5-Trimethylbenzene	19.531	105	1182687	10.73	ppb(v)	99
94) alpha-Methylstyrene	19.757	118	562059	11.87	ppb(v)	99
95) tert-Butylbenzene	20.100	134	271522	10.15	ppb(v)	97
96) 1,2,4-Trimethylbenzene	20.112	105	1077437	10.34	ppb(v)	98
97) 1,3-Dichlorobenzene	20.302	146	707710	10.20	ppb(v)	99
98) Benzyl Chloride	20.296	91	841985	11.58	ppb(v)	99
99) 1,4-Dichlorobenzene	20.400	146	687476	10.37	ppb(v)	99
100) sec-Butylbenzene	20.479	134	334567	10.78	ppb(v)	94
101) p-Isopropyltoluene	20.712	134	364573	10.61	ppb(v)	97
102) 1,2-Dichlorobenzene	20.865	146	653603	10.05	ppb(v)	98
103) n-Butylbenzene	21.281	134	311950	11.32	ppb(v)	88
104) Hexachloroethane	21.740	201	410905	10.49	ppb(v)	95
105) 1,2,4-Trichlorobenzene	23.055	180	310209	10.81	ppb(v)	98
106) Naphthalene	23.183	128	659353	12.51	ppb(v)	100
107) Hexachlorobutadiene	23.630	225	373446	9.91	ppb(v)	99
109) TVHC as equiv Pentane	5.619	TIC	1238570	10.21	ppb(v)	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W02927.D
Acq On : 7 Nov 2017 11:57 pm
Operator : DANAT
Sample : icv76-10
Misc : MS21818,V6W76,,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 08 09:38:38 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03148.D
 Acq On : 21 Nov 2017 10:11 am
 Operator : DANAT
 Sample : cc76-10
 Misc : MS22325,V6W86,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 21 10:41:33 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.189	130	238126	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.397	114	886308	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.934	82	418509	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.189	130	238126	10.00	ppb(v	0.00

System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.179	95	511505	9.48	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	94.80%

Target Compounds						Qvalue
2) 1,1,1-Trifluoroethane	3.637	69	457890	12.31	ppb(v	98
3) Freon 152A	3.735	65	162941	10.54	ppb(v	98
4) Chlorodifluoromethane	3.772	67	61293	11.32	ppb(v	100
5) Propene	3.796	41	189128	11.13	ppb(v	98
6) Chlorotrifluoroethene	3.803	116	410308	10.82	ppb(v	98
7) Dichlorodifluoromethane	3.858	85	661996	11.12	ppb(v	99
8) 1-Chloro-1,1-difluoro...	3.968	65	428670	10.64	ppb(v	100
9) Chloromethane	3.986	50	206235	10.75	ppb(v	100
10) Dichlorotetrafluoroethane	4.066	85	581049	10.44	ppb(v	100
11) Vinyl Chloride	4.164	62	235968	10.67	ppb(v	100
12) 1,3-Butadiene	4.274	54	175886	10.48	ppb(v	98
13) n-Butane	4.316	58	43777	11.15	ppb(v	89
14) Bromomethane	4.500	94	219099	10.76	ppb(v	99
15) Chloroethane	4.641	64	119682	10.36	ppb(v	100
16) Dichlorofluoromethane	4.720	67	479463	10.12	ppb(v	99
17) Acetonitrile	4.928	41	203720	11.17	ppb(v	99
18) Freon 123	5.075	83	693853	11.26	ppb(v	99
19) Freon 123A	5.118	117	751940	22.83	ppb(v	96
20) Bromoethene	4.940	106	266386	11.93	ppb(v	100
21) Trichlorofluoromethane	5.301	101	648358	11.49	ppb(v	99
22) Acetone	5.148	58	128187	10.61	ppb(v	100
23) Pentane	5.620	57	67730	11.97	ppb(v	98
24) 1,1-Dichloro-1-fluoro...	5.412	81	538376	11.00	ppb(v	99
25) Iodomethane	5.821	142	759880	11.46	ppb(v	99
26) Isopropyl Alcohol	5.363	45	521033	10.88	ppb(v	98
27) 1,1-Dichloroethene	5.889	61	404573	11.18	ppb(v	99
28) Freon 113	6.250	101	571340	11.11	ppb(v	99
29) Methylene Chloride	6.005	84	250007	10.18	ppb(v	99
30) Carbon Disulfide	6.286	76	866259	11.10	ppb(v	100
31) Ethanol	4.732	45	65756	9.66	ppb(v	98
32) Acrylonitrile	5.571	53	210063	12.20	ppb(v	98
33) 3-Chloropropene	6.115	76	128211	11.68	ppb(v	95
34) trans-1,2-Dichloroethene	6.917	61	387355	11.09	ppb(v	99
35) tert-Butyl Alcohol	5.919	59	557946	12.07	ppb(v	98
36) Methyl tert-Butyl Ether	7.173	73	747340	11.58	ppb(v	99
37) Vinyl Acetate	7.277	43	657139	11.41	ppb(v	100
38) 1,1-Dichloroethane	7.125	63	487332	11.24	ppb(v	99
39) 2-Butanone	7.534	72	146373	11.80	ppb(v	99
40) Hexane	8.220	57	434063	11.33	ppb(v	99
41) cis-1,2-Dichloroethene	8.012	61	366775	11.27	ppb(v	99
42) Di-isopropyl Ether	8.220	87	245414	11.82	ppb(v	97
43) Ethyl Acetate	8.250	61	96118	12.18	ppb(v	94
44) Methyl Acrylate	8.238	55	535403	11.54	ppb(v	99
45) Chloroform	8.336	83	571391	11.11	ppb(v	99
46) 2,4-Dimethylpentane	9.205	57	497214	11.67	ppb(v	99
47) Tetrahydrofuran	8.764	72	135774	12.28	ppb(v	99
48) 1,1,1-Trichloroethane	9.425	97	527452	11.38	ppb(v	99
49) 1,2-Dichloroethane	9.149	62	336488	11.24	ppb(v	99
50) Benzene	9.957	78	884891	11.00	ppb(v	99
51) Carbon Tetrachloride	10.128	117	573690	11.31	ppb(v	99
52) Cyclohexane	10.269	56	429990	11.65	ppb(v	100
53) 2,3-Dimethylpentane	10.563	71	195300	11.66	ppb(v	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03148.D
 Acq On : 21 Nov 2017 10:11 am
 Operator : DANAT
 Sample : cc76-10
 Misc : MS22325,V6W86,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 21 10:41:33 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

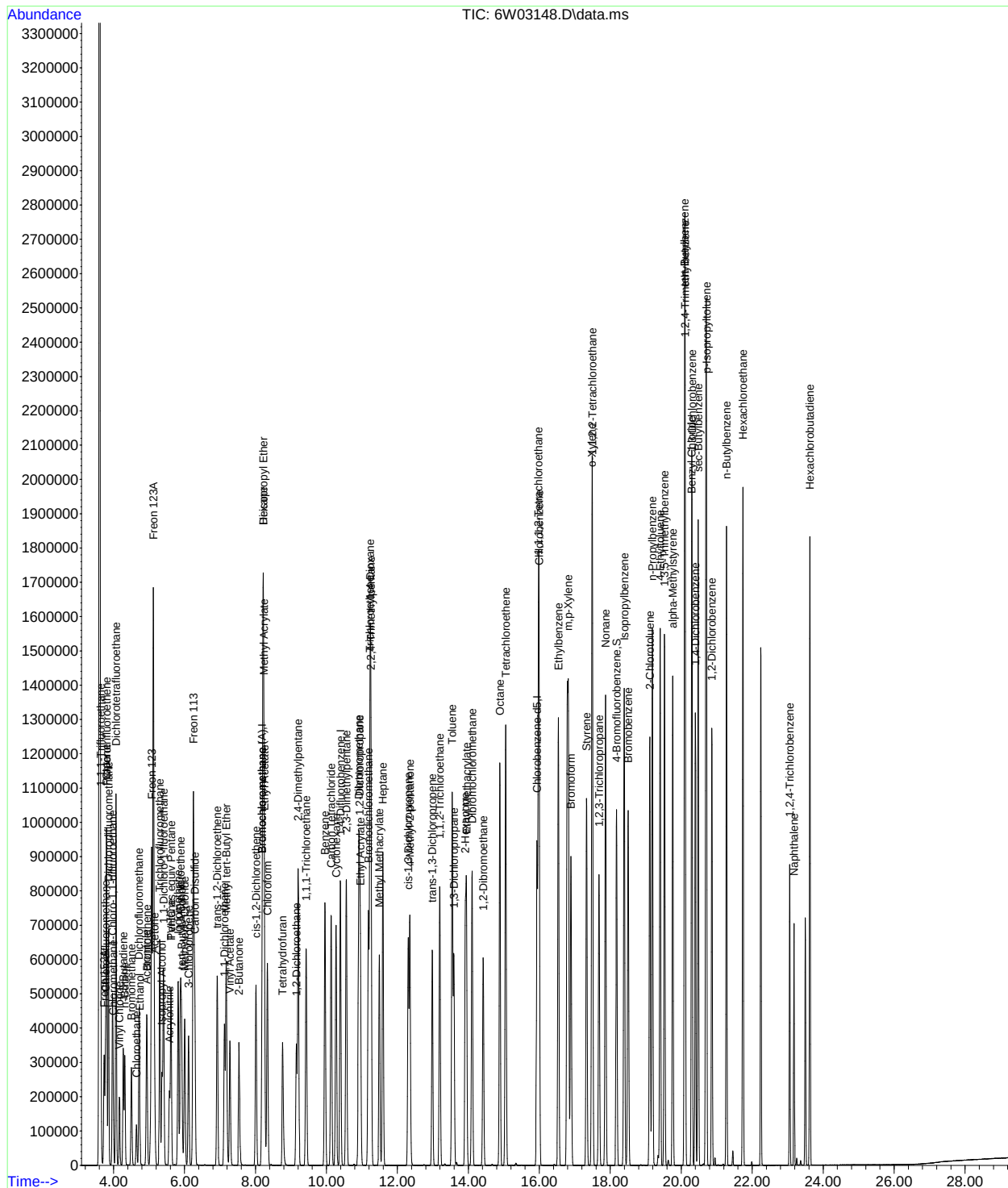
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.254	57	1381220	11.23	ppb(v)	100
56) Heptane	11.590	71	299739	11.33	ppb(v)	100
57) Trichloroethene	11.223	95	388582	11.21	ppb(v)	98
58) 1,2-Dichloropropane	10.936	63	331254	11.31	ppb(v)	100
59) Dibromomethane	10.911	174	368886	10.43	ppb(v)	98
60) Ethyl Acrylate	10.960	55	665171	12.35	ppb(v)	100
61) Methyl Methacrylate	11.493	69	333854	12.45	ppb(v)	99
62) 1,4-Dioxane	11.229	88	173576	11.60	ppb(v)	90
63) Bromodichloromethane	11.181	83	627125	11.37	ppb(v)	100
64) cis-1,3-Dichloropropene	12.306	75	517030	11.59	ppb(v)	100
65) 4-Methyl-2-pentanone	12.349	58	271954	12.49	ppb(v)	98
66) trans-1,3-Dichloropropene	12.979	75	472848	11.74	ppb(v)	98
67) Toluene	13.542	91	1053882	10.91	ppb(v)	100
68) 1,1,2-Trichloroethane	13.193	97	358624	11.21	ppb(v)	100
69) 1,3-Dichloropropane	13.591	76	510421	11.21	ppb(v)	99
70) 2-Hexanone	13.915	58	372268	12.12	ppb(v)	99
71) Ethyl Methacrylate	13.946	69	546318	12.85	ppb(v)	100
72) Dibromochloromethane	14.105	129	638635	11.60	ppb(v)	100
73) Tetrachloroethene	15.053	166	520206	10.71	ppb(v)	99
74) 1,2-Dibromoethane	14.417	107	567784	11.28	ppb(v)	100
75) Octane	14.888	43	639446	11.65	ppb(v)	100
76) 1,1,1,2-Tetrachloroethane	15.977	131	438337	11.09	ppb(v)	99
78) Chlorobenzene	15.995	112	799718	10.62	ppb(v)	98
79) Ethylbenzene	16.540	91	1326233	11.40	ppb(v)	100
80) m,p-Xylene	16.815	91	2017811	22.75	ppb(v)	99
81) Styrene	17.329	104	755374	12.80	ppb(v)	99
82) Nonane	17.867	43	649093	11.41	ppb(v)	100
83) o-Xylene	17.482	91	1015999	11.42	ppb(v)	100
84) Bromoform	16.888	173	600888	12.26	ppb(v)	99
85) 1,1,2,2-Tetrachloroethane	17.494	83	703249	11.23	ppb(v)	99
86) 1,2,3-Trichloropropane	17.684	75	523543	11.22	ppb(v)	99
87) Isopropylbenzene	18.393	105	1323298	10.81	ppb(v)	99
88) Bromobenzene	18.503	156	438025	10.88	ppb(v)	99
89) 2-Chlorotoluene	19.115	126	327310	11.38	ppb(v)	98
90) n-Propylbenzene	19.183	120	372872	11.42	ppb(v)	94
92) 4-Ethyltoluene	19.409	105	1303362	11.59	ppb(v)	100
93) 1,3,5-Trimethylbenzene	19.525	105	1089371	11.43	ppb(v)	99
94) alpha-Methylstyrene	19.758	118	531571	12.98	ppb(v)	100
95) tert-Butylbenzene	20.094	134	252776	10.93	ppb(v)	97
96) 1,2,4-Trimethylbenzene	20.112	105	1042904	11.57	ppb(v)	94
97) 1,3-Dichlorobenzene	20.302	146	655793	10.93	ppb(v)	99
98) Benzyl Chloride	20.290	91	820660	13.05	ppb(v)	99
99) 1,4-Dichlorobenzene	20.400	146	640739	11.18	ppb(v)	99
100) sec-Butylbenzene	20.479	134	296695	11.05	ppb(v)	99
101) p-Isopropyltoluene	20.712	134	324051	10.90	ppb(v)	100
102) 1,2-Dichlorobenzene	20.859	146	608429	10.82	ppb(v)	98
103) n-Butylbenzene	21.275	134	283835	11.92	ppb(v)	98
104) Hexachloroethane	21.740	201	365482	10.79	ppb(v)	97
105) 1,2,4-Trichlorobenzene	23.055	180	268535	10.82	ppb(v)	99
106) Naphthalene	23.177	128	547748	12.01	ppb(v)	100
107) Hexachlorobutadiene	23.624	225	354883	10.90	ppb(v)	99
109) TVHC as equiv Pentane	5.620	TIC	1143801	10.99	ppb(v)	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W03148.D
Acq On : 21 Nov 2017 10:11 am
Operator : DANAT
Sample : cc76-10
Misc : MS22325,V6W86,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 21 10:41:33 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03171.D
 Acq On : 22 Nov 2017 6:58 am
 Operator : DANAT
 Sample : ecc76-10
 Misc : MS22168,V6W86,,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 22 09:20:08 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.195	130	173199	10.00	ppb(v)	0.00
54) 1,4-Difluorobenzene	10.398	114	650122	10.00	ppb(v)	0.00
77) Chlorobenzene-d5	15.934	82	334850	10.00	ppb(v)	0.00
108) Bromochloromethane (A)	8.195	130	173199	10.00	ppb(v)	0.00

System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.179	95	402359	9.32	ppb(v)	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	93.20%

Target Compounds						Qvalue
2) 1,1,1-Trifluoroethane	3.644	69	360484	13.32	ppb(v)	99
3) Freon 152A	3.735	65	132846	11.81	ppb(v)	94
4) Chlorodifluoromethane	3.778	67	52379	13.29	ppb(v)	100
5) Propene	3.803	41	165579	13.39	ppb(v)	98
6) Chlorotrifluoroethene	3.809	116	317340	11.51	ppb(v)	98
7) Dichlorodifluoromethane	3.858	85	514106	11.88	ppb(v)	100
8) 1-Chloro-1,1-difluoro...	3.974	65	395216	13.49	ppb(v)	97
9) Chloromethane	3.992	50	201900	14.47	ppb(v)	99
10) Dichlorotetrafluoroethane	4.066	85	522144	12.90	ppb(v)	91
11) Vinyl Chloride	4.170	62	220346	13.70	ppb(v)	99
12) 1,3-Butadiene	4.280	54	173579	14.21	ppb(v)	97
13) n-Butane	4.323	58	42209	14.78	ppb(v)	86
14) Bromomethane	4.506	94	187195	12.64	ppb(v)	100
15) Chloroethane	4.647	64	114342	13.60	ppb(v)	98
16) Dichlorofluoromethane	4.720	67	473327	13.73	ppb(v)	99
17) Acetonitrile	4.928	41	173414	13.08	ppb(v)	99
18) Freon 123	5.075	83	536581	11.97	ppb(v)	99
19) Freon 123A	5.124	117	544097	22.71	ppb(v)	95
20) Bromoethene	4.947	106	190580	11.74	ppb(v)	98
21) Trichlorofluoromethane	5.308	101	484035	11.80	ppb(v)	99
22) Acetone	5.155	58	103504	11.78	ppb(v)	89
23) Pentane	5.620	57	54866	13.33	ppb(v)	92
24) 1,1-Dichloro-1-fluoro...	5.412	81	422133	11.85	ppb(v)	99
25) Iodomethane	5.821	142	526703	10.92	ppb(v)	96
26) Isopropyl Alcohol	5.369	45	441988	12.69	ppb(v)	100
27) 1,1-Dichloroethene	5.889	61	330268	12.54	ppb(v)	95
28) Freon 113	6.250	101	434774	11.62	ppb(v)	96
29) Methylene Chloride	6.005	84	193244	10.82	ppb(v)	94
30) Carbon Disulfide	6.293	76	677417	11.93	ppb(v)	100
31) Ethanol	4.733	45	74436	15.03	ppb(v)	99
32) Acrylonitrile	5.577	53	170511	13.61	ppb(v)	98
33) 3-Chloropropene	6.115	76	99101	12.42	ppb(v)	90
34) trans-1,2-Dichloroethene	6.923	61	310674	12.23	ppb(v)	97
35) tert-Butyl Alcohol	5.919	59	452393	13.45	ppb(v)	97
36) Methyl tert-Butyl Ether	7.180	73	583814	12.44	ppb(v)	97
37) Vinyl Acetate	7.277	43	555449	13.26	ppb(v)	96
38) 1,1-Dichloroethane	7.131	63	392488	12.45	ppb(v)	99
39) 2-Butanone	7.534	72	113922	12.62	ppb(v)	85
40) Hexane	8.220	57	364139	13.07	ppb(v)	92
41) cis-1,2-Dichloroethene	8.012	61	294041	12.42	ppb(v)	96
42) Di-isopropyl Ether	8.220	87	190528	12.62	ppb(v)	80
43) Ethyl Acetate	8.256	61	78441	13.67	ppb(v)	90
44) Methyl Acrylate	8.244	55	454676	13.47	ppb(v)	98
45) Chloroform	8.336	83	450435	12.04	ppb(v)	98
46) 2,4-Dimethylpentane	9.205	57	404189	13.04	ppb(v)	98
47) Tetrahydrofuran	8.770	72	104561	13.00	ppb(v)	92
48) 1,1,1-Trichloroethane	9.431	97	408309	12.11	ppb(v)	100
49) 1,2-Dichloroethane	9.150	62	278302	12.78	ppb(v)	98
50) Benzene	9.963	78	687304	11.75	ppb(v)	98
51) Carbon Tetrachloride	10.134	117	434657	11.78	ppb(v)	100
52) Cyclohexane	10.269	56	346939	12.93	ppb(v)	96
53) 2,3-Dimethylpentane	10.563	71	154026	12.64	ppb(v)	93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03171.D
 Acq On : 22 Nov 2017 6:58 am
 Operator : DANAT
 Sample : ecc76-10
 Misc : MS22168,V6W86,,,,,1
 ALS Vial : 5 Sample Multiplier: 1

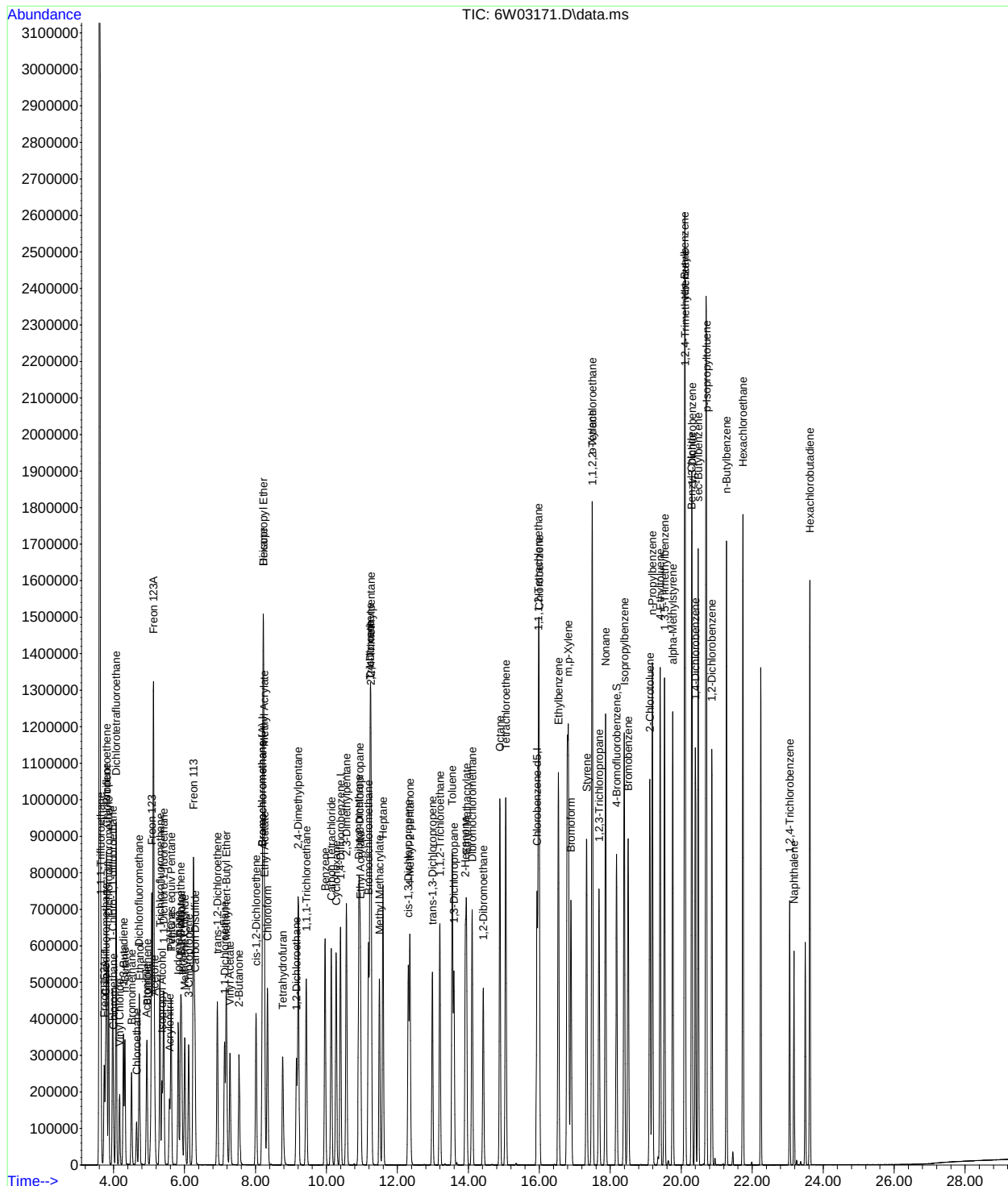
Quant Time: Nov 22 09:20:08 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55)	2,2,4-Trimethylpentane	11.254	57	1161626	12.87	ppb(v)	99
56)	Heptane	11.597	71	240655	12.40	ppb(v)	97
57)	Trichloroethene	11.230	95	306264	12.05	ppb(v)	95
58)	1,2-Dichloropropane	10.936	63	273316	12.72	ppb(v)	99
59)	Dibromomethane	10.911	174	261012	10.06	ppb(v)	90
60)	Ethyl Acrylate	10.960	55	554173	14.03	ppb(v)	98
61)	Methyl Methacrylate	11.499	69	263706	13.41	ppb(v)	94
62)	1,4-Dioxane	11.230	88	137660	12.55	ppb(v)	90
63)	Bromodichloromethane	11.187	83	505395	12.49	ppb(v)	99
64)	cis-1,3-Dichloropropene	12.306	75	409395	12.51	ppb(v)	98
65)	4-Methyl-2-pentanone	12.349	58	225106	14.10	ppb(v)	93
66)	trans-1,3-Dichloropropene	12.985	75	375571	12.71	ppb(v)	98
67)	Toluene	13.542	91	826678	11.67	ppb(v)	100
68)	1,1,2-Trichloroethane	13.199	97	281813	12.01	ppb(v)	98
69)	1,3-Dichloropropane	13.591	76	411755	12.32	ppb(v)	95
70)	2-Hexanone	13.915	58	310175	13.77	ppb(v)	91
71)	Ethyl Methacrylate	13.946	69	448591	14.39	ppb(v)	98
72)	Dibromochloromethane	14.105	129	496563	12.29	ppb(v)	99
73)	Tetrachloroethene	15.053	166	384688	10.80	ppb(v)	97
74)	1,2-Dibromoethane	14.423	107	445969	12.07	ppb(v)	99
75)	Octane	14.888	43	556377	13.82	ppb(v)	94
76)	1,1,1,2-Tetrachloroethane	15.977	131	341570	11.78	ppb(v)	98
78)	Chlorobenzene	15.995	112	633323	10.51	ppb(v)	96
79)	Ethylbenzene	16.540	91	1061184	11.40	ppb(v)	99
80)	m,p-Xylene	16.815	91	1660596	23.40	ppb(v)	98
81)	Styrene	17.335	104	601802	12.74	ppb(v)	99
82)	Nonane	17.867	43	590960	12.98	ppb(v)	97
83)	o-Xylene	17.488	91	860114	12.08	ppb(v)	98
84)	Bromoform	16.888	173	462169	11.79	ppb(v)	99
85)	1,1,2,2-Tetrachloroethane	17.494	83	613644	12.24	ppb(v)	100
86)	1,2,3-Trichloropropane	17.684	75	446908	11.98	ppb(v)	98
87)	Isopropylbenzene	18.393	105	1091617	11.15	ppb(v)	98
88)	Bromobenzene	18.503	156	345154	10.71	ppb(v)	95
89)	2-Chlorotoluene	19.115	126	265880	11.55	ppb(v)	97
90)	n-Propylbenzene	19.183	120	308264	11.80	ppb(v)	88
92)	4-Ethyltoluene	19.409	105	1102310	12.25	ppb(v)	99
93)	1,3,5-Trimethylbenzene	19.531	105	921947	12.09	ppb(v)	99
94)	alpha-Methylstyrene	19.758	118	442767	13.52	ppb(v)	98
95)	tert-Butylbenzene	20.094	134	218834	11.83	ppb(v)	96
96)	1,2,4-Trimethylbenzene	20.112	105	926764	12.85	ppb(v)	93
97)	1,3-Dichlorobenzene	20.302	146	554516	11.55	ppb(v)	98
98)	Benzyl Chloride	20.290	91	717825	14.26	ppb(v)	98
99)	1,4-Dichlorobenzene	20.400	146	533133	11.62	ppb(v)	99
100)	sec-Butylbenzene	20.480	134	251859	11.73	ppb(v)	96
101)	p-Isopropyltoluene	20.712	134	284846	11.98	ppb(v)	97
102)	1,2-Dichlorobenzene	20.859	146	514623	11.43	ppb(v)	97
103)	n-Butylbenzene	21.275	134	242788	12.74	ppb(v)	92
104)	Hexachloroethane	21.740	201	297679	10.98	ppb(v)	94
105)	1,2,4-Trichlorobenzene	23.055	180	211615	10.66	ppb(v)	99
106)	Naphthalene	23.177	128	440256	12.07	ppb(v)	100
107)	Hexachlorobutadiene	23.624	225	288732	11.08	ppb(v)	99
109)	TVHC as equiv Pentane	5.620	TIC	999320	13.21	ppb(v)	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\
Data File : 6W03171.D
Acq On : 22 Nov 2017 6:58 am
Operator : DANAT
Sample : ecc76-10
Misc : MS22168,V6W86,,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 22 09:20:08 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration



7.7.33

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03632.D
 Acq On : 20 Dec 2017 11:52 am
 Operator : DANAT
 Sample : cc76-10
 Misc : MS23032,V6W105,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 20 13:14:54 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.189	130	229719	10.00	ppb(v	0.00
54) 1,4-Difluorobenzene	10.391	114	846762	10.00	ppb(v	0.00
77) Chlorobenzene-d5	15.934	82	375486	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.189	130	229719	10.00	ppb(v	0.00

System Monitoring Compounds

91) 4-Bromofluorobenzene	18.173	95	504161	10.42	ppb(v	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	104.20%

Target Compounds					Qvalue	
2) 1,1,1-Trifluoroethane	3.643	69	353806	9.86	ppb(v	99
3) Freon 152A	3.735	65	137888	9.25	ppb(v	100
4) Chlorodifluoromethane	3.772	67	52171	9.98	ppb(v	99
5) Propene	3.803	41	155596	9.49	ppb(v	99
6) Chlorotrifluoroethene	3.803	116	353860	9.68	ppb(v	99
7) Dichlorodifluoromethane	3.858	85	570389	9.94	ppb(v	100
8) 1-Chloro-1,1-difluoro...	3.968	65	397043	10.22	ppb(v	100
9) Chloromethane	3.992	50	189970	10.26	ppb(v	100
10) Dichlorotetrafluoroethane	4.066	85	536341	9.99	ppb(v	96
11) Vinyl Chloride	4.170	62	213319	10.00	ppb(v	100
12) 1,3-Butadiene	4.274	54	162055	10.01	ppb(v	97
13) n-Butane	4.323	58	39499	10.43	ppb(v	94
14) Bromomethane	4.506	94	195723	9.96	ppb(v	99
15) Chloroethane	4.641	64	109575	9.83	ppb(v	100
16) Dichlorofluoromethane	4.720	67	449374	9.83	ppb(v	100
17) Acetonitrile	4.928	41	166876	9.49	ppb(v	99
18) Freon 123	5.075	83	572896	9.63	ppb(v	100
19) Freon 123A	5.118	117	615100	19.36	ppb(v	98
20) Bromoethene	4.940	106	216695	10.06	ppb(v	99
21) Trichlorofluoromethane	5.308	101	537094	9.87	ppb(v	100
22) Acetone	5.148	58	107579	9.23	ppb(v	96
23) Pentane	5.620	57	55188	10.11	ppb(v	94
24) 1,1-Dichloro-1-fluoro...	5.412	81	452461	9.58	ppb(v	99
25) Iodomethane	5.821	142	616297	9.63	ppb(v	99
26) Isopropyl Alcohol	5.363	45	425681	9.22	ppb(v	99
27) 1,1-Dichloroethene	5.889	61	331577	9.49	ppb(v	99
28) Freon 113	6.250	101	472700	9.53	ppb(v	99
29) Methylene Chloride	6.005	84	206285	8.71	ppb(v	99
30) Carbon Disulfide	6.286	76	717199	9.52	ppb(v	99
31) Ethanol	4.732	45	63112	9.61	ppb(v	100
32) Acrylonitrile	5.571	53	170320	10.25	ppb(v	98
33) 3-Chloropropene	6.115	76	105153	9.93	ppb(v	93
34) trans-1,2-Dichloroethene	6.916	61	314535	9.34	ppb(v	99
35) tert-Butyl Alcohol	5.919	59	448314	10.05	ppb(v	100
36) Methyl tert-Butyl Ether	7.173	73	607880	9.76	ppb(v	99
37) Vinyl Acetate	7.277	43	522396	9.40	ppb(v	99
38) 1,1-Dichloroethane	7.124	63	400407	9.57	ppb(v	100
39) 2-Butanone	7.534	72	118504	9.90	ppb(v	97
40) Hexane	8.220	57	351673	9.51	ppb(v	99
41) cis-1,2-Dichloroethene	8.012	61	298358	9.50	ppb(v	98
42) Di-isopropyl Ether	8.213	87	200280	10.00	ppb(v	95
43) Ethyl Acetate	8.250	61	77130	10.13	ppb(v	99
44) Methyl Acrylate	8.238	55	430623	9.62	ppb(v	99
45) Chloroform	8.336	83	470609	9.49	ppb(v	100
46) 2,4-Dimethylpentane	9.204	57	403970	9.83	ppb(v	100
47) Tetrahydrofuran	8.764	72	109456	10.26	ppb(v	96
48) 1,1,1-Trichloroethane	9.431	97	432441	9.67	ppb(v	100
49) 1,2-Dichloroethane	9.149	62	274847	9.52	ppb(v	99
50) Benzene	9.957	78	722470	9.31	ppb(v	99
51) Carbon Tetrachloride	10.128	117	472621	9.66	ppb(v	99
52) Cyclohexane	10.269	56	346191	9.72	ppb(v	98
53) 2,3-Dimethylpentane	10.557	71	159558	9.87	ppb(v	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03632.D
 Acq On : 20 Dec 2017 11:52 am
 Operator : DANAT
 Sample : cc76-10
 Misc : MS23032,V6W105,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

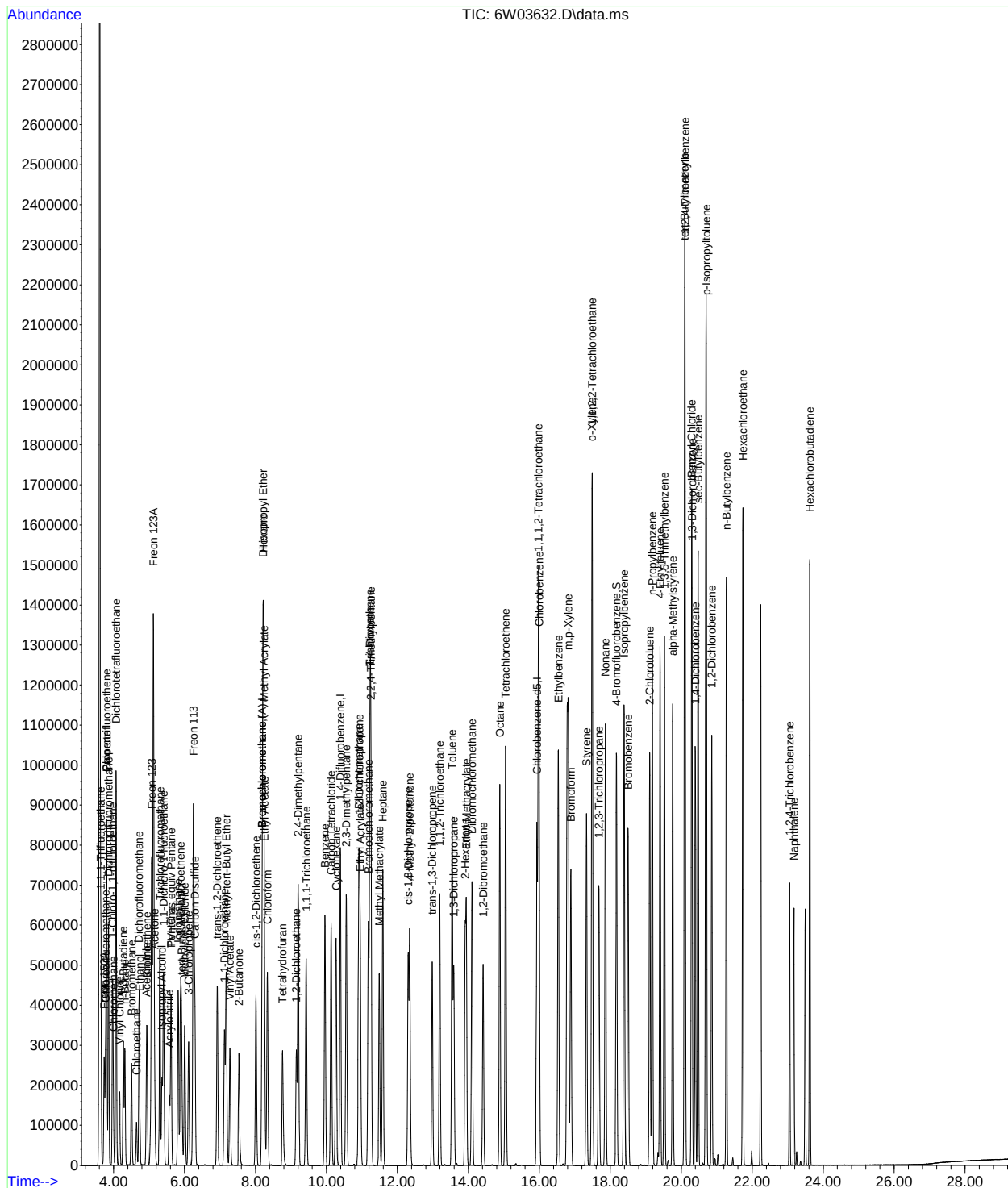
Quant Time: Dec 20 13:14:54 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.254	57	1122101	9.55	ppb(v	99
56) Heptane	11.590	71	245604	9.72	ppb(v	99
57) Trichloroethene	11.223	95	317949	9.60	ppb(v	98
58) 1,2-Dichloropropane	10.930	63	266697	9.53	ppb(v	99
59) Dibromomethane	10.911	174	299140	8.85	ppb(v	96
60) Ethyl Acrylate	10.954	55	528736	10.28	ppb(v	100
61) Methyl Methacrylate	11.493	69	265498	10.37	ppb(v	97
62) 1,4-Dioxane	11.223	88	141175	9.88	ppb(v#	75
63) Bromodichloromethane	11.181	83	514738	9.77	ppb(v	100
64) cis-1,3-Dichloropropene	12.306	75	413356	9.70	ppb(v	99
65) 4-Methyl-2-pentanone	12.343	58	217631	10.46	ppb(v	98
66) trans-1,3-Dichloropropene	12.979	75	376248	9.78	ppb(v	99
67) Toluene	13.542	91	862336	9.35	ppb(v	100
68) 1,1,2-Trichloroethane	13.193	97	295298	9.66	ppb(v	100
69) 1,3-Dichloropropane	13.585	76	413803	9.51	ppb(v	98
70) 2-Hexanone	13.909	58	294715	10.04	ppb(v	99
71) Ethyl Methacrylate	13.940	69	438752	10.80	ppb(v	100
72) Dibromochloromethane	14.099	129	525165	9.98	ppb(v	98
73) Tetrachloroethene	15.047	166	428310	9.23	ppb(v	99
74) 1,2-Dibromoethane	14.417	107	462155	9.61	ppb(v	100
75) Octane	14.888	43	507885	9.69	ppb(v	99
76) 1,1,1,2-Tetrachloroethane	15.977	131	358753	9.50	ppb(v	98
78) Chlorobenzene	15.995	112	657713	9.74	ppb(v	100
79) Ethylbenzene	16.540	91	1076545	10.31	ppb(v	99
80) m,p-Xylene	16.809	91	1658645	20.84	ppb(v	100
81) Styrene	17.329	104	608897	11.50	ppb(v	100
82) Nonane	17.861	43	522513	10.24	ppb(v	100
83) o-Xylene	17.482	91	840971	10.54	ppb(v	99
84) Bromoform	16.888	173	495399	11.27	ppb(v	99
85) 1,1,2,2-Tetrachloroethane	17.488	83	584925	10.41	ppb(v	100
86) 1,2,3-Trichloropropane	17.677	75	430300	10.28	ppb(v	100
87) Isopropylbenzene	18.387	105	1099006	10.01	ppb(v	99
88) Bromobenzene	18.503	156	357663	9.90	ppb(v	97
89) 2-Chlorotoluene	19.109	126	269015	10.42	ppb(v	98
90) n-Propylbenzene	19.182	120	309286	10.55	ppb(v	96
92) 4-Ethyltoluene	19.403	105	1079853	10.70	ppb(v	100
93) 1,3,5-Trimethylbenzene	19.525	105	912182	10.67	ppb(v	99
94) alpha-Methylstyrene	19.758	118	434616	11.83	ppb(v	100
95) tert-Butylbenzene	20.094	134	212595	10.25	ppb(v	99
96) 1,2,4-Trimethylbenzene	20.106	105	872770	10.79	ppb(v	94
97) 1,3-Dichlorobenzene	20.302	146	536891	9.97	ppb(v	100
98) Benzyl Chloride	20.290	91	641121	11.36	ppb(v	99
99) 1,4-Dichlorobenzene	20.400	146	520162	10.11	ppb(v	99
100) sec-Butylbenzene	20.479	134	247945	10.30	ppb(v	97
101) p-Isopropyltoluene	20.706	134	276252	10.36	ppb(v	95
102) 1,2-Dichlorobenzene	20.859	146	502414	9.96	ppb(v	99
103) n-Butylbenzene	21.275	134	235587	11.02	ppb(v	97
104) Hexachloroethane	21.740	201	302585	9.95	ppb(v	96
105) 1,2,4-Trichlorobenzene	23.055	180	219181	9.84	ppb(v	98
106) Naphthalene	23.177	128	487826	11.93	ppb(v	100
107) Hexachlorobutadiene	23.624	225	299371	10.24	ppb(v	99
109) TVHC as equiv Pentane	5.620	TIC	934390	9.31	ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\
Data File : 6W03632.D
Acq On : 20 Dec 2017 11:52 am
Operator : DANAT
Sample : cc76-10
Misc : MS23032,V6W105,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 20 13:14:54 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03655.D
 Acq On : 21 Dec 2017 10:55 am
 Operator : DANAT
 Sample : cc76-10
 Misc : MS23032,V6W106,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 21 12:06:51 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.189	130	197198	10.00	ppb(v)	0.00
54) 1,4-Difluorobenzene	10.398	114	717994	10.00	ppb(v)	0.00
77) Chlorobenzene-d5	15.934	82	354816	10.00	ppb(v)	0.00
108) Bromochloromethane (A)	8.189	130	197198	10.00	ppb(v)	0.00

System Monitoring Compounds

91) 4-Bromofluorobenzene	18.173	95	477563	10.44	ppb(v)	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	104.40%

Target Compounds						Qvalue
2) 1,1,1-Trifluoroethane	3.644	69	288998	9.38	ppb(v)	99
3) Freon 152A	3.735	65	122029	9.53	ppb(v)	98
4) Chlorodifluoromethane	3.778	67	44711	9.97	ppb(v)	100
5) Propene	3.803	41	129395	9.19	ppb(v)	98
6) Chlorotrifluoroethene	3.809	116	315723	10.06	ppb(v)	100
7) Dichlorodifluoromethane	3.858	85	519641	10.54	ppb(v)	100
8) 1-Chloro-1,1-difluoro...	3.974	65	359995	10.79	ppb(v)	100
9) Chloromethane	3.992	50	175470	11.04	ppb(v)	100
10) Dichlorotetrafluoroethane	4.066	85	496651	10.78	ppb(v)	95
11) Vinyl Chloride	4.170	62	198830	10.86	ppb(v)	98
12) 1,3-Butadiene	4.280	54	150176	10.80	ppb(v)	98
13) n-Butane	4.323	58	36713	11.29	ppb(v)	92
14) Bromomethane	4.506	94	185098	10.98	ppb(v)	99
15) Chloroethane	4.647	64	103285	10.79	ppb(v)	99
16) Dichlorofluoromethane	4.720	67	420211	10.71	ppb(v)	100
17) Acetonitrile	4.928	41	147212	9.75	ppb(v)	97
18) Freon 123	5.075	83	514748	10.08	ppb(v)	99
19) Freon 123A	5.124	117	554369	20.32	ppb(v)	95
20) Bromoethene	4.947	106	195464	10.57	ppb(v)	99
21) Trichlorofluoromethane	5.308	101	480233	10.28	ppb(v)	99
22) Acetone	5.155	58	94873	9.48	ppb(v)	92
23) Pentane	5.620	57	48507	10.35	ppb(v)	91
24) 1,1-Dichloro-1-fluoro...	5.412	81	396239	9.77	ppb(v)	99
25) Iodomethane	5.822	142	555359	10.11	ppb(v)	100
26) Isopropyl Alcohol	5.363	45	361819	9.13	ppb(v)	99
27) 1,1-Dichloroethene	5.889	61	290316	9.68	ppb(v)	97
28) Freon 113	6.250	101	423864	9.95	ppb(v)	100
29) Methylene Chloride	6.005	84	184285	9.07	ppb(v)	97
30) Carbon Disulfide	6.287	76	642960	9.95	ppb(v)	100
31) Ethanol	4.733	45	59066	10.47	ppb(v)	100
32) Acrylonitrile	5.571	53	148024	10.38	ppb(v)	98
33) 3-Chloropropene	6.115	76	92972	10.23	ppb(v)	87
34) trans-1,2-Dichloroethene	6.923	61	276842	9.57	ppb(v)	96
35) tert-Butyl Alcohol	5.919	59	387499	10.12	ppb(v)	99
36) Methyl tert-Butyl Ether	7.174	73	531714	9.95	ppb(v)	98
37) Vinyl Acetate	7.278	43	440204	9.23	ppb(v)	98
38) 1,1-Dichloroethane	7.125	63	350785	9.77	ppb(v)	100
39) 2-Butanone	7.535	72	104972	10.22	ppb(v)	87
40) Hexane	8.220	57	303749	9.57	ppb(v)	98
41) cis-1,2-Dichloroethene	8.012	61	260253	9.66	ppb(v)	98
42) Di-isopropyl Ether	8.214	87	177136	10.30	ppb(v)	90
43) Ethyl Acetate	8.250	61	68224	10.44	ppb(v)	97
44) Methyl Acrylate	8.238	55	371251	9.66	ppb(v)	99
45) Chloroform	8.336	83	416957	9.79	ppb(v)	99
46) 2,4-Dimethylpentane	9.205	57	348833	9.89	ppb(v)	99
47) Tetrahydrofuran	8.764	72	95736	10.45	ppb(v)	93
48) 1,1,1-Trichloroethane	9.431	97	382867	9.98	ppb(v)	100
49) 1,2-Dichloroethane	9.150	62	237306	9.57	ppb(v)	98
50) Benzene	9.957	78	638353	9.58	ppb(v)	99
51) Carbon Tetrachloride	10.135	117	418653	9.97	ppb(v)	99
52) Cyclohexane	10.269	56	300053	9.82	ppb(v)	98
53) 2,3-Dimethylpentane	10.563	71	140252	10.11	ppb(v)	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03655.D
 Acq On : 21 Dec 2017 10:55 am
 Operator : DANAT
 Sample : cc76-10
 Misc : MS23032,V6W106,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

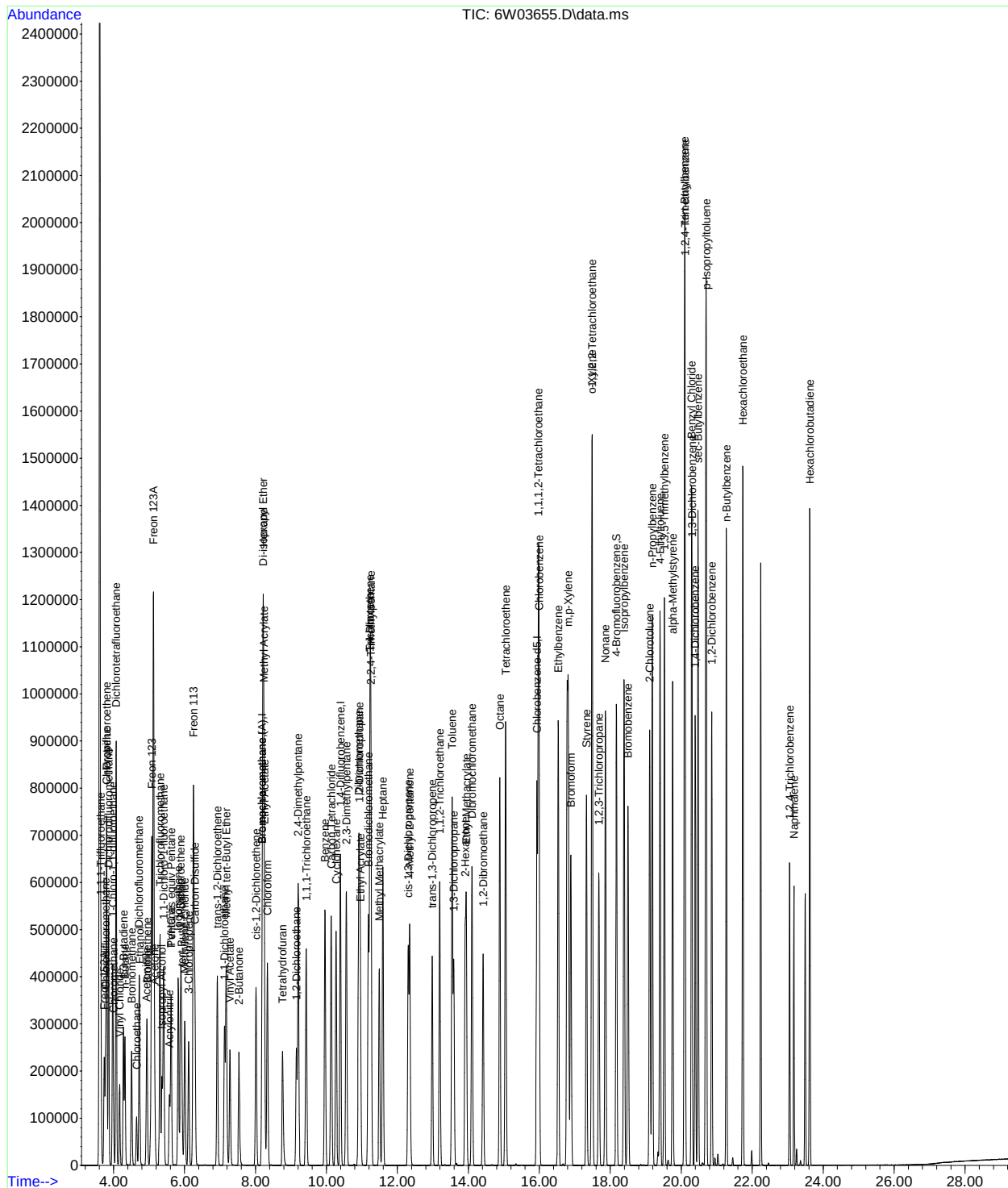
Quant Time: Dec 21 12:06:51 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.254	57	978737	9.82	ppb(v	99
56) Heptane	11.591	71	217357	10.14	ppb(v	99
57) Trichloroethene	11.223	95	285278	10.16	ppb(v	99
58) 1,2-Dichloropropane	10.930	63	235350	9.92	ppb(v	99
59) Dibromomethane	10.911	174	271064	9.46	ppb(v	97
60) Ethyl Acrylate	10.960	55	454823	10.43	ppb(v	99
61) Methyl Methacrylate	11.493	69	233827	10.77	ppb(v	93
62) 1,4-Dioxane	11.223	88	126090	10.41	ppb(v#	72
63) Bromodichloromethane	11.181	83	453505	10.15	ppb(v	100
64) cis-1,3-Dichloropropene	12.306	75	363412	10.06	ppb(v	98
65) 4-Methyl-2-pentanone	12.343	58	189767	10.76	ppb(v	95
66) trans-1,3-Dichloropropene	12.979	75	330364	10.12	ppb(v	99
67) Toluene	13.542	91	766605	9.80	ppb(v	100
68) 1,1,2-Trichloroethane	13.193	97	262463	10.13	ppb(v	100
69) 1,3-Dichloropropane	13.585	76	368020	9.97	ppb(v	96
70) 2-Hexanone	13.909	58	255631	10.27	ppb(v	97
71) Ethyl Methacrylate	13.940	69	384671	11.17	ppb(v	100
72) Dibromochloromethane	14.099	129	472229	10.59	ppb(v	99
73) Tetrachloroethene	15.053	166	392676	9.98	ppb(v	99
74) 1,2-Dibromoethane	14.417	107	412660	10.12	ppb(v	100
75) Octane	14.888	43	429847	9.67	ppb(v	96
76) 1,1,1,2-Tetrachloroethane	15.977	131	324850	10.14	ppb(v	99
78) Chlorobenzene	15.995	112	593938	9.30	ppb(v	99
79) Ethylbenzene	16.534	91	966361	9.80	ppb(v	100
80) m, p-Xylene	16.809	91	1488840	19.80	ppb(v	100
81) Styrene	17.329	104	549755	10.99	ppb(v	100
82) Nonane	17.861	43	444288	9.21	ppb(v	97
83) o-Xylene	17.482	91	758303	10.05	ppb(v	100
84) Bromoform	16.888	173	447970	10.78	ppb(v	99
85) 1,1,2,2-Tetrachloroethane	17.488	83	526516	9.91	ppb(v	100
86) 1,2,3-Trichloropropane	17.678	75	384061	9.71	ppb(v	99
87) Isopropylbenzene	18.387	105	997608	9.62	ppb(v	100
88) Bromobenzene	18.497	156	328736	9.63	ppb(v	97
89) 2-Chlorotoluene	19.109	126	245383	10.06	ppb(v	100
90) n-Propylbenzene	19.183	120	280836	10.14	ppb(v	100
92) 4-Ethyltoluene	19.403	105	977047	10.25	ppb(v	100
93) 1,3,5-Trimethylbenzene	19.525	105	827009	10.24	ppb(v	100
94) alpha-Methylstyrene	19.758	118	394478	11.37	ppb(v	100
95) tert-Butylbenzene	20.094	134	188647	9.62	ppb(v	99
96) 1,2,4-Trimethylbenzene	20.106	105	758654	9.93	ppb(v	97
97) 1,3-Dichlorobenzene	20.302	146	484561	9.53	ppb(v	98
98) Benzyl Chloride	20.290	91	561458	10.53	ppb(v	100
99) 1,4-Dichlorobenzene	20.394	146	472714	9.73	ppb(v	100
100) sec-Butylbenzene	20.473	134	224565	9.87	ppb(v	98
101) p-Isopropyltoluene	20.706	134	244026	9.68	ppb(v	93
102) 1,2-Dichlorobenzene	20.859	146	461664	9.68	ppb(v	100
103) n-Butylbenzene	21.275	134	213170	10.56	ppb(v	90
104) Hexachloroethane	21.740	201	280732	9.77	ppb(v	93
105) 1,2,4-Trichlorobenzene	23.055	180	206354	9.81	ppb(v	99
106) Naphthalene	23.177	128	459078	11.88	ppb(v	100
107) Hexachlorobutadiene	23.624	225	278045	10.07	ppb(v	100
109) TVHC as equiv Pentane	5.620	TIC	810928	9.41	ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\
Data File : 6W03655.D
Acq On : 21 Dec 2017 10:55 am
Operator : DANAT
Sample : cc76-10
Misc : MS23032,V6W106,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 21 12:06:51 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03682.D
 Acq On : 22 Dec 2017 12:56 pm
 Operator : DANAT
 Sample : cc76-10
 Misc : MS23193,V6W107,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 22 13:42:03 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	8.189	130	236868	10.00	ppb(v)	0.00
54) 1,4-Difluorobenzene	10.398	114	894932	10.00	ppb(v)	0.00
77) Chlorobenzene-d5	15.934	82	404444	10.00	ppb(v)	0.00
108) Bromochloromethane (A)	8.189	130	236868	10.00	ppb(v)	0.00

System Monitoring Compounds						
91) 4-Bromofluorobenzene	18.173	95	519377	9.97	ppb(v)	0.00
Spiked Amount	10.000	Range	65 - 128	Recovery	=	99.70%

Target Compounds						Qvalue
2) 1,1,1-Trifluoroethane	3.644	69	499716	13.51	ppb(v)	93
3) Freon 152A	3.735	65	144188	9.38	ppb(v)	96
4) Chlorodifluoromethane	3.772	67	52452	9.73	ppb(v)	98
5) Propene	3.797	41	138343	8.18	ppb(v)	98
6) Chlorotrifluoroethene	3.803	116	382397	10.14	ppb(v)	99
7) Dichlorodifluoromethane	3.858	85	667865	11.28	ppb(v)	99
8) 1-Chloro-1,1-difluoro...	3.968	65	412338	10.29	ppb(v)	98
9) Chloromethane	3.992	50	190971	10.01	ppb(v)	100
10) Dichlorotetrafluoroethane	4.066	85	584606	10.56	ppb(v)	99
11) Vinyl Chloride	4.170	62	234635	10.67	ppb(v)	99
12) 1,3-Butadiene	4.280	54	167741	10.04	ppb(v)	95
13) n-Butane	4.317	58	42579	10.90	ppb(v)	83
14) Bromomethane	4.506	94	225223	11.12	ppb(v)	99
15) Chloroethane	4.641	64	123332	10.73	ppb(v)	98
16) Dichlorofluoromethane	4.720	67	505213	10.72	ppb(v)	100
17) Acetonitrile	4.928	41	205291	11.32	ppb(v)	98
18) Freon 123	5.075	83	701736	11.44	ppb(v)	100
19) Freon 123A	5.118	117	755923	23.07	ppb(v)	98
20) Bromoethene	4.941	106	273836	12.33	ppb(v)	99
21) Trichlorofluoromethane	5.308	101	664144	11.84	ppb(v)	99
22) Acetone	5.149	58	130694	10.87	ppb(v)	96
23) Pentane	5.620	57	63676	11.31	ppb(v)	92
24) 1,1-Dichloro-1-fluoro...	5.406	81	540838	11.10	ppb(v)	99
25) Iodomethane	5.815	142	761755	11.55	ppb(v)	99
26) Isopropyl Alcohol	5.363	45	510164	10.71	ppb(v)	98
27) 1,1-Dichloroethene	5.889	61	388722	10.79	ppb(v)	99
28) Freon 113	6.250	101	545046	10.65	ppb(v)	98
29) Methylene Chloride	6.005	84	237564	9.73	ppb(v)	96
30) Carbon Disulfide	6.286	76	826976	10.65	ppb(v)	99
31) Ethanol	4.733	45	63732	9.41	ppb(v)	98
32) Acrylonitrile	5.571	53	196705	11.48	ppb(v)	99
33) 3-Chloropropene	6.115	76	125470	11.50	ppb(v)	82
34) trans-1,2-Dichloroethene	6.923	61	366645	10.55	ppb(v)	98
35) tert-Butyl Alcohol	5.919	59	506045	11.00	ppb(v)	98
36) Methyl tert-Butyl Ether	7.174	73	700385	10.91	ppb(v)	97
37) Vinyl Acetate	7.278	43	564784	9.86	ppb(v)	97
38) 1,1-Dichloroethane	7.125	63	457384	10.61	ppb(v)	100
39) 2-Butanone	7.534	72	136160	11.03	ppb(v)	83
40) Hexane	8.220	57	376110	9.87	ppb(v)	97
41) cis-1,2-Dichloroethene	8.012	61	340944	10.53	ppb(v)	98
42) Di-isopropyl Ether	8.214	87	227403	11.01	ppb(v)	82
43) Ethyl Acetate	8.250	61	84140	10.72	ppb(v)	93
44) Methyl Acrylate	8.238	55	447874	9.71	ppb(v)	97
45) Chloroform	8.336	83	519748	10.16	ppb(v)	99
46) 2,4-Dimethylpentane	9.205	57	455124	10.74	ppb(v)	99
47) Tetrahydrofuran	8.764	72	126303	11.48	ppb(v)	90
48) 1,1,1-Trichloroethane	9.431	97	481842	10.45	ppb(v)	98
49) 1,2-Dichloroethane	9.150	62	301814	10.14	ppb(v)	99
50) Benzene	9.957	78	820047	10.25	ppb(v)	98
51) Carbon Tetrachloride	10.134	117	543082	10.77	ppb(v)	99
52) Cyclohexane	10.269	56	395376	10.77	ppb(v)	96
53) 2,3-Dimethylpentane	10.563	71	184857	11.09	ppb(v)	91

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
 Data File : 6W03682.D
 Acq On : 22 Dec 2017 12:56 pm
 Operator : DANAT
 Sample : cc76-10
 Misc : MS23193,V6W107,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

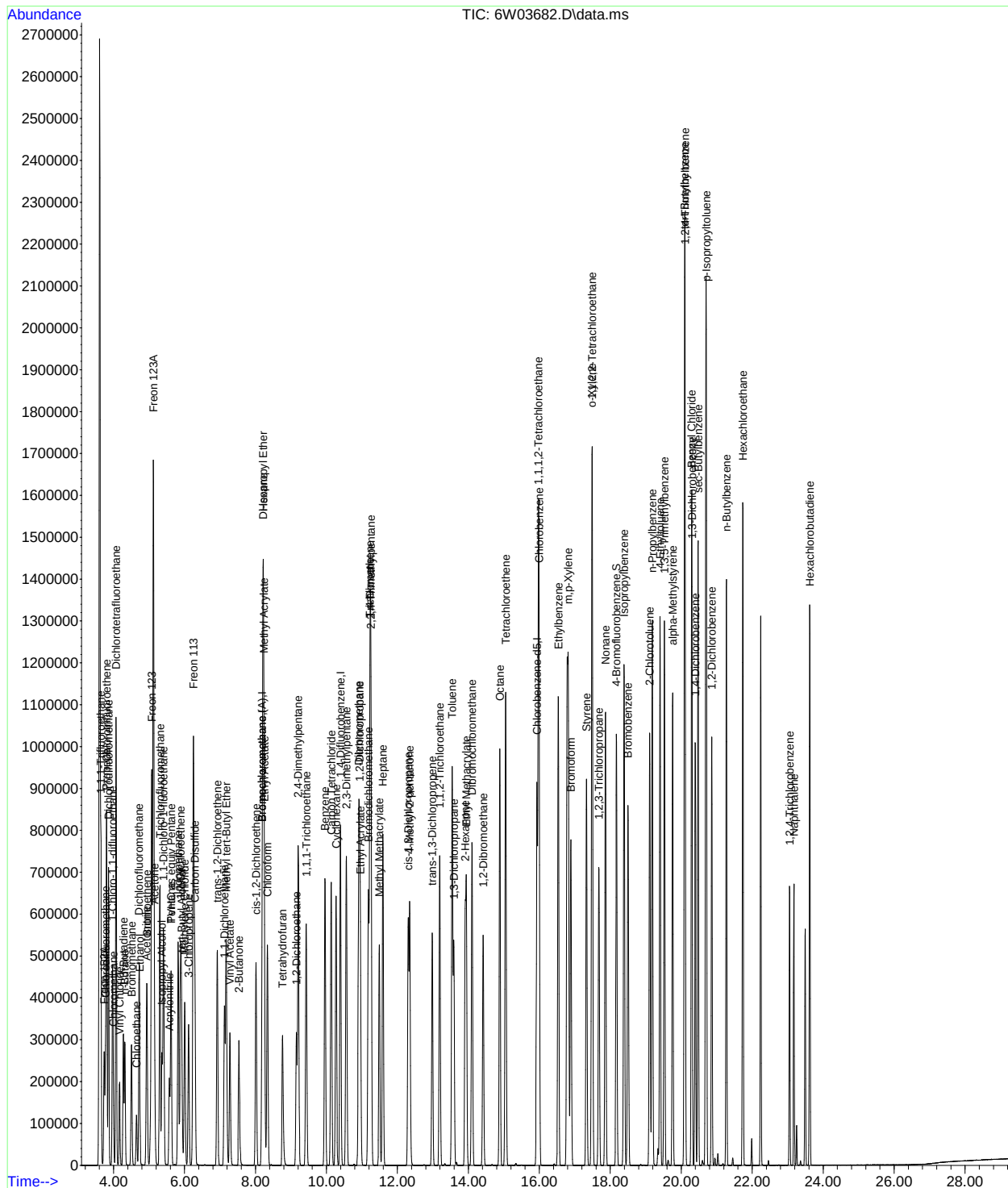
Quant Time: Dec 22 13:42:03 2017
 Quant Method : C:\msdchem\1\methods\6w076.M
 Quant Title : T0-15 Full Scan Mode
 QLast Update : Wed Nov 08 09:25:32 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) 2,2,4-Trimethylpentane	11.254	57	1225110	9.86	ppb(v	99
56) Heptane	11.591	71	280496	10.50	ppb(v	97
57) Trichloroethene	11.223	95	351651	10.05	ppb(v	97
58) 1,2-Dichloropropane	10.936	63	294058	9.94	ppb(v	99
59) Dibromomethane	10.911	174	338606	9.48	ppb(v	99
60) Ethyl Acrylate	10.960	55	560387	10.31	ppb(v	98
61) Methyl Methacrylate	11.493	69	296714	10.96	ppb(v	93
62) 1,4-Dioxane	11.223	88	157224	10.41	ppb(v#	69
63) Bromodichloromethane	11.181	83	563621	10.12	ppb(v	99
64) cis-1,3-Dichloropropene	12.306	75	474699	10.54	ppb(v	99
65) 4-Methyl-2-pentanone	12.343	58	236631	10.77	ppb(v	91
66) trans-1,3-Dichloropropene	12.979	75	430098	10.57	ppb(v	99
67) Toluene	13.542	91	966949	9.92	ppb(v	99
68) 1,1,2-Trichloroethane	13.193	97	329947	10.21	ppb(v	100
69) 1,3-Dichloropropane	13.591	76	462442	10.06	ppb(v	95
70) 2-Hexanone	13.909	58	315525	10.17	ppb(v	92
71) Ethyl Methacrylate	13.940	69	468144	10.91	ppb(v	97
72) Dibromochloromethane	14.099	129	588111	10.58	ppb(v	100
73) Tetrachloroethene	15.053	166	477711	9.74	ppb(v	99
74) 1,2-Dibromoethane	14.417	107	511963	10.07	ppb(v	100
75) Octane	14.888	43	512510	9.25	ppb(v	91
76) 1,1,1,2-Tetrachloroethane	15.977	131	402494	10.08	ppb(v	99
78) Chlorobenzene	15.995	112	738007	10.14	ppb(v	96
79) Ethylbenzene	16.540	91	1177200	10.47	ppb(v	98
80) m,p-Xylene	16.809	91	1776060	20.72	ppb(v	99
81) Styrene	17.329	104	671414	11.77	ppb(v	99
82) Nonane	17.867	43	488968	8.89	ppb(v	93
83) o-Xylene	17.482	91	873436	10.16	ppb(v	98
84) Bromoform	16.888	173	529759	11.19	ppb(v	99
85) 1,1,2,2-Tetrachloroethane	17.488	83	585686	9.68	ppb(v	100
86) 1,2,3-Trichloropropane	17.678	75	454712	10.09	ppb(v	99
87) Isopropylbenzene	18.387	105	1181523	9.99	ppb(v	99
88) Bromobenzene	18.497	156	382087	9.82	ppb(v	96
89) 2-Chlorotoluene	19.109	126	289586	10.42	ppb(v	95
90) n-Propylbenzene	19.183	120	327245	10.37	ppb(v	99
92) 4-Ethyltoluene	19.403	105	1115649	10.27	ppb(v	99
93) 1,3,5-Trimethylbenzene	19.525	105	936834	10.17	ppb(v	99
94) alpha-Methylstyrene	19.758	118	449816	11.37	ppb(v	99
95) tert-Butylbenzene	20.094	134	217155	9.72	ppb(v	97
96) 1,2,4-Trimethylbenzene	20.106	105	857498	9.85	ppb(v	95
97) 1,3-Dichlorobenzene	20.302	146	538117	9.28	ppb(v	98
98) Benzyl Chloride	20.290	91	631670	10.39	ppb(v	98
99) 1,4-Dichlorobenzene	20.400	146	527026	9.51	ppb(v	98
100) sec-Butylbenzene	20.480	134	256346	9.88	ppb(v	94
101) p-Isopropyltoluene	20.706	134	280501	9.77	ppb(v	97
102) 1,2-Dichlorobenzene	20.859	146	505453	9.30	ppb(v	98
103) n-Butylbenzene	21.275	134	241203	10.48	ppb(v	88
104) Hexachloroethane	21.740	201	309019	9.44	ppb(v	94
105) 1,2,4-Trichlorobenzene	23.055	180	219269	9.14	ppb(v	99
106) Naphthalene	23.177	128	541716	12.30	ppb(v	100
107) Hexachlorobutadiene	23.624	225	271764	8.63	ppb(v	99
109) TVHC as equiv Pentane	5.620	TIC	1029375	9.95	ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\
Data File : 6W03682.D
Acq On : 22 Dec 2017 12:56 pm
Operator : DANAT
Sample : cc76-10
Misc : MS23193,V6W107,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 22 13:42:03 2017
Quant Method : C:\msdchem\1\methods\6w076.M
Quant Title : T0-15 Full Scan Mode
QLast Update : Wed Nov 08 09:25:32 2017
Response via : Initial Calibration



7.7.36

Date: 10/6/17

Analyst Signature: [Signature]

Columns: 6x1-6L 40.32mm x 1.0mm

Method: SWT015

Seq. File: 171006

Initial Cal. Method: MCV1065

AS Data

Method: PIS. 970

Standard Data

Lot #	Description	Conc.
AS7821	T015 LCS (A977)	40 ppb
AS7849	T015 LCS (A978)	40 ppb

Standard Data

Lot #	Description	Conc.
AS7636	T015 Std (A965)	100 ppb
AS7846	T015 Std (A965)	40 ppb
AS7847	T015 Std (A971)	1.6 ppb
AS7848	T015 Std (A981)	0.8 ppb

(M) Manually integrated chromatographic peaks in the following reportable file have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature: [Signature]

Date: 10/10/17

AS #	Data File	Sample ID	TEST	Canister Serial #	Vol Sample	Dil Fact	TICS	Int. STD Areas	Surr	Status Data	Comments
1	SW27079	DFB		A981	40					OK	time 1205
1	SW27080	IC1065-0.04		A971	40			✓	✓	OK	
2	SW27081	IC1065-0.1		A971	40			✓	✓	OK	
2	SW27082	IC1065-0.2		A981	200			✓	✓	OK	
2	SW27083	IC1065-0.5		A971	200			✓	✓	OK	
2	SW27084	IC1065-0.5		A981	500			✓	✓	OK	
3	SW27085	IC1065-5		A965	50			✓	✓	OK	
3	SW27086	IC1065-10		A965	100			✓	✓	OK	
3	SW27087	IC1065-20		A965	200			✓	✓	OK	
3	SW27088	IC1065-40		A965	400			✓	✓	OK	
4	SW27089	IB		A962	400						
5	SW27090	ICV1065-10		A962	100			✓	✓	OK	pgs from leaking standard discarded
4	SW27091	IB		A962	400						
6	SW27092	ICV1065-10		A978	100			✓	✓	OK	
TH 10/7/17											

All strikeouts must be initial and dated. Comment is required for anything other than a transcription error.

Form: AT008-05
Rev. Date: 10/20/09

147

Canister Secondary Dilution Log

0601090

Test Gauge ID: TG-2

[illegible]

DF = (Original Canister DF) x (Secondary Canister DF)

Definition:

Dilution Factor at Instrument = $\frac{\text{(Final Canister Dilution Factor)} \times \text{(Normal Sample Volume)}}{\text{(Sample Volume in cc Injected)}}$

Example:

Original Canister is diluted 2x for manual sample draw. 75cc from this canister is added to a 375cc minican and brought to 14.7 psig or 750cc equiv volume. This results in an additional dilution of 750/75 or 10. The final canister dilution factor is $2 \times 10 = 20$. From the dilution canister 20cc is injected at the instrument where normal volume is 400cc. This is an additional instrument dilution factor of 20 (from instrument dilution) $\times 20$ (from canister dilution) = 400

Notes:

Case	Investigation Error	# 3 = Computer Miscalculation	# 4 = Analyst's Correction
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Form: AT003-04

Rev. Date: 04/15/13 

198

Date: 11/8/17

Analyst Signature: 

Columns: RTX-1 60m x 0.32mm x 1.0um

Method: SWT 15.14

Seq. File: 171108.5

Initial Cal. Method: *M5W1065*

AS Data

Method: T01 S, CTD

Standard Data

<u>General Data</u>		
Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
A57636	Int / Surv.	100 ppbw
A57890	TOIS STD (A965)	40 ppbw

(M) Manually integrated chromatographic peaks in the following reportable file have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature:

Date: 11/2/17

Supervisor Signature: <i>[Signature]</i>										Date: 11/9/17	
AS #	Data File	Sample ID	TEST	Canister Serial #	Vol Sample	Dil Fact	TICS	Int. STD Areas	Surr	Status Data	Comments
1	SW27717	BFB		<i>open</i> A962	400					OK	
2	SW27718	CC1065-10		A965	100			✓	✓	OK	
2	SW27719	BS		A962 th	100			✓	✓	OK	
2	SW27720	BSD		A962 th	100			✓	✓	OK	
4	SW27721	IB		A962	400					OK	
4	SW27722	MB		A962	400			✓	✓	OK	
5	SW27723	SCE CP9441		A994	400			✓	✓	OK	
6	SW27724	SCE CP9419		A614	400			✓	✓	OK	
7	SW27725	JCS4549-8	STD M521618	M250	50	1		✓	✓	OK/DL	over cal PCE low
8	SW27726	JCS4549-9	✓	A711, M257	800	1280		✓	✓	OK	
9	SW27727	JCS4549-20	✓	A647	100	1		✓	✓	OK/DL	PCE over cal PCE low
10	SW27728	JCS4251-10	SL M521692	A506, A1029	400	276		✓	✓	OK/DL	
11	SW27729	JCS4916-1	STD M521947	A1035	20	1.70		✓	✓	OK	too dilute PCE 1X
12	SW27730	JCS4916-2	✓	A906	680	1.70		✓	✓	OK	
12	SW27731	JCS4916-2DUP	✓	A906	680	1.70		✓	✓	OK	
13	SW27732	JCS4916-3	✓	A278	760	1.90		✓	✓	OK	
14	SW27733	JCS4916-4	✓	A271	680	1.70		✓	✓	OK	
15	SW27734	JCS4917-5	✓	A339	400	1		✓	✓	OK	Triple Blank
16	SW27735	JCS4877-1	✓	A1220	195	1.95		✓	✓	OK	
1	SW27736	JCS4877-2	✓	A1233	293	2.93		✓	✓	OK	
2	SW27737	SCE CP9457		A463	400			✓	✓	OK	
3	SW27738	SCE CP9462		A857	400			✓	✓	OK	
4	SW27739	SCE CP9463		M244	400			✓	✓	OK	
5	SW27740	SCE CP9459		A1215	400			✓	✓	NG	PCE hit reclaim
6	SW27741	SCE CP9455		A435	400			✓	✓	NG	PCE hit, PCE hit reclaim
7	SW27742	SCE CP9460		A924	400			✓	✓	OK	
											TH 11/9/17

All strikeouts must be initial and dated. Comment is required for anything other than

All strikeouts must be initial and dated. Comment is require for anything other than a transcription error.

Form: AT008-05
Rev. Date: 10/20/09

199

Date: 11/13/17Analyst Signature: [Signature]Columns: Rtx-1 60m x 0.32mm x 1.0umMethod: SW2015.MSeq. File: 171113.SInitial Cal. Method: MSW1065

AS Data

Method: TD15.CTD

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
A37686	Int / SWR	100ppm
A37690	TD15 STD (A965)	40ppm

(M) Manually integrated chromatographic peaks in the following reportable file have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature: [Signature]Date: 11/13/17

AS #	Data File	Sample ID	TEST	Canister Serial #	Vol Sample	Dil Fact	TICS	Int. STD Areas	Surr	Status Data	Comments
1	SW27795	BFB		open	400					OK	
2	SW27796	CC1065-10		A965	100			✓	✓	OK	
2	SW27797	BS		A965	100			✓	✓	OK	
2	SW27798	BSD		A965	100			✓	✓	OK	
3	SW27799	IB		A962	400					OK	
3	SW27800	MB		A962	400					OK	
4	SW27801	JC55333-6	STD MS22033	A503	100	1		✓	✓	OK	
5	SW27802	JC55333-7	✓	A699	400	1		✓	✓	OK	
6	SW27803	JC55333-8	✓	A489	100	1		✓	✓	RR	Food/Air rxn
6	SW27804	JC55333-8DUP	✓	A489	100	1		✓	✓	OK	
7	SW27805	JC55333-9	✓	A408	100	1		✓	✓	OK	
8	SW27806	SCC CP9464		A309	400			✓	✓	OK	
9	SW27807	JC54222-1	STD MS22061	A464	400	1		✓	✓	OK	
10	SW27808	JC54222-2	✓	A1055	400	1		✓	✓	OK/DL	TCEP RR 10um
11	SW27809	JC54222-3	✓	A1190	400	1		✓	✓	OK/DL	TCEP RR 10um
12	SW27810	JC55166-1	✓	M411	592	1.48		✓	✓	RR	possible c/o
13	SW27811	JC55166-2	✓	A836	592	1.48		✓	✓	RR	possible c/o
14	SW27812	SCC CP9455		A435	400			✓	✓	OK	possible c/o
15	SW27813	JC55167-1	STD MS22061	A70	100	1		✓	✓	OK	
16	SW27814	JC55167-2	✓	M330	100	1		✓	✓	OK	
1	SW27815	SCC X TH CP9468		A992	400			✓	✓	OK/DL	acetone T RR 20um
2	SW27816	SCC CP9467		M207	400			✓	✓	RR	acetone hit possible c/o
3	SW27817	SCC CP9471		M202	400			✓	✓	OK	
4	SW27818	SCC CP9470		A289	400			✓	✓	OK	
5	SW27819	JC55333-7	STD MS22033	A699	100	1		✓	✓	OK	
6	SW27820	SCC CP9469		A024	400			✓	✓	OK	
7	SW27821	SCC CP9465		A1112	400			✓	✓	NG	multiple hits rec'tem
										OK	

All strikeouts must be initial and dated. Comment is required for anything other than a transcription error.

Form: AT008-05

Rev. Date: 10/20/09

5

Date: 11/17/17

Analyst Signature: *[Signature]*

Columns: RTX-1 60m x 0.32 x 0.25mm

Method: SWTO15.M

Seq. File: 171117.S

Initial Cal. Method: MSW1097

AS Data

Method: TO15.CTD

Standard Data

Lot #	Description	Conc.
A37901	TO15 STD (A968)	40ppbv
A37902	TO15 LCS (A978)	40ppbv
A37903	TO15 STD (A971)	1.0ppbv
A37904	TO15 STD (A970)	0.4ppbv

Standard Data

Lot #	Description	Conc.
A37636	Int / Surr.	100ppbv

(M) Manually integrated chromatographic peaks in the following reportable file have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature: *[Signature]*

Date: 11/21/17

AS #	Data File	Sample ID	TEST	Canister Serial #	Vol Sample	Dil Fact	TICS	Int. STD Areas	Surr	Status Data	Comments
1	SW27906	BFB		A970	40					OK	
1	SW27907	1C1097-0.04		A970	40			✓	✓	OK	
2	SW27908	1C1097-0.1		A971	40			✓	✓	OK	
2	SW27909	1C1097-0.2		A971	80			✓	✓	OK	
2	SW27910	1C1097-0.5		A971	200			✓	✓	OK	
3	SW27911	1C1097-5		A968	50			✓	✓	OK	
3	SW27912	1C1097-10		A968	100			✓	✓	OK	
3	SW27913	1C1097-20		A968	200			✓	✓	OK	
4	SW27914	IB		A962	100						
3	SW27915	1C1097-40		A968	400			✓	✓	OK	ICV-10 analyzed on 11/21/17 see 19.17
TH 11/21/17											

All strikeouts must be initial and dated. Comment is required for anything other than a transcription error.

Form: AT008-05

Rev. Date: 10/20/09

Date: 11/22/17Analyst Signature: [Signature]Columns: MS-1 (Wax) 32mm x 1.0umMethod: SWDIS.MSeq. File: 171122.5Initial Cal. Method: M5W1099

AS Data

Method: TO15.CTD

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
A57636	Int/Surr	10ppbv
A57901	TO15 STD. (A968)	40ppbv

(M) Manually integrated chromatographic peaks in the following reportable file have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature: [Signature]Date: 11/28/17

AS #	Data File	Sample ID	TEST	Canister Serial #	Vol Sample	Dil Fact	TICS	Int. STD Areas	Surr	Status Data	Comments
1	SW27974	BFB		open position	400					not used	
2	SW27975	CC1097-10		A968	100			✓	✓	not used	
2	SW27976	BS		A968	100			✓	✓	NG	1PA fails low return instrument
2	SW27977	BFB		open position	400					OK	12.2 ppm
2	SW27978	CC1097-10		A968	100			✓	✓	OK	
2	SW27979	BS		A968	100			✓	✓	OK	
2	SW27980	BSD		A968	100			✓	✓	OK	
3	SW27981	1B		A962	400						
3	SW27982	2 MB		A962	400			✓	✓	OK	
4	SW27983	SCL CP9495		A532	400			✓	✓	OK	
5	SW27984	SCL CP9491		M441	400			✓	✓	OK	
6	SW27985	SCL CP9493		M257	400			✓	✓	OK	
7	SW27986	JC55180-1	STD MS22061	A079	100	2.68		✓	✓	OK/DL	
8	SW27987	JC55180-4	✓	A746	20	1		✓	✓	OK	
9	SW27988	JC55180-11	✓	M117	100	1		✓	✓	OK	
10	SW27989	JC55180-12	✓	A081	100	1		✓	✓	OK	
11	SW27990	JC55180-13	✓	A026	100	1		✓	✓	OK	
12	SW27991	JC55180-17	✓	A450	20	1		✓	✓	OK	
13	SW27992	JC55180-18	✓	M153	20	1		✓	✓	OK/DL	exhaustive per 20ml
14	SW27993	JC55180-19	✓	A455	20	1		✓	✓	OK	
15	SW27994	JC55180-20	✓	A088	80	1		✓	✓	OK/DL	over cat per 20ml
16	SW27995	JC55180-21	✓	A290	80	1		✓	✓	OK/DL	over cat per 20ml
1	SW27996	JC55180-22	✓	M132	90	1		✓	✓	OK/DL	over cat per 20ml
2	SW27997	JC55180-23	✓	A471	100	1		✓	✓	OK	
2	SW27998	JC55180-23dup	✓	A471	100	1		✓	✓	OK	
3	SW27999	JC55180-24	✓	A866	100	1		✓	✓	OK	
4	SW28000	JC55180-33	✓	A358	10	1		✓	✓	OK/DL	over cat per 80x
6	SW28001	CC1097-10		A968	100			✓	✓	OK	

All strikeouts must be initial and dated. Comment is required for anything other than a transcription error.

Form: AT008-05
Rev. Date: 10/20/09

21

Date:

Analyst Signature:

Columns: RTX1-60m x 0.32mm x 1.0

Method: Autopsy

Seq. File: HW 2017140

Initial Cal. Method: M6 Wb76

AS Data

Method: 6WT015.CT07

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
A57626	Int/Surr	100ppb
A57926	Tox Std (A465)	40ppb

(M) Manually integrated chromatographic peaks in the following reportable file have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature:

Date: 12/22/17

Supervisor Signature: <u> </u>							

All strikeouts must be initial and dated. Comment is require for anything other than a transcription error.

Form: AT008-05

Rev. Date: 10/20/09

51

Date: 2/21/17

Analyst Signature:

AS Data

Method: GWT015-CT03

Columns: RTK 1-6cm x 0.32cm x 1.0µm

Method: OUTSIDE

Seq. File: 612017221

Initial Cal. Method: M6.W076

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
AS7626	1.175 gm	100 g/g
AS7626	10.15 g (1465)	40 g/g

(M) Manually integrated chromatographic peaks in the following reportable file have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature: _____

Date: 12/24/17

Supervisor Signature: _____										Date: 12/24/17	
AS #	Data File	Sample ID	TEST	Canister Serial #	Vol Sample	Dil Fact	TICS	Int. STD Areas	Surr	Status Data	Comments
1	6W03654	BFO		09091	400					OK	
2	6W03655	C276-10		A965	100			✓	✓	OK	
2	6W03656	B)		A965	100			✓	✓	OK	
2	6W03657	B50		A965	100			✓	✓	OK	
3	6W03658	IB		A963	400					OK	
3	6W03659	ME		A963	400			✓	✓	OK	
4	6W03660	JC5742-1	MS2265	A963	100	1		✓	✓	OK	
4	6W03661	JC5742-1	MS2265	A963	100	1		✓	✓	OK	
5	6W03662	JC5742-2		A963	100	1		✓	✓	OK	
6	6W03663	JC5742-3		A963	100	1		✓	✓	OK	
7	6W03664	JC5742-4		A963	100	1		✓	✓	OK	
8	6W03665	JC5685-4		A1033	100	1.0		✓	✓	OK	
9	6W03666	JC5685-10	MS2265	A1033	400	1.0		✓	✓	OK	
10	6W03667	JC5685-12	MS2265	A1033	400	1.0		✓	✓	OK	
11	6W03668	JC5685-1	MS2265	A1033	400	1.0		✓	✓	OK	
12	6W03669	JC5685-3	MS2265	A1033	400	1.0		✓	✓	OK	
13	6W03670	JC5685-5		A1033	400	1.0		✓	✓	OK	
14	6W03671	JC5685-7		A1033	400	1.0		✓	✓	OK	
15	6W03672	JC5685-9		A1033	400	1.0		✓	✓	OK	
16	6W03673	JC5685-11		A1033	400	1.0		✓	✓	OK	
1	6W03674	JC5685-15		A1033	400	1.0		✓	✓	OK	
2	6W03675	JC57485-3	MS2265	A1033	400	1.0		✓	✓	OK	
3	6W03676	JC57485-1	MS2265	A1033	400	1.0		✓	✓	OK	
4	6W03677	JC57485-2		A1033	400	1.0		✓	✓	OK	
5	6W03678										
Signature: _____ Date: 12/22/17											
All strikeouts must be initial and dated. Comment is required for anything other than "OK".											

All strikeouts must be initial and dated. Comment is require for anything other than a transcription error.

Form: AT008-05

Rev. Date: 10/20/09

53

Date: 12/22/17Analyst Signature: [Signature]

AS Data

Method: 6W1015: CTO3Columns: RTX1-60m x 0.32mm x 1.5Method: 6W1015Seq. File: 6W20171222.SInitial Cal. Method: 6W1015

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
A57636	Int/Surr	100 ppb
A57926	TOC Std. (A965)	40 ppb
A57933	TOC Std. (A965)	40 ppb

(M) Manually integrated chromatographic peaks in the following reportable file have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature: [Signature]Date: 12/26/17

AS #	Data File	Sample ID	TEST	Canister Serial #	Vol Sample	Dil Fact	TICS	Int. STD Areas	Surr	Status Data	Comments
1	6W03678	BFB		open position	400					OK	
2	6W03679	CC 76-10		A965	100			✓	✓	OK	Initial, Recheck
2	6W03680	CC 76-10		A965	100			✓	✓	OK	Initial, Recheck
1	6W03681	BFB		open position	400					OK	
2	6W03682	CC 76-10		A965	100			✓	✓	OK	
2	6W03683	BS		A965	100			✓	✓	OK	
2	6W03684	BS		A965	100			✓	✓	OK	
3	6W03685	IS		A963	400			✓	✓	OK	
3	6W03686	MS		A963	400			✓	✓	OK	
4	6W03687	JCS6810-1	Notable MS 12/25/17	A1100	800	1		✓	✓	OK	
5	6W03688	JCS7579-2	TOC STD	A235	100	1		✓	✓	OK	
5	6W03689	JCS7579-2	MS 22/17	A235	100	1		✓	✓	OK	
6	6W03690	JCS7579-1	MS 22/17	A342	100	1		✓	✓	OK	
7	6W03691	JCS7579-3		A235	100	1		✓	✓	OK	
8	6W03692	JCS7579-4		A1174	100	1		✓	✓	OK	
9	6W03693	JCS7579-5		M242	100	1		✓	✓	OK	
10	6W03694	JCS7579-6		M148	100	1		✓	✓	OK	
11	6W03695	JCS7579-7		M038	100	1		✓	✓	OK	
12	6W03696	JCS7579-8		A710	100	1		✓	✓	OK	
13	6W03697	JCS6815-7	TOC MS 12/25/17	A326	100	1		✓	✓	OK	
14	6W03698	JCS6815-9		A896	100	1		✓	✓	OK	
15	6W03699	JCS6815-11		A343	20	1		✓	✓	OK	
16	6W03700	JCS6815-13		A215	20	1		✓	✓	OK	
1	6W03701	JCS7485-3	TOC MS 12/25/17	M415	10	1		✓	✓	OK	OK Box, OK
2	6W03702	JCS7485-2	MS 23/17	A187	50	1		✓	✓	OK	OK Box, OK
3	6W03703	JCS7504-2	TOC STD MS 23/17	M328	100	1		✓	✓	OK	OK Box, OK
4	6W03704	JCS6815-1		A1100	50	1		✓	✓	OK	Not used

All strikeouts must be initial and dated. Comment is required for anything other than a transcription error.

Form: AT008-05

Rev. Date: 10/20/09

Test Gauge ID: TG-

[illegible]

Definition:

Example:

Notes:

All strikeouts must be initial, dated and reason code applied as follows: # 1 = Reviewer Correction Error; # 2 = Transcription Error; # 3 = Computer Miscalculation, # 4 = Analyst's Correction Error

Form: AT003-04

Rev. Date: 04/15/13

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SGS



7.8.7

Batch ID: 46W76



ACCUTEST.

Date: 11/7/17

Analyst Signature: [Signature]

Columns: RTX1-60m x 0.52mm x 1.0µm

Method: Interview

Seq. File: EW20171107.5

Initial Cal. Method: M6W076

AS Data

Method: 6WTO15.CT03

Standard Data

Lot #	Description	Conc.
A57636	Int/Surr	100 ppb

Standard Data

Lot #	Description	Conc.
A57892	TOL5H (A964)	40 g/ml
A57893	TOL5H (A974)	1.0 ml
A57894	TOL5H (A969)	0.4 ml
A57890	TOL5LC3 (A977)	40 ml

(M) Manually integrated chromatographic peaks in the following reportable file have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature:

Date: 11/8/17

AS #	Data File	Sample ID	TEST	Canister Serial #	Vol Sample	Dil Fact	TICS	Int. STD Areas	Surr	Status Data	Comments
1	bwozq14	BFB		A964	400						
2	bwozq15	CCG-10		A964	100					N/G	Fails
2	bwozq16	BS		A964	100					N/G	Fails , Recalibrate
1	bwozq17	BFB		A969	40					OK	
1	bwozq18	IC76-0.04		A969	40			✓	✓	OK	
2	bwozq19	IC76-0.1		A974	40			✓	✓	OK	
2	bwozq20	IC76-0.2		A974	80			✓	✓	OK	
2	bwozq21	IC76-0.5		A974	200			✓	✓	OK	
3	bwozq22	IC76-1		A964	50			✓	✓	OK	
3	bwozq23	IC76-10		A964	100			✓	✓	OK	
3	bwozq24	IC76-20		A964	200			✓	✓	OK	
3	bwozq25	IC76-40		A964	400			✓	✓	OK	
4	bwozq26	I3		A963	400						
5	bwozq27	IC76-10		A977	100			✓	✓	OK	
JN 11/17											

All strikeouts must be initial, dated and reason code applied as follows: # 1 = Reviewer Correction Error; # 2 = Transcription Error, # 3 = Computer Miscalculation, # 4 = Analyst's Correction Error

Form: AT008-05

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Date: 11/21/17Analyst Signature: [Signature]

AS Data

Method: 6W T015-CTD3Columns: RTX1-60m x 0.32mm x 1.9µMethod: 6W T015.mSeq. File: 6W 20171121Initial Cal. Method: M6W076

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
AS7636	Int/Surr	100µg
AS7403	T015 Std (A965)	40µg

(M) Manually integrated chromatographic peaks in the following reportable file have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature: [Signature]Date: 11/22/17

AS #	Data File	Sample ID	TEST	Canister Serial #	Vol Sample	Dil Fact	TICS	Int. STD Areas	Surr	Status Data	Comments
1	6W03147	6F0		1965	400					OK	
2	6W03147	CC76-10		1965	100			✓	✓	OK	
2	6W03149	BS		1965	100			✓	✓	OK	stagnant
2	6W03150	650		1965	100			✓	✓	OK	
3	6W03157	TS		1963	400						
3	6W03152	MO		1963	400			✓	✓	OK	
4	6W03153	JCSY251-7R	JT015SL	1145	400	1		✓	✓	OK	
4	6W03154	JCSY257-7R	MS 21692	1145	400	1		✓	✓	OK	
5	6W03155	CC CP9478		1962	400	1		✓	✓	OK	ethanol kit
6	6W03156	SCC CP9480		1962	400	1		✓	✓	OK	
7	6W03157	JCSY251-8R		1963	600	1.52		✓	✓	OK	
8	6W03158	JCSY251-9R		1972	400	1		✓	✓	OK	
9	6W03159	JCSY476-3T	MS 21692	1201, 1906	20	240		✓	✓	OK	RED-BSM5
10	6W03160	JCS5600-1	MS 21692	1905	400	1		✓	✓	OK	
11	6W03161	JCS5600-2	MS 21692	1127	100	1		✓	✓	OK	20mL, PLE+
12	6W03162	JCS5600-3		1126	100	1		✓	✓	OK	
13	6W03163	JCS5600-6		1904	100	1		✓	✓	OK	
14	6W03164	JCS5600-7		1124	100	1		✓	✓	OK	20mL, PLE+
15	6W03165	JCS5600-8		1125	100	1		✓	✓	OK	
16	6W03166	JCS5598-3	JT015 2010L	1538	100	1		✓	✓	OK	
1	6W03167	JCS5598-1	MS 21692	1674	20	1		✓	✓	OK	
2	6W03168	JCS5598-2		1696	20	1		✓	✓	OK	
3	6W03169	SCC CP9484		1904	400	1		✓	✓	OK	20mL, PLE+
4	6W03170	SCC CP9486		1904	400	1		✓	✓	OK	
5	6W03171	CC76-10		1965	100			✓	✓	OK	

All strikeouts must be initial and dated. Comment is required for anything other than a transcription error.

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Form: AT008-05

Rev. Date: 10/20/09



Appendix D – Data Usability Summary Report

Quality Assessment Data Usability Summary Report

RemVer Project #2017GE01			
Client Project # 1102613-02-210			
Site:	Orangetown Shopping Center	Site #:	C344066
Client:	GES, Inc.	Site Owner:	UB Orangeburg, LLC (UBO)
Sample Delivery Group (SDG)	JC56815		
Sample Matrix:	☐ Drinking water ☐ Groundwater ☐ Surface water ☐ Soil ☐ Sediment ☒ Air ☐ Biota (tissue, type: _____) ☐ Other: _____		

Introduction

RemVer performed a data quality assessment (DQA) on the analytical data reported in Sample Delivery Groups (SDGs) #JC56815 for air samples. The DQA evaluated the performance of the analytical procedures and the quality of the resulting data. RemVer followed the requirements of the New York State Department of Environmental Conservation (NYSDEC) Data Usability Summary Report (DUSR) guidelines for an Analytical Services Protocol (ASP) Category B Data Deliverable. This report includes a narrative discussion of sample results qualified during the DQA. Table 1 describes qualification flags applied to the data either by Test America or during the DQA process.

Reported Methods

☐ Method 1311 TCLP ☐ Method 1312 SPLP ☐ Method 6010A, B & C / 6020 Trace Metals ☐ Method 7000 Metals ☐ Method 7196 Hexavalent Chromium (other: _____) ☐ Method 7470A or 7471 Mercury ☐ Method 8021 Volatile Organic Compounds (VOCs) GC ☐ Method 8081B Pesticides ☐ Method 8082 PCBs ☐ Method 8151 Chlorinated Herbicides ☐ Method 8260C VOCs GC/MS ☐ Method 8270D Semi-VOCs (sVOCs) GC/MS ☐ Method 9010/9012/9014 Cyanides (_____)	☐ Method TO-13A PAHs (air) ☒ Method TO-14A / -15 VOCs (air, summa) (_____) ☐ Method TO-17 VOCs (air, sorbent) ☐ Extractable Petroleum Hydrocarbons (EPH) ☐ Volatile Petroleum Hydrocarbons (VPH) Method ☐ EPH-total ☐ Other Methods: Method 9060A Total Organic Carbon Method MCAWW 300.0 Anions (IC) Method RSK-175 Dissolved Gases Method SM4500 Nitrite Method 353 Nitrite & Nitrate

Quality Control Requirements Summary

☒ Duplicate (internal) ☐ Matrix Spike [MS] / Matrix Spike Duplicate [MSD] ☐ Trip Blank(s) ☐ Equipment, Method, &/or Rinsate Blank	☒ Other Field QC: Field notes regarding sampling ☐ Special QAPP Requirements: _____ _____

Intended Use of Data under Review

The client collected air samples during a two-consecutive day collection event beginning December 4, 2005 at the referenced New York State Brownfields site. The site is under a Site Management Plan (SMP) that requires several kinds of monitoring. The sampling event provided ambient and sub-slab/soil vapor monitoring (see §3.3 of Kleinfelder, 2011).

Significant Data Usability Issues Identified for SDG: #JC56815

Of the thirteen samples (six soil gas, six indoor ambient air, and one outdoor ambient) discussed herein, RemVer rejected no results, but flagged certain analytes as estimated due to the quality of the analysis and the results are acceptable for use. Some analytes had quality issues associated with results failing beyond the calibrated range requiring UJ/J flagging for certain analytes.

Please refer to the Lab Results and Data Usability Narrative section for further detail.

Detailed Quality Review

Field Notes Review

	Y	N	NA	COMMENTS
Sampling notes	☒	☐	☐	Field Notes & COC sheets
Field meteorological data	☐	☐	☒	No review required under QAPP
Associated sampling location and plan included	☒	☐	☐	See RAP/QAPP
Associated drilling logs available, reviewed	☐	☐	☒	No review required under QAPP
Identification of QC samples in notes	☒	☐	☐	
Sampling instrument decontamination records	☐	☐	☒	No review required under QAPP
Sampling instrument calibration logs	☐	☐	☒	No review required under QAPP
Chain of custody included	☒	☐	☐	With analytical report
Notes include communication logs	☐	☒	☐	
Any corrective action (CA) reports	☐	☒	☐	If so, CA documentation of results required.
Any deviation from methods noted? If so, explain	☐	☒	☐	None
Any electronic data deliverables	☒	☐	☐	See Attachment #4
Sampling Report (by Field Team Leader)	☒	☐	☐	

Lab Report Contents (Test America SDG Report: #JC56815)

☒ SDG Narrative	☒ Spike recoveries
☒ Contract Lab Sample Information Sheets	☒ Duplicate results
☒ Data Package Summary Forms	☒ Confirmation (lab check/QC) samples
☒ Chain-of-Custody (COC) Forms	☒ Internal standard area & retention time summary
☒ Test Results (no tentatively identified compounds [TICs])	☒ Chromatograms
☒ Calibration standards	☒ Raw data files
☒ Surrogate recoveries	☒ Other specific information
☒ Blank results	

The SDG reported on the following samples:

Sample ID	SDG #JC56815– Sample #	Matrix	Sampled	Received
Outdoor Ambient	#-1	OA	12/05/17	12/07/17
SSD-MP-2	#-2	SV	12/05/17	12/07/17
SSD-MP-2	#-3	IA	12/05/17	12/07/17
VP-1	#-4	SV	12/05/17	12/07/17
VP-1	#-5	IA	12/05/17	12/07/17
VP-6	#-6	SV	12/05/17	12/07/17
VP-6	#-7	IA	12/05/17	12/07/17
VP-5	#-8	SV	12/05/17	12/07/17
VP-5	#-9	IA	12/05/17	12/07/17
VP-9	#-10	SV	12/05/17	12/07/17
VP-9	#-11	IA	12/05/17	12/07/17
SSD-MP-5	#-12	SV	12/05/17	12/07/17
SSD-MP-5	#-13	IA	12/05/17	12/07/17

NOTES: SV = Soil Gas (Vapor) IA = Indoor Ambient Air OA = Outdoor Ambient Air

All samples associated with SDG #JC56815 were analyzed using USEPA Method TO-15.

Is the data package complete as defined under the requirements for the NYSDEC ASP Category B?		
Laboratory Report	Complete (Y/N)	Comments
JC56815	Y	Yes

Sample Preservation Requirements & Holding Times Met?			
Laboratory Report	Hold Times (Y/N)	Preservation (Y/N)	Exception Comment
JC56815	Y	Y	None

Do all QC data fall within the protocol required limits and specifications? (1) blanks, (2) instrument tunings, (3) calibration standards, (4) calibration verifications, (5) surrogate recoveries, (6) spike recoveries, (7) replicate analyses, (8) laboratory controls, (9) and sample data									
SDG	1	2	3	4	5	6	7	8	9
JC56815	☐	☐	☒	☐	☐	☐	☒	☐	☐
The narrative section, below, discusses these deficiencies in detail, see Attachment 2 as well.									

Have all of the data been generated using established and agreed upon analytical protocols?		
Laboratory Report	Protocols (Y/N)	Exception Comment
JC56815	Y	None

Do the raw data confirm the results provided in the data summary sheets and quality control verification forms?		
Laboratory Report	Confirmation (Y/N)	Exception Comment
JC56815	Y	None

Have the correct data qualifiers been used and are they consistent with the most current guidance?		
Laboratory Report	Qualifiers (Y/N)	Comment
JC56815	Y	The laboratory generally applied appropriate qualifiers. To prepare the DUSR, it was necessary to apply additional qualifications or adjust qualifications to certain results as shown in Attachments 3 and 4.

Have any quality control (QC) exceedances been specifically noted in this DUSR and the corresponding QC summary sheets from the data packages referenced?		
Laboratory Report	QC Exceedances Documented (Y/N)	Comment
JC56815	Y	Several data qualifications were applied as described below

Data Quality and Usability Narrative

Field Notes Inspection

The air samples came from a collection event over two-consecutive days, beginning December 4, 2017. GES provided air sampling field notes related to the liquor store with the COC.

Laboratory Report Inspection

The laboratory produced SDG report #JC56815. The original report was re-issued on 3 Jan 2018. The final report contained the required data and information.

Chain of Custody (COC) Evaluation

GES produced one COC for the referenced fieldwork (#JC56815, single, two-page COC). There were no quality issues.

Sample Preservation & Holding Time Evaluation

Laboratory received the canister samples on 12/7/2017 @ 9:20 (designated as SDG-JC56815) in proper condition. Holding times and preservation requirements were met.

There were no issues noted with the canisters nor the flow controllers.

Blank Evaluation

There were no associated blanks, other than the ambient indoor and outdoor air samples. All laboratory method blanks performed within acceptable parameters.

Laboratory Control Samples (LCS)

The various LCS' were within the acceptable range for their particular analyses in SDG JC56815.

Surrogates

Surrogates added to a sample allow testing of preparatory and instrument behavior resulting in recoveries within appropriate method ranges for all analytes. The various surrogates were within the acceptable range for their particular analyses in SDG JC56815.

Site-Specific Matrix Spikes and Matrix Spike Duplicates

No matrix spike/matrix spike duplicate (MS/MSD) runs were required for the analyses per TO-15 Method.

Duplicates

The laboratory used internal duplicates for these VOC analytes; all duplicates met the RPD performance criteria of <20% (see below Attachment #2), except for Methylene Chloride in Batch V6W105 where the RPDs were beyond control limits.

Tentatively Identified Compounds (TICs)

This SDG had no analysis of TICs.

Sample Result and Usability Evaluation

All samples were run as three batches, with one to three independent sample runs. Due to certain sample issues or laboratory performance (result beyond calibration range for Ethanol in Samples #10, 11, 12, & 13), some results were qualified; however, the data are usable. No data received an R (rejected) flag. If an analyte was above the MDL but below the RL, then it was flagged as "UJ".

RemVer modified Test America's laboratory electronic data reports by adding quality flags, highlighted in yellow (see Attachment #4 [separate file]: Orangetown_2017Q4air_DUSR.xlsx [EXCEL file]).

References

- Kleinfelder, 2011, *Site Management Plan, Orangetown Shopping Center, 1-45 Orangetown Shopping Center, Orangeburg, NY, NYSDEC Site #C344066*, Final, 21-November, 250p
- NYSDEC, 2010, *Technical Guidance for Site Investigation and Remediation*, "DER-10," Division of Environmental Remediation: Albany, NY, May, 232p
- NYSDEC, 2010, *Guidance for Data Deliverables and the Development of Data Usability Summary Reports*, Appendix 2B IN *Technical Guidance for Site Investigation and Remediation*, Division of Environmental Remediation: Albany, NY, May, 232p
- USEPA, 2008, *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, OSWER 9240.1-48, USEPA-540-R-08-01, Office of Superfund Remediation and Technology Innovation: Washington, DC, June, 225p
- USEPA, 2010, *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, OSWER 9240.1-51, USEPA-540-R-10-011, Office of Superfund Remediation and Technology Innovation: Washington, DC, January, 110p
- USEPA, 2012, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*, Current Online Revision: <http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm>, accessed April 2012

Tables

1. Qualifier Flags

Attachments

1. Data Usability Reviewer Qualifications
2. DQA Detail Worksheet
3. DQA Non-Conformance Summary Workheet
4. Separate EXCEL File: Orangetown_2017Q4air_DUSR.xls [NOTE: RemVer modified the Test America work products by adding quality flags, which are in yellow highlight.]

Prepared by: Kurt A. Frantzen, PhD, CHMM
January 12, 2018



GES PO#689504-1111

Table 1
Qualifier Flags

Qualifier	Quality Implication
U	Analyte analyzed for, but not detected above the sample's reported quantitation limit
J	Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample
J +	Sample likely to have a high bias
J –	Sample likely to have a low bias
UJ	Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample
N	The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
R	Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (<i>i.e.</i> , dilutions or re-analyses), the most technically acceptable result is considered acceptable.
B EB TB BB	An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.
P	Use professional judgment based on data use. It usually has an "M" with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (<i>see below</i>).
PM	A manual review of the raw data is recommended to determine if the defect affects data use, as in "R" above. This review should include consideration of potential affects that could result from using the "P" qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

Attachment 1

Data Usability Reviewer: Kurt A. Frantzen, PhD, CHMM

Experience

2014-Present	AECC	Senior EHS Consultant
2013-Present	d/b/a RemVer	Owner
2011-2012	RemVer, Inc.	President
2006-2011	Kleinfelder	Senior Principal Scientist
2005	Kleinfelder	Principal Scientist, Part-Time/On Call
2004-2006	d/b/a Environmental Risk Group	Owner
2004-2006	RemVer, Inc., Larchmont, NY	Founder, President
1999-2004	VHB, Inc.	ERM Director & Associate
1997-1998	GEI Consultants, Inc.	Senior Project Manager
1992-1997	Ecology and Environment, Inc.	Technical Chief
1991-1992	EA Engineering, Science, & Technology, Inc.	Project Manager III
1990-1991	Ecology and Environment, Inc.	Technical Group Manager
1986-1990	Ecology and Environment, Inc.	Senior Environmental Scientist

Education

Am Cancer Soc. Post-Doctoral Fellow, U Washington 1985-1986
PhD—Life Sci. / Biochem, NU—Lincoln 1985
MS—Plant Pathology, Kansas State Univ. 1980
BS—Biology, NU—Omaha 1978

Registrations

Certified Hazardous Materials Manager, since 2007, #14143

Professional Affiliations

Society Risk Analysis ('09 & '11 Chair, Eco-Risk Assessment)	Am. Chemistry Society
Am. Assoc. Advance Science	NY Academy of Science
LSP Association	Am. Institute of Biological Sciences

Other

- CERCLA & RCRA experience, as well as DOD (Air Force & Army) & DOE (INEL)
- NE Regional Experience—NY BCP; Mass MCP; & various sites in CT, RI & NH
- National Experience: NE, SE, Gulf & West Coast, Mid-west, Inter-mountain, California, Alaska
- International: Germany, Israel, Kuwait, Australia
- Selected Publications
 - *Using Risk Appraisals to Manage Environmentally Impaired Properties*, 2000, VHB Site Works, Report 108
 - *Risk-Based Analysis for Environmental Managers*, 2001, CRC/Lewis
 - Chapter 7 Risk Assessment, *Managing Hazardous Materials*, 2002 & 2009, IHMM
 - Chapter 22 Cleanup Goals, *Brownfields Law & Practice*, 2004-Present, Lexis/Nexis
 - *Use of Risk Assessment in Risk Management of Contaminated Sites*, 2008, ITRC
- 60 Conference Papers & Invited Professional Presentations
 - 1999-2014, Visiting Lecturer, Brownfields Program, Harvard Graduate School of Design
 - 2010-2013, Invited Lecturer, Pace University Law School

Attachment 2 DQA Detail Worksheet

BLANKS	>RL?	Compounds	Notes
Method Blank: VOCs	No	—	No Comment
—	—	—	—

LCS	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOCs	—	—	—	VOCs	No Comment
—	—	—	—	—	—

SURROGATES	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOCs	—	—	—	—	No Comment
—	—	—	—	—	—

MS/MSDs	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	QC Source	RPDs	Notes
VOCs	—	—	—	—	—	No Comment, none required
—	—	—	—	—	—	—

FIELD DUPLICATES RPDs	QC Source	Soil RPD > 50%	Water RPD > 20%	Compounds	Notes
N/A	N/A	N/A	N/A	N/A	N/A
N/A		N/A	N/A	N/A	N/A
LAB DUPLICATES					
Batch V6W105 for Samples #2, 3(run1), 4(run1), 5(run1), 6, 8, 10(run1), 11(run1), & 12(run1)	JC56815- 2DUP	N/A	N/A	Methylene Chloride All other TO-15 VOCs	Flag as UJ/J No Comment
Batch V6W106 Samples #3(run2), 4(run2), 5(run2), 7(run1), 9(run1), 10(run2), 11(run2), 12(run2), & 13(run1)	JC57421- 1DUP	N/A	N/A	All TO-15 VOCs	No Comment
Batch V6W107 Samples #1, 7(run2), 9(run2), 11(run3), & 13(run2)	JC57421- 2DUP	N/A	N/A	All TO-15 VOCs	No Comment

RemVer

	Reasonable Confidence Achieved ☐ Y ☐ N—Not Applicable Significant QC Variances Noted ☒ Y ☐ N Requested Reporting Limits Achieved ☒ Y ☐ N Preservation Requirements Met ☒ Y ☐ N Holding Time Requirements Met ☒ Y ☐ N
	Abbreviations: RL = Reporting Limit LCS = Laboratory Control Sample SV = Significant QC Variance RPD = Relative Percent Difference LCL= RCP Lower Control Limit UCL= RCP Upper Control Limit VOCs = Volatile Organic Compounds SVOCs = Semi-volatile Organic Compounds Pest = Pesticides EPH = Extractable Petroleum Hydrocarbons VPH = Volatile Petroleum Hydrocarbons ETPH = EPH-Total PCBs = Polychlorinated Biphenyls N/A = Not Applicable N/C = Not Collected -- = nothing to report Notes: * Typical lab contaminants, not site-related

Attachment 3

DQA Non-Conformance Summary Worksheet

Only Flagged Results Shown Below

Sample Number(s)	Compound(s)	QC Non-Conformance	% Recovery	% RPD †	High or Low Bias ‡	Comments
#-1	All Other VOCs	—	—	—	—	No Flag
#2	Ethanol	Beyond calibration range	—	>UCL	Hi	Flag UJ or J
	Methylene Chloride	Dup. out of range	—	>UCL	high	Flag UJ/J
	All Other VOCs	—	—	—	—	No Flag
#-3	Ethanol	Beyond calibration range	—	>UCL	Hi	Flag UJ or J
	Methylene Chloride	Dup. out of range	—	>UCL	high	Flag UJ/J
	All Other VOCs	—	—	—	—	No Flag
#-4	Methylene Chloride	Dup. out of range	—	>UCL	high	Flag UJ/J
	All Other VOCs	—	—	—	—	No Flag
#-5	Ethanol	Beyond calibration range	—	>UCL	Hi	Flag UJ or J
	Methylene Chloride	Dup. out of range	—	>UCL	high	Flag UJ/J
	All Other VOCs	—	—	—	—	No Flag
#-6	Ethanol	Beyond calibration range	—	>UCL	Hi	Flag UJ or J
	Methylene Chloride	Dup. out of range	—	>UCL	high	Flag UJ/J
	All Other VOCs	—	—	—	—	No Flag
#-7	All Other VOCs	—	—	—	—	No Flag
#-8	Ethanol	Beyond calibration range	—	>UCL	Hi	Flag UJ or J
	Methylene Chloride	Dup. out of range	—	>UCL	high	Flag UJ/J
	All Other VOCs	—	—	—	—	No Flag
#-9	All Other VOCs	—	—	—	—	No Flag
#-10	Ethanol	Beyond calibration range	—	>UCL	Hi	Flag UJ or J
	All Other VOCs	—	—	—	—	No Flag
#-11	Ethanol	Beyond calibration range	—	>UCL	Hi	Flag UJ or J
	All Other VOCs	—	—	—	—	No Flag
#-12	Ethanol	Beyond calibration range	—	>UCL	Hi	Flag UJ or J
	All Other VOCs	—	—	—	—	No Flag
#-13	All Other VOCs	—	—	—	—	No Flag

Notes: † RPD—Relative Percent Difference

‡ Bias High—Reported result may be lower, Reporting Limit (RL) is acceptable as reported. Bias Low—Reported results may be higher, RL may be higher than reported.



Appendix E – NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York

Soil Vapor/Indoor Air Matrix A

May 2017

Analytes Assigned:

Trichloroethene (TCE), *cis*-1,2-Dichloroethene (c12-DCE), 1,1-Dichloroethene (11-DCE), Carbon Tetrachloride

SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m ³)	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m ³)		
	< 0.2	0.2 to < 1	1 and above
< 6	1. No further action	2. No Further Action	3. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
6 to < 60	4. No further action	5. MONITOR	6. MITIGATE
60 and above	7. MITIGATE	8. MITIGATE	9. MITIGATE

No further action: No additional actions are recommended to address human exposures.

Identify Source(s) and Resample or Mitigate: We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

Monitor: We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Mitigate: We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

These general recommendations are made with consideration being given to the additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX A

This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

- [1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).
- [2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.
- [3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 0.20 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.
- [4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.
- [5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.
- [6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.

Soil Vapor/Indoor Air Matrix B

May 2017

Analytes Assigned:

Tetrachloroethene (PCE), 1,1,1-Trichloroethane (111-TCA), Methylene Chloride

SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m ³)	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m ³)		
	< 3	3 to < 10	10 and above
< 100	1. No further action	2. No Further Action	3. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
100 to < 1,000	4. No further action	5. MONITOR	6. MITIGATE
1,000 and above	7. MITIGATE	8. MITIGATE	9. MITIGATE

No further action: No additional actions are recommended to address human exposures.

Identify Source(s) and Resample or Mitigate: We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

Monitor: We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Mitigate: We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

These general recommendations are made with consideration being given to the additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX B

This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

- [1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).
- [2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.
- [3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 1 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.
- [4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.
- [5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.
- [6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.

Soil Vapor/Indoor Air Matrix C

May 2017

Analytes Assigned:

Vinyl Chloride

SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m ³)	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m ³)	
	< 0.2	0.2 and above
< 6	1. No further action	2. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
6 to < 60	3. MONITOR	4. MITIGATE
60 and above	5. MITIGATE	6. MITIGATE

No further action: No additional actions are recommended to address human exposures.

Identify Source(s) and Resample or Mitigate: We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

Monitor: We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Mitigate: We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

These general recommendations are made with consideration being given to the additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX C

This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

- [1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).
- [2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.
- [3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 0.20 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.
- [4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.
- [5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.
- [6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.